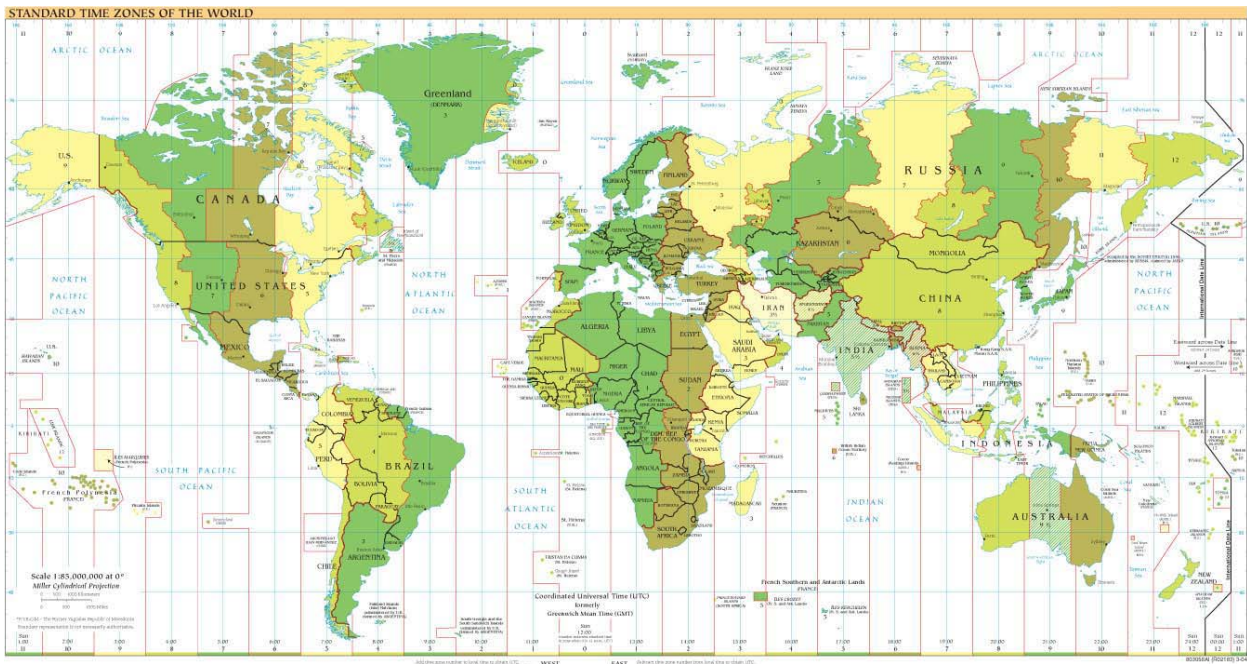# PROCEEDINGS

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Managing Editors:

Cheick Wagué, Ph.D.
South Stockholm University, Södertörn
Stockholm, Sweden

Detelin Elenkov, Ph.D.
University of Tennessee at Knoxville
Knoxville, Tennessee, USA

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We sincerely thank the authors and the reviewers who made this Proceedings possible.

We hope you will join us again at the **IABE-2008 Las Vegas in October 2008 and IABE-2009 in Greece.**

Warmest regards,

Cheick Wagué, Ph.D.
Detelin Elenkov, Ph.D.

June 06, 2008
Stockholm, Sweden

TABLE OF CONTENTS

AUTHOR INDEX

WORKED-OUT EXERCISES VERSUS PROBLEM SOLVING – AN EMPIRICAL APPROACH FOR PRINTED MATERIALS IN TEACHING BASIC ACCOUNTING IN THE ROMANIAN HIGHER EDUCATION SYSTEM

Victor O. Müller, Babeş-Bolyai University, Cluj-Napoca, Romania
Carmen G. Bonaci, Babeş-Bolyai University, Cluj-Napoca, Romania
Alin I. Ienciu, Babeş-Bolyai University, Cluj-Napoca, Romania
Dumitru Matiş, Babeş-Bolyai University, Cluj-Napoca, Romania

ABSTRACT

Our study complements the growing literature on teaching methods within the field of accounting education by analyzing the proper design for the printed materials type of method. The formulated hypotheses were tested by analyzing the obtained data from 42 students who participated in the experiment. The basis of our paper is represented by the cognitive load theory, measuring instructional efficiency by using both measures of performance and effort. The study brings support to previous researches on the topic of relative efficiency of worked examples versus problem-solving which analyzed computer based learning and extends it to the printed materials method, recommending the use of (partly) worked-out problems for the introductory accounting. The main contribution of our study consists in dividing the solved problems into low and high difficulty categories with the purpose of optimizing the teaching design in the case of basic accounting considering the proper type of instruction for each category of problems and their place within the teaching process. Following this pathway the findings of our study underlie the effectiveness of (partly) worked-out problems in the case of high difficulty degree problems.

Keywords: *cognitive load theory, accounting education, printed materials, worked-out exercises, problem solving*

1. INTRODUCTION

Learning can be understood as a process of changing behavior. It is recognized that the teaching method can influence the development of several abilities such as: cooperation, leadership, responsibility, self-confidence, independence, and decision making ability and communication skills.

Accounting is the primary language used to process, integrate, and disseminate information throughout the veins of today's businesses. The teaching of accounting is facing nowadays a significant challenge. Learning accounting can be intimidating for many students because it seems so far removed from their personal experience. Accounting is a science of measuring and communicating which can be very difficult to be learned for students who have little relevant knowledge in this field.

In our empirical study we analyze and compare two learning instruction methods used in accounting: worked examples and problem-solving exercises. For these purpose we use the learning efficiency paradigm developed in the cognitive load theory. The study has been conducted using printed materials on 42 students with no prior knowledge in accounting enrolled in Basic Accounting at the Faculty of Economics and Business Administration of the Babeş-Bolyai University, Cluj-Napoca, Romania. The topic area in this instance consisted in *influences of economic transactions on an entity's financial position*.

The Cognitive Load Theory proposes optimum learning which occurs in humans when the load on working memory is kept to a minimum to best facilitate the changes in long term memory (Sweller, 1988). The cognitive load theory analyzes instructional implication of the interaction between information structure and cognitive architecture. The theory provides a general framework for instructional designers for it allows them to control the conditions of learning within an environment or more generally within most instructional materials. Specifically it provides empirically-based guidelines that help instructional designers to minimize extraneous cognitive load during learning (Sweller, 1999).

Regarding cognitive accounting, researchers noted the importance of effort when learning (Libby and Tan 1994; Cloyd 1997; Rose and Wolfe, 2000; Bryant and Hunton, 2000). Mental effort is analyzed and defined as the total amount of controlled cognitive processing that a subject is engaged in (Schneider and Shiffrin, 1977; Paas and van Merriënboer, 1993)

Very important cognitive load reduction techniques are the worked-out examples (VanLehn, 1986, 1996). It basically consists of the given problem, solution steps, and the final solution itself and it is a learning mode preferred by novices in accounting science (Anderson et al., 1984; LeFevre and Dixon, 1986; Pirolli and Anderson, 1985; Reeker and Pirolli, 1995). Furthermore, research has shown that learning from worked-out examples is typically very effective (Sweller and Cooper, 1985; Tarmizi and Sweller, 1988; Ward and Sweller, 1990; Zhu and Simon, 1987).

Another important learning method consists in problem-solving exercises. Many theorists and educational institutions have placed a heavy emphasis on problem-solving as discovery learning (e.g., Bruner, 1961), especially in mathematics and science (see Dewey, 1910, 1916). In the problem-solving process students are presented with a question and asked to work out a solution. In this situation, students act as independent learners and solve problems by reading the instructions, with little or no teacher guidance.

This article contributes to the development of the accounting education research because it brings face to face two methods that instructors can use in their seminar classes to introduce accounting topics and shows the appropriate method that should be used depending on the difficulty degree of the exercises.

In the next sections of the paper, the literature is reviewed and the research hypotheses developed in relation to cognitive load theory, performance, instructional efficiency of worked examples and problem-solving exercises. The methodology of the study is then outlined and the results presented and analyzed. Finally, the discussion summarizes the findings and outlines the learning implications of this study.

2. LITERATURE REVIEW

The importance of worked examples and prior knowledge in schema creation was noted in many studies of accounting education. Worked examples may be used as a potential substitute for understanding rules (Bonner and Walker,1994). Wynder and Luckett (1999) states that worked examples are of particular interest to novice accountants as they constitute an important source for understanding and performing various tasks without the need to use detailed verbal or written instructions.

When learners are in the initial stages of learning a new cognitive skill in well structured domains such as accounting, mathematics, physics that exposure to worked-out examples is critical (Anderson et al., 1997).

In a study investigating the location of explanations in a computerized decision aid for taxation Rose and Wolfe (2000) found that the acquisition of knowledge is enhanced when explanations are available as worked examples. Kalyuga, Chandler, and Sweller (2001) noted that worked examples are where appropriate steps to a question and the solution are presented before a student completes similar problems. Representative problems are solved by either reading through the fully worked solutions or watching a tutor demonstrate the procedure. Past research has shown that worked examples are an effective form of guided practice particularly for difficult content (Sweller, 1999; Tuovinen and Sweller, 1999; Sweller et al., 1998; Sweller and Cooper, 1985; Zhu and Simon, 1987; Rieber and Parmley, 1995).

In the context of cognitive load theory, a result that combines the effect of prior discipline knowledge with the relative benefits of worked examples was obtained by Tuovinen and Sweller (1999), who stated that worked examples assist students learning more than problem solving, particularly for students with no prior experience (see also, Paas et al. 2003; Renkl and Atkinson, 2003). For students with experience in the subject area, the advantage of worked examples over problem solving was often reduced (see also, Kalyuga et al., 2001).

Although worked-out examples have significant advantages, their use as a learning methodology does not, of course, guarantee effective learning. Chi and her colleagues (Chi et al. 1989) noted that examples drawn from college-level physics textbooks often do not include all of the reasons why a certain step in the solution was performed. As a result, the burden of explaining the solution steps rests on the learner. Chi et al. (1989) discovered that learners attempted to establish a rationale for the solution steps by pausing to explain the examples to themselves and that these learners appeared to learn more than those who did not—a phenomenon they termed the self-explanation effect.

Kalyuga et al. (2001) also emphases within the dominant view in the cognitive load theory literature the relative merits of worked examples versus problem solving. They stated that the results of prior studies demonstrated that a cognitive structure resulting from instruction emphasizing practice with partly or completely worked-out problems is a more efficient knowledge base for solving problems than one resulting from instruction based on conventional problem solving. Their general conclusion was that the literature supported the view that worked examples potentially lead to a reduction of cognitive load (effort) and increased facilitation of learning when compared to conventional problem solving.

Moreover, studies performed by Sweller and his colleagues (Sweller and Cooper, 1985; for an overview, Sweller et al., 1998) document that learning from worked-out examples can be more effective than learning by problem solving.

Renkl and Atkinson (2003) are concern with the role of worked examples when solving particular classes of problems and how the role changes as learners' levels of knowledge increase. They stated that in the earliest stages of learning learners should study instructions; in the intermediate stages they should study worked examples and in the final stages it should be capable to more problem solving. Therefore, Renkl and Atkinson (2003) proposed a fading procedure in which problem-solving elements are successively integrated into example study until the learners are expected to solve problems on their own. First, a complete example is presented. Second, a structurally identical incomplete example is provided in which one single step is omitted. In the subsequent isomorphic examples, the number of blanks is increased step by step until just the problem formulation is left, that is, a problem to be solved. Hence, by gradually increasing problem-solving demands, the learners should retain sufficient cognitive capacity to successfully cope with these demands and, thereby, to focus on domain principles and on gaining understanding. In a number of experiments, Renkl and colleagues provided empirical evidence for the effectiveness of a smooth transition from example study to problem solving (Atkinson et al., 2003; Renkl et al., 2004).

Because of the limits of students' cognitive capacities, determining cognitive load is difficult for researchers. Paas et al. (2003) stated that it is quite feasible for two people to attain the same performance levels by one working laboriously through a very effortful process to arrive at the correct answer while the other reaches the same answer with a minimum of effort. Sweller et al. (1998, 266) wrote that: *Based on these arguments, a combination of the intensity of mental effort being expended by learners and the level of performance attained by learners constitutes the best estimator of instructional efficiency.*

In the cognitive load theory literature the technique used to measure instructional efficiency is based on the conversion of self-reported mental effort data and performance measures to z-scores. The z-scores formula: $E = \dfrac{P - R}{\sqrt{2}}$ where: E = instructional condition efficiency; P = performance z-score; and R = effort rating scale z-score. If performance and effort rating z-scores are equal ($P = R$), then efficiency is 0 ($E = 0$); if the performance z-score is higher than the effort rating z-score ($P > R$), then instructional efficiency is positive ($E > 0$); and finally, if the performance z-score is lower than the effort rating z-score ($P < R$), then instructional efficiency is negative ($E < 0$). (Halabi et al.2005).

3. HYPOTHESES AND METHODOLOGY

Applying the dominant view in the cognitive load theory literature (on the relative merits of worked examples versus problem-solving exercises reviewed by Kalyuga et al. (2001)) to accounting education leads to following three hypotheses tested in this study:

Hc1: Students completing (partly) worked-out problems operate with lower levels of cognitive load than students completing problem-solving exercises.

Hp1: Students completing (partly) worked-out problems have a higher performance than students completing problem-solving exercises.

He1: Students completing (partly) worked-out problems operate with higher levels of instructional efficiency than students completing problem-solving exercises.

Willing to refine our research in order to obtain relevant results for improving the instruction in accounting education and relying on our teaching experience, we predicted that the advantage of worked examples over problem solving might vary relative to the level of difficulty of the problems. Our prediction is supported also by the findings of Kalyuga et al. (2001), who concluded that only for more complex tasks worked examples are more efficient than problem-solving (exploratory learning). This leads to our next three hypotheses about the interaction between instruction format and level of problems' difficulty, which supplement those already developed:

Hd1: Students display higher differences in cognitive load for (partly) worked-out exercises versus problem-solving exercises in the case of more difficult problems than in the case of less difficult problems.

Hd2: Students display higher performance gains from completing (partly) worked-out exercises instead of problem-solving exercises in the case of more difficult problems than in the case of less difficult problems.

Hd3: Students display higher differences in levels of instructional efficiency when completing (partly) worked-out exercises versus problem-solving exercises in the case of more difficult problems than in the case of less difficult problems.

The first three hypotheses mentioned above are tested using one-way ANOVAs at the 5 percent significance level and the last three hypotheses are tested using two-way ANOVAs, also at the 5 percent significance level. We have chosen this level due to the small sample size in order to get an appropriate balance between the risks of Type I and II. In addition, for measuring the effect size (Halabi et al., 2005, Cohen, 1988) the t-test is used to assist evaluate the practical significance of the results. The abbreviations of our hypotheses stem from the four connection levels on which we have organized our analysis (see heading 4).

The study was conducted with 42 students enrolled in Basic Accounting at the Faculty of Economics and Business Administration of the Babeş-Bolyai University, Cluj-Napoca, Romania. We selected only students with no prior knowledge in accounting (as they amount for approx. 90 percent of the total number of students enrolled), which attended the courses where a lecture was given on the topic and did not extra studied the topic. 26.2 percent (n=11) of the subjects were male and 73.8 percent (n=31) were female. The mean age was 19.79 years.

For this study were developed three instruments: a demographic questionnaire, an effort evaluation sheet and a diagnostic test. The questionnaire had to gather demographic information on the students, including whether they had attended the two courses where a lecture was given on the topic area (relevant for the experiment), whether they had extra studied the topic and whether they had previously studied accounting. The second instrument sought to evaluate the mental effort (cognitive load) when completing the instructional materials (i.e. the problems). Similar to Halabi et al. (2005) we used subjective effort measures based on a Likert scale (1 = very low effort, 2 = low effort, 3 medium effort, 4 =

high effort, 5 = very high effort). Rating scales have been used extensively in previous cognitive load studies (Kalygua et al., 1998, 2001, Paas et al., 2003, Halabi et.a., 2005). Subjective ratings of mental effort where chosen for this study as they are easy to implement, are reliable and correlate highly with objective measures (Moray, 1982). The third instrument consisted in an evaluation test that examined the students understanding of the chosen topic. The test included 10 open-ended questions. 5 questions were similar to those problems completed by students during the instruction stage of the experiment which had been considered (by the subjects) less difficult and 5 questions were similar to those problems completed by students during the instruction stage which had been considered more difficult. The two types of questions (less and more difficult) have been alternated on the evaluation sheet.

The study was conducted in three stages (the preliminary, the instruction and the testing stage), during two weeks. The preliminary phase took place at the end of the second course on the topic for collecting demographic information using the first instrument (mentioned above). Student participation was voluntary. Based on the gathered information we built the sample for the experiment, selecting only students with no prior knowledge in accounting, which attended the (last) two courses where a lecture was given on the topic and did not extra studied the topic (The lecture on the topic was given to all students by the same instructor and the students were told at the end of each of the two courses not to prepare any work for the upcoming meeting.). The selected 42 students (from 91 who completed the demographic questionnaire) were drawn from two separate groups of students. Independent sample t-tests showed (at the end of the experiment) that the demographic characteristics of the participating students (pertaining to the two groups) were similar in all aspects of the experiment procedure. After the selection the subjects were randomly divided into two groups of equal size (n=21), the first assigned to problem-solving exercises and the second assigned to worked example material.

The instruction stage (second stage) took place during the following seminar within the first week. The participating students from the first group (assigned to problem solving exercise) were taken to a seminar room, given a printed material (containing the problems) and an effort evaluation sheet. The students have been separated from each other by one seat (chair). The printed tutorial material presented the students with an opening balance sheet and 10 accounting transactions. Students had to complete for each transaction (problem) the equilibrium equation of the financial position (e.g. Assets + X = Liabilities + X+ Equity) and then post new balances into the balance sheet. The tutor instructed the students to solve the problems at their own pace one by one and not to collaborate between them. Each time a student informed the tutor (by raising his/her hand) that he/she completed a problem, the tutor gave that student a sheet with the correct answer for that problem and asked the student to verify his/her solution, then to record the amount of estimated mental effort expended to complete the task and afterwards to solve the next problem. No other teacher instructions were provided. When the students completed the exercise, they returned the printed material (containing the problems and the correct answer) and the effort evaluation sheet to the instructor and then left the seminar room.

Shortly after, the participating students from the second group (assigned to worked examples) were taken to the same seminar room (which has been ventilated meanwhile), given the same printed material (containing the same problems) and a similar effort evaluation sheet (as for the first group). For each of the first four accounting transactions, students were provided with solutions on the blackboard by the instructor. The students introspected and recorded the amount of mental effort expended to understand each of the four worked examples. The procedure for the last six (unsolved) problems was similar to that applied for the first group.

Both instructions (of group one and two) lasted each for about 90 minutes. Before leaving the seminar room, the students were asked not to prepare any work for the upcoming seminar. All students pertaining to the two groups did not attend other courses or seminars previously on that day. The total responses of mental effort from the 10 stages were combined and averaged, separately for the two groups and for all the participating students, as well.

The final stage (the second week) consisted in a diagnostic test on the tutorial topic. The test was administered during the seminar and lasted for about 90 minutes. The students have been separated from each other by one seat (chair) as in the instruction phase. The tutor instructed that there be no

collaboration between students and supervised the administration of the diagnostic test. At the end of the seminar the test was collected, graded by the same tutor and returned for the upcoming seminar.

4. TECHNICAL ISSUES AND ACHIEVED RESULTS

Our research was based on the collaboration of the 42 students which formed the analyzed population after fulfilling all the necessary requires as described within the research methodology. After completing all the stages of the experiment the obtained data was analyzed in order to test the formulated hypotheses by performing and interpreting the one-way and two-way ANOVA tests at the 5 percent significance level, complemented through the eta squared (where available - measures of effect size thought of as the proportion of variance due to an effect after controlling all other effects in the design) and t-test also at the 5 percent significance level, as imposed by the effect size.

One-way ANOVA (analysis of variance procedure), is a nondirectional procedure that tests the equality among two or more population means using independent groups. The name, analysis of variance, given to a procedure to test the quality of population means may seem like a misnomer. Actually, the name comes from the method that is used to test for the equality of means. ANOVA tests hypotheses regarding the equality of means by analyzing variances defined in different ways relative to the groups in the design. Like the t-test, the one way analysis of variance is, by extension, a test of the relative size of a between group variance and a within group variance for the purpose of judging hypotheses about more than two independent group means. Within the one-way ANOVA the following assumptions are made: the null hypothesis is true; the scores are independent to each other; the parent populations are normally distributed for all groups under study and the parent populations have equal variances (homogeneity of variance) for all groups under study. The reason for us using the ANOVA is that, in statistical terms, we say ANOVA is robust to violations of the assumption of normality. In the case of a small data set, however, checking within cell distribution for outliers and other evidence of non-normality to ensure that that a small set of values does not unduly influence the results of the analysis is recommended. Violations of the assumption of homogeneity of variance do not affect, or only minimally affect, the validity of ANOVA when cell sizes are large and unequal. When sample sizes are unequal and small, however, and when populations have heterogeneous variances, the Type I error rate associated with the F-test will actually be greater than what is reported. When samples are larger, yet still unequal in size, and when variances are unequal, there is less distortion in Type I error. That is, reported Type I error levels come closer to actual levels and the effect of unequal variances is reduced when samples are larger.

The one way analysis of variance helped us determine whether the observed variance of the dependent variable (cognitive load (effort) variance, performance variance, instructional efficiency variance) was related to a single grouping variable (type of instruction) and also the proportion of the dependent variable variance that was explained by that grouping variable. Further more we included a second grouping variable (the difficulty degree of the solved economic transaction) in attempt to explain additional residual variance and to gain further insight into the nature of the dependent variable. The two-way analysis of variance is an extension of one-way analysis of variance used to asses mean differences through an analysis of dependent variable variance explained by two grouping variables. The method also assesses the amount of variance explained by each of the two grouping variables and by something called the interaction between the two grouping variables.

Nevertheless, we may say, that the t-ratio describes the variability between groups, expressed as a difference between means, relative to the variability within groups, expressed as a weighted average of within group variances. Thus, we may conceptualize the t-test as a test of the relative size of two different variances, a between group variance, for the purpose of judging hypotheses about two independent group means.

The mode, median and mean measure different aspects regarding the location of a distribution of data values. Depending upon the particular shape of a distribution, the numerical values of these three measures may be the same or different. Conversely, knowing the values of these three measures relative to one another can often provide us with better understanding of the shape of the distribution. If we denote the ith observation of the variable X by X_i, the mean is the sum of all the data values of the

distribution divided by N, the total number of data values in the distribution. The mode is that data value that occurs most often in a distribution and can be found for any distribution. The median is defined as any theoretically possible data value in a distribution of a continuous variable below which 50% of all data values fall, representing the middle point in a middle point in a distribution, or that point which divides a distribution into two equal halves. We have used the median in our study in order to distinguish the difficulty degree for the economic transactions, as seen through the students' feed back and not only relying on our own professional judgments.

We have organized our analysis on four connection levels which follow the students' cognitive load (**c level**), their performance (**p level**) and also the instructional efficiency of the teaching process under analyze (**e level**) as dependent variables in correspondence with the type of instruction as independent (grouping) variable by using the one-way ANOVA, and also the difficulty degree of the economic transaction (**d level**) added as an independent (grouping) variable and therefore using the two-way ANOVA. We will furthermore detail and conclude the results for each level of the analysis within our research.

Cognitive load – c level

The cognitive load (effort) required to carry out the exercises was quantified by the students through a Likert scale of *1 = very low effort, 2 = low effort, 3= middle effort, 4 = high effort, and 5 = very high effort*, implicitly lower means scores indicating the lower effort. The data resulted from applying one-way ANOVA is summarized within Table 1, showing that the cognitive load (effort) of students completing the (partly) worked-out problems is significantly lower than for students completing the problem-solving exercises.

Type of Instruction	Mean	Standard Deviation	n
Problem-solving exercises	3.89	0.23	21
(partly) Worked-out problems	3.63	0.21	21
Total	3.76	0.22	42

TABLE 1
Cognitive Load (Effort) Mean Scores and Standard Deviations

The results for the instruction main effect show that the null form of **Hc1**a can be rejected at the 5 percent significance level, the inequality of population means being reflected within the following figure:
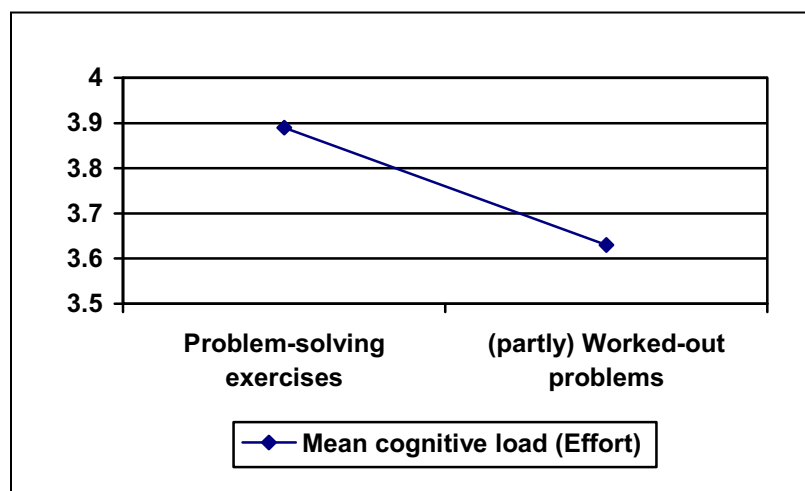
FIGURE 1
Mean Cognitive Load (Effort) by Printed Materials Type of Instruction

Achieved performance – p level

The level of performance on the diagnostic test across the two instruction types was measured by using grades, the maximum grade on the diagnostic being 10. We have once again applied one-way analysis of variance and obtained the mean levels of performance as summarized within Table 2. The F result for the type of instruction main effect and the results from Table 2 show that the null form of **Hp1** can be rejected at the 5 percent significance level. Hence, it can be concluded that the performance of students completing the (partly) worked-out problems is higher than those completing the problem-solving exercises.

Type of Instruction	Mean	Standard Deviation	n
Problem-solving exercises	6.85	2.29	21
(partly) Worked-out problems	7.40	2.11	21
Total	7.13	2.20	42

TABLE 2
Diagnostic Test (Performance) Mean Scores and Standard Deviations

Instructional efficiency – e level

Instructional efficiency, as demonstrated through the cognitive load theory literature, can only be accounted for by taking into consideration both the self-reported mental effort data and performance measures. Hence, the instructional condition efficiency is computed as the difference between performance z-score and effort z-score as follows:

$E = \dfrac{P - R}{\sqrt{2}}$, the $\sqrt{2}$ in the denominator being used to make the graphical interpretation of the formula

more straightforward –(see Paas and van Merrienboer, 1993 for details), therefore existing the possibility to reach a positive instructional efficiency (when P>R), a negative instructional efficiency (when P<R) or equal to 0 instructional efficiency (when P=R).

After analyzing the obtained data by using a one-way ANOVA, we have summarized the mean levels of instructional efficiency within Table 3.

Type of Instruction	Mean	Standard Deviation	n
Problem-solving exercises	-0.19	1.23	21
(partly) Worked-out problems	0.17	0.88	21
Total	0.00	1.11	42

TABLE 3
Instructional Efficiency Mean Scores and Standard Deviations

Of course that the more efficient mean of instruction consists in higher performance for less invested effort, and, as shown through the carried analysis, students completing (partly) worked-out problems operate with higher levels of instructional efficiency than students completing problem-solving exercises. Therefore the null form of He1 can be rejected at the 5 percent significance level.

The difficulty degree of the problems – d level

Our study goes further with the analysis by dividing the economic transactions in accordance with their difficulty degree. The novelty aspect of our approach consists in the fact that establishing the difficulty degree is not only based on professional judgments coming from our personal teaching experiences and

that of our colleagues, but also relies on the feedback which we collected from the students within our analyzed population. Hence, in order to establish the difficulty degree of the types of economic transactions which had to be assessed by the students, we determined the median value for the cognitive load (effort) at the level of our population and than divided the types of transactions into two groups. All those transactions which were rated with values below the median (here we considered the mean value of cognitive load (effort) for each type of economic transaction as it was determined based on the answers of the 42 students involved) were considered to a low difficulty degree type of questions, while all those having registered mean values above the median were put into the high difficulty degree type of questions. Therefore we have obtained four groups within our population in accordance to the type of instruction applied and to the difficulty degree of the problems. All of the 21 students of each of the two groups solved both the low difficulty degree problems and the high difficulty degree problems, but the data collected from them was again subdivided into two more groups. The objective of this approach is on one hand completing our study by adding an independent (grouping) variable to filter our analysis, and on the other hand establishing a way to control the difficulty degree of the problems comprised within tests, from the students' point of view.

Furthermore we tested the developed hypotheses within the d level as mentioned above. Since we are now dealing with two independent (grouping) variables, we have this time applied the two-way analysis of variance, specifically the two-way ANOVA.

We have first tried to reflect the differences regarding the cognitive load (effort) within the two types of instruction (problem-solving exercises and (partly) worked-out problems) considering in the same time the distinction between high and low difficulty degree problems. Table 4 reflects the obtained information:

	Difficulty Degree of the Problems								
	Low difficulty degree			High difficulty degree			Total		
Type of instruction	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n
Problem solving exercises	3.47	0.12	21	4.31	0.18	21	3.89	0.23	21
(partly) Worked-out problems	3.45	0.17	21	3.81	0.19	21	3.63	0.21	21
Total	3.46	0.15	42	4.06	0.19	42	3.76	0.22	42

TABLE 4
Cognitive Load (Effort) Mean Scores and Standard Deviations Considering the Difficulty Degree of the Problems

A first conclusion would be that, as expected, the cognitive load is higher when dealing with a high difficulty degree type of problems than with the low difficulty degree type ones. Moreover we observe higher differences in cognitive load for (partly) worked-out exercises versus problem-solving exercises in the case of more difficult problems than in the case of less difficult problems. The null form of Hd1 is this way rejected at the 5 percent significance level.

Continuing with aspects regarding the achieved performances within the two types of instruction and also the two groups of difficulty degree we have again applied the two-way ANOVA and gathered the following data comprised within Table 5 also rejecting the null form or Hd2.

| Type of instruction | Difficulty Degree of the Problems | | | | | | | | |
| | Low difficulty degree | | | High difficulty degree | | | Total | | |
	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n
Problem solving exercises	7.22	2.31	21	6.49	1.82	21	6.85	2.29	21
(partly) Worked-out problems	7.38	1.98	21	7.42	1.53	21	7.40	2.11	21
Total	7.3	2.16	42	6.95	1.68	42	7.13	2.20	42

TABLE 5
Diagnostic Test (Performance) Mean Scores and Standard Deviations Considering the Difficulty Degree of the Problems

As we can see students display higher performance gains from completing (partly) worked-out exercises instead of problem-solving exercises in the case of more difficult problems than in the case of less difficult problems and an even more interesting aspect is that the difference in performance obtained for the low difficulty degree and respectively high difficulty degree problems is not very high, showing that both low and high difficulty degree problems have been assimilated by the students.

One last analyzed aspect is the one referring to the instructional efficiency of the two types of instruction analyzed through our study, in the specific case of low and high difficulty degree problems. The obtained data from the two-way ANOVA test are as follows:

| Type of instruction | Difficulty Degree of the Problems | | | | | | | | |
| | Low difficulty degree | | | High difficulty degree | | | Total | | |
	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n
Problem solving exercises	0.16	0.68	21	-0.54	1.05	21	-0.19	1.23	21
(partly) Worked-out problems	0.18	0.72	21	0.16	0.65	21	0.17	0.88	21
Total	0.17	0.70	42	-0.19	0.85	42	0.00	1.11	42

TABLE 6
Instructional Efficiency Mean Scores and Standard Deviations Considering the Difficulty Degree of the Problems

It is clear that students display higher differences in levels of instructional efficiency when completing (partly) worked-out exercises versus problem-solving exercises in the case of more difficult problems than in the case of less difficult problems. There are also some differences in levels of instructional efficiency

when completing (partly) worked-out exercises versus problem-solving exercises in the case of low difficulty degree type of problems, but these differences are significantly smaller. An alarming aspect is that concerning the high difficulty degree type of problems, the instructional efficiency seems to be negative. The F result for the interaction effect indicates that the null form of Hd3 can be rejected at the 5 percent level. Cell-to-cell comparison by t-test show that the difference in the instructional efficiency of students completing either problem solving exercises or (partly) worked-out problems for low and high difficulty degree is significant. The difference in the instructional efficiency means is illustrated in Figure 2.
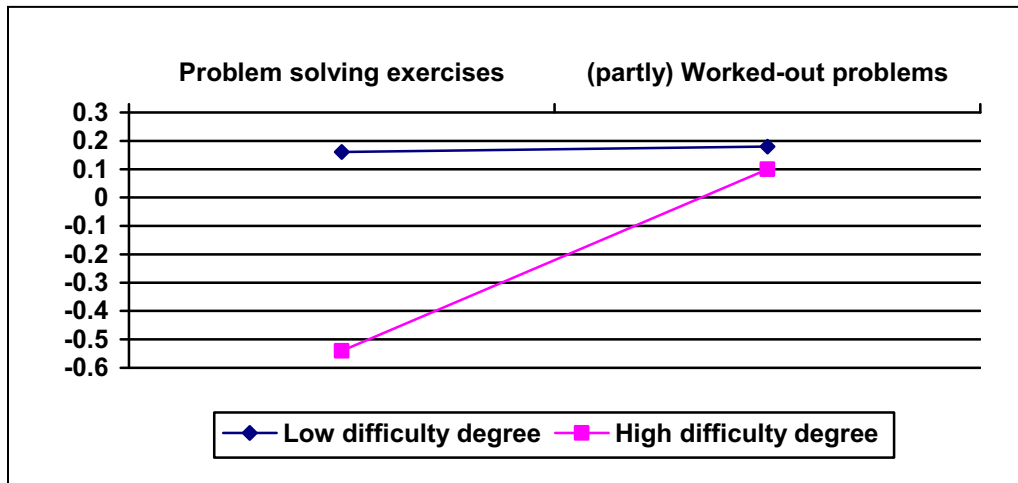
FIGURE 2
Mean Instructional Efficiency Measures by Instruction Type and Difficulty Degree of the Problems

5. CONCLUSIONS OF THE PERFORMED ANALYSIS

Our study complements the growing literature on teaching methods within the field of accounting education by analyzing the proper design for the printed materials type of method. The instruction methods were shaped in two formats: problem solving exercises and (partly) worked-out problems. The basis of our article is represented by the cognitive load theory, measuring instructional efficiency by using both measures of performance and effort (Paas and van Merriënboer, 1993)

The obtained results show that a well structured printed material type of teaching method in basic accounting should rely on the (partly) worked-out problems in preference to problem solving exercises since findings show that it involves lower levels of cognitive load while bringing a higher performance level and therefore generating a superior instructional efficiency. Generally, (partly) worked-out problems are less demanding on one's limited processing capacity, do not require as much cognitive load (effort) as problem-solving exercises, and result in more efficient schema development, these aspects also being debated and proven within other cognitive load studies (Tuovinen and Sweller, 1999; Kalyuga et al., 2001). Implicitly (partly) worked-out problems would appear a particularly good way to begin instruction for students with no prior knowledge like most of our students which attend basic accounting classes (the number of students who have prior accounting knowledge is insignificant in the case of our students, these also being the situation within our faculty).

The study brings support to previous researches on the topic of relative efficiency of worked examples versus problem-solving which analyzed computer based learning and extends it to the printed materials method, recommending the using of (partly) worked-out problems for the introductory accounting. Our findings emphasize the importance of (partly) worked-out problems as a source of learning for all students.

Beside analyzing the printed materials teaching method, our study's innovational aspects consist in dividing the solved problems into low and high difficulty degree categories considering the student's point of view and developing hypotheses around these variable. The reasoning for dividing the problems in accordance to the difficulty degree consists in optimizing the teaching design in the case of basic accounting considering the proper type of instruction for each category of problems and their place within the teaching process. The findings of our study underlie the usefulness of (partly) worked-out problems in the case of high difficulty degree problems. Generally problem solving exercises require a higher cognitive load than (partly) worked-out problems do for our entire population, but the differences in mean scores are significantly larger in the case of the high difficulty degree problems. At the next level we show that students display higher performance gains from completing (partly) worked-out exercises instead of problem-solving exercises in the case of more difficult problems. Taken together we can conclude by observing a high level of instructional efficiency in using (partly) worked-out exercises in the case of high difficulty degree problems. Worked examples clearly benefit students in the case of high more difficult problems, and are not harmful in the case of lower level of difficulty problems.

6. OUTLOOK OF FUTURE RESEARCH AND ENDORSEMENT OF THE STUDY

This study was implemented in the case of basic accounting with the specific topic of analyzing economic transactions, but we will develop it by extending on one hand the considered population and on the other hand the considered topic to the necessary material to be taught during one semester (the period during which basic accounting is taught within our faculty). The main objective of our future research will not only be to analyze and compare the two types of instruction, but also to find a way to optimize their use with the purpose of increasing instructional efficiency. More specifically we will investigate possible approaches to integrating elements of problem solving into example study, this way combining the two types of instruction by successively introducing more and more elements of problem solving in example study. The learning process will therefore be structured considering the transition from studying examples in initial skill acquisition to problem solving in later stages.

Another aspect which must be taken into consideration in analyzing the two type of instruction is the students' implication degree imposed by each one of them, this being eliminated from our study since our sample was made out of those students who voluntary accepted to collaborate in our research.

Furthermore we will continue developing this study by also considering our students in financial accounting (this topic being taught in the following semester after basic accounting), this way having prior accounting knowledge to consider when optimizing the use of the two methods.

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AUTHORS PROFILES:

Victor O. Müller earned his MBA at the University of Applied Sciences, Fulda Germany. Currently he is assistant lecturer of basic and financial accounting and Ph.D. Candidate at the Babeş-Bolyai University, Cluj-Napoca, Romania.

Carmen G. Bonaci earned her Master Degree at the Babeş-Bolyai University, Cluj-Napoca, Romania. Currently she is a Ph.D. Candidate at the Babeş-Bolyai University, and is teaching different accounting disciplines.

Alin I. Ienciu earned his Master Degree at the Babeş-Bolyai University, Cluj-Napoca, Romania. Currently he is a Ph.D. Candidate at the Babeş-Bolyai University, and is teaching different accounting disciplines.

Dumitru Matiş earned his Ph.D. at the Babeş-Bolyai University, Cluj-Napoca, Romania. Currently he is a professor of different accounting disciplines (e.g. basic accounting, financial accounting, advanced accounting and international accounting) at the Babeş-Bolyai University and Dean of the Faculty of Economics and Business Administration within the same University. He is member of the Chamber of Financial Auditors from Romania and of the Superior Council of the Accounting and Financial Reporting Council of Romania.

TEXTILE AND CLOTHING INDUSTRIES: TRADE AND TRADE POLICIES

Inka I. Havrila, Victoria University, Melbourne, Victoria, Australia
Pemasiri J. Gunawardana, Victoria University, Melbourne, Victoria, Australia

ABSTRACT

Structural change of textile and clothing (TAC) industries has intensified in recent years, mainly due to reductions in protection, increased import competition, shifts in consumer expenditure, and technological change. This paper provides an overview of the impact of those factors on the global and Australia's TAC trade. The paper also identifies major global exporters and importers, as well as Australia's major trading partners in TAC. Given Australia's long history of the high level protection of TAC industries, the paper presents a history of government policies protecting domestic producers from low cost foreign competitors. In spite of recent decreasing levels of government assistance, Australia's TAC industries have not been able to become internationally competitive.

Keywords: *Textiles and clothing, International trade, International trade policy, Trade liberalisation, Australia.*

1. INTRODUCTION

Textile and clothing (TAC) industries have undergone notable global changes in production, consumption and trade in recent years. Some parts of these industries have played an important role in the economic progress of many developing countries with implications for developed countries, including Australia. Prior to the 1980s, developed countries dominated the global market in textiles. The economic progress of East-Asian newly industrialising economies (NIEs) and the resulting change in comparative advantage have shifted the relative importance of different countries in the world trade in TAC. The labour-intensive sectors of these industries, in particular clothing, continue to relocate to relatively low-labour-cost countries, such as China. For instance, in 1993, the cost of one hour of work in the clothing industry in Australia was the equivalent of 35 hours of work in China (IC, 1997, p. 19). As a result, the local TAC industries in Australia have lost domestic market share to imports mainly from the low-labour-cost countries.

Other significant factors influencing the TAC industries are the weak demand for and structural change in household budget with a declining share committed to textiles and clothing products. For instance, share of clothing and footwear consumption in total household consumption between 1990 and 2000 decreased in Australia by 22 percent, the United States by 22.1 percent, France by 21.9 percent, Japan by 19.9 percent, Italy by 9.8 percent and the United Kingdom by 7.3 percent (PC, 2003, p. 159).

A major contributor to the growth in world trade in TAC has been the trade liberalisation in the member countries of Asia-Pacific Economic Co-operation (APEC). All the participants of the APEC Forum, including Australia, made a commitment to free trade and investment by 2010 for developed member countries and by 2020 for all APEC countries. In addition, the World Trade Organisation (WTO) Agreement on TAC challenged the member nations to remove all quantitative restrictions on TAC trade by 1 January 2005.

Australia's TAC industries have also been affected by these developments. They experienced major structural changes driven by more intense competition, changes in production, consumption and gradual liberalisation of a long distorted international trade. Anderson (1992) discussed some effects of global developments in the textile and clothing industries and their implications on Australia and major players in the market for the period between the 1960s and mid 1980s (in some cases late 1980s). Thus, Anderson (1992) does not include the period of significant changes that have taken place recently.

In light of the developments in both global and Australian TAC industries, as well as of indications from earlier studies (Vollrath, 1991; Torstensson, 1991; Ratnayake and Athukorala 1992; Stone and Lee, 1995; Greenaway and Torstensson, 1997) regarding the gap in research, and the industry-level and the Australian government's efforts to encourage the TAC sector to become internationally more

competitive in the environment with lower levels of government assistance, the main objectives of this paper are:

- to identify major global traders and Australia's major trading partners in TAC and to highlight significant changes over time; and
- to provide an overview of trade protection, policies, and policy reforms towards Australia's textile and clothing industries.

The paper is organised as follows: In Section 2, the global trends in TAC industries and trade are examined. A general description of the Australian TAC industries with respect to their classifications, contribution to the economy, Australia's TAC trade performance, and its position within the world TAC trade environment is presented in Section 3. The history of assistance and protection granted to Australia's TAC industries is described in Section 4. The Multi-Fibre Agreement and the extent to which it affected Australia's TAC Trade are reviewed in Section 5. Conclusions are included in Section 6.

2. GLOBAL TRENDS IN TAC TRADE

2.1 Textiles

The share of textiles in the world merchandise *exports* has been declining. Between 1995 and 2000 it declined from 3.1 percent to 2.5 percent. Between 2000 and 2006 it dropped further, to 1.9 percent Table 1 shows the shares of leading exporter countries in world exports of textiles for the period 1980 to 2006.

TABLE 1
EXPORT SHARES (%) OF LEADING EXPORTERS OF TEXTILES, 1980- 2006

Exporter	1980	1990	2000	2006
European Union (25)[b]	..	..	35.6	32.6
China[a]	4.6	6.9	10.2	22.3
Hong Kong, China	3.2	7.9	8.5	6.4
United States	6.8	4.8	6.9	5.8
Republic of Korea	4.0	5.8	8	4.6
Taipei, Chinese	3.2	5.9	7.5	4.5
India	2.4	2.1	3.8	4.3
Turkey	0.6	1.4	2.3	3.5
Pakistan	1.6	2.6	2.9	3.4
Japan	9.3	5.6	4.4	3.2
Indonesia	0.1	1.2	2.2	1.6
Thailand	0.6	0.9	1.2	1.3
Canada	0.6	0.7	1.4	1.1
Mexico[a]	0.2	0.7	1.6	1.0
United Arab Emirates	0.1	0.0	0.8	0.9
Total share by above 15			89.6	90.2

[a] Includes shipments through processing zones; .. not reported
[b] Since 2000 Europe is reported as the European Union.
Source: (WTO, 2007; Table II.58).

Prior to 1980s, exports of textiles were dominated by Europe, in particular by Germany, Italy, Belgium, France, and United Kingdom. However, the dominance of Europe has been diminishing. While in 1980, Europe's share in the world exports of textiles was 49.4 percent; in 1990 it was 48.7 percent. By 2000 it declined to 39.3 and in 2006 it was down to 37.9 percent of the world exports of textiles. Exports from Germany declined from 11.4 percent in 1980 to 9.3 percent in 1995 and 7 percent in

2000. Another significant decline in the world export share in textiles was that of Japan, from 9.3 percent in 1980 to 4.0 percent in 2000 and 3.2 percent in 2006.

On the other hand, countries such as China, Turkey, India, Indonesia, Pakistan, Thailand, Mexico and United Arab Emirates have been increasing their share in the world exports of textiles, although some from a very low level. China, in particular, has strengthened its position, as its share expanded from 4.6 percent in 1980 to 10.3 percent in 2000 and 22.3 percent in 2006. The share of the United States in the world exports of textiles declined from 6.8 percent in 1980 to 4.8 percent in 1990. However, by 2000 it increased back to 6.9 percent and in 2006 it was 5.8 percent.

World *imports* of textiles, in the past, have also been dominated by Europe, in particular Germany, United Kingdom, France, Italy and Netherlands. In recent years, the share of the Europe in the world imports of textiles declined. For instance, between 1980 and 2000, the share in the world imports of textiles in Germany declined from 12.2 percent to 5.6 percent, France from 7.3 to 4 percent, United Kingdom from 6.3 to 4.1 percent, Italy from 4.7 to 3.7 percent, and Netherland from 4 to 1.6 percent. Since 2000, the data for Europe are reported as the EU.

As Table 2 indicates, between 2000 and 2006, the share of European Union (25) in the world imports of textiles dropped from 32.9 to 30.7 percent. The countries that marked a slightly declining share include Japan and Canada. On the other hand, the United States share has been rising steadily, from 4.5 percent in 1980 to 10.2 percent in 2006. There are a number of 'new comers', including Russian Federation, Romania, and Vietnam, with an expanding share in the world imports of textiles.

TABLE 2

IMPORT SHARES (%) OF LEADING IMPORTERS OF TEXTILES, 1980- 2006

Importer	1980	1990	2000	2006
European Union (25)	..	..	32.9	30.7
United States	4.5	6.2	9.5	10.2
China[a]	1.9	4.9	7.6	7.1
Hong Kong, China	5.2	9.4	8.2	6.1
Japan	3.0	3.8	2.9	2.7
Mexico[a]	0.2	0.9	3.5	2.6
Turkey	0.1	0.5	1.3	2.0
Canada	2.3	2.2	2.5	1.9
Republic of Korea	0.7	1.8	2.0	1.7
Russian Federation	..	..	0.8	1.6
Romania	..	0.1	1.0	1.4
United Arab Emirates	0.8	0.9	1.2	1.4
Vietnam	..	..	0.8	1.4
Thailand	0.3	0.8	1.0	0.9
India	0.1	0.2	0.3	0.9
Total share by above 15			**68.2**	**66.8**

[a] Includes shipments through processing zones;
 ... not reported;
[b] Since 2000 Europe is reported as the European Union.
 Source: (WTO, 2007; Table II.58).

The regional share distribution of the exports in TAC can be observed from Table 3 below. It is apparent that Asia plays a dominant role in the global exports of TAC. Asia accounts for around a quarter of the world exports in textiles and around a third of the global market in clothing. Thus, among the Asian countries, China is the largest single exporter of TAC.

TABLE 3
REGIONAL SHARES IN WORLD EXPORTS OF TEXTILES AND CLOTHING

Region	Share of the World Exports (%)			
	Textiles		Clothing	
	2000	2006	2000	2006
Asia	43.8	47.7	46.4	52.3
China	10.2	22.3	18.2	30.6
Other Economies in Asia	33.6	25.4	28.2	21.7
Europe	39.3	37.9	32.6	34.4
North America	9.9	7.9	9.8	4.2
Rest of the World	7.0	6.5	11.2	9.1

Source: WTO (2007, Table II.56 and II. 61)

2.2 Clothing

The share of *clothing* in the world merchandise exports between 1990 and 2000 stagnated at 3.2 percent. By 2006 the shares dropped to 2.7 (WTO, 2007).

In recent years, clothing exports have been dominated by China's rising share in world exports, from 4 percent in 1980, to 8.9 percent in 1990, 18.2 percent in 2000 and almost 31 percent in 2006 (see Tables 3 and 4). Other significant exporters, although with a declining export share, have been European countries, including Italy, Germany, France, and the United Kingdom (WTO, 1996; 2001; 2003). The countries with a rising share in the world export market of clothing in recent years include Turkey, India, Bangladesh, Mexico, Indonesia, Romania, Pakistan, Vietnam, and Morocco (Table 4). On the other hand, the United States weakened their export position, in particular between 2000 and 2006, from 4.4 percent to 1.6 percent of the total world exports in clothing.

On the other hand, the imports of clothing to the United States between 1980 and 2000 almost doubled from 16.4 percent to 32.2 percent (Table 5). However, between 2000 and 2006 the United States share in world imports of clothing dropped from 32.2 to 25.6 percent (WTO, 2007). With almost 40 percent of the world imports of clothing in 2000 and almost 44 percent in 2006, the European Union remains the leading importer of clothing, with the current market share of around 26 percent. Japan, although with a significantly smaller share of the world clothing import market (7.4 percent in 2006) is the third largest importer of clothing in the world. As evident from Table 5, a majority of less significant importers of clothing, including China, have been expanding their share in the world import markets.

TABLE 4

EXPORT SHARES (%) OF LEADING EXPORTERS OF CLOTHING, 1980- 2006

Exporter	1980	1990	2000	2006
China[a]	4.0	8.9	18.2	30.6
European Union (25)	..	..	26.9	26.8
Hong Kong, China	12.3	14.2	12.2	9.1
Turkey	0.3	3.1	3.3	3.8
India	1.7	2.3	3.1	3.3
Bangladesh	0.0	0.6	2.1	2.8
Mexico[a]	0.0	0.5	4.4	2.0
Indonesia	0.2	1.5	2.4	1.8
United States	3.1	2.4	4.4	1.6
Vietnam	..	..	0.9	1.7
Romania	..	0.3	1.2	1.4
Thailand	0.7	2.6	1.9	1.4
Pakistan	0.3	0.9	1.1	1.3
Morocco[a]	0.3	0.7	1.2	1.0
Tunisia	0.8	1.0	1.1	1.0
Total share by above 15			77.1	82.2

Source: (WTO, 2007; Table II.63).

TABLE 5

IMPORT SHARES (%) OF LEADING IMPORTERS OF CLOTHING, 1980-2006

Importer	1980	1990	2000	2006
European Union (25)	..	..	39.7	43.6
United States	16.4	24.0	32.2	25.6
Japan	3.6	7.8	9.5	7.4
Russian Federation	..	..	1.3	2.5
Canada	1.7	2.1	1.8	2.1
Switzerland	3.4	3.1	1.5	1.4
Republic of Korea	0.0	0.1	0.6	1.2
Australia	0.8	0.6	0.9	1.0
Mexico[a]	0.3	0.5	1.7	0.8
Singapore	0.3	0.8	0.9	0.8
Turkey	0.0	0.0	1.9	1.4
Norway	1.7	1.1	0.6	0.6
United Arab Emirates	0.6	0.5	0.4	0.6
Tunisia	0.8	1.0	1.1	1.0
China[a]	0.1	0.0	0.6	0.5
Total share by above 15			91.9	88.8

Source: (WTO, 2007; Table II.63)

3. AUSTRALIA'S TEXTILES AND CLOTHING INDUSTRIES AND TRADE

The textiles and clothing industries in Australia include all stages of production of TAC products, from processing of raw materials to producing of final products such as clothes, carpets, linen and industrial textiles. Because of this character, the industries are linked both vertically and horizontally to other parts of the economy, as well as to other activities within the industry itself. A large proportion of the output is used as inputs within the industry. However, textiles are used in other industries, such as car and furniture industries. Table 6 shows the classification of the industry, at the four-digit level, according to the Australian and New Zealand Standard Industrial Classification (ANZSIC).

In terms of overall economic activity, the TAC industries do not play a significant role in the Australian economy as a whole. Nevertheless, they are an important part of the manufacturing sector in terms of their contribution to manufacturing GDP and employment. The industries account for around 4 percent of manufacturing value added (VAD) and around 6 percent (excluding outworkers) of manufacturing employment and 0.4 percent of VAD and 0.6 percent of employment in the economy as a whole (PC, 2003). In 2000-01, Australia's textiles, clothing and footwear (TCF) industries generated a turnover of $9 billion, and provided 'factory-based' employment for at least 58,000 people (PC, 2003). The Productivity Commission (PC) estimates that in clothing industry there might be an equivalent of 25,000 full time employees engaged in outwork.

TABLE 6
THE ANZSIC CLASSIFICATION OF TEXTILES AND CLOTHING

Group		Class	
221	Textile fibre, yarn and woven fabric manufacturing	2211	Wool scouring
		2212	Synthetic fibre textile manufacturing
		2213	Cotton textile manufacturing
		2214	Wool textile manufacturing
		2215	Textile finishing
222	Textile product manufacturing	2221	Made-up textile product manufacturing
		2222	Textile floor covering manufacturing
		2223	Rope, cordage and twine manufacturing
		2229	Textile product manufacturing *nec*
223	Knitting mills	2231	Hosiery manufacturing
		2232	Cardigan and pullover manufacturing
		2239	Knitting mill product manufacturing *nec*
224	Clothing manufacturing	2241	Men's and boys' wear manufacturing
		2242	Women's and girls' wear manufacturing
		2243	Sleepwear, underwear and infant clothing
		2249	Clothing manufacturing *nec*

Source: ABS (ABS, 1993)
nec = not elsewhere classified.   .

3. 1 Industry Structure and Performance

The character of the TAC industries is reflected in the diversity of concentration of various stages of production. The TAC industries are dominated less by large-scale operators than in other areas of manufacturing. The small domestic market limits the utilisation of benefits from economies of scale for Australian manufacturers. A high proportion of establishments (around 60 percent) are of small size, with less than 10 employees, in particular in the clothing industry. In contrast, only about 5 percent of establishments employ more than 100 people (PC, 2003, p. 32). Some argue that this may be due to the varying capital intensity involved in various activities in the TAC manufacturing (Baston, 1996).

In recent years, various global and domestic factors, such as reductions in industry protection from imports, changes in consumer spending patterns, shifts of TAC manufacturing from developed to

developing countries, and development of new technology have influenced the size and structure of the industry. Many firms closed their operations and consequently, reduced the output and employment in the industry. More focus has been given to high VAD and more capital-intensive, and less to labour-intensive standardised products (PC, 2003).

These developments have led to an increase in the proportion of imports in the domestic markets, and a reduction of consumer expenditures, in particular on clothing (in Australia the share of clothing and footwear consumption in total household consumption between 1990 and 2000 decreased by 22 percent) and consequently in the reduction of contribution of TAC to GDP and employment. The only sector that experienced a positive growth rate of gross product was 'Textile fibre, yarn and woven fabric manufacturing' (4 percent; IC, 1997, p. 7). While the Australian TAC industries are much more efficient than in the past, there is still a significant diversity in individual performance. In terms of labour productivity, the TAC industries under-performed the total manufacturing, with the exception of 'fibre, yarn and fabric manufacturing and clothing manufacturing' sectors (IC, 1997).

Various segments of the industry have experienced different trends. Some textiles increased domestic market share at the expense of imports. However, many sectors, in particular labour-intensive clothing sectors, have declined. This uneven growth distribution resulted in disproportionate impact on the industries' regional employment. Whereas the TAC employment in New South Wales, and more significantly in Queensland increased, in Victoria, employment declined. It is also reflected in the trend of overall employment. The various categories of the TAC recorded a significant, though diverse, decline in employment (see Table 7). The largest decline was in knitting mills, textile fibre, yarn and woven fabric, and clothing manufacturing. In contrast, textile product manufacturing recorded strong employment growth between 1985 and 1997. Since then it has been relatively stable (IC, 1997, p. C.5).

TABLE 7

THE TAC MANUFACTURING EMPLOYMENT, BY INDUSTRY, 1985 TO 2002

Industry	Employment by ANZSIC Industry (000)					
	1985	1991	1997	1985 - 97 (%)	2002	1997- 02 (%)
Textile fibres, yarn and woven fabrics	20.3	15.3	11.6	-42.9	7.0	-39.7
Textile product manufacturing	12.6	15.2	21.7	72.2	21.9	0.5
Knitting mills	8.2	9.9	3.7	-54.9	3.1	-16.2
Clothing	62.2	51.2	49.3	-20.7	39.3	-20.8
All manufacturing	1128	1099	1128	0.0	1147	1.7

Source: IC (1997), Table C. 2, p. C. 4 and PC (2003), Table B. 5, p.162.

In order to protect jobs, the industries have been arguing for maintaining tariffs. However, the analysis of the trend in the rate of protection and employment does not support a claimed positive correlation between the level of employment and protection (IC, 1997). Instead, the factors being responsible for declined employment may be technological change, especially in the textiles sector, consumers' preferences for imported products, and undeniably, labour cost differences between Australia and developing countries.

Australia has been traditionally involved in the early stages of the production process. However, in recent years, the government has taken policy actions focusing on increasing value-added exports by further processing of raw material, such as wool and cotton, reducing the intra-industry diversity in the rate of assistance, and promoting specialisation and export orientation. For instance, the majority of Australia's wool is exported in its 'greasy' or unprocessed state. However, in recent years there has been significant growth in early stage processing of wool in Australia. For example, in 1996, 37 percent of the Australian wool clip was processed to an early stage in Australia (up from 23 percent ten years earlier), but only 13 percent of the clip was processed to the tops stage (IC, 1997, p. 15).

3. 2 Australia's Trade in TAC Products

Australia, like most advanced industrial countries, is a net importer of TAC products. This fact is reflected in the relative share of exports and imports of TAC in total merchandise trade. In 1990, textiles contributed to Australia's total merchandise exports by 0.4 percent and in 2000 their share increased to 0.5 percent, however, in 2006 it dropped to 0.3 percent in economy's total merchandise exports. In terms of imports, however, the share was 3.6 percent in 1990 whereas it declined to 2.3 percent in 2000 and to 1.4 percent of the economy's total merchandise imports. The contribution of clothing to Australia's total merchandise imports was 1.8 percent in 1990, 2.6 percent, in 2000, and by 2006, it dropped slightly to 2.7 percent of the economy's total merchandise imports.

Australia's share in the world exports of textiles is rather insignificant. In 1990 it was 0.15 percent, in 1995, 0.25 percent, in 2000, 0.22 percent, and in 2001 it was 0.2 percent (WTO, 2002, Table IV. 62). Another significant fact is that Australia's share in the world imports of textiles has been declining steadily. In 1980 it was 2 percent, in 1990, 1.3 percent and in 2002 it decreased to 0.9 percent. Australia's share in the world imports of clothing is slightly lower and is not as steady as the share of textiles in the world imports of textiles. In 1980 it was 0.8 percent and it declined to 0.6 percent in 1990. However, in 2000 it increased to 0.9 percent and in 2006 it was 1 percent of the world imports in clothing (WTO, 2002, Table IV. 61 and 69)).

Global changes in the trading environment as well as in domestic levels of TAC protection have resulted in shifting the origins and destinations of Australia's TAC trade. China is the major source of clothing imports for Australia. Other significant suppliers of TAC imports to Australia are New Zealand and the U.S. Whereas South Korea and Taiwan remain substantial suppliers (mainly of synthetic fibres and fabrics) their shares in Australian imports have been declining. On the other hand, Australia's imports from Fiji, Indonesia and India have been increasing.

There has been a significant reduction in Australia's *exports* of TAC to Japan. However, this decline has been compensated for by the growth in exports to other countries, in particular Italy, New Zealand, China, South Korea, Fiji, and Malaysia. This significant increase in exports to New Zealand reflects the implementation of the ANZCERTA, Australia-New Zealand Closer Economic Relations Trade Agreement. A large proportion of exports is re-exported back to Australia under the SPARTECA, South Pacific Regional Trade and Economic Cooperation Agreement (IC, 1997, p.13).

Whereas the trend of imports to Australia from the rest of Asia (China, Hong Kong, Taiwan, Japan, Singapore and Vietnam) remains essentially flat, there are some differences among countries. Particularly, declining imports from Japan are compensated for by the rising imports from China and other economies.

4. HISTORY OF GOVERNMENT ASSISTANCE TO AUSTRALIA'S TAC SECTOR

Australia, similar to most developed countries has a long history of protecting textile and clothing industries from import competition. The application of quantitative restrictions on textile imports by Australia dates back to the 1930s. They were directed not only against the competitive pressure from developing countries but also to ease the consequences of weak domestic demand on output and employment (Keesing & Wolf, 1980).

Between 1901 and the Second World War, the TAC industries were protected mainly by tariffs. After the War these were replaced by import licensing arrangements that were abolished in 1960 when tariffs were restored. Until the 1970s government reports recommended increasing levels of assistance to TAC industries (Cappling & Galligan, 1992). However, the imposition of tariffs (in 1972) did not stop the surge in imports and the decline of the local industries. Therefore, in 1977 the government introduced global quotas to limit the quantity of imports. In response, then the Industries Assistance Commission expressed that, as a result of past assistance policies, the TCF industries had become inward-oriented, tariff-dependent and fragmented, and unfit to adapt to the major domestic and international changes taking place. Accordingly, the Commission recommended removing all quotas and reducing assistance to the average rate for all manufactures. Instead, influenced by strong lobbying, in November 1977, the government announced a three-year assistance program. However, the need for structural adjustment in the sector was acknowledged, and a seven-year plan was set to stimulate the industries.

In November 1986, the government announced a TCF Plan. The declared objectives of the Plan were to promote the restructuring and revitalisation of the industries, to improve their efficiency and international competitiveness, and to reduce their dependence on assistance. The Textiles, Clothing and Footwear Development Authority (TCFDA) was established to implement the Industries Development Strategy. The Industry Plan began in March 1989 by eliminating quotas (except on some fabrics) and implementing tariff reductions to 45 percent for textiles and 60 percent for clothing, and reducing yarn bounty payments (a subsidy of 30 percent on costs) by March 1994, which was later brought forward to July 1992 and removed on 1 July 1995. Tariff levels were also reduced by another 5 percent by that date. In the early stages of the Plan the effective rate of assistance continued to be high (see Table 6). In 1989-90 it was 78 percent for textiles and 183 percent for clothing (IAC, 1990). It was also recognised that the industries still maintained an inward-oriented view. Consequently, in the March 1991 Industry Statement, the government announced significant alterations to the TCF Plan. To promote exports, in 1991, the government introduced the Import Credit Scheme. This allowed firms which added value to exports to reduce tariff duty payments on TCF imports (Cappling & Galligan, 1992, p. 249) which allowed producers in the TCF industries to acquire credits that can be converted to facilitate an import levy. The aim was to achieve a closer integration with the global industry by making the industries more trade-oriented and able of taking advantage of overseas opportunities (PC, 2003, p. 293).

After the termination of tariff quotas by March 1993, protection was in the form of tariffs only. Duty concessions for goods made and cut from Australian fabric, but with finishing completed overseas, are obtainable through Overseas Assembly Provisions (OAP) and a number of Policy By-law arrangements that permit concessional entry (usually duty free) for particular imports, which were used as inputs for further production. In addition, the government set a development package to assist the industries in the adjustment to lower levels of protection.

Between 1997 and 2000, the government provided over $520 million through the new Strategic Assistance for Research and Development (START) Program. Incentive payments were awarded as part of a national training system under the umbrella of the Modern Australian Apprenticeship and Traineeship system, targeting small and medium sized firms. Smaller firms have been given better access to export support, as the threshold for Export Market Development Grant assistance has been reduced from $30,000 to $20,000.

By July 2000 successive reductions were to bring the tariff rate for most fibres and textiles to a maximum of 15 percent, and tariffs on apparel and most other finished textile imports will be 25 percent, compared with the maximum 5 percent for other manufacturing, except Passenger Motor Vehicles (IC, 1996). In 2000, average effective rates (without the Import Credit Scheme) were to be 33 percent for clothing and 17 percent for textiles compared to 4 percent for the remaining manufacturing industries. Table 8 below provides a summary of the history of TCF protection.

However, in July 2000, after nine years of gradual reduction of tariffs, cutbacks were put on hold until January 2005. One outcome of this pause was to maintain a disparity in tariff rates for the sector and the rest of manufacturing. From 1 January 2005 tariffs for apparel and certain finished textiles were reduced from 25 percent to 17.5 percent until 2010 when they drop to 10 percent and then to 5 percent in 2015. Tariffs on cotton sheeting and woven fabrics, carpets will drop from 15 percent to 10 percent, and tariffs on sleeping bags and table linen stay at 7.5 percent between 2005 and 2010. Tariffs on items currently at 5 percent, for instance, textile yarns will not change.

In addition, during the transition period to lower tariff protection, the TAC sector has received budgetary assistance to encourage investment and innovation, through Strategic Investment Program (SIP). The funding to individual firms in a year is limited to 5 percent of their annual sales. The main objective of the SIP is to improve the competitiveness of TAC firms by encouraging investment and innovation (PC, 2003, p.174). It replaced the ICS whose orientation was directly on promoting exports. Table 9 provides the nominal and effective rates of assistance to TAC industries over the last three decades.

TABLE 8

HISTORY OF TCF ASSISTANCE, 1969-2000

Year	Action
1969	Temporary quantitative restriction on all knitted shirts and outer garments. They were removed after one month, but re-applied two years later for 18 months.
1971	Negotiations with foreign low-cost suppliers of clothing for 'voluntary' export restrictions.
1972	Tariff quotas introduced on a selection of intermediate and final goods.
1974	Import licensing re-introduced on imports from Taiwan. Voluntary Export Restraint Arrangements negotiated with Hong Kong, South Korea, India and China. Australia became a member of first Multi-Fibre Agreement.
1975	Country-specific quotas imposed.
1976	Non-discriminatory global quotas imposed.
1977	IAC TCF Inquiry. Three-year industry program announced.
1978	Tariff quotas introduced on a range of hosiery, knitted underwear and sleepwear.
1979	Tariff quotas introduced on certain fabrics. One-year extension to the three-year assistance program for TCF industries announced.
1980	IAC TCF Inquiry. Seven-year program of assistance for TCF industries announced. Sale of quota entitlements above base quota announced.
1981	The TCF Advisory Committee (replacing TCF Review Committee) established.
1982	Bounty assistance to local production of most yarns commenced. Start of seven year plan.
1986	IAC TCF Inquiry.
1987	TCF Industry Plan – the Button Plan – announced in response to IAC Report.
1988	Textile Clothing and Footwear Development Authority established. Changes to 1987 Plan announced as part of May Economic Statement. Changes included: the sunset for quotas brought forward by six months to 1995; and a five percentage point reduction in 1996 tariff levels.
1991	Changes to the 1987 TCF Plan announced as part of May Industry Statement. Import Credit Scheme introduced. Further changes in tariff cuts, quota elimination brought forward to 1993.
1992	Further changes to the 1987 TCF Plan announced in the July Industry Statement.
1993	TCF quotas abolished. Overseas Assembly Provisions Program introduced.
1995	Remaining bounties phased out.
2000	Tariff reductions put on hold until January 2005. The Strategic Investment Program (SIP) introduced.

Source: Based on IC (1997, Vol. 2) and PC (2003).

TABLE 9

NOMINAL AND EFFECTIVE RATES OF ASSISTANCE, 1968-69 TO 2000-01

Year	Textiles (ASIC 23)		Clothing (ASIC 245)		All Manufacturing	
	NRA	ERA	NRA	ERA	NRA	EFA
1968-69	25	43	58	108	24	36
1970-71	24	42	54	101	23	36
1975-76	23	50	47	96	16	28
1980-81	28	55	66	135	15	23
1981-82	26	54	90	216	16	25
1982-83	23	68	72	189	13	21
1983-84	23	69	81	222	13	22
1984-85	25	75	90	243	13	22
1985-86	23	72	56	136	12	20
1990-91	18	51	66	106	8	14
1991-92	16	46	54	84	8	13
1992-93	14	41	44	66	7	12
1993-94	12	37	39	59	6	10
1994-95	11	33	36	54	5	9
1995-96	10	27	33	50	5	8
1996-97	9	25	30	47	4	6
2000-01	6	17	19	34	3	5

NRA – Nominal rate of assistance;   ERA – Effective rate of assistance
Source: IC (1997, Vol.2, p. I.12) and PC (1998, p. 15).
Note: Due to the data limitations, the ERA beyond 2001 is provided for the industry group of Textiles, clothing, footwear and leather. The PC estimates indicate the following ERA (%): in 2001-02 of 18.6, 2002-03 of 17.6, 2003-04 of 17.1, 2004-05 of 16 and in 2005-06 of 15.2 percent (PC, 2007, Table 2.8, p. 2.19). Thus, despite a significant reduction the TAC industries remain the most highly protected.

5. THE MULTI-FIBRE AGREEMENT AND AUSTRALIA'S TAC TRADE

Multilateral coordination of protection began in the early sixties, with cotton textiles by a Short-Term Arrangement (STA) in cotton textile trade, initiated by the US who, at that time, faced declining international competitiveness of TAC, and under the flag of the GATT, in 1961. It evolved into a Long-Term Arrangement (LTA) in 1962 that introduced a system of quantitative protection against textile exports from low-cost developing countries. With successive renegotiations the LTA lasted until 1973. The core of the MFA is the quantitative restrictions on textile exports from developing countries, mainly through bilateral agreements on export quotas and voluntary export restraints (VERs).

Export quotas are allowed to be transferred from one category to another and from both previous and the following years to the current year. The MFA has been renegotiated every few years under the auspices of the GATT Committee on Textiles. At its beginning, the MFA dealt almost entirely with exports from developing countries. Over time, however, restrictions were also imposed on exports from developed countries, including Japan, Portugal, and Spain. Over the period, the MFA has extended to include a growing number of products and countries. A number of countries participated in the MFA at earlier stages and then adopted other restrictive trade policies.

Australia participated in the MFA in the earlier Long-Term Arrangement and in the first phase of the MFA, until December 1974 when the Government imposed global tariff quotas outside the MFA. However, Australia did not participate in the other three extensions of the Agreement. This decision was based on two factors; the failure of the MFA to reduce imports and on the adverse effect on Australia's relations with Asian countries (IAC, 1987, pp. I34-35). Consequently, in early 1975 the voluntary restraint agreements were substituted by unilateral quotas that operated until 1993. For instance, Bora and Pomfret (1995, p. 106) pointed out that about 30 percent of textiles and 90 percent of clothing were protected by import quotas. In the final, the fourth, phase of the MFA, there have been eight developed (importing) countries participating in the MFA, the US, Canada, the EU, Japan,

Austria, Finland, Norway, and Switzerland (Japan and Switzerland, however, have not imposed quotas and 36 developing and the newly industrialised (exporting) countries (Trela and Whalley, 1995, p. 285).

In 1974, major trading nations expanded coverage to man-made fibre products under the Multi-Fibre Arrangement (MFA). Under the MFA, import quotas were allowed to grow at the maximum rate of 6 percent per year. However, as Trela and Whalley (Trela & Whalley, 1990a) point out, imports from some countries, such as Korea, Taiwan and Hong Kong have been at the higher rate.

By the early 1980s the MFA was a comprehensive device for the control of international trade in TAC. However, a number of factors, including the bilateral character of the MFA import quotas, a less than full incorporating of products, changes in economic conditions in concerned countries, that have increasingly complicated the implementation and quantitative evaluation of the MFA (Gehlhar, 1997, p. 94). Therefore, in the recent Uruguay Round, it was agreed to transfer the products from the export quota restrictions under the MFA to the GATT, in four stages over the period of ten years, 1 January 1995, 1998, 2002, and 2005. At the same time it was agreed to reduce import tariffs on both textiles and clothing. The process will be facilitated by the Agreement on Textiles and Clothing (ATC), established for that purpose. In order to monitor the implementation of the ATC, the WTO has established the Textiles Monitoring Body (TMB) to report on the progress. From 1 January 2005, tariffs have been the major instrument of border protection (Smeets, 1995).

Whereas Australia was not affected directly by the quantitative restrictions under the MFA, the Australian trade was limited indirectly, through restrictions on exports from countries that use Australian inputs, such as wool. Australia was also affected by the MFA in another way. Since Australia has abolished quotas, the experience shows that exporting countries, in particular those who have exhausted their quota entitlements into the MFA countries often seek to supply their export excess to quota free Australia, often at prices below cost.

6. CONCLUSION

Since the late 1980s, the TAC industry assistance has declined considerably. However, the assistance provided by the Australian Government still remains significant. As the extent of protection has been reduced there has been a large increase in the exposure of Australia's TAC industries to international competition both in terms of the share of the local market accounted for by imports and in terms of export growth. While some of the TAC industries have increased exports as a proportion of their turnover, this proportion remains low. Given the disadvantages in labour costs, it is clear that Australia is unable to compete internationally in TAC trade, since labour costs are a crucial aspect of competitiveness in TAC manufacturing. Therefore, in these labour-intensive manufacturing industries Australia must address other competitive criteria, such as quality, service, and distinctive characteristics of products or brand names.

Important factors in further enhancing the overall performance and international competitiveness of TAC manufacturing in Australia will be investment in technology, research and development and innovative strategies. It is crucial that Australia takes advantage of its abundant natural resources and complements it with capital and technological improvements. However, the implementation of these strategies might be hindered by the smaller size of Australian TAC firms compared to the average size of overall manufacturing. Australia should also rationalise production, in order to benefit from economies of scale.

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AUTHORS' PROFILES:

Dr. Inka I. Havrila earned her Ph.D. from Victoria University, Melbourne, Australia in 2004. Currently, she is a senior lecturer in economics and research associate of the Centre for Strategic economic studies, Victoria University, Melbourne, Australia.

Dr. Pemasiri J. Gunawardana earned his Ph.D. from La Trobe University, Melbourne, Australia in 1988. Currently he is a senior lecturer in economics and research associate of the Centre for Strategic Economic Studies, Victoria University, Melbourne, Australia.

THE THEORY OF THE LIQUIDITY PREFERENCE, MONETARY POLICY AND THE NATURAL RATE OF INTEREST

Abe T. Aburachis, Gannon University, Erie, Pennsylvania, USA

ABSTRACT

It is argued that Keynes' Liquidity Preference Theory is a theory of financial intermediation and not a simple theory of the demand for money. It is further argued that changes in liquidity preference impinge on the real sector of the economy. Keynes argued that such changes act to change money values of assets and liabilities. Moreover, he further argued that such changes occur independently of any change in their underlying real productive potential by way of increased liquidity preference. And finally, these changes may lead to a fall in liability prices as investors shift their holding of financial liabilities to more liquid assets.

I. INTRODUCTION

The ratio which relates the income stream (yields) from real capital to its demand price (total value) is defined as the internal rate of return (IRR). Traditional theory does not distinguish clearly the IRR from the nominal rate of interest as a payment for the use of money. The traditional view has been to view the market rate as the "money side" of the "real rate" of interest. In the strict sense, the real and money rate of interest cannot diverge from their equilibrium path for too long because automatic market forces are always at work to prevent any divergence.

In a paper entitled "The Self Adjusting Economy", Keynes (Keynes, 1935) challenged the traditional view and argued that a fatal flaw of the traditional financial economics is the lack of an adequate theory of interest rates. His argument goes back to his dissatisfaction with the "real" rate of interest, which, according to his predecessors is determined by productivity (investment) and thrift (saving). For Keynes, traditional theory is one equation short of a determinate solution. This is the equation which gives the theory of interest rates as determined by the quantity of money and the state of the liquidity preference. The flaws that Keynes finds in traditional theory can be summarized in two propositions. First, there is a different internal rate of return (what Keynes calls the marginal efficiency of capital) for every level of employment. That is, traditional theory does not allow for the possibility of equilibrium at less than full employment. Keynes interpreted traditional theory as implying that the money rate of interest adjusts to the real rate in the sense that the real rate determines the money rate of interest. Keynes suggested that the marginal efficiency of capital (MEC) can be estimated from the stock exchange valuations of equity shares. He cautioned, however, against the use of equity valuations by stock exchanges because such valuations may be the outcome of speculative bubbles, instead of genuine fundamental market valuations. Thus, the focal point of this paper is that Keynes' liquidity preference theory should be viewed as a theory of asset allocation in the face of uncertainty, and not a simple theory of the demand for money. It is suggested that the theory of liquidity preference can not be understood without reference to the role of expectations, the non-neutrality of money, and investment, and how they are traced out in financial markets.

The plan of the paper is as follows: the focus of section two is the interdependence between the real and the financial sectors of the economy. Section three discusses the role of the financial system from the perspective of the liquidity preference function and the importance of the long-term rate of interest as an allocating mechanism in portfolio decision making. Section four relates the rate of interest to central bank actions designed to achieve its dual mandates, namely, price stability and maintenance of a high level of employment. We also estimate a simple econometric model relating the output gap to the natural rate of interest for the period 1994 quarter 1 through 2006 quarter 4. Section five concludes.

II. LITERATURE

Keynes' efforts to understand the forces operating on investment, which he viewed as the principal cause of volatility in market economies, led him to introduce the theory of liquidity preference, thereby bringing

individuals' time preferences and portfolio choices together and orienting them toward the future. The interdependence of liquidity preference and portfolio choice of individuals' decisions led to the abandonment of the notion that investment is determined by the physical productivity of capital. Specifically, Keynes viewed investors as comparing expected profitability of a given investment in relation to the rate of interest, so that, for him the return on investment and the market rate of interest are not the same. Writers like Wicksell and Fisher distinguished between the market rate of interest and the "natural" rate which Keynes followed in his Treatise (Keynes, 1930), but from the perspective of the General Theory, Keynes (Keynes, 1936) held the view that there is a different natural rate (or marginal efficiency of capital) for every level of employment, the quintessential idea of the General Theory.

Earlier writers took the natural rate or the real rate to be constant. For Keynes, of the General Theory the MEC is variable and will change with new investment, and since the MEC varies with the volume of investment and since income (employment) changes as investment changes, the MEC is _not_ determined unless the level of income is also determined. That is, unless the level of income is assumed to be given, or unless the rate of interest is determined independently of both the MEC and the level of income we _do not_ know at what level the MEC will be equal to the rate of interest, as it must be in equilibrium. In short, in an economy of fluctuating income, the marginal efficiency is indeterminate as long as the rate of interest is not determined. Viewed from a different perspective, one can say that earlier writers theorized that the market rate of interest adjusts by way of price movement to the real rate. But, for Keynes it is the MEC which adjusts to the money rate of interest. Keynes' words are: "Thus, instead of the marginal efficiency of capital determining the rate of interest, it is true (though not a full statement of case) to say that it is the rate of interest which determines the marginal efficiency of capital." (Keynes, 1936).

Keynes thought of his liquidity preference theory, that is, the role of the rate of interest in relation to the MEC, as the centerpiece of his explanation of the observed financial crises in market economies. Unlike previous theories of interest rates which concentrated on flows (saving and investment) the stock approach to interest rate determination is seen as doing more than clearing the supply and demand for current finance. Every change in the market rate of interest involves a reevaluation of existing securities as well as a transfer of funds from surplus to would be deficit spenders. If a change in market valuation provokes investment, there will be further repercussions. It is this ability of the rate of interest to move quite independently of the "real rate" which suggested to Keynes that one must know the nominal rate of interest in order to calculate expected returns in the evaluation of assets. One of Keynes' fundamental conclusions is that the level of income and the MEC adjust by way of investment to the rate of interest. For Keynes, the interaction between money, interest, and expectation determine the prices of capital assets, which, in turn, are traced out in financial markets.

Keynes' dissatisfaction with the classical theory of the rate of interest centers on his contention that the schedule relating saving to the rate of interest overlooks the impact on savings of changes in income and, by similar reasoning, it neglects the impact of investment on income, factors which led Keynes to conclude that savings and investment cannot shift independently. Keynes' argument can be summarized in the following simple model (see Surrey, 1988; and Edey, 1989):

$$(1) \qquad I = f(A , r)$$

$$(2) \qquad S = f(Y , r)$$

$$S = I$$

where I is investment, S is saving, Y is income, r is the "real" rate of interest, and A is the portion of investment which is determined by ("state of expectation") autonomous expenditure. Keynes argued that the saving function is mis-specified causing the two equation system to be under-identified. In other words, this system contains Y and r as endogenous variables to be solved in terms of a single exogenous variable, A. The introduction of the liquidity preference function made possible the determination of the rate of interest from an "outside" source, namely through the demand and supply of money. The extended system takes the following equations (see Surrey, 1988):

$$(3) \qquad \partial + S(Y , r) = B + I(A , r)$$

$$(4) \qquad Y + L(Y , r) = M$$

M will be given an interpretation if the two functions are consistent with the liquidity preference function.

III. NATURAL RATE OF INTEREST

Keynes viewed the role of the financial system as reconciling the desire of households to transfer purchasing power to the future in liquid form with the technological necessity of the economic system to carry a large stock of durable capital. The connecting mechanism between households' decisions to store wealth in liquid form and business decisions to accumulate capital is the rate of interest. He introduced the theory of liquidity preference not only to emphasize interdependence between the real and financial sectors of the economy, but to differentiate the concept of hoarding from what others meant by hoarding. Hoarding and saving were used interchangeably. One can then substitute time preference for saving and liquidity preference for hoarding or portfolio decisions. If we are induced to part with our liquid wealth we face two alternatives: we can invest in financial assets or capital assets. This, in effect, makes the rate of interest one of the determinants of the price of capital assets. The other determinant is the expected return from the use of capital, which fluctuates independently of changes in the rate of interest on money.

Keynes emphasized that investment may fluctuate, even if production costs are stable, because of two uncertain factors. The first is the liquidity preference function where he distinguished three motives for holding money (namely, the transaction motive, the precautionary motive, the speculative motive, and later the finance motive). The second one is the state of confidence with respect to the yield on capital. Moreover, fluctuations in liquidity preference offset fluctuations in prospective yields because a decline in confidence with respect to prospective yields may act to raise liquidity preference.

Thus, from a different vantage point, Keynes sought to emphasize that fluctuations in employment are caused by fluctuations in investment, but fluctuations in investment are, in turn, the result of the instability of the financial sector because of the interrelations between money, interest rates, and expectations, which determine the price of capital as sets which are traced out in financial markets. It is this emphasis on the interrelation between the monetary and the real sectors of the economy which distinguish Keynes' monetary analysis from his predecessors and, indeed, Modern Business Cycle analysts. As Keynes put it: "expectations concerning the future affect what we do today. It is when we have made this transition that the peculiar properties of money as a link between the present and the future must enter into our calculations . . . Money in its significant attributes is, above all, a subtle device for linking the present and the future; and we cannot even begin to discuss the effects of changing expectations on current activities except in monetary terms." (Keynes, 1935).

The Keynes of the General Theory presents the interrelation between the financial and the real sectors of the economy primarily in terms of long-term bond prices, a less general concept. In the Treatise on Money, Keynes presented the arguments in terms of securities, which included both stocks and bonds. For a detailed discussion of such financial models, see Hicks (Hicks, 1974), Fisher (Fisher, 1976), Miller (Miller, 1984), Davidson (Davidson, 1972), and Leijonhufvud (Leijonhufvud, 1968). Financial markets, in Keynes' liquidity preference, are composed of two groups, *bears* and *bulls*. Those who think that securities will yield a higher return than liquid assets, which are not subject to capital losses, are bulls and will hold securities. Those who are concerned about a decline in security prices are bears and hold liquid assets. The bears who hold liquid assets include both those who attach a high probability to a decline in security prices, reflected in a high proportion of liquid assets in their holding, and those who are risk averse and concerned about changes in security prices. Keynes also argued that expectations of investors in the bond markets were inelastic and change very slowly, and depend not only on the current rate of interest but more importantly on the "normal" rate of interest. When current rates are below expected long-term rates, bond prices will exceed what is regarded as a long-term normal and a price

decline will be strongly expected. When current rates are above expected long-term rates, there will be expectations of a bond price rise and decline in the holding of liquid assets.

IV. ANALYSIS

While Keynes attached great importance to the rate of interest, we know that there are many concepts relating to interest rates. These will include the following:

> Long-term equilibrium real interest rate: Determined by economic fundamentals such as population growth, productivity, and saving preferences.

> Neutral real interest rate: Determined by all the disturbances to the economy that influence the prospect of closing the output gap in the medium term.

> Actual real interest rate: Determined by the central bank's desire to conduct an expansionary or contractionary monetary policy. When economic disturbances occur, the central bank sets the real interest rate lower or higher than the neutral level with a view to stabilizing the economy so that monetary policy objectives are achieved.

Keynes added that what he called the normal rate of interest is highly conventional. As he put it: "Any level of interest which is accepted with sufficient conviction is likely to be durable will be durable." (Keynes, 1936). For more on this, see Cottrell (Cottrell, 1994), Rogers (Rogers, 1989), Littleboy (Littleboy, 1990), Morgan (Morgan, 1978), Fender (Fender 1981), and Fletcher (Fletcher, 1987).

The Federal Reserve as well as other central banks use interest rates as the monetary instrument. The rate may be set so that monetary policy is expansionary, contractionary, or neutral. The concept "neutral " rate of interest originated by Knut Wicksell (1907) who maintained that the general price level would rise or fall indefinitely as long as the real interest rate deviated from the neutral interest rate, but since the subject of this essay is Keynes' theory of the liquidity preference we will use his definition of the neutral rate. Keynes defines the neutral rate of interest rate as "the neutral rate of interest can be ….defined as the rate of interest which will prevail in equilibrium when output and employment are such that the elasticity of employment as a whole is zero." Of course there is no definitive definition of the neutral interest rate, and there are a number of approaches to it in the literature.

Yellen (2005), president of the Federal Reserve Bank of San Francisco states: "Conceptually, policy can be deemed 'neutral' when the federal funds rate reaches a level consists with full employment of labor and capital resources over the medium run." Accordingly, in this essay, the neutral rate of interest is the real interest rate level, which in the medium term is consistent with a closed output gap. The output gap is defined as the difference between actual and potential output, which is the output level that is consistent with stable inflation over time.

It is well recognized that the neutral rate of interest can change over time. Yellen describes this as follows: "The value of [the neutral rate] depends on the strength of spending -- that is, aggregate demand for U.S. produced goods and services. Aggregate demand, in turn, depends on a number of factors. These include fiscal policy; the pace of growth of our main trading partners; movement in asset prices, such as stocks and housing, that influence the propensity of households to spend and save; the slope of the yield curve, which determines the level of the long-term interest rates associated with any given value of the federal funds rate; as well as the pace of technological change, which influences spending…"

Yellen is referring here to different disturbances to the economy that may lead to changes in the neutral rate of interest. Disturbances to the economy may influence the prospects of closing the output gap in the medium term. Positive demand shocks of a certain duration tend to widen the output gap. To counteract this, and ensure the output gap stabilizes at around zero in the medium term, the real interest rate must increase. Similarly, negative demand shocks of certain duration will tend to reduce the output gap. To counteract this, and stabilize the output gap at around zero in the medium term, the real interest rate must be reduced. This means that the neutral interest rate has fallen.

Where as the long-term equilibrium interest rate is determined by factors such as productivity, population growth, and saving preferences, the neutral interest rate is additionally influenced by various disturbances that influence the economy in the medium term. Examples are changes in fiscal policy, and consumer and investment demand. Moreover, in an economy characterized by stickiness of wage and price formation, the central bank can influence the interest rate and economic growth by changing the policy rate. The real interest rate may therefore deviate from the neutral rate, depending on how the central bank seeks to orient monetary policy. This in turn depends on the central bank's trade-off between different objectives, such as stable inflation on the one hand, and stable output and employment on the other.

There are a number methods for assessing the neutral real interest rate (see Giammarioli and Valla (2004) for an overview). One possible estimate of the neutral interest rate is the average of historical real interest rates. If the neutral interest rate is constant over time, an average of historical real interest rates over an entire business cycle will provide an indication of the level of the neutral real interest rate. The problem with this method is that the neutral real interest rate can not be assumed to be constant over time. It can also be difficult to decide when a business cycle starts and ends.

Other methods attempt to measure market participants' expectations regarding future short-term real interest rates. This is done by means of real bond returns, market surveys (for example general equilibrium by Consensus Forecasts) and by estimating market participants' future interest rate expectations via market rates (implied rates). See Kloster (2000). One commonly used method for estimating the neutral real interest rate is to specify an econometric model, combine actual data and a apriori assumptions about developments in the unobservable variables (often, other unobservable variables such as potential output and equilibrium unemployment, are also included), and to use the Kalman filter to estimate the neutral real interest rate.

The neutral real interest rate can also be estimated using dynamic stochastic general equilibrium models, which are based on so-called New-Keynesian theory. In these models, the participants are forward looking, while the central bank sets the interest rate with a view to stabilizing inflation and output over time. These models are theoretically appealing. On the other hand, the models do not necessarily have to be true in reality. See Gali (2002) and Amato (2005).

It is clear from the above that there is no simple method for estimating the neutral rate of interest. A number of methods exist, and there is uncertainty attached to all of them. Nevertheless, the literature, in which a broad range of different methods are used, can generally contribute to providing an overall picture of the magnitude of the neutral real interest rate.

Laubach and Williams (2003) estimate the neutral real interest rate in the U.S. from the early 1960s up to 2002. They find the neutral rate has fallen gradually over time. A possible explanation for this trend may be a fall in the inflationary risk premium. Aside from the general fall in the long-term trend, Laubach and Williams find that the neutral real interest rate was temporarily low in the mid-1990s, but rose in the latter half of that decade. A widely accepted explanation for the latter is the high productivity growth of the latter half of the 1990s. In the first few years of this century, the neutral real interest rate fell in the U.S., which can be explained by the sharp fall of equity prices and slower growth in these years. Laubach and Williams estimate the neutral real interest in the U.S. at about 3 per cent in mid-2002. The OECD (2004) updates Laubach and Williams study, finds that the neutral real interest rate in the U.S. may be just over 2 per cent at the end of 2004.

Manrique and Manuel Marques (2004) estimate the neutral real interest rate in the U.S. and Germany from the mid-1960s to the end of 2001. Their results for the U.S. are comparable with those of Laubach and Williams. Amato (2005) argues that the neutral real interest rate in both the U.S. and the Euro area may be in the range of 2.5 - 2.75 per cent, which is consistent with estimates of the Bank of International Settlement (2005). Goldman Sachs (2005) estimates the neutral real interest rate in the U.S. at about 2.5 per cent. Wu (2005) argues that the neutral real interest rate in the U.S. has varied between 4 and 2 per cent since the 1960s and that it was about 2.5 in early 2005.

In the rest of this essay, a neutral rate of interest is estimated for the U.S. using data for the 1994:1 - 2006:4 period. According to Keynes, the neutral rate of interest is the long-term rate that is consistent with full employment. In this essay, we also introduce a new rule emphasizing the role of long-term interest rates and aggregate output which is consistent with the fundamental Keynesian theoretical framework concerning the macro economy. We estimate the neutral rate of interest beginning in 1994:2, because during this period the federal funds rate was used as the publicly announced operating target of the Federal Reserve monetary policy. See Thornton (2006). The federal funds rate is a revealing indicator of the stance of monetary policy during the above period.

After estimating the neutral rate of interest, a new monetary policy rule is developed. The primary goal of the proposed rule is to insure that the macro economy produces an output equal to its full-employment level. This section concludes by an application of a simple version of the policy rule and how it can be used.

In estimating the neutral rate of interest, it should be recognized the there are disagreements as to what constitutes the full-employment level of output. Different measures of full-employment output can yield different estimates of the neutral rate of interest. In this essay, real potential gross domestic product estimates by the Congressional Budget Office are used as the measure of full-employment output. Given the full-employment level of output, the output gap (OG) can be measured as the difference between real GDP and real potential GDP.

We next test whether there is a relation between the output gap and the interest rate. The yield on the 10-year Treasury Constant Maturity security is used as a measure of R. If such a relation exists, and can be estimated, the relation can yield an estimate of the neutral interest rate. The estimate would be consistent with Keynes's definition of the neutral interest rate -- the rate prevails when the economy is producing an output equal to its full-employment level. Before the estimation of such a relation, we ran a Johansen cointegration test to see if the two variables share a common stochastic trend. The sample period covers 1959 quarter 1 to 2006 quarter 4. The results presented in appendix 1 indicate such a relation exists.

To find the value of the neutral interest rate, the following regression was estimated:

$$R = \beta_0 + \beta_1(OG) + \varepsilon \qquad\qquad (5)$$

where R is the ten year government bond yield and OG is the output gap. β_0 is the intercept and β_1 is the slope coefficient of the regression equation. In this equation, our primary purpose is to estimate the relationship between the ten year government bond yield and the output gap, knowing well that other factors may be important determinants of the bond yield. The equation was estimated by the Kalman filter which allows for the coefficients to vary over time and making use of the maximum likelihood method of estimation. In equation (5), when the economy is producing an output equal to its full-employment level, OG will be equal to zero. Therefore, in equation (5), the interest rate that will prevail when OG is equal to zero is the estimated value of the regression intercept, β_0. The intercept in equation (5) is the neutral interest rate. We opted for the use of a simple method of estimation, because neither a small econometric model such as the one used by Laubach and Williams, a VAR, or a so called DSGE model give better results. See Favero (2007). All models suffer from use of sampling errors, model uncertainty, and data revision.

The estimates of equation (5) are presented in table 1. The intercept, which is equal to the neutral interest rate, is equal to 4.55. The slope is negative and small in magnitude consistent with studies cited above that the neutral rate of interest has been declining in recent years. It is also consistent with Thornton's (2007) empirical results when the Fed began targeting the federal funds rate. The estimate of the neutral rate of interest of 4.55 implies that when the neutral rate of interest is equal to 4.55 per cent, the economy is producing output equal to its full-employment level. When the neutral rate is above 4.55, output is likely to be above the full-employment level and when the neutral rate is below 4.55, output will be below the full-employment level.

With the estimate of the neutral rate of interest, a new policy rule can be developed. This rule relates the federal funds rate to the difference between the actual interest rate and the neutral interest rate. Before running such a regression, we tested whether the funds rate and the difference (DI) between the actual rate of interest and the neutral interest rate share a common stochastic trend. The Johansen method of cointegration indicated that the two variables do have a common stochastic trend. The results of cointegration are presented in appendix 2.

Table 2 presents the results of regressing the federal funds rate on (DI), the difference between the actual funds rate and the neutral rate of interest.

The results of table two suggest the following monetary policy rule:

$$F = 5.33 + 0.275(DI) \qquad\qquad (6)$$

Where F is the federal funds rate and DI is the difference between the actual funds rate and the neutral rate of interest. According to this rule, the macro economy would be stabilized at full-employment level if the Fed set the federal funds rate consistent with equation (6).

In equation (6), when the actual long-term rate is equal to the neutral rate of interest, the interest rate gap is equal to zero and F is equal to 5.33. The intercept in equation (6), 5.33, can be considered as the neutral federal funds rate, a level of funds rate consistent with full-employment of the macro economy, DI = 0. Note that if DI > 0, the federal funds rate predicted by the rule will be higher than the neutral funds rate, and if DI < 0, the federal funds rate predicted by the rule will be lower than the neutral funds rate. For assessing the stance of monetary policy, a simple version of the rule, (for example for August, 2007), the rule is:

$$F = 5.3 + (4.56 - 4.55) = 5.31 \qquad\qquad (7)$$

where 5.3 is the neutral federal funds rate, (4.56 is the yield on the 10-year Treasury Constant Maturity security – August, 2007) and 4.55 is the neutral rate of interest. Equation (7) is a successful approximation of equation (6) -- prediction from equation (7) is very close to those from equation (2).

V. CONCLUDING REMARKS

In a recent contribution, Modigliani et al. (Fabozzi, Modigliani, and Ferri, 1994), assert that Keynes' Liquidity Preference is a theory of choices between money, namely currency and demand deposits and bonds. Tobins' (Tobin, 1958) Liquidity Preference is given a similar interpretation. Each is based on the concept of risk. But risk aversion is neither the only nor the most important part of Keynes' theory of the liquidity preference. Keynes introduced the theory of the liquidity preference in order to bring together individuals' time preferences and portfolio choices and orienting them toward the future. Keynes thought of his liquidity preference theory, this is, relation to the role of the MEC, as the centerpiece of his explanation of the observed financial crises in market economies. Unlike previous theories of interest rate determination which concentrated on flows, the stock approach to interest rate determination is seen as doing more than clearing the supply and demand for current finance. Every change in the market rate of interest involves a reevaluation of existing securities as well as transfer of funds from surplus to would be deficit spenders. As Keynes put it, liquidity preference "results from the existence of uncertainty as to the future of the rate of interest, provided that there is an organized market for dealing in debts. For different people will estimate the prospects differently and any one who differs from the predominant opinion as expressed in market quotations may have a good reason for keeping liquid resources." (Keynes, 1936). The division of financial analysts into bears and bulls creates a role for monetary policy to influence market expectations, since neither bears nor bulls hold their views about the direction of change of interest rates with certainty. It is this broader concept of liquidity, which, unlike modern theories based as they are on risk aversion, give individual investors the flexibility to revise their portfolio as new information becomes available. For more on this see Runde (Runde, 1994). Keynes' Liquidity Preference Theory, in short, is a theory of changes in the money values of assets and liabilities which

occur independently of any change in their underlying real productive potential by way of increased liquidity preference leading to a fall in liability prices as investors shift their holding of financial liabilities to more liquid assets.

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APPENDIX 1

Johansen Cointegration Test Summary
==
Date: 09/05/07   Time: 19:44
Sample: 1959:1 2006:4
Included observations: 189
Series: OG R
Lags interval: 1 to 2

Selected (5% level) Number of Cointegrating Relations by Model
==

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	0	1	0	1
Max-Eig	1	1	1	0	1

==

Information Criteria by Rank and Model
==

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend

==
Log Likelihood by Rank (rows) and Model (columns)

0	-1141.733	-1141.733	-1141.729	-1141.729	-1140.983
1	-1133.658	-1132.774	-1132.774	-1132.275	-1131.563
2	-1133.523	-1131.767	-1131.767	-1130.675	-1130.675

==
Akaike Information Criteria by Rank (rows) and Model (columns)

0	12.16648	12.16648	12.18760	12.18760	12.20087
1	12.12337*	12.12460	12.13518	12.14047	12.14352
2	12.16426	12.16685	12.16685	12.17646	12.17646

==
Schwarz Criteria by Rank (rows) and Model (columns)

0	12.30370*	12.30370*	12.35912	12.35912	12.40670
1	12.32919	12.34758	12.37531	12.39775	12.41796
2	12.43870	12.47558	12.47558	12.51950	12.51950

==

TABLE 1

Modelling R by Maximum Likelihood
        The selection sample is: 1994(1) - 2006(4)

Log-Likelihood is 31.7843 (-2 LogL = -63.5686).
Prediction error variance is 0.185669

Summary statistics
 std.error   0.43089
 Normality   1.5216
 H(16)   0.81744
 r(1)   -0.00079066

r(5)   -0.075450
DW   1.9966
Q(5,2)   5.9247
Rd^2   0.11860

Variances of disturbances.

Component	Value	(q-ratio)
Level	0.066302	(1.0000)
Slope	0.00000	(0.0000)
Cycle	0.0082551	(0.1245)
Irregular	0.050698	(0.7646)

Parameters in Cycle

Variance	0.11102
Period	9.5767
Period in years	2.3942
Frequency	0.65609
Damping factor	0.96210

State vector analysis at period 2006(4)
 - level is 4.55324 with stand.err 0.276461.
 - slope is -0.043638 with stand.err 0.0368022.
 - amplitude of Cycle 1 is 0.216126

Regression effects in final state at time 2006(4)

	Coefficient	stand.err	t-value	prob
OG	-0.00122	0.00106	-1.14912	[0.25609]

APPENDIX 2

Johansen Cointegration Test Summary

==
Date: 10/07/07   Time: 15:37
Sample: 1959Q1 2006Q4
Included observations: 189
Series: DI1 FFR
Lags interval: 1 to 2
==

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend

==
Selected (5% level) Number of Cointegrating Relations by Model (columns)
==

Trace	1	1	2	1	2
Max-Eig	1	1	2	1	2

==
Log Likelihood by Rank (rows) and Model (columns)
==

0	-473.1724	-473.1724	-473.1612	-473.1612	-472.6892
1	-467.0158	-458.2056	-458.1952	-457.9503	-457.7653
2	-466.4221	-456.0781	-456.0781	-455.7251	-455.7251

==

Akaike Information Criteria by Rank (rows) and Model (columns)
==
```
   0    5.091771  5.091771  5.112817  5.112817  5.128987
   1    5.068951  4.986303*  4.996775  5.004765  5.013389
   2    5.104996  5.016700  5.016700  5.034128  5.034128
```
==
Schwarz Criteria by Rank (rows) and Model (columns)
==
```
   0    5.228988  5.228988  5.284338  5.284338  5.334812
   1    5.274776  5.209280*  5.236904  5.262046  5.287823
   2    5.379429  5.325438  5.325438  5.377170  5.377170
```
==

TABLE 2

Modelling FFR by Maximum Likelihood
        The selection sample is: 1994(1) - 2006(4)

Log-Likelihood is 50.9645 (-2 LogL = -101.929).
Prediction error variance is 0.108086

Summary statistics
 std.error   0.32876
 Normality   2.7983
 H(16)   1.2740
 r(1)   0.028538
 r(5)   0.064881
 DW   1.9254
 Q(5,2)   1.1061
 Rd^2   0.50914

 Variances of disturbances.

Component	Value	(q-ratio)
Level	0.019906	(0.5049)
Slope	0.039425	(1.0000)
Cycle	0.005471	(0.1388)
Irregular	0.0043896	(0.1113)

 Parameters in Cycle

Variance	0.17458
Period	11.060
Period in years	2.7650
Frequency	0.56809
Damping factor	0.98421

State vector analysis at period 2006(4)
 - level is 5.33294 with stand.err 0.268763.
 - slope is 0.274894 with stand.err 0.271091.
 - amplitude of Cycle 1 is 0.363067

 Regression effects in final state at time 2006(4)

	Coefficient	stand.err	t-value	prob
DI1	-0.10192	0.07443	-1.36932	[0.17714]

A MARKET FORCES MODEL OF ECONOMIC BEHAVIOUR:
DEFINING ENTREPRENEURIAL PERFORMANCE, INNOVATION AND ECONOMIC DECLINE

Ken R. Blawatt, University of the West Indies, Cave Hill, BARBADOS

ABSTRACT

This theoretical paper challenges neo-classical economics in defining the operation of the marketplace and the economy. It develops the micro factors bedded in marketing constructs that are in fact extensions to those presented in behavioural economics. It proposes a new paradigm that better explains the demand concept still entrenched in much of today's economic thinking. The paper develops the value – utility paradigm (Blawatt, 2004) to account for economic activity with reference to the product life cycle (PLC). The result is a more comprehensive model that defines the role of entrepreneurship and the need for continuous innovation as essential to maintaining competitiveness and economic health.

The paper begins by establishing alternative theoretical micro-economic factors that would actually follow on current cognitive-psychological economic thinking. It employs these to create an explicative model showing that an economy can be defined by two major sectors, an alpha or dynamic entrepreneurial sector and a beta sector that is characterized as a managed, (Baumol, 2000) and declining sector. The implications confirm the need for dynamic entrepreneurial activity to offset older conventional industries as they decline or are absorbed by others. It opens the way for further research into why some nations prosper and grow while others do not, based on the entrepreneurial behaviour in the country, (Global Entrepreneurship Monitor, 2004).

Keywords: *Market Forces, Utility-Value Paradigm, Prospect Theory, Managed Economy, Dual Economy, Behavioural Economics, Cognitive Decision-making, Buying Behaviour, Entrepreneurial Economics*

1. INTRODUCTION

Economists have only recently addressed the need to include human social and psychological dimensions to estimates of economic behaviour. Neo-classical economics has, for almost three centuries, set aside these derivatives of consumer activity in favor of the more purely cognitive and mathematical treatment of individual acquisition of goods and services. Typically researchers and authors have applied utility and expectancy theories, probability theory, marginalism and such where, for the most part the result has been essentially a numerical expression derived from cognitive assumptions about rational behaviour that is often constrained by nontransferable parameters. For all that effort the results have been less than stellar and often at odds with market behaviour (Harrison et al, 2003).

As a consequence and in an effort to improve micro-tools, economics researchers incorporated psychological factors hopeful of adding a more robust configuration to their calculations. It was expected that "behavioural economics" with the new "interdisciplinary study of the interface, or sometimes the gap, between economics and psychology," (Lea, 2001) would move the discipline toward a realistic tableau taken to better define individual economic behaviour. One of the more renowned efforts by Kahneman and Tversky (1979) was considered to be a seminal work toward resolving the ambiguities often found in prior research.

1.1 Developing Market Factors that Define Micro Economic Activity
The problem is it little matters what variable is singled out for economic treatment, there is no one measure; preference, utility, satisfaction, desire and so on, that can effectively represent individual economic behaviour, (Foxall, 2005). The paper posits that the penultimate progression of the utility - psychological -sociological shift leads to a marketing oriented measure of customer economic behaviour that is represented by two defining constructs; a cost-value (c-v) axis and a utility-benefit (u-b) axis. The c-v and u-b expressions are extracted from marketing parameters that summate consumer/customer economic behaviour.

1.2 The Entrepreneurial Macro-economic Model.

The paper then develops a macro-economic model that presents the role of entrepreneurship as a consequence of market forces where the acquisition of goods is motivated by one or more of four expectations or factors in the paradigm; cost, utility, value and benefit. New businesses are born in the alpha quadrant of value and benefit, where innovation and new technology offer a product or service that is unique and appeals to individuals who seek that form of satisfaction. The need for new software, for example is associated with the need for better performance, or increased output, and a higher value (price) is justified. On the other hand the old software is standard material and while large numbers of buyers may want the product, they do so only at a lower price since all that is of value is the utility of the product. It has less to offer the buyer either in terms of new knowledge, innovation or application and thus contains smaller intrinsic value.

Once competitors become aware of a new product, in particular the effect it may have on their own financial situation, they become competitively active by building on their old product or perhaps incrementally changing it or creating their own substitute. This places the innovator in a challenged position and the enterprise finds it must reduce costs and price. Moreover it moves the innovative entrepreneur into the cost – utility segment of the marketplace in which the primary advantage is price leadership. The enterprise may engage in a price/cost adjustment, or a number of these, in an effort to stay in business. It might then move to offshore production, which signals a stage of product maturity and promise of decline. It has moved along the PLC to the beta sector of the economy where eventually there is no longer sufficient economic incentive to maintain the product, or the business and the operation declines, closes down or is acquired.

But the entrepreneurial organization does not permit this to happen and constantly re-invents its product or introduces new technologies to maintain an alpha position. The paper concludes by discussing the need for future empirical work.

2. ECONOMIC BEHAVIOR

Economists have only recently addressed the need to include human social and psychological dimensions to estimates of economic behaviour. Neo-classical economics has, for almost three centuries, set aside these derivatives of consumer activity in favor of the more purely cognitive and mathematical treatment of individual acquisition of goods and services. Typically researchers and authors have applied utility theories, probability theory and expectancy theory among others in describing human behaviours where, for the most part the treatment has been essentially a numerical expression derived from cognitive assumptions about rational behaviour.

Yet for all that development the results have been ambiguous at best and often at odds with market behaviour. As a result and in an effort to improve micro-tools that would seemingly replicate economic behaviour leading researchers incorporated psychological factors hopeful of adding a more robust configuration to their calculations. Lea (2001) argues that the introduction of economic psychology as the interdisciplinary study of the interface between economics and psychology better defines individual economic behaviour. The melding of the two disciplines is seen not so much as a reaction to inadequacies but rather a priori as a move to improve a functionally acceptable methodology. "Behavioural Economics is the combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications."(Mullainathan and Thaler,)

 It is interesting to note Camerer and Loewenstein (2002) find the concepts incorporated in behavioural economics are in fact a re-emergence of psychological dimensions first noted in Adam Smith's less known text The Theory of Moral Sentiments in which Smith establishes the importance of psychological factors to explain economic behaviour. More recently Simon (1974) introduces the argument that rationality requires the consideration and effect of emotions in choice behaviour where human decision-making is influenced by affective and perhaps even conative inputs that play on cognitive mechanisms.

Yet even so the move to include elements of the social sciences within the algorithms and estimates of economic behaviour does little to fully explain individual behaviour in economic activity. What occurs is that the application of psychological factors is based almost entirely on subjective interpretation as to which psychological variables best describe the decision process. On one hand the approach may be to examine the trade-off of risk perceptions against fear of loss while another approach may subsume perceptional behaviour in endowment experiments using students in a contrived situation. Even so, what underscores the problematic aspect of the process is the uncertainty of the assumptions. It is assumed that individuals have well defined and stable preferences, that there is always a desire to maximize expected utility and they are Bayesian information processors (Rabin, 2002). Given that human decision-making is not so narrowly definable, the approach is potentially flawed since "the multiple causation of human economic consumption often renders such interpretive accounts piecemeal or suspect because they fail to handle the whole range of influences on consumer choice…." (Foxall, 2003).

The paper argues that economic behaviour is but a small shift toward the realities already in practice in the theories used by social scientists and marketing scholars. The expectation that a single affect or decision point serves as the criteria to explain buyer motivation is somewhat unrealistic. Instead the research must apply a more robust approach to explain the dynamic of economic behaviour and then to include it in a more comprehensive model of economic behaviour.

3. CLASSICAL MICRO-ECONOMIC FOUNDATIONS

Micro economics begins with the acceptance of the term "utility" to explain the measure of real or fancied satisfaction or happiness the individual gains from economic activity in which "the utility theory is an attempt to infer subjective value, or utility, from choices." (Bell et al, 1988). The theory is applied to a range of economic activities. On the one hand it is used to examine decision-making under risk, as in selecting one investment over another, using specific probability assignments to the condition where probabilities are not as discernable as in decision-making under uncertainty. On the other hand utility theory is applied to individual purchase of goods from which point the marginal utility in regard to purchasing the next unit is diminished and so on to the point where the individual is indifferent to acquiring any more of that particular good. The resulting set of indifference curves is then taken to establish demand curves for the item in question.

In any case the use of probabilities is usually subjective. In the situation where the economist examines an individual utility function in acquiring a product, for example it is referred to as the descriptive approach. If the objective is to construct a rational model of behaviour or decision-making it is termed a normative approach with the effort to bridge these two methods as a prescriptive approach. In each case there is a conscious effort to quantify a presumed function using utility theory.

The models used by economists to describe individual human behaviour are based on the concept of utility maximization, expressed as:

$$\text{Maxim } U = f(X, Y))$$

where 'X' & 'Y' are taken to be the measurable quantities of goods or services. Since the term on the left-hand side of the expression, utility '**U**', is neither observable nor measurable economists resort to individual preferences for goods and services to indirectly represent the utility (satisfaction) gained from consumption of these items.

The procedure is governed by a number of assumptions stating that:

1. Individuals can make choices and rank their preferences for goods and services.
2. Individuals are rational in their choices.
3. More is preferred to less.
4. Additional units consumed provide less additional satisfaction relative to previous units consumed (the more you have of a particular good, the less satisfaction you receive with additional consumption of that same good).

Utility was taken to be a measurable dimension with regard to an individual and her or his relationship to each good available in society. It held the assumed promise of being able to identify the maximum desired utility, or satisfaction in society and then to maximize it for the common good. In this approach utility is represented as the individual preference one has toward a product using a numerical value to

quantify the extent of preference. Thus an assigned score of 10 for a bottle of Coca Cola indicates a higher level of desire over a score of 7 for Pepsi Cola. In time, however, neoclassical researchers adopted the concept of preferences that while still applying a utility value to products actually uses the scores to reveal degrees of preference and not absolute preference differences.

The utility concept is applied to both single attribute as well as multi-attribute items. It is a key assumption that the decider always chooses the alternative for which the expected outcome will maximize his or her utility (EU). In each case the values assigned to the utility measures are assumed by the researcher to reflect preferences. In most cases the values are measured under laboratory conditions or within contrived settings such as students in a classroom. The researcher then applies probability theory to the process and develops a generalization about economic behaviour.

A refinement of utility theory is the application of marginal utility wherein the perceived economic value of an item is the result of marginal utility and marginal cost. Here it is taken that the most important decision occurs at the point of the marginal or last unit of consumption or production. What is the consequence or utility of acquiring the next item when one already has one or two in hand? The area gains further importance since the theory of marginal utility leads to the estimation of indifference curves and economists develop demand curves from the indifference curves for a product or service.

3.1 Utility and Behaviour

For the many decades that economists assigned their perceived values of purchase choice behaviour to express preferences and individual choice the results have been varied and in many cases inconclusive. There has been an inconsistency in the ability of estimates and models to predict economic behaviour with any reliability. Harrison et al (2005) in concluding their study on utility theory state that, "The most important conclusion we draw is that EUT (Expected Utility Theory) is hard to test, and that its main weakness as a theory may be the difficulty of undertaking operationally meaningful tests of it. Thus it is not an 'ex hypothesis'….so much as it was never an operationally meaningful hypothesis when tested unconditionally." The paper controls for the effect of risk and the indifference curve yet even so finds that expectancy utility theory cannot be tested and thus presents a major weakness as to efficacy. Here we see a confirmation that pure utility methodology is problematic and seemingly requires the acceptance of something more, perhaps behavioural elements such as attitude.

Minkler (1997) takes a more aggressive position by arguing that when utility theory is used by itself the theory is descriptively incomplete, theoretically flawed and ethically questionable. He proceeds to declare that the incorporation of a "commitment function" remedies the problem, again confirming the need for the inclusion of more socially derived values other than those subsumed through "perceived" rationality.

An even more conclusive argument is presented by Bazerman and Malhotra (2005) who submit that the conventional economic rationale used in developing governmental policy initiatives and public direction is flawed and that this "failure to incorporate the lessons from other social sciences leads to inferior public policy." They go on to disclaim the five pervasive economic assumptions that serve as "guiding policy principles and destroy values in society," including:

1. Individuals have stable and consistent preferences
2. Individuals know their preferences and pursue them with volition
3. Individuals make decisions based on all the evidence available to them
4. Free markets solve economic problems and
5. Credible empirical evidence consists of outcome data, not of mechanism data.

The list is expanded with Rabin's (2003) perspective of "importantly wrong" assumptions about people that subsume they are:

6. Bayesian information processors who
7. Maximize their expected utility,
8. Are self interested, narrowly defined and can
9. Apply exponential discounting weighting current and future well-being and
10. Have only 'instrumental'/functional taste for belief and information.

In effect most if not all assumptions used by economists in pursuit of utility theory and those deriving from utility theory are seen as at least inappropriate if not purely erroneous in those applications dealing with human economic behaviour.

3.2 Superseding the Utility Function

The underlying assumption of rational choice theory is that selected utility factors, the use of alternatives and the outcomes thereof can universally satisfy the rules of economic choice; that the calculated values accurately report consumer expectations and as such may be extended to produce predictive models of rational choice. These expectations are not realistic. Camerer (1999) points out, "The models have been "grossly inconsistent with findings from psychology" and that "for decades social scientists have criticized economic models for assuming too much rationality even as economists defend the models as useful approximations." (Camerer, 2000).

Even so there is a considerable reluctance to accept reality. Economists continue to apply the concept of utility even though it is flawed. The apparent rationale is that despite the lack of realism in the results, the issue is too important to accept the notion it might be flawed. There is the countervailing expectation that somehow it will one day prove valid. As Baron (2003) obliquely notes,

> "I have argued that most of the inconsistencies and other difficulties in utility
> measurement can be understood as deviations from a true underlying utility function. Some of these can be understood in terms of the distinction between means values and fundamental values. Others can be seen as the results of various biases resulting from how we think about judgment tasks. In no case are we at a loss to propose accounts of this sort. The accounts may be incorrect in detail, but we have no reason to think that other accounts of the same sort will not replace them. Thus, from a normative point of view, the concept of utility is intact."

It is the case that economists have used assumptions of perfect information and perfect competition to be good approximations. But these have since been replaced by corporate behaviour, in game theory models and monopolistic competition. As rational scientists acquire more information and knowledge the old conventions are replaced by more appropriate procedures.

The pure application of utility theory, however manipulated with probability applications and other normative constructs is overly simplistic and clearly yields a problematic outcome at best. There is little evidence to support the view that a single variable, even when combined with probability assignments can possibly determine an individual's economic behaviour. In the application of Expected Utility applications Camerer and Lowenstein (2002) conclude "The statistical evidence against EU is so overwhelming that it is pointless to run more studies testing EU against alternative theories…."

The human is simply too complex, the decision-making procedure is widely variable, governed as it is by exogenous as well as endogenous factors. Another consideration is that economists rarely collect demographics, self-report, response times, survey results and other measures that psychologists have found of value. There is little effort made to relate findings to the real world, as it were.

Given that context, researchers began to appreciate the role that psychology might play in the deliberations and began to embrace the much earlier view of Adam Smith, H. A. Simon and others that economic behaviour must include human dimensions.

4. BEHAVIOURAL ECONOMICS

Economic behaviours include any of the aspects of purchasing, saving, donating, investing, working and even gambling. Behavioural economists assemble a number of psychological precepts about human behaviour and apply them to normative models about investing, saving and so on with the expectation of improving the outcome. In some respects it is seen as an effort to reunify the social sciences even as it addresses the shortfalls in neoclassical economics. It applies laboratory experiments, field experiments and unconventional theory, including 'bounded rationality' as adjuncts to the usage of mathematical structure and normative estimates. There is the expectation that with the alliance of psychology and economics at a point where presumably their strengths converge, the estimates may more closely replicate market behaviour. "Probably the main comparative advantage of psychologists is a deep

understanding of the behaviours, feelings and motivations of individuals… (while).. Economists are best at developing normative frameworks which can be used as a benchmark to conduct welfare analysis and obtain policy implications." (Brocas et al, 2003)

Camerer (2003) observes that 'Behavioural economics replaces strong rationality assumptions used in economic modeling with assumptions that are consistent with evidence from psychology, while maintaining an emphasis on mathematical structure and explanation of naturally-occurring (field) data." The intention is to add realism to economic analysis and to advance the insights and policies that might be derived from imputed predictions.

H. A. Simon (1969), an early advocate of behavioural economics introduced theories of economic behaviour that were based not only on cognitive algorithms but also included the limited ability of individuals to process information or to apply "bounded rationality," to the decision-making process. Daniel Kahneman, a psychologist who received the Nobel Prize in Economics in 2002, with his long time colleague Amos Tversky, was an early researcher in the use of psychological concepts. He published his findings in simple terms familiar to economists that expanded on the bounded rationality issues and classified these within his newly developed 'prospect theory.'

During the last part of the 20th century and to the present a number of outstanding researchers including Camerer, Thaler, (1980) Kahneman, Tversky and Simon have advanced what is now a new discipline incorporating human dimensions into otherwise assumed characterizations of economic behaviour. To some it was a return to the aspects of personal desires first raised by Adam Smith. Others believed it an overdue consideration of the reality of behaviour in the marketplace.

4.1 Prospect Theory

Kahneman and Tversky (1979) studied the manner in which human beings engage in decision-making. They observed that human beings have what they termed as perceptual weaknesses built into the cognitive structure that affects the conventional economic models. Their investigations introduced the use of two components; a value function derived from psychological perceptions such as risk, fear, endowment and a probability weighting function. The structure was then applied to experiments in which subjects were asked to take part in a number of decisions relating to different risk levels, opportunities to increase payoffs and losses or gains in endowment, where they could lose an item they owned. The objective is to capture the full essence of a person's utility or measure of happiness or expectation about buying something, for example.

Behavioural economists find emotions from one situation to another can vary and influence economic transactions in a completely unrelated manner. For example the "endowment effect" is evident when people ask a higher price for an item they own compared to what they would be willing to pay if they did not own the same item. In another examination traditional economic theory had it that stock traders were entirely logical and always strove to maximize profits based on complete knowledge about what the market is doing, (Vaillancourt-Rosenau, 2004). However, in a study by Farmer, Patelli, and Zovko (2003) using a model of agent behaviour with data from the London Stock Exchange they found that observed action is so complex and varied that it exhibits random choice more so than rationality. It would seem that presumably traders try to contain their own emotional tendencies but in general fail this test.

Kahneman and Tversky (1992) in advancing their view on prospect theory assembled a composite of events that display "irrational "economic behaviour. They establish that people are more affected by losses than by gains, concluding that most people are loss averse. Ainslie (1992) finds that individuals are more short-term than long-term oriented, discounting future rewards in favor of the short-term gain. People tend to prefer a lower return in the present to a greater reward later.

All these experiments produced a number of terms taken to account for psychological dimensions in the decision-making process. They are described in the literature as anomalies or exceptions to standard expectations, an economics term that refers to behaviour not in accord with economic concepts. These anomalies presumably confirm the need to employ psychological elements. They consist of:

- *Framing* – making different choices when the problem is presented in a different way. If one had the choice of saving 5 lives and saving 1 life the rational choice would be saving the 5 lives. However if the five are terrorists and the one is a child, a different logic prevails.
- *Non-linear preference* – making choices inconsistent with commonly accepted preferences. If apples are preferred to oranges and these are preferred to bananas, people will buy the banana when offered a choice of apples or bananas.
- *Risk aversion and risk seeking* – Taking a risk to buy life insurance in order to avoid long term risk
- *Source* – Paying more for a product because one likes the package as opposed to buying the good at lesser cost without the packaging.
- *Judgment by heuristic* - assisting the process of learning or discovery, the extent that decision-making is influenced by an individual's perceptions, emotions and prior knowledge.
- *Cues in decision-making* - making judgments based on incomplete knowledge, accepting partial cues and in doing so making errors in those judgments.

4.2 The Psychology of Economic Behaviour

The intent of uniting psychology with economics is to incorporate human dimensions to an otherwise cognitive process built on a subjective estimate of reality by the researcher. Thurow (1983) understood the need for more inputs from the behavioural field and argued in favour of including psychology in the process. "Contrary behavioural evidence has had little impact on economics because having a theory of how the world "ought" to act, economists can reject all manner of evidence showing that individuals are not rational utility maximizers, (See Baron). Actions that are not rational maximizations exist, but they are labelled "market imperfections" that "ought" to be eliminated. Individual economic actors "ought" to be rational utility maximizers and they can be taught to do what they "ought" to do. Prescription dominates description in economics, while the reverse is true in the other social sciences that study real human behaviour."

Psychological dimensions bring an important understanding to economic analysis. Utility theory was appreciated as a tool for model building against which the economist could test a variety of market conditions and perhaps make adjustment so as to more closely define market behaviour. Yet as Thurow points out, these models served more to spell out what should be the case, rather than what was the case and how to capitalize on it.

Even so, behavioural economics has yet to hit the mark in proving relevance. The anomalies and other deviations noted by researchers signal the importance of psychological as well as sociological issues that impact on consumer behaviour. But that really is the extent of it. There is no further attempt to build on these cues and include human dimensions to the analyses or move toward understanding market behaviour. Rather, researchers have taken a small step without really abdicating the single-minded view that utility theory presses on the economist. One still finds Thurow's view very much in evidence.

> "One of the peculiarities of economics is that it still rests on a behavioural assumption -- rational utility maximization -- that has long since been rejected by sociologists and psychologists who specialize in studying human behaviour. Rational individual utility (income) maximization was the common assumption of all social science in the nineteenth century, but only economics continues to use it."

4.3 Criticisms of Behavioural Economics

Many of the experiments used by economic behaviourists are contrived settings that assume a particular scenario presumed to explain market reality. Experiments that apply endowment issues, lottery choices, risk trade-off, buy-sell situations in a presumed stock market exchange and contrasted time events are at best partial models of consumer behaviour. They are laboratory experiments that by extension are expected to replicate reality of the marketplace. Myagkov and Plott (1997) among others contend that experimentally observed behaviour is inapplicable to market situations, since learning opportunities and competition are a part of the reality of consumer behaviour and these are not accounted for in the tests. Then too the cognitive theories; prospect theory, bounded rationality and game theory are actually decision-making models and not descriptors of a generalized economic behaviour. As such they can be taken as applicable only to those settings which are a once-off decision problem presented to experimental participants or survey respondents.

While many researchers acknowledge the considerable "complementaries" between psychology and economics, there has been little change in traditional economic conventions, (Glaeser, 2003). Behavioural economists continue to incorporate a single psychological expression in defining issues of finance, labor economics, savings and investment, arbitrage, taxation and welfare. There is also the difficulty of translating a single event experiment, constrained by subjectively imposed limitations, to the broader level of marketplace decision-making. Foxall cites the ..."problems of interpreting the behaviour of consumers acting in situ and subject to multiple influences of modern marketing management and the societal influences that shape consumption." In this context the laboratory type experiments carried out by behavioural economists raise any number of issues as to application if not validity given that the consumer decision-making is "not a single event but the distribution of behaviour over time." (Foxall, 2003).

Further, the literature has little to offer on the role of economic behaviour in regard to actual consumer purchasing. Anderson (1994) in a real world study of managers taken from a Conference Board datum finds that bias and limited learning have an effect on decision-making in industry and that their findings, "add to the growing literature that notes the limited empirical validity of certain assumptions of the rationality paradigm." While findings indicate variance from expected normative and descriptive constructs, there remains dissatisfaction with results in explaining either psychological aspects or the economic assumption of rationality. Prospect theory can explain "ten different phenomena in field data, from stock market pricing anomalies to downward sloping labor supply and asymmetric price elasticity,"(Camerer,2000), but it does little to explain consumer behaviour in the broad and general sense nor does it assist in identifying elements in the economy that address individual purchases of goods and services. Economic behaviour models still remain modified utility models touched with a hint of human bias or feeling that remain quite normative and requires testing to establish, or not, their validity.

4.4 Consumer Behaviour and Economic Rationality
The shortfall in current economics models of behaviour is the limited allowance for the role the individual plays in exercising decisions and implementing economic behaviours. There is extreme reluctance to move from flawed, if not erroneous precepts as with utility theory, toward any modification that might better explain economic behaviour. The human decision-making process is not a one-dimensional act but is seamed with emotions, motives, experiences as well as the cognitive dimensions of "rationality." The assumption that a chosen single mechanism, touched by a hint of behaviour reflects the whole of human action in the acquisition of goods and services is a position that can only be seen as extremely narrow and 'ex-academe.'

Simon (1983) observes that any account of human rational behaviour must include the significance of the full scale of human emotions in choice behaviour. Classical, and in good part behavioural economics has avoided the fact. In a study that explores the mechanism of emotions on bounded rationality Muramatsu and Hanoch (2004) agree with earlier research from Elster to Thaler and Lowenstein (1999) of the importance of human emotion and that the "accounts of various instances of economic behaviour…. require us to dig deeper into the nature and structure of agents' preferences, beliefs (expectations), and rationality."

4.5 The Psychology of Decision-making
It is a fact that people do not process information in a purely cognitive manner. Hanson (2000) finds that "consumers do not use their cognitive and affective skills independently, rather they affect each other" A further finding from his study is that pricing, the principal keystone of economic behaviour according to neo-classic economics does not have an effect on the intention to buy. Contrary to the utilitarian desire for an ordered, rational behaviour humans simply do not conform to that model and the expectation that rational economic behaviour is contained in a single postulate has little correlation with reality. It therefore holds that no amount of tinkering or the "testing" of normative economic models will describe the market and individual behaviours in it except in the most confined of events.

Foxall (2003) summates the issue noting that, "In cognitive portrayals of choice, the goal oriented behaviour of the decision-maker is influenced by his or her motives, perceptions, beliefs, attitudes and intentions which are the means and output of information reception and processing."

There is a considerable body of research on human decision-making and information processing conducted by cognitive psychologists and researchers and a number of journals dedicated to the science, to wit: <u>Cognitive Science</u>: A Multidisciplinary Journal; <u>Applied Cognitive Psychology</u>, Copyright © 2005 John Wiley & Sons, Ltd.; <u>Journal of Behavioural Decision Making</u>, Copyright © 2005 John Wiley & Sons, Ltd.; <u>Cognitive Psychology</u>, Elsevier.

Paivio (1971), Sadoski & Paivio (1994) and other cognitive psychologists confirm that decision-making and behaviour are very much governed by emotional and conative, or experiential factors as well as cognition. These three conditions, in whole or in part but not singly are what form an individual's total information processing or cognitive process. The literature in the discipline of Cognitive Psychology is heavy with emphasis on the role of affective and experiential as well as cognitive factors in determing human behaviour, including economic behaviour. It is an inescapable fact that any consideration of economic or market behaviour must account for expectations that incorporate all aspects of decision-making and not just that which is convenient, (Blawatt, 1995).

"Cognitive psychology embraces the term 'cognition' in reference to all processes by which sensory input is transformed, reduced, elaborated, stored, recovered, and used. It is concerned with these processes even when they operate in the absence of relevant stimulation, as in images and hallucinations...[i]" Given such a sweeping definition, it is apparent that cognition is involved in everything a human being might possibly do; that every psychological phenomenon is a cognitive phenomenon. Cognitive psychology is radically different from previous psychological approaches in two key ways; the application of the scientific method to test hypotheses and secondly the inclusion of internal motivation, beliefs, desires and drives.

The selection of one good over another can be expressed as a progression from a cognitive state through an affective state to a conative condition where economic behaviour is manifest in the final purchasing decision. Lavidge and Steiner (1961) developed a model well known in marketing for its 'hierarchy of effects' presentation of the continuum in human decision-making from a state of unawareness to conviction and expressed behaviour through the cognitive states. People do not make decisions based on a single expression. They make decisions and act on them by employing a variety of cognitive and affective elements and the final act of selection is the determining behaviour.

5.   CONSUMER ECONOMIC BEHAVIOUR

"Whenever a buyer, in choosing between two things which chemists and technologists deem perfectly equal, prefers the more expensive, he has a reason. If he does not err, he pays for services which chemistry and technology cannot comprehend with their specific methods of investigation. If a man prefers an expensive place to a cheaper one because he likes to sip his cocktails in the neighborhood of a duke, we may remark on his ridiculous vanity. But we must not say that the man's conduct does not aim at an improvement of his own state of satisfaction. What a man does is always aimed at an improvement of his own state of satisfaction." (von Mises, 1966)

Economic decision-making as the major transit of buying behaviour is complex and compelled by psychological, social and personal factors to satisfy a need or "improvement" of a state of being. Even as economists are inclined to rely on a single utility construct to express an economic outcome, consumer behaviouralists and marketers find there are dozens of factors that come in to play. Even as behavioural economics develops a single item marker of fear (of loss, risk) or greed (gain, profit) to identify a psychological variable to incorporate in normative calculations, they eschew the "anomalies" of source, heuristics (learning) and cues that convey the elements of consumer behaviour.

There are three items within the individual that issue or give cause to behaviour, including buying behaviour: personal, social and psychological factors. Personal factors refer to those demographic

compositions, age, sex, income that physiologically determine broad patterns of need and response to the marketplace. An individual's age disposes her or him to manifest certain requirements and motivates them toward a decision to acquire certain goods and services; young people for entertainment, older people for health care and so on.

Social factors refer to motives, perception, ability, knowledge, attitudes, personality and lifestyle. According to Massey (1975) and Sullivan (1978) between the ages of 2 years to 12 years of age an individual is socialized and develops a value set that serve as the platform from which all things are judged and acted on from that point forward. The way one relates to his or her community, the types of products one is disposed to, the lifestyle decisions and even the work that a person does, is influenced if not determined by the value set which remains more or less unchanged throughout life, barring a significant emotional experience that might intervene and stimulate an adjustment.

The psychological factors are those that are affected by ones association with the external world – opinion leaders, family life cycle, reference groups, culture, and social-class. They exert an influence and impact on the decisions one makes. A study of consumer behaviour by (Blackwell et al, 2001), and numerous texts in the same genre by eminent researchers reveals that individual economic behaviour is comprised of a very extensive construct inclusive of the three prime factors and the manner in which they coordinate, motivate and impel an individual to behave. But the literature clearly establishes there is no one single variable that can be held to account for individual behaviour, let alone economic behaviour.

5.1 Consumer Decision-Making
Consumer behaviour is an expression of intentions derived from attitudes that are based on beliefs and ultimately an individual's personal values. Fishbein and Ajzen (1980) developed the paradigm that indicates a progression from one condition to the other. Attitudes toward a product or service are influenced by ones beliefs and values. The attitudes may be modified and indeed do change from time to time, as one switches from one brand to another, for example. A person's intended behaviour, given little interference or external pressure then follows with behaviour.

An individual is compelled by needs, wants and desires to improve her or his "state of satisfaction", moderated by internal and exogenous variables such as economics, timeliness, involvement level and so on. Generically the process is expressed in five steps: (a) problem recognition, (b) search, (c) alternative evaluation, (d) choice and (e) post purchase behaviour. These conform to the early models of decision-making introduced by Howard and Sheth (1968). The first three steps of the process are essentially qualifying activities where the decision to purchase is arrived at in the context of emotional, cognitive and experiential issues effecting the final decision. But it is in the fourth step of the actual selection or choice that one would look for a summative determination of the factor or factors that power consumer economic behaviour in the final decision.

Within this progression Hansen (2003) finds that four elements have an effect on the final buying decision. They are: price, quality, involvement and emotion. His findings are consistent with most descriptive models of consumer decision-making. There is a general overlap of personal, social and psychological variables with no clear indication that a single item is accountable as an expression of economic behaviour. In Hansen's model price has an impact on the buyer's involvement and perception of quality. There is an established association in that an individual might perceive lesser or higher quality in relationship to price. Higher prices may be interpreted to reflect higher quality and vice versa. Quality plays a role in defining ones attitude as well as buying intention.

5.2 Primary Determinants of Market Forces Buying Behaviour
 Consumer decision making is centered on two very specific contexts one in which the consumer makes a judgment or is motivated to do so on the basis of a functional, physical dimension and a second comparative dimension that conveys a notion of the value of, or compensation for the first. In the former case the buyer looks for a tangible item, one that induces or is expected to provide satisfaction of a need as in an automobile for transport, cologne for pleasant odor and social acceptance or a fine dining experience that may address both of those needs. The value one ascribes to these experiences that is, or will be consequential to a purchase is dependent on what must be given up or paid for. If there is a

minimal expectation of physical satisfaction or utility, then the value is minimal or reduced to the level of a pure monetary exchange. If the product offers a number of advantages and/or benefits of worth the purchaser then accepts the consequence of a higher price or value that can go beyond a specific monetary statement.

The focus on these two dimensions explains consumer and economic behaviour. The consumer makes an economic decision concomitant with an evaluation of a product or services worth. They are mutually inclusive and are covalent in the process.

The market is a process in which the participants, buyers and sellers of goods and services behave independently and competitively. Decisions are made on the basis of motives or drive to satisfy needs and/or improve ones position or existence. The motivation to select a product or service is described by Solomon (2003) as "the process that leads people to behave as they do." It occurs when a need is aroused that a consumer wants to satisfy. Usually needs are structured and can be developed as from Maslow's (1943) hierarchy and may originate in the physiological or the self-actualization level. Thus a need can be manifest in a physical manner as in obtaining satisfaction from eating or it may be something more intangible as in receiving comments or praise for a new garment. In the first case an individual looks to satisfy a <u>utilitarian</u> need with the desire to achieve a functional or practical benefit, whereas the second is a <u>hedonic</u> need and the desire to obtain experiential and/or emotional benefit.

Hanson (2003) states that consumers seek two experiences through consumption. Firstly there is the desire or motivation to satisfy a need and secondly to obtain pleasure or satisfaction. In the latter case the experience is based on an expectation that is a subjective value while the former may be said to rely more on a trade-off of product features and performance. Unlike the economist who tends to lump "the terms utility, values, and goals interchangeably,"(Baron 2003), social scientists view decision criteria within two factors one of which is physical and perhaps has a concrete orientation and the other in terms of more esoteric considerations as with value and importance. As we shall see in discussing the role of marketing in economic behaviour, the concept of value become synonymous with perception about the item and expectations intrinsic to it.

The decision criteria and motivations in purchasing a product or service are then seen to center on two aspects: a physical characterization that implies a promise of performance and a dimension that addresses the perceived value of the item. In the first issue the consumer is concerned that the product has the ability to function as it is expected to do. Will it fit comfortably if it is a dress? Will it shape steel if it is a manufacturing tool? On the one hand there is the need for an item to perform a simple *utility* function. On the other hand there may be a desire that the item embodies a number of features and *benefits* that supersede the single, parsimonious function.

The second criterion is the acknowledgement of the investment that has been made in creating the product or service and the acceptance by the buyer of having to compensate for that worth; that is to pay for the product or service. At one extreme one can appreciate the desire to pay as little as possible, the lowest possible *cost* to the buyer for an item. Commensurately there is the realization that an item may embody a *value* that is beyond the cost level. In this there is the expectation of accommodating needs beyond the physical plain to the more intangible level where *value* is a considerably subjective perception, matched by a willingness to pay for that prospect at a level well beyond cost.

5.3 The Utility – Benefit Spectrum
Unlike the word 'utility' used as an abstract concept in economics that indicates how much 'happiness' a person might have from buying and owning a thing, utility in this discussion is a functional term. It conforms to a much more ancient view as found in the Venetian patent statute of 1474, in regard to intellectual property, "Now, if provision were made for works and devices discovered by men of great genius apt to invent and discover ingenious devices so that others who may see them could not build them and take the inventor's honor away, more men would then by their genius would discover and would build devices of great ***utility and benefit*** to our commonwealth." (Oddi, 2000)

The Canadian Government (2004) states that, "a 'useful article' means an article that has a utilitarian function and includes a model of any such article. Further a 'utilitarian function', in respect of an article, means a function other than merely serving as a substrate or carrier for artistic or literary matter." In this respect a product delivers a <u>form</u> utility at the elemental level where there is a worth or importance to the possessor as identified by physical dimensions.

In addition to form utility, the paper subscribes to the fact that marketing creates and provides further utility (usefulness or performance value) for the consumer. Utility is the attribute in an item that makes it capable of satisfying wants. In this paper, as in the marketing sense it would comprise one or all of the four types of utility including form utility that is the physical change that makes a product more valuable. While this can be taken as a function of production, it is the case that marketing plays a vital role in directing the ultimate shape, size, quality, and design of products. Place utility makes a product accessible to potential customers where they want it. Time utility makes a product available when it is needed and possession utility is created when ownership is transferred to the buyer. (Purdue University, 2003)

At the opposite end of the spectrum a product or service may be comprised of a number of utility functions in the form of benefits that would represent a higher order of performance worth to the buyer. Webster's defines benefit as an advantage, something that promotes or enhances well-being. An automobile has many benefits in respect of providing comfort, speed and efficiency even as it moves a person from one place to another which is the primary utility.

A benefit according to Roget's Thesaurus (2005) can be expressed as a verb and refer to help or assist someone. Or, as in this paper it can be taken as a noun and carry the definition of advantage, betterment and even worth. Thus a product or service can be described as having a single worth or utility or any number of attributes, each of which ostensibly provides an advantage or number of benefits to the buyer. These reflect the physical parameters of a good/service and contain intrinsic perceptions of worth as associated with performance. As such the product/service has the capacity to satisfy the needs, wants and/or desires of the consumer. In this context a commodity is a lower order utility. It has a limited function in its existing form and until processed further it has a lesser worth. A commodity offers a comparably narrow need satisfaction and is taken to reflect little or no differentiation. It is a simple utility

In the selection process we see there is a continuum that ranges from a single utility or function over to a number of attributes and/or advantages of some benefit. A person might look for a single function item with no other characterizations enhancing it, other than the fact it can do a specific, simple job or provide a direct function. It can be a commodity, as in salt or wheat or perhaps a pair of pants. The point is that aside from the promise the item is expected to fulfill of a simple capacity there are no other attributes or items of worth attached to it.

A product/service contains three essential benefits. The first is a core benefit that in the case of a utility item is a single core benefit. The second is described as providing 'in-use' benefits or a provision of a function. It is through using the item that one receives a functional benefit, perhaps in performance. The third incorporates psychological benefits, which is to say aspects that can affect self-image enhancement, hope, status, self worth, and problem reduction benefits (e.g., safety, convenience).

The lowest item on the utility – benefits scale is a commodity, a single product or perhaps a service that is singular in function, form and possibly a psychological dimension. But the higher order package of product benefits would offer many advantages in a mix of function-form, personal, sociological and psychological offerings.

5.4 The Cost – Value Spectrum

The concept of value requires some discussion. It suffers a number of uses, not all of them consonant or comparable. The economist looks on value in providing an economic statement as in 'the value of an asset deriving from its ability to generate income.' Marx considered value as a consequence of labour, although he wrote of it in a modified form. He said, "'Use-values ... constitute the *substance* of all wealth, whatever may be the social form of that wealth....A commodity is, in the first place, a thing that

satisfies a human want; in the second place, it is a thing that can be exchanged for another thing. The utility of a thing makes it a *use-value*. Exchange-value (or, simply, value), is first of all the ratio, the proportion, in which a certain number of use-values of one kind can be exchanged for a certain number of use-values of another kind." (Pilling, 1980)

Webster's Dictionary defines value to be the quality of a thing according to which it is thought of as being more or less desirable, useful, estimable or important. It is worth in usefulness or importance to the possessor; utility or merit: *the value of an education.*
Schumpeter (1908) states "That it is society as a whole which sets values on things …. It is evidently true, moreover, that, if value means "exchange-value," it is, of course, not fixed by any single individual, but only by the action of all."

Peter Drucker (1977) says that because its purpose is to create a customer, the business has two - and only two functions: marketing and innovation. Marketing and innovation create value, everything else reflects costs.
The knowledge industry has also created intrinsic value in products as a function of the informational or conceptual-image content. All commodities have what might be termed a knowledge composition. It may include the technical knowledge bedded in the design and production of an item (as with Microsoft's Office XP), and the image content that is tied to the promotions and advertising efforts carried out on behalf of the product or service. (Curry, 1997)

The image content that is associated with even the more prosaic of products carries a value. For example a hamburger is no longer just a hamburger, but a Big Mac from McDonald's or 'finger-licking-good' chicken from the Colonel at KFC. Thus the consumer purchases a brand image that has an intrinsic value, an assurance of satisfaction or an expected experience.

The notion of value in consumer economic behaviour embodies all these in the establishment of the worth of a good or service that satisfies wants, needs and desires. It embodies the allowance for perceived ideations, form and conceptual notions. As in the MacDonald's example the value of a Big Mac is in the eye of the beholder in which case, and others, perception is reality. The subjective valuation is very much dependent on the sociological, psychological and personal factors that come into play when the consumer considers acquiring a good. They are summated in the final value placed on the item at the time of acquisition of the product or service.

On the alternate side of the spectrum is the cost consideration. Cost is taken to be the minimum value of an item, bereft of all intrinsic ideations or valuations. There are no mitigating factors that might enhance the consumer's view of the item except the amount of exchange or cash that must be paid to obtain it. Lewin (1995) gives some grounding to the discussion in declaring that cost is a subjective element that is very important in two respects. "First, it manifests itself in utility terms, making it non-comparable across individuals. Secondly, cost implies subjective expectations. It refers to the *perceived* alternatives; it relates to an *imagined* future."

Value is found in the association of benefits and costs. In this paper it is an expression of the investment a buyer makes in time, effort and money in order to obtain a particular bundle of benefits. It is the counterpoint to the utility – benefits spectrum that provides expectation of performance in satisfying ones needs, wants, etc. Value is the sum of all expectations an individual has about an item. It goes beyond the notion of pure monetary considerations and enfolds the ideation component intrinsic in an item of product. It is greatly subjective and rests on the "subjectivism" of the Austrian school. Von Mises (1996) declares that, "Economics is not intent upon pronouncing value judgments. It aims at cognition of the consequences of certain modes of acting."

So it is with the factors in this paper as regard the cognitions of the final disposition to purchase. The argument is made there are two principal dimensions that summate the motivations to purchase goods and service in the exercise of economic behaviour, a utility – benefits expression and a cost – value expression. These are the consequence of decisions arrived at through, and inclusive of personal, psychological and social issues. They are also the consequence of market influences, perceptions and

experiences of the buyer. Perception of value is derived from the expectations as to the anticipated benefits arising from the purchase. The final determination of the decision to purchase, of expressing economic behaviour is vested in the evaluation between these two constructs. They constitute a paradigm that identifies consumer choice and form the basis for the behavioural economic model.

6.   THE ENTREPRENEURIAL ECONOMIC MODEL

The underlying demand that powers economic activity comes from consumers, institutions and industries who/that acquire goods and services to their own purposes and desires. Their motivation has its basis on internal needs, wants and requirements that reflect psychological and social drives, rather than purely cognitive dimensions as found in arguments on equilibrium theory. Israel Kirzner (1992) makes the case that an economy is subject to market forces and does not necessarily respond to supply side economics. The principle drivers of an economy are the demand expectations of a population, augmented by trend shifts, changes in technology and global market access, all being directed by an entrepreneurial class. In the first case it appears that established and often larger, firms satisfy this basic demand. In the second case it is more likely that new firms as well as responsive, creative elements in existing firms perceive new opportunities in the market and through new methods and technologies initiate new enterprises to capitalize on those opportunities.

In this there is a dynamic at work that adds motion to the function of an economy. Companies and industries proceed through a life cycle from birth to decline. *"The market is not a place, a thing, or a collective entity. The market is a process*..." (von Mises). New firms are born of new technologies and/or opportunities. They rise in strength and power in response to market forces and soon reach a position of maturity at which point competitive forces impose on them the need to improve productivity, to become efficient and to reduce costs. The ensuing programs to cut costs, which often include heavy capital expenditures for new processes and equipment, are ultimately expressed in the decline of the numbers employed in the firm. The downsizing of America during the latter part of the 20th century eliminated over fifty million permanent jobs, the direct consequence of the turbulence issued by change and opportunity. (Timmons, 1998)

Economic activity then is the consequence of market forces in which the acquisition of goods and services is motivated by one or more of four expectations or factors; cost-value, and utility-benefit, that find their origins in marketing activity and human needs including emotions, perceptions of quality and involvement. The two spectrums can be aligned in an ordinate and abscissa construct that would see cost and utility connected at the zero point and value and benefits orthogonal to each other. The angle enjoined by the benefit-utility-cost-value lines offers interesting possibilities for regression and factor analysis. It is a proposition that a correlation exists between the two subsets that is consistent across segments for different products and services.
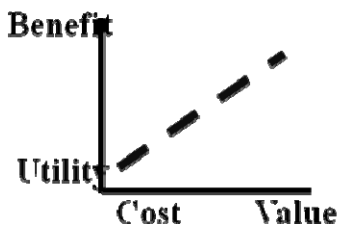
The argument is that low or zero expectations as to a product or service offering is commensurately matched by a low determination as to cost and therefore the price one would pay for that item. A commodity such as salt, for example would have a minimal cost associated with it under normal circumstances. The homemaker purchases salt from the supermarket as a matter of course and with little regard except that it is of nominal cost. However, should none be found in the home and while the utility remains the same, there is a higher value attached to the product given urgency in needing it to cook a dinner. In this case one is willing to pay the higher price as in the case of convenience stores. This is the purview of marketing where conditions of urgency or other techniques such as the use of brand names and such stimulates the creation of additional value that encourages a higher price. Associating the salt with a well known object, calling it "Sea Salt" for example, may elicit a higher market price in which case the buyer perceives and accepts the implied additional value.

When there is the perception of numbers of benefits tied to a product or service there is also the acceptance of a higher value and price. A Mercedes-Benz is essentially an automobile that is valued on reputation rather than the fact it likely costs no more to produce than a high end consumer sedan. But the buyer has the perception of status and prestige attached to the auto and so pays more for it. He wishes to have his drinks with a duke, as it were.

In the same manner innovation and new technology have the effect commanding a higher order of benefits and consumers willingly accept the higher values and prices. In this respect there is very much a correlation between the factors. The higher the perception of benefit, which may be psychological as well as physiological, the higher is the acceptance of perceived value and therefore price.

6.1 Developing the Model
When the lines in the paradigm are orthogonally set to bisect each other the quadrants indicated by the factors present four uniquely different fields, each having remarkable economic and marketing implications. The assumption is that the lines meet at a midpoint where cost becomes value and where utility become a benefit. Four sectors are manifest. The first, in the benefit-value quadrant is indicated by innovation and new technology, for example that offer a product or service that is unique and appeals to individuals who seek those norms. The buyer of innovative products and services ascribes to the benefits of new technology that is beyond the perceived value that might exist in conventional, standard products. It is also the early stage of the product life cycle (PLC) where the product or service is seen to be new and different, thus not in demand by the general population but only to a narrow, small or niche market for which the item has a particular appeal.

Figure 1.0
The Entrepreneurial Economic Model
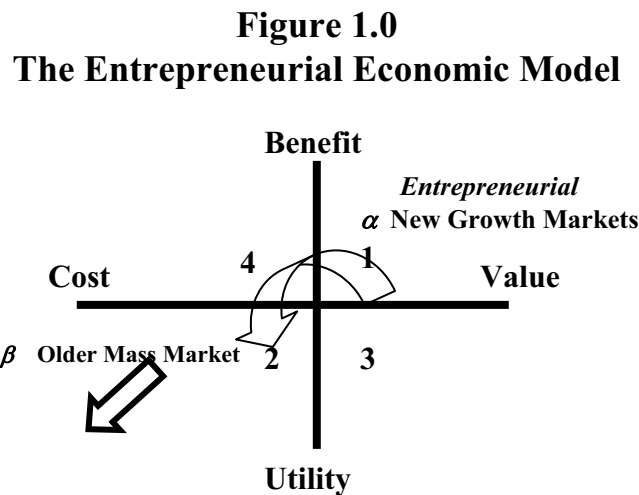
The need for new software is associated with the need for better performance or increased output and a higher price is justified. On the other hand the old software is standard material and while large numbers of buyers may want the product, they do so only at a significantly lower price since all that is of value is the utility of the product. It has little to offer the buyer neither in terms of new knowledge nor innovation and thus contains lesser intrinsic value.

At the onset of a new product offering in the market a small number of buyers will respond to the innovation. These are the innovators in society who quickly adopt new technology. They are the 'trend-setters' and they influence others to purchase the new offering who are characterized as 'the early adopters of new technology or innovation,' (Rogers, 1976). Should the item appeal broadly to the market then in a comparatively short order it becomes well known, popular and in demand with a resulting growth phase which is the growth stage of the product life cycle. Earlier in the 20th century the adaptation process took place over a few decades. The adoption of the telephone in the early part of the 20th century took half a century to reach maturity. More recently the adaptation to wireless technology has only taken a few years.

At some point competitors become aware of the new product, in particular the effect it may have on their own financial situation and they competitively activate their 'old product' even as others may offer equivalently new products. This places the innovator in a challenged position and he/she begins to cut price, or finds new ways to decrease costs. Moreover it pushes the innovative entrepreneur into the **cost – utility** segment of the marketplace **[2]** in which the primary advantage is price leadership and cost reduction, which may lessen the utility or function of the item offered. The enterprise may engage in a price/cost adjustment, or a number of these, in an effort to stay in business. It might then move to offshore production, which signals a stage of product maturity and subsequent decline. Eventually there is no longer sufficient economic incentive to maintain the product, or the business and the operation declines, closes down or is acquired. Seemingly General Motor's current problems and the elimination of 30,000 jobs in the United States is a manifestation of this stage. The consequent move is for GM to employ offshore manufacturing to enable competitiveness in the home market. Toyota and others are arguably more efficient and effective in the quadrant than GM. Moreover, the company has lost its brand name advantage through provision of products that have not engendered consumer satisfaction and thus no longer sustains the loyalty it once had. In those conditions where brand loyalty still remains strong, the value is maintained and this is exhibited in the value-utility quadrant **[3].**

6.2 Economic Sectors

The model develops four sectors, each with a unique market response and intrinsic behaviour. These generally compare with Michael Porter's (1980) concept of generic strategies. In the alpha sector the market is defined as a narrow but very specific segment that is intensely satisfied by the product/service. In time and with growth demand it follows the PLC to maturity and the larger, mass-market beta sector. In order to sustain the product life of the product/service managers face three choices, (a) expand the product line with a number of offerings to appeal to a broader portion of the market with merchandized goods, and/or to enter into export markets, (b) create a brand image that stabilizes product/service usage in a satisfaction-loyalty cycle, or allow the product/service to decline by introducing new, innovative products and technology to recast the PLC process. In the event of a single product company, the consequence is corporate decline.

6.21 The Entrepreneurial Alpha Sector

The sector is characterized by Schumpeter's "turbulence zone" where dis-equilibrium is the constant force. It is also, and more importantly the entrepreneurial zone where new opportunities and technologies are introduced and commercialized. The strategy in any case is one that employs a niche approach directed at the innovators and early majority of the adoption process or to customers in need of particular product/service solutions. The creation of new jobs and growth in the economy is dependent on the entrepreneurship that powers the system and offsets the decline taking place in the β sector.

The innovator may be the single entrepreneur working in a small firm or equally so the entrepreneurial manager in a larger, organic organization that encourages the intrapreneurial process. At this point there is an entrepreneurial velocity to the economy (**Ve**) that is a function of new technologies (Δ**t**), entrepreneurial action (Δ**e**) and opportunities arising from demographic and sociological shifts (Δ**d**) such that the change in velocity becomes **Ve = ƒ [Δt, Δe, Δd]** and economic growth is exhibited by the form

Economy = GDP (1 +/- Ve)

When the entrepreneurial sector is positive and creates sufficient economic activity as to override the decline in the price leadership sector, the economy grows and is sustained. As the economic velocity slows or decreases, it exhibits a negative value and the economy declines.

6.22 The Price Leadership Beta Sector

The beta sector is governed by economies of scale and productivity issues. Products in this sector take on the nature of a commodity where the determinant of purchase is generally on price. The low cost leader in any market gains competitive advantage from being able to produce at the lowest cost. Factories are built and maintained, labor is recruited and trained to deliver the lowest possible costs of production; 'cost advantage' is the focus. Costs are shaved from every element in the value chain. Products tend to be 'no frills.' However, low cost does not always lead to low price. Producers could price at competitive parity, exploiting the benefits of a bigger margin than competitors. Some organization, such

as Toyota, are very good not only at producing high quality autos at a low price, but have the brand and marketing skills to use a premium pricing policy.

It is often the case that the entrepreneur who by this time has created an established business may be seen to assume a capitalistic attitude. The corporate motivation is to sell more and more of what has been successfully produced, hence the disposition to enter global markets, often extending the product life cycle and/or broadening the product line with a variety of similar, only slightly modified products or brands. It is a fact that larger corporations are not normally creative and the cost of innovation is quite high.

On occasion the entrepreneur establishes an entrepreneurial organization and it proceeds to create innovative, new products to replace declining products in its inventory. Or a corporation may encourage an entrepreneurial manager to create a new product. However the case as the old standard goods decline in this situation, they are replaced by new innovations as extensions to old-line products and, sometimes, radical innovations. In this manner the firm extends its life by striving to re-enter the alpha market with some or all of its products.

6.23 The Managed Sector
Differentiated goods and services satisfy the needs of customers through a sustainable competitive advantage in the managed sector. This allows companies to desensitize prices and focus on value that generates a comparatively higher price and a better margin. The benefits of differentiation require producers to segment markets in order to target goods and services at specific segments, generating a higher than average price. For example, British Airways differentiates its service. The differentiating organization will incur additional costs in creating their competitive advantage. These costs must be offset by the increase in revenue generated by sales. Costs must be recovered. There is also the chance that any differentiation could be copied by competitors. Therefore there is always an incentive to innovate and continuously improve.

Two sectors comprise the managed economy, the cost-benefits gamma χ **sector [3]** and the utility-value delta δ sector, **[2].** The gamma sector provides different segments in the market with variations in the product that are principally cosmetic and appeal to the combination of 'packaging' aspects and lower cost. The variety of breakfast cereals, automobile variations through accessories and merchandizing concepts are manifest in this sector. The delta sector provides value and enhanced pricing (profits) through branded offerings whereby the item has an intrinsic value beyond cost factors, Crest toothpaste exhibits the case where higher prices are paid to specific markets (the worriers of cavities) in the sector. High priced vehicles as in Rolls Royce and Porsche vehicles command higher than usual margins because of the identification attached to the product.

Corporate managers may apply one or both of the techniques in an effort to sustain the product life cycle through a longer saturation stage of the PLC. The battle of brands as in beer and cola drinks is a sustained saturation stage powered by advertising and marketing applications. It should also be noted that brands and merchandized goods ma be improved through incremental innovation where changes are introduced to stimulate application and sustain the life of the product. Tide laundry detergent has been modified or changed dozens of times to accommodate new washing machine designs, fabric texture and colors.

6.3 Innovation and Product Recycling
 Goods and services are created for markets in response to needs for something new or improved. It may be that innovation is introduced into existing products that reposition them in the market. A software program is modified to include an additional function and is sold as an improved item. A machine has a unique attachment that improves its output and is sold as a new and improved model. In each case the intent is to provide added value and to move from the less profitable, highly competitive cost-utility quadrant to the benefit-value section where higher prices can be charged. In due course, except for certain branded and/or commodity type products such as Tide soap and despite all improvements, the market rejects the product and it declines or dies. The activity of marginally changing products in an effort to improve them is referred to as incremental innovation. In due course the incrementally adjusted

product is superceded by radical innovation and it declines as well. Further study into lengthening life cycle – recycle strategies would likely show that some products assume a commodity attribute that is adopted for some length of time by the market and may enjoy longer sojourns in the beta market or in between in the two gamma market sectors.

More often the effects of new technology, demographic shifts and new global markets place the firm in the stronger growth market sector. Even so, as the products then move to reach larger markets, they become subject to competitive forces that diminish their perceived value and the firm is required to introduce new products, in addition to current mature products in order to maintain growth and profitability. In any event a majority of products eventually assume a commodity position, competing in the beta, mass market for market share by reducing costs and prices until eventually the product declines or is phased out.

The move from an innovative market sector to the mass market is a mixed blessing. On one hand the move promises increased sales and profits even as it presents lower prices and easy access to the consumer[ii]. But unless a firm has a proprietary product, as in the ethical drug industry where the product's intellectual property offers a quasi-monopolistic niche in the market, thereby retaining its position in the alpha market competitive forces continue to compel price reductions that then require cost cutting moves to maintain the company's earnings picture. Continued downward pricing then forces a drive to re-position the product back toward the **value-benefit** quadrant through *incremental innovation.* The modification may place the product in the **cost-benefit or value-utility** quadrants, the gamma markets **[3],** that extends overall life and gains market niche support. Indeed corporations apply the process vacillating between quadrants until the product literally wears out. On the other hand after some period of vacillation between quadrants the product meets with a radically innovative competitor and declines in the market; the typewriter was challenged by software that turned the PC into a word processor even as the slide ruler was replaced by the pocket calculator.

The American economy in particular is a model of the cumulative effect of the oscillating effect of technology. The compensating activity, born from the technologies of the Information Age, biology, electronics, medicine and nanotechnology to name a few, compensated the prior losses as declining industries cut costs and improved productivity. These new, innovative companies redefined the economy and created a new class of labor, the knowledge worker. Larger enterprises, particularly those with commodity type products are able to globalize their reach and become even larger, at least for a period of time. The expansion of soft drink, fast-food chains, and other consumer goods is a mark of the effort to extend the life of products about to reach their mortality. Unless innovation is applied to these items, thus increasing their value, they will in time decline.

What transpires then is a continuous process of innovation and improvement to products and services in response to competitive pressures and market demand. New firms or divisions in existing firms create new products to meet demand; they progress through a life cycle to a point of maturity. They may be recycled for a time but eventually they die. It is this continuous change to products and services in response to market demand that power the growth of the economy; based on new venture formation. But larger enterprises have a difficult time adapting to change and some are unable to thrive except through market extension and incremental innovation, or buyouts and acquisitions. The real creativity is existent within smaller firms and individuals and there is a growing realization that, since the end of World War II, small entrepreneurial firms have been responsible for most of the innovation in the American economy.

7. MACRO-ECONOMIC IMPLICATIONS

The model is a preliminary development and serves as a proposition as much as being a postulation of economic behaviour. It establishes that the economy is led by an entrepreneurial sector that generates a flow of firms and products into the system even as others disappear from the scene. Further testing of the value-utility paradigm may resolve the issue as to product life cycle association with sector boundaries. At what point does a product cross over to the managed sector? Where does the decline sector diverge? How strong are the associations between the two paradigm constructs?

In the macro model the estimates of economic velocity are subject to a number of variables that need refinement and accommodation to the general model. Can the GEM measurements be incorporated into the estimates of national economic valuation? What variables are appropriate or may be included that will account for the technical input to the model?

The proposition is that an economy is comprised of at least three principal sectors, each of which behaves in a unique and specific fashion. It is the major hypothesis that the genesis of all economic activity is the entrepreneur and her or his genius that produces economic wealth and well-being.

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AUTHOR PROFILE:

Dr. Ken Blawatt earned his Ph.D. at the University Cranfield, UK, in 1988. Currently he is visiting senior lecturer at the University of the West Indies, Cave Hill, Barbados in Strategic Management, Marketing and Entrepreneurship.

HUMAN RESOURCE MANAGEMENT AND PERFORMANCE IN A NEW ZEALAND TERTIARY SECTOR SETTING

Fiona Edgar, University of Otago, Dunedin, New Zealand
Alan Geare, University of Otago, Dunedin, New Zealand

ABSTRACT:

A major concern of Human Resource management (HRM) is the relationship between the management of employees and the performance outcomes which lead to achievement of business objectives and competitive advantage. This objective is as relevant within tertiary settings as it is within private sector workplaces. A criticism levelled at previous studies exploring the HRM-firm performance relationship is that they often fail to use objective performance data that can be directly related to worker behaviour and performance. This study addresses this criticism by using the externally assessed Performance Based Research Funding (PBRF) exercise as a measure of department-level performance. Using a content analysis approach, data revealed there is a set of characteristics and attributes evident in departments classified as high performers, which are not present in those departments classified as low performers. This paper reports these findings and discusses their implications.

INTRODUCTION:

HRM is primarily concerned with the relationship between the management of an institution's human resources and institutional performance outcomes which lead to achievement of business objectives and competitive advantage. Superior performance and competitive advantage come from a culture and people management practices that support the development of a committed and motivated workforce (Anderson, 1997).

One of the main problems identified with previous studies exploring the HRM-organisation performance, mainly by the use of correlational studies, has to do with the issue of 'causality' (Wright and Haggerty, 2005). Causality could be in the opposite direction with improved performance encouraging the use of innovative HRM practices, or improvements in both could be a function of something else, for example, economic climate or consumer demand. The problem, according to Wright and Haggerty (2005), is that currently a range of viable alternative explanations for the finding of a relationship between HRM and institution performance exist.

It has therefore been suggested that in order to better understand the causal relationship between HRM practice and institution performance outcomes future research necessarily needs to adopt a framework which includes some in depth and longitudinal case study analysis of HRM activity (Patterson, West, Lawthom and Nickell, 1997), workplace culture (Purcell, Hutchinson, Rayton and Swart, 2006), and furthermore uses externally objective and uniform (standardized) indicators of institution performance which can reasonably be attributed to the performance of the workforce (and not, for example, to technological advances or research and development improvements made to processes operating within the institution) (Wright and Haggerty, 2005). With respect to the latter, in New Zealand such a measure of institution performance exists within the tertiary education sector – i.e. the Performance Based Research Funding (PBRF) assessment exercise. The PBRF system provides an ideal basis for longitudinally assessing the HRM-institution performance relationship at a departmental level within a tertiary setting. This is because a direct link exists between *research performance behaviours* (such as productivity levels and high quality research) which reflect the knowledge, skill and motivation of departmental staff – all of which are widely viewed as being primarily influenced by HRM activities - and the departmental outcomes achieved as a result of the *PBRF performance evaluation*.

THE LITERATURE:

HRM and Institution Performance
The role of HRM in achieving competitive advantage through improving institutional performance has increasingly gained in importance over recent years as a result of the more traditional sources of

competitive advantage (for example, technology, economies of scale, patents, and the like) no longer being able to realize this goal. HRM is focused on the institution and people are seen as key resources for realizing a competitive advantage (Paauwe and Boselie, 2003). In general an institution's resources can be considered any aspect that has the potential to create value; is difficult to replicate and copy; and has some scarcity value (Huselid, 1995). People, as a resource of the institution, are seen to fall into this category – the knowledge, skills and abilities held by the workforce, along with the social complexity that comes from the idiosyncratic interaction patterns that develop amongst workforce members, all contribute to enhancing performance and providing a competitive advantage (Dreher and Dougherty, 2002). People management is seen as a lever which can lead to positive and significant effective economic effects (Becker and Gerhart, 1996).

HRM policies and practices are not considered to directly lead to institution performance outcomes however. Delery suggests people-management policy and practice instead influences a "firm resources, such as the human capital of the firm, or employee behaviours, and it is these resources and behaviours that ultimately lead to performance" (1998:303). A number of variables have been identified in the literature that are considered to further mediate this relationship (for a full picture of these mediating variables, see the work of Becker, Huselid, Pickus and Spratt (1997)).

So how do HRM practices contribute to this relationship? HRM assumes worker performance is largely a function of individual characteristics (Cardy, Dobbins & Carson, 1995). Hence, its activities are designed to make sure the organisation has the right people, with the right knowledge, skills and attitudes, and to ensure these people continually perform the function of HRM is to make sure they properly trained and that their performance is effectively managed.

Institution Performance: The Performance Based Research Fund System
It is the view of the New Zealand Labour Government that the tertiary education sector plays a key role in creating a "dynamic, knowledge society" (Hon. S. Maharey, TEC Report, 2003: vii). Conducting high quality research was seen as pivotal to achievement of this outcome. To ensure this occurred, the Tertiary Education Commission (TEC) in 1999 introduced the Performance Based Research Fund (PBRF) as the primary mechanism for allocating funding to tertiary institutions. The espoused public aim of PBRF was to "encourage and reward research excellence" in the tertiary sector (Hon. S. Maharey, TEC Report, 2003: vii). PBRF, like the Research Assessment Exercise (RAE) conducted in the United Kingdom, is an externally-appraised, nation-wide, standardised and objective performance measure and it replaced the previous funding model which allocated funding to these institutions based on student enrolments.

The RAE had as its objectives, accountability and efficiency, which were to be achieved through a mechanism of transparent performance measurement. The PBRF system saw the purpose of research as twofold. First it was seen as the means by which knowledge and understanding are advanced and, second, "vigorous and high quality research activity" (TEC, 2003:1) creates the optimum environment for learning and research training to occur. Research, according to the PBRF, is defined as "original investigation undertaken in order to gain knowledge and understanding" and "typically involves enquiry of an experimental or critical nature driven by hypotheses or intellectual positions capable of rigorous assessment. It is an independent, creative, cumulative and often long-term activity conducted by people with specialist knowledge about the theories, methods and information concerning their field of enquiry" (TEC, 2003). It does not include any activities associated with teaching, nor does it cover professional practice activities.

The PBRF assessment is a periodic "Quality Evaluation" and while evaluations will normally be conducted every six years, its introduction has been phased process. This process has seen a full evaluation completed in 2002 (spanning the period 1997-2002) with a partial round being undertaken in 2005 (spanning the period 2000-2005). The implication of phasing in the PBRF system is that grades awarded to individuals in the 2002 round can stand for a total period of 9 years, as opposed to the intended assessment period of only six years. Individuals could elect whether or not they wished to resubmit their portfolio for assessment, and this assessment was likely determined by whether or not they considered

their grade would improve. No-one, whose grade was likely to be revised downwards, should have submitted in this second partial-round.

Twelve assessment review panels were commissioned to make the actual assessments of individual portfolios. The subject areas covered are – biological sciences; business and economics; creative and performing arts; education; engineering, technology and architecture; health; humanities and law; Maori knowledge and development; mathematical and information sciences and technology; medicine and public health; physical sciences; and social sciences and other cultural/social studies. Peer review panels for each subject area consisted disciplinary experts from both New Zealand and overseas, comprising between seven and 20 members. Assessments made by these panels were subsequently audited to ensure the assessment procedures were "robust, fair and consistent" and of the "highest possible integrity" (TEC, 2003:2).

HRM ACTIVITIES AND WORKPLACE CULTURE:

Activities
As a result of the introduction of PBRF, the aim of most tertiary institutions is likely to now be to foster high levels of quality research outputs. The shape of their HRM practices will be determined by this objective and activities are likely to include features such as the use of sophisticated selection techniques that aim to ensure only people capable of delivering high quality are employed; focused developmental and training opportunities; a rewards system that is linked to the desired performance outcomes; a relatively egalitarian environment; some prospect of job security; high levels of worker participation, as well as trust; and extensive and ongoing training and developmental opportunities (Schuler and Jackson, 1987). All the aforementioned activities come under the rubric of HRM 'best practice'. Best practices are designed to elicit superior performance from the workforce and the determinants of this relationship are now discussed.

Workers are considered an investment, and also as a resource that can be utilised to provide the institution with competitive advantage. As an end in themselves, workers are encouraged to pursue their own objectives, albeit these are secondary to those of the institution, and in the process of doing so develop commitment to the employing institution. This commitment is assisted through the implementation of policies and practices such as goal setting, training and development opportunities and flexible work practices that essentially are aimed at promoting high commitment amongst the workforce. These practices are often referred to as 'best' practices (and more often in the United States literature as High Commitment Management Practices or High Performing Work Practices). Flexibility can come from the adoption of practices that encourage autonomous work habits or enhance skill development and these increase opportunities for worker discretion. Discretion in one's job in turn impacts motivation and commitment to the institution. As well as fostering worker commitment, these types of practices also aid in helping the institution achieve the dual objective of improved performance. Over the years, what practices should be deemed 'best', and as noted above, how these practices should be implemented, has been the subject of some debate in the HRM literature.

Culture
"Cultural rules spring up randomly like weeds in a garden; the manager's job is to pull the weeds and cultivate the plants" (Camerer & Vepsalainen, 1988:123). When environmental conditions change and render a current culture inappropriate, a new set of cultural rules need to be established and signaled to the workforce. Setting precedents is one mechanism for establishing cultural rules, so to, is leading by example.

Delery suggests "a firm does not gain a competitive advantage from HRM practices, per se, but from the human resources that the firm attracts and retains" (1998:290).   The goal for the organization attempting to achieve a competitive advantage from its people therefore seems obvious – recruit and retain workers who are capable of performing to a high standard. Along with best practice, a strong culture can play an important role here too. Organisational culture specifies a "set of broad, tacitly understood rules" and values which, over time, become so firmly entrenched within the organisation they operate as the guiding principles; in effect prescribing the range or template of acceptable behaviours, responses and actions

available to organisational members (Camerer & Vepsalainen, 1988:115). Cultural artifacts tell members what sorts of behaviours are likely to lead, for example, to rewards, or on the other hand, discipline. In other words what behaviours are valued and what are not. The onus of responsibility is on the individual to internalize these cultural messages and to then monitor and self-regulate their behaviour accordingly. A culture that is effective requires both *appropriateness* and *consistency* (Camerer & Vepsalainen, 1988:121); appropriateness referring to the culture having a fit with the strategic needs of the organisation, and consistency is the situation where both managers and workers share agreement about the rules.

High performance might relate to the quality of outputs and/or it could be in relation to level of output. In some types of industry, more so than others, people can be considered the central most important resource for the institution. Service-oriented organisations, for example, are heavily reliant on the quality and/or quantity of service delivered by their workforce. A similar case could be made for organisations concerned with research, development and innovation. By contrast, this would not necessarily be the case for the manufacturing sector where it is likely technological aspects such as equipment and machinery would be considered the key resources (Schonberger, 1986). An argument can therefore be made for suggesting some settings because of the very nature of their primary resources and outputs are particularly reliant on effective people-management policies and processes if they are to be successful in achieving their objectives.

Four cultural dimensions have been identified and subsequently found to impact firm performance – human relations, open systems, internal processes and rational goals (Patterson, West, Lawthom and Nickell, 1997). The human relations dimension is concerned with the development of people and comprises a concern for employee welfare, training, autonomy and supervisory support. Open systems has a focus on transformation and expansion and its four elements are an outward focus, reviewing of objectives, flexibility and innovation. Internal processes are concerned with consolidation and equilibrium and this dimension emphasizes efficiency, tradition and formalization. The final dimension, rational goals, has an emphasis on maximizing output and includes an articulated and accepted vision, pressure to produce, quality and performance feedback.

As noted earlier, HRM considers job performance to be an individual phenomenon (Blumberg & Pringle, 1982). The TQM literature considers system factors to also play an important role – these include such things as organisation climate; quality and availability of technology; supervisory support (Cardy, Dobbins & Carson, 1995). A further system factor may be the evidence of a strong collectively held value system. In this respect Anderson (1997) suggests high individual performance develops in organisations that share a strong sense of community. A strong community derives from management's creation of an environment in which there are clear and well-articulated goals, a sense of purpose, and the means to attract individuals who share and are committed to the attainment of these.

THIS STUDY:

Research Design
Approach
The main aim of this study is to explore how approaches to people management influence performance outcomes. In doing so it builds on those studies that have attempted to assess the causal nature of the relationship between HRM activities and firm performance outcomes. The unit of analysis is the department which, according to Wright and Boswell's (2002) dimensional classifications, is at the macro level. It uses a content analysis method and an externally validated measure of performance is used. This approach has a number of benefits over the traditional survey research that has been carried out in this area. First it enables researchers to probe deeper into the relationship between HRM practice and subsequent identifiable behavioural changes. Second it enables the impact of the introduction of HRM activities to be longitudinally assessed. Generalisability of the findings are also enhanced because contextual issues related to the idiosyncratic nature of (a) departments and (b) people can also be taken into account.

To classify and sort data for reporting of results a two-phase process was adopted similar to that used by Rynes, Giluk and Brown (2007). This process involved one author coding interview data into recurring themes (Flick, 2002) and attaching classificatory names for each of the themes identified. Using this set of classifications, the second author then recoded the interview data. In some instances data could reasonably be considered to fall into two classifications and where it was agreed by both authors, this was the case, it was recorded accordingly.

Measures
Performance - institution performance is measured using the PBRF evaluation. PBRF measures research performance in institutions along three dimensions - the quality of researchers (weighted 60 per cent of total funding allocation); research degree completions (weighted 25 per cent of total funding allocation); and external research income (weighted 15 per cent of total funding allocation). This study is concerned with the HRM-institution performance relationship at a departmental level and thus it is only concerned with measurement of the first dimension.

Eligibility for assessment under the PBRF system was as follows (TEC, 2003:17):

(a) The individual must be an academic staff member (i.e. they are expected to make a contribution to the learning environment; and
(b) The individual is expected to make a significant contribution to research activity and/or degree teaching in a tertiary institution.

The quality of researchers is judged by information supplied by staff at each institution. This information is collated into what has come to be termed an "evidence portfolio". This portfolio is evaluated then externally assessed by a panel at the TEC and awarded a grade. While grades are assigned to individuals, union lobbying around the time of the introduction of the PBRF system has meant details can only be made public at the departmental level. The purpose of the union's opposition to reporting of individual assessments is that these would likely be used by institutions as a mechanism for performance management and this was not the intent of the system.

Individual evidence portfolios span three areas – research output; peer esteem; and contribution to the research environment. TEC definitions of these three components are as follows (TEC, 2003:19):

(i) The 'research output" component comprises up to four nominated research outputs (NRO), as well as up to 50 other research outputs. This component had a 70 per cent grade weighting. For a research output to be eligible for inclusion it must have been produced (i.e. published, publicly disseminated, presented, performed, or exhibited) within the agreed assessment period. Research outputs must also satisfy the PBRF definition of research (outlined above).
(ii) The 'peer esteem' component is weighted at 15 per cent of the overall grade and comprises the recognition of research by peers (for example, prizes, awards, invitations to speak at conferences).
(iii) The 'contribution to research environment' component is also weighted at 15 per cent of the overall grade and comprises contribution to a high-quality research environment (for example, supervision of research students and receipt of research funding).

The rating scale for awarding grades saw each of the three components measured attracting a score of between 0 (no evidence provided for that portfolio component) to 7. Each awarded score on the three components was then multiplied by its weighting factor to produce a final score. For example, a score of 3 on the peer esteem component was then multiplied by 15 (the percentage weighting) to produce a total of 45. All scores across the three components were then totalled to produce an aggregate score for individuals. It was then assigned one of four grades (referred to as 'quality categories'). At the departmental level these individual grades for all eligible staff were allocated a score of '10', '6', '2' or '0' and a composite mean total was calculated (for example, a department with three As [30 points]; four Bs [24 points] and seven Cs [14 points] would end up with a final score of 4.86). The grades for assessment at the individual and departmental level are as follows:

Grade		Individual Score	Departmental Score
"A"	-	Total weighted score of between 600 to 700	10 points
"B"	-	Total weighted score of between 400 to 599	6 points
"C"	-	Total weighted score of between 200 to 399	2 points
"R"	-	Total weighted score of less than 200	0 points

One change to the system for the 2005 evaluation round is the inclusion of a "new and emerging researcher" category. This category has been added to the existing ones in recognition that some staff who are early in their research careers (i.e. with five or less years experience) are unlikely to have developed enough depth in their evidence portfolio to classify them as research active under the old system. This new category enables researchers who meet this criterion to be appropriately designated research active (NRC).

Culture - the central tenets of culture within each of the participating departments were identified by simply asking respondents to describe (a) the culture within the department; and (b) the research culture. In doing so respondents seemed to be able to identify what they considered to be as the primary cultural characteristics.

HRM - HRM activities were assessed by conducting a range of semi-structured interviews. HRM policy and practice impact occurs at three levels – the institution, the Department and the individual. Core HRM policy and practice within large institutions is often developed in a standardized format from a centralized HRM function. Responsibility for its implementation is subsequently devolved to the Department, and in particular in a university setting, to Heads of Departments. The process of impact does not stop at either the development or the delivery phases however. HRM policy and practice is a consumable. It is primarily designed to impact or influence the behaviour of individuals, and hence its effectiveness in doing so is very much determined by that experience. It therefore seems both necessary and logical for data collection to span these three identifiable stakeholder groups. It is worth noting at this stage that while some HRM data are collected at the individual level, performance data are only collected at the group level. For consistency, and for privacy reasons, all data will only be reported at the departmental level.

The unit of analysis, for HRM activities and performance outcomes, is the department. Clearly the main benefit of this approach is that it minimizes the risk of exogenous variables contaminating the relationship, a problem often cited in HRM research (Wright & Nishii, 2005).

Each departmental study has been informed by collecting data using a semi-structured interview process. Interviews were undertaken (a) at the institution level with a group comprising Human Resource Advisors; (b) at the department level with Department Heads; and (c) at the individual level with individual members of faculty. A pilot study, using the interview schedule was initially conducted. The purpose of this was two-fold. It enabled modifications to the questions to be made, and it also provided an opportunity to identify recurrent themes that could then be validated or refuted in future interviews. This form of confirmatory analysis is considered to enhance the robustness of the research findings reported. Ethics approval for this study was approved by the University of Otago Ethics Committee. Neither departments nor individuals are identifiable from this research. This is because classifications have been based on the three aforementioned categories, and no specific performance data has been reported.

The Sample
The main participating sample for this study comprises a selected group of ten academic departments from within one tertiary setting - three each from the low and improving groups, and four from the high performing group. Ten department heads and ten faculty members were interviewed. The average duration of department head interviews was 80 minutes, and for faculty members this was 50 minutes. Along with these, a further eight interviews were conducted, four with staff from the HR Department, and four with union representatives.

RESULTS:

Analysis of interview data identified two seemingly related and equally important contributory factors that appear to positively influence workplace behaviour, and the subsequent desirable outcome of high performance. These are (a) the research culture and; (b) a selected group of HRM activities – specifically, recruitment and performance management. Data also enabled identification of a range of factors that could be considered detrimental to this outcome.

Culture

Despite the claim by Elton that, "Academics are difficult to change" (2000:277), it is nonetheless achievable and 'workplace culture' seems to be considered an important vehicle for inducing behavioural changes. This study, consistent with research examining the impact of the RAE in the United Kingdom (Henkel, 1999), finds PBRF to also have acted as a catalyst or 'trigger' in relation to bringing about a change to research culture.

In the United Kingdom, Henkel (1999) identified a number of cultural characteristics associated with this new regime, including development of what is described as a 'macho culture'; competitiveness; and divisiveness. In the New Zealand study a different set of characteristics were identified and distinct parallels in behaviors can be drawn between the characteristics of members of the high performing departments and those of the low. In particular, collegiality *versus* conflict, team-based *versus* isolated and solitary; collaborative *versus* fractional, confident *versus* insecure and apprehensive; strong *versus* an absence of social ties and integrative family events; and motivated and energetic *versus* apathetic and lethargic dispositions were identified.

HRM Activities

This study finds the discipline itself to some extent impacted the quality of research performance. In particular it was identified that some or the poorer performing disciplines experienced serious recruitment and retention difficulties, whereas some of the better performing disciplines reporting have an abundance of outstanding applicants from which they could select. New Zealand, like the United Kingdom with the introduction of the RAE, also has seen standards of entry to the profession increase (Henkel, 1999).

In the United Kingdom study, two recruitment strategies were identified as the primary mechanisms for improving the research performance of a department. The first approach was one whereby high performing staff was *bought in*. The second approach, termed 'organic', had a longer term focus. With this approach research capability, along with improvements to the research performance of individuals was seen as a departmental responsibility (Henkel, 1999). This approach appears to have been two-pronged. First, an entry level criteria in which a 'readiness to undertake research' had been demonstrated was required; and second, future progress was heavily scrutinized, suggesting a strong and sustained emphasis on performance management was necessary. Evidence of these two strategies was also found in this study. It is reasonable to conclude all departments would opt to use the 'buy-in' approach, but it was not an option for many owing to either imposed financial constraints or because current staffing levels were already excessive. The approach which sees attention placed on the 'potential' of recruits is one all departments reported they would use. Only one high performing department went further and emphasized the need for career development, stating performance required continual monitoring and evaluation. In lower performing departments, career development appeared to be left to the individual to seek out and utilize those institutional mechanisms available to them.

Both the functions of performance management and recruitment and retention suggest a long-term orientation to people-management is being promoted. To achieve superior performance outcomes, and thus acquire both financial assistance as well as an enhanced reputation standing, a certain type of person and a certain style of people-management require implementation. This next section briefly describes the workplace behavior model originally developed by Campbell, Dunnette, Lawler and Weick (1970) and uses this model as the basis to explore the types of people-management strategies and worker characteristics most likely to yield desirable performance results in this environment.

This study has identified a number of workplace characteristics associated with high research performance (as based on the externally measured PBRF assessment exercise). Analysis reveals cultural rules and norms; along with several HR activities to have prominence when it comes to effective people-management in an academic setting. While institutional mechanisms can be useful as guidelines for the delivery of HR activities, it is initiatives tailored and delivered at the departmental level that seem to have the greater efficacy.

It is acknowledged by all the communities participating in this study that research is often be considered a solitary and independent task, however, reliance on individuals to develop the necessary levels of self-motivation and confidence solely through immersion within a department is imprudent. Instead, it is recommended purposeful steps are taken to support and develop a culture of research competence. While it is unclear to the researchers whether research culture can be treated as synonymous with workplace culture per se, this study finds research excellence to come from a set of cultural rules and norms which sees high standards established. These standards need to be accepted by all staff and continually monitored. Recruitment strategies are adopted which seek to employ only those with a proven record of potential. Finally, a climate of collegiality and confidence needs to permeate the department.

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MANAGING TRANSFORMATIONAL CHANGE IN THE PROSPECTORS AND DEFENDERS

Sharadindu Pandey, Indian Institute of Technology, Kanpur, India
RRK Sharma, Indian Institute of Technology, Kanpur, India

ABSTRACT

A prospector needs to be innovative to maintain its strategic position whereas defenders need to be innovative in order to maintain its strategic performance. The purpose of this paper is to explore how we can classify the change interventions differently for the prospector and defender to become product and process innovators respectively. Paper draws findings from the various researches related to organizational transformation, adaptation and large scale change management interventions. It was found that due to differential in the structure and systems of the two orgnisational forms, different interventions are suitable for transformational change. These interventions can be classified as P to I change interventions and D to I change interventions. The study gathers research support from the early studies. Empirical support is yet to be gathered. This paper classifies the OD interventions suitable for the transformational changes in the defenders and prospectors. These interventions might help them in becoming innovator.

Key words-*Transformational change, Prospector, defender, OD intervention*.

1. INTRODUCTION

Any organizational change intends to move the organization from its current state to a more desirable state (Ragsdell, 2000). Greiner (1972) mentions two type of organizational change; one is evolutionary which is gradual and continuous in nature and second is revolutionary that is radical and transformational. In the gradual or incremental change organisation maintains its identity and improves in the shadow of its past behaviour where as in the latter's case organizational/business unit shifts its identity and plays its game plan in totally different ways as it was in the past. Incremental or gradual changes are well suitable for the organizations operating in the stable environment where as in the volatile environment; rapid or transformational changes are required to remain fit. Elimination of boundaries, eye lashing technological development and increased competitiveness has made it mandatory for the organisation to come out of its shell and pursue the transformational activities. Many a authors have described major changes as responses to environmental upheavals (e.g. Meyer, Goes, and Brooks, 1994; Miller and Friesen, 1980a, 1980b) while other studies have described such changes in terms of "cusp catastrophe models" (e.g., Gresov, Haveman, and Oliva, 1993) or changes in the organization's strategic orientation (Beugelsdijk et al, 2002; Zajac and Shortell, 1989), structure (Meyer and Rowan, 1977), organizational identity (Dutton, Dukerich, and Harquail, 1994), or in the mental models of top-level managers (Barr, Stimert, and Huff, 1992). Organizations that have honed their skills in making incremental changes in processes and products develop momentum that works to impede major change (Miller & Friesen, 1980). This tendency transforms core competencies to the organization into rigidities (Leonard-Barton, 1992). For getting out of that core rigidities major changes are required. Dunphy and Stace (1988) list the cases or scenarios where transformational changes are more desirable than incremental changes.

1. Firstly the environmental 'creep' where gradual environmental changes are invisible to managers .In the passage of the time overdue changes are becoming larger.

2. Organisational 'creep' where organization itself misalign from the stable environment. In the due course change requirement is becoming larger.

3. Merger, acquisition and the diversification also makes it mandatory for the organization to change its structure. In this situation incremental changes may be insufficient.

4. Industry reorganization where organization itself adjusting within an industrial structure.

5. Major technological breakthrough where organisation originally involved in to the older technology may have to change its social technical system radically

Responding to environmental uncertainty and variation requires similar variety within the firm (Daft & Weick, 1984). Minings and Greenwood (1988) conceptualised organisations as archetypes or holistic patterns. These "patterns are a function of the ideas, beliefs, and values — the components of an 'interpretative scheme' (Ranson, Minings, and Greenwood, 1980). They explain these tracks as configurations of interpretive decoupling and recoupling arising from the loss or retention of structural coherence and the displacement or stability of underpinning interpretive schemes. Hinings and Greenwood (1988) suggested four potential tracks through which organizations decouple and recouple their interpretive scheme from the structures and processes of organizational design. Revolutionary or Second-order change is a type of reorientation track. "Reorientation track", by which an organization leaves one type of archetype and ultimately moves to another. While some reorientations may be linear in progression, oscillating or delayed patterns also may be observed, and reorientations need not follow a pattern described in cusp-catastrophe terms as punctuated equilibrium, in which sudden, discontinuous shifts occur, followed by convergence around a framework (Tushman and Romanelli, 1985; Gresov, Haveman, and Oliva, 1993).

Ozsomer et al's (1997) in their study examine this link between environment , strategy , structure and innovativeness of the firm by presuming that in environments where rapid change is a way of life it would seem that firms with the most aggressive strategic posture are more likely to survive, let alone stay competitive. They concluded that strategic posture is a major determinant for innovativeness. IBM CEO Samuel J. Palmisano (2006) has recently made remark: "The way you will thrive in this environment is by innovating -- innovating in technologies, innovating in strategies, innovating in business models".   In a 2005 study sponsored by Cisco Systems, 635 business and IT decision-makers from companies of all sizes ranked innovation as more important to their competitiveness than better education, lower wages, or reductions in corporate taxes. Not surprisingly, having the highest-quality product or service was the top-rated means of differentiating their businesses from the competition (Collins, 2007). Damanpour (1991, p. 556) defines innovation as "the adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization". Higgins (1995, p. 33) defines innovation as "the process of creating something new that has significant value to an individual, a group, an organization, and industry, or a society". Innovation in its broadest sense implies both organizational and economic changes (Afuah, 1998). There are two kinds of innovation: production and process innovation. Product innovations are new products or services introduced to meet an external and market need whereas process innovations are new elements introduced into an organization's production or service operations (Afuah, 1998). Similarly, a distinction has been marked between technical and administrative innovation. Technical innovation is about improved products, services, or processes or completely new ones which is in contrast to administrative innovation that pertains to organizational structure and administrative processes and may or may not affect technical innovation (Siengthai & Bechter, 2001).

Miles and Snow (1978) categorize organizations into four strategic types that provide organisation to pool their strategic responses to the turbulent environment into four distinct categories. Each has a particular configuration of technology, structure, and process. This classification is based on the adaptability potential of the organisation. Organizations comes out to be most adaptable is labeled as 'prospector' and lesser adaptable are 'defenders'. Beer and Walton (1987) write, "We need a theory of Organsation adaptation that incorporates all types of interventions, applying them to the management of the numerous crises all organizations face. McDaniel and Kolari (1987) investigated that defenders consistently lack strategic marketing responses centered around the 4-Ps, marketing research, and new business strategies. Their focus is to serve the existing market with increased operational efficiency. To maintain competitiveness in their niche, they constantly   endeavour to transform their processes and thus adopt process innovation. There is an abundance of literature that expounds on the importance of creativity and innovation to keep organizations healthy, viable and competitive, but few studies have focused on the organizational characteristics that lead to innovation (Tanewski et al, 2003). Burns and Stalker (1961) identified two contrasting nature of the organization mechanistic and organic which is hereby termed as defender and Prospector (Miles and Snow,1978).They concluded that organic type of the organizations

are more prone to the innovation. Their study led to the subsequent studies on the organizational innovation which assessed the impact of the organizational structure on the innovative performance of the organization (Miller, 1986; Subraminian, 1996; Sciulli, 1998).

Miles and Snow (1978) argue that defender tend to ignore environmental development outside of their primary area of interest whereas Prospector monitor much wider range of the environment conditions. Ramaswami (1991) accumulated empirical support that the Prospector mostly have output (Product) oriented CEOs where defenders usually have throughput (process) oriented CEOs. These contrasting approaches suggest that both defenders and prospector utilize different sources of knowledge and apply that in different types of innovative activities (Blumentritt and Danis, 2006). A prospector needs to be innovative to maintain its strategic position whereas defenders need to be innovative in order to maintain its strategic performance. Defenders would adopt those process break thorough which aid them in increasing the bond with their existing customers.

2. ORGANIZATION TRANSFORMATION (OT) VS. ORGANIZATION DEVELOPMENT (OD)

Fast change typically occurs when organizations are overtly under-performing, often to the extent of endangering their long-term survival. In these instances changes are made in direct response to crises (Smith, Evans and Westerbeek, 2005). These changes are disruptive. These are especially great in the large organizations where the change resistance often gets fierce (Yvette and Mintzberg, 1988). Quantum theory (Miller and Friesen, 1984) suggests that long periods of evolutionary changes sometimes punctuated as required by environmental pressure. This is the period of the revolution in the strategy. Smart organizations try to leap to a new strategic (as well as structural and cultural) orientation (Yvette and Mintzberg, 1988).

Reliance on instrumentalism as a preferred model of the change for all situations carries some assumptions that can be challenged both conceptually and practically (Dunphy and Stace, 1988). Levy (1986) discusses that models proposed by OD practitioners doesn't work profoundly to create second order change as their basic commitment has been to the dominant paradigm. A comprehensive change theory needs to accommodate both incremental and transformational approach of the change as both are complementary rather than conflicting (Dunphy and Stace, 1988). As Fiol and Lyles (1985) mentions that organizations undergoing periodic learning often finds fit by a series of large scale adjustments in strategy, structure or process or a combination of three. These changes are referred as transformative changes. Blumenthal and Haspeslagh (1994) conducted extensive studies on organizations undergoing transformational changes. They write "We propose that to qualify as a transformation, a majority of individuals in an organization must change their behaviour. They explore three types of transformation:

- Improving operations by achieving quantum improvement in firm's efficiency.

- Changing strategy to regain a sustainable competitive advantage by redefining business objectives, creating new competencies, and harnessing capabilities to met market opportunities.

- Engaging in corporate renewal which demands that large numbers of managers and employee engage in particular type of behaviour-such a facing reality, setting high standards of performance, and accepting responsibility for results.

They made the distinction between transformational change and other types of change like mergers, rightsizing etc. They establish that a change can only be called as transformational change if it changes work behaviour of the managers and the employees. Transformation is defined as "the orchestrated redesign of the genetic architecture of the corporation, achieved by working simultaneously-although at different speeds-along the four dimensions of Reframing, Restructuring, Revitalizing and Renewal" (Gouillart and Kelly, 1995). The "four Rs" mentioned in the definition are the biological metaphor for the organization where it is presumed that organization is a living organism which requires a holistic

treatment to improve its capability in the changing context. Transformational changes are frame bending (Nadler, 1982), large scale or fundamental not transition oriented or evolutionary. Anderson (1996) mentions that transformational change is "…the radical shift from one state to another, where the new state is uncertain until it emerges and by definition, is better able to meet the more sophisticated demands of environment than the old 'tried and true' state". Nutt and Backoff (1997) describes that to transform an organization, its leaders must create and implement a paradigm shift. A totally new paradigms or models for organizing and performing work (French et al., 1994) or a change in our fundamental ways of perceiving, understanding, and valuing the world about us (Harrison, 1995) than Cooper et al (1996) describes organizational change not as shifting one organization identity to another for instance Prospector to innovator or Defender to Innovator but layering of one archetype to another. Image of Sedimentation (Clegg, 1981) has the advantage of sidestepping what is increasingly seen as the sterile debate about transformational and incremental change (DiMaggio and Powel, 1991; Oliver, 1992). Nutt and backoff (1997) writes, "Many researchers characterize the nature of a transformational change in very general terms, such as 'radical' or a 'Sweeping' change". These second order changes brings innovation. But this type of innovation requires specifying that what organization practice is terminated now and what new changes are freezed to meet the desired state of the organization. Head (1997) explains this as , " the term Organizational transformation means the step by step process of restructuring an existing organization- removing what does not work, keeping that which does, and implementing the new systems, structures, or cultural values where appropriate. No company can install completely new system, replace its entire work force, or bring all new structures. Even if they could, none would want to. Instead organizations want to benefit from as many improvements as possible by leaving in place what it still of value,, replacing what is broken and outdated, redesigning what can be modified.

Freedman (1994) proposed the model for organization transformation. He elucidated that in transformational changes, a transition from bureaucratic structure to Process oriented flexible structure take place.

FOUR TYPES OF CHANGES AS INCREMENTAL STAGE TO TRANSFORMATIONAL STAGE

Source: Dunphy et al (1993)

SCALE TYPE 1: Fine Tuning. Organizational change which is an ongoing process characterized by fine tuning of the "fit" or match between the organization's strategy, structure, people, and processes. Such effort is typically manifested at departmental/divisional levels and deals with one or more of the following:

* Refining policies, methods, and procedures.

* Creating specialist units and linking mechanisms to permit in-creased volume and increased attention to unit quality and cost.

* Developing personnel especially suited to the present strategy(improved training and development; tailoring award systems to match strategic thrusts).

* Fostering individual and group commitment to the company mission and the excellence of one's own department.

* Promoting confidence in the accepted norms, beliefs, and myths.

* Clarifying established roles (with their associated authorities and powers), and the mechanisms for allocating resources.

SCALE TYPE 2: Incremental Adjustment. Organizational change which is characterized by incremental adjustments to the changing environment. Such change involves distinct

modifications (but not radical change) to corporate business strategies, structures, and management processes, for example:

* Expanding sales territory.

* Shifting the emphasis among products.

* Improved production process technology.

* Articulating a modified statement of mission to employees.

* Adjustments to organizational structures within or across divisional boundaries to achieve better links in product/service delivery.

SCALE TYPE 3: Modular Transformation. Organizational change which is characterized by major realignment of one or more departments/divisions. The process of radical change is focused on these subparts rather than on the organization as a whole, for example:

* Major restructuring of particular departments/divisions.

* Changes in key executives and managerial appointments in these areas.

* Work and productivity studies resulting in significantly reduced or increased workforce numbers.

* Reformed departmental/divisional goals.

* Introduction of significantly new process technologies affecting key departments or divisions.

SCALE TYPE 4: Corporate Transformation. Organizational change which is corporation-wide, characterized by radical shifts in business strategy, and revolutionary changes throughout the whole organization involving many of the following features:

* Reformed organizational mission and core values.

* Altered power and status affecting the distribution of power in the organization.

* Reorganization--major changes in structures, systems, and procedures across the organization.

* Revised interaction patterns--new procedures, work flows, communication networks, and decision making patterns across the organization.

Dunphy and Stace (1988) proposed a matrix containing Typology of the change strategies and conditions for their use. He recommended dictatorial transformation when organization passes through turbulent recessionary times and radical change is vital for the organisation's survival and fulfillment of basic mission. However, Charismatic change is worthy when stakeholders widely feel the need for large scale changes in the organization. Bass (1998) mentions "We still have much more to learn about charismatic behaviour, the ethics of transformational leadership. Existence of the supportive group in the organization is the viable condition for the charismatic change. Head (1997) lists the characteristics for the successful transformation to occur:

- Employee participation and involvement.

- Alignment of hardcore organizational variables system, structure and culture.

- Employee awareness, empowerment and more freedom in decision making.

- Processes to redesign to gain cost efficiencies, Customer focus and fast response to opportunities.

- Performance oriented compensation design.

3. TRANSFORMING DEFENDER TO INNOVATOR

Defenders have focus view about product and market. They tend to limit themselves to the part of the market. Tidd et al. (1997) asserts that in the case of more mature and established markets, competitive sales growth comes not simply from being able to offer low prices by attaining the cost leadership but also from a variety of non-price factors, such as design and customization. Similarly, products which are differentiated on both quality and other features achieve twice the normal return on investment. The failure to develop and introduce breakthrough innovations puts established firms at risk of being knocked out of the game by the entrepreneurial newcomers (Leifer et al, 2000). They achieve sustainability through their superior management processes. For this they have to continuously develop the competent processes to survive and grow. Operational innovation should not be messed up with operational improvement or operational excellence, Hammer (2004) further adds on "Those terms refer to achieving high performance via existing modes of operation: ensuring that work is done as it ought to be to reduce errors, costs, and delays but without fundamentally changing how that works gets accomplished. Operational innovation means coming up with entirely new ways of filling orders, developing products, providing customer service, or doing any other activity that an enterprise performs" . They adopt niche strategy. The niche can be by investigating how a firm differs from its rivals in terms of what product it offers and how it does business for instance the operational processes it chooses to practice (Day, 1981; Porter, 1996). By this way defender firm can be put in to "Process niche" .The concept describes firm's competitive position differs considerably in ways that are economically meaningful from its competitors (Echoles and Tsai, 2004). Beatty, Ulrich and David (1991) identified the principles of reenergizing or renewing the mature organization. These are described as stages viz Restructuring, Bureaucracy bashing, Continuous improvement and Cultural change.

POSCO has been continuously carrying out innovation through Process Innovation initiatives since 1999 to cope with business environment changes. The innovation approach pursued by POSCO did not involve merely innovating technology or company infrastructure through making investments in IT. Rather, POSCO decided to drive comprehensive innovation activities that could transform the mindsets of employees, organizations and processes. POSCO focused on three areas for PI. They are

(1) The design of process-centric organizations,

(2) The operation of an integrated enterprise management information system that can satisfy global standards; and

(3) A customer-centric business process that integrates both internal and external organizations.

POSCO laid foundation for innovation by establishing necessary infrastructure including POSPIA, a new information system, innovating processes including business standardization and integration, and shifting toward a process-oriented organization.

3.1 Parallel Learning structures

Organizations strive to adapt their operating processes through proactive actions dedicated to process improvements (Ethiraj et al, 2005). These may include those lessons to make improvements in prevalent practices or create formal mechanisms to coordinate and institutionalize the improvement effort (Kale et al, 2002). Production experience provide the firm with the background necessary both to recognize the value of and implement methods to recognize or automate particular manufacturing process (Cohen and Lavinthan, 1990) .Firm may use absorptive capacity where it uses prior knowledge to add new knowledge.

Bushe and Shani (1991) details out " we offer the term 'parallel learning structure' as generic label to cover interventions where a 'structure' that created operates 'parallel' with the formal hierarchy and structure which has the purpose of increasing an organizational learning that is creation and implementation of the new thoughts and behaviours of the employees. It may contain idea group which helps out in keeping the record of learning from the history. Parallel structure help people break free of the normal constraint imposed by the organization engage in genuine enquiry and experimentation and initiate needed changes (French and Bell, 2006).

3.2 Survey Feedback

It is very useful tool when organization wants to shift from one strategy to another. Surveys of employee perception or satisfaction can help to determine where the current style of operation is strong and where it is weak (Rao, 1998). Strategic Shifts are more successful when it I one after examining the pulse of the employees. The Intervention was used in the company called EID parry at a time when new CEO took over. He has the mission to turn around the company in terms of downsizing, increase in accountability and cost effectiveness. The data was later used by the CEO who clarified number of issues causing the wrong perception of the company.

3.3 Open Systems Planning

Emergent approach of the strategic design tells that organizations continually respond to changes by adapting in the same manner as the living organisms do. De wit and Meyer (1999) finds strategic problems as "wicked" characterized by interconnectedness, complications, uncertainty, ambiguity and conflict. To tackle such problems, the use of wider spectrum of information from diverse sources is needed (Kenny, 2006).

The Intervention utilized by the top team developing a number of future scenarios. They assess the realistic situations and evaluate what impending events will occur if organization maintains its resistance. Hanna (1988) in his 'outside in' approach discussed to redesign organization after the scanning of he environment.

3.4 Stream analysis

Stream analysis is a system to graphically displaying the problems of the organizations, examining the Interconnections between the problems and thus identifying core problem (French and Bell, 2006). Porras (1987) who developed this method writes what is required is a grouping of problems and condensation of the larger set of the problems in to a much smaller collection of the relatively unique issues. Problems that have many interconnections are noted as the core problems and action plans are further developed to correct the core problem.

3.5 Transformational Leadership

Organization has begun to look at leadership development as the organizational development opportunity (Leonard and Goff, 2003). Marshak (1995) asserts that leaders in the chaotic time of the transformatory changes will require vision and values that would provide the (a) a sense of direction, (b) vehicle for achieving the directional set, and (3) Valences to give hope and commitment. Stewart (1994) indicates that in comparison of transactional leadership, the job of leading the transformation is intensely interpersonal. Leaders need to adopt radical humanism from functionalism. Tichy and Devanna (1986) emphasized in their book Transformational leadership that leaders should understand human nature, their own and others. He should enlist everybody in the organization and give them some responsibility for

helping to ensure the viability of the company. Schein (1995b) opines that leader must create the environment of learning. They must create, embed, evolve, and change culture.

Motorola has recently emerged as the Top rate business case for imbibing the operational efficiency and innovation together. The company is able to grab no.1 position in supply chain performances in the world as rated by the AMR research, a supply chain bench marking and consulting organization based at US. The story of saga largely began when Ed Zander became chairman and CEO of the corporation in 2004. Zander pursued his business strategy of launching new product; he began integrating less collaborating autonomous business units and continues working on the strategy of one Motorola. He focused on keeping profitability and operational efficiency together. Motorola brought Stu Reed from IBM who viewed supply chain as the "once in the career opportunity". Reed believed that real break through innovation is the sustainable culture that breeds a wealth of ideas and keeps delivering process improvements to enable supply chain to become the best (Gubman, 2006). Reed believed that to sustain the innovation for long talent acquisition and development is essential. Earlier at the Motorola, Supply chain was not the attractive area for engineers to work as it was having limited opportunity. But as the size of chain become larger, it started attracting talent from the elite universities.

3.6 Employee involvement, Commitment and motivation
Downsizing is the common phenomenon in the defenders. This challenge which requires coping up with innovative response. Recently "survival" value has been prevalent than the "social". Organization never hesitates to fire their employees to keep it efficient. Hard work and the commitment become the rule of the business. Downsizing typically occurs in the context of major changes. There appears to be inconsistency in the way organizations respond to these upheavals. Flexibility is needed than rigidity, participation is needed than authoritarianism, and innovation is needed than conservatism (Buch and Aldridge, 1990).

Employee involvement programme are sometime termed as Quality Work life (QWL) programme. This aims to ensure well being of the employee with increased commitment to the work. This commitment leads to creativity and thus innovative performance. The process is different than Parallel structure. Here a team is formulated not from the cross section of the organization but from the same unit involving the supervisor. They focus on sorting out the operational problems. The basic goal is to increase the involvement and commitment which in long run may bring in fruit for the organization.

4. TRANSFORMING PROSPECTOR TO INNOVATOR

Gruenwald (1992) states, "no one type of organisation is an ideal or even highly practicable organisation for any one industry, let alone more than a few companies. Each company will seek its own structure, relying both on its needs and its talent pool" (Gruenwald, 1992, p. 42). Authors like Thomas, 1993; Urban, 1989; Gruenwald, 1992 are agree that "without an organisational structure that has the specific responsibility to manage new products, few product innovations will result". Berg and Shuchman (1988) mentions that the easiest way to maintain control over new product Projects is to put somebody in charge of the new product effort and for that person to be held accountable for it. In addition, companies need to establish 'new products' or product planning' departments with the following responsibilities:

• Reporting to top management about the progress of any projects

• Participating in any new products projects

• Assigning responsibilities to other departments involved in new product development (research, development, sales and marketing)

• Selecting specialists so that specific projects can be implemented effectively.

One important lesson executives have learned about innovation in the past few years is that companies shouldn't go it alone. Companies are increasingly drawing business partners and suppliers into innovation networks. That brings more minds to bear and speeds up product development (McGregor, 2007). Strategic alliances are an innovative means for firms to increase their learning. Firms that have a strategy to seek new products or to imitate what is effective seem likely to form alliances with a learning motivation. When developing new technologies and transferring sensitive technologies, joint ventures appear to be the most desirable structural form of alliance. Interpartner learning may entail the use of any of the latter three processes – imitation, grafting, and synergism. In all three processes of interpartner learning the major source of knowledge acquisition is a related organization. A critical goal of interpartner learning is the development of core competences that spawn a stream of product, process, and marketing innovations (Osland and Yaprak, 1995).

4.1 Role transition and Career management interventions

Major organizational changes require individuals to develop both aspects; it is characterized by both novelty (difficulties in making proper use of previous knowledge, skills and habits) and discretion (slack on role requirements) (Josserand et al, 2006). Nicholson (1984) mentions in his work role transition theory that work role transitions can have profound significance for the future development of individuals and organizations. Arthur D. Levinson, chairman and chief executive of Genentech Inc., the world's foremost biotechnology company says "If you want an innovative environment, hire innovative people, listen to them tell you what they want, and do it." Organizations operating in the international business arena have not thoroughly thought through:

- what they want from international career management practices;

- what initiatives should drive such career activity;

- whom they really expect to be involved in an international career programme;

- how that involvement might take place; and

From where they might recruit people to their international career programme, if in fact one International business ventures and their managers continue to experience difficulties in adjusting to and managing differences across cultural settings (Birdseye and Hill, 1995). This can be explained by organizations:

- failing to address international careers in the context of a firm's business strategy, particularly its international strategy;

- not acknowledging the need for adjustment to business practices as attempts are made to move into different stages and aspects of international business operations and growth;

- not identifying and appointing appropriate staff in line with changed international business needs; and

- Not adequately recognizing that individual managers also need to adjust to the specific cultural demands of different international business environments. This is resulting in deleterious effects on the careers of international managers

- Existed (Fish and Wood, 1993).

Nicholson's (1987) career transition theory can assist here and is based on a number of factors which provide potential guidance in the analysis of the micro-aspects of international career mobility. Nicholson (1984) identifies relevant factors to consider in the career transition process. These are:

- new role requirements (general and cross-cultural management competences, for example);

- psychological predispositions (career motivation and commitment to the organization, for example);

- prior role socialization experiences that are likely to contribute to effective role adjustment and performance (adjustment to previous overseas appointments, for example);

- current induction, socialization and adjustment activity in the new role that is likely to contribute to effective performance in the new environment; and

- The transitional, discontinuous, recursionary and interdependent nature of the career transition process itself, that is, the ongoing career implications of the overseas experience.

4.2 Appreciative Enquiry

Cooper rider and Srivastva (1987) have critique on traditional action research and problem-solving approaches to planned change. They argue that they do not lead to new knowledge, but instead to recreating the processes they claim to be studying. They claim that appreciative inquiry emerged out of a search for methods of inquiry that have the potential to create new images, models and theories of social organization.

As prospectors are new idea and knowledge seekers, Appreciative inquiry fits for them. Prospectors owe enormous burden to bring novelty. AI theorists like to describe what they are attempting to create as "new lens for seeing old issues". Marcel Proust, a theorist of appreciative inquiry says "The real voyage of discovery consists not in seeking new landscapes, but in having new eyes." By new eyes they mean that an important result of the inquiry is that people have new ways to think about and discuss their organization. This begins right from the inception of the intervention in the way in which the inquiry is framed. A specific form of new lens described by AI theorists is a "generative metaphor" (Barrett & Cooperrider, 1990; Bushe, 1998). Generative metaphors are sayings or phrases that are in themselves provocative and can create new possibilities for action that people had not previously considered (Schon, 1993). Cooper rider and Srivastva (1987) laid some principles for Appreciative inquiry, these are:

- The inquiry begin with appreciation

- The inquiry is applicable.

- The inquiry is provocative

- The inquiry is collaborative

The first principle means that appreciative inquiry should look at the best of the system under examination. The second principle means that the outcomes of an appreciative inquiry have to be applicable to the system in which the inquiry takes place and be validated in action. The third principle means that the inquiry should create knowledge, models and images that are compelling to system members and provoke people to take action. The final principle means that system members must be part of the design and execution of the inquiry (Bushe and Kassam, 2005). AI practice is the collection of "stories" from system members and other stakeholders about their best experiences. (Cooperrider & Whitney, 1999; Ludema, Cooperrider & Barrett, 2000). This is supposed to occur during the Discovery phase. AI creates ground (John Carter, in Bushe, 1995). The idea is that by creating new ground, a much wider range of new possibilities emerge for the way system members think about things and do things.

4.3 Trans Cultural Planning Processes

Some areas of transnational Solution (Harvard Business School Press, second edition, 1998) as required for success by a global business enterprise in today's market are as follows:

- What is Company's "administrative heritage" that unique complex of home-country culture, history, influence of specific individuals, etc.?

- What is the unique strategic role of each regional/national market? How is local knowledge and innovation being leveraged throughout the company (i.e., internal best practices)?

- What basic organization structure makes sense for this organization: Global? Multinational? Or Transnational? How the company is operating today with regard to the conflicting needs of "integration" and "differentiation" as regards to products lines of business, functions and tasks?

- The company's global culture and how does it distinguish itself from your competitors and contribute to your business mission?

- The preparation of your managers and leaders to manage effectively in a transnational company. Is the company equipping them to deal with the contradictions and conflicts inherent in the transnational organization? Are we developing the unique 'mind-set' needed for successful transnational leadership?

- Current recruitment strategies for building a transnational corporation. Is your deployment and development of managers on track to provide the leadership needed for a transnational corporation?

- What are the obstacles that stand in the way of effectively developing your capabilities in world-scale efficiency, national responsiveness and flexibility, and worldwide innovation and learning?

Holden (2002) argues that current cultural management research emphasizes differences between groups and reflects a "19th century anthropological perspective" of culture. He proposes a knowledge management (KM) approach. KM approach believes that knowledge is the most important asset in the organisation. Individuals have explicit and tacit knowledge. Explicit knowledge is easily explainable sharable where reverse is true for tacit knowledge. Tacit knowledge includes beliefs, mental models and perceptions that are taken for granted. In view of Holden (2002), culture is tacit knowledge.

The KM approach (Fontaine, 2007) is significant due to:

- Consistency with people's experience of culture. Everybody has a culture but very few people can accurately tell other people what that culture is.

- Cross-cultural experience is fundamentally a never-ending learning experience.

- Cross-cultural can be managed using a KM approach. Much of cross-cultural management seems to be an attempt at describing the existing state of culture but there is surprisingly little discussion about how to modify existing cultural states.

Holden (2002) exemplifies the case of Novo Nordisk (NN), a Danish company involved in biotechnology. The company has 15,000 employees deployed in 68 countries. Company has a strong ethical and independent outlook and has been on the Fortune list of top 100 best-run companies in the world. In the late 1990s, one of its key concerns was to protect its reputation as an ethical company as its key stakeholders include health care organizations. NN's management feared that subsidiaries in different parts of the world would have a different cultural perception of what "being ethical" meant. Having established that maintaining a global ethical standard was a strategic objective, NN's senior management put in places the resources and processes necessary to develop that global standard across cultures. In 1996, NN invited 1,000 senior managers to become Facilitators. Their responsibility was to transfer the values associated with NN as well as benchmark international units and become "change agents" to promote excellence inside the company. Fourteen candidates were selected. They worked in pairs and traveled throughout the world to audit every NN site. For each audit, two facilitators

- Assessed each unit whether a minimum amount of compliance to NN's way of management was met.
- Assisted units in correcting perceived errors.
- Facilitated the sharing of best practices and problem solving.

Throughout the process, all issues – including how NN's values can be interpreted according to the local culture – were negotiated. NN realized that it could not impose its cultural values on employees worldwide but that it could put into place a KM system to develop a global ethical standard for NN employees.

6. CONCLUSION: STUDY CONTRIBUTION AND RESEARCH IMPLICATIONS

This paper classifies the OD interventions suitable for the transformational changes in the defenders and prospectors. These interventions might help them in becoming innovator. The study confines its scope to the collection of the research support for the transformational strategies for the Low cost defenders where defender company lowers its cost by process innovations. Defenders attain their competitive advantage by superior processes which are easy to be imitated by competitors. So they have to continuously involve in to process or management innovation. For which the role of the human part of the organization is key. People's participation and empowerment brings the commitment and productive time at work. The reason of Toyota's apparent superior operational excellence is the human orientation emanating from Japanese culture. Toyota's real advantage was its ability to harness the intellect of "ordinary" employees (Hamel, 2006). The key aspect of the defenders is to target the premium segment by offering the differentiated product quality wise. Slater et al (2006) mentions that most successful differentiated defenders are emphasizing on customer oriented behaviors but it doesn't mean that they are not involved in the product / service innovation. Future research can classify the OD interventions when defenders are transforming in to Product innovator.

ALIGNING OD INTERVENTIONS WITH ORGANISATIONAL TRANSFORMATION

TRANSFORMATION TYPE	OD INTERVENTION
Defender to Process Innovator	Parallel Learning structures Survey Feedback Open systems Planning Stream analysis Transformational Leadership Employee involvement, Commitment and motivation
Prospector to Product Innovator	Role transition and Career management interventions Appreciative Inquiry Trans-Cultural Planning process

The role of the strategy is dynamic, involving managers continually assessing the various combinations of environmental conditions, technologies and structures to enhance performance (Tekav et al, 2005). Porras and Silvers (1994) mentions as, "Organisational Transformation has emerged over the last decade as a distinct form of planned change. It is advancement over OD owing to its focus on precipitating more profound change in organizations. This occurs because the variables targeted by OT approaches (organizational beliefs, purpose, and mission, the components of organizational vision) affect a "deeper" level in the organization than those traditionally targeted for change by OD (i.e. work setting variables)." The gist of the argument is that whether organizational learning occurs at the level of the core belief of the individuals or it is confined to the current business perspective.

Creative and courageous but risk-conscious activities of innovators are elevated above the risk aversion of the masses of defenders of the status quo (Kley et al, 2007). The "Flop of the Month" program was implemented at the BMW Regensburg factory between 1990 and 1993. The purpose was to avoid strategies aimed at safety and security, which constrain innovation. Simultaneously, it was intended to foster risk friendliness for innovation. A management workshop was organized to generate ideas. This workshop marked the beginning of the "Creative Error of the Month" initiative. The area of application was the department of Personnel and Social Services led by Gerhard Bihl at the Regensburg BMW plant who said, "If an innovative project carries only an 80/20, or even a 60/40 chance of succeeding, but you have thought it through carefully and are well prepared, then go ahead and try it". Bihl stressed that employees are chosen for the "Creative Error of the Month" if their innovative and self-initiated efforts failed in the implementation. The classical error-induced single-loop-learning (Argyris and Schon, 1978), based on the notion that "I made a mistake, so I will never do this again", recedes into the background in the above case study. This began the breakthrough thinking in the organisation that resulted innovation culture in the organisation.

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AUTHOR PROFILES:

Mr. Sharadindu Pandey is currently pursuing Doctoral programme from Indian Institute of Technology, Kanpur, India. His research work includes strategy, structure and matching OD interventions.

Prof. R.R.K. Sharma is Professor of Management at Industrial and Management Engineering Department, Indian Institute of Technolgy, Kanpur, India. His research interest includes change management, innovation and operation management problems.

THE EDUCATIONAL POLICY IN ROMANIA:
GAPS BETWEEN THE RURAL AND URBAN AREAS AND POLICIES FOR DIMINISHING THEM

Sinziana Baltatescu, University "Al. I. Cuza", Iasi, ROMANIA
Laura Asandului, University "Al. I. Cuza", Iasi, ROMANIA
George Maha, University "Al. I. Cuza", Iasi, ROMANIA

ABSTRACT

The efficiency indicators for the educational system reveals major differences of efficiency and quality between Romania and the European Union and, more importantly, between Romania and the new member states from Eastern Europe, which have relatively similar economic conditions for development. The most evident gaps are between the rural and urban areas, due to the differences between the economic developments of these areas. Education and economic development are strongly related, so it is not possible to create a coherent policy of education without a strategy of economic development in the infrastructure, employment, agriculture in the rural areas. This article is aiming to underline the possible factors which cause these gaps and the possible ways of diminishing them.

Keywords: *education policies, rural/urban disparities, infrastructure, economic development, economic reforms.*

1.INTRODUCTION

As a member of the European Union, Romania is aiming to fulfill the European standards and rules, in order to face the challenges of the new competitive environment and the new development requirements imposed by its status. The educational system is one of the areas in which Romania needs to implement important reforms in order to cope with the specific features of the European labor market and the new learning based economy, as well as the objectives stipulated in the Lisbon Agenda.

Table no. 1 Total public expenditure on education in EU and Romania

Indicators	EU	Romania
Total public expenditure on education as % of GDP, for all levels of education combined	5.07	3.29
Total public expenditure on education as % of GDP, at primary level of education (ISCED 1)	1.15	1.20
Total public expenditure on education as % of GDP, at secondary level of education (ISCED 2-4)	2.30	0.73
Total public expenditure on education as % of GDP, at tertiary level of education (ISCED 5-6)	1.13	0.70
Total public expenditure on education as % of GDP, at pre-primary level of education (ISCED 0) and not allocated by level	0.49	0.66

Source: Eurostat

As observed in Table no 1, there is a disparity between the level of public expenditure on education of GDP in Romania and the European Union; while in the EU the percentage of public expenditure on education is 5.07% of GDP, in Romania it is only of 3.29% of GDP. The difference between percentages for the entire educational system is revealed later in the statistical data related to the percentage of public expenditure on the secondary level of education: 2.3% in the European Union versus 0.73% in Romania.

This is exactly the education stage in which students pass from the primary level to the gymnasium and high school.

2. COMPULSORY EDUCATION IN ROMANIA

In Romania, the secondary education system is organized on four levels: pre-primary level of education (ISCED 0), primary level (ISCED 1), secondary level (ISCED 2-4) and tertiary (ISCED 5-6). The pre-primary level includes the education of children in kindergarten, structured on three age groups: 3 to 4 group, 4 to 5 group and the 5 to 6 group. The last one aims at preparing children for school and, according to a draft law, is compulsory.

The primary level of education includes the first four years of pupil's education. The secondary level (ISCED 2-4) has two stages: the inferior secondary level, which includes the gymnasium education (four years) and the first two years of high school, and the superior secondary level, which includes the last two years of high school. The tertiary (ISCED 5-6) education is formed by the years of additional vocational specialization in arts and crafts schools (in the new draft law which is being discussed now, these schools will be eliminated, thus enforcing a new system of vocational learning).

Attendance is compulsory until the inferior secondary level (the first 10 years of school). During this time, education is free since it is financed by the state. The Romanian legislation in force stipulates the compulsory character of study in the first 10 years and offers the necessary framework to protect the child by a series of measures and normative acts meant to stop child labor as well as a number of social protection measures.

3. URBAN – RURAL DISPARITIES ON EDUCATION

In spite of the education policy which provides free learning during the first 10 years of school and of the social protection measures offered for the children, especially in rural areas, there still are disparities between the levels of education in rural and urban areas, in terms of school attendance.

Table no. 2. The specific rate of school attendance in the primary education System (ISCED 1) by age

Age		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
6 years	total	19	21.9	41.7	37.8	27.2	23.5
	urban	18.6	20.9	37.4	32.7	25.9	22.7
	rural	19.3	22.6	45.2	42.1	28.3	24.1
7 years	total	89.1	91.9	94.7	94.7	91.9	90.4
	urban	92	94.9	97.9	93.8	96.2	94.7
	rural	86.6	89.3	92.1	95.4	88.1	86.8
8 years	total	95.8	96.8	97.2	97.6	98.3	95.2
	urban	97.3	99.3	99.7	96.5	100	99.4
	rural	94.5	94.8	95.2	98.6	96.2	91.6
9 years	total	98.7	99.6	97.7	99	98.5	100
	urban	100	100	100	98.4	100	100
	rural	96.7	98.1	95.7	99.5	95.1	96.2
10 years	total	91.6	84.8	86.8	83.4	87.3	86.5
	urban	91.8	86.2	89.1	83.6	91.3	90.7
	rural	91.3	83.5	84.8	83.2	83.7	82.9
11 years	total	11.2	13.3	12.8	12.5	13.7	13.7
	urban	9.6	11.9	11.6	11.4	12.9	13.5
	rural	13.2	14.9	13.9	13.6	14.4	14.0

Source: calculated on the data from INS, Bucharest, 2001-2005.

From Table no. 2 it can be observed that, in each school year, starting with 2001-2002 and until 2004-2005 the rate of school attendance in the primary level is over 95% for children of 8 and 9 years old, and lower in the case of other ages.

Although the level of school attendance in the primary stage of education is higher in the rural areas, sometimes higher than in the urban ones, the percentage of those attending the next stage of education is lower and tends to fall significantly under the percentage registered in the urban areas. The different pace of economic development, the demographic evolution, the migration of the labor force, the subsistence agriculture, the lack of resources, precarious infrastructure, the low quality of the teaching staff (most times unqualified persons substitute teachers), the lack of perspectives for continuing the studies created significant gaps between the rural and urban environment from the perspective of school drop out.

The predominance of agriculture as the primary occupation of the rural areas inhabitants, performing unmechanized agricultural activities, with old, labor-based technologies conducted to the use of children in the house related activities and in other productive activities. The lack of vision from the parents, which, on their turn, have poor education, makes easy money more appreciated than the benefits of a later potential qualification. Thus, on the short term, the cost generated by further education is to be replaced by extra income. This also explains why the percentage of instruction is higher in the female population than in the male one.

The burden of parent-paid tuition for further education is more obvious if one takes into consideration the fact that secondary schools and high schools are often far away, positioned in towns. In the mountain areas there may be distances of tens of kilometers between the students' residence. Only recently, the Ministry of Education developed a program providing buses for pupil transportation to school Inspectorates. Nevertheless, the problem is not solved as funding so far has been insufficient.

Tabel no 3. The specific rate of school inclusion in the gymnasium education system (the inferior secondary level) by age

Age		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
11 years	total	77.8	86.7	83.6	85.7	83.2	83.9
	urban	80.5	92.5	89.1	89.5	90.5	92.0
	rural	74.6	80.6	78.3	82	76.5	76.6
12 years	total	92.2	89.3	95.7	92.7	93.7	92.0
	urban	94.5	92.2	100	95.3	100	99.9
	rural	90	85.4	90.2	90.1	86.7	84.7
13 years	total	95	95.5	85.7	96.8	93.0	94.3
	urban	97.7	99.8	90.1	99	98.4	100
	rural	91.5	90.3	80.8	94.3	87.4	87.5
14 years	total	76.1	79.3	79.7	70.6	84.5	82.1
	urban	79.2	83.9	83.1	72	89.4	87.8
	rural	72.1	73.6	75.6	68.9	78.8	76.2
15 years	total	13.9	12.6	12.8	13	12.3	15.4
	urban	13.3	12.5	12.4	12	11.9	15.3
	rural	14.7	12.7	13.2	14.3	12.7	15.5

Source: calculated on the data from INS, Bucharest, 2001-2005

A constant deficiency of the education system in the rural areas is the precarious quality of the teaching staff. Insufficient remuneration, lack of facilities and the absence of any motivation (even an ethical one) have led to the critical shortage of qualified personnel in the rural areas. Even as we speak, most of the

teaching positions are occupied by substitute teachers, mostly unqualified, incapable of offering sufficient training to the pupils so that they pass high school entrance examinations. Lately, governmental policies aimed at offering more attractive wages, scholarships to university students who choose to work in the rural areas after graduation and at offering incentives for relocating in rural areas (The government approved the methodological norms for implementing Ruling no. 769/ 14th July 2005, that sets the new rules of scholarship granting), but the results will be visible only after an amount of time has passed.

In addition, the infrastructure of schools (especially of those in rural areas) is weak. State funding aimed, in most of cases, to meet the unions' demands for higher wages and neglected infrastructure improvement. This has led to a poor student training, diminishing their chances for further education.

As observed in Table no 3 and Fig. no. 1, the specific rate of school attendance is falling dramatically around the age of 14, as pupils must decide whether they attend the next stage of education, namely the first years of high school. In this case, the gap between rural and urban areas also increases, based on the increase in education costs that this stage implies. In most cases, attending high school implies transportation to the closest town in which there is a high school, which means significantly higher expenses for transportation and housing for students.

Fig. 1 The specific rate of school inclusion (age 12)
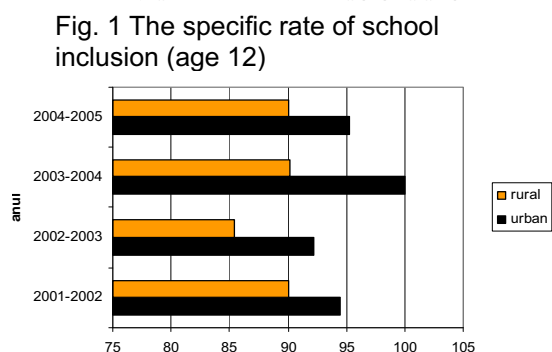
Source: processed on data from table no 3.

Because of insufficient accommodation in dormitories and the precarious conditions of living, paying for rent adds to transportation and subsistence expenses. Due to an almost complete lack of income in the rural areas, the budget of an average family cannot support the education even for one child. The perspective of child labour in household or agricultural activities seems much more «profitable», rather than going to school. The low level of education will later generate employment difficulties for these young people. Unemployment indicators show high levels of unemployment in the case of the young people from rural areas. One more problem is their quality of work: because of poor education, the range of activities they can choose is relatively small and includes low wages, low levels of social protection, thus leading to the increase of poverty indicators in Romania.

4. EDUCATIONAL POLICY IN ROMANIA

The efficiency indicators for the educational system reveals major differences of efficiency and quality between Romania and the European Union and, more important, between Romania and the new member states from Eastern Europe, which have relatively similar economic conditions for development. For these reasons, the Romanian educational system needs major reforms. It has to restructure study cycles, the curriculum, and the infrastructure; to increase the quality of education by diminishing the disparities between the rural and urban areas or ethnic differences and by promoting and stimulating a system based on equity and adapted to the requirements of the learning economy.

Government policies in Romania should focus on increasing the awareness of rural population towards the benefits of a more complex education, as well as on solving the problems which prevent the rural population from attending higher levels of education.

The Post Integration Strategy for 2007-2013 and The Operational Sectorial Program for Human Resources Development set as primary objectives for social inclusion policies to ensure equal and universal access to primary level and inferior secondary level of education and to increase the education chances for underdeveloped areas. These would be possible by developing infrastructure in rural areas, providing the schools with IT infrastructure, diminishing disparities of infrastructure and quality of personnel between the rural and urban areas.

As far as statistics on years of schooling are concerned, a special attention must be given to the Rromanes communities. In these communities, the illiteracy level for people aged 45+ is of 30% and over 50% of children do not attend school on a regular basis. The number of children abandoning school has increased every year, due to a number of factors and preexistent economic, social, cultural conditions and the struggle with racism and discrimination.

The social status of the Rromanes population has worsened due to the political and economic transition in Romania. Children have been the main victims of poverty and the lack of social and medical assistance. Gradually, situations such as the high rate of illiteracy or semi-illiteracy, school abandonment, low percentage of students finishing primary education as well as a high level of school absenteeism have increased alarmingly.
The main problems identified in numerous studies are:
- The funds allocated to the programs of endowment of educational institutions were either insufficient or insufficiently used; there hasn't been a strategy concerning the improvement of the school infrastructure, the one that exists not being in compliance with the scientific progress or with the educational standards in terms of social or professional development. For the state budget, the educational system was a priority only at a declarative level, not being translated into a channel financial effort;
- Lack of a coherent reform of school curriculum, the system of alternative textbooks, which proved to be very expensive for the average income of people in rural areas, and failed in providing an integrated approach to school curriculum;
- Programs designed to bring back the young generation after graduation by offering scholarships and fiscal incentives, which were launched too late, haven't made a significant impact up to now;
- Lack of a professional analysis of the educational system in rural areas leads to reduced possibilities in building a coherent strategy in reviving rural areas;
- The mentality according to which "one does not benefit from schooling in any way" is still widespread, families view a child or a teenager as an individual with responsibilities in the household;
- Lack of communication between local and central authorities and parents, lack of a non-governmental sector which should promote school abandonment help in explaining the importance of school in the professional development of any individual;
- Low level of economic development in rural areas has a negative impact on the percentage of income which is allocated by families to school expenses;
- Unattractiveness and low development of vocational education which could offer short-term professional education and financial independence to graduates.

Governmental intervention for remedial of these problems should follow both measures needed to adapting institutions to European educational standards and also specific measures aimed at reducing inequalities in access to education. It is necessary that educational institutions adapted their curricula to the demand on the labor market as to reduce discrepancies between the education offered and the demand on the Romanian market. Several national strategies and programs have been designed and implemented with the aim to improve the conditions of study in schools and reduce social and educational inequalities.

According to The Post-Integration Strategy for 2007-2013, Romania intends to follow four important objectives in order to further sustain the development of the human capital:
- continuous education
- supporting research, development and innovation in significant economic areas

- minimizing discrimination on the labor market, social inclusion, social protection
- improving the national health care system

Furthermore, the strategy stipulates some specific objectives concerning the education system: to adapt education on labor market requests, to ensure the compatibility between the Romanian education system and the European one in what regards quality and efficiency, to reform the early education system, to ensure equal access to education both in rural and urban areas.

Four main problems the Romanian educational system with an effect on the competitiveness and prosperity of the country were identified in the Presidential Report for the Analysis and Design of Educational and Research policies in 2007. According to this Report, education in Romania is 'inefficient, irrelevant, unequal and of poor quality' (according to "Romania for education, Romania for research", Report of the Presidential Committee of Analysis and Elaboration of Educational and Research Policies, Bucharest, 2007). The inefficiency of the educational system is evaluated by comparing the results of Romanian pupils in comparison with the EU, and especially with pupils in the neighboring countries which have similar socio-economic conditions but have better results.

Table no 4. Lisbon indicators for Romania and EU

Lisbon indicators	Romania	EU	EU 2010 Target
Early school drop out	23,6	14,9	Max 10
Percentage of population aged 22 with high-school education (secondary education)	66,5	77,3	Min 85
Percentage of pupils aged 15 which do not manage to reach the minimum requirements (PISA, 2001)	41	19,4	15
Percentage of graduates in mathematics, science and technology	23	24,1	+10
Adults in life-long education	1,6	10,8	12,5

Source: "Romania for education, Romania for research", Report of the Presidential Committee of Analysis and Elaboration of Educational and Research Policies, Bucharest, 2007

Lack of relevance of the system compared to the economy of future is assessed taking into account the positioning of Romania against main indicators of efficiency set by the Lisbon Agenda. From this perspective, Romania is positioned under the average indicators in the European Union, which reflects the fact young people leaving the educational system are not prepared to face the challenges of a knowledge-based economy.

5. **CONCLUSIONS**

An educational system with equal opportunities means providing equal conditions in access to the system of education and education within the system irrespective of ethnic belonging or socio-economic or cultural conditions. As shown above, there still exist huge discrepancies in Romania between conditions of study for pupils in rural and urban areas, as well as the actual access to education. The number of pupils with low results in subjects like Romanian language, Mathematics and Science is 2-6 times higher than those in urban areas. Evermore, Rroma children are a special case being the least advantaged group with the lowest level of access to education. This is due both to poverty and socio-cultural conditions: approximately 80% of illiterate young people are of Rroma ethnicity, out of which 38% are functionally illiterate. 64% of Rroma children go to primary schools in comparison to the national average

of 98% (according to the Report of the Presidential Committee of Analysis and Elaboration of Educational and Research Policies, Bucharest, 2007).

Another factor which has an impact on low efficiency of the Romanian educational system is the underdeveloped infrastructure and poor resources. As shown earlier, this is an important factor in rural areas with no school at the secondary level, pupils being forced to commute to neighbouring cities to get access to high-school level education. Evenmore, school buildings are old (82 % of schools were built before 1970, sometimes even earlier), lack of proper conditions of study as to meet the standards of education in the EU.

Measures which should be adopted to solve these problems refer to the reform of the cycles of education to become compatible the European framework of qualifications, as well as the restructuring of the higher education under the Bologna process. The latter has started to be implement with positive results. The reform in higher education if at the secondary level problems have not been addressed. The new draft legislation provides that the compulsory education subsidized by the state will be extended to 13 years of school, starting with pre-school and ending with high-school where the years of education will no longer be fragmented by an exam after 8 years of education. A flexible curriculum is necessary focused on competencies of professional development which should prepare and adapt pupils and students for the needs on the labour market.

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AUTHOR PROFILES:

Lecturer Sinziana Baltatescu earned her title in 2007 and is in the process of preparing her Phd paper. She teaches International Trade, Economics and International Business Negociation at the Faculty of Economics and Business Administration, Universty "Al. I. Cuza", Iasi, Romania.
Professor dr. Laura Asandului teaches Statistics and Demography, at the Faculty of Economics and Business Administration, Universty "Al. I. Cuza", Iasi, Romania.
Lecturer Liviu George Maha is in the process of preparing his Phd paper. He teaches Economics, International Business and Economic Integration at the Faculty of Economics and Business Administration, Universty "Al. I. Cuza", Iasi, Romania

EFFECTS OF THE SOCIAL, CULTURAL ACTIVITIES, BASIC ELEMENT FOR EFFICIENCY'S IMPROVEMENT

Claudiu Cicea, Academy of Economic Studies from Bucharest
Cosmin Dobrin, Academy of Economic Studies from Bucharest
Ion Popa, Academy of Economic Studies from Bucharest

ABSTRACT

In the socio-cultural area there have always been difficulties under the rapport of the effects quantification. The try to evaluate the results in the socio-cultural area came across several problems related to the definition and the estimation of the effects, from which we can enumerate:
- Unlike the economic activities (in which the human is a subject of the activity), the socio-cultural activity see the human in a double posture (subject and object of the activity). In other words, in the socio-cultural activities, the human interact on the environment. From here results the highly subjective character of the manifestation of the effects – the same socio-cultural activity can generate different effects (in intensity and manifestation modality) from individual to individual;
- Unquantifiable social objectives (the increase of the civilization degree and of the living level for the population of a geographical area);
- The relatively long period in which the economical effects manifest (the beneficiary of the educational and/or health services registers economical effects of these activities during the entire lifetime);
In this paper we will analyze the effects of the social & cultural activities, as a first step in order to increase the efficiency in this area. In detail, we will present the evaluation's method of the effects for one of the most important sectors of social & cultural domain: healthcare services.

Keywords: Efficiency, effects, sanitary services, healthcare system, evaluation.

INTRODUCTION

"The effects of the activities from the social area are usually quantitative, expressed in physical unities and that are obtained as a result of the productive economical processes". This is how W. Z. Hirsch defined the effects of the public area activities in his work, "*Urban Economic Analysis.*" The need to evaluate the effects from the social-cultural area in order to quantify the social efficiency is based on more arguments. First of all, it is absolutely necessary to improve the management and decisional fundamental activities at a government level. This issue gains more and more importance in the structural reforms from the public administration. In this sense, the measuring of the variables (goods and services) resulted from the social activity is indispensable at a government level for the application of the financing forms *based* on objectives, that constitute a strong basis for decisions at all levels and for the creation of an efficient stimulating and coordinating system of the activities of the different economical agents.

Secondly, the evaluation of the generated effects in the social activity can be seen as a control process, as P. Smith used to appreciate. In this case, the quantification activity of the effects becomes more and more important because the tax payers appreciate the quantity and quality of the goods and services offered by the social-cultural area from the point of view they have in the financing of this sector. We have to mention that, according to these effects, the tax payers will trust or not the government activities.

Thirdly, the need for evaluation of the effects residues in the fact that all the economical growth studies realized at a government level that analyse efficiency and productivity aspects take into account, besides the economical effects, the results registered in the social- cultural area. After these studies, the conclusion was that the efficiency (productivity) growth rate in the social area is smaller than the growth rate from the productive area. The precision of the variables' (goods and services) evaluation, resulted from the social-cultural area, is determined in the fundament of the efficiency at this level. Any quantification error automatically leads to a wrong estimation of the social-cultural efficiency.

The problematic of the performances and efficiency in the social-cultural area must be analyzed from the point of view of the benefits brought to the members of the society. We can say that in 2002 the average

level of the public services from the countries of the Economical Organization for Cooperation and Development (OECD) was situated at 15 % of the gross domestic product, most of the countries having over 12.5 %, while the employees' contribution (through taxes and fees) to the public services was about 17 %. By analyzing this situation, we can conclude that the public services (education, health, culture, religion etc.) train an important volume of resources, at the same time developing a great economical activity, able to absorb an important labour force.

There is no doubt that the nature of the activities from the social – cultural area itself complicates a lot the evaluation process of the obtained effects. We will next analyse the problematic of the social – cultural area effects quantification, by underlining two main aspects:
- The knowing of the methodological effects connected to the social effects' evaluation;
- The presentation of some specific indicators for the results in different representative social – cultural sectors.

METHODOLOGICAL ASPECTS

When we are talking about the social effects, there is a great diversity of issues regarding their evaluation. These issues can be divided into two categories: a) The issues regarding the clear definition of the objectives and activities; b) The issues regarding the quantification of the results.

a) The objectives definition
L. Pliatzky appreciated in one of his books that "*…the management of a country is a more complex work than the management of a private company because while a company from the market generally speaking has an unique objective to obtain profit, the governments by their nature tend to different objectives and quite frequently, to contradictory ones, generated by the public sector …they try to solve problems that are more difficult than the resources management*".

Before we begin the effects' evaluation, we must define as clearly as possible the objectives the public society wants to accomplish, the effects they hope to obtain. There is no doubt that there is a certain ambiguity regarding the precise definition of the social area objectives; we are talking about public institutions and societies that have multiple objectives, even contradictory, generated by heterogeneous "users" that compete for the access to certain resources. At last, the effects definition process is resumed to the chose of one "user". The existence of certain conflicts in the decisional process represents an aspect that is present in all types of organizations. Still, we have to underline that in all the social – cultural institutions the pressure of the external interests is higher than in all the other types of societies.

b) The results' quantification
After we defined the objectives the different institutions from the social – cultural area must respect, we have to define the variables that approximate their final product. For this, we first have to underline that a society (institution) from the social – cultural area needs to be understood as a generator of utilities for the society, as a society whose goal is to satisfy the needs of the users and where the productivity factor is predominant, in spite of the other two production factors (nature and capital). Generally, any type of service from the social – cultural area presents certain characteristics, which makes the evaluation effects to be quite complicated.

A first characteristic is represented by the fact that the services, especially in the social – cultural area, are intangible. That is why it is impossible to apply the classical method of the effects quantification based on the calculation of the resulted physical unities. At the same time, the services quality is different; it cannot be established before, but only after the respective service has been realized. The social – cultural area services are realized by people so it is difficult to evaluate their quality, because there is a greater or smaller subjectivity dose.

Another characteristic is represented by the heterogeneous character of the services. We have to mention that the heterogeneous aspect may exist in any economical good or service, meaning these sums up a wide offer of features that make it required on the market. The physical characteristics of all the goods and services resulted from a complex activity are very complex, included in a main model,

relatively easy. So, although the IT industry has a very wide offer of computers, with different performances, the final product of this industry can be reduced to a vector (representative product) with well determined features, more or less complex. Usually, a greater heterogeneity degree complicates the evaluation process of the results.

The problematic of the effects' quantification in the social – cultural area imposes the taking into account of more aspects:

> A. The intermediary effect - final effect relation;
> B. The gross effect – net effect relation;
> C. The quantification of the effects in the case of the services or activities aggregation

A. *The intermediary effect - final effect relation*
An important aspect referring to the quantification of the effe4cts from the social – cultural area is represented by the distinction we have to make between the intermediary product (effect) and the final product (effect). The first is the one obtained at the moment of the unfurling of the respective social – cultural activity or after this ended, while the second one is registered long time after the activity ended. In order to better understand these things we will present a few examples:

- In the sanitary area, the intermediary effect can be represented by the number of cured patients, the number of receipts etc. The final effect can be considered the society-s health status;
- In the educational area, the intermediary effect can be the number of graduates (in absolute or relative size), while the final effect can be the education level of the individual or of the society.
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Generally, the intermediary effect is easy to quantify, while the evaluation of the final effect presents some difficulties. We must underline the idea that the relation between the intermediary product (the effect) and the final result of a socio-cultural (public) activity is, in most cases, influenced by the environment, where the ambient factors play an important role. This influence is generated by the fact that there are several powerful connections between the different public institutions. Therefore, we often meet cases in which the activity of a socio-cultural (public) institution comes into contact with other governmental or public organizations (departments).

To conceive the efforts (resources) that enter the system as variables of the effects (results) is a very frequent and erroneous practice. Generally, the more value a product comprises (many processing phases, much work force and high qualification), the more it is accentuated the necessity of its quantification, but in the same measure the evaluation process is getting more complex. This is also valid for any economical good and/or service, both from the productive area and the social-cultural one. R.A. Bradford presents a quite simple version of the connection between the efforts and the effects, more precisely between the costs and the benefits of the public (social-cultural) services at a local level. Therefore, R.A. Bradford distinguishes two stages:

- 1) The definition of the effects (the benefits) of the public services according to their efforts (costs):

$$Y = f(X),$$

Where: Y represents the effects;
X – The efforts.

- 2) The second stage is based on the supposition according to which the society (the tax payers) solicit certain social services based on their effects, according to the impact they have on its members. This connection can be defined in the following way:

$$I = f(Y, M),$$

Where I represent the impact (the result) that the benefits (effects) of the public services have over the society;

   M   –   The ambient factors under which the given social-cultural activity takes place.

We can not determine exactly the influence a change in the environment factors (M) will have over the final result (I). Still, we can state that M is a vector which includes a multitude of ambient factors whose effects can cancel each other.

The quantification of the final results of the social-cultural services presents even bigger difficulties if we look at the overall phenomenon. This is due to the fact that the results (effects) are registered in a practically unlimited space and time.

B. *The Gross effect – net effect relation*
As in the case of the intermediary effect – final effect, we must make a clear distinction between the gross effect (the gross product) and the net effect (the added value). For example, in the education activity the quantification of the added value can be conceived through the approximation of the product realized by the institution that provide those types of services (educational services) that lead to the increase of the knowledge level, to the improvement of the performances of its students. Therefore, an indicator or a model build in order to differentiate the academic results at the end of a course (or a cycle) from those from the beginning of the course (in fact, to prove the added value of the educational activity) it is compulsory for the work from the education centres (institutions).

K.J. Arrow claimed that the substitution of the gross product (effect) with the added value supposes that the production is not (or it is in a very small manner) divisible in intermediary consumptions, which implies that the marginal rate of substation between the capital and work production factors to be independent from the quantity of consumptions implicated in the given process.

At the same time, M. Bruno studies the consequences derived from the quantification of the added value in the approximation of the value of total productivity of the production factors. This way, he elaborates a series of conditions in order for him to effectuate the substation of some evaluation to other. In this way, in order to verify the equivalence between the gross production and the added value, it is necessary to accomplish the following requests:
-        1) The raw materials must be used in constant proportions at the realization of the gross product (effect);
-        2) The production function must be defined starting from the gross product must be divisible on groups of raw materials;
This condition also comprises the first one. Given the situation in which the raw materials are combined in constant, well-determined proportions, the production function can be the following:

$$Y = f\{a(L), b_1(M_1), b_2(M_2), b_3(M_3), \ldots b_m(M_m)\}$$

Where:
Y represents the final production (product) final;
a – The percentage in which the work production factor participates to the final product;
L – The work production factor;
$b_1, b_2, \ldots b_m$ – The percentages from the 1, 2, … m raw materials;
$M_1, M_2, \ldots M_m$ – The 1, 2, … m raw materials;
-        3) The relative prices of the intermediary consumptions must stay constant.
        Given the situation in which one (or more) conditions are not satisfied, the evaluation of the productivity variations present more or less significant errors. This fact has great implications in the case of the productivity variance estimation in the public sector. If the choice of variables, in the established proportions is not correct, there can be registered erroneous conclusions.

C. *The quantification of the effects in the case of the activities or services aggregation*

Frequently, as an important feature of it, the main service offered by a social-cultural public institution represent a multidimensionality, meaning that it adds, on different occasions, secondary services. Here we have to underline the role a social-cultural institution plays for the so-called "peripheral services". These services refer to those activities that do not make up the main activity object of the institution, but which contribute to the abstinence of the final result (product), through the creation of optimal unfurling conditions of the activity. A good example is represented by the university canteens, the information centre of the museums, the wardrobe service of the theatres etc. Although these services do not make up the central point of the analyses, they contribute to the increase of the offered services' quality.

The social-cultural area offers numerous services that are not created to be sold on the market, the establishing of the prices as percentages to build aggregated indexes in the conditions of the multidimensional services being impossible. Even when the price is established (under the form of public taxes), it must not be analyzed as an adequate percentage, because it represents a fixed (imposed) price and not a competitive price. The most frequent solution supposes the establishing of the price starting from the cost function. According to F.M. Fisher and K. Shell a more adequate solution for the price establishing is the calculation of the marginal costs through the deriving of the cost function. Also, other methodologies can be used in order to increase or reduce the number of variables. This way, the technique of "factorial analysis on the main components" techniques (initially introduces by H. Hotteling) groups the variables according to the variation and covariation criteria. The system is based on the existence of the relations between the variables, as a basis for their reduction to only a few factors, so that the information loss is minimal. The factors that result through the application of this method are independent, so that the problems related to the interdependences between the variables are eliminated. This technique is used in the evaluation process of the quality, leading to the decrease of a big number of variables to only a few qualitative sizes.

An alternative form of aggregation is represented by the DEA methodology (Data Envelopment Analysis). This method is a non-parametric modality, especially applied to the efficiency evaluation, being fundamental by A. Charnes, W.W. Cooper and E. Rhodes. In essence, the method consists of the optimization of the total productivity rate, given the conditions of the satisfying of some restrictions. This rate is obtained by dividing the weighted sum of the effects (results) to the weighted sum of the efforts (results), these weights being automatically generated by its own optimization program. These weights are fixed taking into account the maximum efficiency in the given sector; from this reason, the weights vary from one sector to another, according to which the proper levels of inputs (efforts) outputs (effects) are established. Doubtlessly, there are many situations in which the economic practice solicits the diminishing of the weights number. Let us consider the example of a society from the productive area that would have to produce two products (effects), both being considered representative. Let us suppose that the management of this society decides to specialize the unit for the production of a single product from the two; in this way, it decides that all the resources are used for the realization of a single effect, not taking into account the other. In this case, the society can register a decrease in efficiency as the product that is not taken into account would have an equal (or even greater) importance to the one chosen to be realized. As the three authors (A. Charnes, W. Cooper and E. Rhodes) underlined in the work "*Measuring the efficiency of decision making units*", the realization of an approximation model of the production function can have erroneous records, as long as effectively representative variables are not taken into account. For this reason, in the case of the DEA analysis model the idea to establish limits for the weights associated to the respective sector was taken into account, this way avoiding the elimination of the representative variables. This diminishing procedure is significant for one of the common practices from the social-cultural (public) sector, laying in the introduction of "value judgements" in the determining of the weights.

SPECIFIC INDICATORS FOR THE EVALUATION OF THE EFFECTS

For the goods and services market from the economical area, the price that the society is willing to pay for various goods provides valid information regarding its value, even if the inflation and other economical phenomena can artificially increase their price, without changing their quantity or quality. In the case of the societies belonging to the social-cultural area, the problem is getting more complex, because in most

cases, the price does not provide real information about the value. From this reason, the evaluation of the products and services belonging to the social-cultural area must be made without the help of the price. Such an evaluation can be the physical one that does not refer to the value, but the quantity. These physical evaluations provide important information in the situation in which the price is absent or inefficient in the representation of the production value. Still, the construction of such evaluation methods is not simple. This is because the effect of an activity from the social-cultural area can be evaluated under many forms. For example, the effect of a theatre play can be quantified through the number of actors, through the number of spectators, through the age of the spectators or through their satisfaction level.

Zvi Griliches said that „...in many social-cultural sectors it is not clear that which is being transitioned, what is the effect and what are the services which are paid...". These difficulties are especially present in the health, education, religion, research-development areas.

In order to be able to eliminate these difficulties we have to take into account the idea of M. Bail and E. Zitzewitz, according to which „...*in the choosing of the measuring system, the objective is to find those measurements that are intuitive and easy to comprehend for the non-economists … and the are at least accepted by the economists. Where possible, we have to have a preference for the physical evaluation in the economical goods sector… And we must use similar measurements for the services as well*".

Doubtlessly, in the evaluation process of the effects from the social-cultural area we must not neglect the valorical evaluations. In the case of the social-cultural sector we must use those measurements that illustrate the quality differences of the similar services. For example, the tickets for a play in a theatre vary based on the physical placement of the theatre, on the duration of the play, on the number and the prestige of the actors etc. In the case of the museums, the art galleries and of the libraries the magnitude of the collections can be a quite eloquent qualitative for the evaluation of the effects.
In the social-cultural context, the term "service" is very vague. This way, we can enumerate:
-        The "preferable" services (healthcare, education, religion);
-        The public security services (firemen, police);
-        The public utility services (the power and water distribution);
-        The help services (sanitation);
-        The communication services (public transport, the construction and maintenance of the roads);
-        Recreative services (museums, theatres, libraries, cinemas).
-
We will analyze the effects' quantification in the sanitary, educational and public security services. In these entire three examples we will first analyze the heterogeneous character of the services.

The sanitary services
The sanitary services, as part of the socio-cultural services, represent an activity sector with unique characteristics, both for its dimensions that are in connection to the economies of each country, as well as for the specific of each country, to revitalize the health state of each member of the society. The main goal of these services lays in the maintenance or the improvement of the individual's health state, defined by the World Health Organization as a "*condition of physical, mental and social welfare*".

These services present a high degree of heterogeneity, both from the diversity of the centre types where they are being realized point of view (the hospitals, polyclinics and pharmacies of different kinds) as well as from the point of view of the cases they treat. The classification criteria are the following:
-        1) Based on the department type in which the patient is admitted (hospital section, polyclinic etc.)
-        2) Based on the pathology that service treats. Here we must notice that there is an important classification of the types of diseases;
-        3) Based on the resource consumption and the treatment cost. Based on these criteria there are homogenous diagnostic groups. These groups are the result of some investigations initiated at the middle of the '60s at the YALE University and finished in the middle '80s.

After the classification of the sanitary services types, the effect (result) variables can be defined, which refer to each category of service or treatment, or any index capable to reflect the complexity of a centre in the health service (hospital, polyclinic etc.) can be elaborated.

Here we must remember the great contributions M.S. Feldstein and R.G. Evans who have created representative indexes for the heterogeneity of a sanitary centre. In both cases we are talking about synthetic measurements obtained by starting from the cared patient's weights in the various sanitary centres or from the diagnostic categories that can be treated in a hospital.

By following the previously analyzed methodology, we will analyze the quantification of the effects in the sanitary area through the *intermediary effect (product)* and the *final effect (product)* point of view.

A. The intermediary product
It is represented by easy to build indicators that have a reduced signification.
This way, *the number of patients* is an indicator frequently used in the specialty literature. M.S. Feldstein suggests that it should be used as an indicator of the sanitary centre's (hospital) outputs, because its role is to treat patients and not maximize the hospitalization period. Presented in this manner, the indicator does not take into account the differences between the cases of different hospitalizing periods. On certain occasions *the number of consolations,* is used as an indicator of evaluation of the intermediary product.
Another modality of evaluation is represented by the *number of externations.* Several specialty works, as well as practical applications consider that this indicator is one that quantifies the effects from the sanitary system. There is no doubt that this indicator is limited, at least from two points of view:
-    Not all the externations from a hospital are correspond to heals or at least ameliorations of the health state of the patient;
-    The indicator can not be assimilated to a production index, because of the specific of the area in which it is calculated.
For this reason, *the number of re-hospitalizations* and *the number (percentage) of transfers* from a hospital to another can be considered an adequate indicator for the evaluation of the quality of the sanitary services.

Two other indicators to quantify the intermediary product in the sanitary area are:
-      *The number of spaces* in a sanitary centre; it evaluates the quantitative aspect of the accommodation (hosting) capacity in a sanitary centre;
-      *The duration of the hospitalization*; illustrates the qualitative aspect of the accommodation capacity. We must underline that there is no direct and precise connection between the duration of the hospitalization (days) and the improvement of the health state of the patient. If we want to maximize the duration of the hospitalization, as an indicator that quantifies the qualitative side of the accommodation capacity, we can obtain unexpected negative results. Generally it was noticed the excessive prolongation of the hospitalizing duration is inopportune. Furthermore, the actual tendency stresses on the decrease of the hospitalization period, the decrease of the hospitalizing rate, considering the long duration of hospitalization as a characteristic of inefficiency.
In the sanitary activity area, the problem of the quantification of the effects is very complex. This is because there is a great diversity of opinions regarding the definition of the effect of this activity, the measurement unit etc.

Another evaluation modality (other than the one made with the help of the indicators) is the one recommended by the Economic Organization for Cooperation and (OECD). It supposes the taking into consideration of the effects of all the activities that help to treat a disease. Such a technique supposes a connection system that is established between the personal data of the patient and the estimated costs for the disease treatment. There is no doubt that this evaluation supposes the access to information regarding the disease of the patient, the sheerness level, the age and the sex of the patient, the used resources and technology etc.

B. The final product
After the classification of the cases was realized, it is necessary the identification of adequate variables for the evaluation of the final product of the sanitary activity. Generally, when we talk about the final product of the sanitary activity, we refer to the measurement of the most important of the dimensions of this activity, which is **the improvement or the maintenance of the health state** of the patients. Because this dimension represents the most important objective of the sanitary activity, it will be at the centre of

attention in the building of the quantification indexes of the results. In any case, the indicators of the final product will also reflect the prevention, investigation and treatment activity.

Table 1. Effects Indicators in the Sanitary Sector:
Health

AREA	Sub-area	Indicator
Health	Hospital	Number of patients, on age and sex categories
		Number of externations
		Number of beds
		Number of hospitalization days
	Policlinic	Number of prescriptions
		Number of treatments
	Other services - stomatologic	Number of consultations
		Number of interventions
	Other services - ophthalmologic	Number of consultations
		Number of interventions
	Other services - emergencies	Number of interventions with the ambulance
	Public health service	Number of litres of blood donated

At the middle of the 70s, a theoretic current based on the construction of health indicators that can be interpreted as evaluation of the final product began to develop. Its construction was based on the aggregation of the living years (life expectancy) weighted with they quality (life quality). For G.W. Torrance this approximation of the final result represents an important quantification instrument of the sanitary programs, especially when they are conceived in terms of added value. By this aggregation method we include the two fundamental aspects of the sanitary:

- **The quantitative aspect** (referring to the living years). In strong relation with the *average life expectancy, the mortality rates* are also used as quantitative indicators. The main deficiency of these rates in evaluating the sanitary activity is represented by the fact that it does not take into account a disease's implications and severity;

- **The quantitative aspect** (referring to the life quality). If the quantitative aspect is relatively easy to evaluate, the measuring of the qualitative one presents several problems, arguing the difficulty of the final product of the sanitary activity evaluation. We are talking about subjective measurements regarding each patient and less objective measurements regarding the disease's clinical data.

The main feature of this method is represented by the fact that in involves different health states in the evaluation of the final product
.

A.J. Culyer illustrates the need to study these indicators in several stages. These levels must contain both the health's definition and dimensions and the calculus of the different health states evaluation. In this sense, G.W. Torrance presents more determination methods for these evaluations.

A first modality is based on the building of a gradated scale that registers the significant differences among the different health states. This method implies the definition of the functions and capacities

associated to the perfect health status, and the rest of the situations need the introduction of certain individual evaluations foe each situation with the help of a scale between 0 (dead) and 100 (the perfect health) or with the help of the 0 and 1 percentages. This method was also adopted by R. Rosser and P. Kind, whose matrix of evaluation is presented in the following table:

Table 2:

Incapacity	PAIN			
	Inexistent	Weak	Moderate	Strong
No incapacity	1.0	0.995	0.99	0.97
Slight social incapacity	0.99	0.986	0.973	0.932
Severe social incapacity	0.98	0.972	0.956	0.912
Limited capacity of selection of the working place	0.964	0.956	0.942	0.87
Incapacity to occupy a working place	0.946	0.935	0.9	0.7
Immobilization in a limited space (domicile)	0.875	0.845	0.68	0
Immobilization in bed	0.677	0.564	0	0
Unconsciousness	0	-	-	-

Legend : 1 – perfect health; 0 – dead.

R. Rosser describes the health states according to two parameters: incapacity and pain. This way he determined 29 different states, each of them with a proper evaluation.

Another evaluation modality of the health states is represented by the risk evaluation. This method supposes the identification of all the possible alternatives with the afferent probabilities. As an example, we take an individual who has two acting modalities:

- 1) He can follow a medical treatment to obtain the perfect health, but with certain risks to loose his life during the treatment. The probability to tough the perfect health stage *1-p*, where *p* represents the possibility to loose his life;
- 2) He can continue (without making anything) with his present health stage.

In this case, the probability *p* represents the measure of the present health state of the individual.

The third evaluation modality of the health state is based on the comparison of conditioning pairs. Its application is more adequate when the results of the medical treatments present high degrees of certainty. For example, if an individual is indifferent to living a certain number of years (A) in a perfect health state (x) and to living a greater number of years (B) in a worse health state (y), then the evaluation of his health state y can be made with the help of the rapport A/B.

There is no doubt that there are other evaluation methods of the health states. From this point of view, we have to underline that there is not consensus. Some specialists consider that the method based on

comparisons of the conditioning pairs is the most important while others consider that the most important method is that based on the graded scale.

CONCLUSIONS:

Given the conditions when the socio – cultural area consumes a greater and greater volume of resources, the efficiency of evaluation in this area is a must. This is also stressed by the present financing trends based on productivity, objectives and results.

The social – cultural area satisfies a great diversity of needs, many times contradictory needs. The public institutions (hospitals, schools) are not limited only to the intermediary product providing but they also maximize the final product. As we have previously mentioned, at the beginning of this study, in comparison with the economical efficiency, the social efficiency stresses more on effects and less on efforts. There is no doubt that both the effects (intermediary and final) have their importance. Still, the intermediary product is mostly used in practice, thanks to the evaluation facility. In order to better understand this, we take into consideration the example of a hospital. In this case, we have indicators of the intermediary product, the number of beds, the period of hospitalization, the number of hospitalizations, etc No matter how easy these indicators may seem, they cannot characterize very exactly the final product of the sanitary activity, the society's health status. This exclusive use of the intermediary product leads to the more or less drifting from the reality.

Another conclusion is that in the evaluation of the effects of any socio-cultural activity interferes a qualitative part. The subjective aspect is also strongly connected to the qualitative aspect of a socio-cultural activity. In a real productive activity, the quality of a product is established through clear norms and standards. In the social-cultural area, where the individual acts over the individual, the opinion of the various members of the society regarding the product offered by a social-cultural activity has a great importance. We also have to underline the complexity of the efforts and effects from the social-cultural area, in comparison with those from the economical area. We can even state that the social effects generate certain implications both over the economical effects and efforts. Therefore, a person that benefited of medical care (social effect) will depose less effort in his working place and will have superior economical results. From here, we understand that the *social efficiency* is as important as the *economical efficiency* in the human activity, both at a micro-systemic and micro-systemic level.

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AUTHOR PROFILE(S):

Dr. Claudiu Cicea earned his Ph.D. at the Academy of Economic Studies from Bucharest, in 2003. Currently, he is a senior lecturer at the Economic Efficiency Department at the same university and Managing Editor of the EfiCon Press Publishing House.

Dr. Cosmin Dobrin earned his Ph.D. at the Academy of Economic Studies from Bucharest, in 2001. Currently, he is a senior lecturer at the Management Department at the same university.

Dr. Ion POPA earned his Ph.D. at the Academy of Economic Studies from Bucharest, in 2002. Currently, he is a senior lecturer at the Management Department at the same university.

THE LONG RUN FOR THE CHANGE:
TURKEY'S ATTEMPT TO REORGANIZE IT'S SOCIAL SECURITY SYSTEM

Ufuk Aydin, Anadolu University, Eskisehir, Turkey

ABSTRACT

Turkish Social Security System consisted of three main social insurance organizations until the year 2005. Emekli Sandigi (Retirement Fund-ES) for the public servants (state employees); Sosyal Sigortalar Kurumu (Social Insurances Institution - SSK) for the workers and Bagkur (Institution for the Self-Employed -Bagkur) for the self-employed. The system covered more than 80%of the total population.

In 1999 due to financial problems, the government passed an act (No:4447) which completely revised Turkish Social Security System. But this reorganization was not successful, so that the financial problems raised in the beginning of the century again. The transfers from national budget to social security system raised up to 5% of the national income which was 2% above the Maastricht Criterion.

In 2004, the new single-party government has planned to make a reform. But this time it looks like a real reform as it replaces three major social insurance organizations with a new single one. According to the justification of the Reform Act, present system is unfair and unaffordable. Therefore, a fair and affordable system must be adopted.

In 2006, The Parliament passed two main acts of the reorganization: "Social Security Institution Act" (No:5502) and "Social Insurances and General Health Insurance Act" (No:5510). The Act No.5502 combines all the social security institutions under one single organization while The Act No.5510 will serve for almost everyone in the country.

On December 2006, the Court of Constitution annulled some articles of the Act No:5510. Nothing has been done in 2007 and in the beginning of 2008, the Reform still could not be concluded.

Keywords: *Social Security; Socal Insurances, Turkish Social Security System; Social Security Reform.*

1. AN OVERVIEW OF TURKISH SOCIAL SECURITY SYSTEM BEFORE 2005

Turkish Social Security System (TSSS) is quite new when it is compared to Western Nations of Europe. The main reason for this is the late industrialization of Turkey. Before The Turkish Republic was established in Turkey in 1923, there were very rare factories of industry and so the workers. Historicians believe that Turkey did not face the Industrial Revolution and due to this reason, the class of workers remained very weak. As there were a little number of workers, there were no need or no demand for a social security system.

While some retirement and pension funds for some worker groups and public servants were operating in 1930's; the first labour act of Turkey (No:3008) was put in force in 1936. It was a Labour Act, but like other labour acts of the same period, it consisted of some articles about social security of workers. The TSSS, if existed, was very scattered and unorganized along the 1930's (Güzel and Okur, 2002:30-35; Tuncay and Ekmekçi, 2008:54-60).

Despite the fact that Turkey did not take place in the World War II, the evaluating social security system of Turkey broke down as well as the industrial relations system. After the World War II, both systems tried to recover and to serve people again.

In 1950, The Public Servants Retirement Fund (Emekli Sandigi – ES) was established by the Act No: 5434. The Fund (ES) provided retirement pensions for all public servants covered by the general and annexed budgets. It also paid disability and survivors' pensions to the same groups and their dependants. The ES shut down all the existing (and scattered) retirement funds for the public servant. So that, the social security rights for public servants were gathered under a single organization, the ES.

The Social Insurances Institute (Sosyal Sigortalar Kurumu – SSK) for the workers was established in 1965 by the Act No: 506. This Act included all the persons employed under a labour contract and their

dependants; but excluded agricultural workers which were a great proportion of the total population in those years. The Social Insurances Institution (SSK) covered the industrial accidents, occupational diseases, maternity, sickness, disability, old age (retirement) and death (survivors) risks both on the grounds of medical care and allowances/pensions (Social Security Administration, 2007: 197-201).

In 1972, The Social Insurances Institution for the Self-Employed (Bagkur) was established by the Act No:1479. The Act included the tradesman, artisans and other self-employed persons. The Institution provided disabilty, old age and survivors insurances.

Finally, in 1983 by the Act No: 2925 agricultural workers and their dependants were taken under the umbrella of social security. According to the Act No: 2925, SSK will serve the agricultural workers; no new institution was established (DERELİ, 1998: 29-31; Güzel and Our, 2002: 30-35; Social Security Administration , 2007: 197-198).

After putting the Act No:2925 in force, TSSS was almost completed. TSSS consisted of three main social insurances organizations: The ES, the SSK and the Bagkur. The system had very few noncontributory and supplementary social aids and social services institutions which were very scattered. These institutions of social security wre excluded from this study.

Like in all other countries, in the first years the system operated well; there were no financial problems, and it had a perfect active/passive insured ratio. But in the late 1980's, political influences like using the funds for political reasons; interrupting the autonomy of the organizations and other populist actions such as playing with the key elements of the system (lowering the minimum requirements of the insurances) created new problems.

TABLE 1: QUALIFICATION REQUIREMENTS FOR SOME SOCIAL INSURANCE BRANCHES BY THE ACT NO: 4447

Old Age Insurance	Age		Minimum Contribution to Qualify
	Women	**Men**	
SSK	(none) 58	(none) 60	(5000) 7000 Days of premiums
Bağkur	(none) 58	(none) 60	25 years of premiums
ES	(none) 58	(none) 60	25 years of premiums
Survivors and Invalidity Insurance			
SSK	None	None	5 years of premiums
Bağkur	None	None	5 years of premiums
ES	None	None	10 years of premiums
Sickness Insurance (Medical and financial)			
SSK	None	None	(0) 90 days for the insured (90) 120 days for tne dependants
Bağkur	None	None	(4 months) 8 months for the new; (0) mohths) 4 months for the re-insured
ES	None	None	(None) None

Source: Acts No: 506, No:1479, No: 5434 (The figures inside the paranthesis show the requirements before 1999)

In 1999, the three-party coalition government passed an act (No:4447) which completely revised Turkish Social Security System a week after the big earthquake. Such an amendement, by a coalition, immediately after the diseaster meant that social security system was in deep trouble. This Act was a radical revision because it cut off lots of benefits, and increased the minimum requirements of the insurances such as the retirement age.The Act also established the unemployment insurance for the workers. The Table below shows the changes by the 1999 Act (No:4447) for the qualification requirements for some social insurance branches.

In the first years of the 2000's, Turkey reorganized the organizational structure of the institutions and established two new bodies; National Employment Institution and The Social Security Institution to plan and coordinate the social insurance organizations. Three main social insurance organizations (SSK, Bagkur, ES), however, remained almost the same.

A brief evaluation can show that neither 1999 revision nor 2000's reorganization solved the problems of TSSS. The financial problems raised in the first years of the century again. In 2005 the transfers from national budget to social security system raised up to 5% of the national income (GDP) which was 2% above the Maastricht Criterion. Due to deep financial deficit of the system, the new single-party government has planned to make a reform. But this time it looked like a real reform as it planned to replace three major social insurance organizations with a new single one. Table 2 below shows the transfers to TSSS from the national budget (Brook and Whitehouse, 2006: 13).

TABLE 2: TRANSFERS FROM THE NATIONAL BUDGET TO TSSS

Years	Transfers as the (%) of the budget	Transfers as the (%) of GDP
2001	6,9	3,1
2002	8,4	3,5
2003	11,3	4,5
2004	12,4	4,4
2005	14,7	4,8
2006	12,9	4,4

Sources: General Report 2007, Ministry of Public Finance, Ankara, 2007. Statistical Bulletin, SSK, April, 2007.

All these meant that, the TSSS which served for more than fifty years was waving. In fact, the system operated well and included more than 80% of the Turkish population (approximately 71.000.000), and it was a hard work to abondon the whole system and create a new and a very different one. But this time the government chose this hard way and took the political responsibility. Table 3 below shows the number of persons included in the TSSS in the year 2005 (Minor Funds for some banking and insurance employees were excluded from this table).

TABLE 3: NUMBER OF PERSON INCLUDED İN THE TSSS

SSK	2001	2003	2005
Total	**22.698.903**	**25.421.152**	**29.454.776**
Active (1)	4.913.939	5.655.647	6.965.937

Active voluntarily (2)	888.675	697.630	266.558
Active agriculture (3)	142.306	165.268	178.178
Passive (retired-pensioners) (4)	3.560.638	3.935.523	4.308.186
Dependants (5)	13.193.345	14.967.084	17.735.917
Active – passive ratio (1+2+3) / 4	1,67	1,66	1,72
Dependant ratio (5+4) / (1+2+3)	2,82	2,9	2,97
Bagkur	**2001**	**2003**	**2005**
Total	**15.434.122**	**15.881.624**	**15.990.253**
Active (1)	2.198.200	2.224.247	2.103.651
Active voluntarily (2)	249.306	236.398	239.388
Active agriculture (3)	889.149	923.204	1.011.333
Passive (retired-pensioners) (4)	1.343.840	1.445.820	1.600.294
Dependants (5)	10.753.627	11.218.219	11.200.608
Active – passive ratio (1+2+3) / 4	2,48	2,34	2,1
Dependant ratio (5+4) / (1+2+3)	3,63	3,74	3,82
ES	**2001**	**2003**	**2005**
Total	**8.712.438**	**9.399.583**	**9.633.079**
Active (1)	2.236.050	2.408.148	2.402.409
Passive (ret-pen) (2)	1.355.558	1.466.679	1.595.973
Dependants (3)	5.120.830	5.524.756	5.634.697
Active – passive ratio (1) / (2)	1,65	1,64	1,51
Dependant ratio (2+3) / (1)	2,9	2,9	3,01
TURKEY GENERAL	**2001**	**2003**	**2005**
Total	**47.168.151**	**51.164.276**	**55.549.298**
Active (1)	9.421.279	10.358.967	11.547.549
Active voluntarily (2)	1.137.981	934.028	505.946
Active agriculture (3)	1.031.455	1.088.472	1.189.511

Passive (retired-pensioners) (4)	6.335.198	6.919.737	7.580.480
Dependants (5)	29.242.238	31.863.072	34.725.812
Active – passive ratio (1+2+3) / 4	1,83	1,79	1,75
Dependant ratio (5+4) / (1+2+3)	3,07	3,13	3,19

Source: TISK (Turkish Confederation of Employer Associations), 23th General Meeting Report, 2007.

2. THE NEED AND THE REASONS FOR THE REFORM

As the justification of the Reform, the government stated that present system is unfair and unaffordable. It is unable to protect against poverty. Therefore, a fair and affordable system which protects against poverty must be adopted. The government, for the proposal of the Reform, stated some reasons which are explained below;

2.1. Changes in Population Structure

One of the most important variables that determine whether existing social security systems are financially sustainable in the long run is the distribution of the population according to age groups. Increase of the population, covering age 65 and over within the whole population causes the revenues of social security system to decrease while increasing its expenses (Social Security Institution, 2004: 5).

Turkey has a young population structure but projections regarding the future state that this population will rapidly get older. According to a recent study, Turkish population over 65 years of age will raise to 14% of the total population in the year 2039. That means, the population in Turkey will get older soon (Social Security Institution, 2004: 6) The Social Security Institution states about this figure that, "The rate of ageing projected for Turkey requires an urgent and comprehensive reform in the social security system alone".

Another projection related to the population structure is about the dependency rate. Dependency rate means the ratio of the population covering the ages (+65) and (-14) groups to the total population. According to the projection by Prime Ministry, the dependency rate will decrease until the year 2025. After this year it will start to increase, and by the year 2035 it will accelerate. In the same projection, it is concluded that Turkey has a window of opportunity in the next 20 or 25 years. Among this period, the population will be quite young and the dependency rate will be reasonable so that along with the measures to fight unemployment and informality problems, apparent measures should be taken in TSSS (Başbakanlık (Prime Ministry), 2005: 37)

2.2. Insufficient Protection Against Poverty

As it is stated in the justification of the Reform Acts above, current social security system is not effective enough in preventing poverty. According to *State Institute for Statistics (SIS) Report 2002*, 1,35% of the population of Turkey is below the line of poverty that includes food expenditures, and 27% of the total population lives below the poverty line that includes food and non-food expenditures.

According to the same Report by SIS, instead of employers and wage and salary workers; the whole population is facing the danger of poverty. Yet, the public resources transferred through social security system in order to finance the deficit of the retirement system are mostly directed to these groups. So, it can be concluded that public resources are not used efficiently enough in preventing poverty.

The situaiton in health insurances resembles to the retirement insurances. The public resources are mostly directed to the insured and their dependants; not to the people excluded from the social security system. This also shows that, the system doesn't serve to poor and doesn't fight against poverty, which has to be done by a social security system.

2.3. Negative Impacts of Financial Deficits of Social Security System

One of the negative impacts of social security related deficit is the inflation. According to the Proposal by the Social Security Institution, within the last 10 years, TSSS itself has become one of the main

sources creating instability in Turkish Economy. As it was stated before, the transfers from the national budget to social security system reached 5% of GDP. In addition, the deficit of the system is more than 1,30 times the total consolidated debt stock of the end of 2004.

When Turkish young population is taken into consideration, a well-designed social security system should have contributed into the economy positively by creating fund accumulation during this period, instead of having deficits (Başbakanlık (Prime Ministry), 2005: 44; Social Security Institution, 2004: 14)

2.4. Insufficient Inclusion of the System

According to the Report by Prime Ministry, approximately 20% of the population is not effectively covered by any kind of health security. So that, one of the most important components of the Reform will be to access to the health services easily. Also the adequate measures to achieve social benefits and services through appropriate conveyance of resources within predetermined criterion must be taken.

2.5. Other Justifications For the Reform

According to the Proposal, current social security institutions are having financial, organizational and structural problems. If the system is reorganized under one single institution, all these problems could be solved. Management by a single authority can overcome these problems.

3. CRITICS ABOUT THE REFORM

Following the release of the justification and the key elements of the Reform in TSSS, IMF Executive Board approved 10 Billion Dollars Stand-By arrangement for Turkey. After the release, Mr.Rodrigo de Rato, IMF Managing Director, stated that, the Reform should gradually reduce the social security deficit and improve the quality of spending (IMF Press Release No:05/104, May 11, 2005)

When the government faced some problems in the process of the Reform Ms.KRUEGER, IMF First Deputy Managing Director, made her statement about the first and second reviews of the Stand-By aggreement between Turkey and the IMF. According to Ms.KRUEGER, "The authorities' structural reform agenda will complement some prudent macroeconomic policies and should help sustain economic growth and reduce vulnerabilities. In this regard, efforts to rein in the rising social security deficit will be the key. In the short run, priorities are to address growing health spending and implement in full the agreed framework for strengthening social security collections. Ensuring the long-run viability of the social security system will require fundamental changes to the pension system. While delays in this area are unfortunate, the authorities' commitment to accelerating social security reforms is welcome." (IMF Press Release, No: 05/271, December 9, 2005)

After the parliamentary step of the Reform is completed, Ms.KRUEGER, in one of the Press Meetings, stated about TSSS Reform that, "... The Social Security Reform measure, ..., does seem to address some of underlying issues in a way that will enable Turkey to sustain its growth and I think, on the whole, our viewpoint of that is very positive" (Transcription of a Press Conference by IMF, April 20, 2006: 4).

In one of his statements to the leading Turkish Newspaper, Hurriyet, Andrew Vorkink, Director to Turkey of World Bank stated that, "... Turkish Social Security Reform is a revolution for it will serve equal opportunities and better social rights to Turkish citizens. The World Bank welcomes the Reform with great pleasure. Lots of other European countries have unaffordable and unfair social security systems; so that they can learn lots of things fromTurkey". He concluded his speech with a statement that, "These reforms will allow Turkey to join EC" (http://arama.hurriyet.com.tr).

A Deutsche Bank Report about the Reform stated that, it will decrease the deficit of the budget in the long run; therefore the Standart and Poors will increase the credit rate of Turkey.

As international bodies criticize the Reform in a good manner; domestic reflections were so pessimistic and opposing.

According to the statements of the opposing parties, the Reform is a proposal of IMF and the World Bank. Due to the pressure these organizations apply, Turkish Government hurried and did not take the opinions of the social partners and the academy. They also claimed that, all these changes occured so quickly and the government did not care for even the simplest grammatical mistakes in the content of the acts.

Another critic is about the autonomy of the new Social Security Institution. According to the opposing parties, the management of the Institution is open to political pressure; so that governing parties can easily use the social insurance funds for political reasons as it was seen in Turkish Political History.

The opposing parties conclude that the Social Security Reform has not been set on realistic matters and present system should be revised instead of a reform.

Trade unions mostly opposed the Reform for it makes the situation worse for workers; it increases the minimum requirements of the insurances (65 years of age for retirement with 9000 days of premiums; 5 more years and 2000 additional days) while decreasing the payments and pensions (2% of the means-tested pension for a single year instead of 2,5 to 3% at present).

Employer associations were silent. Some of them claimed about the autonomy of the new Institution but it can be said that they were for the Reform or they were neutral.

4. STRUCTURE AND KEY ELEMENTS OF THE PLANNED REFORM

Social Security Reform consists of 4 main components that complete each other (Social Security Institution, 2004: 21-28).

The first component is the creation of *General Heath Insurance* towards financing the provision of a high quality health service for all population. It is supposed to be equitable, equal, protective and curative. The system will be obligatory and premium based. Health insurance premiums for the poor will be provided by the State. A central database for the health histories of the insured to be used by family doctors and other physicians will be created.

The situation before and after the Reform may be schematized as follows.

TABLE 4: SITUATION BEFORE AND AFTER THE REFORM
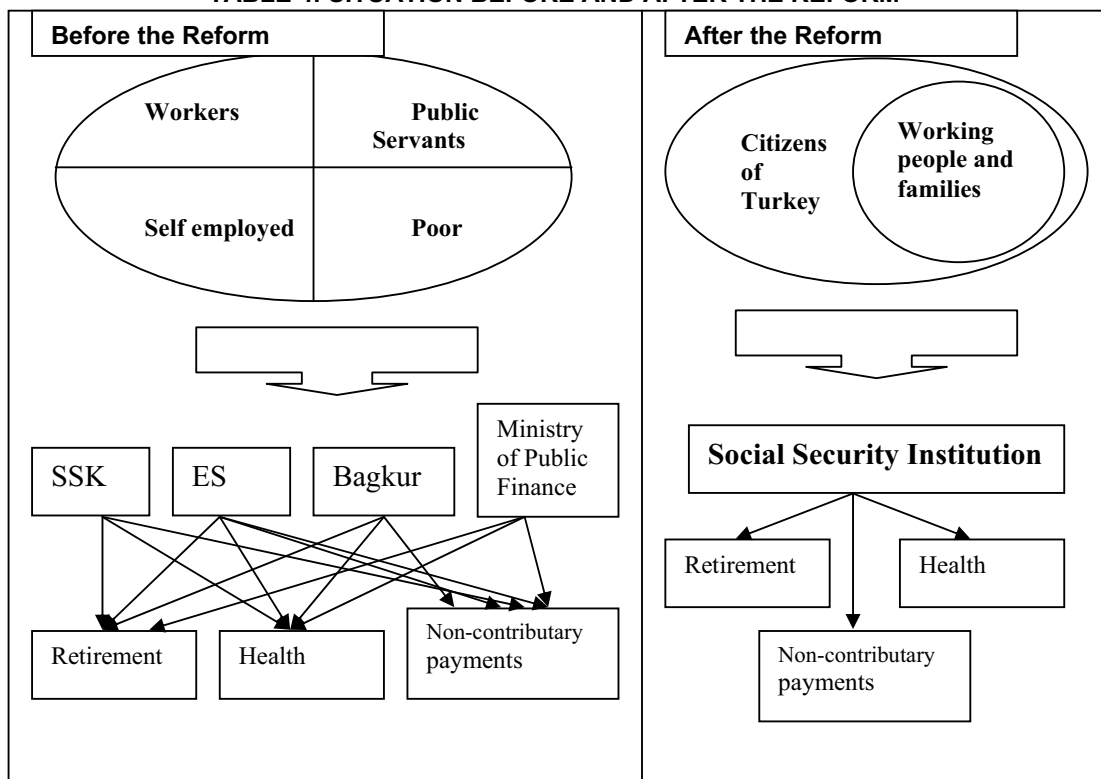
*Source: Ministry of Employment and Social Security, **Towards a New Social Security System**, Ankara, 2006.*

The second component is the *setting up of a single retirement insurance regime* that includes short and long term insurance branches other than health. This part of the Reform will be the most difficult for it will transfer 5 different retirement regimes into one single retirement regime where rights and obligations will be equal in actuary terms.

New regulations on parametric issues such as the retirement age, replacement rate and adjustment of salaries make this part very difficult. This second component took the most opposition from the social partners, especially trade unions for the system is getting more stingy. But this part is the heart of Reform, because the main reason for the Reform is financial and this second part contains measures to fight against financial problems.

The third component is the *gathering of social benefits and services* that are currently being carried out in a scattered manner. The aim of this component is the establishment of a system where the noncontributory social benefits and services are based on objective benefit criteria and can be reached by all groups who are in need. It is planned that, the right for social benefits will be determined based on the minimum subsistance level criteria which is below the 1/3 of the daily minimum wage. State and other participants such as local administrations, legal persons or foundations will carry out these benefits.

The fourth component is the *creation of a new institutional structure*, which will provide the opportunity to present social security services. The new social security institution will focus on user satisfaction in the access of the people to social security services. The institution will facilitate the daily life using all means of technology through automated local service centers.

5. A BRIEF CHRONOLOGY OF THE REFORM

December 2004- The first and draft version of laws related to the Reform were concluded and put in front of public to be criticized.

December 2005- The draft acts of four components of the Reform were sent to the Parliament.

May 2006- After a veto by the President, the Act on Social Security Institute (No:5502) was put in force, so that the legal personality of the three major social insurances organizations ended. Social insurances system were gathered under a single organization (Official Gazetta, May 20, 2006, No: 26173).

May 2006- Social Insurances and General Health Insurance Act (components one and two of the Reform combined under one act) accepted by the Parliament (Act No: 5510).

June 2006- The President and the main Opposition Party (CHP) applied for the annullment of the principal articles of the Act (No:5510) to the Court of Constitution.

December 2006- The Court of Constitution annulled some articles of the Act and suspended the operation of these norms. The main justification of the annullment was the protection of the acquired rights of the public servants. After this annullment decision of the Court, the Parliament delayed the application of the Act for 6 months (Official Gazetta, December 30, 2006, No: 26392).

July 2007- As there were general elections in Turkey in June, the Parliament delayed the application of the Act for another 6 months.

January 2008- The Government applied for the Parliament to postpone the application of the Act due to some technical and infrastructural problems. Meanwhile, some street demonstrations and protests by major trade unions and confederations against the Act occured.

March 2008- Subcommittee of the Turkish Parliament made some changes on the Act No: 5510 according to the annullment decision of the Court of Constitution. The greatest ever street demonstrations by public servants' and workers' organizations and a one hour generel strike, which is a crime in Turkish Law, occured. Ministry of Employment and Social Security announced another postponement of the Act No: 5510 due to the reason of technical and infrastructural needs. The proposed date for the Act No:5510 to put in force is January 1, 2009.

Current Status (As of April 2008)- Turkish Social Security System is in a confusing situation. Social Insurance Organizations were gathered under one single organization: Social Security Institute. But the Institute serves workers, public servants, self employed and their dependants under seperate and old Acts (No:506, 5434 and 1479). The new act (No:5510) that will allow to unite the norms of social

security could not be put in force yet. So that there are several norms for several types of people on the grounds of social security.

No one wonders the act related to the fourth component of the Reform: The Act of Non-Contributary Social Benefits an Social Services (Non-Contributory Payments Act). As a result, the social benefits and services still remain scattered.

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AUTHOR PROFİLE:

Dr. Ufuk AYDIN graduated from Faculty of Law, Ankara University in 1989 and earned his Ph.D. at the Anadolu University, Turkey in 1996. Currently he is an Associate Professor of Labour and Social Security Law at Anadolu University and Vice Director of Graduate School of Social Sciences. He teaches Labour Law, Social Security Law and Basic Principles of Law at the same University.

EFFECT OF JUDGMENT PERFORMANCE ON AUDIT QUALITY, IMAGE, AND REPUTATION: AN EMPIRICAL STUDY OF CPAs IN THAILAND

Phaithun Intakhan, Mahasarakham University, Thailand
Phapruke Ussahawanitchakit, Mahasarakham University, Thailand

ABSTRACT

This paper investigates the relationship among judgment performance on audit quality, image and reputation via professional acceptance moderator. It also tests antecedent of judgment performance as knowledge and experience. Certified Public Accountants (CPAs) are used as the sample. The results show that judgment performance has significant relationship with audit quality and audit quality has significant influence on image. Also, image has significant effect on reputation. Surprisingly, professional acceptance does not moderate the audit quality-image relationships. Contributions and suggestions are also provided for further research.

Keywords: Judgment Performance, Audit Quality, Image, Reputation, Knowledge, Experience

1. INTRODUCTION

Firm needs to search for any strategy to help support them to gain their competitive advantage. How to build a competitive advantage is an important issue for enhancing firms to do best business practices, such as profitability, performance, market share, and reputation (Fiol and Lyles, 1985; Sinkula, 1994). The important factor to build the competitive advantage is receiving data that is of good quality (Redman, 1995). The accounting data is a primary data and important to decision making. It is provided from accountants in order to present to publics. This data is guaranteed from Certified Public Accountants (CPAs). The quality of accounting data is consistent with relevance, reliability, comparability and consistency (Ussahawanitchakit, 2005).

Auditor's practice is the important for build the accounting data to be creditability and quality (Watkins, 2004). The accuracy and quality of audit task depends on auditor's judgment such as, selecting the auditing evident, decision making for auditor's report. Thus, auditors who are concerned with the quality of judgment will be the top of audit quality. The audit quality can build information creditability and information quality of financial reporting. It also helps users have useful information.

Most papers have discussed the judgment and order to understand how to judgments are made and how they can improve (Trotman, 1998) but no one has linked that to audit quality. The study provides important theoretical contributions expanding on previous judgment performance, audit quality and outcome of audit quality. For preceding the field theoretically, this research is one of the first known studies to link among judgment performance, audit quality, image and reputation in auditors' perspective. Therefore, the primary purpose of this study is to examine the relationships among judgment performance, audit quality, image and reputation via moderator effect of professional acceptance and examine antecedent of judgment performance as knowledge and experience too. The key research questions are how the judgment performance affects audit quality, how does the knowledge and experience influences judgment performance, how does audit quality affect image and reputation via moderator effect of professional acceptance, and how does image effect reputation.

The remaining part of this study is structured as follows. 1) The relevant literature on all construct is reviewed. 2) The research method of the study is described. 3) The results of the empirical study are discussed. 4) The study ends with theoretical and managerial contributions, suggestions for future research, and conclusion.

2. RELEVANT LITERATURES, RESEARCH MODEL, AND HYPOTHESES

The image, reputation of service business have been examined extensively, but there are relatively few empirical studies (Peursem and Hauriasi, 1999) that have attempted to link the concept of auditor, who have importance for build information creditability and information quality for financial

statement (Watkins, 2004). Here, we explore the effects among judgment performance, audit quality, perceived image and reputation of auditor via professional acceptance moderator and explore antecedent of judgment performance as knowledge and experience too. In this study, we propose that judgment performance has a positive relationship with audit quality. Audit quality has positive influence with image and reputation also knowledge and experience is antecedent of judgment performance. For professional acceptance as a moderating effect, if the public is concerned with high professional acceptance, the more likely that auditors will achieve the better relationship between audit quality and image. Thus, our conceptual model presents the relationship among knowledge, experience, judgment performance, audit quality, image and reputation via professional acceptance moderator, as show in Figure 1

FIGURE 1
MODEL OF THE RELATIONSHIP AMONG KNOWLEDGE, EXPERIENCE, JUDGMENT PERFORMACE, AUDIT QUALITY, IMAGE AND REPUTATION
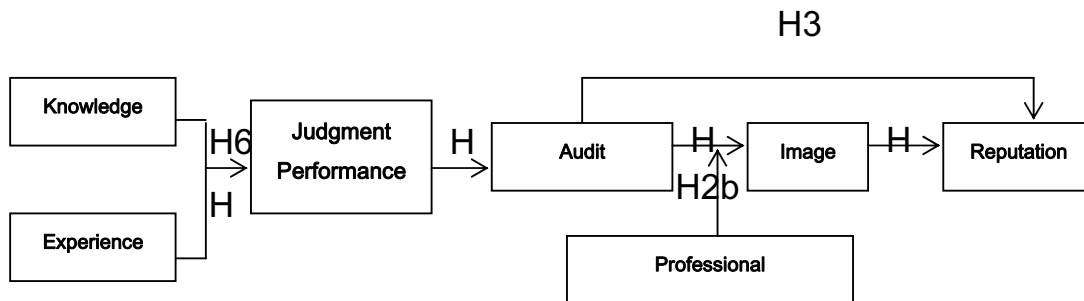
2.1 Judgment performance
Judgment research in auditing is major area that studies order to understand how judgments are made and how they can be improved (Trotman, 1998). Most research uses experimental settings and found many factors related to audit judgment very complex. In this paper, judgment performance refers to outcome of assessment that auditors make taking action (Peecher and Solomon, 2001). In audit task, judgment performance includes accuracy and confidence and depends on knowledge, experience and ability. There are relatively few studies that have attempted to link the concept of judgment performance. We link judgment to audit quality because many audit task depend on judgment (Mohammad, 1999) such as selecting evidence and methods of auditing, information search, and auditors' opinion thus, that auditors' greater judgment performance shows that they have greater audit quality. This leads to the hypothesis as follows:

Hypothesis 1: The auditors with the stronger judgment performance, the more likely that they will achieve higher audit quality.

2.2 Audit Quality
Audit quality is defined as probability which an auditor will discover and report a breach in their client's accounting system (DeAngelo, 1981). Most studies focus on how to measure and survey and experiments determinants of perceived audit quality. Most of the paper uses audit firm size, audit firm reputation, industry specialization and independent to measure audit quality that the results are mixed. In order to examine the relationship between audit quality and image, Moizer, García, Humphrey and Martinez (2004) examines corporate image of auditor in Spain. The results show that, regulation and quality of auditing service are important to build corporate image and auditor reputation. Thus, when auditors have high quality the image presented to the public is better. This leads to the following hypothesis:

Hypothesis 2a: The auditors with the stronger audit quality, the more likely that they will admit the better image.

Wooten (2003) suggests factors related to detection include audit firm size, human resources, control process industry expertise and factor related to reporting include pricing and tenure. The out come of audit quality include higher fees, lower litigation, good reputation, and higher client valuations. No behavioral studies that examine the relationships between audit quality and reputation (Watkins, 2004). This leads to the following hypothesis:

Hypothesis 3: The auditors with the stronger audit quality, the more likely that they will achieve higher reputation.

2.3 Image

Image is defined as auditors' is the mental picture, generally of competence, trust and expertise (Thomson and Jones, 1990). Chun (2005) suggests that the construct of image allied to construct of reputation consistent with Moizer, García, Humphrey and Martinez (2004), Peursem and Hauriasi (1999) suggests auditor reputation and good image occur when the auditor keeps within professional conduct and work done. The public tends to admit with auditors' knowledge, experience, practice regulation, and code of conduct. The Enron case, public awareness established confidence of public in the integrity, objectivity, capability of Certified Public Accountant (CPAs) are necessary actors for auditors to make reputation (Roger, Rodney, Dillard and Yuthas, 2005). Imply that if auditors have a good image, when public perceive an auditor's expertise, practice regulation, code of conduct, responsibility of work the better the reputation. This leads to the following hypothesis:

Hypothesis 4: The auditors with stronger image, the more likely that they will achieve higher reputation.

2.4 Professional Acceptance

Professional acceptance refers to the acceptance by the public to auditing professional. No one links to audit concept and no empirical evidence to the moderator. However, auditing is important to build information creditability and information quality (Watkins, 2004). The public trust in quality of audit presents the better the image. If the public trust in auditing profession occurs, the higher relationship among audit quality and image will achieve. This leads to the following hypothesis:

Hypothesis 2b: The public with stronger professional acceptance, the more likely that they will achieve the greater positive relationship between audit quality and image.

2.5 Knowledge

Knowledge is information stored in memory (Libby, 1995) that is important for auditors because when environments in audit change, auditor needs to improve knowledge to best practice and use to make judgment. A large amount of empirical research links between knowledge and judgment (Choo, 1996; Kent and Webber, 1998) and they found knowledge is linked to judgment performance. In this paper knowledge is defined as awareness and understanding of facts, truths or information gained from experience or learning. When an auditor has knowledge they can identify which information is important to focus on and know a lot and stay current with their area such as, standard of auditing (AIS), Generally Accounting Accepted Principle (GAAP), and the civil and commercial code. If auditor has high knowledge, it may also have higher judgment performance. This leads to the following hypothesis:

Hypothesis 5: The auditors with the stronger knowledge, the more likely that they will achieve higher judgment performance

2.6 Experience

Experience as task related encounter that provide opportunities for learning both first hand (for example, auditing clients) and second hand (for example, training) (Libby, 1995). For auditing experience is part of a larger area which studies focus on how experience can help audit task the most of empirical research use experiment. Bonner and Pennington (1991) found that, more experience auditors outperformed inexperienced auditors but knowledge and ability provided a better explanation of variations in performance. Consistency with Shelton (1999) found that, experience reduces the influence of irrelevant information on auditor judgment and Carol and Michael Knapp (2001) found that, audit managers are more effective than audit seniors in assessing the risk of fraud with analytical procedures. Imply that if auditor is more experience it may also have higher judgment performance. This leads to the following hypothesis:

Hypothesis 6: The auditors with the stronger experience, the more likely will higher judgment performance

3. METHOD

3.1 Data collection

The samples were randomly drawn from Certified Public Auditing (CPAs) in Thailand. The sampling list in Department of Business Development (DBD) database the questionnaire was constructed covering contents according to each variable that was operationalzed for empirical studies. The pretest was used to verify the validity and reliability, especially all construct is notice by auditor reputation, hence, and it is improved in its contents, item ordering, and wording. Reliability was tested by Cronbach's alph reliability coefficients of all constructs to make sure that the items of the questionnaire were designed to measure consistency for each concept.

Later, 600 questionnaires were sent to auditors to provide data of this study via mail. After four weeks 153 questionnaires were received. There were 15 questionnaires that could not be sent to receivers and these were returned. Thus, the response rate was 26.1%. However, 3 received questionnaires were incomplete, and were not included in the data analysis. In addition, non-response bias was investigated by t-test, and results were not significant. Hence, it was implied that these received questionnaires as non-response bias.

3.2 Reliability and Validity

Constructs, multi-item scale, were tested by Cronbarch Alpha to measure reliability of the data. Table 1 shows an alpha coefficient higher than .6, (Nunally, 1978). Alpha coefficients of constructs have value ranging from .721 to .854 the highest coefficient for reputation and the lowest coefficient for experience. Hence, internal consistency of the measures used in this study can be considered very well for all constructs.

Factors analysis is employed to test the validity of data in the questionnaire. Items are used to measure each construct that is extracted to be one only principal component. Table 1 shows factor loading of each construct that presents a value higher than .7. Thus, construct validity of this study is tapped by items in the measure, as theorized, this is factor loading of each construct should not be less than .4 (Hair, Black, Babin, Anderson and Taltham, 2006).

TABLE 1
FACTOR LOADING AND ALPHA COEFFICEINTS OF CONSTRUCTS

Constructs	Factor Loading	Alpha Coefficient
Knowledge (KNO)	.766-.848	.836
Experience (EXP)	.754-.882	.721
Judgment Performance (JP)	.839-.851	.797
Audit Quality (AQ)	.598-.835	.737
Image (IMG)	.786-.869	.838
Reputation (REP)	.874-.887	.854
Professional Acceptance (PA)	.801-.907	.823

3.3 Statistic Technique

The ordinary least squares (OLS) regression is used to a test hypothesized effect and estimate factor affecting the judgment performance, audit quality, image, and reputation. OLS is used for investigated the hypothesized association (Hair, Black, Babin, Anderson and Taltham, 2006). Then, we present the model in our studies as below.

$$\text{Equation 1: } AQ = \beta_{01} + \beta_1 JP + \beta_2 FS + \varepsilon$$
$$\text{Equation 2: } IMG = \beta_{02} + \beta_3 AQ + \beta_4 AQ*PA + \beta_5 PA + \varepsilon$$
$$\text{Equation 3: } REP = \beta_{03} + \beta_6 AQ + \varepsilon$$
$$\text{Equation 4: } REP = \beta_{04} + \beta_7 IMG + \varepsilon$$
$$\text{Equation 5: } JP = \beta_{05} + \beta_8 KNO + \beta_9 EXP + \varepsilon$$

Where JP is Judgment performance; AQ is Audit quality; IMG is Image; REP is Reputation; FS is Firm size; PA is professional acceptance. These regression equations are employed to estimate inferred parameters whether the hypotheses are substantiated and fit an overall model (F value) or not. Then, the model variables and parameters are presented in various tables later.

3.4 Measure
Five-point Likert scales ranging from strongly disagree (scored one) to strongly agree (scored five) were used measure all variable. Next, respondents were asked to indicate knowledge, experience, judgment performance, audit quality, image and reputation. An attention of firms' size as control variables was also probable to influence the hypothesized relationship. Many studies found that large and small firms have differential sizes are more likely the higher audit quality than small audit firms because must have monitoring strength. It was measured by the Big 4 – non Big 4 firms' dichotomy variables.

4. Results and Discussion
Table 2 shows the correlation matrix for the whole of constructs. Multicollinearity problems were checked by Variance inflation factor (VIF) that VIFs range from 1.00 – 1.39, and cut-off value of 10 recommended by Hair, Black, Babin, Anderson and Taltham (2006), to explain the independent variables are not correlation with each other. Hence, There are not has multicollinearity problem in this paper.

TABLE 2
DESCRIPTIVE STATISYICS AND CORRELATION MATRIX FOR ALL CONSTRUCTS

Constructs	KNO	EXP	JP	AQ	IMG	REP	PA	FS
Mean	4.31	3.98	4.20	3.97	4.02	3.90	3.77	
Standard deviation	0.41	0.52	0.42	0.50	0.53	0.61	0.72	
Knowledge (KNO)	1.00							
Experience (EXP)	0.53***	1.00						
Judgment Performance (JP)	0.66***	0.68***	1.00					
Audit Quality (AQ)	0.54***	0.44***	0.55***	1.00				
Self Image (IMG)	0.61***	0.55***	0.62***	0.54***	1.00			
Reputation (REP)	0.47***	0.54***	0.56***	0.42***	0.70***	1.00		
Professional Acceptance (PA)	0.40***	0.40***	0.50***	0.42***	0.45***	0.57***	1.00	
Firm Size (FS)	-0.23***	-0.17***	-0.17**	-0.15	-0.13	-0.16**	-0.14	1.00

***p<.01, **p<.05

4.1 Effect of Judgment Performance on Audit Quality, Image, and Reputation
Table 3 shows that the effect of judgment performance on audit quality, image and reputation via the professional acceptance as a moderator. The judgment performance has a significant positive influence on audit quality (β_1 = 0.549, p < 0.01). Therefore, Hypothesis 1 was support described that audit task depends on judgment of auditor when auditors with effectiveness judgment performance appear to have high audit quality. Beyond influencing judgment performance on audit quality significant, there is one variable that may affect the model as well. That is, control variable, firm size. This variable is added in the model to explain audit quality, but may not be affected significantly. Regression analysis shows that this control variable is not significant imply that, firm size don't have influence to audit quality when auditors have a good judgment performance.

For association between audit quality and image via professional acceptance moderator effect, audit quality has a significant positive relationship on image (β_3 = 0.429, p < 0.01) consistency with Moizer, García, Humphrey and Martinez (2004) explained that the higher the quality of the work done the greater image occurs thus, Hypothesis 2a is supported. The interaction between audit quality and professional acceptance has no relationship (β_4 = 0.007, p < 0.17). Professional acceptance has a significant positive effect on image (β_5 = 0.283, p < 0.01). Thus, Hypothesis 2b is not supported. It is possible relationship between audit quality and image are not necessary via professional acceptance moderator effect imply that in Thailand has changed the regulator from the Institute of Certified Accountants and Auditors of Thailand (ICAAT) to Federation of Accounting Professional under the Royal Patronage of his Majesty the King in October 22, 2004 that may effects

to the perceptions of publics. According to the relationship between audit quality and reputation is shown to have a significant positive influence on auditors' reputation (β_6 = 0.421, p < 0.01). Similar to Wooten (2003) mentions that outcome of audit quality to have good reputation. Thus, Hypothesis 3 was supported.

TABLE 3
EFFECTS OF JUDGMENT PERFORMANCE ON AUDIT QUALITY,
IMAGE, AND REPUTATION

Independent Variables	Models			
	1	2	3	4
JP	.549*** (0.06)			
AQ		.429*** (0.07)	.421*** (0.07)	
IMG				.704*** (0.05)
PA		.283*** (0.07)		
AQ * PA		.007 (0.05)		
Firm Size (FS)	-0.06 (.09)			
Adjusted R^2	.307	.292	.177	.492

* p< .10, **p<.05, ***p<.01, [a]Beta coefficients with standard errors in parenthesis.

About relationship among image and reputation is shown to have a significant positive effect on auditors' reputation (β_7 = 0.704, p < 0.01). Consistency with Roger, Rodney, Dillard and Yuthas (2005) and Moizer, García, Humphrey and Martinez (2004) described auditors with good image can build good reputation. Thus, Hypothesis 4 was supported.

4.2 Antecedent of Judgment Performance
Table 4 shows that the antecedent of judgment performance. Knowledge has a significant positive effect on judgment performance (β_8= 0.425, p < 0.01) consistent with Choo (1996), Kent and Webber (1998) described that knowledge is important factor related to judgment performance. Auditor with the higher knowledge appear to have accuracy and confident of judgment performance. Therefore, Hypothesis 5 was supported. Experience has a significant positive effect on judgment performance (β_9 = 0.456, p < 0.01). Similar to Bonner and Pennington (1991), Shelton (1999), Carol and Michael Knapp (2001) described that auditor with experience reduce mistake in selecting relevant auditing evidence and more effectiveness to detection fraud risk. Therefore, Hypothesis 6 was supported.

TABLE 4
ANTECEDENT OF JUDGMENT PERFORMANCE

Independent Variables	Models
	5
KNO	.425*** (0.06)
EXP	.456*** (0.06)
Adjusted R^2	.588

* p< .10, **p<.05, ***p<.01, [a]Beta coefficients with standard errors in parenthesis.

5. CONTRIBUTIONS AND FUTURE DIRECTIONS FOR RESEARCH

5.1 Theoretical Contributions and Future Direction for Research

This research aimed to provide an obviousness understanding of judgment performance, on audit quality through image and reputation and examine antecedent of judgment performance as knowledge, experience too. The study provides important theoretical contributions expanding on previous judgment performance, audit quality and outcome of audit quality. For preceding the field theoretically, this research is one of the first known studies to link judgment performance, audit quality, image and reputation in auditors' perspective. In addition, this paper examines difference of audit quality and image via moderator effect of professional acceptance. According to the results of this research, the need for future research is apparent. Because of the countries that have different environments which may affect auditor image and reputation. The future research should study effects of ethic and code of conduct to image and reputation and examine other countries.

5.2 Managerial Contributions

This study helps auditor explain key factor that may be more critical in rigorous audit quality, image, and reputation. Auditors should be given precedence knowledge, experience, and improve these to reduce judgment mistake. In order to continuously maintain audit quality and increase the better image and reputation. The key element of the auditors' image and reputation depend on judgment accuracy and confidence. To maximize the benefits of audit quality, auditors should provide other factor to support its effectiveness including the training, improving knowledge and keep on code of conduct. Particularly, the number of clients each year is not important, auditors should received tasks to maintain your capability because it affects to audit quality, image, reputation and professional acceptance in the whole.

6. CONCLUSION

Auditors' image and reputation are important and they create competitiveness for auditors to keep client and higher fee. Therefore, this paper is to investigate among judgment performance on audit quality, image and reputation via moderator effect of professional acceptance and investigates antecedent of judgment performance as knowledge and experience too. Particularly we link judgment performance to audit quality is the theories contribution. Results show that stronger judgment performance has a direct positive influence to audit quality and out come of audit quality are the image and reputation. Moreover, knowledge and experience are antecedent of judgment performance. Thus, auditor, who want a competitive advantage and more good image and reputation should practice audit task by quality, improve knowledge all the time, and keep on profession conduct too.

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AUTHOR PROFILES:

Mr. Phaithun Intakhan earned his M.Acc. at Chiang Mai University, Thailand in 2005. Currently he is a Ph.D. student in Accounting at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

Dr. Phapruke Ussahawanitchakit earned his Ph.D. at Washington State University in 2002. Currently he is an associate professor of accounting, a deputy dean of academic affairs, and a director of graduate studies at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs) AND EMPLOYMENT: THE CASE OF TURKEY

Naci Gundogan, Anadolu University, Turkey

ABSTRACT

Small and medium-sized enterprises (SMEs) are the backbone of the world economy and the most important creators of new jobs and economic growth. SMEs play a particularly important role in the Turkish economy because of their number and because of the large share of total employment. They constitute 99 per cent of total enterprises and have a 76 per cent employment share. Within the SMEs, the employment share of micro enterprises is substantially higher in Turkey than in the developed countries. Micro enterprises comprise 95 per cent of all enterprises, employ roughly one third of the labour force. The aim of this paper is to create a picture of SME employment in some developed countries and in Turkey.

Keywords: Smal and Medium-Sized Enterprises, Employment, Entrepreneurship

1. INTRODUCTION

In a rapidly changing global economy, small and medium-sized enterprises (SMEs) are increasingly seen as being fundamental to economic growth, employment and income generation. Today, they are the lifeblood of most developed and developing economies. On average, they represent over 90% of enterprises and account for 50-80 per cent of total employment at a national level.

Small and medium-sized industry constitutes a major component of an economy because it is flexible in adapting to social and economic conditions, and it is a dynamic sector in which new technologies are first tried out (Taymaz, 1997). In most of the economies in the world, SMEs have been under scrutiny since the two oil crises occurred in 1970s. Large companies were severely affected by the crises while SMEs demonstrated an elasticity of response, generated employment, diversified regional economies and also contributed to the processes of democratization and decentralization for transitional economies. For these reasons, SMEs have become the highest priority within social and economic development (ABIGEM, 2005).

SMEs are are not only important for economic issues but also they are important for social and political issues. Considering the social conditions their contribution to employment, medium class character and dynamism to adjust quickly to changes make them essential for changing economies.

SMEs are particularly important in supporting economic growth and livelihoods in developing countries, because they:
- tend to use more labour-intensive production processes than large enterprises, boosting employment and leading to more equitable income distribution;
- provide livelihood opportunities through simple, value-adding processing activities in agriculturally-based economies;
- nurture entrepreneurship; and
- support the building up of systemic productive capacities and the creation of resilient economic systems, through linkages between small and large enterprises (Luetkenhorst, 2004).

2. DEFINITION OF SMEs

SMEs are a very heterogeneous group. They are found in a wide array of business activities, ranging from the single artisan producing agricultural implements for the village market, the coffee shop at the corner, the internet café in a small town to a small sophisticated engineering or software firm selling in overseas markets and a medium-sized automotive parts manufacturer selling to multinational automakers in the domestic and foreign markets. The owners may or may not be poor; the firms

operate in very different markets (urban, rural, local, national, regional and international); embody different levels of skills, capital, sophistication and growth orientation, and may be in the formal or the informal economy (OECD, 2004). Because of this, there is no universally accepted definition of an SME among different organisations and different countries. The definitions of small firms used by different authors and organisations are often confusing and inconsistent. The definition poses such a difficulty because of three factors. First, the SME sector is not a homogeneous identity. Any definition based upon a one-dimensional measure tends to blur the diversity of SMEs. Second, SMEs are supported in almost all countries by various means, and the definition will determine who will benefit from such SME support schemes. Institutions construct and recommend their own definitions to suit their own purposes. Finally, the deficiency of data on SMEs makes it difficult to use some definitions that are otherwise relevant on theoretical grounds (Taymaz, 1997).

Statistical definition of SMEs varies by country and is usually based on the number of employees, and value of sales and/or value of assets. The number of employees is the most common method for determining the size of enterprises. Because information about number of employee is easily available. In OECD Member countries, SMEs are usually defined as firms with fewer than 500 employees, although a number of countries - including those in the European Union - use a lower cut-off point of 250. EU Member States traditionally had their own definition of what constitutes an SME, for example the traditional definition in Germany had a limit of 500 employees.

Table1- Definition of SMEs in the OECD, in the EU and in Turkey

 Source: OECD (2004)

In 2003, the EU decided on the definition of the enterprise sizes to be used by all the member countries[1]. So the European Commission revised its definition of an SME. The new definition, effective since 1 January 2005, reflects economic developments and a growing awareness of the many hurdles confronting SMEs. The EU categorizes SMEs according to Table 2:

Organisation	Sectoral definition	Criterion for definition	Micro-sized enterprise	Small-sized enterprise	Medium-sized enterprise
OECD	Non-primary private		1-9 workers	10-99 workers	100-499 workers
EU	Non-primary private	Number of workers	0-9 workers	10-49 workers	50-249 workers
KOSGEB	Manufacturing industry	Number of workers	--	1-50 workers	51-150 workers
HALK BANK	Manufacturing industry	Number of workers	--	--	1-250 workers
UNDER SECRETARIAT OF TREASURY	Manufacturing industry, tourism, agro-industry, mining, education, health, software development	Number of workers	1-9 workers	10-49 workers	50-250 workers

Table 2- Revised European SME definition

Enterprise category	Number of employees	Turnover (Euro millions)
Micro-sized	<10	<2
Small-sized	<50	<10
Medium-sized	<250	<50

 Source: EC (2005)

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[1] European Commission (2003-05-06), Recommendation 2003/361/EC: SME Definition.

There are variety of definitions adopted for SMEs in Turkey. Different agencies have set up different criterias for entitlement to their services. Chambers of Commerce and Industries, Halk Bank, Turkish Statistical Institute (TURKSTAT), The State Planing Organization, Chamber of Industry, and KOSGEB have been using different criterias for defining SMEs, but the main criterias are the number of persons employed and total fixed assets.

In the integration process to the European Union, Turkey has adopted a new definition of SME in 2005. The new SME definition has entered into force on 18 May 2006. The new definition categorizes SMEs according to Table 3:

Table 3- The New SME Definition, Which Entered into Force on 18 May 2006

Enterprise category	Number of employees	Turnover (YTL millions)
Micro-sized	<10	<1 million
Small-sized	<50	<5 millions
Medium-sized	<250	<25 millions

Source: Official Gazette, 18.11.2005.

3. OVERVIEW OF SMEs IN TURKEY

SMEs constitute a major part of the Turkish economy, accounting for a large proportion of the country's businesses and total employment. They constitute;

- 99.8 per cent of all the enterprises,
- 76.7 per cent of employment,
- 8 per cent of export,
- 38 per cent of value added,
- 26.5 per cent of investments.

There are nearly 2 million SMEs in Turkey with 10 per cent of these being medium-sized according to the EU definition. According to one of the survey which was done by ABIGEM, it was found that around 70 per cent of all SMEs are family owned and managed. The geographical distribution of SMEs is extremely unequal and a good indicator of the bipolar nature of the Turkish economy – 38 per cent of SMEs are in the Marmara region compared to just 3 per cent in Eastern Anatolia (ABIGEM, 2005).

The average profile of Turkish SMEs is different from that of SMEs in the European Union or in most other OECD countries. When SMEs in Turkey are compared with the European SMEs, as can be seen from Table 4, In European countries, the vast majority of all firms are small like in Turkey. Nearly 90 per cent of all firms have less than 10 people employed and about 99 per cent of all firms have less than 250 people employed. The Mediterranean countries (Spain, Portugal, France, Italy) have more micro enterprises than the other countries. Germany and UK have more medium-sized enterprises.

Table 4- Size Distribution of Firms in Selected Countries and Turkey (2003) (%)

Country	- 9	10 - 49	50 - 250	250 -
Germany	83.0	14.2	2.3	0.5
France	92.2	6.5	1.1	0.2
UK	86.1	11.4	1.8	0.4
Italy	94.5	4.9	0.5	0.1
Portugal	92.4	6.5	0.9	0.1
Spain	92.2	6.9	0.8	0.1
EU27	87.3	10.8	1.6	0.3
Turkey	**95.3**	**3.09**	**0.4**	**0.1**

Source: EC, **The Observatory of European SMEs**, 2006.

In Turkey, micro and small enterprises constitute major part of the SMEs. This portion is significant; it constitutes 99 per cent of the total nonagricultural enterprises (TURKSTAT, 2003). The main differing feature of the Turkish SME structure is the lack of medium-sized companies. These companies play an important part in bridging the gap between large and small companies and assist processes of technology transfer, commercialization of knowledge and outsourcing (ABIGEM, 2005).

In Turkey, although SMEs constitute 99 per cent of total enterprises and have a 76 per cent employment share, they contribute only 8 per cent of export. This figure is low when compared to other countries; the figure is 38 per cent in Japan, 31 per cent in Germany, 26 per cent in France and 22 per cent in England (Table 5).

Table 5- Characteristics of SMEs in Selected Countries and Turkey (2003) (%)

Share of SMEs total:	USA	Germany	Japan	UK	France	Turkey
Enterprises	99.7	99.0	99.4	98.8	99.8	**99.8**
Employment	56.6	64.0	81.4	36.0	63.1	**76.7**
Production	43.0	49.0	52.0	25.1	53.2	**38.0**
Export	32	31	38	22	26	**8.0**

Source: OECD, **SME and Entrepreneurship Outlook**, 2005.

SMEs play a major role in every sector of the Turkish economy. According to the 2002 General Census of Industry and Business Establishments, there are 1.7 million SMEs in Turkey and nearly half of the SMEs (46.19 per cent) are engaged in trading while 14.3 per cent are involved in manufacturing activities. Although the number of enterprises in wholesale and retail trade sector is more than three times from manufacturing, the numbers of employees in both sectors are the same (Table 6).

Because of the size of Turkey's informal sector, these data underestimate the relative importance of SMEs in the Turkish economy and probably overestimate their typical size more than in the majority of OECD countries. (According to certain estimates, the informal economy could represent about 50 per cent of the activity of SMEs) (OECD, 2004).

Table 6- Sectoral Distribution of Enterprises in Turkey

Sectors	Number of Enterprises	%	Number of Employees	%
Wholesale and retail trade	794.715	46,19	2.048.2644	32,38
Manufacturing	246.899	14,35	2.043.815	32,31
Transportation, Communication and Storage	244.490	14,21	500.104	7,91
Hotel and restaurants	163.112	9,48	526.845	8,33
Community, Social and Personel Services	90.919	5,28	213.400	3,37
Real Estate, Leasing and Busines Services	90.473	5,26	325.697	5,15
Construction	35.702	2,07	229.400	3,63
Health and Social Services	31.546	1,83	99.966	1,58
Financial Services	13.538	0,79	123.178	1,95
Education	5.692	0,33	76.435	1,21
Mining and Quarrying	1.809	0,11	80.341	1,27
Electricity, gas and water	1.703	0,10	57.591	0,91
Total	**1.720.598**	**100,00**	**6.325.036**	**100,00**

Kaynak: Turkstat (2003)

4. EMPLOYMENT IN SMEs

High and rising unemployment rates in the early 1990s have moved the employment question centre-stage in the policy debate (OECD, 1996). The relation between firm size and employment creation has attracted policy makers' attention. Today, SMEs account for 60 to 70 per cent of jobs in most OECD countries, with a particularly large share in Italy and Japan, and a relatively smaller share in the United States. Throughout they also account for a disproportionately large share of new jobs, especially in those countries which have displayed a strong employment record, including the United States and the Netherlands.

EU considers SMEs as "a key source of jobs and main driver for innovation" (EC, 2000). SMEs make up 99 per cent of all enterprises in Europe, account for the majority of new jobs created, and make an important contribution to achieving the European Union's goal of more growth and more and better jobs. So the value of SMEs to an economically competitive Europe is enormous.

The EU's 23 million SMEs are a major component of the European economy as more than 75 million jobs are concerned. Europe's SMEs account for up to 80 per cent of jobs in some sectors, such as textiles, construction and furniture. Although their base is local or regional, SMEs, just like large companies, must adapt to factors such as increasing international competition, movements of capital and its globalisation, the speed of technological change and the rapid cyclical shifts which characterise modern economies (EC, 2005a).

The average European enterprise employs 6 people. On average, an enterprise in Europe – even including all very large enterprises- provides employment to 6 people; the average for SMEs only is 4 people. However, this varies between 2 people in micro enterprises, and over 1000 in large enterprises. Between countries, there are large differences as well. On average, an enterprise has 2 occupied persons in Greece and in Hungary too; and 3 in Italy, compared with 10 in Ireland, Luxembourg, Austria and the Netherlands (Lukacs, 2005).

The notion that SMEs are a driver of employment growth is supported by the analysis of Eurostat employment data on the non-financial business sectors between 1998 and 2004. In this period, SMEs in the ten countries analysed in this study created more than four times as many jobs as large enterprises: While the employment in SMEs increased by more than 4.6 million jobs, large enterprises in the ten countries created only around 1 million jobs (Voss, 2007).

Table 7- Distribution of Employment by Firm Size (2003) (per cent)

Country	- 9	10 - 49	50 - 250	250 -
Germany	19.6	21.9	18.7	39.8
France	23.3	20.7	16.9	39.2
UK	21.1	17.9	14.8	46.2
Italy	47.1	22	12.4	18.5
Portugal	39.8	23.5	17.5	19.2
Spain	38.6	25.8	14.7	20.9

Source: Storrie (2007)

Table 7 presents the size distribution of employment. The size-class distribution of employment differs between European countries. The Mediterranean countries have a larger share of employed in the smallest enterprises whereas UK, Germany and France have a larger share of employed in the LSEs. For example, the share of micro enterprises in total employment is 47 per cent in Italy, and 38 per cent in Spain. On the other hand, the share of large enterprises in total employment is over 46 per cent in the UK and 39 per cent in Germany.

Europe's private sector jobs are in:
Micro-enterprise: 29.8 %
Small enterprise: 20.8 %
Medium-sized: 16.5 %
Large: 32.9 % (EC, 2007).

SMEs are a major source of employment and job creation in Turkey, too. They currently employ 76 per cent of the labour force. Companies in Turkey tend to be very small. Indeed, 75 per cent of all businesses employ five people or less. The employment share of micro enterprises is substantially higher in Turkey than in the developed countries. Micro enterprises comprise 95 per cent of all enterprises, employ roughly one third of the labour force. Self employment provides 25 per cent of total employment in Turkey.

While the average European enterprise employs 6 people, Turkish enterprises employ only 2-3 people. Thirty five per cent of all manufacturing employment is generated by micro establishments, i.e., those establishments in which at most 9 persons are employed. The employment share of large-sized enterprises (LSEs) in Turkey is lower than the EU average but it is comparable to Japan which has the lowest average plant size among the developed countries because of its unique inter-firm networking. The share of SMEs seems to be lower in Turkey than the EU, but this is a result of the outstanding share of micro enterprises.

The small size of Turkish SMEs and their relatively modest contribution to national output stand out in international comparisons. For example, the proportion of SMEs with fewer than 100 workers is higher in Turkey than in many other OECD countries (Italy is a notable exception), and most Turkish SMEs fall into the category of enterprises with fewer than ten employees. Turkey also has the highest proportion of jobs in manufacturing firms with fewer than ten workers (34 per cent). Furthermore, while micro-enterprises account for 95 per cent of Turkish businesses and 34 per cent of Turkey's jobs, they account for a scant 7.8 per cent of production, whereas in Italy, France and Portugal, where such firms are proportionately fewer and employ fewer people, their contribution to total output ranges from 11per cent to 15 per cent (OECD, 2004).

Although it is difficult to obtain reliable data on the size distribution of employment in Turkey, we have data on the size distribution of employment in manufacturing sector. Table 8 shows that in manufacturing industry, SMEs account for roughly two thirds (per cent 65) of employment in Turkey, with micro enterprises accounting for 27.6 per cent, small enterprises accounting for 20.9 per cent and medium-sized enterprises accounting for 34.9 per cent. Likewise, more than one-third of manufacturing SMEs employs between one to nine workers. Turkey takes first place amongst OECD countries in the share of employment at the micro level. It is obvious that this picture does not create a conducive climate for unions either to be organised in enterprises or to be sufficiently active in the industrial relations arena.

Table 8- Size Distribution of Enterprises and Employment in Manufacturing Sector

Countries	1-9 Employees		10-49 Employees		50-249 Employees	
	Number of Enterprises (%)	Employment (%)	Number of Enterprises (%)	Employment (%)	Number of Enterprises (%)	Employment (%)
Turkey	**89.7**	**27.6**	**8.24**	**20.9**	**1.66**	**34.9**
Australia	72.6	14.1	21.8	20.5	4.1	17.8
Austria	71.0	10.3	21.8	18.9	5.5	26.9
Belgium	79.4	11.6	15.5	18.9	4.1	23.8
Denmark	71.4	7.4	21.1	18.9	6.0	26.3
Finland	84.0	9.0	11.4	14.8	3.6	22.5
France	81.6	12.0	14.0	19.0	3.4	22.3
Germany	62.1	6.7	27.3	14.5	8.4	23.7
Hungary	87.2	16.1	9.4	16.5	2.7	23.2
Italy	83.4	25.5	14.4	31.0	1.9	20.8
Japan	50.9	10.8	39.2	28.4	8.5	29.9
Holland	74.7	9.9	18.9	23.3	5.2	30.6

Norway	60.6	8.7	29.4	22.9	7.6	28.3
Poland	89.7	19.4	6.5	12.8	3.0	27.9
Portugal	78.9	18.9	16.7	28.1	3.9	29.3
Spain	78.4	19.2	18.4	31.9	2.8	22.6
Sweden	85.4	11.1	10.8	15.2	3.0	20.7
UK	71.7	10.1	21.0	18.8	5.9	25.8

Source: Turkstat, 2002; OECD, 2005

Industry	-9	10-49	50-249	250-
Manufacturing	13.6	21.9	23.5	**41.1**
Electricity, gas and water	3.0	5.5	12.2	**79.4**
Construction	**42.8**	32.0	13.8	11.4
Wholesale and retail trade	37.3	20.9	12.0	29.9
Hotel and restaurants	**44.0**	26.4	10.1	19.6
Mining and quarrying	9.3	13.6	3.0	**42.8**
Industry	**-9**	**10-49**	**50-249**	**250-**
Manufacturing	13.6	21.9	23.5	**41.1**
Electricity, gas and water	3.0	5.5	12.2	**79.4**
Construction	**42.8**	32.0	13.8	11.4
Wholesale and retail trade	37.3	20.9	12.0	29.9
Hotel and restaurants	**44.0**	26.4	10.1	19.6
Mining and quarrying	9.3	13.6	3.0	**42.8**

Only a small share of SMEs are in the manufacturing sector in Turkey. According to the Turkstat data, on 1 January 2001 there were around 210 000 SMEs in the sector (99.6 per cent of the total number of manufacturing firms). Just over 1 million persons are employed by these SMEs (64.3 per cent of the manufacturing total) and they accounted for 34.5 per cent of the sector's value added. Manufacturing sector SMEs are broken down across industries as follows: metallic goods: 26.1 per cent, textiles, clothing and leather goods: 25.6 per cent, wood and furniture: 24.3 per cent, food and drink: 12.7 per cent, paper: 3.9 per cent, other sectors: 7.4 per cent. Furthermore, these enterprises are generally very small. The average number of people employed by SMEs in manufacturing is 4.8, but for the 95 per cent of SMEs with employment of between one and nine, the average is 3.1 (OECD, 2004).

The role of SMEs is not constant across economic activities.The employment share of SMEs varies between sectors. As can be seen from Table 9, in the EU, while micro and small enterprises are particularly important in construction, hotel and restaurants; in electricity, gas and water, mining and manufacturing sectors large enterprises are dominant.

Table 9- Size Distribution of Employment by Industry, 2003 (EU)

Industry	-9	10-49	50-249	250-
Manufacturing	13.6	21.9	23.5	**41.1**
Electricity, gas and water	3.0	5.5	12.2	**79.4**
Construction	**42.8**	32.0	13.8	11.4
Wholesale and retail trade	37.3	20.9	12.0	29.9
Hotel and restaurants	**44.0**	26.4	10.1	19.6
Mining and quarrying	9.3	13.6	3.0	**42.8**

Source: Stenkula (2006), SBS Database, Eurostat.

Although we have no data on the size distribution of employment by industry in Turkey, average size in sectors in terms of number of employees is available: the mining sector has the highest average per company with 44 people, with manufacturing at 8 and transportation, storage and communication at 2 (Table 10).

Table 10- Average Size in Sectors in Terms of Number of Employees

Sectors	Size
Mining and Stone Extraction	44.41
Manufacturing	8.27
Electricity, gas and water distribution	33.82
Construction	6.43
Commerce	2.58
Transportation, storage, communication	2.05
Financial intermediary activities	9.10
Real estate, renting and business activities	3.60
Educational services	13.43
Health and social services	3.17
Other social, community and personal services	2.35
Hotels and restaurants	3.23

Source : Turkstat (2003)

5. SOME OF THE NEGATIVE FEATURES OF SME EMPLOYMENT IN TURKEY

Although SMEs are important actors in solving unemployment problem and they have positive features for employers (comparatively low labour costs, relatively little wage rigidity, etc) and national economies, SME employment (especially micro and small-sized) has some negative features for employees as follows:

- *Widespread informality and unregistred employment:* There is a link between firm size and informality. The smaller the firm, the more likely there is to be non-compliance with labour and tax regulations. Self employment provides 25 per cent of total employment in Turkey. Almost all self-employment in Turkey is likely to be either unregistered or partially or fully undeclared.

- *Underemployment:* SMEs jobs are relatively low-skilled. In countries where unemployment rate is high, like Turkey, many educated unemployed are forced to choose these jobs because of unemployment problem.

- *Inadequate training:* SMEs also tend to invest less in training. They offer mainly on-the-job training, which may not be structured in the way that many employees would expect; access to professional qualifications may be limited.

- *Low Wages:* Wages in SMEs are often lower than those offered by larger enterprises and access to other benefits is likely to be limited. SMEs could pay lower wages because they usually employ unorganized labour. They also tend to have lower hiring and firing costs and have weak incentives to have long term employment contracts (Taymaz, 1997).

- *Lack of employment security:* High job turnover poses problems for employment security in SMEs. Furthermore, many labour market regulations don't comprise small enterprises. For example, Turkish Labour Code (No. 4857) doesn't cover the establishments employing three or fewer employees and employees who work in SMEs with fewer than 30 workers can't benefit from the employment security in the Labour Code.

- *Low unionisation:* Trade union membership levels appear to be relatively low in SMEs. Turkey takes first place amongst OECD countries in the share of employment at the micro level. It is obvious that this picture does not create a conducive climate for unions to be organised in enterprises.

- *Common use of child labour:* According to a report published by the Ministry of Labour and Social Security, 87 per cent of working children are employed by micro-sized enterprises having one to nine workers.

6. CONCLUSION

In conclusion, it is apparent that SMEs play an important role in the Turkish economy due to their large share in the total number of enterprises and in total employment. The general importance of SMEs is widely recognised, because of their vital role in job creation. But directly linking with SME growth to job quality is an issue remaining to be addressed in future studies. In short, there are two concerns dealing with SMEs, these are namely job creation and job quality as a whole. These two concerns have to be brought more closely together.

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AUTHOR PROFILE:

Dr. Naci Gundogan earned his Ph.D. at Anadolu University, Turkey in 1996. Currently he is an Associate Professor at the Faculty of Economics and Administrative Sciences, Anadolu University. His research interests are in the areas of labor economics, unemployment and working poverty.

THE UNRAVELING CAPACITY OF TRADE PERFORMANCE INDICATORS

Semir Daskapan, Delft University of Technology, Delft, The Netherlands

ABSTRACT

Governments are willing to react to global threats and opportunities by changing their international competition policy, but it is not sure how effective their efforts will be. To measure this impact so-called trade performance indicators (TPIs) are used. Common TPIs, like the Balassa, Michaely and Lafay indicators for example, use somehow a ratio between the export and import to show the degree of trade specialization and competition. However, in this paper we pose that assessing a country's trade share, as those TPIs do, does not necessarily expose its trade competitiveness. As such those TPIs are presenting misleading figures for policy makers. Besides that the number of TPIs gives us enough reason to dispute their reliability. Empirical data is used to underpin this proposition.

Keywords: *Revealed comparative advantages, International Specialization, international trade, Balassa, Trade performance.*

1. INTRODUCTION

Several theories explain why international trade occurs, ranging from Adam Smiths absolute advantage and Ricardo's revealed comparative advantage until Heckscher-Ohlin and many other modern theories. Although their approaches differ enormously from each other, trade specialization remains for all of them a main driver in this global trading process. That means that each region ought to be specialized in the production of those goods in which it is, and here is the difference in the theories, somehow better or at best in order to have global trade advantage. Common measures like the Balassa, Michaely and Lafay indicators use somehow a ratio between the export and import to show the degree of trade specialization. We call them trade performance indicators (TPIs). Given the impact of their results, it is of high importance that those calculi can be relied on. But many authors like Marsh and Tokarick (1994) and Scott (2005) are skeptical. Therefore, we expect that the current TPIs will give an incomplete and/or distorted results. After all, the assumption is that when a country has a (absolutely or relatively) better export in a specific sector, this country is ought to be specialized in the production of the products of that sector. This assumption is not legitimate: the ability to specialize does not necessarily imply a strong export and vice versa. This unrealistic export-based-specialization-assumption has lead to another practical problem. Prior to the measurement an event should have been occurred that gives the data. That is why all those TPIs are based on an ex post measurement, since the application of such TPI requires regions already to have traded and gathered data for that purpose. But then, in those statistics regions without (or with negligible) trade are as such disregarded. The unjustly conclusion might then be that they have no trade advantage. It might even be so that the non-exported products of trading regions are not included in the assessment. Such regions cannot then anticipate (develop a policy) or decide to export those products based on those economic figures. Because of this ex post approach those TPIs will give, especially for countries with low exporting profile like Cuba, North-Korea and previously also India, incomplete or distorted results. Protectionism of regions, like by the European Union, is one of major causes for discouraging many other countries to export their goods. Political and economic sanctions form another category. Cuba for example would indicate that it has a comparative advantage with their Havana cigars, while it may also have a comparative advantage in some pharmaceutics. This is not exposed in those TPIs, since pharmaceutics are until now not exported due to trade barriers. A misleading conclusion from these TPIs could be then that pharmaceutics are not trade advantageous for Cuba. The purpose of this paper is to validate the TPIs: do they measure what they should measure, i.e trade specialization and competitiveness, or not. Secondly, since there are so many TPIs for the same purpose we must assume that none of them provides a reliable and conclusive result above the others. Are they really different? Therefore, a second purpose is to test the similarity between the different TPIs.

After explaining the theory of comparative advantage in the following section, upon which many TPIs are conceived, the different TPIs will be discussed in section 3. In section 4 the reliability of the different methods will be challenged.

2. COMPARATIVE COST ADVANTAGE

Because trade theories explain why trade occurs, they form the basis for TPIs. The classical trade theories like Mercantilism, providentialists and physiocrats are according to many economists outdated, although nowadays terms as neo-mercantilism are used to phrase the protectionist behavior of some countries (Landreth et al 2002). The theory of absolute advantage is also loosing much interest, but the theory of Ricardian comparative advantage and the Heckschler -Ohlin theory of factor endowments however are still widely accepted and dominating many statistical analysis and decisions of politicians. Ricardian theory of comparative advantage is based on technological differences and the Heckscher-Ohlin theory is based on factor endowments. The Heckschler -Ohlin theory did not induce any TPI. We will explain the theory of comparative advantage as the soil for many TPIs.

The theory of absolute advantage implicates that no trade will occur if one country has an absolute advantage for all products and failed then to explain why many countries still managed to export goods, while they did not have an absolute advantage in any goods. David Ricardo solved this friction, by developing the theory of comparative advantage, which states that *a country should produce and export those goods and services for which it is relatively more productive than other countries and import those goods and services for which other countries are relatively more productive* (Mahoney et al 1998). The term comparative advantage refers to the opportunity cost of two producers. The Ricardian model is based on technological differences across countries, which result in differences in the productivity.

Consider the example with COUNTRY U and COUNTRY M as trading countries and only one factor of production, i.e. labor. COUNTRY M is better than the COUNTRY U at producing both goods (computers and cars). The theory of absolute advantage indicates then that the COUNTRY U will only import goods, because COUNTRY M is more productive than the COUNTRY U in producing both goods. The theory of Ricardian comparative advantage indicates that trade should still occur in both directions. COUNTRY M is comparatively better than the COUNTRY U in car production, but the COUNTRY U is comparatively better than COUNTRY M in the production of computers (Gandolfo 1998).

	Required units of labor		Export objective
	Cars	Computers	
COUNTRY M	1	3	Cars
COUNTRY U	3	4	Computers

TABLE 1 RICARDIAN COMPARATIVE ADVANTAGE

The basic assumptions for the theory of Ricardian comparative advantage are based on: 1) 2x 2x 1 model, i.e. two countries, two products and a single factor of production, 2) perfect competition prevails in all markets, 3) labor is not mobile across the two countries, 4) constant returns to scale, 5) free trade and no transportation costs, 6) labor theory of value: labor is the only cost of production, 7) full employment of factors of production.

A number of criticisms of Ricardian comparative advantage theory exist especially related to its 'win-win' basis and its applicability in terms of the environment.

1. Empirical tests show also trade cases that do not follow this theory (Bhagwati 1964).
2. Assumptions are unrealistic: labour is not the only factor of production, capital and labour are internationally mobile and perfect competition does not hold (Krugman and Obstfeld 2005).

3. TRADE PERFORMANCE INDICATORS

In this chapter we will discuss the methods to measure trade performance of nations according to the theory of Ricardian comparative advantage. The outcome of the methods or calculi are called trade performance indicators (TPIs). The objective is to assess whether those TPIs do indeed measure trade competitiveness or specialisation.

3.1. Balassa indicator

The revealed comparative advantage can be considered as the first method to measure comparative advantage of international trade specialization (Balassa 1965). Since it is one of the oldest TPIs, it has

as such been used in many economic analysis. Over all the years some shortcomings have been noticed in this indicator and many alternatives have been proposed. The Revealed Comparative Advantage (RCA) is defined as

$$RCA_{ij} = \frac{X_{ij} / \sum_i X_{ij}}{\sum_j X_{ij} / \sum_i \sum_j X_{ij}} \qquad (1)$$

where Xij is the export of sector i from country j. Here the numerator represents the percentage of share of one given sector i in the total national exports of country j, whereas the denominator represents the percentage share of a given sector in world exports. The *RCA* indicator is thus a comparison of national export structure with the world export structure. When *RCA* equals 1 for a given sector in a given country, the percentage share of that sector is identical with the world average. If *RCA* is above 1 the country is considered to be specialized in that sector and vice versa, where *RCA* is below 1.

3.2. Michaely indicator

The Michaely indicator (MI) is one of the alternative indicators to measure trade competition. The indicator was originally developed to show 'only' the difference between the national exports and the national imports of a given sector (Michaely 1967; Michaely 2004). Nevertheless, since then it has been applied as an indicator to measure trade competition at the level of the sectors (Amable 2000). The indicator that ranges between (-1;1) can be defined as:

$$MI_{ij} = X_{ij} / \sum_i X_{ij} - M_{ij} / \sum_i M_{ij} \qquad (2)$$

where *Mij* represents the imports for sector i to country j. The formula expresses the percentage share of a given sector in national exports excluding the percentage share of a given sector in national imports. If the value of the indicator returns positive a country is considered to be specialized in a certain sector. If the value of the indicator returns, however, negative, a country is said to be under-specialized in that sector. Comparing with RCA, the advantage of MI is that it eliminates the distortion of re-exports.

3.3. Chi^2 indicator

The Chi-square measures the difference between the export of a given country and the total world export as a percentage of the world export (Archibugi 1994). Using the same notation as of the *RCA,* the definition of the measure is then as follows:

$$\chi_{ij}^2 = \frac{[(X_{ij} / \sum_i X_{ij}) - (\sum_j X_{ij} / \sum_i \sum_j X_{ij})]^2}{\sum_j X_{ij} / \sum_i \sum_j X_{ij})} \qquad (3)$$

The X_{ij}^2 score is then an indication of how strongly each country is *specialized* in a specific sector. The measure ranges between [0; →). The more a country differs from the world export, the more it is specialized, since the greater the chi-value is. However, the chi-square can also be misleading since it takes high values in case of less specialized and in case of more specialized countries as compared to the average of the other countries (Archibugi 1994). This is due to the square of the extraction in the denominator.

3.4. Trade specialization indicator

The Trade Specialization Indicator (*TSI*) shows that the *degree of specialization* in each sector i is weighted by its relative importance in the country's total trade (Amable 2000). The TSI, defined as follows, ranges then between zero and one, with the value of one giving a complete trade specialization (Bender 2001).

$$TSI = \sum_{i=1}^{n}\left\{\left(\frac{(X_i + M_i)}{\sum_i (X_i + M_i)}\right)\frac{|X_i - M_i|}{(X_i + M_i)}\right\} = \sum_{i=1}^{n}\left\{\frac{|X_i - M_i|}{\sum_i (X_i + M_i)}\right\} ; \qquad (4)$$

3.5. Beneficial structural change indicator

The Beneficial Indicator (*BSCI*), defined as follows, measures whether an improvement in export is oriented to the *most dynamic products* demanded by the world (Bender 2001).

$$BSCI_j^i = \sum_{j=1}^{N}\left\{\left(\frac{x_j^i(t)}{\sum_{j=1}^{N} x_j^i(t)} \bigg/ \frac{x_j^i(t-1)}{\sum_{j=1}^{N} x_j^i(t-1)} - 1\right)\left(\frac{\frac{m_j^W(t)}{m_j^W(t-1)}}{Average\left(\frac{m_j^i(t)}{m_j^i(t-1)}\right)} - 1\right)\frac{x_j^i(t)}{\sum_{j=1}^{N} x_j^i(t)}\right\} ; \qquad (5)$$

where *Xi* and *Mi* indicate export and import of sector *i* in a given year, respectively. A positive value indicates a beneficial orientation, and that exports expanded in the more dynamic sectors. The higher the value of this indicator, the stronger is the beneficial change in export.

3.6. Lawrence indicator

The Lawrence Indicator is given by:

$$L = 1/2 \sum_{i=1}^{n} |S_{i,t} - S_{i,t-1}| \quad , \quad S_{i,t} = X_{i,t} \bigg/ \sum_i X_{i,t} ; \qquad (6)$$

where $S_{i,t}$ is the share of sector *i*'s exports in total exports of the country at year *t* (Sapir 1996). It *measures the change* in the export share. The Lawrence Indicator ranges from zero to one, where one represents a complete upheaval and a value close to zero indicates little change. As such it does not address any specialisation of an industry.

3.7. Lafay indicator

The Lafay indicator is measured by:

$$LFI_j^i = 100\left(\frac{x_j^i - m_j^i}{x_j^i + m_j^i} - \frac{\sum_{j=1}^{N}(x_j^i - m_j^i)}{\sum_{j=1}^{N}(x_j^i + m_j^i)}\right)\frac{x_j^i + m_j^i}{\sum_{j=1}^{N}(x_j^i + m_j^i)} ; \qquad (7)$$

where x_{ij} and m_{ij} are exports and imports of product *j* of country *i* and *N* is the number of products (Lafay 1992). According to this indicator, the trade performance of country *i* in the production of item *j* is thus measured by the deviation of product *j* normalized trade balance from the overall normalized trade balance, multiplied by the share of trade (imports plus exports) of product *j* on total trade.

3.8. Unraveling capacity of the indicators

All the previous indicators are based on some calculi that use ex-post export (X) and sometimes also ex-post import (M) data. This leads to the measurement of the specialization of a country in a specific sector or good that is already being exported. So, the results of those indicators only confirm or oppose the once already taken decision to export. They do not assist policy makers in deciding to export new goods. After all, export and import data about those not yet exported goods or services is not yet available. What is then measured? Actually, those indicators do not measure trade

specialization, neither do they measure trade competitiveness. Hypothetically it is even possible that a country that is specialized in a certain good/service and has a competitive advantage is not able to export for arbitrary reasons. Examples are South Korean human cloning technology, which are forbidden in other countries and USA export restrictions on cryptographic technologies.

Short name	Trade performance indicators	Reference	Input
RCA	Revealed comparative advantage	Balassa 1965	X
Michaely	Michaely indicator	Michaely 1967	X,M
Chi	Chi-square measure	Archibugi 1994	X
TSI	Trade Specialization Indicator	Amable 2000	X,M
BSCI	Beneficial structural change indicator	Bender 2001	X,M
Lawrence	Lawrence Indicator	Sapir 1996	X
Lafay	Lafay indicator	Lafay 1992	X,M

TABLE 2. COMMON TRADE PERFORMANCE INDICATORS AND THEIR INPUT VARIABLES

Lemma 1: *The existing TPIs do not expose a country's specialization and neither its trade competitiveness. They rather show somehow the relative share in export and import.*

Given lemma 1 a conclusion we can draw is that the presented figures by the TPIs are unjustly used by policy makers to adjust their competition policy. This also strengthens our suspicion about their reliability. If the TPIs have the same purpose then they would produce similar results for the same case. We expect that because they do not measure trade specialization, but other things, that hey will differ significantly in their output. This will be tested in the following section.

4. SIMILARITY BETWEEN THE INDICATORS

In statistics, reliability is the consistency of a set of measurements or measuring instruments (Bower 2000). Consistency refers to the property that a method applied on the same case in another time frame should yield the same results. Consistency between methods with the same purpose refers to the fact that similar methods applied on the same case should also yield similar results. Therefore, we consider TPI's as reliable if their methods show a consistent output given a certain input in time. Consequently, if all methods are reliable and the same input data is used for all methods:
- Hypothesis 1. they should produce similar results, but possibly with different magnitudes.
- Hypothesis 2. the relative changes of the results through a period should be similar.

If one or none of the two hypotheses will be falsified then the TPIs are assumed to be reliable. If both hypotheses will be falsified then then the TPIs are considered as unreliable.
To test the hypothesis in the following we have only considered Lawrence, beneficial, michaely and TSI indicators. The chi-square was not considered further, since it can be misleading: it takes high values in case of less specialized and in case of more specialized countries as compared to the average of the other countries. This is due to the square of the extraction in the denominator (Archibugi 1994). The Lafay and Balassa indicators have a similar approach as Michaely. As such only Michaely will be shown furher.

In (Bender and Li 2002) an analysis has been made of the trade performance of East Asian and Latin American countries. We will use this empirical data to test our hypothesis. For the period 1981-1997, trade performances are showed on the basis of a three-years average. They aggregate the main three, five and ten main export sectors on a 3-digit industry classification. If all methods were reliable they would show more or less the same pattern through the years, i.e. same results, but with different magnitudes. However, in this case we see that the TPIs show different patterns (TABLE 3). This pleads for the falsification of the first hypothesis. Although their absolute values differ, it is still possible that this is only a difference in magnitude. Therefore another way to see whether there are similarities between the patterns is to calculate the relative performance, i.e. the relative difference in output of one indicator for both regions. In case of a similar pattern we should see the same curves in time, i.e the second hypothesis. In   TABLE 4 we have calculated the relative performance of Latin America above East Asia for these periods to see whether the indicators differ relatively.

East Asia	1981–1983	1984–1986	1987–1989	1990–1992	1993–1995	1996–1997
Lawrence Index	0.03	0.04	0.03	0.04	0.05	0.02
Beneficial Index	0.00	0.01	0.00	0.01	0.01	0.00
Michaely Index	0.29	0.27	0.26	0.20	0.18	0.07
Trade Specialization Index	0.28	0.29	0.27	0.22	0.19	0.15
Latin America						
Lawrence Index	0.10	0.13	0.10	0.08	0.11	0.24
Beneficial Index	0.03	-0.01	0.00	0.01	0.03	0.05
Michaely Index	0.61	0.45	0.44	0.43	0.48	0.25
Trade Specialization Index	0.57	0.44	0.41	0.01	0.38	0.26

TABLE 3. EXPORT PERFORMANCE OF EAST ASIA AND LATIN AMERICA.

The relative performance RP is calculated by: RP (I,t) = $|(I_{L,t} - I_{E,t})/I_{L,t}|$, with I_L the indicator for Latin America and I_E the indicator for East Asia for the period t. For example:

RP (Lawrence, 81-83) = $|(I_{L,t} - I_{E,t})/I_{L,t}|$ = (0,10-0,3)/0,10 = 0,7

Period/ indicator	81-83	84-86	87-89	90-92	93-95	96-97
Lawrence	0,7	0,7	0,7	0,5	0,55	0,92
Beneficial	1	2	0	0	0,67	1
Michaely	0,52	0,4	0,41	0,53	0,63	0,72
TSI	0,51	0,34	0,34	21	0,5	0,42

TABLE 4. THE RELATIVE PERFORMANCE OF LATIN AMERICA ABOVE EAST ASIA

If we look at the scores, we see that the indicators do not only differ in their absolute output, but obviously also in their relative output. This pleads for the falsification of the second hypothesis. So, there is no consensus between the indicators about the (absolute) trade performance of each region (TABLE 3), i.e. first hypothesis, and neither about the relative trade performance between the regions (TABLE 4), i.e. second hypothesis. Apparently, each indicator depicts another feature of trade. There is thus no reason to believe that the TPIs are reliable.

Lemma 2: *there is no consistency between the indicators. Since each indicator measures another aspect of trade, reliance on one TPI is a subjective choice.*

There might be a few reasons why such recognized indicators show different patterns. First, there are exceptional values; those are TSI = 21 and Lawrence = 0,92. Second, we see also that the Beneficial indicator has clearly a different pattern with values between zero and two. The fact that the Beneficial indicator shows another pattern can possibly be explained by the fact that it tends to depict the direction of specialization (to some goods) based on trade numbers of subsequent years. Also the Lawrence indicator is based on figures of subsequent years. Based on their exceptional values or behavior we might say that the Beneficial, Lawrence and TSI are less reliable indicators than the Michaely index. The Michaely index shows as the only one in this case a regular pattern without exceptional values. Besides that, the Lawrence and Beneficial indicator study the change of the performance indicators in time, whereas the others do not. This might explain their different pattern.

Lemma 3: *The Beneficial and the Lawrence indicators differ significantly from the other TPI's, because of their time dependency*

5. CONCLUSION

Traditionally, nations protect their weak markets by maintaining entry barriers and by competing with other nations only on their strong markets. Governments are willing to react by hardening their international competition policy, but it is not sure how effective their efforts will be. To measure this impact they rely on the so-called trade performance indicators (TPIs). Given the impact of their results, it is of high importance that those calculi can be relied on. Therefore, in this paper we challenged the goal and the reliability of trade performance indicators. We have examined the different TPIs and

concluded that they do not expose a country's specialization and neither its trade competitiveness. They rather show somehow the relative share in the existing export and import. Other specializations and trade opportunities, which are not on the export list yet are as such neglected. Consequently, the competitive power of a nation is then underestimated by the existing TPIs. Furthermore, we have tested whether the many TPIs show similar results or at least similar changes of the results in time. After all, we may assume that given the fact that all the TPIs have the same goal they should induce more or less similar results when applied on the same case. The test was however negative and as such there is no reason to assume that the TPIs are reliable. In future work, we aim to propose improvements to the existing TPIs such that they include also not yet exported goods and services with a comparative advantage. Other future proposals should improve their reliability.

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AUTHOR PROFILE:

Dr. Semir Daskapan earned his MS in Economics at Erasmus University of Rotterdam and his Ph.D. at Delft University of Technology. Currently, he is an assistant professor at Delft University of Technology, the Netherlands.

THE ADMINISTRATION ACCOUNTANCY IN ROMANIAN
SMALL AND MEDIUM-SIZED ENTERPRISES

Felicia Sabou, West University Vasile Goldis, Arad, Romania

ABSTRACT

Administration accountancy and cost related problems represent primordial fields of concern, being a necessity for a working cost management. In accordance with Romanian Accountancy Law no 82/1991, administration accountancy and cost accountancy are compulsory. As a result of some studies it has been ascertained that most companies don't know how to correctly organize their administration accountancy and their system of cost accountancy. Specialized studies have revealed the fact that many trading companies who didn't organize their administration accountancy, despite the fact that they had at the beginning a rapid soar, they subsequently entered a decline stage, just because the lack of an adequate administration accountancy system. Within a competition environment expenditure control play a decisive part in enforcing managerial decisions, being a tool in the proper administration of a business.

Romanian companies which want to organize and to manage administration accountancy must elaborate their own researches and to appeal to specialists and survey and accounting consulting companies to adopt and implement an individual model of administration accountancy.

Keywords*: costs, cost calculation, cost management, administration accountancy.*

1. THE ADMINISTRATION ACCOUNTANCY

The accountancy system applied in the Romanian companies is made up of two subsystems: the financial and the administrative accountancy. This structure is a consequence of the general accountancy adaptation to the requirements of a market-oriented economy, requirements meaning to ensure on the one hand the transparency of accounts information necessary to external users, and on the other hand the confidentiality of the data from the internal administration of the company. In the specialized literature, the administration accountancy is also known as managerial accountancy, internal or analytic accountancy or the exploitation accountancy. The information offered by the administration accountancy is exclusively meant for those who ensure the company's management, facilitating them the taking of decisions regarding the proper use of resources aiming to maximize the profit.

Administration accountancy must provide, depending on the type of the activity that is under way, primarily, the recording of operations concerning expenses collection and distribution on destinations, respectively on activities, departments, fabrication stages, cost centers, profit centers, if the case may be, and also acquisition, production, processing of entered and obtained goods, costs calculation, and also of executed tasks and rendered services, of underway production and immobilizations, in the production, commercial, service, financial units as well as in other domains of activity.

Administration accountancy is compulsory according to the Accountancy Law no. 82/1991, the responsibility for its organization belonging to the administrator. The administrator accountancy can be organized either by using specific accounts, or by developing the accounts of the financial accountancy or with the aid of the pertaining technical accountancy. The using of administration accounting accounts as well as their symbolizing has to be done in such a way that the saving and accessing the obtained information is a flexible process which can guarantee a large scale of options. The administration accounts list must be adjusted according to the desired purposes, respectively: the prominence given to the flux costs, the calculation of costs pertaining to stocks, the calculation of incomes and results depending on the generating activity, the undertaking of previsions, etc.

Administration accountancy offers the necessary information for the elaboration of reports and internal analyses, used by firm managers while making decisions. The requirements for the presentation and analysis of the information offered by administration accountancy are not limitative. When organizing the

administration accountancy one will ensure that the obtained information satisfies both the existent information requirements and those in perpetual change. The procedures and techniques used in the administration accountancy are established according to the qualitative characteristics of the information requested by the users, as well as to the particularities of the activity under way (Sabou F., 2007).

The Accountancy law no. 82/1991 stipulates that 'the commercial societies, national companies/societies, the autonomous administrations, the national research and development institutes, the co-operative societies and all the other juridical persons with a lucrative purpose have the obligation to organize and manage their own accountancy, i.e. the financial accountancy, according to the present law, and the administration accountancy adapted to the specificity of their activity'. The object of administration accountancy is the analytical reflection of certain internal processes of the company which generate qualitative and quantitative changes of the assets. The administration accountancy takes over the expenditure from the financial accountancy, which determines and analyses the result globally, according to the nature of expenses and income.

The administration accountancy is organized by each company according to its specific activities and needs, having the following primary objectives:
- Stock administration
- Estimation of product, service and activity costs ;
- Determination of the results and profitability of the products, services and executed works;
- Elaboration of the income and expenditure budgets on areas of activity;
- Cost and budget control through deflection, necessary for the decision making in the company's accountancy

As stipulated by the Accountancy law no. 82/1991, through the administration accountancy, the companies can obtain information that can ensure an efficient management of the assets, as follows:
- Information related to the cost of the goods, works, services, juridical persons who are actively involved in production, service offers as well as the cost of sold goods for the companies with commercial activities.
- Information that fundament the budget and the exploiting activity control.
- Necessary information for financial analyses having as a goal the strengthening of managerial decisions concerning the internal activity of a company.
- Other compulsory information for a proficient management.

Specific for the Romanian administration accountancy is the fact that the accountancy issues are centered on calculating the costs and analytical results. Also, the administration accountancy model adopted in Romania lacks the stock management objective, which is still realized through financial accountancy.

2. THE PRODUCTIVE ACTIVITIES IN ADMINISTRATIVE ACCOUNTANCY

The productive activity realized within a firm can be grouped, according to its destination and importance in: basic activity, auxiliary activity and annex activity.

The basic activity forms the main object of activity within the company and consists of the obtaining of final products, intermediates, works and services. It is realized in the main production departments of the company (basic departments).In the administration accountancy these are called main places (centers) of production or of expenditure, of costs, respectively administration.

The auxiliary activity ensures the proper course of events of the basic activity. Within auxiliary activities one can include all the manufacturing of secondary products or the execution of works and services such as: the electrical power plant, the water plant, the steam plant, the maintenance and repairs workshop,, the transport department, etc. the auxiliary production is realized within the auxiliary production departments, departments called in administration accountancy secondary places (centers) of production of or expenditure of costs, respectively administration.

The annex activity is the activity within a company that has no direct connection with the basic activity, having as a goal the fulfillment of some socio-cultural and living needs of the company's employees such as. The obtaining of annex production is realized in annex departments such as the annex agricultural household, the annex dwelling household, etc. In the administration accountancy the annex departments are called secondary places (centers) of production or of expenditure, of costs, respectively administration.

The administration and management of all the activities that take place within the company are realized by the management and administrative department, department that constitutes a distinct place (centre) of expenditure and costs.

In administration accountancy the calculation and recording of expenditure is made on departments and production places, respectively on expenditure places and in continuation on the products manufactured within the respective departments and places, using specific accounts according to the production type and to the possibilities of identification of expenditure on the level of products or departments (Oprea C., 2001).

3. THE ORGANIZING OF THE ADMINISTRATION ACCOUNTANCY

Administrative accountancy is influenced, mainly, by the concrete conditions existing in companies belonging to different branches of the national economy.

The most important factors that determine the organization of the administration accountancy are: the company's profile, its organization structure, its production technology and the management methods and techniques.

A certain **activity profile** supposes the establishment of the main activity objective of the company and the orientation of the whole activity towards its realization. The realization of the main objective requires different technological processes varying from one company to another. In administration accountancy, according to the company's profile, (industrial production, constructions, agricultural production, commerce, tourism, etc.) there appear different calculation objects and cost bearers.

The grouping of the production and administrative activity into sectors, departments, workshops and other expenditure places influences the organization of the administration accountancy, mainly in the aspect of cost location and calculation works echeloning. According to the **organization structure** of the firm, there are delineations between the zones (sectors) of expenditure, respectively the responsibility centers.

The zones or sectors of expenditure represent technical and productive, organizational and administrative subdivisions of a company, reported to which budgeting, following and controlling of the activity of the expenditure zone or sector are made. Expenditure zones or sectors can be defined as the reunion of several working or production places.

Production technology (the ensemble of successive operations through which raw materials are transformed in finite products or through which services and works are provided) is an important factor that influences the organization of administration accountancy. From the point of view of technology, the activity of a company can be simple or complex.

Simple production consists either in the extraction from nature of some material goods (minerals, sand, stone etc.) or in the successive transformation of raw materials, the obtaining of the finite product being realized at the end of the last transformation stage (for instance, sugar production). Mass and great scale production are specific to simple production, the manufacturing process being organized as a continuous flux or on great stages.

Complex production comprises the production processes where the finite product is obtained through the assembling of pieces or subassemblies previously manufactured through independent technological processes, taking place in different locations, in parallel. This type of production appears in machine and

complex devices manufactories. Specific to complex production are individual production (one of kind items) and the small or medium-sized production (On small and medium lots).

According to the way of organizing production and the production technology particularities, within the administration accountancy will be established the calculation objects, and taking these into account, the respective calculation methods.

The organization of administration accountancy can also be influenced by the **management methods and techniques** applied within the company. Thus, the company may select a calculation method of total (integral) cost-type or a calculation method of partial cost-type. Also, one can choose a classical calculation method (the global method, the on-stages method or the on-order method), or an evolved calculation method, such as the method of standard or rationed costs, which ensures the accentuation of the prevision character and an increase in information operability (Sabou F., 2005).

4. THE PRINCIPLES OF ADMINISTRATION ACCOUNTANCY AND OF COST CALCULATION

When organizing administration accountancy and the cost calculation the following principles must be taken into account:

- The principle of delineation in time of exploitation costs – which assumes that to each administration accountancy period correspond only the costs pertaining to the activity cost calculation is made for ;
- The principle of delineation in space of exploitation costs – supposes de delineation of exploitation costs on areas of activity (manufacturing costs proper – in basic and auxiliary sectors, administration and retail expenditure) and on production departments, workshops, technologic lines, responsibility centers, both in pre-calculation and in post-calculation ;
- The principle of cost separation implies the separation of exploitation expenditure from the other expenditures (financial and extraordinary). Financial expenditure (excepting the interest payments on loans for units with long-time span manufacturing) and extraordinary expenditure are not included in the production cost and is not the object of administration accountancy.
- The principle of delineation of under-activity costs – envisages the delineation and the evaluation of expenditure generated by production inferior to normal-capacity production. The under-activity cost, as a rule, is not included in the price of the product, but is directly reflected in the result of the exercise ;
- The principle of delineation of finite products expenditure and underway production expenditure – it implies de exact determination of unfinished production, in order to calculate correctly and exactly the real costs for finite products (Oprea C., 2001).

5. RESULTS AND CONCLUSIONS

In 2007 we conduced a survey in small and medium-sized enterprises in Maramures county and Salaj county, on the way in which these organize and accomplish their administration accountancy.

Through this study we wanted to answer the following questions:
- which is the rate of small and medium-sized enterprises in Maramures county and Salaj county, that accomplish a form of administration accountancy
- How many small and medium sized enterprises in Maramures county and Salaj county, calculate the cost price of their products or services.

The research method adopted in order to gather data concerning the accomplishing the administration accountancy within small and medium-sized enterprises in Maramures County was the survey based on a questionnaire. Were questioned 392 small and medium-sized enterprises in Maramures county and Salaj County.

After assessing the gathered data the following conclusions were drawn:
- Out of the 392 small and medium-sized enterprises only 59.18% separate the expenditure in variable and fixed;

- Only 66. 07% small and medium-sized enterprises (from 392), make the separation of the expenditures in: direct and indirect expenditures;
- Out of the 392 small and medium-sized enterprises only 145 companies, (36.99%) accomplish their administration accountancy with the aid of class 9 accounts 'administration accounts'
- Out of the questioned enterprises, only 68. 62% calculate the cost price for their products and services.
-

From the studies and observations made till now I have noticed that Romanian small and medium–sized enterprises from Maramures and Salaj, are not enough prepared to implement correctly costs system calculation and also administration accounts. Taking into account the importance of correctly and exactly calculating the cost price for products and services realized in enterprises, I believe that a great percentage of the small and medium-sized enterprises in Maramures county and Salaj county that were interviewed, are exposed to the risk by not correctly knowing the costs with which their products and services are realized (31. 38%). Romanian companies which want to organize and to manage administration accountancy must elaborate their own researches and to appeal to specialists and survey and accounting consulting companies to adopt and implement an individual model of administration accountancy.

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THE PLETHORA OF CORPORATE GOVERNANCE:
THE QUEST TO CREATE A NORDIC GOVERNENCE PRACTICES CODE

Lisa Barnes, University of Newcastle, Newcastle, Australia

ABSTRACT

The Nordic Region is of significance in relation to employment and economic growth, corporate governance then is an appropriate mechanism to retain this orderly commercial environment. The countries of Norway, Sweden, Finland, Iceland and Denmark have all issued codes on Corporate Governance to assist companies trading on the various stock exchanges. This paper reviews these codes to analyse the similarities and indeed the apparent differences in an attempt to create one code applicable to all countries to enhance the ability to assess companies corporate governance initiatives within the region, and encourage further international interest in investment.

It is hoped this analysis will assist governments and regulatory bodies to write one code of corporate governance for the Nordic Region – coined here as Nordic Governance Practices to satisfy all stakeholders and assist to retain the present economic conditions and enhance competition and create economies of scale especially for those corporations listed on the various stock exchanges who presently have several different codes to address.

Keywords: *Corporate Governance, Nordic Governance Practices Code.*

1. INTRODUCTION

It is well known that the Nordic regions made up of Norway, Sweden, Iceland, Denmark and Finland have issued corporate governance codes that differ from the codes issued by countries such as the Combined Code (2003) in the United Kingdom and Sarbanes Oxley Act (2002) in the United States, and even the international Organisation of the OECD (2004). The Nordic regions have each issued a code with the usual "comply or explain" for listed corporations on their stock exchanges, but is it really necessary for each country to issue their own code, when possibly a combined governance initiative would be more efficient.

It is acknowledged that the Nordic countries due to history and culture have a different focus on their governance needs. For example the fine and penalties and litigation aspects of the Sarbanes Oxley Act (2002) is not at all applicable in the Nordic region. In deed a comparison of other governance regimes from Asia and Europe will reveal a move away from accountability and disclosure, with more of a focus upon annual general meetings and committees. But can we have a one-size-fits-all Nordic Governance that would satisfy the regulatory needs of the various countries within the Nordic region?

This study addresses those inferences and focuses on an examination of the current individual corporate governance codes, in an attempt to create one *Nordic Governance Practices Code*. An understanding of the differences between the countries, and then on an international scale is, arguably, a critical precursor to the identification of those Nordic specific governance mechanisms in need of a clearer delineation and prescription.

The review will be of the Swedish Code of Corporate Governance (SE 2005), the Finland Corporate Governance Recommendation for Listed Companies (FIN 2003), Denmarks Corporate Governance Recommendations (DEN 2005), Icelands Guidelines on Corporate Governance (ICE 2004) and The Norwegian Code of Practice for Corporate Governance (NOR 2006). It is hoped with such an array of corporate governance codes, that some similarities will emerge, and best practice recommendations can be made for *Nordic Governance Practices Code* (NGPC).

2. LITERATURE REVIEW

Anglo-American corporate governance is almost completely focused on the means of enhancing and protecting shareholders' value (Siebens, 2002), derived from an increase in transactions within a framework in which owner-managers are replaced by salaried managers (Carlos & Nicholas 1988). Classical economists such as Smith (1776) and corporate observers such as Berle and Means (1932) perceived the dangers inherent in the separation of ownership (*principal*) and control (*agent*) regarding managers' actions. Drawing upon their analysis of the behaviour of US corporations in the World War 1 period following the trust movement engineered by the *robber-barons*, Berle and Means (1932) realised the growing power of the organisation, and the inevitable separation of power between executive management and their diverse range of shareholders – a theme pursued in the modern setting by Jenson and Meckling (1976) in their discussion of the concept of the *agency costs* of monitoring the behaviour of potentially errant *opportunistic* managers (Clarke, Dean and Oliver 2003) not acting in the best interests of their owner principles. However, the Nordic companies differ to that of the widely owned Anglo-American models of business in that most of them have concentrated ownership (Grünberg and Hägg 2007).

Governance steersmanship then, is necessary for corporate entities, nation states, associations, clubs, and societies to function legitimately and efficiently for the benefit of those for whose wellbeing they are argued to have been created. Management is concerned with organising, planning, controlling, and leading organisations with limited resources to achieve goals (Robbins, Bergman, Stagg and Coulter 2000), but governance also involves the limitation of powers to control and direct, and regulate organisations (Tricker 1984).

The interest in corporate governance for corporations seems to have peeked over the last twenty years (Oman 2001, Lin 2001, Goswani 2001, Malherbe and Segal 2001, Arun and Turner 2004). Large corporations appear to have recognised the wisdom of complying with the governance regimes currently in fashion. "The logic is simple: poor corporate governance is viewed as risky, whereas creditors and investors view good governance as a sign of strength in a company" (Lee, 2001 p.24). Following this, "a good governance structure is then one that selects the most able managers and makes them accountable to investors" (Tirole, 2001 p.2). Table One indicates the historical development of important governance regimes.

TABLE ONE : TIMELINE FOR GOVERNANCE PRACTICES

Year	Governance Regime
1999	OECD Principles of Corporate Governance
2002	Sarbanes Oxley Act 2002 (US)
2003	The Finland Corporate Governance Recommendation for Listed Companies (FIN 2003)
2003	Combined Code on Corporate Governance (UK)
2003	Australian Stock Exchange Good Corporate Governance and Best Practice
2004	Hong Kong Code on Corporate Governance Practices
2004	Corporate Governance in New Zealand Principles and Guidelines (NZ)
2004	OECD Principles of Corporate Governance *Revised*
2004	Iceland Guidelines on Corporate Governance (ICE 2004)
2005	Denmark Corporate Governance Recommendations (DEN 2005),
2005	Swedish Code of Corporate Governance (SE 2005)
2006	The Norwegian Code of Practice for Corporate Governance (NOR 2006).
2007	ASX Corporate Governance Principles and Recommendations *Revised*

In particular this paper reviews the Nordic region in terms of its corporate governance initiatives. The region is significant in terms of the high turnover of shares on the various exchanges, and the attraction of the various stock exchanges for foreign investors. According to the OMX which runs the Vilnius, Riga,

Tallinn, Copenhagen, Helsinki and Stockholm Stock Exchanges, turnover of stock amongst the various stock exchanges is increasing over time (OMX Exchange Statistics 2005). Trades per day in 2005 reached 84,357, with average daily share turnover amounting to EUR 2,993 million, with a turnover rate of 115 percent, with the number of companies listed increasing to 679 (OMX 2005).

In particular, the Stockholm Stock Exchange recorded turnover of EUR 1,603 million per day, with a turnover rate of 124 percent, the Helsinki Stock Exchange had a daily average of EUR 6.1 million, and Copenhagen Stock Exchange reached a high of EUR 125,8 Billion for 2005 (OMX Exchange Statistics, 2005). These statistics show the emerging Nordic markets and the attraction they present to foreign investors.

2.1 The Finland Corporate Governance Recommendation for Listed Companies (FIN 2003)

This was written by the Central Chamber of Commerce of Finland and the Confederation of Finnish Industry and Employees. It was written with the knowledge that shares of listed Finnish companies are widely held by international investors, (particularly for the large corporations), and thus the "describe and report" mechanisms are used and in particular the "comply or explain" principle. It applies to all large listed corporations on the Helsinki Stock Exchange. It is written particularly for the Shareholder/Investor, to "clearly define procedures consistent with international practices…facilitating factors for their reasoned investment decisions" (page 2). It applies to all large listed companies from 2004 onwards.

2.2 Iceland Guidelines on Corporate Governance (ICE 2004)

This code became effective in 2005, and applies to all listed corporations on the Iceland Stock Exchange. Written by the Iceland Chamber of Commerce and the Confederation of Icelandic Employers, it was written to "assist enterprises in conducting relations between shareholders, boards of directors and managers" (p 2). It is specifically for listed limited liability companies.

2.3 Denmark Corporate Governance Recommendations (DEN 2005)

This code is again under the "comply or explain" paradigm, and was issued in 2005 to apply after 1st January 2006. It defines good corporate governance as an "appropriate framework which encourages the shareholders to enter into a dialogue with the management of the company and each other"(p.5). Written by the Copenhagen Stock Exchange Committee on Corporate Governance, it applies to Danish listed companies as part of their annual reporting requirements.

2.4 Swedish Code of Corporate Governance (SE 2005)

Based on the Swedish Companies Act (1975), it is largely self regulated, and was written due to the large portion of Swedish people owning shares in companies (SE 2005). It is aimed at listed companies, particular the large listed companies (A-List), under the "comply or explain" principles. It encourages companies to comply with the code in a cost-effective manner, and to encourage implementation of systems and procedures for governance mechanisms. During the first year of the code the Annual Report of the Swedish Corporate Governance Board (2006) found that 153 companies or 60% discussed governance on their websites and 102 stated if they intended to apply the code or not. Of the 76 companies obliged to apply the code due to their size, only 25 did not provide information. 239 companies or 95% had information on the composition of the board on their websites, showing a slow but steady increase in the communication of governance information.

2.5 The Norwegian Code of Practice for Corporate Governance (NOR 2006)

Initially issued in 2005, it has been reviewed and reissued in November 2006 for 2007 application. Issued by the Norwegian Corporate Governance Board, the objective is to "regulate the division of roles between shareholders, the board of directors, and executive management more comprehensively than is required by legislation" (p.6). As the listed companies manage a large part of the economies asset, and create much of its wealth (NOR 2006), the code targets companies who are listed on the Norwegian Stock Exchange, but also state the code may assist unlisted companies where appropriate.

The importance of corporate governance to all businesses is thus not denied, but the amount of standards, legislation and best practice recommendations needs to be reviewed to create a consistent and if possible uniform set of regimes that can be applied across cultures, across boarders and across

governments to create a international and global set of best practice recommendations. Based on the underlying literature, the research question is : *Can a review of present individual Nordic governance guidelines, produce one set of future Nordic Governance Practices Code?*

3. METHOD OF ENQUIRY

Archival data was collected from publicly available sources, such as organisations web-sites and reports of the relevant Stock Exchanges. The information was collated and compared on order to find both comparisons and differences. Whilst it is noted that recommendations made can be applied to different organizations, it is the object of this analysis to find if any, best practices can be made that will apply to the majority of entities in the majority of stock exchanges or international organizations.

4. DATA ANALYSIS

TABLE TWO: COMPARISON OF PRINCIPLE CORPORATE GOVERNANCE MECHANISMS

Swedish CG (2005)	Denmark CG (2005)	Norway CG (2006)	Iceland CG (2005)	Finland CG (2003)
Shareholders Meeting	Shareholders	CG Reporting	Board of Directors	General Meetings
Board Appointment	Stakeholders	Business	Audit committee	Supervisory Board
Board of Directors	Transparency	Equity and Dividends	Remuneration Committee	Board
Company Management	Supervisory Board x 2	Shareholders		Board Committees
Information	Remuneration	Shares		Managing Director
	Risk Management	General Meetings		Other Management
	Audit	Nomination Committee		Compensation
		Directors		Risk Management
		Directors Work		Administration
		Risk Management		Audit
		Remuneration x 2		Communication
		Communication		
		Take-overs		
		Audit		

By re-organising the information in Table two, Table three enables a comparison of the current popular regimes. Those organisations with similar principles are acknowledged with a tick.

TABLE THREE . COMPARISON OF PRINCIPLES

Principle	Swedish CG (2005)	Denmark CG (2005)	Norway CG (2006)	Iceland CG (2005)	Finland CG (2003)
Shareholders and AGMs	✓	✓	✓✓	✗	✓
Boards and Committees	✓	✓✓	✓	✗	✓
Directors	✓	✗	✓✓	✓	✓
Remuneration	✓	✓	✓✓	✓	✓
Committees	✓	✗	✓	✓	✓

(Audit, Remun)					
Information / Communication	✓	✓	✓	✗	✓✓
Risk Management	✗	✓	✓	✗	✓
Audit	✗	✓	✓	✓	✓
Business Management	✗	✗	✓	✗	✓✓
Stakeholders	✗	✓	✗	✗	✗
Shares Dividend Takeovers	✗	✗	✓	✗	✗

By then counting the number of organisations that acknowledge similar regimes Table four indicates the number of times a regime will be acknowledged by organisations, or stock exchanges.

TABLE FOUR : POPULAR PRINCIPLES INDICATED BY DEMAND

Principles	*Yes*	*No*	*Total*
Shareholders and AGMs	4	1	5
Board Appointment Supervisory Nomination Committee	4	1	5
Directors	4	1	5
Remuneration	5	0	5
Committees (Audit, Remuneration)	4	1	5
Information / Communication	4	1	5
Risk Management	3	2	5
Audit	4	1	5
Business Management	2	3	5
Stakeholders	1	4	5
Shares, Dividends, Takeovers	1	4	5

According to Table four then, the common Principles for Nordic Governance are indicated to be:
- Shareholders and the Importance of AGMs
- Board Appointment via Committees
- Directors and their duties
- Remuneration of Directors and Management
- Sub-Committees eg Audit and Compensation
- Communication of Information
- Risk Management
- Audit of Accounting Information

Those not significant
- Business Management
- Stakeholders
- Shares, Dividends and Takeovers

5. COMMENT ON THE FINDINGS

The answer then to the question of "*can a review of present individual Nordic governance guidelines, produce one set of future Nordic Governance Practices Code*" would be a positive yes, the following guidelines have been indicated to be of importance to a Nordic Governance Practices Code.

5.1 Shareholders and the Importance of AGMs

Corporate Boards are legally bound to represent the vested interests of shareholders (Stanwick and Stanwick 2005). And, as shareholders and managers are separated, managers are generally having to prove their performance to shareholders. According to Cornelius (2005) good corporate governance is a stewardship responsibility of directors for shareholders. In a large business setting with recent corporate collapses evidencing "power tends to corrupt, and absolute power corrupts absolutely" (Lord Action 1887 cited in Payne 2006, p.69), the protection of shareholders right and equitable treatment is an important governance mechanism.

5.2 Directors and their duties

The "personal separation of owners and managers, and the legal separation of ownership rights and decision rights" (Wieland 2005 p.79) has traditionally led to, or the belief in the prospect of, conflict in the large business setting. In that respect it is interesting to note the observation of Stanwick and Stanwick (2005) that the Board of directors is directly linked to the long term survival of the firm. Board responsibilities should be delinated and clearly set out and agreed to by both shareholders and the board, the use of the now popular Nomination Committee where a combination of directors, shareholders and independents elects the board is yet another mechanism to create a board that adds value to the corporations for and on behalf of shareholders and other stakeholders alike.

5.3 Remuneration of Directors and Management

Remuneration of management has become a corporate governance issue in terms of trying to limit the effects of agency theory and bring together the interests of shareholders and executives. Some studies have shown that "a direct positive relationship between a strong Board of Directors and the financial performance of the firm" (Stanwick and Stanwick 2005, p. 42) will have a positive effect on the relationship with shareholders, and that by aligning managers decisions to shareholders interests via specific compensation schemes can improve company performance (Schiell and Andre 2003). Executive remuneration in public companies is a significant corporate governance issue.

5.4 Communication of Information

The use of financial information is a strategic tool for making decisions, evaluating entities outcomes and for funding purposes. In the context of large public corporations "information asymmetry may never be more pronounced than in the imbalance between managers and Board members" (Schiell and Andre 2003, p.1), and the efficient use of resources through accurate and timely accounting information can create a competitive advantage (Wieland 2005). Daily, Dalton and Canella (2003, p.81) described governance specifically in relation to financial information as "a determination of the broad uses to which organisational resources will be deployed", showing specifically that the use of financial information for all businesses is a governance issue.

5.5 Risk Management

Although according to Thomsen (2005) "there is no significant relationship between values and profitability", risk management is a mechanism in which business is able to plan for the future by constantly reviewing the relevant risk factors and making appropriate changes to ensure management is aware of potential risks and can lower the chances of them posing a significant problem impacting profitability. Risk management is thus an important corporate governance issue no less for SMEs than for other business structures.

5.6 Audit of Accounting Information

Auditing financial information serves as a way in which the data in financial statements are accorded the qualitative characteristics of relevance, reliability, comparability and understandability, reasonably taken to disclose the financial consequences of whatever and however directors and managers have acted on behalf of the shareholders, whether they are acting in a fraudulent or otherwise improper manner. As a mechanism of *accountability* it is a control device for shareholders and the community at large (Vinten and Lee 1993). The use of auditors to verify accounting information is one way in which shareholders independently can assess the way in which the directors are performing on their behalf. The use of an independent audit is a mechanism employed by large business even though Boards are free of fraud and

acting in an aboveboard manner in order to show stakeholders that they have in place high-quality financial reporting processes (Cohen, Krishnamoorthy and Wright 2005). Many companies now have in place a separate audit committee to assist in the determination of the independence of auditors. The independent audit process is thus a governance mechanism to protect managers and shareholder alike.

5.7 Sub-Committees eg Audit and Compensation/ Board Appointment via Committees
The importance of committees appears to be a very important issue for corporate governance in the Nordic region. Committees themselves are not new concepts in fact other popular governance regimes such as the Australian Securities Exchange (2007), the Combined Code of the UK (2003) and the Hong Kong Stock Exchange (2004) all acknowledge the recommendation of a nomination committee and of sub-committees such as remuneration/compensation committees and audit committees. Committees them appear a popular Nordic Governance Practice.

5.7 Other Less Demand Governance Practices
Business Management was only indicated by Norway and Finland, and whist the idea is a noble one, for efficiceny it could well be contained in the directors duties section of the code. As for Stakeholders, (Denmark only) it appears to be a default mechanism, that is if you comply with the former regimes, then by default you will be exhibiting ethical performance, taking risk management measures and thus by default, nurturing your stakeholders. The final mechanism of Shares, Dividends and Takeovers (Norway only) would seem a reiteration of making sure the business is run efficiently, effectively and profitably – thus shares should increase in value and dividends paid. Takeovers it would seem are a rarity and would be covered in companies articles of association as no real acknowledgement is required.

6. CONCLUSION

In a report issued by the World Bank – *Corporate Governance: A Framework for Implementation* (Iskander and Chamlou, 2000) it made the point that there is no one-size-fits-all blueprint for corporate governance. However, there is opportunity in a region such as the Nordic one who share similar historical and cultural backgrounds in terms of the business economy. The road towards harmonization appears to be a journey that the various stock exchanges are willing to take, and it is hoped this analysis will assist in the future writing of one Nordic Governance Practices Code. This code would include such initiatives as Shareholders and the Importance of AGMs, Board Appointment via Committees, Directors and their duties, Remuneration of Directors and Management, Sub-Committees eg Audit and Compensation, Communication of Information, Risk Management and Audit of Accounting Information.

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AUTHOR PROFILE:

Dr. Lisa Barnes is a Lecturer in Accounting at the School of Business and Management, University of Newcastle, Australia. She is currently also working with the NSW State Government as advisor to the state Minister for small Business.

THE NEW REGIONS AND GOVERNANCE IN THE CZECH AND SLOVAK REPUBLICS

Phillip J. Bryson, Brigham Young University, Provo, Utah, USA

ABSTRACT:

Several years after the transition to market democracy, the Czech and Slovak Republics pursued "reforms of public administration," which led to the establishment of economic/political regions. This was to effect devolution of power after the excessive centralization of the previous era. The new regions were assigned some typical public service provision functions, but also some of the functions that had formerly been done by the central government through districts established throughout the country. This paper reviews the principles of regionalism and the impact of regional development on the principals of local self-government (or local autonomy) and subsidiarity. The principle of "state administration" is also reviewed, which amounts to the performance of local public service functions by the central government. This practice is generally justified by the many small municipalities in these republics which lack the manpower and resources to manage their own affairs independently.

Keywords: economic/political regions, public administration reform, local autonomy, state administration

1.   INTRODUCTION

Because of the potential and actual legacies of the previous central planning regime, a discussion of the devolution of power in the transition period of these postcommunist economies must begin with the aftermath of the "velvet revolution" of 1989. Before the transition to market democracy began, central planning decisions regarding the delivery of local public services were the exclusive domain of the central government. Regional and local governments that had remained in place formally did not function independently in communism. Local finance was simply not the product of local decision-making. Funding for education, public utilities, police and fire protection were provided by the centre and financed by indirect enterprise taxes.

After 1989, local governments regained responsibility for the delivery of some, though not all, local public services. Early on, municipalities were permitted to seek anew the independence and autonomy lost in the previous era. Those which had earlier been forced into amalgamations were able to free themselves from such arrangements. As of 1990 it was permitted to form new local governments, which soon numbered 2,781 in Slovakia and 6,234 in the Czech region. Initially, neither region established a legitimate, intermediate level of government between the center and the municipalities, although districts did continue to provide "state administration." The new regions, as we shall see below, were to await the advent of the "reforms of public administration."

The extremely large number of municipalities in these countries, originally a heritage of a strong tradition of independence and enhanced by returning to that tradition after being liberated from communist organization, presents serious problems for Czech and Slovak political and economic organization. It is apparent that many of the small cities and towns do not have the manpower or the resources for independent self-government.

The constitution of postcommunist Czechoslovakia had granted "independence" to municipalities, but assigned them a limited set of public services and activities, retaining many functions traditionally assigned to local governments for the central government. These functions were "state administration," *not* a part of "self-government (*samospravy*). So each mayor faced a truncated set of tasks, knowing that regional offices down the street undertook many of the functions of local self-government without consulting the wishes of the local mayor or citizenry. This was justified on the basis of the fact that many municipalities were very small and lacking in personnel and skills to implement policy. And, of course, the arrangement was sanctioned by the constitution.

2. "STATE ADMINISTRATION" VS. SELF-GOVERNMENT IN THE SLOVAK AND CZECH REPUBLICS

2.1 Reforms of Public Administration

Before the Czech and Slovak Republics (unified partners of transition until the "velvet divorce" of 1993) became separate states, then members of the European Union in 2004, they were persuaded to implement "reforms of public administration." These reforms were to assure progress in the development of viable market economies and democratic political systems to prepare them for active membership in the EU. Those reforms, however, largely missed the opportunity to introduce significant change into the system of state administration. They did, of course, introduce the new intermediate level of governance, the region (*kraj*). The old districts, which had represented the center at the municipal level in performing "state administration" were eliminated, some of their tasks going to the region and some of them being delegated to the larger municipal governments. Now the larger cities could implement all of the tasks of municipalities, but they perform those tasks of "state administration" only as agents of the central government. They do not participate in decision-making regarding the funding or implementation of that set of public services. The old system was durable enough so that even in the reforms of public administration the anomaly of state administration continued.

Embarking on the transition to democracy and market economics, these new republics encountered some difficult choices to mitigate municipal fragmentation. One of the more expedient options, but something both republics found abhorrent, would have been a renewal of forced amalgamations of local governments. Having viewed the amalgamations of the 1960s and 1970s as arbitrary and not permissive of genuine representative government, this was of no appeal to policymakers. The second option was voluntary amalgamation, which would avoid social conflict and conform to local preferences. But this approach could be costly and might find few takers among the many cities and towns which had just celebrated their liberation from such amalgamations. Costly financial incentives might have encouraged towns and villages to join associations or special districts to deliver public services with greater scale economies. Today, this option seems to hold the greatest promise for many observers. Alliances of cities and towns with a specialization and division of public service tasks seems to make a lot of sense. A third option would call for an asymmetric assignment of resources and responsibilities to local governments. Most of the responsibilities currently carried by small communities would be transferred either to "designated, statutory" towns, or to the new self-governing regions.

These options seem to have evoked two basic responses in the Czech Republic. Some tasks of state administration have been reassigned from the now defunct districts to "towns with expanded functions" while others have been shifted to the newly created regions. In the first half of this decade, Czech authorities undertook the administrative reorganization and reform of public administration mentioned above, which included the establishment of eleven new regional administrative units, the *Kraje*. The new regions have assumed some of the administrative functions of the center and some of those of the municipalities. Interestingly and importantly, however, the municipalities were not vertically subordinated to the regions and still report directly to the centre. Nor have the regions received a mandate to assist those small municipalities lacking the resources to manage their administrative functions independently. There is no mandate to assist in their training and no mandate to provide any administrative assistance in their day-to-day functioning.

But there has been a tendency for the smaller municipalities to begin to look for alliances with neighbouring towns or villages to specialize and divide the labour of social, educational and other public service functions. In the case of the Slovak Republic, many small municipalities are self-governing, Nižňanský emphasises that this is the result of the establishment of regional self-governing bodies in Slovakia. But the establishment of regions to assist in the provision of municipal services is not all that Nižňanský sees as necessary for local self-government. Where resource- and personnel-poor municipalities are unable to provide public services independently, they may be quite feasible through a diversity of "voluntary partnerships, common councils, companies, and agencies operating on a basis of contractual agreements." Sometimes it will be possible for larger municipalities to provide contractual services to smaller municipalities in their proximity.

3. REGIONAL GOVERNMENTS AND STATE ADMINISTRATION

The reforms of public administration in the twin republics were completed to the satisfaction of the EU by 2004, for long-standing accession applications were accepted and accession granted in May, 2004. Having achieved the objective of membership, there is no longer any substantial leverage the EU would be inclined to bring to bear to carry those reforms further. But the principle of state administration has survived the accession process, so the EU had accepted the traditional wisdom that small municipalities require regional governments to help perform state administration and the central governments' continued role in what local sovereignty or self-government (*samospravy*) would do alone under genuine devolution of power.

The objectives and the fundamental blueprint for Slovakia's reform of public administration were introduced in an official paper of the Government Office in 2000. The areas of governance that would remain under local state administration beyond the reforms were also presented. The central government would continue to provide for most of the significant public services, including local police, criminal investigation, the environmental office, the land and forest office, the cadastral office, the social office and the tax office, the state veterinary office, and the state hygienist office. If these functions were removed from the job description of provincial or state governors in established democracies it would be shocking. Yet Slovak municipalities and regions continue to have neither responsibility nor managerial prerogatives for these activities of governance. So state administration has retained its lock on the Slovak policy mentality, even in a reform that did begin to make some important additions to the activities reflecting local autonomy.

In this same process, the transfer of some of the responsibilities of state administration from district offices to those of particular, designated cities and also to those of regional governments, Slovak reformers hoped that state administration would be "modernized and reformed," but this was undertaken with the clear intent to render state administration sufficiently serviceable to be retained indefinitely.

4. TERRITORIAL SELF-GOVERNING UNITS AND STATE ADMINISTRATION: ORIGINS AND TENDENCIES OF RETAINED CENTRAL POWERS

The significance of state administration is that the Czech and Slovak central governments have reserved for the central government many of the powers traditionally belonging to regional and municipal governments. So the regions, like the cities and towns, have truncated powers and must passively watch as offices of the central government perform functions that should be performed by regional or local officers. It does not improve the situation substantially when the central government delegates some of these powers to the regions. That simply means that the regions will be provided funds to perform the tasks the central government has chosen in the manner the central government prefers. They become no more than agents to perform central policy without having any input into the decision-making processes involved in the design or implementation of policy. Let us now consider the foundation documents that have established the perimeters of regional powers.

The democratic constitution of Czechoslovakia and other critical legislation addressing the subject of exercising power in the contemporary Czech and Slovak Republics, were drafted by national parliamentarians, agents of the central government. These foundation documents emerged historically from the shadows of the previous, highly centralized regime. In Chapter one of the Czech Constitution (1992), under Article 2 of "Fundamental Provisions," it is declared that (1) "the people are the source of all power in the State; they exercise it through bodies of legislative, executive and judiciary power." According to paragraph 3 of Article 2, "state power shall serve all citizens and may be applied only in cases, within limits and by methods defined by law."

In Article 8, "self-government of territorial self-governing units" is guaranteed. Article 99 declares that the Czech Republic "shall be divided into communities, which shall be fundamental self-governing territorial divisions, and regions, which shall be superior self-governing territorial divisions." Article 100 guarantees "citizens inhabiting a particular area,… have the right of self-government." Article 101 promises that a "community shall be independently administered by a community assembly," that a "superior self-governing territorial division shall be independently administered by an assembly of representatives," that self-governing, subnational units "are public-law corporations which may have their own property and

which operate according to their own budget," and that "the State may intervene in the activities of self-governing territorial divisions only if such intervention is required by protection of the law and only in a manner defined by law." Observation of what subnational governments may do does not necessarily reveal the very important substance of what they may not do. The "independent administration" spoken of in these passages pertains only to those particular functions allowed by the constitution and laws.

5. THE SLOVAK REPUBLIC: STATE ADMINISTRATION STRENGTHENED

Slovakia's pre-reform situation was described by Viktor Nižňanský (2006), the government's specialist on fiscal decentralization. It was that the central government directly and indirectly provided roughly 90 percent of all public services through the district and regional offices of state administration. The relevant funding decisions were made at the central level; district and regional offices had no notable decisionmaking power or even influence on the amounts or destinations of centrally-provided funding.

The authority and capacity of the regional and district offices were expanded significantly over time. State administrative tasks were carried out in thirty-two areas of activity by the end of 1998. They managed budgetary and semi-budgetary matters in about 7,500 organizations and facilities in education, about 370 in social care, about 95 in health care (95) and about 39 in cultural affairs. These offices employed in excess of 135,000 employees, and the administration and manpower requirements of regional and district offices employed another 20,000.

The state administrative functions exercised by regional and district offices include: state defense; general internal administration; trade licenses and consumer protection; civil protection; environmental management; fire protection; finances, prices and management of state property; regional development; agriculture, forestry and hunting; state veterinary care; public transportation and road management; public and concession procurement; health care; education; social affairs; culture; regulation; and international operation (Csanda, 2000, p. 307).

The state's recommendation for reform of public administration in Slovakia has been to pursue fiscal decentralization while anticipating a marked decrease in the role for state institutions in public affairs and a transfer of most public service responsibilities to regional self-governing bodies. It was not as confident about transferring such responsibilities to the municipal level. The state's role in public administration should not go beyond supporting, controlling, and organizing tasks with respect to external independence (foreign policy, national defense and civil protection); maintaining law and order (e.g., selected areas of security, education, trade, water supply, medical and hygienic supervision); protecting freedom and civil rights; social legislation; and national economic policy. These tasks should be performed by the central government and regional offices. All remaining tasks should be the responsibility of local and regional self-governing bodies. This ideal, especially given the altered political situation in the country, appears somewhat utopian at this point.

6. THE CZECH REPUBLIC: STATE ADMINISTRATION STRENGTHENED

The anticipated solution to residual centralization was the adoption of reforms of public administration. These reforms added a regional level of governance in both countries and went further than that in Slovakia. The Czechs, more concerned with the management of national deficits and debt, did not pause to reconsider the fine points of intergovernmental finance that the Slovaks found important. As we saw, the Slovak Republic empowered municipalities to set their own, local tax rates and user fees and to introduce new taxes and fees.

Municipalities were also granted greater discretion over their use of the property tax. New regulations transferred responsibility for the establishment of tax rates for buildings, land, apartments and non-residential premises to local self-government bodies. These changes were often overlooked by the media, which were intrigued with slovakia's adoption of the 19% single tax rate for the VAT as well as for the corporate and personal income tax.

But in both cases, the attempt has been to rationalize and modernize state administration rather than to move toward its elimination. In the Czech Republic, at the beginning of 2003, 205 municipalities assumed the performance of delegated functions of state administration when the district offices were eliminated. They were empowered by new laws of public administration reform to do so; other tasks formerly assigned to district offices were transferred to the new regional governments. Municipalities with delegated functions received transfers in the amount of 4.337 billion CZK to perform 12,984 functions.

V. CONCLUSIONS

Bryson and Cornia (2001) suggested that assuring the competent administration of small units, given their obvious resource and personnel limitations, would require either the administrative union of small groups of villages, the establishment of an intermediate level of administration to assist the villages in interacting with the centre, or both. The recommendation to establish territorial regions to assist the municipalities with their administrative challenges has already been adopted, as has been explained. The municipalities were not vertically subordinated to the regions by the reforms that created the latter, and the municipalities still report directly to the centre. Nor have the regions received a mandate to assist small municipalities lacking the resources to manage their administrative functions independently.

Professor Phillip J. Bryson received his PhD from The Ohio State University in 1967. He is currently the Douglas and Effie Driggs Professor of Economics in the Marriott School at Brigham Young University.

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IDENTIFYING KENYA'S DIRECT COMPETITORS IN MAJOR APPAREL EXPORTS TO THE US

Michelle W. L. Fong, Victoria University, Australia

ABSTRACT

This paper uses regression models to identify and determine Kenya's direct competitors from a group of exporters (Bangladesh, China, Germany, Hong Kong, India, Indonesia, Italy, Kenya, Mexico, Pakistan, Romania, South Korea, Thailand, and Vietnam) supplying apparels to the US market. In addition, this paper determines the competitiveness of its business environment against the identified direct competitors.

Keywords: *AGOA; Apparel exports; US market; Competitors; Competitiveness*

1. INTRODUCTION

The US textile and apparel market has been one of traditional sources of livelihood for Kenya. Under the African Growth and Opportunity Act (AGOA), which was passed by the US Congress for sub-Saharan Africa (SSA) in 2000, Kenya has been able to enjoy duty- and quota-free exports to the US (AGOA, 2006). A previous study undertaken by Fong and Ndurumo (2007) shown that this AGOA membership helped to boost Kenya's volume of apparel exports to the US. Prior to being a member of AGOA, Kenya's textile and apparel industry had been in decline in the 1990s. This decline was attributed to a surge in the influx of second hand clothes (known as 'mitumba'), and contraband textiles into the country; cotton substitutes; and a difficult operating environment after the industry underwent liberalization reforms (Coughlin, 1991; The Nation, 2003; Roberts and Fagernäs, 2004; The EIU, 2004). The AGOA brought hope to the Kenyan government because the success in rejuvenating this industry would mean a positive impact on employment and poverty alleviation, and this could also reverberate across other industries or fields, such as farming, ginneries, textile and garment manufacturers, agro-chemical and other input suppliers, and logistics suppliers (Ikiara and Ndirangu, 2002). However, this preferential treatment will expired in 2015.

The AGOA has a special dispensation relating to apparel, known as the 'third country fabric provision', which allows Kenya to source fabric from any country to produce apparel for its duty-free exports to the US until 30th September 2012 (AGOA.info, 2006). Currently, apparel companies in Kenya tend to source their textile or fabric from non-AGOA beneficiary countries such as China, Pakistan, and India, which provide cheaper supplies. However, these companies will not be able to do so after the expiry of the third country fabric provision in 2012, when they have to source fabric made in the US or African countries if they want to retain their duty-free export access to the US. The rationale behind this provision was to encourage investment in the African textiles and apparel sector, in order to build or revive its vertically integrated apparel industry. The Kenyan government and its textile and apparel industry welcome this preferential treatment accorded by the AGOA as well as the ambit of flexibility given to its members in sourcing fabric. On the other hand, they are aware that the expiry of these preferences may catapult the industry into decline again if they are not globally competitive and have not established a strong market share in the US by 2012 or 2015. It is therefore imperative for Kenya to identify and determine its direct competitors in the US import market, as well as the competitiveness of its business environment against its global competitors.

2. TRADE THEORIES

Adam Smith's (1776) theory of absolute advantage, David Ricardo's (1967) theory of comparative advantage, and Heckscher-Ohlin theory (Ohlin, 1933) all advocate unrestricted free trade although they lack agreement in their recommendation for production and trading pattern. These theories argued against protectionist actions such as trade barriers and quotas on the ground that these mechanisms hurt economies, and are self-defeating and result in wasted resources. However, the new trade theory and Porter's (1990) theory of national competitive advantage have been interpreted as supporting limited and selective intervention for the development of export-oriented industries (Hill, 1997).
Kenya adopts an export-led growth strategy as a way to promote economic growth and to eliminate or reduce poverty. Although the AGOA provides an artificial leverage for boosting the production or exports in Kenya's apparel industry, this Act protects the industry from foreign competition to provide

a window of stability for positive learning and spillover effects to occur within the value-chain. It has been hoped that as efficiency improves and value-chain develops, economic growth will be stimulated to result in a much faster improvement in the alleviation of poverty (relative to specialization in the country's comparative advantage goods under free trade). While Kenya currently enjoys privileged access to the US market under the AGOA, the government should take this opportunity to grow its presence in the US market. At the same time, it is also crucial to identify its direct competitors in order to monitor their competitive behaviour as part of a preparation for open competition in the US market.

3. OBJECTIVE THIS PAPER

This paper uses regression models to identify and determine Kenya's direct competitors in the US import market, and determine the competitiveness of its business environment against its direct competitors.

4. DATA AND METHODOLOGY

Table 1 below shows Kenya's major apparel exports (in US$) to the US in 2005, based on data extracted from the Office of Textiles and Apparel (OTEXA).

TABLE 1: KENYA'S MAJOR APPAREL EXPORTS TO THE US (IN US$) IN 2005

Cotton Apparel:	
3-digit classification	Value of Export (US$)
1) 348 Women's/Girls' trousers/slacks/shorts	US$150,710,377
2) 347 Men's/Boys' trousers/breeches/shorts	US$ 36,485,373
3) 339 Women's/Girls' knit shirts/blouses	US$ 13,397,996
4) 338 Men's/Boys' knit shirt	US$ 8,311,270
Man-Made Fibre Apparel:	
3-digit classification	Value of Export (US$)
1) 647 Men's/Boys' trousers/breeches/shorts	US$ 16,064,870
2) 648 Women's/Girls' slacks/breeches/shorts	US$ 7,647,910
3) 639 Women's/Girls' knit shirts/blouses	US$ 7,331,367
4) 638 Men's/Boys' knit shirts	US$ 5,694,781
5) 635 Women's/Girls' coats	US$ 2,206,093
6) 640 Men's/Boys' not-knit shirts	US$ 1,940,246
Cotton or Man-Made Fibre Apparel:	
3-digit classification	Value of Export (US$)
1) 239 Baby garment/clothing accessories	US$ 5,862,467

Source: OTEXA

A multiple regression analysis of the logarithmic model is used to analyze time series data on cotton (338, 339, 347, and 348) and man-made fibre (635, 638, 639, 640, 647, and 648) apparel exported to the US by China, India, Indonesia, Kenya, Mexico, Pakistan, Vietnam, and SSA, between 1989 and 2005. The relevant logarithmic model is as follows:

$LN(Kenyaexpdoz) = \beta_0 + \beta_1 LN(Chinapx) + \beta_2 LN(Indiapx) + \beta_3 LN(Indonesiapx) + \beta_4 LN(Kenyapx) + \beta_5 LN(Mexicopx) + \beta_6 LN(Pakistanpx) + \beta_7 LN(Vietnampx) + \beta_8 LN(SSAquantity) + \varepsilon$

A multiple regression analysis of the logarithmic model is also used to analyze time series data on export category 239 'baby garment/clothing accessories' made of cotton or man-made fibre exported to the US by China, India, Indonesia, Kenya, Mexico, Pakistan, Vietnam, and the SSA, between 1989 and 2005. The relevant logarithmic model is as follows:

$LN(Kenyaexpkg) = \beta_0 + \beta_1 LN(Chinapx) + \beta_2 LN(Indiapx) + \beta_3 LN(Indonesiapx) + \beta_4 LN(Kenyapx) + \beta_5 LN(Mexicopx) + \beta_6 LN(Pakistanpx) + \beta_7 LN(Vietnampx) + \beta_8 LN(SSAquantity) + \varepsilon$

The definitions of the dependent and independent variables in the above models are as follows:
Dependent variables:

LN(Kenyaexpdoz) = Kenya's export quantity (units in dozen).
LN(Kenyaexpkg) = Kenya's export quantity (units in kilogram).

Independent variables:
LN(Chinapx) = China's export price per unit for the relevant category/categories.
LN(Indiapx) = India's export price per unit for the relevant category/categories.
LN(Indonesiapx) = Indonesia's export price per unit for the relevant category/categories.
LN(Kenyapx) = Kenya's export price per unit for the relevant category/categories.
LN(Mexicopx) = Mexico's export price per unit for the relevant category/categories.
LN(Pakistanpx) = Pakistan's export price per unit for the relevant category/categories.
LN(Vietnampx) = Vietnam's export price per unit for the relevant category/categories.
LN(SSAquantity) = The total quantity of the relevant category/categories exported to the US by the other SSA countries.

5. RESULTS AND DISCUSSION

5.1 Kenya's direct competitors in the US apparel market.
The regression results from the above two models are presented in Table 2.

Table 2 – Results from the logarithmic models

Apparel:	Cotton and Man-Made Fibre apparel (quantity in dozen)	Cotton or Man-Made Fibre apparel (quantity in kilogram)
3-digit classification:	**Cotton – 338, 339, 347, and 348.** **Man-Made Fibre – 635, 638, 639, 640, 647, and 648.**	**239 Baby garment/clothing accessories**
Dependent variable:	LN(Kenyaexpdoz)	LN(Kenyaexpkg)
Independent variables:	**Coefficients:**	**Coefficients:**
Constant	0.717	3.154*
LN(Chinapx)	-0.159	0.493
LN(Indiapx)	-0.548	0.056
LN(Indonesiapx)	0.324	-0.941
LN(Kenyapx)	-0.878**	-0.451
LN(Mexicopx)	0.813*	-0.573
LN(Pakistanpx)	0.620	1.019*
LN(Vietnampx)	0.040	0.331
LN(SSAquantity)	0.698***	0.677***
R Square	0.460	0.610
Durbin-Watson	1.907	2.184
Sample size (n)	97	73

Note: *** indicates significance at 1%; ** indicates significance at 5%; and * indicates significance at 10%.

The regression results in Table 2 show that a 1% change in Kenya's export price of cotton and man-made apparel (338, 339, 347, 348, 635, 638,639, 640, 647, and 648) is associated with an 8.78% decrease in Kenya's major export quantity of these categories to the US, at 1% level of significance. No country's export prices, except Mexico's, have a significant impact on Kenya's export quantity in these categories. A 1% change in Mexico's export price is likely to result in an 8.13% increase in Kenya's export quantity of cotton and man-made apparel to the US, at 5% level of significance, suggesting that Mexico may be a direct competitor of Kenya. Table 2 indicates that a 1% increase in export quantity of these categories from the other SSA countries to the US is likely to lead to a 6.98% increase in Kenya's export quantity, at 1% level of significance. This relationship warrants further investigation on whether Kenya and the other SSA countries export complementary apparel products under these classifications.

The regression results in Table 2 for 239 (baby garment/clothing accessories made of cotton or man-made) show that no country's export price of this item, except Pakistan's, has a significant impact on Kenya's export quantity. A 1% change in Pakistan's export price is likely to result in a 10.19% increase in Kenya's export quantity to the US in this category, at 10% level of significance, suggesting that Pakistan may be a direct competitor of Kenya. The same table indicates that a 1% increase in export quantity of this category from the other SSA countries to the US is likely to lead to a 6.77% increase in Kenya's export quantity, at 1% level of significance. This relationship also warrants further investigation on whether Kenya and the other SSA countries export complementary apparel products under this classification.

The two regression models suggest that among the different countries in this study, Mexico appears to be a direct competitor of Kenya in a number of cotton and man-made apparel export categories (338, 339, 347, 348, 635, 638,639, 640, 647, and 648). Pakistan, on the other hand, appears to be a direct competitor of Kenya in the baby garment/clothing accessories made of cotton or man-made fibre (239).

5.2 Analyses: Competitiveness of Kenya against Mexico and Pakistan

Figure1: Comparison of selective business processes and costs in Mexico, Pakistan, and Kenya in
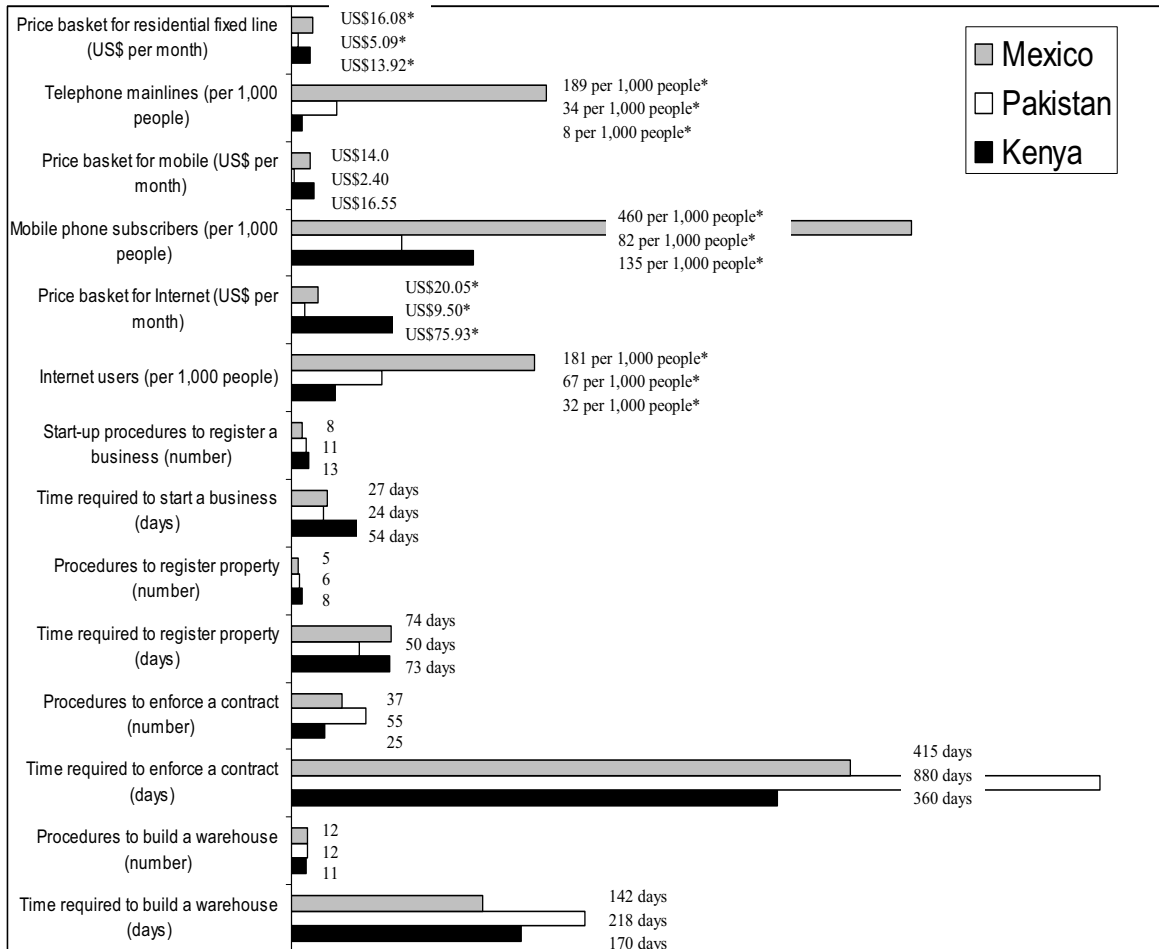
Source: The World Bank Group (data are from 2006, except those marked with an asterisk are from 2005).

In this section, using information available from The World Bank Group (2008), we will investigate the competitiveness of Kenya's business environment against these two countries' by comparing the number of days and procedures involved in some of the business processes, and some of the costs incurred by businesses. Data are from 2006 unless otherwise specified.

Based on Figure 1, Kenya involved fewer procedures and shorter time periods to enforce a contract than Mexico and Pakistan. However, Pakistan ranked ahead of Kenya in that it took shorter time periods to register property and start a business. These statistics have implications for foreign investors on the relative ease of setting up or running a business in these countries. Kenya has the most expensive communication costs (Internet, mobile phone, and telephone) and Pakistan the lowest. Mexico has the highest adoption rates in these information and communications technologies, whereas Kenya has the lowest adoption rates in Internet and telephone due to high communication costs within this country. Support from the Kenyan government for developing the country's infrastructure is necessary to ensure that its industries' competitiveness is not undermined by high utility costs. Support is also needed for the apparel industry to develop strong backward linkages with domestic suppliers of inputs. In this area, major international players such as China and India have been relying on strong backward linkages with domestic suppliers of inputs for their successful exports, and Kenya has yet to develop this.

4. CONCLUSION

The regression models used in this study suggest that Mexico was a direct competitor of Kenya in the cotton and man-made apparel exports categories, and Pakistan was a direct competitor in the baby garment/clothing accessories made of cotton or man-made fibre. In terms of competitiveness in selected business processes, Kenya was ahead of these two competitors in the number of procedures and time periods involved in enforcing a contract. However, it had the most expensive communication costs for Internet, mobile phone, and telephone usage. Despite identifying Mexico and Pakistan as the direct competitors of Kenya, Kenya may have to assess its export performance and competitiveness against major players such as China and India in the long run.

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AUTHOR PROFILE:

Dr. Michelle W.L. Fong was awarded her Ph.D. by Victoria University, Australia in 1998. She is now a Senior Lecturer in the School of Applied Economics at this university.

THE ANALYSIS OF THE LIFE INSURANCE COMPANIES AND THEIR POLICIES IN THE ROMANIAN PENSION SECTOR

Marius D. Gavriletea, Babes Bolyai University, Cluj – Napoca, ROMANIA

ABSTRACT

The state pension system represent for many developed countries just a history. In these countries the pension problem – as a social one – is handled and managed by specialized companies. In Central and Eastern Europe, after the transition process to a capitalist economy, each country was confronted to pension problem: the states cannot support anymore the financial effort of pensions. So these countries introduced the private pensions, having examples from the most developed countries. Finally, after 3-4 years of continuously analysis and debating, Romanian Govern promulgated the necessary law for private pensions. Both private pension pillars started at the end of 2007. In this paper we analyze in Romania the starting of this process, the expectation of the administrators and we present the most important actors on the pension market.

Keywords: life insurance, pillar, pension, funds, participants

1. INTRODUCTION:

Every company is looking for the best people to hire them. Once the people are found, they must be kept, in order to guarantee the success of the company, these are realized by a complex and proactive human resources politic. The difference is made by employees' motivation – that will generate a greater productivity and a higher level of loyalty. In order to be appreciated by an employee, these measures must have an important impact on personal needs, considered of maximum importance.

Now in Romania, a new element that completes the benefits that may be offered to the employees – private pension.

2. PENSION SYSTEM IN ROMANIA

If we use a study made by Mercer – o consulting company in human resources field, between 2005 and 2006 in Romania, the number of the companies that offer private pensions as a part of salary package was around 9% (less than of 1% existed in 2003-2004)[1].

Judging after the number of pension economy products for the employees, Romania is ranked the 7th place, last places being taken by Serbia (3%) and Croatia where only 2% of the companies are offering pension plans in salary packages.

The pension volume accorded as benefits by the companies grew in 9 countries from the 10th countries analyzed. Only Slovenia recorded a decrease. The companies of Czech Republic are the ones that mostly appreciate the importance of pensions as benefits for employees, almost 58% of them offering these types of benefits 2005-2006.

So we appreciate, that the adhesion of the employers to a private optional system will be in the future an essential part of the motivational and recompense plan that is to be offered to the employees, this became a cheaper way of increasing the benefits plan. This fact will happened in the first stage, because after the phenomenon generalization this will become an important benefit of the salary package.

2.1. The Pillars of the Pensions System
The new Romanian pension legislation split the system in three pillars:
- The old state system that will continue (1st pillar),

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[1] www.dailybusiness.ro- may 2007

- The private compulsory system that include all the employees up to 35 years, and facultative between 35 -45 years, and became active in 17th of January 2008 (2nd pillar); this system is complementary to the first one. The employees up to 35 years that did not choose a pension fund were relocated by the supervising pension commission
- The private facultative system that include the employees' optional contribution (the upper level of the age is 52 years and a half) – the 3rd pillar.[2]

The First Pillar – represent the actual state system, almost in bankruptcy (public pension). In present the average pension is of 380 RON (110 Euro), that represent less than 40% of the medium net salary: 941. Conform the statistics one Romanian employee contribute at the social system for 1.24 retired people.
The first pillar is state administrated and has at its base the social solidarity principle (the money we are paying now are used for the payment of tomorrows' pensions) and are not invested by the state. So, the need of private pensions is much needed because the numbers of retired people are increasing despite the decreasing number of active contributors.

The second pillar – became active in 17th of January 2008. In the first year of activity 2% of the 9.5% contribution that we are paying to the social system will be assign to the private systems. The percent will grow 0.5% every year, up to 6% in 8 years time.

The third pillar – became active from September 2007. The system will be financed by facultative contributions of the persons aged up to 52.5 years. A person may contribute with maximum 15% of the gross revenues and may receive the pension at the age of 60 years. This pillar represent an important part of private pensions, and generate a supplementary pension in order to increase the revenues at the retire age. The advantage of this pension is the deductibility character of the payments both for the employer and for the employee up to a total 400 Euro per year. The deductibility consists in the diminution of the income tax with the premium paid up to 200 Euro per year.

The differences between the 2nd and the 3rd pillar are just a few, are about contribution percentage/amount, character compulsory or facultative. Another important aspect is about the guarantees: the guarantees are higher in the compulsory system because the state made this contribution a compulsory one, and then state must offer guarantees.

In case a person does not contribute to the public system, but is authorized to do an independent activity or is realizing revenues from professional activity, this person may get only a facultative pension.

2.2. Private Compulsory Pension Plans for Pillar II
As we mentioned, this pillar mean the transfer of a part of a contribution from the state to the private system. All the transfers will be done without involving other supplementary expenses. The launching of this pillar was postponed for a couple of years, and in the last year it had started: the initial period for the employees to opt for a pension fund was between 1st of August 2007 – 1st of January 2008. Then this term was postponed with 2 weeks 17th of August 2007 – 17th of January 2008. The employees aged between 35-45 years that did not choose a pension fund will have the eventual possibility of adhesion until the age of 45.

At the moment of the starting time of this pillar the majority of the Romanian Life Insurance Companies decided to be involved in pension schemes. They presented a full set of documents for authorization. The top of the insurance companies in the life insurance market expected to remain on the same position in the new pension ranking, after the ending period of the adhesion for pillar II.
Using the statistics, at the beginning of the private pension schemes (pillar II and pillar III), the life insurance market in Romania was:

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[2] www.pensiiprivate.org

Place	Life Insurance Company	Millions Euro Subscription at 3T/2007
1	ING	109.72
2	AIG	45.46
3	ASIBAN	25.03
4	ALLIANZ	20.95
5	ASIROM	20.05
6	BCR	18.34
7	AVIVA	17.8
8	GRAWE	16.02
9	GENERALI	12.86
10	OMNIASIG	10.49
	Total Top 10	**296.72**
	Total Life Insurance Market	**316.57**

The first 3 companies on the Romanian life segment ING Life, AIG Life and ASIBAN hold 35.53%, 14.72% and 7.91% market share almost 60% of the entire life market.

During the analyzed period, ING Life, the market's leader, underwrote an amount of almost EUR 110 millions that means more 23% than similar period of 2006. So the company increases its premiums underwritten in the first 3 quarters of 2007 almost with EUR 21 million from the similar period of the last year.

AIG Life underwrote premiums of EUR 45 million and recorded a 70% growth compared to the same period of last year. The company grew almost EUR 19 million.

ASIBAN the third position in the top underwritten a volume of premium of EUR 25 million, increasing almost 110% (the highest percentage increasing) in comparison to the analyzed period of the previous year. Thus, ASIBAN climbed 4 positions in TOP 10, with a value increase of EUR 13 million from the last year premiums. We must do the mention that the shareholders of ASIBAN are a group of strong Romanian Banks.

All these mentions may be observed in the next graphic:

The Market Share of Top 10 Life Insurance Companies at the end of T3/2007
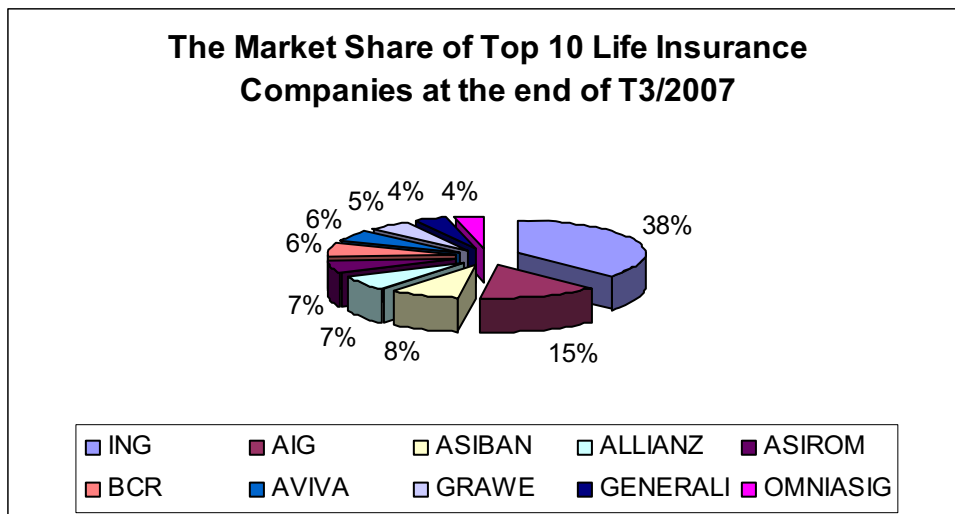
The shareholders of the pension companies (that was set up by the shareholders of the life insurance companies) expected at the time of the starting the competition for the 2nd Pillar of private compulsory pensions, to be placed at least on a similar position.

We present further the main actors on this pillar and we will analyze the statistics at the end of January 2008 in order to see how is presenting the pension sector for the 2nd Pillar.

At the very beginning the authorization was received only by three pension funds: ING, AVIVA and Omniasig all of them received also the authorization of administration for private pension funds[3].

AVIVA Romania – is a part of AVIVA Group (former Commercial Union), the number one insurance in United Kingdom and one of the greatest pension companies in the world. AVIVA has more than 300 years of experience worldwide and is present in Romania since 2000 and has almost 6% cota share in the life insurance market. In present AVIVA has a convention with the bank GSG-BRD for selling of life insurance policies, convention not extended for private pension, because BRD will be at its own a pension administrator.

ING Pension Fund – ING is the leader of life insurance market (as we shown in the previous table) and recently entered with real success in banking with an innovative Self Bank concept. Worldwide ING group is among the first 20 financial institutions, has subsidiaries in more than 50 countries with more than 120.000 employees. The value of the entire group is almost Euro 73 billions. ING is active in Romania since 1994 with more than 1000 permanent employees.

After the first process of authorization, but before the starting of the period for contributors' option, other companies got the authorization for operating in the Pension system – Pillar II.

AIG Life Romania – is a part of American International Group (AIG), the worldwide leader in insurance and financial services that has operations in more than 130 countries. In Romania AIG Life is operating for 8 years, the number of the clients being around of 250,000. In present AIG has a selling force of more than 1200 permanent financial consultants and 100 managers. The market share in life insurance sector is almost 15%.

AIG Life reports at the end of 3T 2007 show us that a subscribing amount of Euro 14.2 millions. That means an increasing of 78% toward the same period of 2006. they recorded an operating profit of Euro 2 millions, 80% more that the same situation in 2006.

Allianz Țiriac Private Pension – is a subsidiary of Allianz Țiriac Insurance – the largest insurance company in Romania. The advantages of this insurance company are given by the very well developed national network, the great numbers of employees and the good existing reputation.

BCR Pension Fund Administration is the private pension company of BCR (the greatest Romanian bank, and part of Erste Group). Romanian Commercial Bank (BCR) is the majority shareholder of BCR Life Insurance. The advantages of BCR Pension Fund Administration are the good knowing of the local market and the distribution network of BCR Bank.

BT AEGON – the association between Transilvania Bank (the most dynamic bank in Romania) and AEGON (a Dutch worldwide financial group) created the premises for a success in the Romanian pension market. The premises are relying on the international experience of AEGON and the local distribution of Transilvania Bank (BT) and BT Insurance.

INTERAMERICAN Pension – is a part of EUREKO Group, a medium financial group present in 15 countries. In Romania Interamerican is active from 10 years. The probable structure of the investments made by INTERAMERICAN will be 35% in governmental bonds, 20% in the capital market, 20% in corporative bonds, 15% in municipal bonds and 10% in treasury bonds.

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[3] www.ghiseulbancar.ro

Generali Pension Fund is the pension company of Generali group, group involved in the European process of mergers with PPF Group. In Romania the merger process will be impacted by the fact that PPF is already greatest shareholders of the ARDAF Insurance and RAI Insurance.

Rank	Pillar II / Company	Adhesion Acts
1	ING	1,066,203
2	ALLIANZ	798,753
3	GENERALI	301,906
4	AVIVA	247,563
5	INTERAMERICAN	196,190
6	AIG	192,503
7	BCR	95,491
8	BT AEGON	95,322
9	BRD	77,314
10	OMNIASIG	49,039
	Total Top 10	**3,120,284**
	TOTAL Market	**3,179,115**

If we compare the table with the ranking of the life insurance companies with this table we observe that ING is also the leader of the pension adhesions (private compulsory pensions for Pillar II). Only Allianz is o a better position, and we notice the medium performances of AIG.
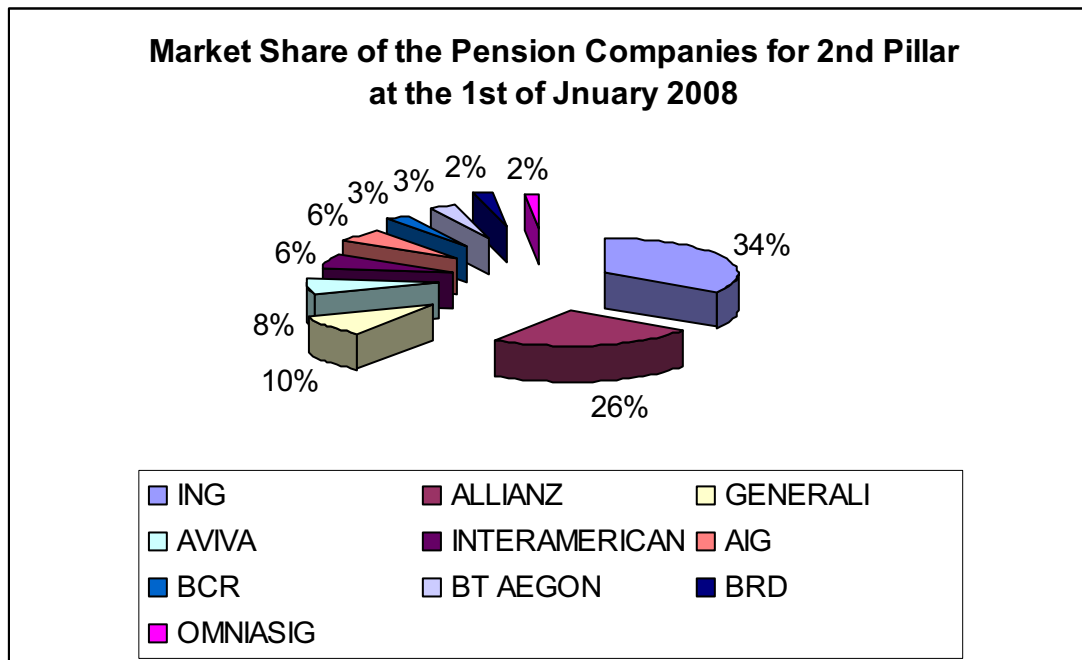
The first two pensions companies ING and Allianz have 60% of the entire market, and the difference to the other competitors is a big one – 16%. Taking into account the strength of this two pension companies nobody is surprise by these results. The specialists comment them as being normal.

2.3. Private Pensions Funds – 3rd Pillar

Four private facultative pension funds got theirs authorization (at the moment this pillar started) **AZT Moderato** (managed by Allianz-Țiriac Private Pension), **ING Clasic** (ING Life Insurance), **Pensia mea (My Pension)** (Aviva Romania) and **BCR Prudent** (BCR Life Insurance). The first three funds are medium risks funds, and the last one a low level of risk. In just 2 weeks from their start in the fall of 2006 there were almost 1,000 participants, from them almost 500 started their first contributions.[4]

There are a few things that make the differences between these funds: the effective structure of the investments and the commissions of the administrators. If we judge after the percent of investment in listed companies (40%) AZT Moderato may become the most risky one; the others to invest maxim 35%. BCR Prudent invests 10% in listed companies and may increase these percent up to 17%. Using a flexible structure of investments, the administrators try to take advantage of the financial market opportunities (in case of a strong increasing of the listed shares the administrators may supplement theirs investment). This fact has a low probability for the moment because all the international markets are decreasing; all stock exchanges record negative trends. So, it is very probable at this moment to decrease the risk exposure caused by the continuously decreasing of the listed shares.

All these funds define a minimum monthly contribution from 35 lei to 60 de lei (10 euro to 17 euro), depending the fund. Contribution may be stopped, but with a notification to the administrator. The minimal legal condition for a person to receive a facultative private pension is to have at least 90 months of contributions. It is not necessary for the months to be continuous, and the people will receive the pensions at the age of 60 years old.

If we analyze the commissions' structure we notice that there are 2 main levels. The maximum quantum required by SAIs (Investment Administration Companies) for the medium level of assets is establish by law at 0.6% per year for 2nd Pillar and 2.4% per year for the 3rd Pillar. The second commission is the distribution one, and is paid for marketing agents and in order to create, develop and improve the distribution channels. The quantum of this commission is 2.5% for the 2nd Pillar and 5% for the 3rd Pillar.
At this level ING and BCR have the lowest initial administration commissions – 3.95% versus 4% from the monthly contribution), and the other 2 funds - 5%. The differences between permanently administration commissions are major: ING and BCR require a commission of 1.24% and 2% of the net active, Allianz – 0.2% every month of the net account and Aviva – a daily percent of 0.0064% of the net account. There are some similarities to the transfer commissions. In case that a client is not satisfied with the results of a fund, he can transfer the individual account to other fund, administrated by other company. That person will support a penalty commission in case of less than 2 years staying at the actual administrator. If the transfer is made within 2 years period, all the 4 funds apply a 5% commission on the net account, excepting AVIVA where the commission is reduced to 2.5% after the first year. For the other commissions (transaction, depositary, auditing), each administrator define differently the effective level, from a global amount paid by the entire fund up to a small percent supported by each participant. All the administrators choose the depositary bank BRD-GSG, three of them choose Ernst&Young as financial auditor, and the other one choose KPMG.

There are others administrators that get the authorization after the starting of the pensions. OTP Garancia that offer OTP Strategic pension, Allianz that offer AZT Vivace and ING with ING Optim.[5]

If we use the statistics at 4th of January 2008 the situation is reflected in the next table:

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[4] www.zf.ro
[5] www.zf.ro

	NET ASSETS	PARTICIPANTS
BCR PRUDENT	7.073.324	11.438
AZT MODERATO	2.755.982	13.786
ING CLASIC	1.844.606	7.810
AZT VIVACE	1.291.174	11.267
ING OPTIM	839.849	4.097
MY PENSION	710.546	8.355
OTP STRATEGIC	12.582	219
TOTAL	**14.528.063**	**56.972**

Surprisingly, the first place (judging after Net Assets) is held by BCR Prudent that has a huge advance toward the competitors. The market share is almost 50%. BCR recorded a very good performance, because they are managing o fund, and the next two companies Allianz and ING have two funds in administration.

Market Share of Pension Administrator of the 3rd Pillar - Assets Value at the 4th of January 2008
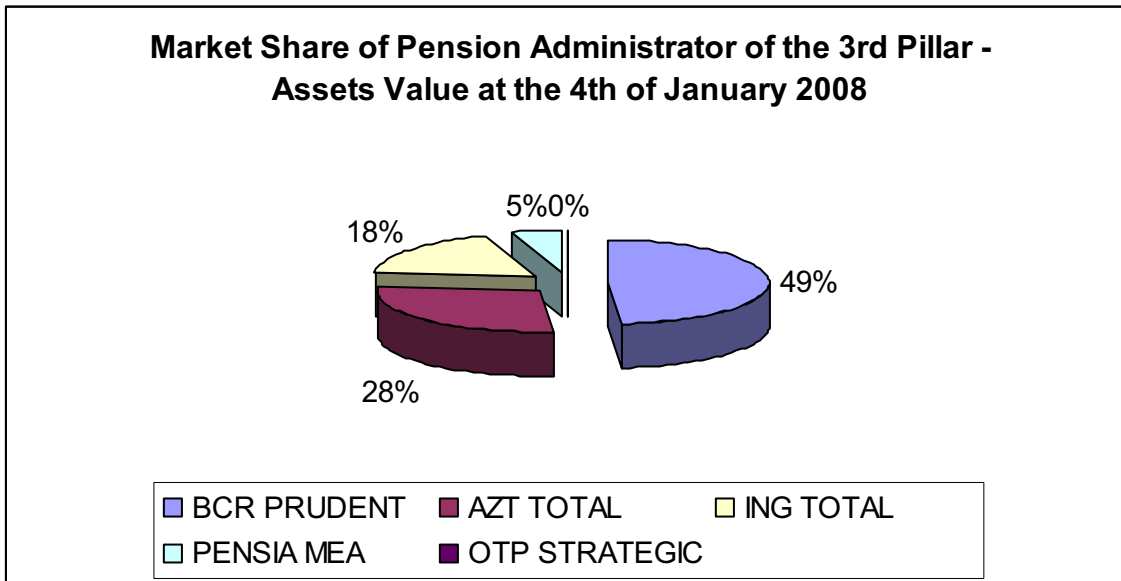
The percent held by BCR – 49% is higher even that the combined amount of the ING and Allianz funds – 46%.

If we judge the top after the number of contributors at 4th of January 2008, the first place is held by AZT Moderato, BCR and AZT Classic. There is a negative record of ING whose funds maybe were not too attractive for investors. Or the marketing agents were not very efficient, perhaps they action too much for Pillar II where they are on the first place.

**Market Share of Pension Administrator of the 3rd Pillar ·
Number of Participants at the 4th of January 2008**

AZT TOTAL   ING TOTAL   BCR PRUDENT   PENSIA MEA   OTP STRATEGIC
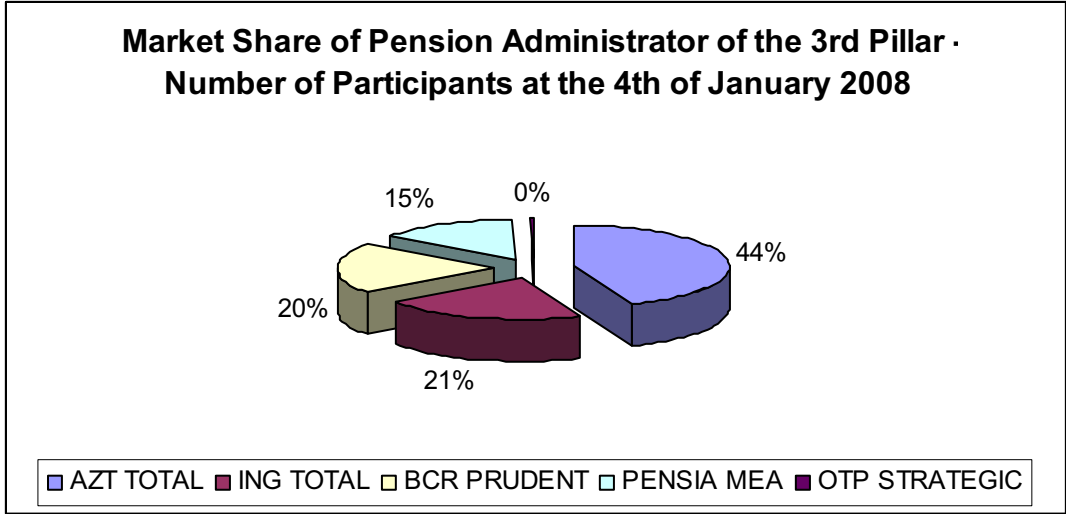
In the above graphic, we observe that in this case (number of participants) Allianz by its' 2 funds held 44%, more than the other 2 companies combined BCR and ING – 41%.

3. CONCLUSION:

The private pension in Romania, by the last two pillars represents a successful stage of development of the national economy. All these results are for the initial stage of the market, and real conclusion must be done after a few years of experience in this new market. A very important role will have the profitability of the investment made by funds' administrators, in order to offer to the participants a higher pension.

As practice demonstrated in other countries, after 2-3 year since the beginning, there was some market concentration. So we expect in Romania, that after the similar period, some pension administrators to sell their funds. Probably in the future will remain the strongest pension administrators with real international experience and perhaps new actors from the international market will appear. Anyway the number of contributors after 3-4 months of activity is insignificant – 57,000 contractors.

Because both of the private pillars started almost at the same period, all the marketing agents and pension administrators were concentrated for the second pillar. It is more than evident, that in the very next period there will continue the "attack" of the potential contributors for the 3rd pillar.

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AUTHOR PROFILE:

Dr. Marius Dan Gavriletea earned his Ph.D. at Babes Bolyai University of Cluj Napoca, Romania, in 2002. He is a lecturer in Business Faculty of Babes Bolyai University, Cluj Napoca, Romania. He has published more than 45 articles related to risk management published in two Romanian national journals, 9 international conferences, 11 international publications, and 4 books

ETHICAL PRESSURE, PROFESSIONAL EXPECTATION, STRESS, AND JOB QUALITY: AN EMPIRICAL INVESTIGATION OF ACCOUNTANTS IN THAILAND

Nupakorn Hanpuwadal, Mahasarakham University, Thailand
Phapruke Ussahawanitchakit, Mahasarakham University, Thailand

ABSTRACT

This study aims at testing the influence of ethical pressure, professional expectation in stress and job quality via moderators of time pressure and self esteem. Accountants in Thailand are the sample. The results show that ethical pressure and professional expectation have positive and significant association with stress. In addition, stress is positively and significantly related to job quality. these findings provide some initial empirical support for suggests need for additional investigation of factors that influence an accountant's stress and for further investigation into the effect of ethical pressure, professional expectation on job quality. Therefore, contributions and suggestion are also provided for further research.

Keywords: Ethical Pressure, Professional Expectation, Stress, Job Quality, Time Pressure, Self-Esteem

1. INTRODUCTION

The rapid acceleration of the global economic system, world trade and free markets continue to expand organizations seek new business opportunities to enhance their competitiveness. Organizations focus to improve services, enhance product quality and improve production efficiency. The significant influence of business activities on accountant professionalism is interesting. It is commonly accepted that accounting information is used to manage business. Accountants cannot escape involvement in this undertaking. Accounting professionals are generally perceived by the public. The characteristics of a professional, which include the presence of a systematic body of the skills required for practice, the sanction of the community in the form of formal credentials and licensing, recognition by the general public of profession authority over the knowledge and skills in the field, a regulative code of ethics and a professional culture with a language, symbols and norm of its own.

Accounting professionals have found to experience various kinds of stress related to their work and workplace. Examples of stressful job characteristics are job pressure from public's expectation, requires professional's ethic, and professional institution's control, which sometimes lead to job quality. Sanders et al. (1995) described that eight work-related sources of stress are: role ambiguity, role conflict, overload-quantitative, overload-qualitative, career progress, responsibility for people, time pressure, and job scope. Accounting professionals in Thailand are related to business societies that are expected and pressured to accountants' practice about accountability and professionalism. Thus, the accountants perceive stress from their practices. Research questions are how the ethical pressure and professional expectation influence stress, stress affects the job quality.

Therefore, the primary purpose of this study is to examine the relationships between (1) ethical pressure and stress, (2) professional expectation and stress, (3) ethical pressure and stress when moderated by time pressure, (4) professional expectation and stress when moderated by time pressure, (5) stress and job quality, and (6) stress and job quality when moderated by self esteem.

This structure of the paper is outlined as follows. In section 2, the relevant literature on all constructs is reviewed. Section 3 presents research method of this paper. Section 4 presents the results of the empirical study and discussion. Section 5 proposes the theoretical and managerial contributions, and suggestions for future research and section 6 ends the study with the conclusion.

2. RELATION MODEL AND HYPOTHESES

In this study and attend to test the effect of ethical pressure, and professional expectation are independent variables, job quality is dependent variable, stress is mediating variable, time pressure, and self esteem are moderator variable, as shown in Figure 1.

FIGURE 1
RELATIONSHIP MODEL OF ETHICAL PRESSURE, PROFESSIONAL EXPECTATION, STRESS, AND JOB QUALITY
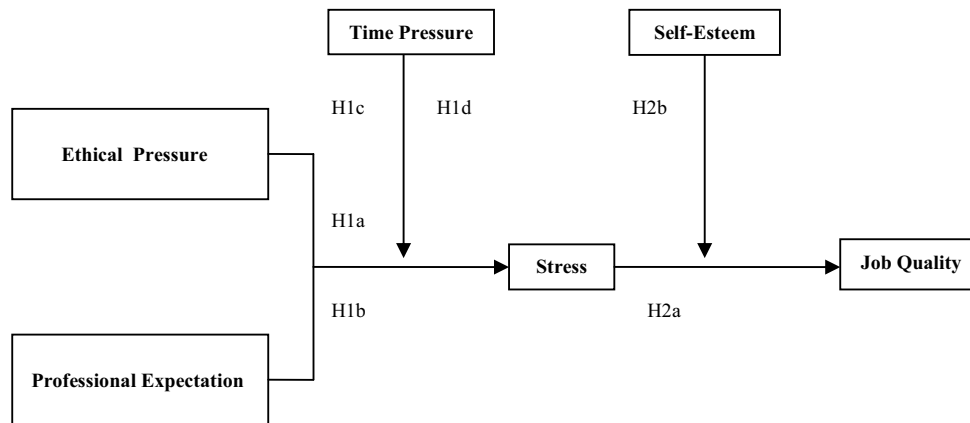
2.1 Ethical Pressure

Ethical pressure is defined as an objective stimulus constructs referring to individual characteristics or combinations of characteristics and events that impinge on the perceptual and cognitive processes of individuals (DeZoort and Lord, 1997; Pratt and Barling, 1988; Eden, 1982; Kahn et al. 1964). It refers to conformity pressure affects individuals who tend to alter their attitudes or behavior in an effort to be consistent with perceived group norm (DeZoort and Lord, 1997; Brehm and Kassin, 1990). In this study, Ethical pressure is defined as perceptions of professional values which accountants have as a professional responsibility to adhere to a code of conduct, and ethical code that expressly prohibits engaging in actions such as the fact of reported financial results.

Shafer (2002) and Aranya and Ferris (1984) found that accountants employed in industry did in fact experience higher levels of organizational-professional conflict than those employed in public accounting. Perceived ethical conflicts can lead to dysfunctional organizational outcomes such as lower organizational outcomes such as lower organizational commitment and higher turnover intentions (Shafer, 2002; Schwepker, 1999). Thus ethical pressure is an important factor to impact an accountant's stress. This implies that if there is high ethical pressure it may also have great stress. This leads to the following hypotheses:

H1a: The accountants with higher ethical pressure will have greater stress.

2.2 Professional expectation

Brierley (1999) and Lachman & Aranya (1986b) described that the realization of professional expectations has been measured in research of accountants by assessing the discrepancy between responses to questions about "how much should there be" and "how much is there now", on aspects of professional values, such as the autonomy to act according to professional judgment and responsibility to clients. Thus in this study, Professional expectation refers to the perceptions of public about professionalism, independence, self improvement, commitment to learning, responsibility, skill with accountant's practice.

Sanders et al., (1995) described stress created by job requirements which exceed the individual's ability or skill level. Professional expectation requires accountant's ability and skill. Thus professional

expectation has effect on accountant's stress. If there is high professional expectation it may also have great stress. This leads to the following hypotheses:

H1b: The accountants with higher professional expectation will have greater stress.

2.3 Stress
In modern times, stress is related to several outcomes. Such as job-tension, job satisfaction, absenteeism, turnover intention, and job performance. In order to examine effect of stress on job quality, stress here refers to a response construct dealing with how internalize and represent pressure with their cognitive processes (DeZoort and Lord, 1997; Pratt and Barling, 1988). Stress has been defined as a state which arises from an actual or perceived demand/capability imbalance in an individual's vital adjustment actions (Picccoli and Emig, 1988). Also, stress is defined as perceptions of accountant demand and capability imbalance about ethics and professionalism.

Tulen and Neidermeyer (2004) and Sullivan and Baghat (1992) reviewed four possible scenarios regarding stress and performance: stress may increase performance, stress may decrease performance, stress may have no effect on performance, and the relationship between stress and performance may represent an inverted-U. Their findings supported a negative relationship between stress and performance. Tulen and Neidermeyer (2004) and Rabinowitz and Stumpf (1987) described that there is a positive relationship between stress and job performance. Thus, stress may be closely related to job quality. This leads to the following hypotheses:

H2a: Accountants with the greater stress will have greater job quality.

2.4 Time pressure
Time budget pressure refers to the pervasive constraint on resources that can be allocated to accomplish a job (DeZoort and Lord, 1997). It is the perception of unreasonable deadlines and time demands.

Sanders et al.,(1995) found role ambiguity, role conflict, overload quantitative, overload-qualitative, career progress, responsibility for people, time pressure, and job scope, related to auditor's stress. In order to examine the effects of time pressure on stress, time pressure thus may be closely related to stress. This leads to the following hypotheses:

H1c: The accountants with the higher time pressure will potentially have greater positive relationship between ethical pressure and stress.

H1d: The accountants with the higher time pressure will potentially have greater positive relationship between professional expectation and stress.

2.5 Self-esteem
Self-esteem refers to as the extent that employees feel valued and taken seriously (LeRouge, et al., 2006). It significantly moderates the relationship between role stress fit and job satisfaction. In order to examine the effects of self-esteem on job quality, self-esteem thus may be related to job quality.

H2b: Accountants with the higher self esteem will potentially have greater positive relationship between stress and job quality.

3. RESEARCH METHODS

3.1 Data collection
The samples were randomly drawn from 818 companies in Automotive/Auto parts and accessories/Machiner in Thailand's Exporting Industries. The sampling frame was listed from the Thailand's exporting firm database. The questionnaire was constructed covering contents according to each variable that was operationalized for empirical studies. The pretest was used to verify the validity and reliability of expertise and misunderstanding were reduced that can arise from ambiguities, and it is improved in its contents, item ordering, and wording. Reliability was tested by

Cronbach alpha reliability coefficients of all constructs to make sure that the items of the questionnaire were designed to measure consistency for each concept.

Later, 600 questionnaires were sent to accounting manager firms to provide data for this study via mail. After two weeks 152 questionnaires were received. There were 33 questionnaires that could not be sent to receivers and these were returned. However, 2 received questionnaires were incomplete, and were not included in the data analysis. This resulted in 100 usable responses or a response rate of 26%.

3.2 Reliability and Validity
Constructs, multi-item scale, were tested by Cronbach alpha to measure reliability of the data. Table 1 shows an alpha ranged from 0.60-0.80.comfortably above the minimum 0.60 requirements (Chalos and Poon, 2000).That is internal consistency of the measures used in this study can be considered very well for all constructs.

Factor analysis is employed to test the validity of data in the questionnaire. Items are used to measure each construct that is extracted to be one only principal component. Table 1 shows factor loading of each construct that presents a value higher than 0.50. Thus, construct validity of this study is tapped by items in the measure, as theorized. That is, factor loading of each construct should not be less than 4.00 (Hair et al., 2006).

TABLE1
FACTOR LOADING AND ALPHA COEFFICIENTS OF CONSTRUCTS

Constructs	Factor Loadings	Alpha Coefficient
Ethical pressure	.70-.77	0.79
Professional expectation	.59-.83	0.76
Stress	.59-.79	0.78
Job Quality	.74-.81	0.78
Time Pressure	.81-.85	0.60
Self Esteem	.74-.84	0.80

3.3 Statistic Technique
OLS regression analysis is employed to estimate parameters in hypothesis test. From the relationship model and the hypotheses the following seven equation models are formulated:

Equation 1: $S = \beta_{01} + \beta_1 EP + \varepsilon$

Equation 2: $S = \beta_{02} + \beta_2 EP + \beta_3 PE + \varepsilon$

Equation 3: $S = \beta_{03} + \beta_4 EP + \beta_5 PE + \beta_6 TP + \beta_7 EP*TP + \beta_8 PE*TP + \varepsilon$

Equation 4: $JQ = \beta_{04} + \beta_9 S + \varepsilon$

Equation 5: $JQ = \beta_{05} + \beta_{10} S + \beta_{11} SE + \beta_{12} S*SE + \varepsilon$

Where EP is Ethical Pressure; PE is Professional Expectation; S is Stress; TP is Time Pressure; JQ is Job Quality; SE is Self-Esteem.

These regression equations are employed to estimate inferred parameters whether the hypotheses are substantiated and fit overall model (f value) or not. Then, the model variables and parameters are presented in various tables later.

3.4 Measure
All variables in Table1 use the 5-point Likert scale and show numbers of items in order to tap each variable. Five-point Likert scale ranging from strongly disagree (score one) to strongly agree (scored five) were used to measure all variable. Next, respondents were asked to indicate ethical pressure, professional expectation, stress, time pressure, self esteem, and job quality.

4. RESULTS AND DISCUSSION

This study aims at examining the relationship among ethical pressure, professional expectation, and stress; stress and job quality, analyzed by OLS regression model. Thus, the results will be presented by Table 3. Table 2 shows the inter-correlation of all constructs to explore relating of each dual variable. Results find that stress would be expected to positively and significantly correlate with ethical pressure, professional expectation, and job quality.

TABLE2
CORRELATION MATRIX FOR ALL CONSTRUCTS

Constructs	EP	PE	TP	S	SE	JQ
Mean	4.30	4.10	4.24	4.16	4.21	3.89
Standard deviation	.52	.49	.57	.48	.49	.49
Ethical pressure (EP)						
Professional expectation (PE)	.529**					
Time Pressure (TP)	.459**	0.465**				
Stress(S)	.359**	0.519**	0.439**			
Self Esteem (SE)	.545**	0.587**	0.489**	0.582**		
Job Quality (JQ)	.409**	0.381**	0.314**	0.326**	0.463**	

**p<.01

The correlations among independent variables, ethical pressure and professional expectation are not more high level; therefore multicolinearity is expected low level when multiple regression model is employed; the model has stress as dependent variable.

4.1 Antecedent of Stress

Table 3 shows the results of regression analysis to inference H1a, H1b, H1c, H1d that is measured via user information satisfaction and monitoring items, moderated by time pressure. The results indicate that in Model 3 of regression equation consisting of ethical pressure, and professional expectation as independent variables, and stress as dependent variable, there is   a significant and positive association between ethical pressure and stress (b = .048; p>.05); therefore, H1a is supported. Likewise, the relationship between professional expectation and stress is significant and positive (b = .381; p<.01), which is consistent with H1b.

TABLE 3
ANTECEDENTS OF STRESS

Independent Variables	Models		
	1	2	3
EP	.359**	.117	.048
	(0.076)	(.082)	(0.085)
PE		.457**	.381**
		(.082)	(0.085)
TP			.244**
			(0.084)
EP*TP			.052
		(0.082)	
PE*TP			.089
		(0.087)	
Adjusted R^2	.123	.269	.297

**p<.01, [a]Beta coefficients with standard errors in parenthesis.

The results of Model 1 presents according to Model 2 that the linkage between ethical pressure and stress, and the linkage among ethical pressure, professional expectation and stress are positive and significant. Indeed, Model 3 is added moderator variable. Finding shows not significant relationship between interaction of ethical pressure and time pressure with stress (b = .052; p>.95). Other interactions are not significant. Therefore, H1c and H1d are not supported.

4.2 Consequence of Stress

Results are presented in table 4; regression analysis is employed to estimate parameters to test H2a. For Model 4, there is a positive and significant relationship between stress and job quality (b = .326; p<.01).

Job quality is explained by stress equaling 10 percent. VIF values among independent variables in less than 10 (Maximum of VIF value = 2.186), and little multicolinearity is accepted. Thus, H2a is supported.

Table 4 shows the results of regression analysis to inference H2b that is measured via user information satisfaction and monitoring items, moderated by self esteem. The results indicate that in Model 5 of regression equation consisting of stress, and self-esteem as independent variables, and job quality as dependent variable, there is a significant and positive association between stress and job quality (b = .418; p<.01); but finding shows not significant relationship between interaction of stress and self-esteem with job quality (b = .056; p >.44). Therefore, H2b is not supported.

TABLE 4
CONSEQUENE OF STRESS

Independent Variables	Models	
	4	5
S	.326**	.082
	(0.077)	(0.089)
SE		.418**
		(0.089)
S*SE		.056
		(0.060)
Adjusted R^2	.100	0.207

**p<.01, [a]Beta coefficients with standard errors in parenthesis.

5. CONTRIBUTIONS AND FUTURE DIRECTIONS FOR RESEARCH

5.1 Theoretical Contributions and Future Direction for Research
This research aims to provide an understanding of ethical pressure and professional expectation that have a significant direct positive influence on accountant's stress, stress has a significant direct positive influence on job quality. The study provides important theoretical contributions expanding on previous knowledge and literature of ethical pressure, professional expectation, stress, and job quality. This research is one of the first known studies to link among ethical pressure, professional expectation, stress, and job quality in accountants' perspective. In addition, this study examines differences of pressure affects accountants' stress and job quality via moderating effects of time pressure, and self-esteem. According to the results of this research, the need for future research should have effects of ethical pressure and professional expectation with other industry.

5.2 Managerial Contributions
This study helps accountants identify and explain key components that may influence to accountants' stress. Accountants should be continuously training in order to continuously maintain knowledge and increase skills and ethics that reduce accountants' stress. Accountants should provide other factors to support job quality including the good staff, the greater time-management, the appropriate accounting

work scope, the character and number of work when suit to accountant's capability. An important point is accountant's professional ethic behavior that he or she should care for acting to professions and users. Consequently, reducing accountant's stress and job quality are needed for businesses and managers .

6. CONCLUSION

Our expectations regarding perceptions of accountant's stress were confirmed. Both ethical pressure and professional expectation have a direct positively influence on stress and stress has a direct positively influence on job quality. In hypotheses testing professional expectation is more a superior variable than ethical pressure in all relational. But interactions of moderator have not association. Our results suggest that it would be prudent for firm managers to focus their stress-reduction strategy upon accountant.

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AUTHOR PROFILES:

Mr. Nupakorn Hanpuwadal earned his M.B.A. at Dhurakij Pundit University, Thailand in 1996. Currently he is a Ph.D. student in Accounting at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

Dr.Phapruke Ussahawanitchakit earned his Ph.D. at Washington State University in 2002. Currently he is an associate professor of accounting, a deputy dean of academic affairs, and a director of graduate studies at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

DARWIN'S GIFT: HETERODOX APPROACHES TO THE BUSINESS CYCLE

Goswald Hughes, Marist College, Poughkeepsie, NY, USA USA

ABSTRACT:

It can be argued that the business cycle is rooted in oversupply. This view is echoed by the, "Domar problem that results because there is no guarantee that the additional demand created by net investment will absorb the additional capacity created by it" (Wray, 2008, p. 153) meaning that the demand gap will only widen as income grows because the propensity to consume is less than one. John Walker and Harold Vatter (1989) and Minsky (1993) complement this view saying that not only does investment add to aggregate demand but increases potential supply by adding capital which results in increased capacity. This also confirms the Keynesian notion that a capitalist economy will tend to operate below full capacity both in the short run as well as the long run. The problem of oversupply is inherent in a free market system and causes underemployment, constrained demand, an overhang in inventory which causes the business cycle

Key Words: Evolutionary Economics, Business Cycle, Creative Destruction

INTRODUCTION:

From an evolutionary perspective it can be further argued that oversupply is also caused by the institutionalization of innovation (Ulrich Witt, 1997). Here growth is largely a result of novelty seeking behavior that tries to outwit demise (the zero economic profit condition) and results in a transcendence of the natural constraints of nature that keeps organic systems in balance. The surplus that accrues to the dominants results in even more surpluses, in an amplifying cycle of oversupply of non satiable, exosomatic gadgetry that causes supply to run perpetually ahead of demand. Novelty seeking behavior explains how technological and intellectual augmentation fires growth of this throughput. Here Solow's (1956) residual is not a residual at all but becomes the main element in an endogenous theory of growth. The business cycle becomes a result of oversupply caused by the institutionalization of innovation that leads to the overproduction of exosomatic gadgetry (Daly, 1991).

A different metaphor to examine endogenous growth and the business cycle is offered by the organic systems of nature that manage oversupply, innovation, survival, competition, dominance and waste far more effectively than capitalist systems which are invented by humans and that suffer from perpetual conditions of inequality, coercive hegemony and pollution. An organic framework for the business cycle contends that the structure of a capitalist system is Darwinian in nature and it therefore exhibits evolutionary characteristics. This evolutionary character of capitalism operates through a pattern of variation, selection and replication just as nature does. If an adjustment for anticipation and novelty seeking behavior of humans is made to this VSR dynamic then even Joseph Schumpeter's explanations for the business cycle fall right into an evolutionary framework that explains why the "only cause of a depression is prosperity" (Schumpeter, 1983, p. 224). Here the catalyzing factors for the business cycle lie within itself and they explain why every boom must be followed by a bust and why every bust must necessarily cause a new boom. Here the rate and process of innovation has as much to do with the booms and busts as the psychology of crisis. Booms are caused by innovation that gathers momentum and spurs the economy to higher levels of growth, and when the innovation has been completely absorbed by the boom, the conditions for a bust reappear.

In this way the economy crests and troughs under the weight of its own momentum, hastened by euphoria in boom time and fear in busts. A kind of waxing and waning that mimics the cyclical patterns in nature. Just as nature evidences cycles of weather patterns, fall and spring, destruction and rebirth, capitalist systems too exhibit crests and troughs driven organically by the forces of self preservation and self augmentation which manifests itself as the business cycle. In the cyclical pattern of nature economic prosperity can be cast as switching system of disorder and order caused by profit seeking through

innovation. Profit seeking due to innovation creates an augmentation but upsets the existing system that must then adapt to the disturbance with the self regulating mechanism of price that restores order. In this progression favorable mutations occur in the structure of capitalism that allows it to adapt to its changing environment by retaining mechanisms that augment growth and survival and discarding mechanisms that don't. The successful mutations then multiply and create the prosperity which we have come to expect. Organizational routines and rule bound behavior of firms can also be considered to be mimicking the genotypes of biology that can transmit successful rules to descendant enterprises. This transmission of successful rules and the discarding of unsuccessful ones can be regarded as evolutionary (Nelson, Richard, R., and Winter, Sidney, G. 1982).

EVOLUTIONARY ECONOMICS:

Evolutionary explanations place the human decision maker at the center of economics, and offer a world view that believes that since humans themselves are a result of evolution then even a vast and complex economy created by human effort should find its seeds in nature. This is called the "continuity hypothesis". It is a term used to describe the ontological continuity between biological and economic evolution despite the fact that mechanisms and regularities differ between these domains. (Cordes, 2007, p. 141) .Veblen says that "There is a lasting influence of embedded behaviors and tendencies that have been genetically coded into humans through the reproductive and selection processes of evolution - It is this continuity within the context of which economic development must be studied" (Veblen, 1898b, p.388). These built in genetic preferences for survival that have conditioned human existence could be a more important factor in anticipating socio-economic behavior than the utilitarian character of market explanations that pervades economic theory today.

But the position of economics has becomes ossified and seated in the energetics metaphor where energy is considered to be transferred into other forms, just as economics assumes that utility is transferred. But the energetics metaphor calls for things to decay and die but the economy doesn't decay and die, in fact each decay is the harbinger of a new birth. The economic system does not decay like a physical system does but grows instead through a series of mutations to better a evolutionary position – meaning ever expanding economic profit. Sellers transmit memory of past experience into future plans that avoid mistakes and expand the profitable schemes that work and discard the ones that don't. The producers rarely know the consumers and what their preferences are excepting by inference from their own experience.

Thus a seller making production decisions can only rely upon what he knows from past experience. How much to produce and at what prices to procure materials. It is not dictated to him by the instantaneous forces of supply and demand but by a deep understanding developed through past experience of what works to the seller's greatest advantage (Schumpeter, 1983, p. 6). Successes in past production dictates how well he will do is the future and therefore every period of economic activity is tied to all other preceding periods of economic activity. The seller exists within a tight circular economic flow and is a prisoner of the social and economic connections that he is a part of. However these connections are assumed away and thought not to exist when formulating the classical theory of market exchanges. Here the producers and consumers are not armed with past experience but are thought to be groping their way towards the greatest welfare by conscious and rational effort

It is far better to imagine that buyers are constrained by their budgets and sellers by their cost, and in multiple iterations of the trading game they learn each other strategy and erode all economic profit. Sellers are unhappy with the impending zero profit condition and try to innovate their way to preserve economic profits, and it is this dynamic that expands the economy through innovation. Innovation that cheats economic demise and prolongs survival, results in a mutation that is a disequilibrium condition and must be adjusted to by the economic system. This dynamic of mutation, then selection of successful profit making rules and their replication until the next mutation, forms the central dynamic in an evolutionary explanation of the business cycle.

It is the mental output of armies of engineers, scientists, and doctors and other professionals that provides the upsetting conditions of technological innovation that also reduces the demand for physical

human labor while at the same time increases comfort and prosperity for a growing population. How technology, innovation and novelty seeking have created the economic boom in output while at the same time replaced physical labor is a manifestation of evolution at work. The amplifying effect of mental augmentation working itself through technology creates increasing levels of output using decreasing levels of physical labor even as more and more intellectual labor is employed.

Disorder is the steady state of capitalist systems and is largely fueled by the innovations of entrepreneurs who themselves are not capitalists but must borrow capital in order to create the "perennial gale of creative destruction" (in Oakley 1990, p. 81). Entrepreneurs acting out of selfish gain, borrow capital to experiment with combinations of land, labor and capital in the extraction of economic profit. In the process of creating innovative combinations of the factors of production, entrepreneurs succeed, fail, and can change paradigms overnight with innovation, technology, competitive advantage, and sheer will. The unpredictable, destabilizing, and disruptive behavior of entrepreneurs sets trade on a permanent path to rebirth through creative destruction. The uneven spurts in innovation, causes the uneven progression of growth and the consequent disorder.

BUSINESS CYCLES:

Profit seeking through innovation not only causes the business cycle, but inevitably leads to oversupply as well. Here innovators rush to produce because they do not pay the full cost of resources, only the cost of extraction. Just as paper companies do not pay for the years it takes for a tree to mature, only what it takes to cut it down. Since producers pay only for capital and labor and not the true cost of resources they overproduce. Here oversupply becomes an inherent property of the free market system because of its excessive reliance on equilibrium which omits the cost of natural resources from the supply curve – only capital and labor are represented. Not only are the true cost of resources not included in the supply and demand models which leads to oversupply but capital offers higher returns than labor and is therefore overused also causing overinvestment and consequently oversupply. Monopolistic firms try to preserve their price power through rent seeking and in the process gain even greater economies of scale meaning ever declining costs.

Oversupply is also a manifestation of the excessive production of non-satiable goods whose demand can be infinite. The demand for food and shelter are limited by the amount of the population but the demand for non-essential, life style products can be infinite. Hence population growth can provide an upper limit to agricultural and industrial production but cannot limit the demand for service goods whose demand grows along with incomes. The employment (and wages) created in producing non-satiable goods creates demand for the same goods which results in a self reinforcing cycle of growth where supply stays ahead of demand consistently.

In Schumpeter's conception causes for a boom spring from the innovation activity of entrepreneurs who in trying to escape the zero economic profit condition experiment with unique combinations of land, labor, and capital and create supranormal profits. Subsequently the first mover having shown the way is unable to prevent other entrepreneurs from joining in. There is an ever growing momentum of adopters of the new technology which not only improves the technology but disperses it widely, creating a boom. Growth through innovation also means that supranormal profits will accrue to successful innovators who will then use it to dominate the industry and gather greater density of structure. Even though firms can use innovation to create barriers to entry, sooner or later other firms of all sizes gather around the technology and this results in the swarming of entrepreneurs. As an increasing number of imitators join the industry, they compete the profits away, causing the adjustment towards a more perfect alignment of prices and quantities in the long run. The swarms of entrepreneurs who join are progressively less qualified but by the time they join the innovation has already spread into other industries causing booms in them as well. There are secondary waves of prosperity that emanate in complementary industries and that spread widely causing a sustained boom overall (Schumpeter, 1983, p. 229). The interconnected nature of commerce means that prosperity accrues widely in such an expansion. Prosperity is also propagated through keystone technologies that emerge in one area but transfers to other areas. The rising output

fueled by the new technology momentarily increases prices overall, and provides a false sense of security to older businesses who do not see their downfall disguised by the boom. The propagation of innovative technology also explains why first adopters who have the means of production begin to see rising capital investment. The consumer also sees rising prices as production picks up and is accompanied by a corresponding rise in employment.

Lags in the time it takes for a new innovation to spawn waves of new entrepreneurs and products causes the oscillatory behavior of the business cycle. Costs rise with rising purchasing power that accrues in the new industry and effects production costs in the old industry as well. As the technology gets more and more disbursed it becomes easier and easier to adopt because the obstacles become fewer. This is why is takes less leadership and business acumen for late adopters to join in the wave of innovation. The weaker business, skills erode the profits of the early adopters and upsets their calculations.

Unemployment and speculation are other accelerators of a bust Owners of the means of production, the capitalists and the investor class can sometimes foresee the coming bust and take evasive action that manifests itself in swings of the stock markets and troughs in investment for no apparent reason. The speculative activity becomes self fulfilling as it sends out advance signals of the oncoming distress, causing further contractions that amplify the bust.

The shock of the boom itself is a disequilibrium condition and forces a new economic reorganization to absorb and adapt to the innovations. The very process of adaptation and struggle towards a new equilibrium creates conditions for a bust. In Nelson and Winter's (1982, p. 330) conception, this dynamic causes the ebb and flow of firms as profits get competed away and the industry demonstrates a boom and bust structure that mimics the business cycle. In a dynamic economy this cresting occurs at the same frequency as innovations and creates growth in its wake. Thus every boom is born from a bust and contains the seeds of its own destruction. It accelerates by gathering momentum which itself becomes the source of the bust. Efforts to moderate the boom and bust nature of the business cycle with monetary policy is only marginally successful because the primary source of the oscillation is innovation and not capital. Falling demand leads to falling prices which causes the acceleration in production to counteract the effects of the price fall. The overproduction leads to the overhang in inventory which only further accelerates the price fall, setting up conditions for the oncoming bust.

Capital only follows innovations and finances the boom. It is the over-investment of this capital that then creates the bust as the innovation is absorbed by the economy. Booms and busts are adjustment processes that absorb social, cultural and economic disturbances that are bound to occur in the pursuit of prosperity. In a dynamic capitalist system, oscillations of the business cycle under conditions of competition are even considered desirable because they prepare society for the next adaptation that leads to even greater prosperity. It is an evolutionary mechanism that uses past history to develop innovations that expand survival even though they appear as disequilibrium conditions in the short run. Innovations lend economic evolutions their jerky nature and then the jerkiness of the disturbance itself causes further disequilibrium condition that spawns the wave of adaptation to adjust to the new conditions.

In this way, the booms and busts, rises and falls, and expansions and contractions of the economy occur constantly, as new equilibriums are established and are then eroded in an ongoing cycle of creative destruction that mimics the waxing and waning, evolutionary patterns of nature. The pursuit for survival itself encourages novelty seeking to a better evolutionary position, robust profit making schemes are adopted and replicated, and transmitted to future iterations. Unsuccessful schemes are selected out. In trying to cheat the zero economic profit condition innovation engenders the business cycle - created endogenously by the system itself.

It is also be argued that the organic remedy to oversupply is to step up demand by creating as much innovation and employment in returning products to reuse as is created in their first use, by instituting a cradle-to-cradle like production cycle. If the capitalist system can create demand without adding more supply then the business cycle itself can be outwitted. If the landfill is considered the middle of the cycle and not the end, and innovation and employment are created in returning products to reuse, then not only

can green wages absorb the excess production of the non-satiable, exosomatic gadgetry produced by throughput, but may also outwit the business cycle in a more organic way than either monetary or fiscal policy can.

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AUTHOR PROFILE:

Professor Goswald Hughes is an Assistant Professor of Finance and Economics at Marist College School of Management in Poughkeepsie, NY, USA

THE CONVENIENCE OF USING THE CASE STUDY METHOD IN TEACHING ECONOMICS AND MANAGEMENT COURSES

Sandra Jednak, Faculty of Organizational Sciences, Belgrade University, Serbia
Ivana Mijatovic, Faculty of Organizational Sciences, Belgrade University, Serbia

ABSTRACT

Teaching and learning styles are changing. There has been a move from lecture-based activity towards student-interacted activities. One of these kinds of teaching method that student's engagement is significant is the case study method. The case method is complex method of teaching but it has great benefits and contributions. It demands both significant use of active student's and teacher's involvement. Students learn more effectively and develop their skills and knowledge when they are involve in learning process. We have goal to create a teaching program focusing on a case discussion and to try to move from classical ex-cathedra method, which is still prevalent in higher education at undergraduate level. Due to this aim, we made research to see how experience of secondary school education has on applying case study method in introductionary courses economics and quality management at faculty i.e. higher education and which method students prefer.

Keywords: *Case Study Method, Introduction to Economic, Quality Management.*

1. INTRODUCTION

The business school students of today will be tomorrow managers and leaders. They enrolled business school to prepare themselves for that task. Teachers have obligation to fulfill their expectation and to give them good knowledge and to prepare them for real business world. There are a couple types of teaching and learning which is in use. The first is traditional teaching method – ex-cathedra, where the student's participation in class is minimal. Next method is traditional teaching method but with some students' involvement. And the third method is the case study where the student involvement and engagement is demanded. The case study method is an active learning method. The case studies give examples of theoretical concepts in practice and give students a context for discussing the practical applications of some issues of economics and quality management. In this way, students develop skills in analytical thinking, discussing, making decision and knowledge that will be helpful in tomorrow real life. Still, for the case method is need theoretical knowledge. This is could be problem in introductionary courses where most of the students do not have significant knowledge and prerequisites for solving the case study. The second problem that could arise is new environment.

For students who have been familiar only with the traditional teaching methods, the case method is radical change in their approach of teaching and learning. Teachers need to put some introduction notes about case study and give them theoretical knowledge and hints about key issues that cover case study. In this way, students could focus on the key problems and issues and start analyse it and try to find solution. Students who have had experience with case study or similar teaching method in previous education like to continue with lecture in this way. Even they are familiar with active based learning and teaching they need some knowledge in economics and quality management how they could make critical analysis and give some recommendations for solution. In this paper we analyse those issues and made research on this topic.

2. TEACHING APPROACHES

Changes are made in every field, so the changes are made in teaching, too. There are different teaching approaches. Making different teaching method is improving and finding better teaching style that leads to more effective learning. Each method has the same conception – set up lectures, program and instructions in the most valuable way for student. On another word, make linker of the knowledge, skills and values for student.

There are traditional and modern teaching methods. In recent years there is moving from traditional toward modern method. Classical lecture – ex-cathedra is still in use in higher education at University, especially at undergraduate courses. At this method there are two sides. On one side is lecture that talks and on other side is passive audience. In this type of lecture, there is no feedback and interaction between lecture and students. Furthermore, most students cannot stay focused throughout a lecture. Students attention begin to fall after certain time, especially when the topic is completely new, complex and difficult and/or teacher can explain in way how students could understand. After this kind of lecture student could learn from the book by themselves. If the each lecture is the same and the teacher do not change anything students would not come in classroom and will be unsatisfied and have resistance to the course. Also, if teacher could not find way to show that theoretical knowledge student could apply and use for other courses or for practice, it will lead to fall in interesting of course. Therefore, this method is modified by some teachers who are interesting in changing in what they do in their lecture. Most of them could not made radical changes at move from one method to totally new method, so they making changes in steps. One of solution is that they still run traditional lecture but now with some students' involvement. Here, there is some feedback and interaction between teacher and students. After the teacher notice that students' attention fall or there are some incomprehension she or he need to make breathing time in lecturing. Students' attention can be maintained through giving them something to do – to answer on question, to give example, explanation or to solve some short problem. The best way to involve all students is that teacher randomly calls students to give him answer on posed question or problem. Because students are not sure whom teacher would call they all think and prepare own answer. After this, lecture can continue with lecturing and have students' attention. According to our research that we run at introductionary courses economics and quality management, this kind teaching method is the most favourable for students at course introduction to economics. This could be explain that is course at 1st semester and for the first time great number of students meet with such type of course and issues.

Today, beside those two types of teaching, the case method is also in use. It is usual for postgraduate courses, but more and more this method is in applying at undergraduate courses. The case method performances are the way in which teacher run the case, attitudes and relationships that exist in the class. Teaching through the case method demands more capabilities and abilities of teacher to run class. There is interaction between students and teacher, during the session lecture gives the control to students, than takes it back and at the end of class lecture should fulfilled education aim – students should learn something new at lecture. The case method supposes active students participation. The role of teacher is to establish right environment for open, focused, analytical and critical discussion. Student's participation is supposing some level of theoretical knowledge and preparation for the case discussion. However, introductory courses, where is specific situation, are not suitable for high intense case method work. The most of university introductory courses have well theoretical foundation. Facts, rules, procedures, different approaches, various methods and techniques are the significant content of number of introductory courses. Introductory courses are based on theory and supposing understanding basic elements of theory. Exams are still based on understanding and reproducing theory.

The case method suppose active role of students and their participations in a number of activity. It is significant that the main benefits from the case method is getting students active and engage in discussion. In large groups at introductory courses, teacher has no many opportunities to work individually and to encourage all students to participate. Teacher could divide large group in several smaller groups and ask students to work as a team on solving case study. It is very important that all participants actively be engage. The possibility of getting students engaged with the case study is connecting with type of the case. Some of case studies are based on history, significant and scientific problems or events. At introductory courses, it will be high absenteeism on the class if lecture insists on analysing the 25 pages case study. From the learning and teaching point of view, most of the cases need some level of customisation for using in the classroom. It seems that the best practice is up to 5-page case study with video clips and diagrams. Furthermore, what is priority that the case should be relevant, interesting, and readable and not too much complex. Also, teachers could choose one of the many "ready for use" cases. The literature from quality management disciplines is rich in the "ready for use" cases. Maybe the reason for that is in fact that the quality management as a discipline is relatively young, that quality gurus have professional background and that real world was the place for confirming effectiveness of all approaches. The history of quality management is, maybe, the best covered with the case studies.

Course Introduction to Economics covers main issues in macroeconomics and microeconomics. The cases are intended to provide an opportunity to apply the concepts of economics to the problems of management. Due to this fact, a number of resources provide suitable cases. There are some resources of case study customisation for introductory courses. There is possible to find cases for Introduction to Economics, where students could apply basic economic knowledge. Some researchers made customisation and adjustment of some newspapers articles, real-life situation to the issues that are the aim of courses. Those case studies are free and available to teachers and lectures. Moreover, it is possible to find recent and actual cases. Choosing that kind of case, students' interest rise because they are familiar with nowadays news and events. Even, some situations in the country or in the business, students try to understand, find solution and try to find out how they would act in such position. When topic of such discussion is in lecture, many students brought different opinions and conclusions. At the end when is given number of opinion students see that theoretical concept which is same for all could have completely different and that depend of student attitude, knowledge and creativeness. Students gave case study by themselves and they try with others to deal with it. In this manner they link theoretical knowledge and practice, they apply what they learnt.

3. THE ROLE OF PREVIOUS EXPERIENCE IN ACTIVE PARTICIPATION AND ADOPTION OF THE CASE METHOD – RESEARCH RESULTS

In order to have a closer insight of student's perception of the effectiveness of the case method we ran research which included students of two different introductory courses with different lecturers. Introduction to Economics is 1st semester course, while Introduction to the Quality is 3rd semester course. The purpose of the research is to gain a better understanding of benefits and constraints of using the case method. Both groups of students had opportunity to meet with different lecture methods: ex-cathedra, mixed lecture - ex-cathedra and student moderate engagement and case study methods. According to this fact, they were able to compare all type of lecture and see what is suiting them the best.

The research included 171 students of the two introductory courses: Introduction to Economics (108 students or 14.21% of students' population) and Introduction to Quality (63 students or 56.76% of students' population). Criteria for choosing the examinees were that they are active students and having experience with learning using the case method within different courses. Examinees are asked to give their own opinion about given statement about main benefits from working on the case study, the main benefits of active involvement in the discussion and about personal preferences toward active involvement in to the classes. The main result of this research is that both groups are showing the similar results. Examinees are recognising their own interest in working same thing in a different way. The research results indicate that using the case method could help students to understand theoretical concept more clearly. The 44.26% of the examinees from course Introduction to Quality, and 49.06% of the examinees from course Introduction to Economics claim that working on the case help them to clearly understand theoretical contents.

Moreover, results of the research indicated that examinees made strong connection between attitude toward benefits and active involvement. The more then 80% of examinees from both groups think that their active involvement made their presence to the class more interesting and useful. However, research results show that need for encouraging students is significant. Attendants of both courses, 31.18% of students, are showing some personal constraints (shyness) to joining discussion. Still, according to research both groups have motivation for use case studies due to be prepared for exams and active participation in order to learn something that might be used in future professional career.

On the other part we want to find relation of past experience with level of adoption the case method. Pre research based on the open end interview was created to explore some basic aspects of previous experience with active participation on the class. The examinees are asked to describe their own previous experiences with active participation on the secondary school classes. Research helps us to identify four main groups among ours examinees. We identify next four groups: students which have experience on working on the case very often, have opportunity to be only passive listener, have experience in active participation only trough asking question and have experience in active participation on the class occasionally. In accordance with these findings we run research using questionnaire and ask our

examinees to give their own opinion about given statements. Figure 1 shows the population of these groups.
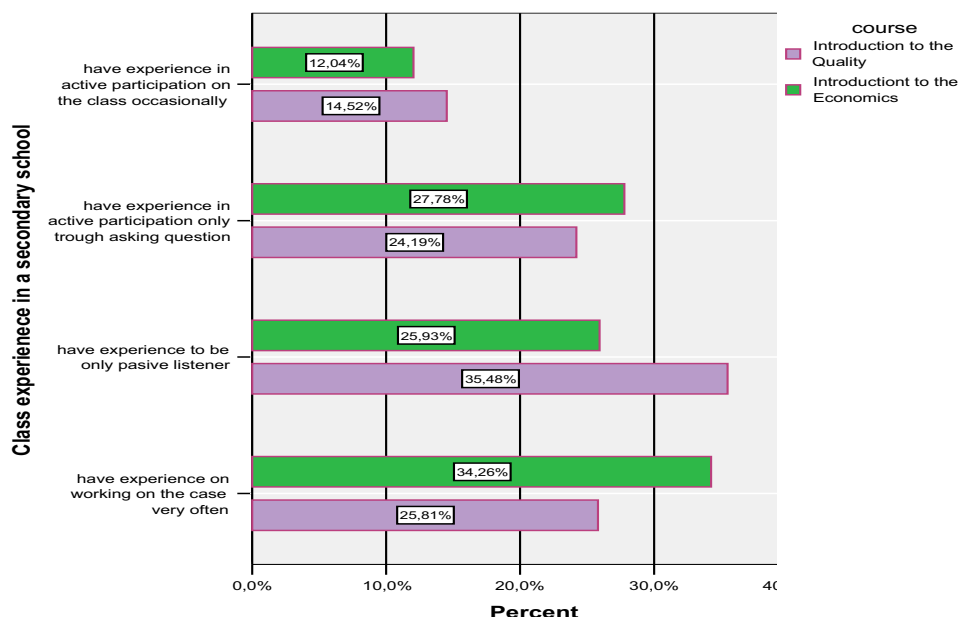
Figure 1 The class experience in a secondary school

The results shows that majority of our examinees belongs to the groups who have no adequate experience in active participation on the class in secondary school. That leads us to pre - conclusion that changes which are results of Bologna process in higher education need to have implications to the secondary even primary levels of educations in Serbia. In addition to above research result, we research some another issues that is connect with case study teaching method. We give here those results in brief. The research shows that preferences toward different ways of teaching show some differences between groups. Examinees from group of economics are showing more significant preferences toward moderate involvement. The reason for this is might be found in insecurity of a student. Knowing the fact that Introduction to Economics is first semester course, the key element for this difference has to be finding in the lack of experience with active involvement in the class.

	Class experience in a secondary school								
	Have experience on working on the case very often		Have experience to be only passive listener		Have experience in active participation only trough asking question		Have experience in active participation on the class occasionally		
Preference to the way of lecturing	Row N %	Column N %	Row N %	Column N %	Row N %	Column N %	Row N %	Column N %	
Classical lecturing (ex cathedra - without active participation of the students)	16,7%	1,9%	**33,3%**	4,0%	**33,3%**	4,4%	16,7%	4,5%	100 %
Classical lecturing with moderate participation of the students	27,1%	30,2%	**32,2%**	38,0%	25,4%	33,3%	15,3%	40,9%	100 %
Lecturing using the case method	**34,3%**	67,9%	27,6%	58,0%	26,7%	62,2%	11,4%	54,5%	100 %
Total	31,2%	100,0%	29,4%	100,0%	26,5%	100,0%	12,9%	100,0%	

Table 1. The relation between experience in secondary school and preference to the way of lecturing

Analysing data for both courses population we find that in population of students who show preference to the classical lecturing (ex cathedra - without active participation of the students) majority 66,6% have opportunity to be passive listener or have experience with reactive participation through asking question. In population of students who show preference to the classical lecturing with moderate participation of the students the highest percents of population belongs to the students who have experience as passive listener. In the population of students who show preference to the lecturing through the case method the highest percents of population belongs to the students who have experience in working on the case very often. On the other side, the preference to the lecturing using the case method of the other group of examines is significant.

By isolation and analyse examines in accordance to their experience we found that all groups of examinees shows preference to the lecturing using the case study method. This is shown by Table 1. Beyond expectation is result that students who have experience to be only passive listeners and reactive participant show high preference to the case method. The results of the research show as that using the case method is suitable for use in introductory courses. Inhibition of students to accept active participation and lecturing using the case method are lower within students who had chance to work on the case in the secondary school. Other groups of students need some time and empowerment, but they are show that new way of lecturing is not hard to accept.

4. CONCLUSION

Case method is challenging and interesting for both teachers and students. Using case method may have a great contribution in learning process. The case method provides that students meet with situation from real world. It helps them to develop their skills, attitude and confidence for formulating and solving the problems. Through the analysing and observation of case, they can see different issues or one issue from different aspects. In this way, there are different solutions that students could apply. To find the best conclusion of problem and made effective and right decision students need to be familiar with theoretical knowledge. Furthermore, by involving in class discussion and working with other students as a part of team, students build their behaviour, creativity and attitude for future career. Generally, the research conclusion is that students of introductory courses very well accept working on the case and the case method could be wise decision for lecturing introductionary courses. However, it could be conclude that the most student that have had chance to have education similar to case studies at secondary school are more likeable to accept active-based teaching and learning method at higher education. Still, there is also fact that others who had traditional teaching method after use it and after explanations of necessary for their further education and work, they are ready to use it.

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AUTHORS PROFILES:

Ms. Sandra Jednak holds M.Sc. from Faculty of Economics, University of Belgrade, Serbia from 2006. She is PhD student and employed at Faculty of Organizational Sciences, University of Belgrade as a teaching assistant at course Introduction to Economics.

Ms. Ivana Mijatovic holds M.Sc. from Faculty of Organizational Science, University of Belgrade, Serbia from 2003. She is PhD student and employed at Faculty of Organizational Sciences, University of Belgrade, Serbia as teaching assistant at courses Introduction to Quality and Technologies of Quality Management.

EDUCATING CONSUMERS ABOUT SUSTAINABILITY: ENVIRONMENTAL AND SOCIAL COMMUNICATION BY AUTOMOBILE MANUFACTURERS

Djavlonbek Kadirov, EIT Hawke's Bay, Napier, New Zealand
Arti Triveni, EIT Hawke's Bay, Napier, New Zealand
Richard Varey, University of Waikato, Hamilton, New Zealand

ABSTRACT
This article explores how automobile manufacturing corporations educate their consumers about sustainability. The process is explained through the concept of cultural education that is a holistic transfer of a meaningful cultural form. The analysis of environmental and social reports indicates that the cultural form has two edges: 1) the meaning is created paradoxically; 2) unsustainable situations are inherent part (basis) of actions that are defined as sustainable. We argue that consumers tend to simply imitate this cultural form. Cultural education happens when the form of paradoxical meaning creation is imitated by all agents in society, including consumers. These agents may speak, support, and argue for a sustainability cause as corporations do, yet they can simply fail to act on it or act in an opposite direction.

Keywords: *marketing, communication, culture, education, sustainability, social systems.*

1. INTRODUCTION

There is more to marketing communication than sending structured messages to target audiences in order to induce these audiences to act in a favourable way toward a company. Marketing communication is "a cultural enterprise that has a cultural impact" (Varey, 2002, p. xxiii). Relevant and powerful marketing communication does not simply change a market situation; rather it creates a new space of cultural existence which is based on novel interactive contexts, consumer values, and product usage behaviours (Holt, 2002; Thompson, Rindfleisch, and Arsel, 2006). In particular, communicating about sustainability issues, environmental responsibility, and social impact of companies' marketing activities is an important aspect of marketing communication strategies (Hart, 1997; Peattie, 2001; Polonsky et al., 1998; Schaefer, 2005; Schaefer and Crane, 2005; Smith, 1998). Several studies have used qualitative techniques to interpret environmental and social reports and other communication such as press releases and website contents released by multinational corporations (Jose and Lee, 2007; Livesey and Kearins, 2002; Porter, 2005).

A strong theme has emerged in several studies that looked into sustainability communication by corporations. These studies revealed a general behavioural inconsistency in corporate communication: business entities tended to talk about the natural environment and society in a certain caring way, while their observed activities were in contradiction to what they said (Kangun and Polonsky, 1995; Smith, 1998; Welford, 1997). Some called this tendency 'greenwashing', while others analysed this tendency as a part of unethical corporate behaviour. No studies looked at a cultural aspect of such marketing communication. The cultural aspect of communication is strongly linked to both learning and educating about consumption practices within various contexts of life (Holt, 2002).

The broad programmatic research problem addressed in this study is to understand different meanings of sustainability to different marketing actors. The specific research question of this article is to understand the ways through which marketing communication is used to educate consumers about important life issues, one of them being environmental and social sustainability. In other words, how do corporations educate their consumers about sustainability?

This article discusses the theoretical background of a constructivist perspective on cultural education. In the literature reviewed, cultural education is seen as diffusion of consistent behavioural patterns which cannot simply be limited to a communicated content. Second, a study method is described. We then

present the interpretation of corporate communication on sustainability in the domain of automobile business. The article ends with the discussion of our main findings.

2. THEORETICAL BACKGROUND: CULTURAL EDUCATION

Several theories address the cultural aspect of communication. They are radical constructivism, Luhmann's social systems theory, and symbolic constructivism. We will discuss these perspectives briefly in this section.

2.1 Radical constructivism

Radical constructivists view the world (ontology) and learning about the world (epistemology) as the consequence of interaction between social agents. Maturana and Varela (1992) examine the biological roots of human understanding. They link a person's capacity to understand his/her surrounding environment to his/her biological processes. These authors argue that biological organisms are originally predisposed to construct their own relevant world by interacting with other members in their social space. This idea eschews the mainstream thinking that knowledge is given and absolute. In their view, understanding is an active operation. In this light, they define communication as "coordinated behaviors mutually triggered among the members of a social unity" (p.193). This brings them to define culture as "the transgenerational stability of behavioural patterns ontogenetically acquired in the communicative dynamics of a social environment (p. 201). They stress that culture is a behavioural pattern rather than a cognitive change, so cultural education happens as imitation rather than content learning.

Another champion of radical constructivists, cultural anthropologist Gregory Bateson (1991) argues that processes that happen in nature and also in mind share the same qualities. The logic of natural and cognitive processes is based on creating a difference through difference-making. He argues that communication is difference-making and in this it becomes an encompassing *difference*. This idea allowed Bateson to differentiate between communication and meta-communication. For him, any social interaction had these two aspects. Communication was the content, whereas meta-communication was the context. Communication informed people, while the meta-communicative aspect of an interaction socially positioned agents in relation to each other. Hence, cultural learning happened in both dimensions: people became educated through propagation of information and also through acquiring the very attitude of social relating constructed in an interactive setting.

2.3 Luhmann's social systems view

A sociologist Niklas Luhmann (1995) proposed his view of communication as being a building block of social systems. Communication was an action/operation of a social actor that is meaningful within a particular social system. Luhmann indicated that communication could be reified through recognition of the unity of three elements: information, utterance, and understanding. Information is a particular differential selected from among available information alternatives, whereas utterance is a particular mode of communication chosen among alternative communicative forms. Understanding is an active process of distinguishing between information and utterance that links a communication to other communications.

For example, an agent in the system makes an observation about him/herself recycling some materials. Here, a series of actions which is observed as "recycling" constitutes utterance. The act of self-observation is utterance too, because it is one of this agent's operations. The label "recycling" connotes care for the ecological environment. Depending on a context, different types of information can be attributed to the same series of actions. For instance, the series that represents recycling in the context of environmentalism can also be hailed as "cost pruning" in the context of profit maximisation or "compliance" in the context of public policy regulation or even "ethical marketing" when they are compared to policy expectations. Interacting agents must understand information, utterance, and also the difference between them in order to actualise communication as a whole. Therefore, understanding becomes a key that finalises communicated meanings (Luhmann, 1995). Understanding is manifested in the ability by the agent to continue similar utterance-information combinations. In this framework,

understanding represents cultural education. Education happens when agents are able to continue (construct) similar utterance-information patterns.

2.4 Symbolic Construction

Anthony Cohen (1985) explored symbolism in actions of society members. He argued that behaviours of people acting within small communities (social contexts) can only be properly understood through their symbolic dimension. Cohen showed that any complex social concept had multiple meanings, in most cases, each person had his/her own meaning for the same concept. In Cohen's view, these concepts are cultural symbols, and they are similar to 'empty boxes'. People share such empty boxes in interaction and fill them with their own meanings that are based on personal experiences. Education occurs as a process of symbolic sharing. In other words, people propagate and share symbols, and also personalise them according to their meaning-making preferences. The interesting aspect of this view is that education occurs not only as meaning creation, but also, and most importantly, as symbol co-construction.

3. METHOD

The theoretical background of this study was set out in the previous section. In this section, an investigative method employing analysis of environmental and social reports published by several automobile manufacturers and made freely available for public scrutiny is described. The text content of environmental reports were downloaded and analysed during eighteen months from October 2005 to December 2007. The sample included major car manufacturing corporations: Toyota Motor Corporation, Honda Motor Corporation, Ford Motor Company, and General Motors (GM) Corporation. The primary concern was to enable the development of a body of in-depth, rich, unique description, and interpretation that is relevant to a particular set of purposefully selected cases. The representativeness of a general imagined population is not pursued (Kozinets, 2002) in this study. The instance of seeking representativeness connotes the positivistic view of the situation, where the properties of a larger population are assumed to be discovered. In contrast, treating selection as a world-in-itself is a characteristic of constructivism that is about understanding the world through the momentary construction of meanings which come forth within this limited but rich discourse. Consequently, the downloaded documents are not assessed in terms of how well they represent a social structure. Instead, the instance of the existence of such utterance is crucial. The corporations cannot avoid communicating, and thus existing. This communication is self-descriptive, so any combination of selections from the pool of communication enables an identical characterisation of this industry. Here, choosing purposeful cases is not intended to reveal the quantitative aspects of the phenomenon, but is about selecting the various live manifestations of the system under investigation.

To accomplish the task of analysis and synthesis, the qualitative data analysis software QSR NVivo 2.0 was used. This software allows document storing, document manipulation, node (theme) creation and manipulation, data linking, modeling, displaying, and searching (Gibbs, 2002). The first step was to transform textual data into an appropriate textual format. The documents were transferred into .rtf or .txt extension files. Then the documents were ordered and distinct identifying tags applied. This allowed tracking any part of a selected text into its original source. The chunks of text which were assessed as representing holistic communicative acts were assigned into distinctive categories. These categories were classified into bigger themes, which were relevant to the research objective (Spiggle, 1994).

4. INTERPRETATION

The corporate environmental reports depict corporations' activities and position these activities within a constructed picture of surrounding realities. One would expect creativity in this respect. Every report must have communicated a very idiosyncratic "corporate world" with regard to sustainable development. However, the surprising aspect is that the views expressed in the reports end up constructing a standard, consistent, and synchronised view of sustainability. We argue that corporations are acting (operating and observing) to actualise a single common pattern of meanings, the characteristics of which are explored below.

The reports introduce a context that is critical for stable meaning-creation. A typical message can be in this form:

> We have changed the name of this report from the Ford Corporate Citizenship Report to the Ford Sustainability Report, reflecting an evolution in our thinking (Ford Motor Company, 2005, p.1).

A *change of emphasis* stressed in the passage is not simply an "evolution" in the company's "thinking". This change means that the context of social interaction between corporations and their stakeholders is being shifted. Ford Corporation signals the context of further interaction. Here differentiation occurs: utterance which comes next is given meaning according to the *sustainability* context, whereas other contexts are simply alienated. Consider an example from Toyota Corporation:

> Sustainability [is] Toyota's everyday commitment to the future. Every day, all over the world, Toyota acts on policies to make it an eco-friendly corporation – and a welcome presence in society (Toyota Motor Corporation, 2005).

The future is complex. The complexity of interaction with stakeholders in the future must be reduced into a coherent meaning. Sustainability becomes a common context and theme of such interaction. The context both sets boundaries and provides opportunities. The corporation signals the reduced form of complexity, so successive meaning-creation happens within the boundaries of this sustainability-related domain. Also this domain has to be ambivalent to allow some extent of creativity in terms of operating

The most recurring pattern in the reports is the stressing of the automobile industry's colossal effect on society. The magnitude of an "environmental footprint" (Hart and Milstein, 1999) generated by car manufacturing, marketing, and use is conveyed in the example of the following passages from the environmental reports:

> The sheer scale of our industry is enormous. In the United States, the auto industry is responsible for 6.6 million jobs, which is about 5 percent of all private-sector jobs and nearly 4 percent of Gross Domestic Product. No other single industry is more linked to U.S. manufacturing strength or generates more retail business and employment. The U.S. auto industry purchases 60 percent of all the rubber and about 30 percent of all the aluminium, iron and stainless steel used in the United States (Ford Motor Company, 2005, p.3)

> A total of 1.67 million tons of raw materials and supplementary materials, 34.5×10^6GJ of energy in the form of electricity and fuel, etc., and 14.3 million cubic meters of water, were used at Toyota. 1.54 million tons-CO_2 of greenhouse gases and 11.84 million cubic meters of water were released into the atmosphere and waterways respectively. Of 546,000 tons of the total volume of waste generated and not processed by Toyota, 540,000 tons was reused as recyclable resources in the form of raw material for steel, and 6,000 tons was disposed of in landfills. In logistics, CO_2 emissions during the transport of 3.5 billion ton-kilometers of completely built units and parts amounted to 285,000 tons-CO_2. (Toyota Motor Corporation, 2005, p.30)

The corporations pinpoint the problem of their own perverse effect on the natural/social environment. Their goal is to guide audiences into a perspective which must be taken in understanding these environmental issues. To accomplish this, they tend to interpret their observed reality via two opposites: *the sustainable* and *the unsustainable*. This is called *valuing*. Through valuing the sustainability is defined in relation to the unsustainability which is mostly inferred, but not made obvious:

> …corporate responsibility issues: sustainable mobility, conventional air emissions, greenhouse gas emissions and road safety, are discussed in the report. (General Motors Corporation, 2005, p.3-14)

Corporations observe events and label them as being either sustainable or unsustainable. The question arises whether this act in itself can be a subject of this valuing. The corporations contradict a self-

essence, because they must consider the sustainable/unsustainable valuing to be always sustainable. The valuing act cannot be unsustainable, as this can ruin the logic of valuing. This valuing, however, indicates one of the values explicitly, whereas the other one is referenced implicitly.

For example, the Toyota Corporation emphasises three key areas of sustainability: *reducing, recycling, and reusing*. These concepts are constructed in action, but they would not attain their intended meaning unless they are contrasted to their negative side. The act of observing these concepts dialectically, for example, as recycling versus non-recycling, is a communicative act in itself. This act constitutes the context of communication and defines corporate sustainability. But how is this particular way of acting evaluated? The corporation contradicts its valuing convention when it simply accepts the valuing act to be sustainable by default.

This is better understood via the following example. It appears that the only condition for the corporation to register sustainability within a certain period is to construct itself in a very unsustainable position at the beginning:

> As a result, CO_2 emissions decreased by 29,000 tons in FY2004, achieving the reduction goal. However, an increase in the volume of production and a shift of production sites to distant locations increased the total transportation volume and distance, resulting in a total CO_2 emission volume of 285,000 tons. (Toyota Motor Corporation, 2005, p.36).

> CO_2 emissions attributed to energy use in the production domain came to 467,600 CO_2-tons in fiscal 2004, up 5.1% from the previous year's level (445,000 CO_2-tons) (a 24.0% reduction over the fiscal 1990 level). CO_2 emissions were thus reduced by 2.8% compared with the numerical target of 481,000 tons. (Honda Motor Company LTD., 2005, p.35).

> …emission levels of carbon monoxide and combined emissions of hydrocarbons and nitrogen oxides have been reduced by 97 percent since 1970, when emission standards were first introduced. The most significant reductions will be achieved between 1993-2005, with CO emissions reduced by 83 percent, combined HC + NOx by 69 percent and particulate matter (PM - from diesel engines) by 82 percent. (General Motors Corporation, 2005, p. 4-27).

As follows from the examples, the corporations cannot self-reference themselves as being sustainable or in a state of struggling to achieve sustainability unless a major unsustainable condition is attributed to their own operation. The condition is that deviation from sustainability should be seen as being continuously managed and curbed, which indicates to the dynamic nature of developing a self-image. This event invokes a question: does the system that cannot (is reluctant to) observe and define its own unsustainability have any prospect of being considered sustainable? Alternatively, is being unsustainable the necessary condition of becoming sustainable?

The manifestation of the paradox is evident in the following example. The corporations claim that hybrid car brands (e.g. Prius, HCH, Silverado, Sierra, and Escape Hybrid) offer substantial improvements in fuel-efficiency. To maintain this strong advantage (benefit), inefficient vehicle categories are required to be in place as a point of reference. Were the traditional vehicle technologies to become more efficient, a hybrid car appeal would vanish. In consequence, the meaningfulness of this 'environmental' action ceases to exist. It does not mean that the hybrid cars would disappear from the market, rather it means that the particular context of meaning creation (including all actions, meanings, and networks), which is built on the logic of differentiating what is sustainable from what is not sustainable through the provision of improved fuel-efficiency, would cease its meaningful operation. Thus, the industry finds itself in a constant struggle (contradiction) in introducing both "sustainable" and "unsustainable" value offerings. Hence, in contradiction to common sense that the value of a sustainable offer is reduced or mitigated by an unsustainable one, the industry operates by means of enlarging a fuel-efficiency gap between models. Though this conclusion may sound rather contradictory, the situation in the marketplace reported by a third party supports this insight. The latest report by United States Environmental Protection Agency (EPA) not only supports this view, but also provides detailed information on the historical dynamics of the phenomenon (EPA, 2006). In stark contrast to the corporations' claims that fuel-efficiency has been

improving in the last years, EPA reports that fuel-economy for all model light-duty vehicles (passenger cars, wagons, sport utility vehicles, vans and pickups) remained constant (!) for almost eighteen years. The current level 21.0 mpg (miles per gallon) is the same as in 1994, and less (!) than that (22.1 mpg) in 1988. Moreover, all marketing groups (Toyota, Honda, Hyundai-Kia, Volkswagen, GM, Nissan, Ford, and DaimlerChrysler) reported an almost steady decrease in the average fuel efficiency since 1987 (Figure 1).

FIGURE 1. FUEL EFFICIENCY DATA FOR THREE BASE YEARS BY MARKETING GROUPS IN THE LIGHT-DUTY AUTOMOBILE INDUSTRY
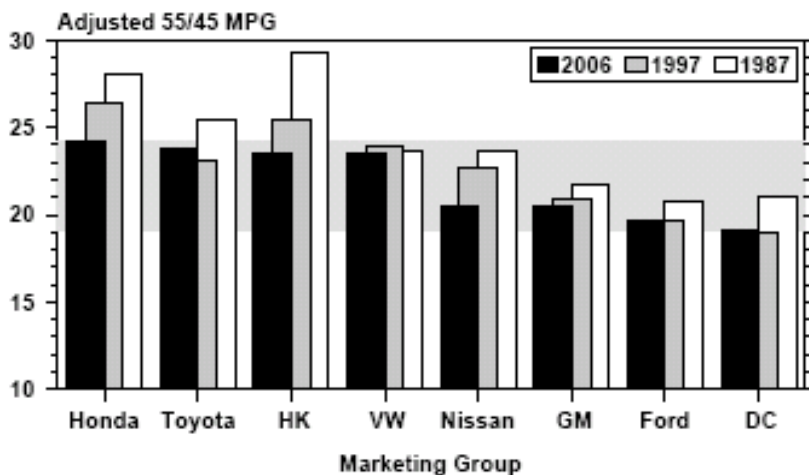
Source: EPA, 2006

Two trends are visible in Figure 1 above. The first trend represents stabilisation, i.e. differences in average fuel efficiency among the groups are stabilising and narrowing down. The second trend represents decrease, i.e. the level of fuel efficiency is steadily decreasing for most members. The stabilisation trend indicates the tendency of consolidating around the unique meaning of value. This is the indication of increasing importance for the sustainable/unsustainable (in this case in the form of fuel efficient/fuel wasting) distinction being operated within the system. The second trend which shows decrease in fuel efficiency is very controversial and taken as an example of hypocrisy by some commentators. The average level of fuel efficiency has actually been decreasing for the last eighteen years amid communications by the corporations that sustainability has historically been, and is now the main prerogative of corporative action.

5. DISCUSSION

We are looking at how corporations create and use the meaning(s) of sustainability. The process described is the manifestation of corporative communication-in-operation. The action observed is based on communications that are underlined by paradoxical meaning-creation. The corporations need to enforce and maintain a meaningful difference in order to communicate.

The paradoxical communication is neither greenwashing nor an unethical technique. It is simply a necessity for creating a meaningful cultural form. This cultural form has two aspects: content and context. The cultural form becomes a behavioural pattern when the content combines with the context. In simple words, the content aspect of communication indicates that sustainability is 'good'. However, the contextual aspect indicates that one can afford to be largely unsustainable in order to become 'good' via tackling one's own problems. Unsustainable behaviour must be taken for granted in order to create this meaning. This is what learned by other agents within this context. Consumers simply imitate this pattern of combined content and context. The mainstream view is that education happens along content learning lines. Many companies contend that they are educating their customers on how to become sustainable

and encouraging them to take some action. However, education is holistic: both content and context is propagated as it is. As a result there are consumers who are very eloquent in talking about sustainability (as corporations do), yet they fail to act on it or act only when it doesn't' endanger their immediate material self-interest.

Understanding the essence of this *cultural education* phenomenon is important. For instance, many corporations realise that people are increasingly becoming aware of environmental sustainability issues and also about societal impacts of marketing activities. Researchers suggested that we are already living in a 'sustainability age' and this is influencing our market choices (Peattie, 2001). However, a recent article in the Economist recounted a problematic situation when consumers avoid serious, *financial* commitment to the sustainability cause:

> …British Airways (BA) announced it would give passengers the chance to do their bit for the planet by letting them pay a few pounds extra on every ticket and use the money to offset the carbon emissions from their trip. Last week the airline admitted that, so far, hardly anybody seems interested, with fewer than 1 in 200 passengers willing to cough up. That sits oddly with people's professed anxiety in polls about climate change (Economist, 2005, p.34).

The dilemma is deep in its essence: despite growing global awareness of environmental and ecological issues, we, as consumers are not prepared to take serious action to confront the consequences of our consumption actions. What are the roots of this dilemma? The answer lies in a dominant cultural form which is propagated as a whole through communication. This cultural form indicates that sustainability is used to create meaning in a particular way. This way entails consistent commitment to unsustainable actions as a basis for becoming sustainable, and also it entails failure to consider sustainability issues when they do not contribute to achieving financial goals. The same form is repeated by consumers. If corporations fail to act in a real sustainable way, why should they expect customers to act differently? However, neither corporations nor customers are to be blamed for bad choices. The cultural form is circulated in society, as a vicious circle, the end or the beginning of which is impossible to recover. The only hope for any agent in this system is to transcend beyond this circle to be able to see the problematic nature of cultural education. The transcendence beyond the vicious circle is education too, but it is of a different kind.

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AUTHOR PROFILES:

Dr. Djavlonbek Kadirov is a PhD student at Waikato Management School, the University of Waikato, and also a marketing lecturer at the Eastern Institute of Technology (EIT), Hawke's Bay, New Zealand.

Ms. Arti Triveni worked as a Sales Rep for the Lloyds of London, Editor of the AFRAS Journal at the University of Sussex, Associate Director of the US Peace Corps, Programme Manager for the Human Development Unit of the United Nations Development Programme, and as Lecturer at the University of the South Pacific and AUT. Currently she is a senior academic staff member at EIT Hawke's Bay, New Zealand.

Dr. Richard Varey is Professor of Marketing at Waikato Management School, the University of Waikato. He is Editor of the Australasian Marketing Journal, former Editor of the International Journal of Applied Marketing, and a member of the editorial boards of Marketing Theory, the European Journal of Marketing, the Journal of Communication Management, the Journal of Marketing Communications, the Corporate Reputation Review, the Journal of Management Development, and the Atlantic Journal of Communication.

INDUSTRY CONCENTRATION AND PRICE IN A POST-COMMUNIST ECONOMY

Gennadi Kazakevitch, Monash University, Melbourne, Australia
Grigoriy Edel, Moscow State University, Moscow, Russia

ABSTRACT

The paper concerns with the impact of industry concentration, in an emerging post-communist market, on increase in price for a homogenous product. It is assumed that even if the technology is homogenous across the industry, concentration may cause competitive advantage, based on market power, economies on distribution infrastructure and/or the scale of contracts. An analytical framework, based on the price leadership theory, is used for separating the industry concentration component of increase in price from the factor price component. Using the example of the cement industry in Russia, it is empirically confirmed, that increasing industry concentration takes increasing proportion in price hike.

Keywords: Industry Concentration; Price Leadership; Post-Communist Transformation.

1. INTRODUCTION

Price-output inefficiency in non-perfectly competitive market structures, compared to perfectly competitive markets, is a theoretically well established phenomenon. Meanwhile, quantification of to what extend industry concentration affects market price generally is an enormously difficult task for the reasons of both variety factors determining price and availability of reliable data on industry concentration. There is a well known literature, such as Dickson (1991 and 2005), attempting to measure a positive relationship between the industry concentration and price, particularly in US manufacturing. The main focus in the literature is, however, on separation of the effect of concentration from the efficiency factor. Furthermore, in the case of Northern America, analysis is normally applied to established and rather stable market structures, where the dynamics of concentration is hardly observable.

Meanwhile, in the post-communist Russia, such sectors of the economy as the cement industry appear to be pure laboratory cases for the empirical verification of the impact of industry concentration on increase in price for industry's product. Firstly, the cement industry is homogenous both in terms of its product and technology used. Secondly, almost all the cement plants in Russia were privatised in early 1990s and after privatisation initially operated as independent commercial entities. Until most recently, the industry operated below its capacity (established during the Soviet time) as a result of a very depressed level of the economy and its construction sector at the beginning of market transformation and subsequent gradual recovery. That is why no investment in the production capacity was needed during the recent 15 years. Thirdly, during the same period, the industry structure has spontaneously transformed from being competitive to a stage in concentration which can be characterised as an oligopoly. Finally, this industry in Russia is characterised by a very simple cost structure, where the bulk of the costs include electricity and gas, which are the two essential components of the production technology. Meanwhile, labour costs are not so important in this industry, especially considering high level of unemployment in 1990s-early 2000s.

A specialised model is suggested of price leadership, based on both the concepts originating from Markham (1951) and Oxenfeldt, (1952), and theoretical analysis – from Stigler (1947) and Ono (1982), The model is reduced to a quantifialble equation, which is is empirically tested and statistically significant results confirming a strong positive relationship between industry concentration and price is obtained.

2. THE MODEL

The model is based on the price leadership theory. According to the theory, dominant firm (or a group of collusive dominant firms) establish price and output at a particular level, leaving a particular market share to followers. The followers, then, close the gap between the production capacity of the leader and the capacity of the market.

The industry-specific leader's cost function is

$$C_l(x_l) = C(x_l) - \gamma(g) = a_1 p_1 + a_2 p_2 + \sigma(x_l) - \gamma(g) \tag{1}$$

where $a_1 p_1 + a_2 p_2$ is the energy and gas cost component, a_1 and a_2 are parameters uniformed across the industry due to unformed technology; p_1 and p_2 - prices for gas and electricity; x_l - leader's volume of production; g - industry concentration variable; $\sigma(x_l)$ - the scale of operations component, uniformed for the industry; and $\gamma(g)$, $(\gamma'(g) > 0)$ – cost reducing concentration component.

Assuming a special case of linear functions

$$\sigma(x_l) = s_1 x_l + s_0 \quad \text{and} \quad \gamma(g) = q_1 g + q_0, \tag{2}$$

where s_0, s_1, q_0, and q_1 are constant parameters, (1) is transformed into

$$C_l(x_l) = a_1 p_1 + a_2 p + s_1 x_l - q_1 g + (s_0 - q_0) \tag{3}$$

Follower's average cost function differs to the leader's one with the concentration function component:

$$C_f(x_f) = a_1 p_1 + a_2 p_2 + \sigma(x_f). \tag{4}$$

where, x_f - followers' volume of production

Leader's marginal cost function is:

$$c_l(x_l) = \frac{d}{dx} x C_l(x_l) = x C_l'(x_l) + C_l(x_l), \tag{5}$$

or substituting (1) and (2) into (5):

$$c_l(x_l) = a_1 p_1 + a_2 p_2 + 2 s_1 x_l + s_0 - q_1 g - q_0 \tag{6}$$

Followers' marginal cost function is:

$$c_f(x_f) = \frac{d}{dx} x C_f(x_f) = x C_f'(x_f) + C_f(x_f) \tag{7}$$

Or, after substituting (2), and (3) into (7)

$$c_f(x) = a_1 p_1 + a_2 p_2 + 2 s_1 x_f + s_0 \tag{8}$$

Follower's supply function is its marginal cost function:

$$p = c_f(x_f) = a_1 p_1 + a_2 p_2 + 2 s_1 x_f + s_0 \tag{9}$$

or, in the Inverse form, -

$$x_f = c_f^{-1}(p) = \frac{1}{2 s_1} p - \frac{a_1}{2 s_1} p_1 - \frac{a_2}{2 s_1} p_2 - \frac{s_0}{2 s_1} \tag{10}$$

Leader's supply function is market demand less wiliness to supply by the follower at the price established by the leader:

$$x_l = d(p) - c_f^{-1}(p) \tag{11}$$

Assuming a linear market demand function

$$d(p) = d_0 - d_1 p; \quad d_1 > 0 \tag{12}$$

$$d'(p) = -d_1$$

And substituting (10) and (11) into (12):

$$x_l = d(p) - c_f^{-1}(p) = d_0 - (d_1 + \frac{1}{2s_1})p - \frac{a_1}{2s_1}p_1 + \frac{a_2}{2s_1}p_2 + \frac{s_0}{2s_1} \tag{13}$$

Leader maximizes profit:

$$\pi_l(p) = p x_l - x_l C_l(x_l) = p \cdot (d(p) - c_f^{-1}(p)) - C_l(d(p) - c_f^{-1}(p)) \cdot (d(p) - c_f^{-1}(p)) \tag{14}$$

First order maximization condition is then:

$$\frac{d}{dp}\pi_l = d(p) - c_f^{-1}(p) + p \cdot (d'(p) - c_f^{-1}{}'(p)) - C_l(d(p) - c_f^{-1}(p)) \cdot (d'(p) - c_f^{-1}{}'(p)) - $$

$$-(d'(p) - c_f^{-1}{}'(p))^2 C_l'(d(p) - c_f^{-1}(p)) = 0 \tag{15}$$

Substituting first derivative of (10), as well as (13) into (15):

$$x - \frac{1}{2s_1}p + \frac{a_1}{2s_1}p_1 + \frac{a_2}{2s_1}p_2 + \frac{s_0}{2s_1} - p(d_1 + \frac{1}{2s_1}) - $$

$$+ (a_1 p_1 + a_2 p_2 + s_1 x_l + s_0 - qg - q_0) * (d_1 + \frac{1}{2s_1}) - \left[d_1 + \frac{1}{2s_1} \right]^2 s_1 = 0 \tag{16}$$

and then replacing x_l with (13), we obtain a linear equation:

$$x - \frac{1}{2s_1}p + \frac{a_1}{2s_1}p_1 + \frac{a_2}{2s_1}p_2 + \frac{s_0}{2s_1} - p(d_1 + \frac{1}{2s_1}) - $$

$$+ (a_1 p_1 + a_2 p_2 + s_1 x - \frac{1}{2}p + \frac{a_1}{2}p_1 + \frac{a_2}{2}p_2 + \frac{s_0}{2} \tag{17}$$

$$+ s_0 - qg - q_0) * (d_1 + \frac{1}{2s_1}) - \left[d_1 + \frac{1}{2s_1} \right]^2 s_1 = 0$$

Therefore, the assumptions of linear demand function (12), linear dependence between average cost and prices for energy and gas components (1), linear dependence on the scale of operations and concentrations allows for reducing first order profit maximization condition to the quantifiable linear form:

$$p = A_0 + A_1 p_1 + A_2 p_2 + A_3 g + A_4 x \tag{18}$$

where A_0, A_2, A_3 and A_4 are functions of the parameters of the initially assumed linear dependences.

3. SOME EMPIRICAL RESULTS AND CONCLUSIONS

The parameters of equation (18) are estimated using the cement industry's 1992-2005 quarterly data on cement production and prices as well prices for the main ingredients of cement production – gas and electricity. Since cement cannot be stocked for a period longer than a few months, industry's production time series can be used as a proxy for sales data. The Herfindahl (1950)-Hirschman (1945) index was directly calculated based on cement production per commercial entity data, and is used as a proxy for the industry concentration variable.

The difficulty of using "raw" product and factor price data is, however, due to hyperinflation in 1990s and two digit inflation during most of early 2000s. The inflation was, of course, incorporated in the price for cement, whereas the prices for energy and gas, even though were also rapidly increasing, were regulated and retained below the inflation rate. That is why it was necessary to deflate the original time series using the IMF estimate of average inflation in Russia in corresponding years.

The parameters of the model (18) are given in Table 1.

Table 1. Parameter Estimates

	Parameter	St Error
R^2	0.9876	0.01614
A_0	0.0324	0.0092
A_1	-0.1199	0.0230
A_2	0.8691	0.1077
A_3	0.1222	0.0136
A_4	-0.0046	0.0014

Table 2. The impact of industry concentration factor prices, and volume of production volume of production on the price for cement in Russia in 1992-2005

Year	The proportion of the impact on accumulated increase in price for cement of			
	accumulated increase in price for gas (%)	accumulated increase in price for energy (%)	the concentration factor (%)	accumulated increase in industry's volume of production (%)
1992	-39.8	131.3	15.5	-6.9
1993	-21.8	114.6	11.5	-4.3
1994	-20.8	109.9	15.1	-4.1
1995	-17.7	102.6	18.9	-3.8
1996	-17.4	101.2	19.5	-3.3
1997	-15.5	95.7	22.9	-3.2
1998	-14.0	89.3	28.3	-3.7
1999	-17.9	80.9	42.7	-5.7
2000	-8.8	78.6	35.5	-5.3
2001	-9.3	76.5	38.1	-5.4
2002	-11.2	81.9	34.8	-5.5
2003	-13.8	84.2	35.8	-6.1
2004	-12.2	76.9	41.4	-6.2
2005	-7.5	47.7	63.6	-3.9

A striking result is the negative value of A_1. However, this is easily interpretable, taking into consideration sharp decrease (!), due to regulation, in the price for gas, cleared from inflation. This means that in real terms the price for gas decreased compared to the purchasing power of ruble. The real price for energy has been also decreasing though at a lower rate than the one for gas. Meanwhile negative A_4 corresponds to the conventional neoclassical demand theory.

Table 2 represents the key finding of the paper with respect to the proportional impact of industry concentration, output, and prices for key factors on the product price. One can see, that

1. Negative contribution of the price for gas to the price for cement is decreasing in time.
2. The impact of the price for energy is GREATER than 100% which is an arithmetical paradox due to negative impact by other factors. This impact is decreasing in time.
3. The impact of concentration is INCREASING from 15 to 62-64%. This is an expected result and a very clear conformation of the textbook theory.
4. The impact of the volume of the output is relatively steady and minor.

In conclusion, the concentration of the cement industry, as well as some other initially privatised and competitive industries in Russia was not caused by the technological or competitive necessity. The scale of production beyond the plant size is not so important for efficiency of the cement industry, and the consumption of every plant's product is mostly local region based due to the limited transportability and short life of the product. Concentration, in this case, was caused by opportunistic taking over and mergers, comparable to monopolisation of key commodity industries in Western economies of XIX and early XX centuries before antitrust and anti-monopoly legislations were introduced. The considerable impact of concentration on price, empirically confirmed in this paper, is another proof of the importance of trade practices regulation, which has not been completely recognised yet in some of the post-communist countries.

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AUTHOR PROFILES:

Dr Gennadi Kazakevitch is Senior Lecturer in Economics at Monash University, Victoria, Australia. The areas of his research interests and publications include market structures, deregulation, competition, as well as economics of high technology and digital product markets.

Mr. Grigoriy Edel is a student in Economics at Moscow State University**,** Russia. This collaborative project was completed in 2006, when Grigoriy was visiting Monash University (Victoria, Australia) for pursuing his research skills in contemporary applied microeconomics under Dr Kazakevitch's supervision.

THE COST OF THE EQUITY CAPITAL AND THE CAPM

Sang-Hoon Kim, Montclair State University, Montclair, New Jersey, USA

ASTRACT

The cost of equity capital is the most difficult cost to be estimated. The capital asset pricing model (CAPM) is frequently used for the estimation. In addition, MM's (Modigniali and Miller, 1958 & 1963) proposition II can be used for the derivation along with the CAPM. However, the two methods provide different estimates, if the CAPM is not properly used. MM proposition II provides an useful guideline how the CAPM model should be used to derive an appropriate estimate of the cost of equity capital.

Keywords: *Cost of Equity Capital, CAPM, MM's Proposition II, Weighted Average Cost of Capital.*

1. INTRODUCTION

In estimating the weighted average cost of capital (WACC, Miles & Ezzell, 1980), the cost of equity is the most difficult cost to be estimated. Among other methods, the capital asset pricing model (Sharpe, 1964 & Lintner, 1965) is widely used for the estimation of the cost of equity.

$$E(R_i) = R_f + (E(R_m) - R_f)\beta_i \tag{1}$$

Where $E(R_i)$ = the expected return on ith stock, R_f = risk-free interest rate, and β_i = systematic risk of ith stock. $E(R_i)$ obtained from the above capital asset pricing can be used as the cost of equity. However, if debt is used, the β should be adjusted because β is affected by financial leverage. An example will be used for the illustration.

1.1 Example (pp. 496, Corporate Finance, 8th edition, Ross, Westerfield, McGraw-Hill, 2008)
"World-Wide Enterprises (WWE) is thinking of entering the widget business, where it plans to finance projects with a debt-to-equity ratio of ⅓. There is currently one firm in the widget industry, American Widgets (AW). This firm is financed with 40% debt and 60% equity. The beta of AW's equity is 1.5. AW has a borrowing rate of 12%, and WWE expects to borrow for its widget venture at 10%. The corporate tax rate for both firms is .40, the market risk premium is 8.5%, and the riskless interest rate is 8%. What is the appropriate discount rate for WWE to use for its widget venture?"

The example can be summarized as follows:
 a. WWE: debt-to-equity ratio(V_D/V_E) = 1/3 → Debt-to-value ratio (V_D/V_A) = ¼ and (V_E/V_A) = ¾.
 b. WWE: cost of debt (K_{DWWE}) = 10% and tax rate (T_{CWWE}) = 40%.
 c. AW: debt-to equity ratio = 2/3, cost of debt (K_{DAW}) = 12%, tax rate(T_{CAW})= 40%, and equity Beta (β_{EAW}) = 1.5.
 d. The market risk premium ($E(R_m) - r_f$) = 8.5%, the risk-free interest rate (r_f) = 8% → the expected market return $E(R_m)$ = 16.5% and CAPM: $E(r_i) = r_f + (E(R_m) - r_f)\beta_i = 8 + 8.5 \beta_i$.

2. DERIVATION OF THE COST OF EQUITY AND WACC BASED ON CAPM

For the derivation, the following equations (See Corporate Finance, RWJ, pp. 501 equation (17.4) and pp. 502 equation (17.5)) need to be used:

$$\beta_{LE} = \beta_{UL} \left(1 + \frac{V_D (1-T_C)}{V_E}\right) \tag{2}$$

$$\beta_{UL} = \frac{V_E}{V_E + V_D(1-T_C)} \beta_{LE} \tag{3}$$

where β_{LE} = beta of a levered firm and β_{UL} = beta of an unlevered firm.

Using Equations (2) and (3), and the information provided, β_{UL} and β_{LEWWE} can be derived as:

$$\beta_{UL} = \frac{V_E}{V_E + V_D(1-T_C)} \beta_{LE} = \frac{3}{3 + 2(.60)} 1.5 = \frac{4.5}{4.2} = 1.071428571$$

This is the unlevered beta for AW, if it does not use any debt at all.

$$\beta_{LEWWE} = (1 + \frac{(1 - T_C)\text{Debt}}{\text{Equity}})\beta_{UL} = (1 + \frac{.60 \times 1}{3})1.071428571 = 1.628571428$$

This is the levered beta for WWE, to be used to assess the widget project. Now, using the CAPM, the cost of equity capital of WWE (K_{EWWE})and the $WACC_{WWE}$ can be found as:

$$K_{EWWE} = 8 + 8.5 \times 1.628571428 = 21.84285714$$

$$WACC_{WWE} = (V_D/V_A)K_D (1 - T_C) + (V_E/V_A)K_E = (1/4)(10)(1 - .40) + (3/4)21.84 = 17.88\%$$

3. DERIVATION OF THE COST OF EQUITY AND BASED ON MM'S PROPOSITION II AND CAPM

a. The first step is to find AW's cost of equity capital using the capital asset pricing model based on the market information provided: AW's cost of equity (K_{EAw}) = 8 + 8.5(1.5) = 20.75%.
b. Second, find AW's cost of equity capital when $V_D = 0$ using MM's proposition II:

$$K_E = K_{AUL} + (K_{AUL} - K_D)(V_D/V_E)(1 - T_C) \tag{4}$$

where K_{AUL} = the cost of the overall capital of an unlevered firm.

Using equation (4) and the information provided, K_{AUL} can be derived as:

$$20.75 = K_{AUL} + (K_{AUL} - 12)(2/3)(1 - .40) \rightarrow K_{AUL} = 18.25\%.$$

The solution implies that if both firms (WWE and AW) do not use any debt, their K_{AUL} = 18.25%.
c. Third, find the cost of equity capital for WWE (K_{EWWE}) using equation (4):

$$K_{EWWE} = K_{AUL} + (K_{AUL} - K_D)(V_D/V_E)(1 - T_C) = 18.25 + (18.25 - 10)(1/3)(1 - .40) = 19.9\%$$

d. Finally, find WWE's weighted average cost of capital ($WACC_{WWE}$):

$$WACC_{WWE} = (V_D/V_A)K_D (1 - T_C) + (V_E/V_A)K_E = (1/4)(10)(1 - .40) + (3/4)19.9 = 16.425\%$$

These solutions (K_{EWWE} = 19.9% and $WACC_{WWE}$ = 16.425%) are different from the one (19.9%) derived based on the CAPM where K_{EWWE} = 21.84285714 and $WACC_{WWE}$ = 17.88%.

4. THE PROBLEMS OF THE CAPM APPROACH

The problem originates in the fact that equations (2) and (3) are derived under the assumption that the beta value of corporate debt (bonds) is zero. It should be noted that corporate borrowing rates (bond yields) are also affected by companies' earning prospects which are sensitive to changes in both

systematic and unsystematic factors. Theoretically, if the beta of corporate debt (bond) is zero, then the borrowing rate (bond yield) should be the same as the risk free interest rate. Consequently, equations (2) and (3) should be derived under the assumption that the beta of corporate debt is not zero. It can be shown that when the beta of corporate debt is not zero, equations (2) and (3) can be derived as: (See pp. 501, footnote, Corporate Finance, 8th edition, 2008):

$$\beta_{LE} = \beta_{UL} + \frac{V_D}{V_E}(\beta_{UL} - \beta_D)(1 - T_C) \tag{2B}$$

$$\beta_{UL} = \frac{V_E\beta_{LE} + (1 - T_C)V_D\beta_D}{V_E + V_D(1 - T_C)} \tag{3B}$$

Using Equation (3B), and the information provided for AW, β_{UL} and β_{LEWWE} can be derived. However, first, the implied beta value (β_D) of debt for both AW and WWE need to be derived based on the CAPM at their respective borrowing rates of 10% and 12%:

$$10\% = 8 + 8.5\beta_{DWWE} \rightarrow \beta_{DWWE} = \frac{10 - 8}{8.5} = .235294117647$$

$$12\% = 8 + 8.5\beta_{DAW} \rightarrow \beta_{DAW} = \frac{12 - 8}{8.5} = .470588235294$$

$$\beta_{UL} = \frac{V_E\beta_{LE} + (1 - T_C)V_D\beta_D}{V_E + V_D(1 - T_C)} = \frac{3(1.5) + (1- .40)(2)(.470588235294)}{3 + 2(1- .40)} = 1.205882353$$

$$\beta_{LEWWE} = \beta_{UL} + \frac{V_D}{V_E}(\beta_{UL} - \beta_{DWWE})(1 - T_C) = 1.205882 + (1/3)(1.205882 - .235294117647)(1- .40) = 1.4$$

From the CAPM, $K_{EWWE} = 8 + 8.5 (1.4) = 19.9\%$. This is the same value derived using MM's proposition II. Therefore, the WACC$_{WWE}$ should be the same:

$$WACC_{wwe} = \frac{V_D}{V_A}K_D(1 - T_C) + \frac{V_E}{V_A}K_E = \frac{1}{4}10(1 - .40) + \frac{3}{4}19.9 = 16.425\%$$

5. CONCLUSION

It is shown that when deriving the cost of the equity capital and WACC based on the CAPM, the beta value of corporate debts should not be assumed to be zero. Otherwise, the WACC derived from both approach cannot be the same. When deriving the WACC based on the CAPM, finance text books implicitly assume that the beta of corporate borrowing is zero. However, by comparing the two approaches, it is obvious that the incorrect cost of equity is derived if the equity beta is derived under the assumption that the beta of corporate debt is zero. It should be noted that MM's proposition II provides a valuable guideline how the CAPM should be used to derive the cost of equity capital and WACC.

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AUTHOR PROFILE:

Dr. Sang-Hoon Kim earned his Ph.D. at the University of Wisconsin, Madison in 1979. Currently he is a professor of finance at Montclair State University.

COMPUTERS AND IT&C IN HOTEL'S ACTIVITY

Liciniu A. Kovács, Babeş-Bolyai University, Cluj-Napoca, Romania
Cristian I. Chifu, Babeş-Bolyai University, Cluj-Napoca, Romania
Veronica R. Rus, Babeş-Bolyai University, Cluj-Napoca, Romania

ABSTRACT

Computers and IT&C have become very popular and transformed all business operations, including hotel and other accommodation facilities. "Internet facility has become a vital factor for the guest in the selection of hotel for his/her stay" (Harish Chandra, 2007). Since time has become such a precious resource and data accuracy is more and more needed for efficient decision processes, it is expected that hotels implement the information technology on a large scale. This paper is focused on research about the utilization of information and communication technology in the hotel activity. The research uses a classical questionnaire, spreadsheets, and statistical tools and has been carried out in order to enhance the content of our faculty's education materials in the field of IT&C. We now speak about "the art of computer usage" (Kovács et al., 2006); in this sense, special importance is given to finding out and understanding how hotels use their endowment. We conclude that the large majority of hotels have websites but the utilization of computers and IT&C is still at a low level in Romania.

Keywords: hotel industry, exploratory research, IT&C, statistical analysis

1. INTRODUCTION

In 2007, our Faculty of Business carried out some research about time management and how hotel managers organize their time. The final conclusion shows that "hotel managers spend on average 9.65% of their time supervising activities in the hotel and 10.35% for administrative matters. A hotel manager spends a large amount of time – 22.78% of their time – in different types of meetings. We also consider that managers spend too much time reading e-mails, surfing the Internet and talking on the phone. As our study indicates, they use 14.44% of their time for these activities, instead of allocating more time for developing their business. The average time for sleep obtained in our study is very close to the normal average value of 7 hours per day. Based on the results of our research we can conclude that managers need to attend time management courses in order to increase the efficiency and effectiveness of their managerial activity (Kovács et al., 2007).

Starting from the conclusions of the research mentioned above and some observation of the Romanian hospitality market, we have done further research in order to find out how computers and IT&C are used in the hotel activity. This new research has a social relevance as it will provide more data to include in the courses for our students, especially as our curricula for Business Administration in Hospitality Industry are to be accredited. The results will also be used in the short courses provided for the local community of hotel managers. The research has a scientific relevance, being the first of this kind in our faculty and among the few existing in our country. Also, in the near future, we will try to correlate the utilization of IT&C in the hotel activity and the time management by hotel managers.

Objective: to conduct an exploratory and quantitative research in order to find out how hotels from Romania (Cluj county) use their computers and the IT&C.

Methods: We sent a total of 56 paper-based questionnaires to the accommodation facilities (hotels, motels, etc.) in the Cluj county; the name and addresses of these accommodation facilities were found in the yellow pages of Cluj Telephone Directory. After receiving 33 successfully completed answers (successfully completed answers were obtained at the end of January and the beginning of February 2008), the sets of data were placed in a centralized Microsoft Excel worksheet. The statistical analysis was conducted in Statgraphics software package. Among other topics, we were interested in the following:

- The numbers of computers bought or received from donations in 2008, 2007, 2006, 2005, 2004, 2003 and earlier;
- The equipment (copy machines, PCs, laptops, Apple Macintoshes, web cams, modems, printers, and scanners) owned and intended to be bought until the end of year 2008;
- The software packages (operating systems, office suites, DBMSs, Internet browsers, and antivirus packages) used in the computers;
- The hotel's preferences for certain suppliers (manufacturer and processor) of new computers (with arguments);
- The factors that influence the choice of IT&C suppliers;
- The availability of a website in hotels, motels, or pensions;
- The preferred Internet provider;
- The impact of IT&C on the activity;
- The number of computers installed at the front desk, in conference rooms, hotel rooms, and other places;
- The software package for reservation management.

2. STATISTICAL ANALYSIS

Although we sent a number of 56 questionnaires, we received only a total of 33 correctly completed questionnaires. We conducted the statistical analysis in Statgraphics, where we obtained 18 frequency tables or summary statistics and the appropriate interpretations (sample mean, standard error). Using sample means we tried to obtain some results at the population level – accommodation facilities from a larger area e.g. Transylvania/Romania (lower limit and upper limit). Due to space limitations, only the first situation is reproduced as screen capture in fig.1 and fig.2. For all the 18 situations, the levels of confidence are situated at 95%.

```
Summary Statistics


                  less2003            a2003               a2004
-------------------------------------------------------------------------------
Count             33                  33                  33
Average           0,878788            0,242424            0,666667
-------------------------------------------------------------------------------


                  a2005               a2006               a2007
-------------------------------------------------------------------------------
Count             33                  33                  33
Average           0,878788            1,81818             1,78788
-------------------------------------------------------------------------------


                  a2008
-------------------------------------------------------------------------------
Count             33
Average           0,484848
-------------------------------------------------------------------------------
```
FIG. 1 – SUMMARY STATISTICS FOR BOUGHT COMPUTERS (2008, …, 2003 AND EARLIER)

```
95,0 percent confidence intervals
--------------------------------------------------------------------------------
                          Mean      Stnd. error   Lower limit    Upper limit
--------------------------------------------------------------------------------
less2003              0,878788       0,495735      -0,130993       1,88857
a2003                 0,242424       0,0976068      0,0436053      0,441243
a2004                 0,666667       0,248734       0,160011       1,17332
a2005                 0,878788       0,388659       0,0871133      1,67046
a2006                  1,81818       0,367873       1,06885        2,56752
a2007                  1,78788       0,300749       1,17527        2,40049
a2008                 0,484848       0,163538       0,151732       0,817965
--------------------------------------------------------------------------------
```

FIG. 2 – THE CONFIDENCE LIMITS FOR BOUGHT COMPUTERS

2.1. Bought computers (2008, 2007,…, 2003 and earlier)

The analysis shows that the average number of computers to be bought by the hotel managers in 2008 is between 0.15 and 0.81 which means that, even if they consider computers as being very important for their businesses, they do not want to spend great amount of money on them (fig.2 and fig.3).

2.2. Equipment owned

The analysis of the equipment owned shows that the managers consider IT facilities very important but that they, as above, did not want to spend great amount of money on them (table 1).

TABLE 1 – 95.0% CONFIDENCE INTERVALS FOR OWNED KIND OF EQUIPMENT

	Mean	Standard error	Lower limit	Upper limit
Copy machines	1.24242	0.16301	0.91038	1.57447
PCs	3.69697	0.60847	2.45755	4.93639
Laptops	0.90909	0.18134	0.53970	1.27848
Apple Macintoshes	0.06060	0.06060	0.06284	0.18405
Web cams	0.54545	0.15132	0.23721	0.85369
Modems	0.18181	0.50274	0.79411	2.84225
Printers	2.18182	0.34938	1.47013	2.89350
Scanners	1.00000	0.13762	0.71967	1.28032

Using the results from the sample, we can see that, for example, the average number of laptops for a hotel is between 0,53 and 1,27.

2.3. Intention to buy new equipment until the end of year 2008

The analysis for the intention to buy new equipment shows that the managers consider it as being very important but they, as above, do not want to spend great amount of money on it (table 2).

TABLE 2 – 95.0% CONFIDENCE INTERVALS FOR INTENTION TO BUY NEW EQUIPMENT

	Mean	Standard error	Lower limit	Upper limit
Copy machines	0.12121	0.07226	0	0.26841
PCs	0.24242	0.16301	0	0.57446
Laptops	0.24242	0.15709	0	0.56241
Apple Macintoshes	0.03030	0.03030	0	0.09202
Web cams	0.06060	0.06060	0	0.18405
Modems	0.06060	0.04218	0	0.14652
Printers	0.12121	0.05769	0	0.23873
Scanners	0.06060	0.04218	0	0.14652

2.4. Operating systems

The analysis and the data from table 3 show that the percentage of the hotels which use one or another operating system is between:
- Linux: 2.22% - 19.23%
- Windows '98:   2.22% - 19.23 %

- Windows 2000:   5.81% - 26.73%
- Windows XP: 41.25% - 70.00%
- Windows Vista: 5.81% - 26.73%

TABLE 3 – FREQUENCY TABLE FOR OPERATING SYSTEMS

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Linux	4	0.0800	4	0.0800
2	Windows '98	4	0.0800	8	0.1600
3	Windows 2000	7	0.1400	15	0.3000
4	Windows Vista	7	0.1400	22	0.4400
5	Windows XP	28	0.5600	50	1.0000

2.5. Office suites

The analysis and the data from table 4 shows that the percentage of the hotels which use one or another office suite is between:

- Corel WordPerfect: 4.93% - 26,25%
- OpenOffice.org (Windows):   6.34% - 28.87%
- OpenOffice.org (Linux):   1.36% - 17.89%
- Microsoft Office: 49.75% - 78.64%

Despite it was very popular, there is no hotel to use an office suite from Lotus Development.

TABLE 4 – FRECVENCY TABLE FOR OFFICE SUITES

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Corel WordPerfect	6	0.1304	6	0.1304
2	Microsoft Office	30	0.6522	36	0.7826
3	OpenOffice.org (Linux)	3	0.6552	39	0.8478
4	OpenOffice.org (Windows)	7	0.1522	46	1.0000

2.6. Data base management systems (DBMSs)

The analysis and the data from table 5 show that the percentage of the hotels which use one of another DBMS is between:

- FoxPro: 20.21% - 52.54%
- Access: 1.70% - 21.91%
- Oracle: 15.87% - 46.98%
- Paradox: 0.06% - 14.15%
- SQL: 4.32% - 28.33%
- dBASE: 3.02% - 25.41%

TABLE 5 – FREQUENCY TABLE FOR DBMSs

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	FoxPro	13	0.3514	13	0.3514
2	Access	3	0.0811	16	0.4324
3	Oracle	11	0.2973	27	0.7297
4	Paradox	1	0.0270	28	0.7568
5	SQL	5	0.1351	33	0.8919
6	dBASE	4	0.1081	37	1.0000

2.7. Internet browsers

The analysis and the data from table 6 show that the percentage of the hotels which use one of another internet browser is between:

- FireFox: 25.76% - 54.72%
- Internet Explorer: 33.28% - 62.81%

- Opera: 4.72% - 25.24%

TABLE 6 – FREQUENCY TABLE FOR INTERNET BROWSERS

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	FireFox (Mozilla)	19	0.3958	19	0.3958
2	Internet Explorer	23	0.4792	42	0.8750
3	Opera	6	0.1250	48	1.0000

2.8. Satisfaction

The analysis and the data from table 7 show that the percentage of the employees who are satisfied by the IT facilities is between 68.10% and 94.89%.

TABLE 7 – FREQUENCY TABLE FOR SATISFACTION

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Satisfied	28	0.8485	28	0.8485
2	Not satisfied	5	0.1515	33	1.0000

2.9. Usefulness

The analysis and the data from table 8 show that the percentage of de employees who consider IT&C as being useful is between 75.66% and 98.08%.

TABLE 8 – FRECVENCY TABLE FOR USEFULNESS

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Useful	30	0.9091	30	0.9091
2	Not useful	3	0.0909	33	1.0000

2.10. Easiness

The analysis and the data from table 9 show that the percentage of de employees who consider IT&C as being easy to use is between 94.24% and 99.92%.

TABLE 9 – FREQUENCY TABLE FOR EASINESS

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Easy	32	0.9697	32	0.9697
2	Not easy	1	0.0303	33	1.0000

2.11. Manufacturer

The analysis and the data from table 10 indicate that the percentage of the hotels that choose one or another manufacturer is between:

- Apple Macintosh   0.06% - 13.50%
- Asus Tek   0.62% - 17.32%
- Compaq   5.85% - 30.52%
- Dell   13.03% - 42.12%
- Fujitsu-Siemens   0.06% - 13.50%
- Hewlett-Packard   5.85% - 30.52%
- IBM   13.03% - 42.12%
- Toshiba   1.61% - 20.86%

TABLE 10 – FREQUENCY TABLE FOR MANUFACTURER

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Apple Macintosh	1	0.0256	1	0.0256
2	Asus Tek	2	0.0513	3	0.0769

			Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
3	Compaq	6	0.1538	9	0.2308
4	Dell	10	0.2564	19	0.4872
5	Fujitsu-Siemens	1	0.0256	20	0.5128
6	Hewlett-Packard	6	0.1538	26	0.6667
7	IBM	10	0.2564	36	0.9231
8	Toshiba	3	0.0769	39	1.0000

2.12. Processor

The analysis and the data from table 11 show that, in the case of a new hardware (computer) acquisition the preferred processor manufacturer is INTEL. The percent of accommodation facilities (hotels, motels, pensions, etc.) where INTEL processors are preferred is between 53.69% and 85.36%. AMD processors are preferred between 26.84% and 42.68%.

TABLE 11 – FREQUENCY TABLE FOR PROCESSOR

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	AMD	10	0.2857	10	0.2857
2	INTEL	25	0.7143	35	1.0000

2.13. System engineer

The analysis and the data from table 12 show that between 20.39% and 54.87% of the hotels have a system engineer.

TABLE 12 – FREQUENCY TABLE FOR SYSTEM ENGINEER

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Have system eng.	12	0.3636	12	0.3636
2	Don't have system eng.	21	0.6364	33	1.0000

2.14. Internet provider

The analysis and the data from table 13 show that the percentage of the hotels that have UPC as Internet provider is between 23.14% and 56.53%. Romtelecom, is situated on the second position.

TABLE 13 – FREQUENCY TABLE FOR INTERNET PROVIDER

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Astral Telecom	1	0.0278	1	0.0278
2	Euroweb	1	0.0278	2	0.0556
3	MaxNet	1	0.0278	3	0.0833
4	Don't have	1	0.0278	4	0.1111
5	Orange	2	0.0556	6	0.1667
6	RDS	1	0.0278	7	0.1944
7	Romtelecom	12	0.3333	19	0.5278
8	StarNet	2	0.0556	21	0.5833
9	UPC	14	0.3889	35	0.9722
10	Other providers	1	0.0278	36	1.0000

2.15. Website

The analysis and the data from table 14 show that between 63.77% and 91.23% of the accommodation facilities have a website.

TABLE 14 – FREQUENCY TABLE FOR WEBSITE

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Have website	27	0.8182	27	0.8182
2	Don't have website	6	0.1818	33	1.0000

2.16. Importance of IT&C in the hotel activity

The analysis and the data from table 15 show that between 39.21% and 74.52% consider that IT&C facilities are very important for the hotel's activity.

TABLE 15 – FREQUENCY TABLE FOR IMPORTANCE OF IT&C IN A HOTEL'S ACTIVITY

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Very important	19	0.5758	19	0.5758
2	Important	10	0.3030	29	0.8788
3	Neutral	3	0.0909	32	0.9697
4	Less important	1	0.0303	33	1.0000

2.17. Installed computers

The analysis and the data from table 16 show that the average number of computers that the hotels have is between:

- Front desk   1.20 - 1.88
- Conference rooms   0.35 - 0.85
- Hotel rooms   0.00 - 0.51

TABLE 16 – 95.0% CONFIDENCE INTERVALS FOR INSTALLED COMPUTERS

	Mean	Standard error	Lower limit	Upper limit
Front desk	1.5454	0.1690	1.2010	1.8898
Conference rooms	0.6060	0.1226	0.3562	0.8558
Hotel rooms	0.6969	0.4000	0.0000	0.5117

2.18. Software packages for reservation management

The analysis and the data from table 17 show that between 13.29% and 45.52% of the hotels use Fidelio as a software package for reservation management.

TABLE 17 – FREQUENCY TABLE FOR RESERVATION MANAGEMENT

Class	Value	Frequency	Relative Frequency	Cumulative Frequency	Cum. Rel. Frequency
1	Other software packages	5	0.1515	5	0.1515
2	CLASSOFT	4	0.1212	9	0.2727
3	FIDELIO	9	0.2727	18	0.5455
4	IDEAL HORECA	1	0.0303	19	0.5758
5	MEDALION	3	0.0909	22	0.6667
6	MENTOR	1	0.0303	23	0.6970
7	Don't use	5	0.1515	28	0.8485
8	WinFro Hostware	5	0.1515	33	1.0000

3. CONCLUSIONS

In our research, we chose to use a classical questionnaire because the e-mail based research is unfamiliar in Romania (Kovács et al., 2007). The research shows that:

- more than 51% of existing computers were bought in 2006 and 2007;
- about 13% of the computers were bought earlier than 2003;
- the hotels use various applications for different operational areas – these applications are separate and operate on different operating systems;
- the preferred operating system is Windows XP and the preferred office suite is Microsoft Office;
- the preferred DBMS is FoxPro followed by Oracle. FoxPro and dBase are used mainly because the accounting systems are based on these DBMS. We mention the fact that most of the interviewed persons founded difficult to specify the DBMS used in their activity. We consider that the questioned persons have low level of knowledge in database systems.

- the IT&C is considered as being very important as it gives satisfaction, is useful and easy to use but the managers do not want to spend a great amount of money on it;
- the preferred computer manufacturers (with Intel processor) are Dell and IBM;
- more than 81% of the accommodation facilities have websites;
- the preferred internet provider is UPC followed by Romtelecom;
- there are a few numbers of computers installed in hotels (front desk, conference rooms, hotel rooms and other places);
- Fidelio is the preferred software package for reservation management.

Based on the results of our research we can conclude that the utilization of computers and IT&C in accommodation facilities is still at a low level in Romania.

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AUTHORS PROFILES:

Dr. Liciniu-Alexandru Kovács earned his Ph.D. (interdisciplinary studies) at Babeş-Bolyai University of Cluj-Napoca, Romania, Faculty of Psychology and Educational Sciences in 2000. Currently he is a professor of information technology and project management at the same university, Faculty of Business.

Dr. Cristian-Ioan Chifu earned his Ph.D. at Babeş-Bolyai University of Cluj-Napoca, Romania, Faculty of Mathematics and Informatics in 2004. Currently he is a professor of mathematics and statistics at the same university, Faculty of Business.

Ms. Veronica Rozalia Rus is a teaching assistant of information technology and lectures the Database Management Systems course at Babeş-Bolyai University of Cluj-Napoca, Romania, Faculty of Business.

WTO: IMPLICATIONS ON SMALL SCALE ENTREPRENEURS IN INDIA

Rajender Kumar, National Institute of Technology, Kurukshetra, Haryana, India

ABSTRACT

The WTO is bound to affect every economic activity - the small-scale sector is no exception. WTO Agreements and Negotiations have thrown up a variety of challenges. The disturbing factor is that most of the small units are unaware of these Agreements and Negotiations and have no idea as to how they are going to affect them. As is a known fact, the majority of small units are single man shows. They do not have the money, the expertise and the work force to deal with the situation. Even if they have in a few cases, they are mostly unaware of what is happening and what is to be done. Indian SSIs are at present incapable of visualizing things in their right perspective because they are technologically, financially, organizationally very weak as compared to global SMEs. Hence, we may have to redefine the SSI unit in tune with international SME definition so that SSIs are able to match them and become comparable with global SSIs. In fact, the SSIs should convert themselves into small-scale enterprises, which would include services. Investment based definition has often been found coming in the way of technology up-gradation Considering that the SSIs are vital constituent of the Indian economy, it becomes imperative to ensure their survival and growth in the changing global scenario. In the face of the increasing challenges from the emerging international trade regime, the SSIs will have to evolve a strategy that includes some of the suggestions discussed in this paper. Only a concerted effort from the SSIs, the Government of India and the governments of other developing countries can achieve this.

Key Words: WTO, SSIs, Entrepreneurs

1. INTRODUCTION

The New Economic Policy (NEP), coupled with the new international trade regime characterized by the World Trade Organization (WTO), ushered in an era of liberalization and globalization. In its wake, the Small Scale Industries (SSIs) lost the shield of protective policies and have been exposed to the onslaught of large organization and international competition., Besides, the opening up of the Indian economy has created an increased competition in the domestic market that has come to be governed by the Law of the Jungle- survival of the fittest. Fitness is defined as the ability to innovate or adapt to innovations. The strategy to survive and flourish will have to begin with a clear understanding of the nuances of the changes that are taking place, not only domestically but also globally. This paper attempts to delineate some of the pertinent issues in this regard.

There is no universal definition of small-scale industries. They are independently owned business setup with the objective of making a reasonable profit on investment. Generally, small-scale industries are defined based on one or more quantitative parameters such as the number of persons employed the annual turnover, or the level of investment. The Small Scale Industries, which are defined in terms of the investment limit in plant and machinery (Above Rs. 25 lacs to 5 Crores for SSI units) are a vital constituent of the Indian economy. Varying from tiny units (one- man shows) to units run by professionals and technocrats, they number about 31.20 lakhs, producing more than 7500 products. They provide employment to more than 29 million people, which is second only to agriculture. The production accounts for Rs. 4, 76,201 crores (current prices). The export from this sector is to the tune of Rs. 1,24,417 crores, which is about 34% of the total export.

The WTO is bound to influence every economic activity - the small-scale sector is no exception. WTO Agreements and Negotiations have thrown up a variety of challenges. The disturbing factor is that most of the small units are unaware of these Agreements and Negotiations and have no idea as to how they are going to affect them. As is a known fact, the majority of small units are single man shows. They do not have the money, the expertise and the work force to deal with the situation. Even if they have in a few cases, they are mostly unaware of what is happening and what is to be done.

Keeping in view the above facts, an attempt has been made to discuss in short the issues and challenges pertaining to the WTO and the SSIs.

2. GENERAL IMPLICATIONS OF WTO

> ➤ The impact of WTO and its Agreements is being felt on every economic activity, may it be agriculture, trading, service or manufacturing.

- World markets are opening up due to lowering of tariffs and protections are being dismantled.
- Developing countries will have greater opportunities in sectors in which they have cost based comparative advantages. .
- Export markets will become tougher because of competition among developing countries with similar comparative advantages.
- There is a wave for standardization-hence products from developing countries will face tougher quality standards.
- Every company will have to cost audit and compare with global markets.
- International Trade is increasingly becoming "knowledge based"
- Every aspect of trade has legal backing. Hence every unit must be legally aware and in a position to fight legally.
- The discipline implicit in the operations of the WTO system has given rise to escalating incidence in instances of anti-dumping, non-tariff barriers and other various forms of protectionist measures which a country can devise. There are charges and counter charges made on both sides and the common tenor of the criticism is that it is heavily loaded against the developing countries. For example, while 80% of the 152 members are developing countries, the balance of power and initiatives favor the developed nations comprising Europe, USA, Japan and Canada accounting for 85% of the world trade.
- WTO includes trade in services, which should be of growing importance to us in India. This sector is important as it is the fastest growing sector in the Indian economy and is mostly concentrated in the small-scale sector.
- The perspective under the WTO regime deserves to be understood against the background of our strengths and weaknesses. There are many information pertaining to WTO, which is available only with the Government, and only Government is in a position to negotiate as a member country in WTO. Hence, it is essential that Government should bring out clear guidelines to be followed by various segments of Indian economy, including the small-scale enterprises.

3. IMPLICATIONS OF WTO ON INDIAN SMALL SCALE ENTREPRENURES

The World Trade Organization has created some far-reaching implications for the SME sector in India, specifically with regard to their competitive ability and integration with the global market. Most of the problems arise due to the unorganized nature, lack of data and information, use of low technology and poor infrastructure in the country. WTO will affect all types of SSI units, whether catering to domestic market or international market. Following are some of the issues that are relevant for India, particularly from the point of View of small-scale sector, and need to be addressed appropriately to ensure that much needed protection to the Indian SSI units is provided:

3.1 Phasing out of Quantitative Restrictions

Indian Small Scale Sector will be adversely affected because:

- Not much has been done to improve their competitive strength. Pace of technological up gradation is slow. Present credit policy is not in favor of SSI as it provides costly credit to it as compared to non-SSI units.

- Industries suffer due to poor infrastructure e.g. power, communication.

- Obsolete laws, rules, regulations.

- Ignorance among small-scale entrepreneurs about implications of WTO provisions.

- NGOs are very weak, data-basis is poor and most of the units do not work in groups or clusters.

- Lack of international exposure.

In view of the removal of Quantitative Restrictions, the SSI Sector faces stiff competition for which modernization and technology up gradation must take place. Besides, setting up Technology Mission for 10-15 important products, a general program of interest subsidy for technology up gradation on the lines of Ministry of Textiles is launched. A separate market and export promotion center for Small Scale Entrepreneurs is created. SSIs should launch their own Market Development Assistance Fund that will help entrepreneurs take part in international exhibitions, conferences, etc.

3.2 Industrial Tariffs

Under the Marrakesh Protocol to GATT in 1994, member countries submitted schedules indicating their

commitments on tariff bindings. Indian SSIs have been provided some protection because they are hindered by some bottlenecks and have no access to economies of scales. As QRs have to be removed, the protection level by way of tariff is also likely to come down/India is committed to a ceiling tariff bindings of 40% on finished goods and 25% on intermediate goods, machinery & equipment. Although the tariff levels have already been reduced to a substantial extent over the last couple of years, international perception is that India have the highest levels. This brings another challenge for the SMEs, who suffer from high cost of in-efficiency and low support facilities such as good infrastructure. Indian SSIs may be uncompetitive even at the prevailing tariff levels.

It has been noticed that Japan levies specific duties while US levies a combination of ad-valorem and specific and/or differential duties, depending on the nature of distribution. There is a high incidence of tariff peaks, despite apparently low average tariffs to protect specific products. Against above background, it has been suggested that the Government should increase the tariff wherever there is scope up to at least 'bound' levels. Associations also oppose 'early harvest' concept and insist on a back loaded tariff reduction program. This should be in line with the reductions done by the developed countries.

FIEO has emphasized the need to protect the domestic small industries sector and has cautioned that various WTO Agreements, particularly those relating to market access, TRIPS and SPS (Sanitary & Phyto Sanitary) measures could adversely affect the SSI sector. Tariff reduction is likely to have its toll on the SSI sector as stiffer competition could emerge from the overseas market. To face this competition, the SSI sector needs to upgrade its technology and management skills. Nevertheless, for this to happen, technology transfer from the developed countries, without any technical & trade barriers would be a pre-requisite. India should push for bringing down tariff and non-tariff barriers so that Indian export could have unhindered access to the developed markets. Most of the WTO members levy import tariff on value added items. These items are mainly plastic polymer, castor oil, its derivatives etc., India should take-up the different levels of tariff structure in different countries.

3.3 Subsidy

While subsidies are not allowed, there are a few subsidies, which are listed as Permissible, Actionable Subsides, and there are others, which are Permissible Non Actionable Subsidies, also called Green Subsidies. Permissible Actionable Subsidies are those, which are permissible until they do not hurt the interests of other members. For example, a subsidy specific to an enterprise, group enterprises, industrial sector or designated geographical location, is permissible.

Permissible Non-Actionable Subsidies are those which are granted based on objective criteria that are economic in nature and horizontal in application and do not favor certain enterprises over others and are not specific. Importing countries cannot levy countervailing measures on Non-Actionable Subsidies. For example, subsidies given by the Government to Small and Medium Enterprises (SSIs) identified based on their size or number of employment would be non-actionable. All major subsidies such as DEPB Scheme, EPCG Scheme, and Income Tax Benefits under Section 80 HHC of Income Tax etc. are considered as "Actionable" subsidies. These are not prohibited subsidies, and, therefore, can be continued by the government. However, the importing country can take action (by way of imposing countervailing duty) if it feels that subsidized imports are causing injury to domestic industry. Indian industry should learn to be competitive without the present set of subsidies.

This is extremely difficult for the SMEs and perhaps the most serious challenge. Further, small enterprises should understand what is permissible and what is not. Normally, subsidies by Government to small enterprises are non-actionable. WTO pre-supposes an enterprise knows the implications of all provisions. In a country where 95% of SSI enterprises are tiny units, this 'knowledge' is a big question mark.

Heavy subsidies are being given to farmers in developed countries, which result in distortion in agricultural production and trade. India being an agrarian country, the government should target the export subsides and tread cautiously on opening the market for agricultural products as it could create adverse socio-economic effects.

The developed counties, especially E.U. & Japan account for over 85% of the total export subsidies given in the world. In fact, another study shows that export subsidy given by the E.U is more than the total exports of Latin America and Caribbean countries, which are major agri-exporters. So one objective of India, US and other countries like Australia, New Zealand, Brazil and South Africa will be to put pressure on E.U and Japan reduce government support to farm export which distort world prices.

3.4 Dumping/Anti-Dumping Practices

While domestic market is going to be fully exposed to external competition, the SMEs may have to be cautious against possible dumping by their competitors from abroad, which may be difficult to establish in many cases. What is also significant is that cost of anti-dumping investigations may be prohibitive for the SSIs. At the other end, anti-dumping charges by the importing counties may do serious damage to the export prospects as well. The SSIs would need to understand the challenges posed by the Agreement on Anti-Dumping Measures. SSIs in India are unable to defend or take counteractive measures primarily due to their ignorance, weak NGOs, lack of necessary data and problem of accessibility to information.

Indian Chemical Manufacturers' Association (ICMA) has pointed out that dumping is being done by the developed counties. Since the international prices at present have fallen, it is difficult to categories this as dumping. Phenol and Acetone are two major products where dumping has been proved to have been done in India.

The Association has proposed that a worldwide database or information system be created which will give information on cost structure of products in various countries. Alternatively, it should be made mandatory for each member country to provide free and Indian textiles, particularly grey cotton and garments, have come under antidumping investigations in the EU countries with the result that exports have declined sharply. Against the above backdrop, there is an urgent need to dissuade countries from initiating anti-dumping proceedings repeatedly when they are rejected. India should also impress upon WTO that in countries where textile items are subjected to QRs, imposition of anti-dumping duties is unjust

3.5 Non-Tariff Barriers

Increasingly, India and other developing countries are facing non-tariff barriers in trade. These include the 'the social clause' where goods made with child labor are penalized. For example, the US banned Indian Biddies on this ground. An investigative report on CBS TV entitled 'Tobacco slaves in India' prompted the US. Customs to suspend the import of Biddies produced by Mangalore Ganesh Works in Tamil Nadu. Earlier, carpet exporters were threatened with such action.

3.6 Market Access

Some may argue that brining down the tariff walls will not be in the country's interest. We need to realize that a proactive stand on this issue will get us higher market access globally. While agreeing to bring down our peak tariffs, we must also insist on the removal of peak tariff on items of Indian interests. For example, the US imposes a post Uruguay Round Tariff of 79% on raw cotton, 32% on T-Shirts, and 58% on footwear. There are several such items where India stands to gain and by taking a liberal stand on this issue, India can actually gain a lot in terms of market access. We may lose in certain areas, ,but it is important to note that India cannot gain a large share in the global market if it tries to keep the tariff high.

It is also opined that the imminent opening of agricultural markets in the South to imports will have catastrophic consequences. Developing countries lose $ 60 billion a year due to agricultural subsidies in the north and barriers on exports of textiles and garments.

On textiles, it has been noted that the back loading of items of export interest to India is being done by developed countries that have also been charged with backtracking on their obligations under the Agreement on Textiles & Clothing (ATC). Trade & Industry has suggested that the Government should ensure sincere implementation of provisions in favor of developing countries under the ATC.

3.7 Technical Regulations and Standards in TBT Agreement

Technical regulations and standards set out specific characteristics of a product such as its size, shape, design, function and performance, or the way it is labeled or packaged before it is put on sale. In certain cases, the way a product is produced can affect theses characteristics, and it may then prove more appropriate to draft technical regulations and standards in terms of a product's process and production methods rather than its characteristics per se. the TBT Agreement makes allowance for both approaches in the way it defines technical regulations and standards. The difference between a standard and a technical regulation lies in compliance. While conformity with standards is voluntary, technical regulations are by nature mandatory.
Regulations and standards related requirements generally create additional difficulties for SSIs because of their limited capacity to raise additional capital, managerial and technological constraints and costs of compliance. Difficulties faced by Indian small-scale sector:

- Limited awareness of emerging product standards in foreign markets.
- Incomplete knowledge of new processing options available to meet product standards.
- High levels of required investments in infrastructure, technologies and skill and of related costs needed to adjust production processes and assess compliance.
- Lack of domestic infrastructure and facilities to test against very strong standards.
- Standards and regulations not appropriately covering SSI products. Difficulties with establishing standards equivalence with trading partners. Scope of risk assessment procedures used to set standards being limited to avoiding negative impacts in importing country without adequate attention paid to assessing negative socio-economic impacts of such standards on exporting small-scale units.
- Insufficient opportunities to provide input into processes that develop regulatory and voluntary food safety standards.

3.8 Agreement on Sanitary and Phyto-Sanitary Measure

The SPS agreement allows countries to set their own food safety, animal, and plant health standards. At the same time, however, the SPS Agreement requires that such regulations be based on science, that they be applied only to the extent necessary to protect health, and that they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

Most of the India's standards are at par with international standards but still there is an apprehension that this may be used as an effective tool to deny entry of Indian products by other countries. This agreement would mainly affect agro based and dairy products. In the developed world, these are high standards, which are difficult to compile in developing countries like India due to the heavy investment involved. We are witnessing the pressure of developed counties to meet environment norms in the WTO agenda. For example, soft drink, which has been in the thick of the controversy regarding contamination by pesticide residues, also appears in the list of the rejected consignments. The UK had rejected a consignment of Indian soft drinks for presence of color sunset yellow-E-110. according to recent reports, the EU has rejected large consignments of hot chilli peppers, ground chilli, curry powder, south Indian curry powder, tandoori masala, spice mix, chilli sauce, spices containing chilli powder, dried apricots, Thompson seedless grapes, frozen prawns, whole washed cuttlefish, frozen squid tentacles, squids and strips of sqids, frozen raw peeled black tiger shrimps, black tiger shrimps skewer, black tiger shrimps (peeled and deveined), frozen prawn tails, frozen raw healess prawns, fish and meat seasoning, frozen baby octopus, egg powder, egg yolk powder, pasteurized spray dried hen, whole egg power and honey. Chilli products including curry powers, souce, and spices mixer rejected due to presence of color Sudan 1 and aflotoxins. Dried apricots were rejected as they were found to contain methomy1 and aflotoxins. Dried apricots were rejected as they were found to contain methomy1, monocrotophos, acephate, methomidophos and monocrolophos. Prawns, cuttlefish and squids were found to contain cadmium, salmonella, furazolidone, nitrofuran, nitrofurazone, mesophiles, cadmium, salmonella, furazolidone, nitrofuran, nitrofurazone, mesophiles, cadmium and vivrie cholerae. Fish and meat seasoning was found to contain color Sudan 1. Frozen baby octopus contained aerobic mesophiles. Eff and yolk powder were rejected as it contained nitrofuran, nitrofurazone, furazonlidone. Honey was found to contain nitrofuran.

There are instances of sub-standard products entering India unrecorded and in collaboration with customs officials and importers. To cite an example, the US trade data show grapes export to India to the tune of $ 3.2 million, whereas the data maintained by the Indian Government show grapes import from USA at $0.19 million only in 2002-03. Substantiating the poor quality of US grapes, as per CITA (Centre for International Trade in Agriculture and Agro-based Industries), the UK based international report said, "In USA, 206 pests are found in grapes while India has the lowest incidence of pests in grapes, which are only 150 in number."

3.9 Government Procurement

While the support of the Government is very important for the SSIs, it is also true that Government procurement often works against free trade. It is felt that this should be subject to multi-lateral rules within the WTO framework to ensure a level playing field. India has not signed this Agreement so far. However, US prohibit its purchasing agencies from buying from non-member countries of the Agreement.
In India, the Government is a large buyer.. For SMEs, Govt., is a big support as far as market is concerned. We are having two schemes for the SSIs i.e. price preference up to 15% over the quotations of large-scale units and the purchase preference in Government procurement, where 358 products manufactured in Small Scale Sector are reserved. These schemes are non-Statutory and are in the form of mere guidelines/instructions, having no legal binding. In case these schemes are challenged, SMEs who face marketing problems will be adversely affected. In the event of Multi-lateral Agreement, the market constituted by the Government may have to be opened up to foreign competition, and the system

will have to be more transparent.

4. THE CHALLENGES

The biggest challenge before Indian industry is to radically change its mindset. Industry cannot continue to survive behind high tariff barriers or non-tariff barriers like import licensing. It cannot hope to get subsidies from the Government indefinitely. Indian industry will have to be at par with the best in the world by raising their level of efficiency and competitiveness. Indian Industry now faces competition in the domestic market from multiple sources. Imported goods coming into the domestic market at lower import duties are offering stiff competition. Besides, MNCs having advantage of brand name and latest technology are producing goods for the domestic market.
Similarly, in the international market, Indian industry is faced with competition from newly industrialized developing countries in its neighborhood. It has also to face non-tariff barriers like environmental conditions, health, safety and technical standards from other advanced countries. Indian Industries, whether large or small, will have to pay special attention to (a) quality and (b) observance of environmental health, safety and technical standards.

5. CONCLUSION

Indian SSIs are at present incapable of visualizing things in their right perspective because they are technologically, financially, organizationally very weak as compared to global SMEs. Hence we may have to redefine the SSI unit in tune with international SME definition so that SSI, are able to match them and become comparable with global SSIs. In fact, the SSIs should convert themselves into small-scale enterprises, which would include services. An investment-based definition has often been found coming in the way of technology up gradation. Considering that the SSIs are a vital constituent of the Indian economy, it becomes imperative to ensure their survival and growth in the changing global scenario. In the face of the increasing challenges from the emerging international trade regime, the SSIs will have to evolve a strategy that includes some of the suggestions discussed in this paper. Only a concerted effort from the SSIs, the Government of India and the governments of other developing countries can achieve this.

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AUTHOR PROFILE:

Dr. Rajender Kumar is professor of Economics and Chairman Department of Humanities and Social Sciences, National Institute of Technology, Kurukshetra (Haryana) India. He completed his Ph.D. in Economics (1984) from IIT Roorkee. He has organized a number of conferences and seminars and completed two research projects on Intellectual Property Rights. He has published sixty research papers in various leading journals. He has also attended seventy national and international conferences/seminars & workshops.

ROMANIAN TOURISM STRATEGIC DIAGNOSIS

Magdalena Vorzsák, "Babeş-Bolyai" University, Cluj-Napoca, Romania
Monica Maria Coroş, "Babeş-Bolyai" University, Cluj-Napoca, Romania

ABSTRACT

At the global level, the industry of tourism represents the most dynamic activity sector, the most important generator of workplaces, and a source of recovery for the national economy. Despite the stages of conjuncture and the mutations of tourism demand, tourism services will permanently attract a continuously increasing quota of the world's population. Thus, specialists consider that, in the global perspective, travel and tourism, together with information technology and telecommunications will be the three industries of services with the highest turnover. The authors analyze the causes of the poor impact of tourism upon the Romanian economy and sketch the main development directions, meaning to transform this sector into the main engine for the development of Romania's national economy.

Keywords: tourism, SWOT analysis, development strategies, development perspectives, Romania

1. INTRODUCTION: THE ECONOMIC IMPACT OF TOURISM

At the end of the 20th Century, the industry of travel and tourism represents worldwide the most dynamic activity sector, and, at the same time, the most important generator of workplaces. Belonging to the tertiary sector of the national economy, tourism plays the role of a barometer that strictly measures its development, and the changes that occur in the economy bear upon it. Tourism plays a dual role:

♦ A direct economic role, which consists in generating revenues and creating receipts that feed the national income. These incomes contribute to the economic and social development of localities and regions that already are or were recently included in the tourist circuits.

♦ An indirect economic role, that assumes the development of other branches of the national economy, which, on their turn, support the carrying out of tourism connected activities: tourism-transportation, telecommunications, trade, etc.

Placed in correlation with the economy as the whole, the industry of tourism is an element that stimulates the entire global system, as it is a multidimensional sector.

The human dimension is due to the capacity of the tourism to generate contacts among people, contacts that are accompanied by specific behaviors, attitudes, and experiences.

The social dimension of tourism may be highlighted both at a microsocial level – representing a means of recovery for the labor force and of the people's health –, and at a macrosocial level – through the absorption capacity of the exceeding labor force from other fields of activity, generated by the restructuring or closedown of large enterprises. This can also be done by including certain areas in the national and international circuits, and by creating new workplaces in the field of tourism, as well as in sectors directly or indirectly related to this industry. Thus, the development of tourism contributes to the diminishing of the unemployment rate.

The economic dimension of tourism has many facets. Firstly, tourism is a business, thus, a revenue source. It enables many individuals to become entrepreneurs and to implement their own business ideas. Secondly, tourism is a complex of an "industrial" type. This name is due to the fact that satisfying tourists' needs cannot be realized through a single activity. There appears the need to simultaneously carry out many sophisticated activities. Thirdly, tourism is a basic sector of the national economy; it is an important source of currency and a specific type of export.

Beyond the three above-mentioned dimensions, we ought to point out a transversal dimension, too: the ecological dimension of tourism. This is of great notoriety, and lately it has been given an increasing

attention. Finally, one should not forget the strong multiplying effect of tourism, which acts as a stimulating element of the global economic system. Tourism generates a specific demand for goods and services, which implies an increase in their production, thus contributing to the diversification of the structures of the national economy. The impact of the inclusion of new areas in the tourist circuit is their fitting out and development, through the creation of a specific infrastructure for tourism: tourist accommodation facilities and public alimentary organizations, etc. Such an action also contributes to the creation of the general infrastructure needed for carrying out all the activities in the area.

Keeping in mind the importance, the role and the multidimensionality of the tourism industry, we have asked ourselves: *Which can be the reasons why Romania's tourism does not yet seem to display its beneficial effects upon the national economy?*

2.   THE INDUSTRY OF TOURISM IN ROMANIA

2.1 Beginnings
The beginnings of the tourist industry – characterized in an article published by the *International Economic Review / Revue Économique Internationale* (Belgium, 1909) as being "the most suitable placement of capital" – date from 1850. At that time, the first travel office was established in England, having as single purpose the organizing of travels. Then, in 1872, the first American travel agency was opened – *American Express*, aiming at selling voyages to Europe. Only after the Great Union of 1918, was Romania included in the international tourist circuit. Naturally, the basic elements needed for carrying out the tourist activity have existed for centuries but it was only in the 19th Century when they were joined by companies aiming to promote tourism. *The Carpathian Society* was founded in 1895. It organized trips to the Bucegi Mountains. In 1903 *The Society of Romanian Tourists* was founded, and, at the initiative of the Romanian scientist Emil Racoviță, there *The Romanian Fraternity* was founded in 1921, an organization with a tourist profile.

From the point of view of the institutional structure of tourism, Romania did not stay behind the other European countries for a long time. In 1924 the *National Tourism Office* (NTO) was founded. It was initially integrated into the *Health Ministry*, and it became a joint-stock company only at the end of the 20th Century. In 1936, under the supervision of the NTO, the *România* magazine was published, issued in three international languages. The first tourist bimonthly publication, *Bucegii from Bușteni* was issued in 1911, and the first monthly tourism paper was *The Bulletin of the Romanian Tourism Academic Society*, issued between 1929-1932. Another publication issued between the two world wars was *Touring-Clubul României* [1930]; its aim was to promote tourism in Romania and to protect the nature. The Association was founded in 1921, ant the first review was issued in 1926. The first monument of tourism (if not the only one worldwide) can be admired in Rușca Montană, Romania. It was built of Rușchița marble, in 1936 by the *Tourist Club of Banat*. The day of the monument is celebrated each year on the 12th of September.

2.2 Problems
Before 1990 Romania used to be an important tourist destination for the Eastern-European market. Our country especially promoted tourist products such as: littoral / seashore, spa resorts, cultural programs or the monasteries form Northern Moldavia and Bucovina. The national tourist offer has not changed too much in time. Thus, it has become uncompetitive in relationship to the exigencies of the demand and of the international competition of similar tourist products [Master Plan, 2006]. According to the data offered by the *National Institute of Statistics* (NIS), by 2006 (complete data for 2007 are not yet available) the economic performances of Romania's tourism were rather modest [Tempo Online]:
♦ 6.6 million foreign visitors;
♦ 6.9 million departures of Romanian tourists abroad;
♦ 607 million USD receipts registered from international tourism;
♦ 105,000 workplaces offered by the tourist sector, that means 1.2% of the total workplaces.

According to the figures published in the *National Development Plan* [Planul Național de Dezvoltare], for the 2004-2006 time-span, tourism contributed to the creation of the GDP in a quota of 2.6%, an

insignificant contribution related to the situation of other European countries (e.g. Hungary 10%, Poland 13.1%, etc).

If in the case of the EU, tourists spent abroad approximately 780 Euro, while for Romania the average of these expenditures rose only up to 220 Euro. The number of foreign tourists who visited Romania between 1995 and 2000 continuously decreased, registering a slight increase by 2001. The number of Romanian tourists spending holidays abroad continuously increased. This has led to the appearance of a negative trade balance. Romania, as a tourist destination, ended up on an unfavorable position: from the 30th place in 1997, to the 40th place by 2000. Consequently, the net usage of the tourist accommodation capacity decreased from 50% in 1991, to 35% by 2000.

Regarding the investments made in the national economy, one may notice that only 1% of them were oriented towards the tourist sector. The one pleasing aspect was the increase of the tourism-generated incomes in foreign currency, by 42.8% in 2002 compared to 1999.

One cannot but wonder about the causes of this poor impact of tourism upon the Romanian economy. In this respect, we made use of a SWOT analysis, that led us to the following observations and conclusions.

2.3 Strengths and Weaknesses of the Romanian Tourism
The natural tourist potential is of a great variety and complexity. It enjoys a worldwide recognition of the tourist value, and it constitutes an important part of the "basic" tourist product [Cândea; Bran, 2001]:

♦ The <u>mountainous</u> tourist potential possesses great landscape diversity and complex tourist resources. It offers great exploitation and valorization possibilities in tourism activities: approximately fourteen types of tourism and leisure modules can be practiced (winter sports, rambles, speotourism, alpinism, sportive hunting and fishing, spa and wellness cures, cultural, religious or rural tourism, ecotourism, etc).

♦ The <u>spa and watering</u> potential is renowned worldwide (mineral and thermal waters, therapeutic mud and gases, salt mine bioclimat, aeroionized bioclimat, therapy based on natural plants, aromatherapy etc) partially valorized through the national spa resorts (approximately 24) and through the regional and local ones, as well as through the unclassified watering towns and sites (approximately 36). In fact, 35% of the European natural mineral and thermal water sources are situated in Romania, and our country has 117 settlements with therapeutic factors [Ministerul Turismului]. Considering the fact that *Băile Herculane* was certified as a spa resort from the time of the Roman ruling (2nd Century A.D.), we may state that Romania is one of the founding countries of spa tourism. Moreover, one may not omit the professionalism of the medical staff, and the diversity of the Romanian balneology original medicines, treatments and cures.

♦ The tourist potential of the <u>Black Sea littoral</u> has an advantageous position in the territory (good accessibility from Europe and Asia: E 60 and E 87 motorways; Constanța and Mangalia harbors; Constanța airport; railways; etc). It enjoys the orientation of the beaches towards East (ultraviolet radiations). On the coast, there are renowned resorts with a varied tourist potential: mineral waters in Mangalia, Venus, Neptun, Eforie; sapropel mud at Techirghiol; peat in Mangalia; chlorosodic water in Lake Techirghiol; marine bioclimate and other cultural-historic and natural tourist attractions between Capul Midia and Vama Veche. By the seashore, there are many tourist accommodation facilities (42% of Romania's whole accommodation capacity). To these, there ads *Terra* [Hagi, 2007], the new *all-inclusive* mini-resort, that is going to be built between Costineşti and Olimp, near 23 August town.

♦ The tourist potential of the <u>Danube Delta</u> raises the tourists' interest through its ecologic, landscape and faunistic resources, valorized by means of cruises and expeditions in an original landscape, etc. The Reservation of the Danube Delta Biosphere is included in the UNESCO World Heritage.

♦ The tourist potential of the <u>Danube River</u> and of the neighboring area presents multiple attractions (the Danube Notch, the Iron Gates, the ponds of the Danube, etc).

♦ The <u>faunistic and floristic</u> potential is extremely rich in species of scientific and hunting interest, having unique ecosystems at European level.

♦ <u>The protected and preserved areas</u> represent 7% of the country's surface (13 National Parks and 13 Natural Reservations). There are representative tourist destinations for the international geo-fund, and also for rest, recovery, leisure and educational-scientific activities.

♦ The temperate climate is favorable to the promotion of yearlong tourism.

But between the exquisite value of the natural tourism potential and the level of their technical endowment (leisure appliances, systems of tourism reception, respectively access infrastructure or of other nature), there is a huge difference, compared to other countries that also have tourist tradition. The technical endowment of the mountainous tourist resorts (as well as that of the littoral or spa resorts) is both physically and morally worn-out, respectively totally insufficient. Ski areas are only partially modernized. Mountainous tourist routes and accommodation facilities are not arranged according to the modern exigencies. Very often tourist accommodation facilities either lack or are inefficient, respectively of poor quality. Treatment or cure, and leisure or amusement services are low. The environment is badly maintained and improperly arranged. Spa parks have grown old and are worn-out, or have been let to get ruined (e.g. in Bazna resort, nowadays a single hotel is still functioning, *Complexul Balnear Expro* [Biz Consulting], managed by the gas company S.N.G.N. Romgaz S.A. of Mediaş, while the old cure and accommodation facilities are completely destroyed). Littoral beaches and promenades have fallen in degradation, and are highly polluted. Their leisure offer is rather poor in quantity and of modest quality, despite the fact that the prices are high. The services provided are of low quality but quite expensive, or totally cost-inefficient when they are offered to beneficiaries of cheap treatment coupons or tickets. The labor force is unsuitably qualified and the salary / labor conditions quota is an unfavorable one, fact that leads to an important migration of the human factor. The fact that only a few of the tourist resorts fulfill international standards ads up to all the other inconveniences. Overcrowding led to their natural tourist potential degradation.

The cultural-historic potential of Romania is highly illustrative, due to the millenary history of our people. There are over 680 exhibits and values of national cultural interest and heritage that enjoy a huge diversity:
♦ 197 churches and monastic ensembles;
♦ 36 architectural monuments and ensembles;
♦ 11 castles, mansions and palaces;
♦ 70 urban architectural ensembles;
♦ 20 historic centers and archaeological sites;
♦ 7 tourist objectives / areas and sites are included in the UNESCO World Heritage [Law No 5 / 2000].

Romania possesses very many museums addressing diverse topics (e.g. the first Museum of Speleology in Europe was opened on the 31st of October 2003 at Cluj-Napoca). Many musical-artistic shows of global prestige, and a wide range of traditional and folkloric festivals are organized here. Romanians have many legends; some of them even enjoy a global notoriety (e.g. the legend of Count Dracula). In 2007 the city of Sibiu was, together with Luxemburg, Europe's Cultural Capital. Romania can be proud of the richness of its cultural-historic material and immaterial heritage, of the multi-cultural features of the Romanian space, or of its globally renowned personalities (Enescu, Eliade, Brâncuşi, etc) **but** this heritage is not properly promoted. Accessibility of archaeological sites and historic monuments is very often reduced and poor. Tourist infrastructure is inappropriate and tourist guides are poorly trained. Unfortunately, many historic monuments and buildings are in an advanced state of degradation and the legislation concerning their conservation is not appropriately implemented. In museums, the presentations and translations of the exhibits are old-fashioned and lack quality. There is no database to enter all of the cultural events, while traditional festivals are insufficiently promoted.

The technical-economic potential (infrastructure, transport, and communications) consists of engineering art-works, bridges, viaducts, dams, old smokestacks, mines and salt mines, vineyards, stud farms and many more. Romania has an ample railway network (the fourth in size in Europe, including the small-track railway network, *mocăniţa* (a miniature train, specific to the region of Transylvania) – an important means of transportation for leisure tourism activities and sightseeing); there is also a good network of airports; the country has a developed network of roads, with numerous border-crossing points. The telecommunications network is quite well-developed – fixed telephony, radio, GSM, satellite, Internet, etc.

But the endowment of the airports is poor; the electrification of the railway network is insufficient. The quality of most trains and of other public transportation means (buses) is quite inappropriate. Roads are not modernized and thus, very congested; heavy traffic is carried out alongside small cars; there is no real network of highways and of orbital roads for historic cities. One may also mention the absence of tourist signs and indicators, or the limited access facilities provided to people with disabilities. Quite often, a shortage of sewerage systems and water supply systems in rural and suburban areas is registered. Moreover, tourist accommodation facilities are both physically and morally worn-out. Camping facilities are limited and of poor quality. Endowments of spa resorts are obsolete, due to the insufficiency of investments during the last 15-20 years. Many tourist destinations lack parking lots and sanitary facilities. Tourist information points are insufficient and poorly endowed. The access to many tourist attractions and destinations is rather difficult.

A number of 4,710 structures of tourist accommodation functioned in 2006 [Tempo Online], in Romania; these offered 281,000 accommodation places. **But** 70% of the tourist accommodation facilities are only of 2 or less stars. Despite the fact that the Black Sea littoral enjoys the shortest season (less than three months per year), 42% of these units and 56% of the accommodation places are situated in this area. One may easily notice that the offer of accommodation places is much larger than the demand, if we take into consideration the fact that during the functioning time the average annual occupation rate was very low in 2006: 45% for littoral, 22% for mountainous areas, 27% for the Danube Delta, and 53% for spa resorts. Only in the case of spa tourism the average annual occupation degree reaches the "maximum" of 53%. These reduced occupation rates are not generated by the exceeding offer but they are mainly due to the very poor state of most of the tourism accommodation facilities.

Human resources represent a decisive factor of the tourist activity efficiency. Romanians are a hospitable people, characterized by the Latin traditional hospitality. Moreover, the young population has remarkable linguistic abilities. There are numerous and experimented tour-operators. By 2006 [Tempo Online] in Romania there were 2,822 registered tourism agencies, of which 2,638 were authorized to function as tour-operators. Also, there were 937 authorized tourism guides, while 151,000 people worked in hotels and restaurants. In Romania, there are organized tourism courses at different levels of education and there is a *National Centre for Tourist Education*, aiming to monitor professional education in the hospitality industry. **But** the apprehension of the importance of tourism for the national economy is still very weak. Hotel industry schools are almost inexistent (the master in *Hotel Management* and the Bachelor of *Tourism and Hotel Business Administration* organized at the Faculty of Business from "Babeş-Bolyai" University of Cluj-Napoca are at this time unique in the country). Thus, the professional preparation of the hotel sector workers is inappropriate. Moreover, the school education regarding the protection of the environment and the development of long-lasting tourism is insufficient. Work-conditions in the tourism industry are hard and the wages are low, facts that lead to a high migration of the labor-force either towards other economic sectors or even abroad [POR, 2007-2013].

Legislation, management, promotion. The legal framework is somewhat appropriate but it still needs a permanent perfecting and alignment to the legal norms of the European Union. There are laws concerning environmental protection, tourist heritage conservation, and the insuring of tourists' protection and safety. Romania also has an appropriate and solid legal framework describing management aspects of protected areas. **But** the criteria for granting tourism authorizations and licenses do not fulfill the current requirements of the market. Yet, legal issues concerning land and building ownership have not been solved. There are no plans of integrated development of towns and resorts still. Also, incentives and support mechanisms for investors are to be expected. In tourism, most of the entrepreneurs do not have any economic education and, thus, no knowledge of tourism and / or hospitality management at all. Romania's promotion as a tourist destination is inappropriate and insufficient. As a consequence, Romania lacks a positive image of its tourist offer.

Given the above observations, we can build the EMIF matrix for the Romanian tourism (Figure No1.) [Vorzsák; Cosma, 2008].

Tourist Potential	Evaluation (0-5)					Grade	Observations
	Weaknesses		0	Strengths			
	- -	-		+	+ +		
I. Natural	Average					**3.81**	Exceptional natural tourist potential but insufficiently exploited and valorized
♦ mountains						4	
♦ spa resorts						3	
♦ Black Sea coast						3	
♦ Danube Delta						4	
♦ Danube River						4	
♦ faunistic and floristic resources						4	
♦ protected areas						4.5	
♦ speleological heritage						4	
II. Cultural-historic	Average					**3.3**	Valuable tourist potential but insufficiently and inappropriately valorized
♦ values of cultural-historic heritage						4	
♦ museums						2.5	
♦ spectacles						3	
♦ folklore, traditions						3	
♦ legends						4	
III. Technical-economic	Average					**2.57**	Relatively important tourist potential but with a high rate of physical and moral obsolescence, with insufficient and inadequate endowments according to the EU standards
♦ works of engineering art						2	
♦ salt-mines, mines, vineyards, stud farms						3	
♦ air, fluvial and sea transport						2.5	
♦ railroad transport						2	
♦ motorway networks						3	
♦ accommodation facilities						2	
♦ telecommunication networks						3.5	
IV. Human resources	Average					**2.2**	Open-hearted human resources but poorly prepared and not motivated
♦ hospitality						5	
♦ linguistic abilities						3	
♦ professional preparation						1	
♦ salary / labor conditions quota						1	
♦ specialized educational system						1	
V. Legislation, organization, promotion	Average					**1.7**	Inappropriately implemented legal framework, almost inexistent promotion, uncompetitive management
♦ environment and tourist heritage protection						2	
♦ organization and management						2	
♦ quality of tourist services						1.5	
♦ promotion						1	
♦ image						2	
General Average	-					**2.71**	-

FIGURE NO 1. THE EVALUATION MATRIX OF THE INTERNAL FACTORS (EMIF) FOR ROMANIA'S TOURISM

2.4 Opportunities and Threats of the Romanian Tourism

Nowadays, Romanian tourism enjoys many development opportunities. Among the most important ones there are: the increase in the international demand for different types of tourist destinations (mountain, spa, rural, ecotourism, etc), for which Romania has an extraordinary potential. Up until now the tourism offer has diversified very much and the number of tour-operators has increased significantly.

Since 2000, a slow but determined trend of recovering and refreshing has been showing in the Romanian economy. This generated a beneficial effect upon our tourist infrastructure. The quality of tourist services has also begun to improve, an aspect also proven by the investigation carried out within a *PHARE*

Program from which the Ministry for European Integration [2002] benefited. Presently, the Romanian tourism has a *Master Plan for National Tourism Development Between 2007and 2016*, and a *Strategy for Tourism Development*, both elaborated in 2006.

After Romania's adhesion to the EU structures the extending and modernizing of tourist accommodation facilities was initiated, and it intensified, under the conditions of an increased access to international financing programs and sources. In parallel, the improvement of Romania's tourist legislation and its harmonization with that of the EU takes place.

But one should not forget the fierce international competition of other tourist destinations, nor the decrease in the purchasing power of most Romanians. Moreover, we expect low wages and hard labor conditions to keep determining, in the coming years, a substantial migration of the workers towards sectors more advantageous to them. The continuing urbanization of the rural population will eventually lead towards the loss of traditions.

Romania's level of economic development is lower than that of most Eastern-European countries. The quality / price quota for tourism is much more attractive in Bulgaria, Croatia, Slovenia or Hungary.

Finally, the insufficient and inefficient management of waste and of protected areas represents in Romania a great threat, especially for ecotourism and rural tourism but not only for these two types.

Given the above observations, we can build the EMEF matrix for Romania's tourism (Figure No 2.) [Vorzsák; Cosma, 2008].

External Factors	Evaluation (0-5)					Grade	Observations
	W.				S.		
	--	-	0	+	++		
1. The development of international demand					×	5	The external environment is very promising, offering many development opportunities but, at the same time it is also very risky, raising serious threats, which must be confronted, fended off, surmounted or avoided
2. The diversity of the tourist offer				×		4	
3. Number of tour-operators and tourism agencies			×			3	
4. The quality of being an EU member state					×	5	
5. International competition	×					1	
6. The economy's development level		×				2	
7. Economic, political, military stability				×		4	
8. Access to financing sources					×	5	
9. Urbanization of the rural population	×					1	
10. Waste-management system	×					1	
11. Management systems of protected areas		×				2	
12. The quality / price quota	×					1	
13. The migration of the labor force	×					1	
14. The decrease of the buying-force / capability	×					1	
15. Legislation			×			3	
General Average	-					**2.6**	-

FIGURE NO 2. THE EVALUATION MATRIX OF THE EXTERNAL FACTORS (EMEF) FOR ROMANIA'S TOURISM

Let us take a look at the SWOT matrix of the Romanian tourism (Figure No 3.) [Vorzsák; Cosma, 2008].
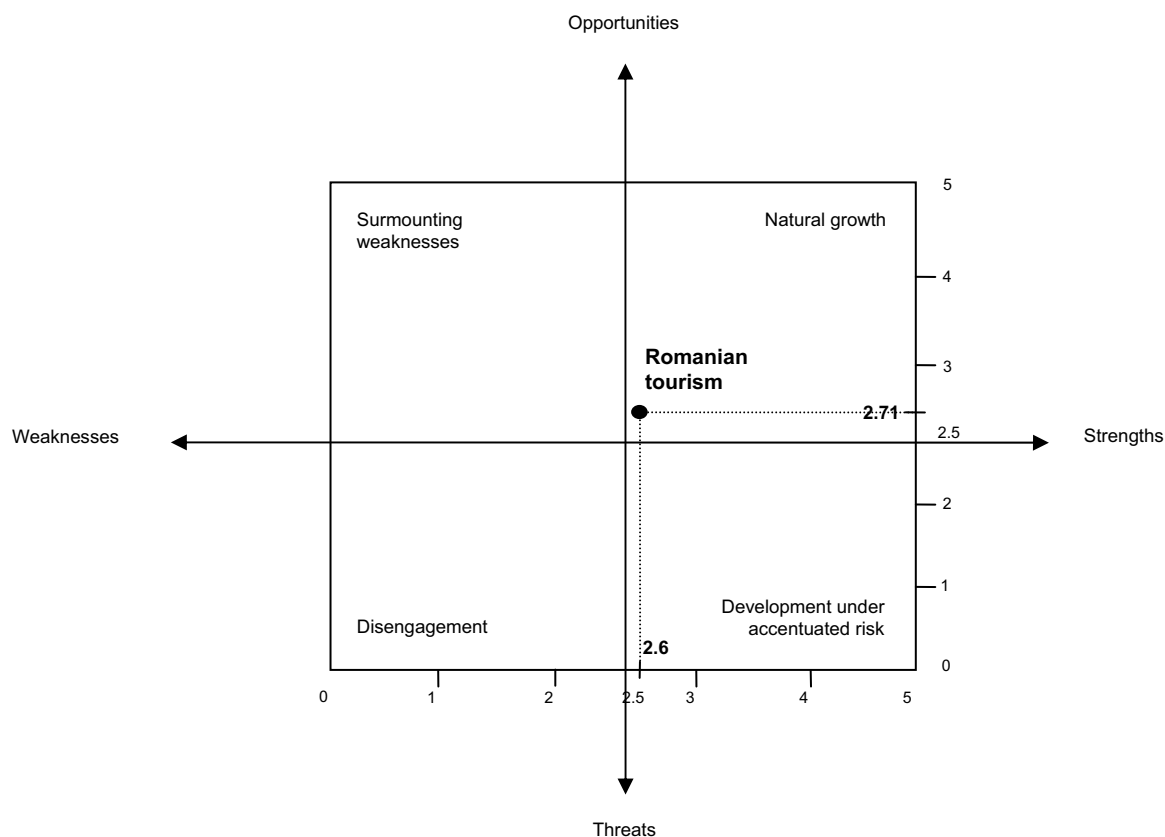
FIGURE NO 3. SWOT MATRIX OF ROMANIAN TOURISM

3. PERSPECTIVES OF ROMANIAN TOURISM

Our SWOT analysis reveals that despite the fact that Romania has an exceptional tourist potential, its exploitation and valorization is totally inappropriate. As a consequence, the average grade for internal factors is rather modest (only 2.71). This proves that even though the strengths of Romania's tourism are more powerful than its weaknesses, our country still has a lot to do for consolidating its tourist sector and for transforming it into the main engine to streamline the national economy. The external factors' analysis proved that the environment is favorable to the development of the tourist sector, offering many valuable opportunities but the average grade (2.6) confirms the fact that we have to surmount serious threats. Their neutralization needs, indeed, adequate strategies.

Despite all of these, Romanian tourism is placed in the most favorable area of the SWOT matrix (opportunities-strengths), being positioned very close to the fields threats-strengths, respectively weaknesses-opportunities. Thus, the generic strategy that needs to be adopted is that of natural growth; but our country will need to implement numerous strategic actions for surmounting weaknesses, respectively for avoiding or fending off threats and risks [Vorzsák; Cosma, 2008].

Keeping in mind these conclusions, we consider that the general strategic objective of the Romanian tourism development must be the creation of an internationally competitive tourist destination, at the level of the value of the tourist resources that Romania has. Such a strategic aim should enforce this sector as a first rank priority economic activity within our national economic system. This would enable the transformation of Romania into a qualitative tourist destination, that meets the EU standards regarding the provision of tourist products and services. It would also grant a long-lasting development from the point of view of the environment, with a better rhythm than that registered by other European tourist destinations.

Such an ambitious vision can be achieved through the correct phrasing or wording of the established strategic objectives. Thus, a priority concern must be to build a positive and nuanced image, both at internal and external levels, regarding the advantages of Romania as a tourist destination and of its tourist brand image. It is compulsory to become conscious of the fact that tourism is a key factor within the national economy and an important generator of workplaces. Authorities must ensure a long-lasting development of tourism in such a manner that the natural richness and cultural-historic heritage would be equally appreciated and presented, and also preserved intact for future generations.

Granting coordinated support mechanisms for the regional and local tourism organizations and consolidating the role of the National Authority for Tourism to insure the fulfillment of the required quality standards by the provided tourist products and services is of vital importance. Systems of regular collection, analysis and dissemination of statistics and market researches need to be developed, in order to offer assistance in the creation of a *Tourist Satellite Account* for Romania. It is also necessary to support investors and the marketing decisional process. In order to extend the hospitality message to visitors, it is necessary to create a network of tourist information centers in the main tourist areas and spots. A national database of the tourist industry products, providers, events, and services must as well be established, and the public must be granted access to it.

To enable investments in tourism, mechanisms must be created and subsidies must be granted, for both, local and foreign investors. For surmounting the weaknesses related to the human factor, the hospitality sector (pre-vocational and vocational) education system needs to be developed. The quota wage / labor conditions must be improved, in order to reduce the labor force migration phenomenon.

Through the aims we have elaborated, one must ensure the creation of a diversified and competitive tourist offer that would eventually lead to the increase of the role of tourist activity and circulation. Stimulating the development of a quality tourist offer enables the increase of revenues, of the contribution of the tourist sector in the GDP and of the net incomes of the population, as well as the amplification of the labor force absorption rate.

In conformity with the *Development Strategy of Tourism in Romania* (August 1st, 2006), the contribution of tourism to the creation of the GDP is expected to increase between 2007 and 2013 from 1.9% to 6%, and 350,000 new workplaces will be created.

The WTTC [2006] estimates for Romania's tourism and travel sector in the 2007-2016 time span are, generally speaking, very optimistic. Average growth rates will be superior to European and global ones:
♦ 7.4% for GDP created in the tourism and travel industry (EU: 2.4%; global average: 3.2%);
♦ 1.7% for workplaces created in this sector (EU: 1%; global average: 1.6%);
♦ 7.9% for tourism and travel demand (EU: 3.5%; worldwide: 4.2%);
♦ 8.5% for export of visitors (EU 4.3%; worldwide: 4.9%);
♦ 6.2% for investments of capital made in the sector (EU: 4.2%; global average: 4.6%).

According to these growth predictions, Romania occupies the 4th place in a hierarchy of 174 countries. By 2016 one may expect the tourism and travel industry to represent 6.2 billion RON (2.5 billion USD), having a contribution of 2.4% in the GDP. If one takes into consideration not only the direct impact but also the indirect economic contribution of tourism, the figures will be 48.4 billion de RON (19.4 billion USD), respectively 5.8%. The occupation in this sector will increase from 3.15% in the total number of workplaces by 2006 to 3.83% by 2016; the indirect impact of tourism will change the figures from 5.75% in 2006, to 6.92% by 2016.

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AUTHOR PROFILES:

Dr. Magdalena Vorzsák earned her Ph.D. at ASE Bucureşti, in 1979. Currently she is a professor of Economics and Strategic Management at the Faculty of Business, from "Babeş-Bolyai" University of Cluj-Napoca, România.

Mrs. Monica Maria Coroş is a Ph.D. Student at the Faculty of Economics and Business Administration, from "Babeş-Bolyai" University of Cluj-Napoca, România and she teaches as a collaborator seminars of General Management and Hospitality Management at the Faculty of Business, from "Babeş-Bolyai" University of Cluj-Napoca, România.

EFFECTS OF RELATIONSHIP QUALITY AND PROFESSIONALISM ON AUDIT QUALITY OF THAI AUDITORS: ROLES OF COMPETITIVE ENVIRONMENTS AND REGULATION FLEXIBILITY

Kulwadee Lim-U-Sanno, Mahasarakham University, Thailand
Phapruke Ussahawanitchakit, Mahasarakham University, Thailand

ABSTRACT

This study investigates the relationships among relationship quality, professionalism, and audit quality via competitive environments and regulation flexibility as moderators by using Thai auditor as a sample. The results reveal that relationship quality has a positive influence on professionalism and audit quality. Moreover, professionalism has a positive impact on audit quality and the competitive environments have negative moderating effect of the professionalism-audit quality relationships. However, the regulation flexibility is not a moderator of the professionalism-audit quality relationships. Contributions and suggestions for further research are also discussed.

Keywords: *Relationship Quality, Professionalism, Audit Quality, Competitive Environments, Regulation Flexibility*

1. INTRODUCTION

Audit quality is of significant value to investors in capital markets because investors often use audited financial statements by auditors as the basis for investment decisions. Because auditors are as both insurance provider and information intermediary that provide independent verification of manager-prepared financial statements, audit quality contributes to the creditability of financial statements. Base on DeAngelo (1981), audit quality refers to the probability that auditors will both discover and truthfully report material errors, misrepresentations, or omissions in accounting system of clients. In addition, Watkins, Hillison and Morecroft (2004) discuss that the components of audit quality consist of "monitoring strength" and "reputation". The monitoring strength gives the auditor's ability to increase the quality of financial statement information which reflects true economic circumstances of clients. Also, the reputation represents the auditor's ability to enhance the creditability of financial statement information.

Recently, the proponents of mandatory auditor rotation have long been an issue of debate both in the U.S. and several countries. They argue that the length of auditor-client relationship may lead to damage auditor independence and audit quality. The extended auditor-client relationship could have a harmful impact on auditor independence because an auditor's objectivity may be reduced (Mautz and Sharaf, 1961). Furthermore, the auditors are more likely to agree with managers on important reporting decisions (Ryan, Herz, Lannaconi, Maines, Palepu, Schrand, Skinner and Vincent, 2001). Consequently, imposing mandatory that requiring auditor rotation would improve audit quality by reducing client's ability to influence the auditors. In fact, several empirical evidences suggest a negative association between the length of auditor-client relationship and audit quality (Giroux, Deis and Bryan, 1995; Davis, Soo and Trompeter, 2002). In contrast, the opponents of mandatory auditor rotation discuss that rotation may increase audit failures because the auditors lack sufficient knowledge regarding client-specific risks and lack auditor independence due to auditor's incentive to maintain new client relationships. This argument is consistent with research indicating that finds a positive relation between the length of auditor-client relationship and audit quality (Ghosh and Moon, 2005; Stanley and DeZoort, 2007).

The Thailand Securities and Exchange Commission (SEC) mandates the requirement of auditor rotation for all listed companies every five year. Despite the continued mandatory rotation debate, little empirical research in the relation between the length of auditor-client relationship and audit quality exists to analyze the adoption or rejection of mandatory auditor rotation. Thus, the main objective of this study is to investigate the relationships among relationship quality, professionalism, and audit quality by using competitive environments and regulation flexibility as moderators. In addition, the key research questions are how the relationship quality impacts on professionalism and audit quality; how the professionalism influences on audit quality, and how the professionalism affects on audit quality via the moderating effects of competitive environments and regulation flexibility.

The remainder of this paper is organized as follows. In Section II, we provide the relevant literature and develop our hypotheses. Then, we describe our research methodology and empirical results in Section III. Finally, the contributions, directions for future research, and conclusion are discussed in Section IV.

2. RELEVANT LITERATURE ON RELATIONSHIP QUALITY, PROFESSIONALISM, AUDIT QUALITY, COMPETITIVE ENVIRONMENTS, AND REGULATION FLEXIBILITY

Base on an extensive review of the literatures involving the relationship between the length of auditor-client relationship and audit quality, numerous studies suggest that the new auditors may lack client-specific knowledge and lack auditor independence due to the increasing incentives to reserve new client relationships that they reduce audit quality. As mentioned earlier, we propose that relationship quality is positively associated with professionalism and audit quality. Additionally, we expect that competitive environments and regulation flexibility weaken the relationship between professionalism and audit quality. Accordingly, we portray the conceptual model of the relationships among relationship quality, professionalism, and audit quality via the moderating effects of competitive environments and regulation flexibility is shown in Figure 1.

FIGURE 1
RESEARCH MODEL OF RELATIONSHIP QUALITY, PROFESSIONALISM, COMPETITIVE ENVIRONMENTS, AND REGULATION FLEXIBILITY
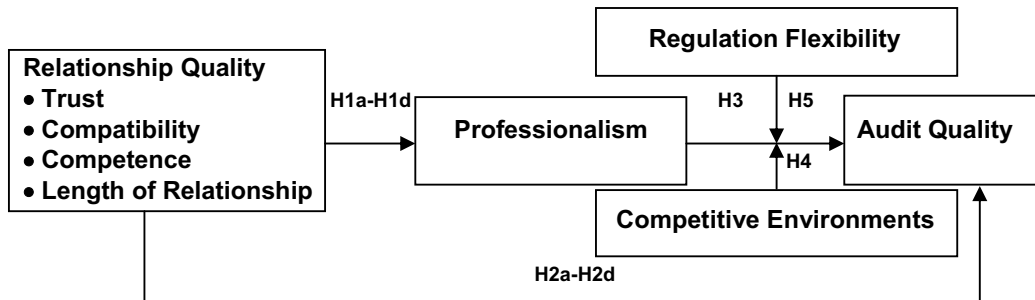
2.1 Relationship Quality
Relationship quality is defined as a level of quality of relationship between auditor and client. It comprises of the level of trust, compatibility, competence, and length of relationship that an auditor engages in a client and they may reflect the length of audit engagement or the length of time an auditor maintains a client (Beattie, Fearnley and Brandt, 2004). Trust refers to the person's belief that another person will perform actions leading to positive outcomes as well as not take actions leading to negative outcomes (Anderson and Narus, 1990). People in high-trust relationships would enjoy open communication and willingness to take risks. Also, they are not afraid to share all information and believe in the content of the information received (Beccerra and Gupta, 1999). Compatibility is described as the similarity of personal characteristics between two persons such as two persons are responsible, honest, mature, or good looking. The successful relationships require a deep understanding of social interactions and emphasis on compatible characteristics (Kwon, 2004). Competence designates to the auditor's ability in client-specific knowledge, adaptability, and technological proficiency (Catanach and Walker, 1999). Lastly, length of relationship is provided as the duration of time that an auditor can continue a client (Geiger and Raghunandan, 2002). O'Leary (1996) and Catanach and Walker (1999) indicate that an auditor's client-specific knowledge grows with the length of auditor-client relationship. Hence, the relationship quality (trust, compatibility, competence, and length of relationship) is likely to have positive relationship with professionalism. Therefore,
Hypothesis 1a: Auditors with the higher degree of trust will effectively attain greater professionalism.

Hypothesis 1b: Auditors with the higher degree of compatibility will effectively attain greater professionalism.

Hypothesis 1c: Auditors with the higher degree of competence will effectively attain greater professionalism.

Hypothesis 1d: Auditors with the higher degree of length of relationship will effectively attain greater professionalism.

According to the literature reviewed a link between the length of auditor-client relationship and audit quality, the relationship quality (trust, compatibility, competence, and length of relationship) is likely to have positive relationship with audit quality. Therefore,

Hypothesis 2a: Auditors with the higher degree of trust will efficiently obtain greater audit quality.

Hypothesis 2b: Auditors with the higher degree of compatibility will efficiently obtain greater audit quality.

Hypothesis 2c: Auditors with the higher degree of competence will efficiently obtain greater audit quality.

Hypothesis 2d: Auditors with the higher degree of length of relationship will efficiently obtain greater audit quality.

2.2 Professionalism
With respect to professionalism, Previts (1985) describes that the characteristics as descriptive of professionalism such as a definable body of knowledge, individuality (decisions are personal, not collective), ethical constraints (self-discipline), altruism (placing the well-being of others above self-interest), and judgment (decision-making in the face of uncertainty). Also, he cites that independence, skills and legality, professionalism, and adaptability play major role in the attested function such as an audit. In this study, audit professionalism describes a set of obligations for professional behavior in audit that the auditors should perform to demonstrate trustworthy and maintain public interests such as responsibility, integrity, objectivity and independence, and due care (Brown, Morris and Wilder, 2006). Catanach and Walker (1999) suggest that professional conduct positively affects audit quality. As a consequence, professionalism is likely to have a positive relationship with audit quality. Therefore,

Hypothesis 3: Auditors with the higher degree of professionalism will potentially acquire greater audit quality.

2.3 Moderating Effects of Competitive Environments and Regulation flexibility

2.3.1 Competitive Environments
Competitive environments demonstrate to the competition in the public accounting profession that it makes auditors and public accounting firms often engage in extensive audit fee cutting to capture new clients away from their competitors (Berton, 1991; Dalton, Dan, Hill and Ramsay, 1997). With regards to competitive environment literatures, Deis and Giroux (1992) suggest that auditor's performance and behavior are influenced by the environment. Yardley Kauffman, Cairney and Albrecht (1992) find that increased competition lead to reduce audit quality. As a result, competitive environment is postulated to reduce the relationship between professionalism and audit quality. Therefore,

Hypothesis 4: Competitive environment has a negative moderating effect on professionalism-audit quality relationships.

2.3.2 Regulation Flexibility
Regulation flexibility is designated as the loosened regulations in the auditing standards and the profession's code of ethical conduct that it may increase obvious conflicts of interests between auditor and client (Windsor and Warming-Rasmussen, 2007). Wyatt (2004) suggests that the deregulation of the profession has seen massive corporate scandals where auditors gave clean opinions to companies that ended in bankruptcies and brought on the collapse of accounting firms. Hence, we assume regulation flexibility reduces the relationship between professionalism and audit quality. Therefore,

Hypothesis 5: Regulation flexibility has a negative moderating effect on professionalism-audit quality relationships.

3. RESEARCH METHODOLOGY

3.1 Sample and Data Collection Procedure
In this study, we select auditors in Thailand as the sample. A mail survey was used for data collection. The questionnaire was distributed to randomly choosing 1000 auditors in Thailand. With respect to the questionnaire mailing, 32 of the auditor surveys were undeliverable because some auditors had moved to unknown locations. Removing the undeliverable from the original 1000 mailed, the valid mailing was 968 surveys, from which 315 responses were returned. Due to 7 incompleteness and response errors in some questionnaires, they were deducted from further analysis. Of the surveys completed and received, only 308 were usable. The effective response rate was approximately 32%. Similar to Aaker, Kumer and Day (2001), the response rate for a mail survey, without an appropriate follow-up procedure, is less than 20%. Consequently, the response rate of this study is regarded adoptable.

To protect possible problems with non response bias, auditor-specific t-test between early and late respondents stressed no statistically significant differences corresponding with the test for non response bias by Armstrong and Overton (1977) and special attempts were made to expand the response rate. Using a t-test comparison of the means of all variables for the random sample versus all other respondents, we find no statistically significant differences. Thus, non response bias was not a key problem in this study.

3.2 Questionnaire Development and Variable Measurement
In this study, all of variables were gained from the survey and were measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Additionally, all of constructs were derived from the existing literature. Audit quality was a dependent variable and was measured using six scale items to evaluate the auditor's ability in monitoring strength and reputation (Watkins, Hillison and Morecroft, 2004). Independent variables consist of relationship quality, professionalism, competitive environments, and regulation flexibility. To measure the degree of relationship quality, three scale items were built to gauge the degree of trust which auditor's belief in their client (Anderson and Narus, 1990). Compatibility was evaluated by using four scale items to demonstrate the degree of similarity of auditor-client characteristics (Kwon, 2004). Five scale items were developed to assess the degree of auditor's ability in client-specific knowledge, adaptability, and technological proficiency (Catanach and Walker, 1999). At the last aspect of relationship quality, length of relationship was measured by using three scale items to express the length of time that an auditor maintains a client (Geiger and Raghunandan, 2002). Professionalism was assessed by eleven scale items to demonstrate the degree of six auditor's behavior: responsibility, serve the public interest, integrity, objectivity and independence, due care, and determine scope and nature of services from the Principles of the Code of Professional Conduct (Brown, Morris and Wilder, 2006). In Addition, we utilize three scale items to evaluate the degree of competitive environments (Dalton, Dan, Hill, John and Ramsay, 1997) and regulation flexibility (Windsor and Warming-Rasmussen, 2007).

Beyond the dependent and independent variables, this study includes auditor's experience as a control variable. Auditor's experience was measured by the number of years in audit that it may affect professionalism and audit quality (Catanach and Walker, 1999).

3.3 Method
The study was firstly utilized by using a confirmatory factor analysis to investigate the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors. The factor analyses conducted were done separately on each set of the items representing a particular scale due to limited observations. This analysis has a high potential to inflate the component loadings. Therefore, a higher rule-of-thumb, a cut-off value of 0.40, was accepted (Nunnally and Berstein, 1994). All factor loadings are greater than the 0.40 cut-off and are statistically significant. The reliability of the measurements was estimated by Cronbach alpha coefficients which are greater than 0.60 (Cronbach, 1951). The scales of all measures seem to produce internally consistent results; hence, these measures are considered appropriate for further analysis because they indicate an adopted validity and reliability in this study. Table 1 presents the results for both factor loadings and Cronbach alpha for multiple-item scales used in this study.

TABLE 1
RESULTS OF MEASURE VALIDATION

Items	Factor Loadings	Cronbach Alpha
Audit Quality (AQ)	0.69-0.78	0.83
Trust (TR)	0.70-0.76	0.64
Compatibility (CO)	0.48-0.79	0.66
Competence (CP)	0.54-0.86	0.80
Length of Relationship (LR)	0.51-0.80	0.64
Professionalism (PR)	0.70-0.82	0.93
Competitive Environments (CE)	0.72-0.84	0.68
Regulation Flexibility (RF)	0.49-0.81	0.68

The Ordinary Least Squares (OLS) regression analysis is used to test factors affecting auditors' audit quality. Because both dependent and independent variables in this study were neither nominal data nor categorical data, OLS is an appropriate method for examining the hypothesized relationships (Aulakh, Kotabe and Teegen, 2000). In this study, the model of the aforementioned relationships is as follows.

Equation 1: $PR = \beta_{01} + \beta_1 TR + \beta_2 CO + \beta_3 CP + \beta_4 LR + \beta_5 EX + \varepsilon$
Equation 2: $AQ = \beta_{02} + \beta_6 TR + \beta_7 CO + \beta_8 CP + \beta_9 LR + \beta_{10} EX + \varepsilon$
Equation 3: $AQ = \beta_{03} + \beta_{11} PR + \beta_{12} CE + \beta_{13}(PR * CE) + \beta_{14} FR + \beta_{15}(PR * FR) + \beta_{16} EX + \varepsilon$

4. RESULTS AND DISCUSSION

TABLE 2
DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

Variables	AQ	TR	CO	CP	LR	PR	CE	FR	EX
Mean	3.74	3.97	3.56	3.94	3.70	4.27	3.35	3.64	10.16
Standard Deviation	0.51	0.58	0.53	0.50	0.52	0.44	0.79	0.62	1.06
Audit Quality (AQ)									
Trust (TR)	0.36**								
Compatibility (CO)	0.30**	0.37**							
Competence (CP)	0.50**	0.36**	0.38**						
Length of Relationship (LR)	0.38**	0.28**	0.41**	0.44**					
Professionalism (PR)	0.46**	0.32**	0.20**	0.56**	0.41**				
Competitive Environments (CE)	0.18**	0.11*	0.10	0.03	0.13*	0.02			
Regulation Flexibility (RF)	0.10	0.12*	0.02	0.06	0.10	0.12*	0.24**		
Experience (EX)	0.08	0.06	0.13*	0.22**	0.16**	0.21**	-0.17**	-0.02	

** $p < .01$, * $p < .05$

TABLE 3
RESULTS OF OLS REGRESSION ANALYSIS[a]

Independent Variables	Models		
	1	2	3
Trust (TR)	0.21***	0.23***	
	(0.05)	(0.05)	
Compatibility (CO)	0.06	0.18***	
	(0.05)	(0.05)	
Competence (CP)	0.49***	0.39***	
	(0.05)	(0.05)	
Length of Relationship (LR)	0.25***	0.27***	
	(0.05)	(0.05)	
Professionalism (PR)			0.45***

			(0.05)
Competitive Environments (CE)			0.15***
			(0.05)
Regulation Flexibility (RF)			0.00
			(0.05)
PR X CE			-0.11**
			(0.05)
PR X RF			0.04
			(0.05)
Experience (EX)	0.07	-0.04	0.03
	(0.04)	(0.05)	(0.05)
Adjusted R^2	0.37	0.29	0.25

*** $p < .01$, ** $p < .05$, [a] Beta coefficients with standard errors in parenthesis.

The descriptive statistics and correlation matrix for all variables are presented in Table 2. With regard to potential problems relating to multicollinearity, variance inflation factors (VIF) were used to provide information on the scope to which non-orthogonality among independent variables dilates standard errors. The VIFs range from 1.00-1.09, well below the cut-off value of 10 suggested by Neter, Wasserman and Kutner (1985), meaning that the independent variables are not correlated with each other. Accordingly, there are no significant multicollinearity problems confronted in this study.

The results of OLS regression analysis of the relationship between relationship quality (trust, compatibility, competence, and length of relationship) and professionalism (Hypothesis 1a-1d) are shown in Table 3. The evidences indicate that trust (H1a: $b_1 = 0.21$, $p < .01$), competence (H1c: $b_3 = 0.49$, $p < .01$), and length of relationship (H1d: $b_4 = 0.25$, $p < .01$) have significant positive effect on professionalism. Our results suggest that auditors with higher degree of trust, competence, and length of relationship have greater professionalism. Similar to O'Leary (1996) and Catanach and Walker (1999), competence is a key element to achieve professionalism. Consequently, Hypothesis 1a, 1c, and 1d are strongly supported. On the other hand, compatibility has no significant (H1b: $b_2 = 0.06$, $p > .05$) influence on professionalism. With respect to the non-impact of compatibility in this study, it is possible that auditors will not utilize compatibility to gain professionalism; nevertheless they implement compatibility to directly achieve audit quality. Hence, Hypothesis 1b is not supported.

According to the relationship between relationship quality (trust, compatibility, competence, and length of relationship) and audit quality (Hypothesis 2a-2d) are demonstrated in Table 3. Our results reveal that trust (H2a: $b_6 = 0.23$, $p < .01$), compatibility (H2b: $b_7 = 0.18$, $p < .01$), competence (H2c: $b_8 = 0.39$, $p < .01$), and length of relationship (H2d: $b_9 = 0.27$, $p < .01$) have significant positive impact on audit quality. Our evidences support that auditors with higher degree of trust, compatibility, competence, and length of relationship have greater audit quality. Overall, relationship quality has a positive influence on audit quality (Ghosh and Moon, 2005; Stanley and DeZoort, 2007). Therefore, Hypothesis 2a-2d are strongly supported.

For association between professionalism and audit quality (Hypothesis 3) are presented in Table 3. Our evidences state that professionalism has a significant positive impact on audit quality ($b_{11} = 0.47$, $p < .01$), a finding similar to Catanach and Walker (1999), where professionalism is positively related to audit quality. Thereby, Hypothesis 3 is strongly supported.

Finally, we set competitive environments and regulation flexibility as the moderators on professionalism and audit quality. Table 3 expresses that the interaction between competitive environments and professionalism has a significant negative relationship with audit quality ($b_{13} = -0.11$, $p < .05$). Similar to Yardley, Kauffman, Cairney and Albrecht (1992), the increased competition impairs the relationship between professionalism and audit quality. Thus, Hypothesis 4 is supported. On the contrary, the interaction between regulation flexibility and professionalism has no significant effect on audit quality ($b_{15} = 0.04$, $p > .05$). According to the non-impact of regulation flexibility, it is possible that auditors are motivated by the increased market competition to reserve objectivity and independence by their desire to protect their reputation and revenue. So, professional behavior and audit quality are not required for the quality control of regulations. Hence, Hypothesis 5 is not supported. Therefore, we conclude that competitive environments are moderators for the relationship between professionalism and audit quality alone.

5. CONTRIBUTIONS AND FUTURE DIRECTIONS FOR RESEARCH

5.1 Theoretical Contributions and Future Directions for Research

This study attempts to gain a clear understanding of the relationship quality that has a significant influence on professionalism and enhance audit quality. The study also expands principal theoretical contributions on the existing knowledge and literature of the association between the length of auditor-client relationship and audit quality. To improve the field theoretically, this study is one of the first known investigations to directly link the length of auditor-client relationship to audit quality in the case of Thai auditors and efforts to assess the critical components of relationship quality (trust, compatibility, competence, and length of relationship) in the length of auditor-client relationship-audit quality relational model. Additionally, this study integrates the moderating effects of competitive environments and regulation flexibility which affect the audit quality in the same model. The need for future research is to seek another more appropriate dimension to measure the relationship quality. Moreover, future research may add mediators and moderators to the relationship between relationship quality and audit quality such as an audit fee effect. Finally, a fruitful avenue for future research is to examine the impact of relationship quality on other types of audit decisions and on the quality of financial reporting.

5.2 Managerial Contributions

This study provides useful contributions and implications to auditors, regulators, the accounting profession and financial statement users. The study help auditors understand which relationship quality and professionalism influence audit quality. Auditors should improve how the competence and professionalism such as integrity, objectivity, and independence, which are critical components that tend to have more direct influence on audit quality. Besides, regulators, members of the accounting profession, and financial statement users need to focus on the costs and benefits of mandatory auditor rotation. Specifically, our results suggest that the length of auditor-client relationship enhances audit quality. Then, Thai regulators should seriously consider extending the regulation of mandatory auditor rotation see that increases audit quality. Interestingly, our evidences find that strongly competitive environments reduce audit quality. Hence, the Thai accounting profession should investigate auditor performance and behavior which support increased audit quality.

6. CONCLUSION

This study investigates the relationships among relationship quality, professionalism, and audit quality by using competitive environments and regulation flexibility as the moderators. Our results indicate that relationship quality has a significant positive influence on professionalism and audit quality. Especially, auditor's competence definitely has a main effect on professionalism and audit quality. Interestingly, professionalism has a significant positive impact on audit quality and the interaction has a significant negative effect when we set competitive environments as a moderator. Surprisingly, the moderating effect of regulation flexibility is not significant. Overall, our results do not support the argument for mandatory auditor rotation and suggest that a good relationship quality does not impair professionalism and audit quality.

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AUTHOR PROFILE:

Ms. Kulwadee Lim-U-Sanno earned her M.Acc. at Chulalongkorn University, Thailand in 2003. Currently she is a Ph.D. student in Accounting at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

Dr. Phapruke Ussahawanitchakit earned his Ph.D. at Washington State University in 2002. Currently he is an associate professor of accounting, a deputy dean of academic affairs, and a director of graduate studies at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

EFFICIENT ESTIMATION OF THE FIXED EFFECTS MODELS FOR PANEL DATA

Chung-ki Min, Hankuk University of Foreign Studies, Seoul, KOREA

ABSTRACT

The dummy-variable approach to controlling for fixed effects is not efficient since it unnecessarily removes the between-groups variability in explanatory variables. This study proposes an efficient estimation method which utilizes the between-groups variability.

1. INTRODUCTION

Panel data provide information about the variation across individual units and over time and have been used in a wide range of empirical research.[1] In particular, understanding that ignoring unobservable time-specific effects could cause an estimation bias, many studies in the literature have analyzed panel data to control for time-specific effects.[2] A widely employed approach in their research is to include dummy variables and differentiate each time period from the others. This dummy-variable OLS approach treats time-specific effects as unknown parameters, thus called a fixed-effects model, and has an advantage over a random-effects model in two considerations: one is a statistical consideration of orthogonality and the other is a logical one of di Finnetti's exchangeability (Hausman, 1978). Time-specific changes are believed to affect not only the dependent variable, but also the explanatory variables. If so, the unobservable time-specific effects included in the error term are correlated with the explanatory variables and thus violate the orthogonality condition required by the random-effects models. In addition, the time-specific effects cannot be exchanged between periods since they have their own effects in the period when they occur.

However, the dummy-variable approach has an important problem. The dummy variables unnecessarily remove the between-periods variability in the explanatory variables, thereby reducing the efficiency of estimation (Hausman and Taylor, 1981; Taylor, 1980).

In the context of fixed time-effects correlated with explanatory variables, this study addresses the problem and develops estimation methods which improve efficiency by utilizing the between-periods variability as well as the within-period variability.[3] Specifically, instead of using dummy variables, the estimation method proposed in this study controls for time-specific effects by conditioning on nuisance parameters representing the time-specific effects. Thus, it will be able to keep the between-periods variability in explanatory variables. To consider the uncertainty associated with the conditioning values of the nuisance parameters, we integrate out the nuisance parameters for unconditional estimation in the Bayesian framework.

The efficiency gain will be bigger as the between-groups variability increases. Use of the proposed unconditional estimation does not hurt anything, and it is expected to offer greater precision for most

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[1] For expositional simplicity, we do not differentiate balanced and unbalanced panel data. In fact, the estimation methods proposed in this study can be applied to both types of panel data in the same way.

[2] Although this study focuses on estimation methods which control for time-specific effects, the same methods can easily be applied to control for unit-specific effects. Further, the methods can also be used for cross-sectional *or* time-series data to control for group differences such as industry effects and seasonal effects.

[3] Hausman and Taylor (1981) propose instrumental variables estimators which utilize the between-groups variability and are asymptotically efficient. However, their estimators require that some explanatory variables be uncorrelated with the unit-specific effects. In contrast, the estimation methods in this study do not need any such prior information or assumptions.

cases. It becomes identical to the dummy-variable approach only when the period means of explanatory variables are constant.

The following section explains estimation methods. Section 3 presents the estimation results and evaluates the efficiency gain of the proposed method. Section 4 contains the conclusions.

2. EFFICIENT ESTIMATION METHODS

Consider the following regression model which includes time-specific effects (δ_t's).[4] For $i = 1, \cdots, N$ and $t = 1, \cdots, T$,

$$y_{it} = x_{it}'\beta + \delta_t + u_{it} \tag{1}$$

where x_{it} is a $k \times 1$ vector of explanatory variables which vary over time and across units and β is a $k \times 1$ vector of regression coefficients. And the time-specific effects may be correlated with some or all of the explanatory variables. The errors u_{it}'s are assumed mutually uncorrelated and to have mean 0 and variance σ_u^2.

The left-hand side graph in Figure 1 shows an efficient way of controlling for time-specific effects δ_t's. When δ_t's are known, we can remove the effects from the dependent variable while maintaining the variability in the explanatory variables. In contrast, the right-hand side graph shows the within transformation by dummy variables which removes the time-specific effects not only from the dependent variable but also from the explanatory variables.

(a) Using δ_1 (b) Using dummy variables
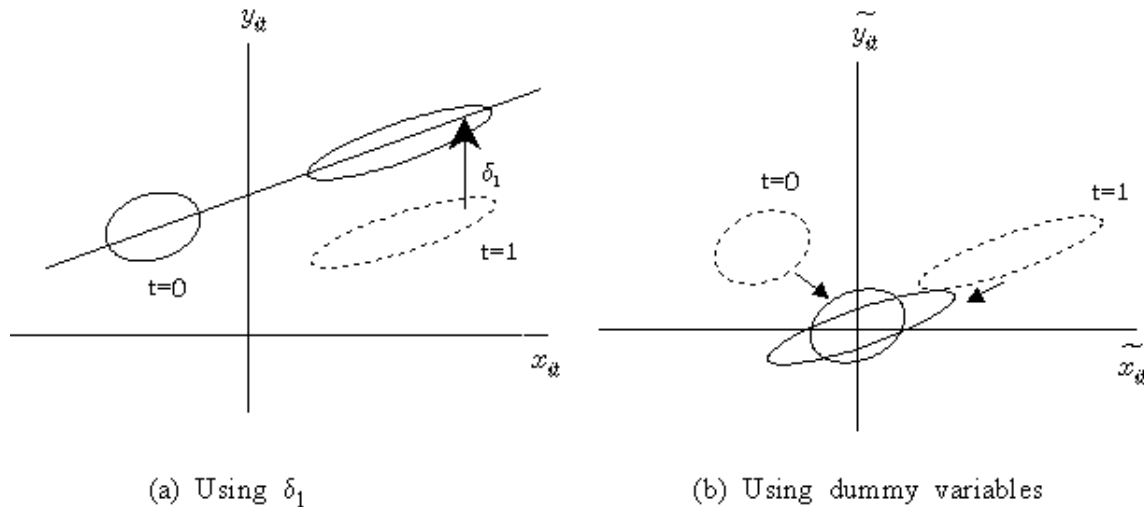
FIGURE 1: TWO WAYS OF CONTROLLING FOR TIME-SPECIFIC EFFECTS

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[4] For unit-specific effects we replace δ_t with a_i. The estimation method proposed in this study can also be applied to control for both time-specific and unit-specific effects: $y_{it} = x_{it}'\beta + \delta_t + a_i + u_{it}$. For the effects due to group differences we change the subscripts: $y_i = x_i'\beta + \delta_g + u_i$ for cross-sectional data, and $y_t = x_t'\beta + \delta_g + u_t$ for time-series data, where a subscript g stands for the group to which each observation belongs.

We can predict that the efficiency gain by using δ_t's becomes larger as the period means of explanatory variables are more variable. Below are presented two estimation methods which keep the total variability in explanatory variables: one is conditional estimation on point estimates of δ_t's and the other is unconditional estimation using a Gibbs sampler.

2.1 Conditional Estimation

Since δ_t's in Eq. (1) are unknown parameters, we first estimate them using dummy variables.

$$y_{it} = x_{it}^{'}\beta + \sum_{t=1}^{T} d_t\delta_t + u_{it} \tag{2}$$

where d_t is set to 1 only if an observation is from period t. This study points out that the OLS estimates of β are not efficient because the dummy variables unnecessarily remove the between-periods variability in explanatory variables x_{it}.[5] If we can control for the time-specific effects δ_t's without using the time dummies, we will be able to keep the between-periods variability and improve the efficiency of estimates. In fact, estimation of β does not require time dummies to be included in the matrix of explanatory variables (Hsiao, 2002, p.32).

Using the OLS estimates $\hat{\delta}_t$'s from Eq.(2) we can remove the time-specific effects from the dependent variable.

$$\widetilde{y}_{it} = x_{it}^{'}\beta + u_{it} \tag{3}$$

where $\widetilde{y}_{it} \equiv y_{it} - \sum_t d_t\hat{\delta}_t$. The OLS estimates of β in Eq. (3), conditioned on the marginal point estimates $\hat{\delta}_t$'s, exploit the between-periods variability as well as the within-period variability in x_{it}, thereby their efficiency being improved.[6]

The estimates derived conditionally on $\hat{\delta}_t$'s are consistent and asymptotically efficient since $\hat{\delta}_t$'s are consistent (Hausman and Taylor, 1981). However, the standard errors of the conditional estimates are underestimated as the uncertainty associated with the conditioning estimates $\hat{\delta}_t$ is ignored. The resulting exaggeration of significance might lead to a conclusion of spurious relation, particularly for finite samples.

2.2 Unconditional Estimation: A Gibbs sampler approach

The Bayesian econometrics provides a method for unconditional estimation: the nuisance parameters δ_t's are integrated out. To do this, we first decompose the dependent variable y_{it} into two components: the mean in each period ($\bar{y}_t$) and the deviation from the mean ($y_{it} - \bar{y}_t$). The period mean $\bar{y}_t$ is related

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[5] As far as β estimation is concerned, the OLS estimates and their standard errors from Eq.(2) are equivalent to the OLS estimates from the following model which uses the within-period variability only: $y_{it} - \bar{y}_t = (x_{it} - \bar{x}_t)'\beta + (u_{it} - \bar{u}_t)$.

[6] In estimating Eq. (3) an intercept is included since the OLS standard errors use the X variability around its grand mean.

with $\bar{x}_t$ through β and also influenced by the time-specific effects δ_t^0, which are assumed to be common for all observations in period t.

$$\bar{y}_t = \bar{x}_t'\beta + \delta_t^0 + \varepsilon_t \;=\; \bar{x}_t'\beta + \delta_t \tag{4}$$

where ε_t is a disturbance having mean 0 and variance σ_ε^2. Since ε_t and δ_t^0 are not separable in each period, they are merged into $\delta_t \, (= \delta_t^0 + \varepsilon_t)$. It is shown below that as far as estimation of β is concerned, it is not required to identify δ_t^0 and ε_t separately. If explanatory variables are also influenced by time-specific changes, then $\bar{x}_t$ will be correlated with δ_t^0: this is the case considered in this study.[7]

The other component $y_{it} - \bar{y}_t$, which is the deviation of y_{it} from its period mean, is assumed to be related with the deviations of explanatory variables from their period means, $x_{it} - \bar{x}_t$.

$$(y_{it} - \bar{y}_t) = (x_{it} - \bar{x}_t)'\beta + u_{it} \tag{5}$$

where the errors u_{it}'s are as defined in Eq (1). Further, since u_{it}'s represent errors within each period, they are not correlated with $x_{it} - \bar{x}_t$ and δ_t. Eq (5) is just the within-transformed version of Eq (1). And the sum of the two components Eqs (4) and (5) is identical to the original regression equation, Eq (1).

It is well known in the Bayesian literature that Gibbs samplers with complete conditional posterior densities can estimate the marginal posterior densities by drawing random numbers from the conditional posterior densities (Chen, 2005; Mira, 2005; and references therein). Using the regression models specified above, we now derive the conditional posterior densities for the parameters β, δ_t's and σ_u.

Given δ_t's and σ_u, the conditional posterior density for β is derived from a conditional version of Eq. (1), i.e., $\tilde{y}_{it} \equiv y_{it} - \delta_t = x_{it}'\beta + u_{it}$, as follows:

$$p(\beta \mid \delta_t's, \sigma_u, X, Y) \sim N\left[\hat{\beta} \, , \; \sigma_u^2 \times \left(\sum_{t=1}^{T}\sum_{i=1}^{N} x_{it}x_{it}'\right)^{-1}\right] \tag{6}$$

where

$$\hat{\beta} = \left[\sum_{t=1}^{T}\sum_{i=1}^{N} x_{it}x_{it}'\right]^{-1} \times \left[\sum_{t=1}^{T}\sum_{i=1}^{N} x_{it}\tilde{y}_{it}\right]$$

where X and Y stand for all observations on x_{it} and y_{it}, respectively.[8] As pointed out earlier, the above conditional posterior density for β keeps the between-periods variability in explanatory variables.

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[7] For random effects models in which δ_t^0's are random variables uncorrelated with $\bar{x}_t$, δ_t's can be treated as disturbances in a regression of period's means. If so, the OLS estimation can be applied to Eq. (4) to obtain an unbiased estimate of β, which may be called a between-periods estimate.

[8] In deriving the conditional posterior density for β an intercept is included since the X variability around its grand mean should be used for calculating the variance.

The conditional posterior density for δ_t can be derived using Eq. (4) since δ_t appears only in the period-means equation. For a given value of β, Eq. (4) yields a deterministic relation of $\delta_t = \bar{y}_t - \bar{x}_t'\beta$ for each period. Thus the conditional posterior density for δ_t may be expressed as a normal density with mean $\bar{y}_t - \bar{x}_t'\beta$ and variance 0.

$$p(\delta_t \mid \beta, \sigma_u, X, Y) \sim N(\bar{y}_t - \bar{x}_t'\beta,\ 0) \tag{7}$$

Each δ_t is deterministic conditionally, but stochastic unconditionally as the conditioning β is random.

Last, for given values of β and δ_t's in Eq (1), the conditional posterior density for σ_u is known to follow an inverted gamma distribution

$$p(\sigma_u \mid \beta, \delta_t's, X, Y) \sim IG\left(v, s^2\right) \tag{8}$$

where $v = TN$ and $s^2 = \dfrac{1}{TN} \times \left[\sum_{t=1}^{T} \sum_{i=1}^{N} (y_{it} - x_{it}'\beta - \delta_t)^2 \right]$

Using the three full conditional posterior densities, we generate random numbers as follows: with an arbitrary set of starting values $\{\beta^{(0)}, \delta_t^{(0)}'s, \sigma_u^{(0)}\}$,

(i) Draw $\beta^{(1)}$ from $p(\beta \mid \delta_t^{(0)}'s, \sigma_u^{(0)}, X, Y)$ in Eq. (6),

(ii) Draw $\delta_t^{(1)}'s$ from $p(\delta_t's \mid \beta^{(1)}, \sigma_u^{(0)}, X, Y)$ in Eq. (7),

(iii) Draw $\sigma_u^{(1)}$ from $p(\sigma_u \mid \beta^{(1)}, \delta_t^{(1)}'s, X, Y)$ in Eq. (8),

(iv) Repeat (i)-(iii) with conditioning the densities on the most recently drawn values.

To ensure the convergence of the Gibbs sampler, we use values drawn after the 500-th iterate. Since the estimation of marginal densities is poor if drawn values are auto-correlated, we save only every k-th iterate after the burn-in period of 500. For the examples in the next section, we choose a value of k such that sample autocorrelations of drawn values are below 0.1 in magnitude. Then we obtain unconditional estimates of β and their standard errors by calculating the means and standard deviations of the saved values of β.

3. AN ILLUSTRATIVE EXAMPLE

The experiment uses simulated panel data of different sizes. The following simple regression generates three sets of data using (T, N)= (2, 25), (2, 150) and (6, 50).

$$y_{it} = \beta_0 + \beta_1 x_{it} + \delta_t + u_{it} \tag{9}$$

Values for the explanatory variable x_{it} are drawn from uniform distributions with an interval of 1 in a way that adjacent periods share a half of each interval: for cases of T=2, an interval [0,1] is used for t =1 and [0.5, 1.5] for t =2; and for the case of T=6, six intervals of [0,1], [0.5, 1.5], …, [2.5, 3] are used. The efficiency gain of the proposed method over the dummy-variables estimation is determined by the

variability in explanatory variables between periods.[9] Thus, the proposed method is expected to produce more precise estimates than the dummy-variable OLS method for all three sets of simulated data. Further, the efficiency gain should be greater for $T=6$ than for $T=2$.

TABLE 1: ESTIMATION RESULTS FOR SIMULATED DATA

Size of panel data	β_1 estimate[a]	Standard Error (s.e.)			t statistic			Ratio of $\dfrac{s.e.(Unconditional)}{s.e.(OLS)}$
		OLS	Uncon-ditional [b]	Condi-tional[c]	OLS	Uncon-ditional	Condi-tional	
T=2, N=25	8.530	4.599	3.795	3.306	1.855	2.247	2.580	0.825
T=2, N=150	3.566	2.044	1.684	1.487	1.745	2.115	2.398	0.824
T=6, N=50	3.487	2.063	1.482	0.615	1.690	2.336	5.670	0.719

[a] The OLS estimates of β_1 with dummy variables, which are identical to the conditional estimates, are reported. The unconditional estimates of β_1 are almost the same as the OLS estimates and not reported here. The simulated data were generated using $\beta_1 = 3.5$.

[b] The unconditional estimates are obtained using the Gibbs sampler with full conditional posterior densities.

[c] The conditional estimates are conditioned on the OLS estimates ($\hat{\delta}_t$'s) of the dummy coefficients. That is, they are obtained using a regression $y_{it} - \sum d_t \hat{\delta}_t = \beta_0 + \beta_1 x_{it} + u_{it}$.

Consistent with our expectations, Table 1 shows that the unconditional estimation achieves a substantial gain in efficiency over the dummy-variable estimation. The efficiency gain, measured by the ratio of the standard errors of the unconditional and OLS estimates, is greater for $T=6$ than $T=2$, i.e., 0.719 vs. 0.824 or 0.825. However, large N has little impact on the relative efficiency. For the three cases reported in Table 1, the unconditional estimation concludes that the coefficient β_1 is significant at a usual significance level of 5%, while the dummy-variable OLS cannot show its significance with the largest t statistic being only 1.855. Thus, the results confirm that the unconditional estimation produces more accurate estimates than the dummy-variable OLS, as long as there is variability in the period means of explanatory variables.

4. CONCLUSIONS

The unconditional estimation proposed in this study is efficient in controlling for between-groups heterogeneity and therefore increases the significance of regression coefficients. This estimation method is so general that it performs better than the dummy-variable OLS estimation for all types of data, not only panel data but also cross-sectional or time-series data. Further, use of the unconditional estimation never hurts anything: it is identical to the dummy-variable OLS only when the between-groups variability in explanatory variables is zero. It will produce larger efficiency gain as the between-groups variability increases.

The only asymptotic approximation used for the proposed method is a normality for the posterior density for regression coefficients, which is also assumed for the dummy-variable estimation. However, the normality can be relaxed only with added complexity in implementing the Gibbs sampler. Since it does not

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[9] Values for the parameters $\beta_0, \beta_1, \sigma_u, \delta_t's$ do not affect the relative efficiency of the estimation methods. Arbitrarily chosen values are $(\beta_0, \beta_1) = (2, 3.5)$, $\sigma_u = 10$, and $(\delta_1, \delta_2, \delta_3, \delta_4, \delta_5, \delta_6) = (0,1,1,0,0,1)$.

require any additional information or assumptions, the proposed estimation method is expected to produce more precise estimates than the dummy-variables approach for samples of any size.

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AUTHOR PROFILE:

Dr. Chung-ki Min earned his Ph.D. in Economics from University of Chicago, USA. He is currently a professor of economics at Hankuk University of Foreign Studies, Seoul, KOREA.

FINANCING RESOURCES USED BY THE ROMANIAN SME'S CASE STUDY: ATTITUDE OF SME'S FROM CLUJ COUNTY

Adina L. Negrusa, Babes-Bolyai University, Cluj-Napoca, Romania
Smaranda A. Cosma, Babes-Bolyai University, Cluj-Napoca, Romania
Gica Oana, Babes-Bolyai University, Cluj-Napoca, Romania

ABSTRACT

In Romania, like in the most transition economies of the South-Eastern countries, large state-owned enterprises, generally concentrated in the petrochemical and mining sectors had a dominate position. Begin with 1990 the privatization and restructuring processes influence the development of the SME's sector. Today this sector represents almost 99% in the total number of enterprises, but it is characterized by a weak position in competition and the low possibility to attract employees. Through the integration agreement, our country assume some responsibilities regarding the development of SME's sector which determined, an intensification of measures for improving the financing access and opportunities in the last 7 years. In this context, in the paper we intend to analyse the behaviour of SME's regarding the financing process and their attitude toward different types of financing resources. Our research is focused on the SME's from Cluj county, an area where this sector is well developed, situated in the second position at national level as density of SME/ 1000 inhabitants and labour productivity. The paper analyse their capabilities and intention for choosing financing resources and the main constraints or disadvantages of the outside sources.

Keywords: SME'S, Strategy of development, Financial resources, International market

1. INTRODUCTION – The Evolution of the Romanian SMEs

In the last 7 years Romanian economy show a steady growth of average 6%, this placed our country in the top of the most dynamic development oriented economies from Europe. For 2006 the GDP growth rate was 7.7%, and resulted mostly due to increasing of final consumption by 11.5% and investment by 16.1%. This was greatly influence by of an increasing of foreign direct investment, with 30.5% comparing with 2005, totalized a net flux of investment of euro 9059 millions. More than 45% of its were done as a greenfield investment and the main domanis were: food manufacturiing, trade, telecommunication and financial transactions.

TABLE NO. 1. THE EVOLUTION OF THE ROMANIAN SMEs

Years	Number of SMEs	Weight of staff in SMEs	Weight of SMEs' turnover in the turnover of the total enterprises
1992	126,549	12.3	30.9
1994	283,697	20.1	41.3
1996	309,454	29.1	48.3
1998	315,970	37.8	52.8
1999	316,593	42.5	54.0
2000	306,073	46.9	55.9
2001	309,303	48.5	57.2
2002	313,159	50.7	55.9
2003	347,064	54.4	57.4
2004	392,544	58.2	57.5
2005	431,135	60.7	57.6
2006	459,972	63.2	58.7

Source: Romanian Statistical Yearbook 2007

Starting with 1990 a central issue of the Romanian economic development was the restructuring of the large and unprofitable enterprises. This objective could be achieved only throw an intensive privatization process which also determined a development of the SMEs' sector. Analyzing the 1990-2006 time span

we noticed that the SME sector has grown very rapidly as number of units, staff and turnover, representing today almost 99% of the total number of Romanian enterprises.

Regarding the average dimension of a small or medium Romanian enterprise, it resulted that the staff number is around 7, which means a good average for a work group in comparison to the European number which is around 5. In general, this result could be explained by the fact that the implementation of the privatization process of the former enterprises determined the emergence of a large sector of Romanian medium enterprises.

The development trend of the Romanian SMEs' sector is a positive one. For example, in 2006 the number of profitable SMEs increased by 5%, the average turnover increased by 10-15% and also the profit increased by 5-10%. Also comparing with 2005 in 2006 the SMEs increase the amount of investment with an average of 10-12%. Based on these indicators, it seems that this sector has become more interesting for making investments and for employing personnel. But the Romanian enterprises made their investments based on their own funds, as it resulted from a study conducted in 2005 by *The National Fund for Guaranteeing Credits for the SMEs, Fondul National de Garantare a Creditelor pentru IMM*.

In order to have an important SMEs' sector it is required to develop their access to the financing resources. The main objective of any entrepreneur, independent from the type of business, is to have a long term development of their enterprises. Such an increase will bring the consolidation of the SME through an appropriate adaptation to the external environment and to its challenges. This development can only be sustained by constant and substantial financing resources. If the SME is at an incipient stage of doing business, there are fewer chances to get access to enough financial funds.

For the Romanian SMEs' the financing activity is one of the main problems. Most of them prefer to use internal financing sources like: the entrepreneurs' savings, partnerships or stakeholders' contributions and the surplus of the business profit. Only a small part of them try to identify external sources like: the banks' loan system and leasing instruments, communitary programs and governmental funds.

Taking into account the correlation between the dimension of the enterprises and the usage of other financial resources it results that, in general, medium enterprises more often use the credit system for getting financial resources, than micro and small enterprises.

TABLE NO. 2. THE QUOTA OF FINANCIAL RESOURCES USED BY ROMANIAN SMES

Sources	Micro	Small	Medium
Exclusively the entrepreneur's/ business resources	70.27	49.29	28.35
Mainly the entrepreneur's/ business resources (more than 85%)	17.78	17.77	14.95
Entrepreneur/ Business resources and bank loans/ other financial support in equal proportions	10.10	27.49	52.06
More than 50% bank credits/ other offers	1.28	4.27	3.61
Other offers	0.57	1.18	1.03

Source: CNIPMMR/ Studiu național, Februarie, Proiect Pilot nr. RO/03/B/F/PP-175017

The lack of external financing resources' attractiveness for the Romanian SMEs is approached from two points of view. From the banking sector's perspective, the SMEs present the following weaknesses which act against their support: lack of training regarding the preparation of credit documentation, deficiency of SMEs' management, insufficient information given about the business activity, lack of long term forecasting for their activities, fragile internal sources for financing their investments and sometimes the financing process of the SMEs is not profitable. Neither the other side, nor the entrepreneurs are content with the financing offers of the banking sector. They consider the following aspects as weaknesses of this sector: the high rate interest, the process of accessing credits or other financial instruments is too difficult, too much documentation is requested for accessing financial resources, lack of transparency and communication skills of the bank or financial institution's staff.

In general, banks do not address to start-up businesses and make collateral demands to other businesses which are often hard to meet by undercapitalized SMEs, whose owners also lack sufficient personal assets to collateralize bank loans. Other forms of financial support are in the same incipient stage. In general the financial support for SME's it is more oriented for short-term due to the low profitability levels, inflation and weak legal protection. The enterprises financial constraints that impede their access to long-term financing limited also their possibility to develop and improve competitiveness.

2. THE ATTITUDE OF SME'S FROM CLUJ COUNTY TOWARD FINANCING RESOURCES

Cluj County is situated in the North-Western region of development, in the heart of the historical province of Transylvania. The county's economy is one of the most balanced developments from Romania. Reviewing the tendency of Cluj economy in the last 10 years reveals that the most important and with a huge impact in the work forces market is the industry.

First of all we analyze the evolution of active enterprises number in the regional economy and resulted that the Cluj economy is specialized on manufacturing with the following fields of interest: food manufacturing, light industry, putlog and machine/building industry. A special meaningful is the increasing of the construction activity with 58%, becoming an important factor for the development of the entire area. This tendency reflects also an important flow of investments concerning the industry infrastructure and the increasing demand for real estate.

 Regarding the structure of Cluj economy by size class, almost 87% of the active units are micro enterprises, with less than 10 employees and the number of macro enterprises with more than 250 employees is just 0,57% from the total.

TABLE NO.3.
THE EVOLUTION OF SME'S FROM DIFFERENT ECONOMIC FIELDS OF THE REGIONAL ECONOMY

- number -

Cluj Area Economic section	2000*	2003	2004	2005	2006
Total	**13604**	**17465**	**18779**	**21066**	**23621**
Percent of trade and wholesale	52.4	51.2	50.89	49.8	50.4
Percent of processing industry	16.8	14.4	14.2	13.3	13.5
Percent of services	18.6	20.8	25	29.3	29.5
Rate of return (%)	NA	5.40	4.45	6.4	NA
Debt service indicator (%)	NA	38.45	41.18	42.73	29.6
Labour productivity (thous.RON/employee)		50.816	66.197	95.460	NA

Regarding the structure of Cluj economy by size class, in 2006 almost 87% of the active units were micro enterprises, with less than 10 employees, 9% were small enterprises and 2% medium companies.

On the other hand, in the analysis we took into consideration the evolution of the active enterprises' turnover, in order to identify which are the promising sectors, already developed and also with an important impact upon the labor force market. The most important sector is trade: wholesale and retail, with a turnover mean per enterprise of about 744,000 RON, on the second position there is manufacturing (with a turnover mean of about 954,000 RON) and on the third position there came

services: real estate transactions, renting and service activities mainly rendered to enterprises (689,000 RON).

In an evaluation realized in 2003 by the *National Agency for SMEs and Crafts ANIMMC*, based on an synthetic index constructed using the economic and financial indicators of the SMEs from our country, the enterprises from the County of Cluj came on the 8th position, with a labor productivity of 50.8 thousand RON/ employee and with an internal rate of return of 5.40. Based on these statistical facts, we concluded that the SMEs' sector is well developed in Cluj and that the entrepreneurs are interested to develop their own business aiming to occupy a better and more competitive position.

Conceptual Frame for the Research and Method

The purpose of the research was to identify the attitude of the SMEs from the County of Cluj towards financing resources used in their development. The central hypothesis that we intend to confirm is: in Romania the main source for financing businesses is given by the entrepreneur's own savings.

In this respect we focused on three main problems identified in their businesses:

- What kind of resources use SMEs for starting their activity or for financing their investments?
- How much are SMEs interested to invest in their business' development?
- Advantages and disadvantages identified for the banking credit system.

In this paper we used the empirical results from the interview study of the Romanian SMEs that are located in Cluj County, selected under the condition of respecting the economic sector classification on economic activity. For our investigation we used a short questionnaire with structured questions applied online to a sample of 125 SMEs from different areas of activity from Cluj, with a high ponder of micro enterprises.
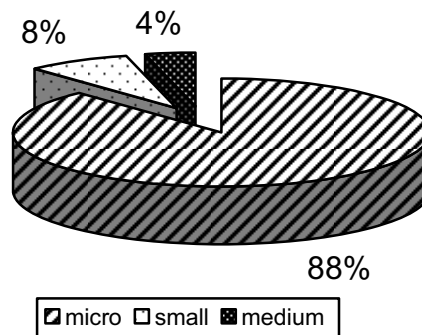
FIGURE NO. 1. THE SAMPLE'S STRUCTURE BASED ON THE SIZE OF THE SMES

More than a half of the enterprises from the sample started their activities in the 1990-1995 period and 27% of them during the last 6 years. When we carried out our investigation we also tried to respect the SMEs' structure based on the type of economic activity from the County of Cluj.
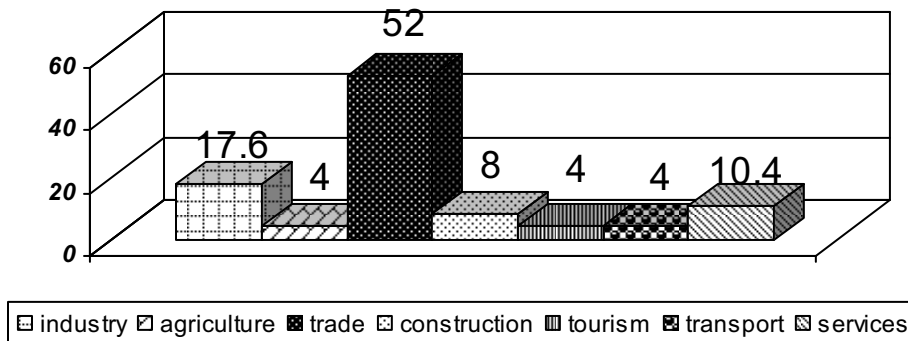

FIGURE NO. 2. THE SAMPLE'S STRUCTURE BASED ON THE ECONOMIC ACTIVITY

The answers given to the questionnaire were processed with the SPSS soft using appropriate methods for each type of the study's values.

Results and Conclusions

First of all, we were interested to identify which is the most commonly used financing source for starting a new SME. Taking into account the fact that the majority of the enterprises were created before 2000, when the access of the SMEs to external financing resources was not well-developed, we found that 88% of the entrepreneurs created their business based on their own savings. Only 5% of the SMEs were foreign investments and 7% used credits for starting up their activity. The quota of these last sources remains a low even when the entrepreneurs decide to make investments. For the investments made in the last two years, the primary choices were the own savings and the business profits.
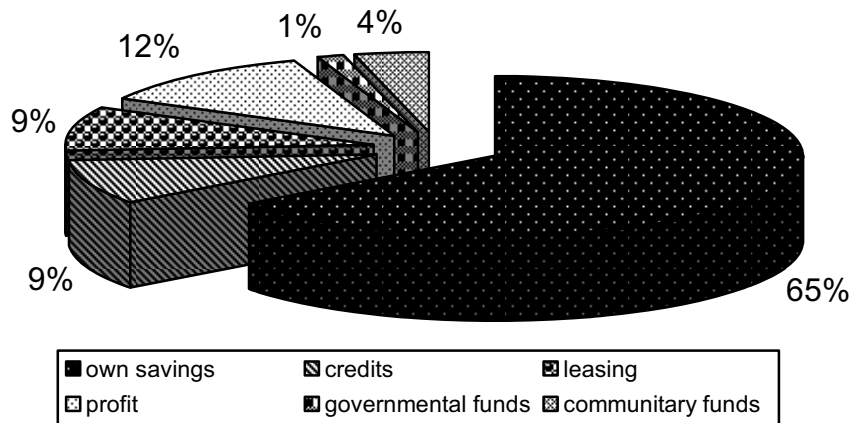
FIGURE NO. 3. THE PERCENTAGE OF USING DIFFERENT FINANCING SOURCES

The SMEs from the County of Cluj have known during the last two years a flourishing period, due to the 85% of enterprises which made some investments and to the 72% of the SMEs which declared that after these investments had been done, their turnover had increased. Nevertheless the investments' amount is not too high, only 12% of SMEs made investments higher then 25,000 Euro. These results show us the slow rate of business growth, due to a distrust and cautious behavior of the entrepreneurs concerning the use of external financing sources. Searching for the reasons of this favorable behavior towards internal financing sources we discovered that 30% consider that this is a kind of reinvestment of their revenue, for 24% of the entrepreneurs it is a cost savings advantage and 10% consider that it is much easier to get the financial resources when they are needed for the business. In conclusion, the entrepreneurs' reasons are related to the economy of time and costs.

This result is correlated with the main disadvantages considered by the entrepreneurs regarding the banking offers.
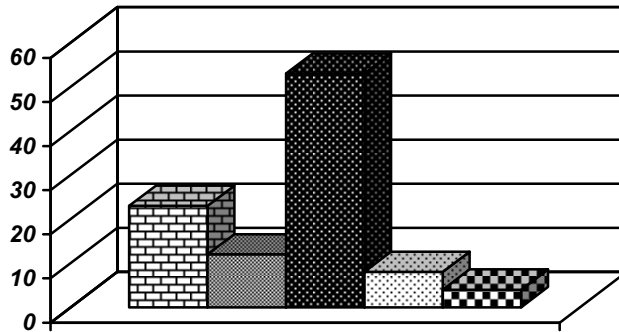
▣ interest rate	23
▦ taxes and commissions	12
▓ procedure	53
▢ warranty	8
▣ business plan	4

FIGURE NO. 4. DISADVANTAGES OF BANKS' LOANS

The improvement of the banks' offers is expected by the entrepreneurs and for the future more than 72% are taking into account, for their business development, the possibility to access bank credits. This result can also be explained by the fact that the new conditions of the business environment require from the SMEs fast and firm reactions and growth decisions. If until now the competition among SMEs did not press entrepreneurs to plan a long term development for their businesses, thus, their own savings were enough for their needs; things have changed starting with the moment of the integration in the European Union. The entrepreneurs have become more conscious that without using external financing resources, the business activity cannot be improved. So, this is why more than 60% of the SMEs state that for them, credits for a medium term (less than 3 years) represent a way of financing their future investments.

During the last years, due to a continuous effort of the ANIMMC and of the governmental institutions, effort that was oriented towards the implementation of the long term National Development Strategy, the banking system became more interested to change its financial offer in order to become more attractive for the SMEs.

Generally speaking, the SMEs' investments carried out during the last two years were oriented towards the improvement of the production systems, either for technology innovation and IT&C applications, or for extending the production capacity. An important value, 14% of the SMEs, registered positive results from the diversification strategy applied by entrepreneurs, fact that means that the Romanian economic environment still offers profitable business opportunities and some of the SMEs have already reached a mature stage of development.

We may conclude by pointing out that despite the fact that SMEs are the most important element of our national economy – they are the most numerous companies, they evolve in the most various areas of activity, they offer an important source of work places, they register one of the most important growth rates etc – they still seem to confront difficulties when identifying financing sources. Given their potential of development, we consider that one of the most important concerns of the Romanian authorities should be to create a genuine framework for the SMEs development and support, which means to grant them access to external financing sources.

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AUTHORS PROFILES:

Dr. Adina L. Negrusa is an Associate Professor of Management at Faculty of Business, Babes-Bolyai University from Cluj-Napoca, Romania. She earned her Ph.D. in Management Science in 2004 at West University from Timisoara

Dr. Smaranda A. Cosma earned her Ph.D. in Marketing in 2004 at West University of Timisoara and she is an Associate Professor of Marketing and International Marketing at Faculty of Business, Babes-Bolyai University from Cluj-Napoca.

Mrs. Oana Gica is an Assistant Professor of Small and Medium Enterprises Management at Faculty of Business and PhD student at the Faculty of Economic Sciences from Babes-Bolyai University from Cluj-Napoca.,

THE ANALYSIS OF DEPRECIATION RULES IN THE SYSTEM OF COMMON CONSOLIDATED CORPORATE TAX BASE

Danuse Nerudova, Mendel University Brno, Brno, Czech Republic

ABSTRACT

The key role during the process of creation of rules for common consolidated tax base construction plays the institutional relation between the financial reporting rules and tax rules. The convergence of financial reporting rules and tax rules (or very close connection between them) represents the basic presumption. Only in that case, the remarkable decrease in administrative and compliance costs of taxation, which are arising to the companies due to the existence of great number of adjustments during the tax base construction, can take place. The aim of the paper is to make the comparative analysis in the field of definition and depreciation (amortisation) of assets in EU member states and to compare the results with the suggested rules, which should be used for assets in the system of common consolidated corporate tax base.

Key words
Common consolidated tax base, assets, depreciation, IAS/IFRS.

1. INTRODUCTION

The key role in the process of creation the rules in the system of common consolidated corporate tax base (hereinafter referred to as the "CCCTB"), is played by the institutional relation between accounting rules and tax rules. The coexistence of 27 different systems of corporate taxation within the European Union causes compliance costs of taxation which have regressive character in respect to the size of the subject (Cressy, 2000). In some cases, compliance costs of taxation can be so high that they have prohibitive character – i.e. they discourage the subject from the cross-border activities on the internal market (European Commission, 2004).

At present, the connection between accounting and taxation systems has different intensity within the EU. There can be also found two extreme situations – disconnection of the systems (i.e. taxation and accounting rules are applied independently and differ) and connection of the systems (i.e. accounting and taxation rules are connected).

In connection with the ideas about the introduction of common consolidated tax base for companies in EU, the convergence of taxation and accounting rules (or very close connection) represents one of the basic assumptions. Only in that case the compliance costs of taxation, arising to the companies mainly in connection with the transformation of the accounting result on the tax base, can decrease remarkably.

Based on the Regulation (EC) No. 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards, all the companies in EU which are publicly traded has follow IAS/IFRS while completing financial reports. That could be considered as the first step on the way towards the harmonization of the rules for CCCTB construction. Nevertheless, most of the accounting systems applied within the EU differs from IAS/IFRS principles (with the exception of Estonia), therefore it will not be probably possible the choose IAS/IFRS as the starting rules for CCCTB construction.

The aim of the paper is the comparative analysis in the area of depreciation methods applied in EU member states and the comparison and discussion of the depreciating methods and definition of assets proposed by the European Commission in the last proposal. The paper presents the results of the research project GA CR no. 402/07/0547 "The Impact of Financial Reporting Harmonization for Small and Medium-Sized Enterprises in Relation to the Income Tax Base Construction".

2. THEORETICAL BACKGROUND

Even though that only the close connection of the accounting and taxation rules in CCCTB system can bring remarkable decrease in compliance costs of taxation as was mentioned above and also decrease in the administrative costs of the tax authorities, there can also be found in the tax and accounting theory very strong arguments, why accounting and taxation rules cannot be connected.

The basic argument for the defence of the disconnection of the systems is the fact, that accounting system and taxation system do have different aims. The aim of the taxation system is the tax collection. Other aims of taxation system are very often considered to be the efficient source allocation between the public and private consumption, the redistribution of the income through the transfer payments, the stabilization of the economy – taxes are considered to be "built in stabilizers", which reduce the fluctuation of the economy cycles, the reduction of "harmful" consumption of selected products and also the political aims – for example the support of the certain types of industry or companies by using corporate taxation as the tool of selective economic policy.

The aims of accounting are different from the aims of taxation system. The institutional framework of International Accounting Standards Board mentions that the aim of accounting is providing information about the financial position and its changes, and efficiency, which are useful for people involved in economic decision process.

Based on the above mentioned, it is not probable, that the form of accounting rules which serve to the different aims of financial reporting would be suitable also for totally different aims of the taxation system.

Costs efficiency can be considered as the basic argument for the connection of both systems. It would bring the remarkable decrease in the costs on the side of the taxpayers as well as on the side of the tax administration. In the situation, when both of the systems would apply the same rules, it is not needed to keep the books twice. This would bring remarkably decrease in compliance costs of taxation, mainly in case of small and medium sized enterprises (SMEs) in the form of costs on tax consultancy and tax file completion. The above mentioned savings can be reached only in the situation, when identical tax and accounting rules will be applied. Any deviation of the taxation rules, for example in the form of tax sales would result in the decrease in compliance costs of taxation savings.

The connection of the systems would bring the savings of costs connected with tax collection on the side of the tax authority (tax control would examine just the content of the tax file). It could also bring the savings in the field of tax legislation creation (for example government decrees, etc.).

Another argument, which is very often marginalized, is represented by the political costs (Suzuki, 2005). The disconnection of the systems can induce the political costs. Under the disconnection, there can raise the situation, when the company will record the profit which will be distributed to the shareholders in the form of dividends, but from the taxation point of view, the company will show loss. The above mentioned situation has raised the wave of criticism of taxation system in 80s, for based on the research, 123 from 250 surveyed companies has not paid any tax during 80s, even though they recorded profit 57.1 billion USD (McIntyre and Folen, 1984). As the reaction on the criticism, the government has introduced new taxation system which comprised the minimum tax base, which has even increased the complicatedness of the taxation system and has deepened the disconnection between the systems.

The convergence of the systems could bring another advantage – the limitation of the tendency to over valuate the profit of the company. In situation, where there is positive correlation between the management remuneration and recorded profit, then higher profit means higher remuneration for the management, but also higher tax liability (only in situation of connection of the systems). The convergence of the taxation system and accounting inhibit the effort of the management to over valuate the profit of the company artificially.

The problems of measurement of connection between accounting and taxation system have been the subject of many surveys (Doupnik and Salter, 1992). A comparative overview of the situation in Europe (13 countries) has been surveyed by (Hoogendoorn, 1996) in second half of 90s. The survey has proved that there can be described two situations – connection and disconnection of the systems. Disconnection is described as the situation, when companies are using different accounting and tax rule, which can influence each other. On the contrary, connection is defined as the situation, when the accounting rules are based on tax rules.

Another classification by (Nobes and Parker, 1998) distinguishes the countries on Anglo-Saxon – in those countries the taxation do not have any impact on accounting rules, and on the countries of continental Europe – in those countries the taxation rules dominate to the accounting rules.

Other authors (Lamb and Nobes, 1998) have surveyed, whether there is a difference in relation between accounting and taxation systems between Anglo-Saxon countries and countries of continental Europe. The connection was measured in four selected countries – U.S.A. and United Kingdom (as Anglo-Saxon countries) and in Germany and France (as countries of continental Europe). The survey has revealed that two above described groups of countries can be distinguished according to the influence of taxation system on accounting system. Anglo-Saxon countries have proved relatively low influence of taxation system on accounting system. While in the second group relatively high influence of taxation system on accounting system was proved.

The key principle which is laid on the CCCTB system and its rules by economic and tax theory is the tax neutrality – i.e. the decision process of the companies on the investment placement should not be influenced by the taxation system of the respective country. Sometimes the tax neutrality is understood in relation to the individual types of investments – i.e. taxation system should not give advantage to the certain parts of the industry, form of the business or financial sources. The last proportion of tax neutrality represents the international element – taxation system should be neutral in respect to the international investments. The economic theory defines three basic forms of tax neutrality (McIntyre, 1993). Capital import neutrality means that all investors with no respect to their residency should be taxed equally in respective country. Second type is represented by capital export neutrality – the investors in respective country should be taxed equally with no respect to the country of investment. The last type is represented by capital ownership neutrality – tax system does not cause the transfer of the assets between the countries.

Keeping the above mentioned rules in the CCCTB system would expect not only the introduction of the unified rules for tax base construction, but also unified tax rate. The concept of tax rate harmonization was abandoned by the European Commission in recent years, for the EU member states are not willing to lose the competence to set the national tax rate.

Another very important requirement, which is laid on the taxation system, is principle of equity. The principle can be divided on horizontal and vertical, which has to be valid both, otherwise the equity is not reached (Kubatova, 2006). The principle of vertical equity is defined as the situation, when two people being equally the same well-off should pay the equal tax. Analogically, the principle of vertical equity is defined as the situation, when the person relatively better-off should pay higher tax than the person who is relatively worst-off.

Other very important attribute of the CCCTB system should be simplicity, for only that it can be able to full fill the basic aim – the increase of the efficiency and competition of the subjects running business on the internal market. In practice there has always be reached the compromise between the neutrality and administrative simplicity of the system. The tax theory says, that the optimal neutrality is reached, when the advantages connected with the neutrality are equal to the additional administrative costs and compliance costs of taxation (caused by the improvement of the neutrality of the system).
The last very important attribute of the taxation system is represented by the legal enforceability. CCCTB system should clearly specify not only the rights of the taxpayers to use operations which are influencing the tax base, but should also clearly specify the taxable incomes and expenses. Only this can guarantee the legal certainty of the subjects and can help to fight against the tax evasion and tax fraud.

3. RESULTS

3.1 The comparative analysis of the depreciation in EU member states

In case of the depreciation methods, the comparative analysis has been done in three basic areas – depreciation of buildings and constructions, intangible assets, tangible assets and goodwill. The analysis has revealed that there are three methods applied within the EU – depreciation based on IFRS principles (IAS 16), straight-line method and declining balance method. According to the IFRS principles, the asset should be depreciated on the systematic basis over the useful life of the asset. The methods which are used in EU member states are shown on the following figure:

Table 1: Methods of buildings and constructions depreciation

Type of the method	Country
Depreciation based on the IFRS principles	Estonia
Straight-line method	Denmark, France, Ireland, Italy, Luxembourg, Germany, Portugal, Austria, Spain, Sweden, United Kingdom, Cyprus, Hungary, Latvia, Malta, Poland, Slovak Republic, Slovenia
Declining balance method	Finland, Lithuania
Straight-line or declining balance method	Czech Republic, Lithuania, Belgium, Netherlands

Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD and own research

As can be seen from the table, the most common method of depreciation of buildings and constructions is straight-line method. Four EU member states allow taxpayer to choose the method. Even though the majority of the sates apply the same method, the rates and the total time of depreciation varies a lot. Different rates and depreciation time in EU member state can be compared further in the following table 3.

In the area of machinery depreciation, the majority of the EU member states can choose between the application of straight-line method and declining balance. Government very often uses the policy in that area as the tool for attracting foreign investment through providing investment incentives (for example in the form of higher depreciation rates or shorter depreciation time). In majority of the EU member states the machinery is divided in two groups according to the useful life and each in each category different depreciation rate and depreciation time is applied. The methods of machinery depreciation are shown in the following table:

Table 2: Methods of machinery depreciation (the paper does not consider component method)

Type of the method	Country
Depreciation based on the IFRS principles	Estonia
Straight-line method	Austria, Ireland, Italy, Portugal, Cyprus, Hungary, Latvia, Malta, Poland, Slovenia
Declining balance method ("Pooled" declining balance)	Denmark, Finland, Latvia, United Kingdom
Straight-line or declining balance method	Belgium, France, Germany, Luxembourg, Greece, Spain, Sweden, Czech Republic, Lithuania, Slovak Republic, Netherlands

Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD a own research

The situation in depreciation methods and rates in EU member states is summarized on the following table 3. It shows the depreciation rates in case of straight-line method (hereinafter referred to as the "SL") and declining balance method (herein after referred to as the "DB").

Table 3: Summary of the depreciation methods and rates applied within the EU

Country	Type of method		Depreciation rate in %			
	Machinery	Buildings	Machinery SL	Machinery DB	Buildings SL	Buildings DB
Austria	SL	SL	10		2-4	
Belgium	SL/DB	SL/DB	10; 33	2xSL	3-5	2xSL

Country						
Denmark	DB	SL		25	5	
Finland	DB	DB		30		4-20
France	SL/DB	SL	20	1.25-2.25xSL	20	
Germany	SL/DB	SL	20	2xSL	2	
Greece	SL	SL	20		5	
Ireland	SL	SL	12,5		4-15	
Italy	SL	SL	20-25		3-7	
Luxembourg	SL/DB	SL	10-25	3xSL	2-5	
Netherlands	SL/DB	SL/DB	20	20	*	*
Portugal	SL/DB	SL	12.5-33.33	0.5-1.5xSL	2-5	
Spain	SL/DB	SL	8-30	1.5-2.5xSL	1.47-3	
Sweden	SL/DB	SL	20	30	1.5-5	
United Kingdom	DB	SL		25	4	
Cyprus	SL	SL	10		3-4	
Czech Republic	SL/DB	SL/DB	2.15-22.25	**	1.02-3.4	**
Bulgaria	SL	SL	10-50		4	
Hungary	SL	SL	14.5		3-15	
Latvia	DB	DB		15-70		10
Lithuania	SL/DB	SL/DB	10-25	***	5-15	***
Malta	SL	SL	4-15		2	
Poland	SL/DB	SL	4.5-20	2xSL	1.5-4.5	
Romania	SL/DB	SL	****	1.5-2.5xSL		
Slovak Republic	SL/DB	SL/DB	2-20	*****	1.5-2.5	*****
Slovenia	SL	SL	20-50		3	

* Immovable property may be depreciated as long as the book value does not drop below "minimum value".

** The tax payer can choose accelerated method, which do not influence the period of depreciation; under that method, depreciation for the first year is calculated by dividing the cost of the asset by the special coefficient, for the subsequent years, it is calculated by multiplying the depreciated value of the asset by two and then dividing by the applicable coefficient, which is reduced by the number of years for which the asset has already been depreciated.

***Declining balance methods can be used just alternatively.

**** Assets are depreciated over their useful time, which is statutorily prescribed; it varies between 4-10 years in case of machinery and between 10-50 years in case of buildings.

*****Accelerated depreciation is applied as in the case of the Czech Republic.

Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD a own research

As is visible from the above stated table, there is great difference between the depreciation rates within the EU. The creation of the deprecation rules under CCCTB will require mainly the harmonization of the rates. In some respects it can be very difficult, for the rates varies from 2 to 33.5 % and depreciation rates can serve as the tool in competition between the states in attraction of investments (the depreciation can influence the tax burden of the taxpayer – the higher the rate is, the lower tax burden is taxpayer facing).

Table 4: Methods of the depreciation of intangible assets

Type of the method	Country
Depreciation based on the IFRS principles	Estonia, United Kingdom
Straight-line method	Belgium, Denmark, Finland, France, Ireland, Italy, Germany, Austria, Greece, Spain, Cyprus, Czech Republic, Hungary, Latvia, Malta, Poland, Portugal, Slovak Republic, Slovenia
Declining balance method	Sweden
Straight line or declining balance method	Luxembourg, Lithuania, Netherlands

Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD and own research

The majority of the EU member states are applying in case of the intangible assets straight-line depreciation method. Nevertheless, four member states apply declining balance method. The time for which the intangible property is depreciated is in nearly in all EU member states connected with the period, for which the rights are protected by the law. Those periods differs between the member states. The methods applied within the EU member states shows the in table above.

The area of goodwill depreciation seems to be more unified than the categories mentioned above. Most of the states apply straight line method. Again, as in case of intangible assets, the time of depreciation differs between the states. Moreover, some of the EU member states do not allow tax depreciation of acquired goodwill. This fact influences the tax incidence during the merger very significantly. On the other hand, there are countries which allow in the first year accelerated depreciation. Therefore, the implementation of CCCTB rules needs unified definition of goodwill and its depreciation rules. The methods used for goodwill depreciation within the EU member states are summarized in the following table:

Table 5: Methods of goodwill depreciation

Type of method	Country
Systematic depreciation (max. 5 years)	Estonia
Straight line method	Belgium, Denmark, Finland, Italy, Luxembourg, Germany, Austria, Greece, Netherlands, United Kingdom, Spain, Czech Republic, Hungary, Lithuania, Poland, Slovak Republic, Slovenia
Cannot be depreciated	France, Ireland, Portugal, Cyprus, Latvia
Straight line or declining balance method	Sweden

Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD and own research

Even though the IAS/IFRS principles do not allow immediate expensing of the assets, for the depreciation of assets should be on the systematic basis during their useful life, there are many EU member states which do allow immediate expensing of the assets in case that the acquisition costs do not exceed certain limit. Also in that area seems to be great differences, therefore the introduction of CCCTB system will also need the introduction of unified rules for immediate expensing of the assets. The present situation in that area is shown on the following table:

Table 6: The limits for immediate expensing of the assets

Country	National currency	EUR*
Austria	400 EUR	400
Belgium	Not allowed	Not allowed
Denmark	11,000 DKK	1,475 EUR
Finland	850 EUR	850
France	500 EUR	500
Germany	410 EUR	410
Greece	1,200 EUR	1200
Ireland	Not allowed	Not allowed
Italy	516.46 EUR	516.46
Luxembourg	870 EUR	870
Netherlands	450 EUR	450
Portugal	199.52 EUR	199.52
Spain	601.01 EUR	601.01
Sweden	Not allowed	Not allowed
United Kingdom	Not allowed	Not allowed
Bulgaria	500 BGN	256
Cyprus	Not allowed	Not allowed
Czech Republic	40,000 CZK	1,503
Hungary	100,000 HUF	394

Latvia	Not allowed	Not allowed
Lithuania	Not allowed	Not allowed
Malta	Not allowed	Not allowed
Poland	3,500 PLN	920
Romania	1,500 RON	420
Slovak Republic	30,000 SKK	901
Slovenia	500 EUR	500

*Exchange rate by Czech National Central Bank on 31st Dec 2007
Source: Amos, Jude. et al. (eds.) 2007. Global Corporate Tax Handbook 2007, Amsterdam: IBFD and own research

3.2 The proposal of depreciation rules in the CCCTB system

Long-term asset in the CCCTB system is defined as tangibles, intangibles, financial assets and proprietary benefits, which are used in business in the production, maintenance or securing of income for more than 12 month. In case that the costs of acquisition, construction or improvement would not overreach 1,000 EUR, the asset will not considered to be long-term and it will be possible to expense it immediately. The costs on acquisition, construction or improvement should be recorded separately for each asset.

The assets of specific character as antiquities, jewellery, financial assets, etc. which value is not decreased during its using, are not depreciated under CCCTB system (in case that the taxpayer is not able to prove permanent character of the decrease in their value). That is the rule, which is respected in most of the EU member states. Therefore it seems to be suitable also for CCCTB.
Inventories are not considered to be fixed assets, therefore cannot be depreciated under CCCTB rules. On the contrary, they are considered to be short-term asset (which is the same as in the Czech accounting legislation), which are kept for the purpose of the sale or in the production process in the form of material or in the process of providing services.

3.3 Depreciation of fixed assets

The proposal of the European Commission comprises two depreciation methods. It sets the depreciation on the individual basis for long term assets as for example buildings, while in case of short-term and mid-term assets it sets the depreciation on pool basis. The depreciation base should be created by the acquisition costs, construction costs or improvement costs. Further, also directly connected costs as for example legal fees, transportation or installation fees.

Tax written down value is defined as the depreciation base decreased by the accumulated depreciations. The depreciation base has to be also decreased by any grants and supports directly connected with the acquisition of the asset, construction or improvement. The CCCTB establishes the concept of economic owner (in accordance with IAS/IFRS principles) – i.e. that the right to depreciate the asset is in the hand of economic owner (not the legal one). Economic owner is considered to be the person bearing the substantial rights and risks connected with the asset with no respect to the fact, whether this person is also the owner based on law. The taxpayer possessing the right of ownership, usage or disposal of asset and bears the risk of its lost or damage will be also consider as the economic owner. The asset can be depreciated by one person only. In case that it is not possible to identify the economic owner, then the legal owner is allowed to depreciate the asset.

Total depreciations cannot exceed 100% of the acquisition price of the asset. The improvement cost of the asset is defined as the additional costs connected to asset, increasing its capacity and function. In case that those additional costs exceed 10% of the depreciation base, they are always considered to be the improvement cost.

In the frame of the long-term asset depreciation (i. e. straight-line method with the set specific depreciation rate), there are two basic attitudes towards the improvement cost:
>   1.   the improvement cost is depreciated at a higher rate over the remainder of the depreciation period for the underlying asset;

2.   the clock starts again for the improvement costs – i.e. the improvement cost is treated as a new asset.

3.

In case that the pooled asset is improved, the improvement cost would be added to the pool and depreciated with the rest of the pooled assets at the relevant rate.

Table 7: Depreciation of long-term asset on individual basis; total depreciation time is 25 years

	Asset	Improvement costs depreciated at 4 %, as asset "clock starts again"	Improvement costs depreciated at higher rate over remaining life
Acquisition price	1,000 EUR		
Depreciation in years 1-10 at 4%	400 EUR		
Tax Written Down Value (TWDV)	600 EUR		
Improvement costs in 11th year		500 EUR	500 EUR
Depreciation in 11th year	40 EUR	20 EUR	
Increased rate for remaining period 6,67%(1)			33 EUR
DZC	560 EUR	480 EUR	467 EUR

(1) 25 years – 10 years = 15 years, i.e. 100/15 = 6.67%
Source: CCCTB/WP057/DOC/en

Table 8: Pooled assets; reducing balance method at 20%

	Asset	Improvement costs depreciated at 20% in pool "clock starts again"	Improvement depreciated at higher rate over remaining life
Acquisition price	1,000 EUR		Not applicable
Depreciation in year 1 rate 20%	200 EUR		Not applicable
TWDV	800 EUR		Not applicable
Depreciation in year 2 rate 20%	160 EUR		Not applicable
TWDV	640 EUR		Not applicable
Depreciation in year 3 rate 20%	128 EUR		Not applicable
TWDV	512 EUR		Not applicable
Depreciation in year 4		500 EUR	Not applicable
TWDV	1012 EUR		Not applicable
Depreciation in year 4 rate 20%	202,4 EUR		Not applicable
TWDV	809,6 EUR		Not applicable

Source: CCCTB/WP057/DOC/en

3.4 Assets depreciated on individual basis

The acquisition, construction or improvement costs of a business asset would be depreciated individually on a straight line basis:
-    at 2.5% per tax year in case of buildings (i.e. 40 years);
-    at 4% per tax year in case of long-term tangible assets (i.e. 25 let).

A long- term asset is defined as a tangible asset the useful life of which is 25 years or more, or the acquisition or construction costs of which exceed 5,000,000 EUR. Certain type of asset would in any event preferably be deemed to be long-term assets, such as planes, ships and hovercrafts.

The acquisition costs of intangible business assets would be depreciated individually on straight-line basis over the period which the asset enjoys legal protection or for which the right is granted or, if that period cannot be determined, 15 years.

A full year's depreciation would be deducted in the year of acquisition or entry into use. No depreciation would be deducted in the year of disposal. This is suggested with a view to keeping the rules as simple as possible and there does not appear to be any particular benefit in time apportioning depreciation when assets are purchased or sold during the year. This would also be consistent with the treatment of pooled assets.

Where an individually depreciated asset is disposed of (whether voluntarily or involuntarily) during a tax year, its tax written down value would be deducted from the taxable tax base in that year. This is corollary of the taxation of the sale proceeds.

3.5 Assets depreciated on pooled basis

In case of depreciation on pooled basis, the reducing balance method at a rate of 20% per year is suggested. The assets are depreciated together in a single assets pool at the rate of 20% per tax year of the depreciation base, which is defined flowingly:

$$DB = TWDV_t + AC + CC + IC - S - C \qquad (1)$$

The depreciation base *(DB)* is equal to the tax written down value *(TWDV$_t$)* of the assets pool at the beginning of the tax year, plus the acquisition costs *(AC)*, construction costs *(CC)* and improvement costs *(IC)* of business assets acquired or created during the year, less the sales proceeds of business assets *(S)* disposed of, and any compensation *(C)* received for the loss or destruction of such assets, during the tax year. Full year's depreciation will be deducted in the year of acquisition or entry into use and no depreciation will be deducted in the year of disposal.

If the depreciation base as calculated above is a negative amount, an amount would be added to bring the depreciation base to zero and the same amount would be added to the tax base. Depreciation of a business asset would start in the year when an asset is acquired or brought into use, which ever comes later.

Where there is a permanent decrease in the value of a non-depreciable asset, the amount of the decrease in value would be deducted as depreciation. Where such an asset is disposed of it would be taxed in the same way as an individually depreciated asset (ie the proceeds are taxed, and cost less depreciation is deducted from the base).

4.   CONCLUSION

European Commission had two opportunities while creating the tax rules for CCCTB. Firstly, they could use IAS/IFRS principles as a basis in combination with autonomous accounting (tax) rules. Secondly, they could create their own accounting (tax) rules with no respect to the IAS/IFRS principles.

As shows the above stated comparative analysis, accounting (tax) rules differs in EU member states very significantly. The only country, which applies fully IAS/IFRS principles, seems to be Estonia. Other EU member states are using those principles just partially. There can be also found areas, in which the national rules deviate fully from IAS/IFRS principles (e.g. France or Ireland in case of goodwill depreciation).

With respect to the results of comparative analysis, the creation of own accounting (tax) rules for CCCTB purposes would mean the establishment of 28th taxation system in EU, for that system would fully ignore the connection between accounting and taxation systems of EU member states. The existence of next accounting (tax) system would not contribute to the higher transparency and significant decrease of compliance costs of taxation on the side of taxpayers as well as on the side of tax authorities.

The proposed depreciation methods and asset differentiation to certain extent respect the IAS/IFRS principles, from other point of view they tries to be more simple and transparent, not only for the tax payer, but also for the tax authorities. The depreciation on the individual basis is more precise, than the methods applied in EU member states. Second method represented by depreciation on pooled basis for mid-term assets is more simple and effective, for the taxpayers are not required to keep detailed lists of individual assets with their expected useful life. It can be said, that long-term assets definition and depreciation rules under CCCTB system are simple and objective.

Definition of the assets and its depreciation represents just one part of the area, which has to be regulated uniformly in the process of CCCTB rules construction. It is needed to create such definitions also in other areas, which could contribute to the higher transparency and the decrease in compliance costs of taxation and mainly to removing the obstacles to cross-border activities of the companies.

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AUTHOR PROFILE:

Dr. Danuše Nerudová earned her Ph.D. at the Mendel University Brno in 2005. Currently she is a head of the Department of Accounting and Taxation on Mendel University Brno and a member of scientific committee in Journal of Management of International Business and Economic Systems.

ORGANIZATIONAL CHANGE, PSYCHOLOGICAL STRESS, AND JOB PERFORMANCE OF ACCOUNTANTS IN THAILAND: ORGANIZATIONAL COMMUNICATION AND SUPPORT AS MODERATORS

Chaiyot Sumritsakun, Mahasarakham University, Thailand
Phapruke Ussahawanitchakit, Mahasarakham University, Thailand

ABSTRACT

The aim of this study is to examine the influences of organizational change on psychological stress and job performance through organizational communication and support as moderators. Here accountants in Thailand are samples of the study. Surprisingly, results show that the organizational change has significant negative relationship with psychological stress and has significant positive association with job performance. Psychological stress also has significant negative influence on job performance. Both organizational communication and support do not moderate the relationships. Theoretical and managerial contributions are provided. Conclusion and suggestion for future research are presented.

Keywords: *Organizational Change; Psychological Stress; Job Performance; Organizational Communication; Organizational Support*

1. INTRODUCTION

In recent years, business environments have rapidly changed. Technology and telecommunication are improving, trade barriers are decreasing and economies are integrating. Many firms increasingly expand business activity from domestic to global. Firms have increased business activity via exporting, licensing, foreign direct investing and other international activity (Buckley, 2002). In the global markets, the competition is higher than domestic markets. Firms that have a little competitive capability could not survive in the global markets. Accordingly, in order to achieve competitive advantage and to survive in the global markets, firms have to improve themselves to gain business benefit and advantage from environment change because the traditional way of doing business may not be appropriate for firms to gain competitive advantages. There are many kinds of change that can help the firms increase the competitive capability such as business process re-engineering, reorganization, adding a major new product and/or service, or mergers with other firms.

To improve the competitive capability of firms in order to gain the higher profit and benefits in the global markets, organizational change is very necessary. Organizational change is strategic to sustain competitive advantage and future growth. It is corporation wide and characterized by radical shifts in business strategy, reorganization of systems and structure and change in distribution of process across the whole organization and corporate value may change (Robinson and Griffiths, 2005) and also speed up process which may impact various levels of the organization at the same time (Johnson and Leenders, 2004). In this study, organizational change refers to wide, deep, and continuous adjustment and modification in business process, business strategy, organizational system and organizational structure in order to increase the competitive capability of firms.

Accordingly high organization change is likely to affect organizational performance and competitive advantage of firms. However in individual perspective firms which have more organizational change tend to have larger work force, staff and employees work very hard, resulting in increased pressure among employees (Schweiger and Densis 1991). And during the change, many features of the office work environment are loss such as of power, rank and sense of mastery and it can bring about job loss (Callan, 1993). It leads to work environments that have high ambiguity and high conflict because they don't know about the future and don't know when the change is finished. As a result it has higher psychological stress and lower job performance (Babakus et al., 1999). Psychological stress is an outcome of pressure of work and work environment. It refers to employee feeling psychologically and emotionally drained which is a reflection of the pressure during the organizational change. In accountants if they have higher psychological stress it leads to lower job performance.

Here, we attempt to assess the relationships among organizational change, psychological stress, and job performance. The aim of this study is to examine the effects of organizational change to psychological stress and performance via organizational communication and support as moderators.

This research has three questions the first, how does organizational change relate to psychological stress? The second how does psychological stress impact on job performance? Finally, how do organizational communication and organizational support moderate the association?

The structure of the paper is outlined as follows. Section 2 reviews exiting relevance literature, section 3 presents the data collection and research methods, the result is shown in section 4, section 5 proposes theoretical contributions and managerial implications for future research, and section 6 is conclusion.

FIGURE 1
**RELATIONSHIP MODEL AND HYPOTHESIS OF ORGANIZATIONAL CHANGE,
PSYCHOLOGICAL STRESS, AND JOB PERFORMANCE**
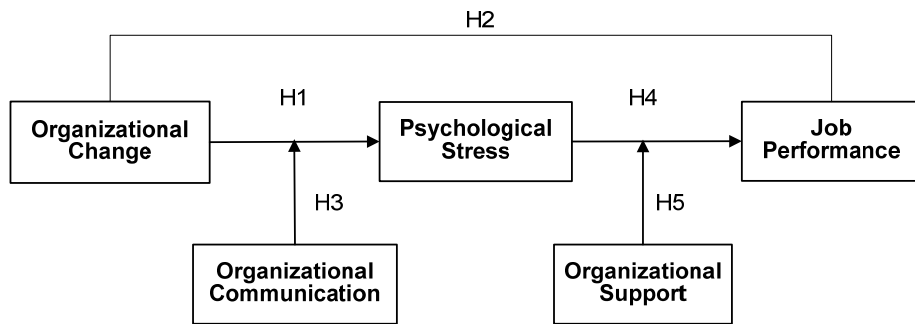
2. LITERATURE REVIEWS

2.1 Organizational Change

In radical change of business environments, there are diminishing trade barriers, building economic integration, developing technology and telecommunication. It leads market change from domestic to global. Firms which have lower competitive capability cannot survive in the global markets. Organizations have to change their business activity and operation in order to gain competitive advantage and sustain in the global markets. Organizational change occurs in different ways and different scales in order to improve the competitive capability of firms. It is the corporation-wide and is characterized by radical shifts in business strategy, reorganization of systems and structures and change is distribution of power across the whole organization and corporate values may also change (Robinson and Griffiths, 2005) and also speed up processes which impacts various level of the organization in the same time, Johnson and Leenders (2004). In this study organizational change refers to widely, deeply and continuous adjustment and modification in business process, business strategy, organizational system, and organizational structure in order to increase or retain the competitive capability of firms. Organizational change can help the firms achieve higher organizational performance and higher competitive capability in order to survive in high competitive global markets. Nevertheless, in individual perspective, employees perceived that organizational change attempts to force staff and employees to work very hard. Accordingly, it leads to higher increased pressure among employees and employees are going to have psychological stress. Psychological stress is the outcome of the pressure. Firms which have more organizational change will affect and higher employee's psychological stress therefore, leads hypothesis as follows:

Hypothesis 1: Higher perception in the organizational change, the higher the psychological stress.
Organizational change is the cause of the loss of many features of the office work environment such as power, rank and sense of mastery and it can bring about job loss (Callan, 1993). During the change work environment has higher ambiguity and higher conflict because employees don't know about their future in the firms and don't know when the change finishes. As a result the job performance of employee is likely to be low. Schweiger and Denisi (1991) argue that organizational change increased pressure among employees and it is associated with lower job satisfaction, organizational commitment job performance and increase in intentions to quit. It leads hypothesis as follows:

Hypothesis 2: Higher perception in the organizational change, the lower the job performance.

2.2 Psychological Stress

Psychological stress is defined as an individual's psychological or physiological response to environment or situational forces (Vakola and Nikolaou, 2005) or the reflection of being emotionally overextended and exhausted by one's work, is manifested by both physical fatigue and a sense of feeling psychologically and emotionally drained (Ito and Brotheridge, 2003) In this study, psychological stress refers to feeling psychologically and emotionally drained which is the reflection of the pressure during the organizational change. In high psychological stress, they feel the lack of energy and emotion resources being used up. As a result, it reduces personal accomplishment involves low motivation and self-esteem (Almer and Kaplan, 2002). In employees that have high psychological stress they have to use higher motivation and more energy to do the job and it leads to the job that they do to be likely of lower quality. Many researches show that the psychological stress is the cause of lower Job satisfaction, lower organizational commitment, higher intention to leave, and lower job performance (Babakus et al., 1999; Wright and Cropanzano 1998; and Mohr and Puck 2007). This study extends to explore psychological stress and the impact of psychological stress on job performance. It leads to hypothesis as follows:

Hypothesis 3: Higher psychological stress, the lower the job performance.

2.3 Moderating Effect

This study also examines the moderating effect of organizational communication on the relationship between organizational change and psychological stress and the influence of organizational support on the association between psychological stress and job performance. To explore moderating effect we defined organizational Communication as management's proactive effort to keep employee well informed (Lui and Perrewe, 2005). Miller and Monge, (1985) argue that information communication is very important during organizational change and helps to reduce the uncertainty and anxiety of the employee. There are many findings supporting the importance of information communication during organizational change. Such as Terry and Jimmies (2003); Wanberg and Banas (2000) and Cameron (1994), they show communication as a key factor that predicts downsizing success, help employee openness to change and increased psychological well being and job satisfaction. It leads to hypothesis as follows:

Hypothesis 4: Organizational communication negatively moderates the organizational change-psychological stress relationships.

Organizational support refers to valuation of employees' contribution and care about employees' well-being (Rhoades and Eisenberger, 2002). While there is a large amount of indirect evidence suggesting that POS will buffer the role stress-outcome relationship, few researchers have directly examined this possible moderation effect. Several researchers (e.g., Carlson and Perrewe, 1999) argue that social support reduces the negative effects of role stressors on various work outcomes by helping employees cope with the stress. Based on these reviews it leads to hypothesis as follow:

Hypothesis 5: Organizational support positively moderates the psychological stress-job performance relationships.

3. RESEARCH METHODS

3.1 Data Collection

In this study, the samples were accountants in Thailand. The questionnaire was constructed covering contents according to each variable that was operationalized for empirical studies. The contents, wording, and item ordering of the questionnaire were checked by expertise to reduce any misunderstanding. Reliability was tested by Cronbach's alpha reliability coefficients of all constructs to make sure that the items of the questionnaire were designed to measure consistency for each concept.

Later, 800 questionnaires were sent to accounting managers to provide data for this study via mails. After one month 169 questionnaires were received. There were 64 questionnaires that could not be sent to receivers and these were returned. Thus, the response rate was 22.96%. According to Aaker, Kumar and Day (2001), the response rate for mail survey, without an appropriate follow-up procedure, is less than 20%. In addition, non-response bias was investigated by t-test, responses from the first 20 and the last 20 questionnaires return were tested and results were not significant. Therefore, it was implied that these received questionnaires as non-response bias. Thus, the response rate of this study is considered acceptable.

3.2 Measure
Data were collected to measure variables specified within the hypothesis: organizational change, psychological stress, job performance, organizational communication and organizational support. Organizational change is measured by 4 items which is self designed to use in this study. Psychological stress is measured by 3 items which is developed from Iverson et al., (1998). Job performance is measured by 4 items adapted from Karatepe and Tekinkus (2006). Organizational, communication is measured by 3 items which is self designed to use in this study. Organizational support is measured by 5 items that is adapted from Allen et al., (2003).

With an attention of age, education and work tenure as control variables were also probable to influence the hypothesized relationships. Many studies found that the age and education have influence in job performance and work tenure associate with psychological stress (Karatepe and Tekinkus, 2006). With the existing literatures, higher age and education are likely to have more job performance, and higher work tenure is likely to have greater psychological stress.

TABLE 1
FACTOR LOADING AND ALPHA COEFFICEINTS OF CONSTRUCTS

Constructs	Factor Loading	Alpha Coefficient
Organizational Change	.78-.89	.85
Psychological Stress	.85-.94	.88
Job Performance	.61-.89	.78
Organizational Communication	.84-.87	.80
Organizational Support	.63-.88	.85

3.3 Reliability and Validity
Constructs, Cronbarch Alpha was used to examine the multi-item in order to measure the reliability of data. Table 1 provides an alpha coefficient higher than 0.60 (Nunnally, 1978). Alpha coefficients of constructs have values ranging from 0.78 to 0.88 the lowest coefficient for organizational change and the highest coefficient for psychological stress. That is, internal consistency of the measures used in this study can be considered good for all constructs.

Factor analysis was employed to test the validity of data in the questionnaire. Items used to measure each construct that was extracted to be one only principal component. Table 1 shows factor loading of each construct that presents a value higher than 0.5. Thus, construct validity of this study was tapped by items in the measure, as theorized. That is, factor loading of each construct should not be less than 0.5 (Hair et al., 2006)

3.4 Statistic Technique
The ordinary least squares (OLS) regression analysis is used to test the hypothesized. From the relation model and the hypotheses the following four equation models are formulated:

Equation 1: PS $= \beta_{01} + \beta_1 OC + \beta_2 + \beta_3 Age + \beta_4 Edu + \beta_5 WT + \varepsilon$
Equation 2: PS $= \beta_{02} + \beta_6 OC + \beta_7 OCom + \beta_8 OC*OCom + \beta_9 Age + \beta_{10} Edu + \beta_{11} WT + \varepsilon$
Equation 3: JP $= \beta_{03} + \beta_{12} OC + \beta_{13} Age + \beta_{14} Edu + \beta_{15} WT + \varepsilon$
Equation 4: JP $= \beta_{04} + \beta_{16} PS + \beta_{17} OS + \beta_{18} Stress*OS + \beta_{19} Age + \beta_{20} Edu + \beta_{21} WT + \varepsilon$
Equation 5: JP $= \beta_{05} + \beta_{22} PS + \beta_{23} Age + \beta_{24} Edu + \beta_{25} WT + \varepsilon$

These regression equations are employed to estimate inferred parameters whether the hypotheses are substantiated and fit an overall model (F value) or not. Then the model variables and parameters are presented in various tables later.

4. RESULTS

Table 2 shows the correlation matrix for all variables. To check multicollinearity problems among independent variables, variance inflation factors (VIF) were used, that range from 1.01-2.86, well below the cut-off value of 10 recommended by Hair et al., (2006). Thus, there are not significant multicollinearity problems confronted in this study.

TABLE 2
CORRELATION MATRIX FOR ALL CONSTRUCTS

Constructs	OC	PS	JP	OO	OS	AG	ED	WT
Organizational Change (OC)								
Psychological Stress (PS)	-0.27**							
Job Performance (JP)	0.28**	-0.08						
Organizational Communication(OO)	0.74**	-0.21**	0.25**					
Organizational Support (OS)	0.64**	-0.34**	0.32**	0.67**				
Age	-0.01	-0.12	-0.02	0.04	0.07			
Education (ED)	-0.01	-0.21**	-0.18*	-0.03	0.08	-0.01		
Work tenure (WT)	-0.08	0.06	0.07	-0.07	-0.02	0.65**	-0.17*	

*$p<.05$, **$p<.01$, ***$p<.01$

Table 3 presents the results of OLS regression analysis of the relationship between the organizational change and psychological stress by organization communication as a moderator. For organizational change (OC), we predict that there is positively influence on psychological stress, but the coefficient of organizational change is a negatively significant effect on psychological stress (Model 1: β = -0.259, $p<0.05$ and Model 2: β = -0.256, $p<0.01$). Similar to Raffety and Griffin (2006), they argue that individuals in more senior positions within the organization is not surprising and reported experiencing less psychological stress because they are also more likely to receive more information about key strategic events occurring in the company, including organizational change. Therefore, Hypothesis H1 is not supported. For organizational communication as a moderator, the coefficient of organizational communication (OO) is negatively associated with psychological stress but not significant (Model 2: β = -0.037, $p>0.10$) and the interaction between organizational change and organizational communication (OC*OO) also has not a significant effect on psychological stress (Model 2: β = 0.087, $p>0.10$). The present study cannot provide the evidence that the organization can decrease the effect of the organizational change on psychological stress. Therefore, Hypothesis H4 is not supported. For model 3 organizational change it has a positively significant effect on job performance (Model 5: β = 0.283, $p<0.01$). Therefore, H2 is not supported.

TABLE 3
OLS REGRESSION RESULTS OF ORGANIZATIONAL CHANGE, ORGANIZATIONAL COMMUNICATION, AND PSYCHOLOGICAL STRESS

Independent Variables	Dependent Variables		
	PS	PS	JP
Intercept	.805***	.838***	.000
Organizational Change (OC)	-.259***	-.256**	.283***
Organizational Communication (OO)		-.037	
OC*OO		-.087	
Age	-.212**	-.204**	-.096
Education	-.394**	-.386**	-.150**
Work Tenure	.130	.130	.126
Adjusted R^2	.124	.124	.092

The results of the control variables, age is negatively significant related with psychological stress (Model 1: β = -0.212, $p<0.05$ and Model 2: β = -0.204, $p<0.05$) but insignificantly related with job performance (Model 3: β = -0.096, $p>0.10$). Education has negatively significant association with psychological stress (Model 1: β = -0.394, $p<0.05$ and Model 2: β = -0.386, $p<0.05$) and also negatively significant association with job performance (Model 3: β = -0.150, $p<0.05$). Work tenure has not a significant influence on psychological stress and job performance (Model 1: β = 0.130, $p>0.10$ Model 2: β = 0.130, $p>0.10$ and Model 3: β = 0.092, $p>0.10$). Adjusted R^2 of model 1, 2 and 3 are 0.124, 0.124 and 0.092

TABLE 4
OLS REGRESSION RESULTS OF PSYCHOLOGICAL STRESS, ORGANIZATIONAL SUPPORT, AND JOB PERFORMANCE

Independent Variables	Dependent Variables	
	JP	JP
Intercept	.588***	.599***
Psychological Stress (PS)	-.143*	-.033
Organizational Support (OS)		.342***
PS*OS		-.034
Age	-.110	-.138
Education	-.403**	-.390**
Work Tenure	.099	.117
Adjusted R^2	.034	.125

*p<.10, **p<.05, ***p<.01

Table 4 presents the results of OLS regression analysis of the relationship between psychological stress and job performance by organization support as a moderator. For model 3 it has a negatively significant effect on job performance but in model 4 psychological stress has not a significant effect on job performance (Model 4: β = -0.143, $p<0.10$ and Model 5: β = -0.033, $p>0.10$) consistence with Babakus et al., (1999) Wright and Cropanzano (1998) and Mohr and Puck (2007). Therefore, H3 is supported. For organizational support as the moderator, the coefficient of organizational support (OS) is positively and significantly associated with job performance (Model 5: β = 0.342, $p<0.01$) but the interaction between stress and organizational support (PS*OS) has no significant association with job performance (model 5: β = -0.034, $p>0.10$). Therefore, H5 is not supported.

The results of the control variables, age is negatively related with job performance but not significant (Model 4: β = -0.110, $p>0.10$ and Model 5: β = -0.138, $p>0.10$). Education has negatively significant association with job performance (Model 4: β = -0.403, $p<0.05$ and Model 5: β = -0.390, $p<0.05$). Work tenure has no significant influence on job performance (Model 4: β = 0.099, $p>0.10$ and Model 5: β = 0.117, $p>0.10$). Adjusted R^2 of model 4 and 5 are 0.034 and 0.125.

5. CONTRIBUTIONS AND FUTURE DIRECTIONS FOR RESEARCH

5.1 Theoretical Contributions and Future Direction for Research
This research aims at providing an obvious understanding of organizational change that has a significant direct negative influence on psychological stress and direct positive impact on job performance. The study provides important theoretical contributions expanding on previous knowledge and literature of organizational change and psychological stress. For preceding the field theoretically, this research is one of the first known studies to link among organizational change, psychological stress and job performance. In addition, this study examines difference of organizational affects psychological stress and job performance via moderator effect of organizational communication and support. According to the results of this research, the need for further research is apparent because of the level of accountants which have different power and responsibility which may influence psychological stress and job performance during the change. Future research should provide insight on the effects of the power and responsibility of accountants by changing the sample. And also insight into key components of organizational change such as planned change and frequent change.

5.2 Managerial Contributions
This study helps CEOs understand the effects of the organizational change on psychological stress and job performance. To survive in high competition global markets, organizational change is very necessary. Because the aim of organizational change is to maintain or improve the competitive capability of the firm by leading the employees to improve their performance, the result in this study shows that during the change the accounting managers have little psychological stress and also have improved their job performance it lead the firms have higher competition capability than the past.

6. CONCLUSION

This study investigates the influence of organizational change on psychological stress and the role of psychological stress on job performance. Questionnaire is used as an instrument in this research and participant are the accounting managers in Thailand. Organizational change has positive influence on psychological stress and has negative association with job performance. Also, organizational change has negative influence on psychological stress and has positive relationship with job performance which is similar to Raffety and Griffin (2006), they argue that individuals in more senior positions within the organization reported experiencing less psychological stress because they are also more likely to receive more information about key strategic events occurring in the company, including organizational change. We also examine the impact of psychological stress on job performance the result shows that psychological stress reduces job performance. In this study, we can not provide the evidence about the moderating effect of organizational communication and organizational support on the association.

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AUTHOR PROFILES:

Mr. Chaiyot Sumritsakun earned his M.Acc. at Chulalongkorn University, Thailand in 2005. Currently he is a Ph.D. student in Accounting at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

Dr. Phapruke Ussahawanitchakit earned his Ph.D. at Washington State University in 2002. Currently he is an associate professor of accounting, a deputy dean of academic affairs, and a director of graduate studies at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

KNOWLEDGE MANAGEMENT THROUGH IPR: AN INDIAN PERSPECTIVE

P. J. Philip, National Institute of Technology, Kurukshetra, Haryana, India

ABSTRACT

As humanity stands at the threshold of the Knowledge Society, India with its abundant pool of intellectual capital is favorably placed to emerge as a leading nation in the 21st century. However, to attain this lofty position, it has to work out effective strategies to manage its knowledge potential to leverage economic and social development. Managing knowledge would entail creating an enabling ambience in the country for knowledge generation and knowledge protection. A system of protecting knowledge would act as an incentive for those engaged in knowledge generation. Assurance of protection and reward would compel more and more knowledge workers to involve themselves in creative thinking, leading to development of technologies resulting in wealth generation, economic growth and societal transformation. As creating and protecting knowledge becomes vital in the emerging scenario, Intellectual Property Rights (IPR) acquires added significance. IPR can be a potent tool in accelerating the transformation of India into a knowledge power. To capture this unique opportunity, India has to consciously develop a system of nurturing knowledge generation. Such a system would involve a network of knowledge workers, knowledge-producing institutions and knowledge users. India should also considerably step up its R&D expenditure to reach the 1% of GDP benchmark. Indian industry should transfer itself from an imitative mindset to an innovative mindset, and integrate R&D into their business strategy. Industry should also come forward and extend its technical, financial and marketing strength to the R&D institutions in taking new ideas to the market place. Knowledge generation leading to wealth creation and societal transformation can be sustained only if knowledge is protected and the knowledge creator is suitably rewarded. This is the rationale for evolving a system for protection of intellectual property. By putting in place a TRIPS-compliant IP protection system, India has expressed its intent to exploit the potential of this system to spur economic growth and social development. Incorporating optimum utilization of IPR into the knowledge management strategies would ensure India's place in the sun in the Knowledge Century.

Key words: Knowledge Management, Intellectual Property Rights, Research and Development

1.   INTRODUCTION:

The 21st century has been christened the Knowledge Century; the evolving human society, the Knowledge Society. Military power and economic power that dominated in the previous century are gradually giving way to 'brain power'. It is the ability of a nation to harness its brainpower that will determine its place among the comity of nations in the present century. The product of brainpower – knowledge – is increasingly acquiring the status of an indispensable asset that has the potential to accelerate growth. Generating, preserving and utilizing knowledge will, therefore, become the key to a vibrant economy in the coming years.

As a successful economy is one that uses knowledge as an effective tool for development, creating and protecting knowledge becomes vital in the emerging scenario. This underscores the significance of Intellectual Property Rights (IPR) that came into the limelight during the Uruguay Round of GATT, and found inclusion in the final agreement in the form of Trade Related Aspects of Intellectual Property Rights (TRIPS). India being a signatory to the agreement was expected to set its house in order with respect to legislations and procedures to comply with the requirement of the international IPR regime. During the ten-year transition period of 1995-2004, India struggled to get over its hesitation and doubts, but successfully met the deadline of December 31, 2004. There are still skeptical noises in various quarters, but there is ample evidence that IPR can be a potent tool in accelerating the transformation of India into a knowledge powerhouse, which today has become essential to spurring economic growth and social development.

2. OBJECTIVES

This paper is an outcome of a study conducted with following objectives:
 ➢ To identify the salient features of the evolving knowledge society
 ➢ To evaluate India's potential to develop into a knowledge economy

> ➢ To examine the role of IPR in knowledge management strategies
> ➢ To appraise India's preparedness to exploit the opportunities offered by the new IPR regime.

2. THE KNOWLEDGE SOCIETY

Man has traversed through different societies, each with its unique characteristics, to arrive at the threshold of what has come to be called the Knowledge Society. A superior intellect in comparison to other beings has contributed to man generating and disseminating knowledge, which in turn has triggered great inventions and innovations, accelerating the growth of human civilization. In the Agrarian Society, manual labor was the key factor and economic growth was linked to agricultural produce. The Industrial Revolution gave birth to the Industrial Society, which was driven by machines and technological development. The advent of the new millennium is witness to knowledge occupying the centre stage and adding to the lexicon new expressions like knowledge society, knowledge economy, knowledge worker etc. Knowledge becomes the most important resource, making acquisition, possession and application of knowledge of immense significance.

According to the Management Guru, Peter F Ducker, knowledge society is a society that is characterized by borderlessness, and where knowledge instead of capital or labor is the primary factor of production (Peter Ducker 2000). Dr. Abdul Kalam identifies the following distinct characteristics of the knowledge society:
> ➢ It uses knowledge through all its constituents and endeavors, to empower and enrich its people.
> ➢ It uses knowledge as a powerful tool to drive societal transformation.
> ➢ It is a society committed to constant inventions and innovations.
> ➢ It has the capacity to generate, absorb, disseminate and protect knowledge and also use it to create economic wealth and social good for all its constituents.

The ability to create and maintain an infrastructure that facilitates knowledge creation and knowledge utilization will be the key to deciding the prosperity of the knowledge society (APJ Abdul Kalam et al 2004).

4. INDIA AND THE KNOWLEDGE SOCIETY

In the new millennium, efficient utilization of the knowledge resource can create comprehensive wealth for a nation and effectively contribute towards economic and social development. India is eminently endowed with all the vital ingredients to be in the vanguard of nations that can be benefited by the knowledge society. India is home to one of the largest technical work force pool in the world. It is rich in natural resources waiting to be harnessed. It has an ancient tradition of knowledge creation that was diluted by invasions and colonization. India needs to reinvent itself to suit the requirements of the modern day knowledge society. As the developed world is moving over to a society, where knowledge is the currency of power and wealth, India should leverage its assets and advantages to not only match the developed world, but also move ahead and be the leader. Evidence that this is already happening is available in the IT sector. There are more IT engineers in Bangalore than in Silicon Valley, and most of the IT jobs in the USA today are held by Indians. In addition, chances are that Indians could grab the jobs in other knowledge sectors as well. Biotechnology and pharmaceuticals are two sectors where India has started developing knowledge products. These products are making a mark for themselves not only domestically but also even globally.

5. KNOWLEDGE MANAGEMENT STRATEGIES

India is favorably placed to emerge as a leader in the knowledge society. Nevertheless, to attain this lofty position, it has to work out effective strategies to manage its knowledge potential to leverage economic and social development. Managing knowledge would entail creating an enabling ambience in the country for knowledge generation and knowledge protection. A system of protecting knowledge would act as an incentive for those engaged in knowledge generation. Assurance of protection and reward would invite more and more knowledge workers to involve themselves in creative thinking leading to inventions and innovations, ultimately resulting in upgraded technologies and social well-being.

6. KNOWLEDGE GENERATION

To capture this unique opportunity to transform itself into a knowledge power, India has to consciously develop a system of nurturing knowledge generation. It is through inventions and innovations that knowledge is converted into wealth. Further, innovation is a vital factor in enhancing competitiveness of both service and manufacturing sectors. Hence, there is an urgent need to put in place a system that would involve a network of knowledge workers, knowledge-producing institutions and knowledge users. With such a network, the innovation system can tap into the growing stock of the global pool of knowledge, assimilate and adapt it to local needs and finally create new knowledge and technology. Evolving such a system would hasten India's growth into a global knowledge power.   India has, today, more than 250 universities and many more colleges that are professional and institutions. We have the world's largest chain of publicly funded R&D institutions. On an average, more than 5,00,000 engineers and 5000 Ph.D. scholars graduate every year. With such a vast reservoir of qualified, English-speaking scientific and technical labor, India holds the potential to becoming an international hub of research & development activity.

Although the above figures when considered in isolation present an impressive picture, they fade in comparison to global standards. Overall, global trends in R&D have

Table 1: Expenditure on R&D (GERD) in billion US$ PPP and R&D intensity (GERD/GDP), 1990-2000

Regions/Countries	1990 GERD	1990 GERD/GDP	1992 GERD	1992 GERD/GDP	1994 GERD	1994 GERD/GDP	1996/1997 GERD	1996/1997 GERD/GDP	1999/2000 GERD	1999/2000 GERD/GDP
World total	**409.8**	**1.8%**	**438.7**	**1.7%**	**478.5**	**1.5%**	**549.7**	**1.6%**	**755.1**	**1.7%**
Developed countries	367.9	2.3%	379.7	2.3%	414.2	2.1%	460.4	2.2%	596.7	2.3%
Developing countries	42.0	0.7%	59.0	0.6%	64.3	0.5%	89.3	0.6%	158.4	0.9%
Americas	**167.7**	**2.1%**	**186.7**	**2.1%**	**193.1**	**1.9%**	**225.8**	**2.0%**	**302.3**	**2.2%**
North America	156.4	2.6%	175.1	2.7%	178.1	2.5%	209.0	2.6%	281.0	2.7%
Latin America & Caribbean	11.3	0.5%	11.5	0.5%	15.0	0.5%	16.8	0.5%	21.3	0.6%
Europe	**138.8**	**1.8%**	**130.2**	**1.9%**	**147.7**	**1.6%**	**157.7**	**1.7%**	**202.9**	**1.7%**
European Union	101.9	2.0%	117.7	1.9%	128.6	1.8%	137.9	1.9%	174.7	1.9%
Central & Eastern Europe	5.7	1.7%	2.9	1.5%	4.4	0.8%	5.6	0.8%	9.1	0.9%
Community of Independent States (in Europe)	18.9	1.1%	4.1	0.8%	11.8	1.0%	7.6	0.9%	12.8	0.9%
European Free Trade Association [1]	12.3	2.2%	5.5	2.3%	2.9	1.8%	6.6	2.3%	6.3	2.1%
Africa	**5.2**	**0.6%**	**3.6**	**0.4%**	**4.2**	**0.2%**	**4.3**	**0.3%**	**5.8**	**0.3%**
South Africa	2.9	1.0%	1.8	0.6%	1.8	0.6%	2.5	0.7%	3.6	0.8%
Other sub-Saharan Countries	1.9	0.5%	1.1	0.3%	0.5	0.1%	0.6	0.1%	1.1	0.2%
Arab states (in Africa) [2]	0.4	0.3%	0.7	0.5%	1.9	0.2%	1.2	0.2%	1.1	0.2%
Asia	**94.2**	**1.8%**	**114.2**	**1.3%**	**127.5**	**1.1%**	**154.8**	**1.2%**	**235.6**	**1.5%**
Japan	67.0	3.1%	68.3	2.8%	80.0	2.8%	83.1	2.8%	98.2	2.9%
China	12.4	0.8%	22.2	0.7%	23.3	0.5%	21.1	0.6%	50.3	1.0%
Israel	1.8	2.5%	2.0	2.6%	2.4	2.7%	3.4	3.2%	6.1	4.7%
India [3]	2.5	0.8%	7.1	0.8%	10.1	0.6%	13.2	0.6%	20.0	0.7%
Newly Industrialised Economies (in Asia)	8.2	1.6%	10.7	1.3%	7.3	0.9%	26.7	1.1%	48.2	1.7%
Community of Independent States (in Asia)							0.6	0.4%	0.6	0.3%
Arab states (in Asia)	1.9	0.4%	3.1	0.5%			0.8	0.1%	0.6	0.1%
Other Asia	0.5	0.2%	0.7	0.1%	4.4	0.3%	5.9	0.5%	11.6	1.1%
Oceania	**3.9**	**1.1%**	**4.1**	**1.2%**	**6.0**	**1.4%**	**7.2**	**1.6%**	**8.5**	**1.5%**

Source: UIS. Regional estimations based on UIS data and UNESCO (1993; 1996; 1998), *World Science Report*, Paris; UNESCO Institute for Statistics (2001), *The State of Science and Technology in the World*, 1996-1997, Paris.

Recorded an impressive growth as is evident in Table I. The world expenditure on R&D almost doubled from US $410 billion to US $755 billion in current purchasing power parities (PPPs), making it 1.7% of total GDP. However, the percentage for developing countries is only 0.9%, which is less than the internationally prescribed target of 1%. Among the major countries of Asia, India is lagging. Asia as a whole spent 1.5% of GDP on R&D in 2000; Japan, 2.9%; China, 1% and India 0.7%. This clearly indicates that though the overall R&D expenditure of the country grew considerably over the decade, India continues to struggle to meet the 1% of GDP benchmark. R&D activities not only generate knowledge, but also utilize knowledge. If India has to emerge as a knowledge power, investments in R&D need to be considerably stepped up. India has to evolve a suitable strategy for building up knowledge networks in the country. Specific focus in this regard should be on the following:

➢ Publicly funded R&D institutions should be networked and nurtured as idea generators and providers of new concepts.

➢ These institutions should make a concerted effort to undergo a cultural shift by looking at research as a valuable input into business, and, hence, managing it in a business-like manner.

➢ A greater role should be played by the industry as partners who have the technical, financial and marketing strength to take ideas to the market place.

➢ Indian industry should transfer itself from an imitative mind-set to an innovative mind-set, and integrate R&D into their business strategy.

➢

There are evidences that some of these initiatives are gradually being put in place. Positive results are starting to show in sectors like IT, pharmaceuticals and biotechnology. There is increasing recognition of India as an R&D hub. Many MNCs have evinced interest in setting up their R&D centers in India. This augurs well for the country. Its future as a knowledge super-power seems a distinct possibility.

7. KNOWLEDGE PROTECTION

Knowledge generation leading to wealth creation and societal transformation can be sustained only if knowledge is protected, and the knowledge creator is suitably rewarded. This is the rationale for evolving a system for protection of intellectual property, which was brought into sharp focus by the Uruguay Round of GATT. The agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) lays down the intellectual property rights and their effective enforcement. The intellectual property system refers to the entire gamut of intellectual property laws, procedures, practices and institutions responsible for protecting, administering, enforcing and using intellectual assets for economic, cultural and social progress. India can be credited for recognizing the potential of IPR and taking the first steps, though unsure, towards systematizing knowledge protection. However, the basic concept of IPR and its increasing contemporary relevance are issues that are still unknown to a vast majority of the Indian population, the educated elite included. This calls for a concerted effort to spread IPR literacy in the country.

8. MANAGING KNOWLEDGE THROUGH IPR
8.1 Concept of IPR
Intellectual property refers to the creations of the human mind, of human intellect. In other words, intellectual property is a 'product of the mind'. The rights granted to the creators of innovative work are known as Intellectual Property Rights. The unauthorised use of intellectual property is an infringement of the right of the owner.
Intellectual Property Rights include:
Patent, Copyright, Trademark, Industrial design, Geographical indications, Trade secret, Layout designs of integrated circuits
The different forms of intellectual property are as under:
8.2 Patent
Patents provide property rights to inventions. An invention may be defined as a novel idea, which permits in practice the solution of a specific problem. The TRIPS Agreement provides that for an invention to be registered as a patent, it must be:
New, Involve an inventive step, and Capable of industrial application.
8.3 Copyright
Rights known in general parlance as copyright can be acquired in relation to works of authorship that include literary works (they include computer software under the Indian law); musical works and accompanying lyrics; dramatic works and dialogues; pantomimes and choreographic work; pictorial, graphic and sculptural works inclusive of drawings, paintings, photographic works, architecture, works of applied art, maps, plans, sketches; motion pictures and other audio-visual works; and sound recordings. This right is basically a proprietary right and comes into existence as soon as the work is created.
8.4 Trade Mark
A Trade Mark is a visual system in the form of a word, a symbol or a label applied to an article of manufacture or sale with a view to indicating to the consumer the origin of manufacture. It, therefore, helps to distinguish such goods from similar goods manufactured by others in the same trade.
8.5 Industrial Design
A design is an idea of conception relating to the features of shape, configuration, pattern or ornamental features applied to an article by any industrial process or means, whether manual, mechanical or chemical, separate or combined; which in the finished article appeal to and are judged solely by vision. It is clear that design means features of shape etc. applied to an article and not the article itself. These

features are conceived in the creator's intellect. The ideas conceived are given material form as a illustration, or as a specimen, prototype or as a model. These features can then be protected as a

8.6 Geographical Indications
Geographical indications are indications which identify a good as originating in a territory, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin. The TRIPS agreement provides that countries should not permit registration of trademarks containing a misleading indication of the geographical origin of goods. The most common example of this is 'champagne', a term associated with wine produced in a certain region of France. In principle, therefore, it is not permissible to call wine produced elsewhere 'champagne', even though the wine may be regarded in the producing country as comparable to the French champagne.

8.7 Undisclosed Information
Undisclosed information refers to trade secrets or know-how that has commercial value because it is secret, and that has been subjected to reasonable steps to keep it secret. The TRIPS agreement stipulates that a person lawfully in control of such information must have the possibility of preventing it from being disclosed or acquired by or used by others without his or her consent in a manner contrary to honest commercial practices. Furthermore, the Agreement has provisions on undisclosed test data and other data whose submission is required by governments as a condition of approving the marketing of pharmaceutical or of agricultural chemical products'. Member governments must protect such data against unfair commercial use.

8.8 Layout Designs of Integrated Circuits
The TRIPS agreement requires member countries to protect the layout-designs of integrated circuits in accordance with the Washington Treaty on Intellectual Property in Respect of Integrated Circuits (which was negotiated in 1989). Additional provisions stipulate that importing or selling articles incorporating a protected integrated circuit without authorization from the right holder shall be considered unlawful.

9 THE TASK AHEAD

If India is to catch up with the developed countries, India needs to exploit its knowledge potential to leapfrog the technology lag. This challenge can be met if instead of being bogged down in the avoidable details of the new IPR regime, India identifies the opportunities it offers and exploits them to its advantage. By legislating on all forms of IPR in compliance with the TRIPS agreement, laying down rules and procedures for their implementation and by modernizing all its IP offices and facilities, India has unambiguously expressed its intent to actively participate in the global IP system. To derive all possible advantages from this initiative, India has to undertake a number of proactive steps:

➢ An intensive campaign to spread IPR awareness needs to be launched so as to energize potential inventors and innovators into creative activity.
➢ An IPR culture needs to be deliberately promoted to encourage innovative activity linked to technological development and market needs.
➢ IPR and public interest are not antithetical to each other as it is made out to be. IPR is only a limited monopoly with the ultimate benefit accruing to the society. Whatever concerns are there regarding adequate safeguards should appropriately be addressed at the national level.
➢ An R&D network capable of creating, organizing and disseminating knowledge and also converting knowledge into economic and social goods be put in place. It should be a collaborative effort in public and private partnership. Although India has set out on a course of privatization, it has to be realized that without government action there will be little investment in the production and adoption of new technologies.
➢ In a country so richly endowed with traditional knowledge, adequate protection should be ensured to exclude unauthorized use of this knowledge by third parties. At the same time, efforts should be made to further develop traditional knowledge so as to enhance its role in local and national development.

10. CONCLUSION

As India sets its agenda for the 21st century, it has to be realized that a nation's ability to convert knowledge into wealth through creativity and innovation will determine its future in the Knowledge Century. An understanding of the role of IPR in the process of innovation and the role of innovation itself in the process of development is crucial to India transforming itself into a knowledge economy. The knowledge management strategies of India, therefore, will have to incorporate optimum utilization of IPR.

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AUTHOR PROFILE:

Dr. P.J. Philip is Professor of Management in the Department of Humanities and Social Sciences, National Institute of Technology, Kurukshetra (Haryana), India. He completed his PhD. in Management in 1989 from Kurushetra University, Kurushetra.

THE SUCCESS OF AN ECONOMIC IDEA: BARRIERS TO ENTRY

Ana Rosado Cubero, Complutense University, Madrid, Spain

ABSTRACT

Barriers to entry, as an economic concept, were defined by Joe Bain in 1956 in his book entitled Barriers to New Competition. Bain described and analyzed different ways used by firms in order to prevent new competitors entering their market. The majority of studies of the history of economic thought and economic theory do not include studies of the theory of the firm. They tend to analyze markets in terms of the supply and demand for goods and services and calculate points of equilibrium thus reached. The theory of the firm and the internal behaviour of the firm itself remains a largely uncharted territory. Most studies of the firm refer to models applicable to different specific firms or to case study analysis. My aim is to analyze what economists have written about the theory of the firm and barriers to entry up until today, highlighting those theoretical obstacles which they encountered in their research, which seem to have pushed them into choosing between accepting neoclassical orthodoxy or searching for more daring unorthodox models.

Keywords: Economic Thought; Barriers to entry, Industrial Organization.

1. INTRODUCTION

Barriers to entry contributed to the improvement of the economic theory of the non competitive behavior of markets, knowledge of competitive conditions allows policy makers to make acceptable regulations for firms. Barriers to entry were still a major subject for research during the period 1979-1989; In what follows I will attempt to set out a brief analysis of how studies of this subject have developed.

At the end of the seventies the conflict between the Harvard School and the Chicago School about how barriers to entry should be analyzed reached a turning point. Both Schools traditionally opposed on this subjet began to see that no one had a worthwhile framework which would permit them to prove or disconfirm the existence of illegal barriers to entry. Meanwhile policy makers called for agreement, because they have to drew up a framework of practical regulations which firms have to comply.

The main authors of this time were Richard Postner and Carl Christian von Weizsäcker, neither of whom believed in the existence of barriers to entry. In order to demonstrate their proposal Postner analyzed barriers as Tie-ins, vertical integration, restricted distribution or predatory pricing, while von Weiszäcker was interested in excess of capacity, the buildup of capital, economies of scale and goodwill. On the other side was Michael Spence, who believed in the existence of barriers to entry tried to demonstrate their existence. Research workers built many theoretical models in an attempt to reach a widely framework accepted. Michael Spence is also the promoter of the use of game theory in order to move barriers to entry from a discussion of limit price theory to strategic decisions. Flaherty, Dixit, Eaton and Lipsey followed this new approach. While Schmalensee, Cubbin and Nagle continued to use price limit theory.

William Baumol opened up a new branch of research, contestable markets, whereas Michael Porter, working alone, although in touch with Richard Caves and Michael Spence, inaugurated another branch of research, strategic competitive. The followers of this proposal are Harrigan, Chappell, Waagstein, Marks and Park. Some years later Baumol and Schmalensee found a common point, the limits of economic theory to offer solutions able to raise the competitiveness. At the end of the eighties we might say that two new trends of thought: we initiated the first built theoretical models which analyzed one by one different barriers to entry. The main authors in this line were Gilbert and Vives, Farrell, Aghion and Bolton, Gelfand and Spiller, Bagwell, Grossman and Horn. The other trend follows the line of sequential entry represented by the research of Eaton and Ware, Shapiro and Khemani, Smiley, Dunne and Roberts and Samuelson.

2. THE OLD CONFLICT BETWEEN HARVARD AND CHICAGO SCHOOLS

In own attempt to set out the arguments for and against barriers to entry, we choose chronological order as the best approach.

Richard Posner presented a paper at the Conference on Antitrust Law and Economics held at the University of Pennsylvania in November 1978, which was directed by Oliver Williamson. Posner returns to the two different approaches to the problem, the Chicago and the Harvard approach seeing and underlying single issue: the behavior of firms in their markets. The point of his article was that through the lens of price theory the simplification of proposals, in order to explain long run equilibrium, transformed monopoly questions into "simple" but not "easy" questions. Economic models built under marshallian premises were impeccable, but the limit of these powerful simplifications is that they are inapplicable in a real world. We therefore need a new theory capable of proving de existence of welfare costs in a monopoly situation.

Some kinds of non competitive behavior such as Tie-ins, vertical integration, restricted distribution or predatory pricing were analyzed by Poster on his 1979 article entitled "The Chicago School of Antitrust analysis". Tie-ins means requiring a buyer to buy a second product as the condition of buying the first (ink with mimeograph machines, for instance). According to the economic theory of Joan Robinson this is a simple case of price discrimination, in the long run the monopolist's output moves to the competitive level of production. Oliver Williamson noted that price discrimination involves extra transaction costs. Poster concluded "that tie-ins should not be forbidden seems both correct and increasingly influential on academic opinion" (Posner, 1979).

Vertical integration understood as the behavior pattern when a supplier A buys all the retail outlets which distribute his products and this obliged supplier B, in order to compete, to open his own chain of retail outlets. The theoretical analysis of this problem is the equivalent of analyzing how new entrants manage to enter an industry and pertains to the existing legal prescription.

Restricted distribution or the possibility to of reselling a product among his distributors includes advertising or product differentiation as a barrier to entry. The conclusion of Posner was that "advertising and related promotional methods create monopoly power, at least in any sense relevant to antitrust policy, cannot be derived from the premises of economic theory" (Posner, 1979).

Predatory pricing means selling below cost in order to increase the number of clients in two ways, firstly because your price is cheaper than competitors, and secondly, predatory pricing pushes a new entrant to neglect the decision to invest in the industry. His behavior is traditionally analyzed as "strategic" and difficult to detect. Of course, this is a short run strategic decision, while long run equilibrium remains, predatory prices will disappear. The predatory pricing theory is still being studied and ties with in the analysis of economies of scale.

Posner concluded his article about the different approach to barriers to entry between Harvard and Chicago Schools with a dramatic sentence: "Differences remain, but increasingly they are technical rather than ideological" (Posner, 1979).

The same discussion took place in Europe; In 1980 Carl Christian Von Weizsäcker published his book entitled *Barriers to entry: a theoretical Treatment*, at same time as another article about barriers to entry and welfare analysis. Von Weizsäcker developed a theoretical model into the traditional Cournot equilibrium of suppliers, his model tried to argue how excess of capacity, the buildup of capital and economies of scale work as barriers to entry, following the path of Michael Spence. Von Weizsäcker argued that excesses of capacity are expensive and "expenditures to deter entry are wasteful" (von Weizsäcker, 1980). On the other hand, the buildup of capital works as deterrent to entry only when the rate of interest is high; finally that economies of scale can become a barrier to entry hinges on the expansion of the market in which firm sells. Within the perspective of limit price theory, the point of Weizsäcker' research is "A more than infinitesimal effect of entry on the price, called Δp, implies a benefit to the consumers which is larger than -x Δp and thus the price reduction as such helps consumers more

than it hurts competitors. On the other and, if in the new equilibrium output of the competitors is smaller than without entry, the suppliers incur an additional loss, if price is above marginal cost, and hence output reductions imply more revenue loss than cost reductions. Which of the two effects is greater has to be investigated in a specific model" (von Weizsäcker, 1980).

Von Weizsäcker in his work on barriers to entry proposed a new analytical framework in order to analyze them; goodwill is the only barrier to entry left to understand the process. The reason why we consider other barriers to entry apart is because of their special characteristics. Goodwill can work as a barrier to entry or can work as an externality. Goodwill as a barrier to entry should be studied as an incentive for other firms to destroy the information about the quality of the products sold by others firms in the market. Goodwill is seen as an externality; in this case goodwill should be analyzed as a valuable asset, or the substitute for direct knowledge of quality. Von Weizsäcker chose the first option and concluded that "It is not useful to say that entrants are at a disadvantage as compared with established firms" (von Weizsäcker, 1980). In his book, this argument was further developed "Goodwill is not a barrier to entry, is necessarily only a partial solution of the quality information problem, this is due to quasi risk aversion of consumers. Barriers to entry would then only exist, if consumers do not form rational expectations, but are biased in favor of products of known quality" (von Weizsäcker, 1980).

Michael Spence traditionally worked on the subject of excess of capacity as a barrier to entry during the seventies. His article of 1980 entitled "Notes of Advertising, Economies of Scale and Entry Barriers" built a model within limit price theory which considered advertising as a fixed cost; in this perspective, advertising should be included in the curve of average cost, thus allowing its inclusion in the old models where economies of scale work as a barrier to entry. The only limit was that the model has to assume the existence of a homogeneous good within the industry. In his own words "if that production function is characterized by increasing returns to scale, then a firm's cost per dollar of revenue generated will decline with market share. Those increasing returns to scale will then have a role in creating entry barriers analogous to the role of ordinary returns to scale in the case of a homogeneous undifferentiated product" (Spence, 1980). In the same vein, Avinash Dixit built a model in which investment deters entry in a industry. Dixit's model tried to develop the old Bain-Sylos-Modigliani model with improvements taken from Spence and his own research of the seventies. This proposal includes game theoretic aspects as well as strategic interactions of incumbents firms against a prospective entrant.

At this point, game theory became the most important theoretical framework to explain barriers to entry. The old assumptions of limit price theory were included into the models, but the traditional marginal costs analysis applied during decades made way for the strategic decisions of firms. It's true that economic theory works with marginal calculus, following long run equilibrium; however decisions process are more and more based on profitability criteria, which has made game theory more and more important.

One of the first models which included game theory in oligopolistic Cournot models is the work of Michael Spence published in 1977; He was working under limit price assumptions or a Bain-Sylos-Modigliani framework. Some years later, in 1980, Therese Flaherty developed a dynamic non-cooperative game in which firms choose output and cost-reducing investment sequences. Her model provides "a technical explanation of how industry structure can converge to a state in which firms has unequal market shares" (Flaherty, 1980). At the same time, Avinash Dixit developed his model which improved upon Spence original model. For Dixit "The basic point is that although the rules of the post-entry game are taken to be exogenous, the established firm can alter the outcome to its advantage by changing the initial conditions" (Dixit, 1980). Curtis Eaton and Richard Lipsey worked on durability of capital as a barrier to entry, using game theory, inevitably the point of their paper was "not indivisibilities and decreasing cost per se which create barriers to entry. Rather, it is the intertemporal commitment of specific capital to a market, in combination with decreasing costs which creates an entry barrier" (Eaton and Lipsey, 1980). The outcome of their model was that capital produces revenue to the firm by acting as a factor of production and as a barrier to entry. The reason why capital acts a barrier to entry is because product-specific capital is a natural vehicle for commitment and firms which use a large amount of capital will break with one important economic assumption: cost minimization.

Richard Schmalensee changed his theoretical analysis of barrier to entry from advertising to economies of scale. He made a survey in this paper, where he rethought the different theoretical assumptions made during the last thirty years, the models of Bain, Dixit, Spence and Eaton and Lipsey. Schmalensee`s criticism was of to the theoretical consideration of scale economies The estimations made in order to demonstrate that economies of scale work as a barrier to entry assume that national markets and products are homogeneous: he thought that this was too strong an assumption. On the other hand, Bain's model assumed that incumbent firms maintain their levels of output after a new entrant firm enters in the industry. Michael Spence assumed that established firms move their production from monopoly output to competitive output when they believe the threat of entry. Dixit assumed that incumbent firms in industry behave as if playing a non-cooperative game in response to a new entrant. Eaton and Lipsey made the assumption that established firms manage to coordinate their investments following the goal of entry deterrence. All of them assumed that, in a way, the threats expose above are believed by a new entrant. However as Schmalensee wrote " if entry is unattractive to outsiders, the flow of monopoly profits received by cooperating insiders cannot exceed the flow cost of capital assets embodied in a firm of minimum efficient scale, as long as industry demand is not strictly convex." (Schmalensee, 1981).

Schmalensee is the expert on advertising, although he wrote about other barriers to entry. In the paper cited above, he also accepts that advertising does not make it possible to protect those profits which accrue from the practice of monopoly power. In the same vein, John Cubbin wrote in 1981 "Advertising and the Theory of Entry Barriers". He developed his model under limit price theory. Cubbin has a prima facie case for his proposition that advertising may contribute to an entry barrier effect: his point is that this effect does not cause fundamental asymmetries in cost of demand functions. In conclusion Cubbin write "Entry barrier effect can exist as long as the entrant's prospective demand curve is made less favourable by the mere fact of the established firm's present advertising". (Cubbin, 1981). From Chicago, Thomas Nagle answered M.I.T.`s Richard Schmalensee, on the role of advertising. Nagle assumes that repeat purchase behavior, or brand loyalty, is the response to the lack of information about alternatives, keeping in mind that the cost of finding a better brand is high. In terms of Stigler's price theory, we are talking about information costs; In this case, advertising should be a correlation with profit rates for incumbents but otherwise for new entrant firms. Problems arise when it is not possible to separate profits from rates of return or monopolistic returns, in which case, there are no arguments in favour of the existence of barriers to entry. Nagle set out his model in 37 American Industries, with Data borrowings by others.

3. TWO NEW BRANCHES OF COMPETITIVE MARKET ANALYSIS: CONTESTABLE MARKET AND COMPETITIVE STRATEGY.

At the beginning of the eighties William Baumol, Robert Willing and John Panzar developed the framework for economic analysis known as "contestable market" to improve the theory of industry structure. Baumol and Willing wrote together about fixed cost and sunk cost as barrier to entry. In order to shed light on this issue, they defined fixed costs which should be born by firms even in the long run, which means they are production costs. Whereas sunk costs disappear in the long run. Sunk costs are those cost which that the firm has to lay out at the beginning but if the business works they are built into accounts as initial investment. Sunk costs become a barrier to entry when the business doesn't work because the investor risks his capital without the possibility of recovering his money. In this sense, the amount of capital that a firm has to risk in order to improve its market share, even in order to enter in the market, can be considered a significant data of the level of the barrier to entry. Their conclusions were that "fixed costs of sufficient magnitude permit the incumbent to adopt prices which prevent entry (sustainable prices) and the preceding assertion that, in themselves, they constitute no barrier to entry" (Baumol and Willing 1981). In conclusion, a contestable market demands two requisites: no artificial barriers to entry, and that fixed costs are not sunk costs.

Meanwhile, the analysis of barriers to entry seen as competitive strategies, as opposed to price theory, began to take shape. Management researchers are interested in knowing how firms behave within their own industries. Harrigan, Chappell, Marks and Park, Waagstein are the representatives authors. However the most representative author of this school of thought was Michael Porter. At this time he was working in the Harvard Business School, and he published in 1980 his book entitled *Competitive strategy:*

techniques for analyzing industries and competitors, following in the path of Bain's framework of 1956, *Barriers to new competition*. Porter's characterization of barriers to entry into markets for firms includes:

1. Investment. - Especially in industries with economies of scale and/or natural monopolies.
2. Government regulations. - May make entry more difficult or impossible. In the extreme case, a government may make competition illegal and establish a statutory monopoly. Requirements for licenses and permits, for example, may raise the investment needed to enter a market.
3. Predatory pricing.- The practice of a dominant firm selling at a loss to make competition more difficult for new firms who cannot suffer such losses, such as a large dominant firm with extensive lines of credit or cash reserves can. It is illegal in most places; however it is difficult to prove.
4. Patents. - Give a firm the sole legal right to produce a product for a given period of time. Patents are intended to encourage invention and technological progress by offering this financial incentive.
5. Economies of scale. - Large, experienced firms can generally produce goods at lower costs than small, inexperienced firms. Cost advantages can sometimes be quickly reversed by advances in technology. For example, the development of personal computers has allowed small companies to make use of database and communications technology which was once extremely expensive and only available to large corporations.
6. Customer loyalty. - Large incumbent firms may have existing customers loyal to established products. The presence of established strong Brands within a market can be a barrier to entry in this case.
7. Advertising. - Incumbent firms can seek to make it difficult for new competitors by spending heavily on advertising that new firms would find more difficult to afford.
8. Research and development. - Some products, such as microprocessors, require a massive upfront investment in technology which will deter potential entrants.
9. Sunk cost. - Sunk costs cannot be recovered if a firm decides to leave a market; they therefore increase the risk and deter entry.
10. Network effect.- When a good or service has a value that depends on the number of existing customers, then competing players may have difficulties to enter a market where a strong player has already captured a significant user base.
11. Restrictive practices. - Such as air transport agreements that make it difficult for new airlines to obtain landing slots at some airports.
12. Distributor agreements. - Exclusive agreements with key distributors or retailers can make it difficult for other manufacturers to enter the industry.
13. Supplier agreements. - Exclusive agreements with key links in the supply chain can make it difficult for other manufacturers to enter the industry.
14. Inelastic demand. - A strategy of selling at a lower price in order to penetrate markets is ineffective with price-insensitive consumers.

On the other hand, Kathryn Harrigan wrote about this topic in 1981, she built a dummy in order to explain the likelihood of successful entry into an industry. To test her model, she used data from the following American industries, for the period 1969-1978: Meat packing, distilled liquors, cigarettes, hydraulic cement and aircraft manufacture. The independent variables were, capital scale economies, the age of physical assets, excess capacity, industry advertising, the number of firms in an industry, prices, sales and so on. Harrigan wrote in her conclusions, "Structural barriers are generic to an industry to the extent that all potential entrant must invent a means of hurdling these obstacle to profitable performance in pursuing a new line of business, and as such, all face similar needs for the capital required to inaugurate sets of productive or distributive assets" (Harrigan, 1981). Henry Chappell, William Marks and Imkoo Park worked on measuring entry barrier models. They built in 1983 a Switching Regression model whose equations assert that industry profitability is a function of industry concentration, a vector of variables indicative of entry barrier levels and a vector of variables which proxy elasticity of demand for each industry. They said that they can provide evidence as to which empirical measures seem to be the best indicators of the presence of entry barriers. They tested their theory in 209 American industries, where two digits data given, and data coming from the 1967 Census of Manufactures. Their conclusions were not promising, and it seems necessary to improve the econometric models.

In the same vein, Thorbj∅rn Waagstein worked on fixed costs, limit pricing and investment in barriers to entry. His paper was published in 1982 and working within the Bain-Sylos-Modigliani framework, Waagstein assumed that advertising and R&D are fixed costs. The following objective was to regard Barriers to entry as endogenous variables within the model. Therefore, the analysis moved from barriers to rents, which means a return to monopoly analysis and to smoke out the two sources of over-normal profits: diversification advantages because of the knowledge of the market which incumbent firms have and the advantages of big business as receivers of cheaper credit, power rebates or favorable government contracts which are profitable only for incumbent firms. John Hilke, from the Federal Trade Commission, wrote a paper which represents an exploratory effort to investigate empirically the prevalence and efficiency of excess capacity in deterring entry. The dependent variable was the sum of market shares obtained by domestic entrants and gains (or losses) in the market share of imports between 1950 and 1966. The main conclusion of Hilke was their "The Sylos-Labini price was calculated by adding a linear price trend from the three preceding years and the expected decline in price as a result of entry to the current price level. The expected decline in price is the result of multiplying the price elasticity of demand by the size of the entry relative to pre-entry capacity. The elasticity estimates are from Comanor and Wilson in 1974. Entry size estimates are from Harris 1973. If price declined by more that predicted by using the Sylos-Labini assumption, then production retaliation was assumed to have taken place" (Hilke, 1984) He applied his theory in 16 four or five-digit American industries.

Meanwhile in the United Kingdom, John Cubbin and Paul Geroski wrote in 1987 a paper entitled "The convergence of profits in the long run: inter-firm and inter-industry comparisons". Following the path originally trodden by Porter-Caves in the seventies, they prove the existence of mobility barriers in British industry: the dummy was built with data coming from 217 large UK industries.

The same concern was shared by William Shepherd who published in 1982 "Causes of Increased Competition in the U.S. Economy, 1939-1980". He built his model with variables some of which come from the Herfindahl index in order to specify standards of market structure. After he classified American Industries into three categories, such as pure monopoly, dominant firms and tight oligopoly, he analyzed their rise in import competition. He met three criteria, more competitive industry, import share above 15% of all US sales and imports genuinely competitive with US products rather than just brought in by US firms to be marketed under their own brand names. At the end of the paper Shepherd suggested policy lessons, such as that "continued antitrust pressure is needed to retain the new level of competition" or "free-trade policies are crucial to the continuation of effective import competition in a range of large industries" (Shepherd, 1982). The significance of this paper was slight, because it made no improvements to oligopoly theory, non improvements in the treatment of statistical data. However as an exercise in economic thought this paper was published and deserves our consideration.

4. A MEETING POINT BETWEEN WILLIAM BAUMOL, RICHARD SCHMALENSEE AND DOUGLAS BERNHEIM

At this time, William Baumol and Richard Schmalensee both published articles about how barriers to entry have been analyzed within the framework of industrial organization existing. Both authors surveyed research and in which direction this research was headed. Beginning with the old controversy between Joe Bain and George Stigler and following up with the limits of game theory to improve the paradigm known as price limit theory, their intention was to set out the theoretical arguments necessary to implement an antitrust policy. Baumol rethought the proposal maintained in Areeda and Turner's article about predatory pricing of 1975, where they seek to find a distinction between predatory and competitive prices, in other words, to be able to differentiate between rents and profits in the industrial activities of the firms. Baumol wrote, "A barrier to competitors may arise from the superior efficiency of existing firms, in which case their low prices are precisely what competitive markets are expected to bring forth". (Baumol, 1982). Baumol argued the impossibility of distinguishing between competitive and collusive behavior of firms. Schmalensee reaches a similar conclusion to Baumol although using other arguments: "The Harvard tradition initially condemned all tying arrangement as providing "leverage" that permitted the multiplication of monopoly positions. Chicago countered that the concept of leverage is without theoretical support, that tying is generally a form of price discrimination, and that ties should be legal because price

discrimination is generally efficiency enhancing…. Theoretical analysis suggest the non-existence of simple test that one could actually apply in particular cases to determine whether banning tying contracts would enhance efficiency" (Schmalensee, 1982).

Baumol's recommendation to policy makers was that "A plausible policy is to take the bird in hand now because none may be in the bush tomorrow" (Baumol, 1982). Schmalensee confronted a similar dilemma: when should economic analysis be transformed into antitrust laws which the firms have to follow, he wrote "the sophistication of antitrust decisions will surely rise more slowly than the sophistication of economic analysis and testimony" (Schmalensee, 1982).

I1984, Douglas Bernheim wrote "The US government possesses an arsenal of public policy instruments designed to foster competitive industrial structures" (Bernheim, 1984). He included penalties, subsidization of entry, consent decrees, restructuring an industry by breaking up a dominant firm. Let us conclude the whole game with Bergheim's words "Initially, a certain number of firms operate within an industry, and face the threat of entry from a single potential competitor. Incumbent firms simultaneously choose investments in deterrence activities. The potential competitor then determines whether entry into the industry would be profitable. If he chooses not to enter, operating firms collect their profits and the game ends. If entry occurs, the group of operating firms is enlarged (one firm has been added). A new potential competitor then appears, all previous deterrence investments become obsolete, and the new group must undertake a similar decision." (Bernheim, 1984). Two years later, the conclusion was similar to Baumol and Schmalensee, both authors cited above, "caution when using simple economic models for making prescriptions about industrial policy" (Bernheim, 1984).

5. THE SPECIFIC ANALYSIS OF SEPARATE BARRIERS TO ENTRY

At the end of eighties, were published several articles about different barriers to entry: Richard Gilbert and Xavier Vives wrote about entry deterrence and the free rider problem. Joseph Farrell about moral hazard as a barrier to entry. Marvin Lieberman about excess capacity as a barrier to entry. Philippe Aghion and Patrick Bolton about contracts as a barrier to entry. Matthew Gelfand and Pablo Spiller about entry barriers and multiproduct oligopolies, paying special attention to bank markets. Kyle Bagwell wrote about informational product differentiation as a barrier to entry, while Gene Grossman and Henrik Horn continued with information as a barrier to entry, in this case concentrating on infant industry protection.

Gilbert and Vives, Lieberman, Aghion and Bolton are the inheritors of the Bain-Sylos-Modigliani paradigm. Their models tried to demonstrate a barrier to entry within the perspective of the Harvard School: the fact is that all of them included improvements on the old limit price theory, mainly driving from game theory. Gilbert and Vives, for instance, used Dixit´s model developed in 1980, where Dixit distinguishes between capacity and output. Capacity would have a constant unit cost; output would have a constant marginal cost up to capacity and infinite beyond that means Cournot equilibrium results from the cost functions (capacities) chosen by the firms. Gilbert and Vives deduce the following conclusion "One may conjecture that there will not be excess capacity in equilibrium since capacities costly and excess capacity does not deter entry; potential entrants ignore capacities that are not going to be use fully (i.e. capacities that are not credible). It would be profitable to keep an entrant out but it is not possible to do so because the output needed to prevent entry cannot be induced in Cournot equilibrium by any capacity choice of the incumbents." (Gilbert and Vives, 1986)

Marvin Lieberman studied in depth excess of capacity, yet again this old barrier to entry was to find another empirical demonstration of its existence. In order to reach this goal Lieberman applied his proposal to several American industries, Organical chemicals, inorganic chemicals, synthetic fibers, metals. The dummy was built using an extended series of data, the period analyzed was 1952-1982, although for some industries the period was reduced.

One the most innovative approximations to modern barriers to entry was made by Philippe Aghion and Patrick Bolton, working on contracts, and taking up Williamson's idea of costs again. Building on the assumption that informational asymmetry constrains the monopoly power of the incumbent and the buyer

with respect to the entrant, in order to solve the problem of long run equilibrium they made use of the following principle "it is a well-known principle in economics that if agents engage in mutually advantageous trade, it is an their best interest to sign the longest possible contract. A long term contract can always replicate what a sequence of short-term contracts achieves". (Aghion and Bolton, 1987)

Joseph Farrell wrote in 1986 a paper which was influential up until the end of the decade. Farrell's model was built onto the contestable market of Baumol, Panzar and Willing. Farrell defined moral hazard as a barrier to entry as follows: "If an industry is providing less consumer surplus than is possible, an entrant can make positive profits by offering buyers a slightly better deal than they are getting from incumbents firms. In some cases, however, an entrant's profits would be higher still if he "Cheated" by providing goods of low quality. In such a case, buyers with rational expectations would not be willing to buy form an entrant and entry will not occur. This is our entry barrier" (Farrell, 1986). He tried to demonstrate that the reputation of incumbent doesn't offer incentives to new entrants in an industry. In this sense the first entrant into an industry faces a less severe moral-hazard problem than do subsequent entrants, and this is exactly the way in which barriers to entry work.

At least Bagwell and Grossman and Horn used this proposal. Kyle Bagwell set up a game in order to demonstrate that inefficiency in quality can persist in the presence of informational product differentiation. Keep in mind that product differentiation had been classified as a barrier to entry a long time ago. The improvement of Bagwell to this theory lies in her demonstration of the existence of equilibrium in the model with a low-quality incumbent that is an inefficient incumbent is able to permanently bar the entry of a high quality, efficient entrant. This issue should be susceptible to be extended to infant-industries analysis; Gene Grossman and Henrik Horn tried to use it in the line of argument which assumes that the infant-industry typically endorses temporary protection until such a time as the domestic industry achieves equal footing with its foreign rivals. They contributed to the barriers to entry theory or deterrence theory with an extension of an idea from microeconomics to macroeconomics.

6. A NEW PROPOSAL: SEQUENTIAL ENTRY

At the end of the eighties, the old pricing limit theory was rescued once again. The limit-price model of Bain-Sylos-Modigliani plus games seems a good way to explain market structure, and therefore the non-competitive behavior of firms within their markets. Curtis Eaton and Roger Ware were the pioneers of this rescue: attempt they wrote a paper entitled "A Theory of Market Structure with Sequential Entry" in which they built a sophisticate mathematical model in order to demonstrate that the long run equilibrium price of output in a industry tends to the limit price. As a conclusion they wrote "In this article we have developed a theory of market structure suggested by the work of these earlier authors. Firms enter the market in sequence, each computing the reaction of all subsequent entrants to its own strategic investment decision. Only demand and cost conditions and the structure of the entry game are specified exogenously; the number of firms, their size distribution, and the market price are determined as the equilibrium to this entry game". (Eaton and Ware, 1987). In the same vein, Daniel Shapiro and R. Khemani found "A high positive correlation between entry and exit barriers across industries is observed because barriers to entry restrict displacement and exit" (Shapiro and Khemani, 1987).

In 1988 Robert Smiley wrote a empirical study of strategic entry deterrence. His model was inspired in the older models of Bain, Spence, and Porter; in this way Smiley tried to test such barriers to entry as aggressive use of the learning curve, capacity expansion pre-emption, advertising, patents and R&D, reputation as an aggressive firm, the excessive filling of all product niches, and the masking of single product profitability. However he improved on the old framework using an opinion poll carried out on seven new products and eight existing product strategies and rent to the CEOs of the firms involved. Smiley wrote about the difficulties which he found doing this research "An additional difficulty in writing to CEOs is that they will rarely respond personally. Instead, they are likely to give the questionnaire to a public relations aide, or not respond at all. The problem of eliciting truthful answers is critical here, since the information desired is sensitive competitive information, and some of the strategies described might be in the grey zone of legality/illegality" (Smiley, 1988). The conclusion of this innovative research was

that more than half the respondents reported that attempts to deter entry were comparable in importance to other strategic marketing and production decisions.

Timothy Dunne, Mark Roberts and Larry Samuelson wrote, in 1988, about patterns of firm entry and exit in United States manufacturing industries. Using data coming from four digit US manufacturing from 1963-1982 they built a model whose main contribution to the analysis of structure market and non competitive behavior of the firm was that as many firms simultaneously operate in a number of industries, it is important to recognize several possible types of entry. The independent variable of their equation was taken as the number of firms over several years and the total output of firms within these years.

7. CONCLUSIONS

During this decade of the 1980's, the analysis of barriers to entry was improved by the introduction of games into the old limit price theory. The objective of researchers was the same, to find a theoretical framework capable of demonstrating the existence of barriers to entry. Armed with this new framework they will have arguments about how to change the behavior of the firms through new regulations which have to be approved by policy makers.

At this time the old controversy between the Harvard and the Chicago Schools continue. Researchers from Harvard spend their time working within the Cournot theory of oligopoly, but inserting into their model more sophisticated statistical techniques and games theory. The Chicago School researchers worked on price theory and general equilibrium, where barriers to entry do not survive in the long run.

The extension of both branches happens when Michael Porter, from Harvard, developed his theory about the competitive strategy of the firms, whereas William Baumol, Robert Willing and John Panzar developed their contestable market. The gap that existed between both Schools of thought grows. The only meeting point was that no one obtains their objective, that neither School reaches the goal that anybody's succeeded in providing a usable framework for policy markers.

At the end of the eighties, some researchers follow the path of Joe Bain, to analyse one by one each barrier revealed by empirical evidence. In the same vein, other researchers improve the Bain-Sylos-Modigliani theoretical model by introducing games under the new heading of sequential entry. Scholars who work within the Stigler price theory paradigm follow their own path.

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AUTHOR PROFILE:

Dr. Ana Rosado Cubero is an associate professor of Economic Thought and Business History at Complutense University of Madrid, Spain.

BUDGETED COSTS IN ROMANIAN SMALL AND MEDIUM-SIZED ENTERPRISES

Felicia Sabou, West University Vasile Goldis, Arad, Romania

ABSTRACT

The budget synthesizes the company's objectives, from a determined period of time, usually a year. These objectives are formulated in terms like: costs, prices and profit. The budget is the instrument which helps the manager take optimal decisions, assume responsibility for using resources efficiently, and control the level of incomes, expenditure and profit. A budgeted cost is a necessity in a performing cost management in Romanian small and medium-sized enterprises. From the studies and observations made till now, in Maramures County and Salaj County, at the beginning of 2008, only 65.82% small and medium-sized enterprises use the budget like an instrument for taking decisions.

Keywords*: costs, cost management, budget.*

1. INTRODUCTION

The budget synthesizes the objectives the company has endeavored to attain in a determined time period, usually a year. These objectives are formulated in terms of cost, prices, profit, and profitability. The budget represents the instrument with the aid of which the manager strengthens his decisions, assumes responsibilities to efficiently use resources, and controls the income, expenditure and profit levels. The budget is an instrument for harmonizing and making more efficient the relation between expenditure and income, inside an enterprise, through the budget the manager tries give a dimension and to control the equilibrium relation that has to exist between expenditure and income.

2. BUDGETED COSTS

Cost budgeting implies the establishing of budgets that allow the presentation of all enterprise previsions, through the creation of autonomous subsystems under the form of expenditure or profit centers.
Elaborating the budget means taking some steps, like:
- the department expenditure budget;
- the general administration expenditure budget;
- the retail expenditure budget;
All the budgets are integrated then in a general budget of a company. (Manolescu Gh., 1999).

2.1. Budgeted costs for the production activity
Budgeted costs comprise the totality of the exploitation expenditure necessary for the realization of the global production of the company, grouped according to their economic content.
Devising budgeted costs for the production activity entails several stages, namely:
- devising the department expenditure budget;
- devising the general administration expenditure budget of the firm;
- devising the retail expenditure budget;
- devising the general exploitation expenditure budget;
All the partial budgets mentioned above, are to integrate, progressively, in the general budget for production activity expenditure (Accounting, Expertize and Business Auditing, 2007).

Department expenditure budget
Department expenditure budget elaboration supposes the realization of the following components: expenditure budget for raw and primary materials, the budget for direct manufacturing, the budget for auxiliary activities expenditure, the budget for indirect expenditure for the main departments.
Expenditure budget for raw and primary materials
Expenditure for raw and primary materials are determined on the basis of consummation norms, established on classes of raw and primary materials, separately for each product and for the cost price of the respective raw and primary materials.

Balancing the consummation norms and the cost prices of raw and primary materials and the quantity of products we obtain the complete raw and primary material expenditure for each product. Summing up the complete raw and primary material expenditure for all the products realized by the company we obtain the overall raw and primary material expenditure for the company.

Budget for direct manufacturing
Expenditure with direct wages on product unit is determined by the balance of norm time on product unit with the wage list on time. Multiplying the wages on the product unit with the intended quantity to be realized for each product, one obtains the wage expenditure on product, that added up form then the total expenditure for direct wages.

In this budget are also included the state-controlled welfare contributions, the health insurance contributions, the unemployment fund contributions, and the contributions to other special funds.

Budget for auxiliary activities expenditure
The budget for auxiliary activities expenditure is drawn on elements of expenses, grouped on occasional places (auxiliary departments) and on expense bearers. Part of the auxiliary activities expenditure is identified on bearers, being direct expenses, listed in the budget on expenditure elements, and other expenses are divided between cost bearers, on different criteria.

Budget for indirect expenditure for the main departments
To draw these budget analytical budgets for indirect expenditure will be realized for each department, workshop, and production center.

Within these analytical budgets expenditure will be set in expenditure groups, and within these groups in expenditure types.

Budget for indirect expenditure for the main departments
The drawing of the expenditure budget for general administration expenditure within the company consists of programming the expenditure in groups and types (stationery and consumables, inventory, power and sewage, other material expenses, works and services executed by a third party, taxes, payments, wages, contributions to the budget and to special funds pertaining to wages, amortization, etc.)

Retail expenditure budget
The elaboration of retail expenditure budget is distinctly made for export and internal sales. Within this budget there appear expenditure groups, and within those expenditure types(stationery and consumables, inventory, power and sewage, other material expenses, works and services executed by a third party, taxes, payments, wages, contributions to the budget and to special funds pertaining to wages, amortization, etc.).

Exploitation expenditure general budget
The exploitation expenditure general budget centralizes all the three types of budgets already mentioned, namely : the department expenditure budget, the general administration expenditure budget of the firm and the retail expenditure budget. Within this budget too the expenditure is divided into types.

2.2. Budgeted Cost Price
Cost price budgeting is realized on each product, service or work. This budget is realized extendedly, on calculation articles, according to the production cost structure
Budgeted Cost Price:
- Raw and direct materials
- Direct Wages
- Social welfare and protection contribution pertaining to direct wages
- Plant maintaining and functioning expenditure
- Department general expenditure
- PRODUCTION COST

- Administration general expenditure
- Retail expenditure
- COMPLETE COST

3. BUDGET CONTROL

Budget control consists in the comparison of the realizations with the previsions and the highlighting of possible miscalculations.

Within the classical methods of cost calculation, at the end of the accounting period, the real indicators are compared to those stated in the accounts, working out the miscalculations between the real expenditure as compared to the programmed one, and the difference between the real cost as compared to the programmed one. Through the intermediary of these differences it is realized the periodic control on production costs, on retail expenditure and on general administration expenditure.(Sabou F., 2005).

4. THE BUDGET IN ROMANIAN ENTERPRISES FROM MARAMURES COUNTY SALAJ COUNTY

At the beginning of the year 2008 we realized a study on budgeting the activities inside the small and medium-sized enterprises in Maramures county and Salaj county. The aim of the study was to answer the following questions:

- What's the number of small and medium-sized enterprises in Maramures County and Salaj County have an income and expense budget at the beginning of the year 2008?

- How many small and medium-sized enterprises in Maramures county and Salaj county have distinct budgets on cost and profit centers?

The method adopted in order to gather data concerning budgeted costs within small and medium-sized enterprises in Maramures County and Salaj County was the survey based on a questionnaire. Were questioned 392 small and medium-sized enterprises from Maramures county and Salaj County.
After assessing, analyzing and interpretation of the questionnaire, the following conclusions resulted :

- 65.82% to the small and medium-sized enterprises interviewed have, at he beginning of the year an income and expense budget for 2008;
- Out of the interviewed enterprises having an income and expense budget at the beginning of 2006, only 33.93% have distinct budgets on profit and costs centers.

5. CONCLUSION

From the results of the study, one may observe that the number of small and medium-sized enterprises in Maramures county that have drawn and are utilizing, at the beginning of 2008 and income and expense budget for 2008 is insufficient, being only of 65.82%.

Taking into account the importance of this working tool in managerial activity, namely the budget, the number of those who use an income and expense budget in their activity should be by far greater. This result can sometimes explain the incertitude that hover above the small and medium-sized enterprises concerning their activities in the future.

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VALUES' ORIENTATION IN THE MANAGEMENT OF INNOVATION

Maria Sava, Iasi "Gheorghe Asachi" Technical University, Romania

ABSTRACT

Competitiveness depends essentially on knowledge in its different forms: production, acquisition and use. Scientific research and technological development, more particularly, are at the heart of what makes society tick. More and more, activities undertaken in this domain have as an express purpose to meet economic demands and to satisfy social needs, especially in connection with the evolution of work and the emergence of new ways of life and activities. Then speaking about knowledge, one cannot neglect the key factor, the researcher and as a consequence the cultural input, which exerts strong influences on his/her behaviour, attitude and position toward action (Zait, 2002). The culture, through its specific features, could entice or inhibit, could lead to success or to failure. A positive attitude towards research could be built on the favourable premises for creativity and entrepreneurship, but also the research community should rely on trust, self confidence and the feeling of affiliation.

Keywords: *Organizational knowledge management, Exploitation of research results, Cross-cultural management, Cultural dimensions, Competitiveness*

1. COMPETITIVENESS IN THE KNOWLEDGE BASED SOCIETY

The history of humanity is comprised of three stages of competitiveness (Drucker,1994): the **factor driven economy**, based on low cost labour and abundant natural resources (the primitive and the agricultural society), the **investment driven economy** based on capital (capitalist society) and the third stage, the **innovation driven economy** (knowledge based) in which the competitiveness is ensured by the innovation enclosed in goods and services. For all of us the 21st century rang the bells of a new era: the "knowledge based society". The former communist regime endowed Romanian people with the distrust of grandiloquent periphrases: less than two decades ago, "the multilateral developed society" showed its emptiness behind the track of the military tanks from the '89 anti-communist revolution.
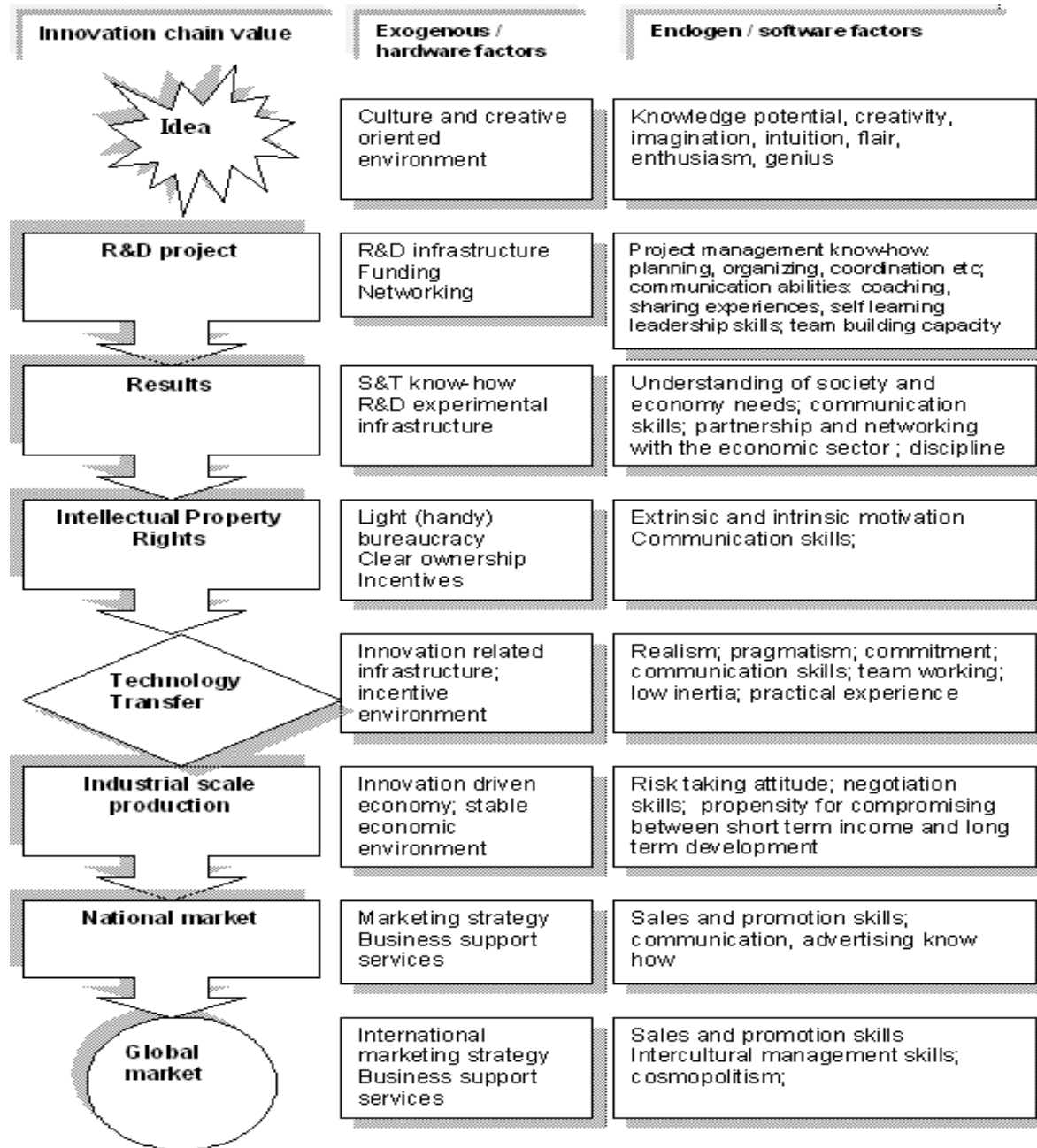
The concept of the "knowledge-based society" could have an unhappy fate if inappropriately handled by those in charge with the planning and the management of the research. *Nous sommes ici aux portes de l'Orient ou tout est pris à la légère* was said by Raymond Poincaré during the peace negotiation process after the First World War. We could presume that globalization of manners, tastes, norms and values have induced some changes, but we are aware that the "software of the mind" of the Romanians is still tributary to their historic legacy. The centralised and state ownership mentalities inherited from the communist regime have also created a "ready made" behaviour, which is not quite compatible with the entrepreneurship profile requested for a dynamic and growing economy.

The economic competitiveness relies on some key physical factors such as research infrastructures, innovative services dedicated to quick translation of knowledge into concrete applications (technology and scientific parks, centres of technology transfer, offices of liaison with the industry) and in the same time on efficient business support services (chambers of commerce and industry, consultancy companies, trade unions etc). The Romanian research sector has benefited during the last years of an increasing inflow of money provided by the two National Plans for Research Development and Innovation and by the recent (2003) membership in the European Commission's Framework Programme for Research and Technological Development. In this view, the Romanians have adopted the model of incubators and scientific parks, which structure and management rules are inspired by European practices. Unfortunately their creation hasn't automatically ensured tangible results in terms of competitiveness. The Romanian economic growth is still devoted to low manpower costs and to row materials, exported without added value. The extensive use of these cheap factors has incurred dramatic damages to the environment and has drained the labour force outside the country.

2. CULTURAL DIMENSIONS AS "PUSH AND PULL" FACTORS FOR VALUING INNOVATION

The following diagnosis of the Romanian research and innovation environment is based on the five cultural dimensions defined by Geert Hofstede:

Innovation chain value	Exogenous / hardware factors	Endogen / software factors
Idea	Culture and creative oriented environment	Knowledge potential, creativity, imagination, intuition, flair, enthusiasm, genius
R&D project	R&D infrastructure Funding Networking	Project management know-how: planning, organizing, coordination etc; communication abilities: coaching, sharing experiences, self learning leadership skills; team building capacity
Results	S&T know-how R&D experimental infrastructure	Understanding of society and economy needs; communication skills; partnership and networking with the economic sector ; discipline
Intellectual Property Rights	Light (handy) bureaucracy Clear ownership Incentives	Extrinsic and intrinsic motivation Communication skills;
Technology Transfer	Innovation related infrastructure; incentive environment	Realism; pragmatism; commitment; communication skills; team working; low inertia; practical experience
Industrial scale production	Innovation driven economy; stable economic environment	Risk taking attitude; negotiation skills; propensity for compromising between short term income and long term development
National market	Marketing strategy Business support services	Sales and promotion skills; communication, advertising know how
Global market	International marketing strategy Business support services	Sales and promotion skills Intercultural management skills; cosmopolitism;

Power distance: the extent to which inequalities among people are seen as normal, running from equal relations being highly valued (low power distance) to inequalities being accepted as normal (high power distance).
Uncertainty avoidance: a preference for structured situations including work rules and regulations (high uncertainty avoidance), to a value placed on unstructured situations and being comfortable with ambiguity and flexibility (low uncertainty avoidance).

Individualism: a tendency to act as individuals (individualism) versus acting as part of a collective or social group (collectivism).

Masculinity: values placed on "hard" aspects such as assertiveness and competition and on the differences between male and female (masculinity) versus valuing "soft" or "feminine" values: personal relations, caring for others, while playing down the differences between male and female (femininity).

Long-Term Orientation associated with prosperity and perseverance versus short-term orientation related to the respect for tradition and social obligations. (Hofstede,1996)

Taking into account the innovation chain value from the genesis of the research idea to its final valorisation on the global market, one could emphasise that the "push and pull" factors depend on external "hardware" conditions (first column), but also on intangible "assets" based on cultural norms, values, attitudes and behaviour, which are specific for each national culture.

3. VALUES' ORIENTATION IN ROMANIAN INNOVATION AREA

Some studies (Luca, 2007) recently performed on the Romanian population which used as a diagnosis method the five Hofstede cultural dimensions, have come up with strong evidence that Romania has similar values as other Balkan countries. This similarity is due to their common historic background: the Ottoman suzerainty until the 19th century, the orthodox religion and, last but not least, the fifty years of communist experience. These features imply a specific orientation towards action and undermine the technological progress of the country, as it is shown bellow:

Power distance: the studies have emphasised the preference of the population for a unique, centralised and authoritarian leadership, in order to avoid undertaking independent decisions and the responsibilities issued in case of failure. The management structure of the most research centres and universities has the form of an elongated hierarchical pyramid. The decision-making process is top-down oriented; due to the intermediary levels, the communication links fail to preserve the genuine creative ideas. The good practices sharing as a pre-requisite for innovation and creativity cannot be easily achieved if it is not appropriately encouraged.

Collectivism: is a dominant form for creating relationships and establishing rules. The specialised literature (Hofstede, 2002) considers that the collectivist dimension is specific for under developed societies and depends on the GDP of the country. Romania lies behind other European countries from the point of view of economic competitiveness and the necessary skills for translating innovation into marketable products are still at shortage. The free will, the strong commitment and the self motivation (individualist characteristics) remain to be acquired and improved in the context of the free market economy in which the young generation is called to play the main role.

Uncertainty avoidance index is also very high. People rely on rules, norms and regulations for being effective. These practices increase bureaucracy, create confusion, discourage initiative and in the long term leads to failure.

Short term orientation: planning is more often only an attempt to comply with the official rule; the fate of any plan is to be carefully designed and afterwards ignored and labelled as useless. One of the main Romanian sayings "*a bird in the hand is worth two in the bush*" explains very well the lack of long term vision of the Romanian society, explicable by its various historical determinations.

Amazingly, the fifth dimension *masculine versus feminine* values show the pre-eminence of the last one; it is surprising because actually the access of women on the hierarchy scale is often obstructed not only by the power's mechanisms, but mainly due to the general perception that women are best positioned in housekeeping and children's nursing. Despite the fact that women represent more than 51% from the active population of the country they are still underrepresented at the top management of the research centres as well as in business.

Taking into account the innovation chain value as represented above, one could conclude that the adopted European strategies for economic competitiveness through research and innovation have, at this moment, fewer chances to be successfully implemented. Romanian research sector need some "tailor made" innovative structures and management approaches which take into account the specific attitudes and behaviour of the Romanian people.

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AUTHOR PROFILE:

Ms. Maria Sava is a first year PhD student at Iasi "Alexandru Ioan Cuza University", Faculty of Economics and Business Administration. Her doctoral thesis is dealing with the research's management. She is working as European Programs officer at the Technical University from Iasi. During the last eight years she has acquired a lasting experience in lifecycle project management including research projects which allow her to have an inside view of researcher sector.

FUTURE EARNINGS ESTIMATES AND CHOICE OF MAJORS

Miles M. Smayling, Minnesota State University-Mankato, Mankato, Minnesota, USA

ABSTRACT

A large body of research has developed around the process of individuals investing in human capital. One branch of this examination concerns the ability of students to accurately assess the relative value of training in different fields of study. Although a number of American investigators addressed this issue during the 1990's, the most current work has been conducted by European authors. Alchian (1972) argued that the cost of acquiring information imposes a constraint on the ability of individuals to make the "best" decisions. The internet provides a bounty of inexpensive information with respect to market pricing. This paper examines student estimates of starting and future wages and in 1991, 1999 and 2006, a period during which internet usage grew from non-existent to fairly common to universal. It was found that student accuracy has increased over this time and that there has been some movement toward areas of study which are thought to yield higher returns. Additionally, a person's perception of earnings growth seems at least as important as their starting wage expectations.

Keywords: *Human Capital, Wage Estimation, Earnings Growth, Choice of Major, Internet*

1. INTRODUCTION

An entire generation in the United States was raised hearing a series of television advertisements which intoned "To get a good job…get a good education." Gary Becker's (1964) seminal work formalized this relationship with the human capital model. Student estimations of future wages have been an area of interest for a number of years, with the majority of recent research being published by European authors. A variety of interesting issues arises when one considers this area. A great volume of work has focused on the accuracy of student perceptions and expectations. Another body of research is devoted to the effect of future earnings estimates upon an individual's career choice. The sources of information one chooses to rely on when generating these estimates has also been regarded as significant. The internet has been a dramatic addition to the list of sources available. The demographic characteristics of the student raters have been the subject of substantial effort.

2. LITERATURE REVIEW

Researchers have examined the linkage between education and earnings for decades (Becker, 1964, Becker and Chiswick, 1965, Rosen, 1983). Young people, in this framework are able to acquire human capital (education) and sell in on the labor market, garnering higher wages. Freeman (1971, 1975) focused on the different returns that might be experienced in different fields of study. An implied assumption in all such models is that individuals' possess accurate knowledge of the earnings associated with various choices of human capital accumulation.

A reasonable group to examine with regard to market returns to education is university students. Given that they are engaged in the art of human capital formation, one would hope that they have an awareness of the relative worth of what they seek. Extending the work of Freeman (1971, 1976), Betts (1996) surveyed university students to determine the accuracy of their wage estimates. Setting a pattern that others would follow, he analyzed the impact of demographic attributes on the error in student wage estimates. His sample was drawn from an American university. Later authors (Wolter and Zbinlen, 2002; Hartog and Webbink, 2004) used responses from European students and Wolter (2000) compared students from the United States and Switzerland. Schweri, Hartog and Wolter (2007) had a sample of Swiss students when they considered the variability of future earnings estimates. Table 1 summarizes the findings in these studies with respect to the effect of demographic characteristics. It can be seen that no clear consensus exists as to what attributes are most important and the level of explanation is not extremely high.

A final area of investigation has been the manner in which students respond to perceived difference in the earnings stream of various degree choices. Koch (1972) considered the rate of return for various fields of study. Freeman (1975b) wrote extensively about a "cobweb" model of vocational choice based on changes in these relative earnings of occupations. Cebula and Lopes (1982) and Easterlin (1995) specifically studied the effects of relative occupational pay on choice of major. Oosterbeek, and van Ophen, (2000) also included preferences and discount rates in their treatment of this question. The underlying idea is simply that students wish to maximize the return of their time or human capital investment by picking a field of study with a high net market value.

Table 1

Factors Affecting Accuracy of Student Prediction

Demographic	Field of study	Info source
• Gender	• Law	• Career center
• Age	• Soc. Sciences	• Friends & colleagues
• Parent's education	• Medicine	• Print media
• Race	• Engr. & I.T.	• University publications
• Parent's income	• Other	• Salary reports
• Same major discipline		
• Grades/marks		
• Employed while at school		
• Positive outlook on job prospects		

3. OVERVIEW OF THE STUDY

This paper examines the accuracy of student wage estimations at three points in time; 1991, 1999 and 2006. During this period, student usage of the internet exploded and it is suggested that this inexpensive form of labor market data might allow students to acquire more information and form more accurate estimates. The longitudinal model also made it possible to examine whether students' choices of majors mirrored variations in the market.

A sample of 719 students is used in study, about 1/3 drawn from each of the sample years (1991, 1999 and 2006). These individuals were all juniors in the College of Business and the accuracy of their estimates within and outside their field will be considered. The enrollment and wage trends are calculated at the university level, although these trends do not differ from what one sees nationwide.

One distinctive characteristic of this study is that students were asked to rank the relative pay of different new graduates and experienced professionals, as opposed to generating actual pay forecasts. This is consistent with the point made by Betts.

"Economic theory predicts that occupational choice should depend on relative salaries, rather than on the absolute level of salaries in any one occupation. Thus, it may be that a large degree of variation in beliefs about salaries in a given field or for a given level of education may mask quite uniform beliefs about relative salaries, in that some students consistently overestimate or underestimate salaries in all fields or for all levels of education (1996, p.34)."

A similar ranking method was used when asking students about their beliefs regarding pay for jobholders five years after graduation in different fields. The only variables considered when examining the accuracy of student perception, with respect to the labor market, were gender and internet usage. The inclusion of gender seemed reasonable, given the research suggesting that males and females get different results

and utilize different models when formulating expectations (Blau, 1991; Caravajal et al, 2000). In a fashion similar to previous works (Betts, 1996; Brunello, Lucifora and Winter-Ebmer, 2004) student perceptions of starting pay and earnings five years after graduation were considered. Internet usage is an issue of concern because of the array of market wage information available from this medium at a minimal cost. Viewed from an Alchian-like perspective, individuals are likely to engage in more aggressive information gathering behavior. One would argue that this variable would unambiguously be associated with more precise wage calculation.

Although these variables represent a very modest attempt at explanation, the available body of research does little to provide clear, alternative directions. How these affect the precision of one's estimate of the relative earnings in one's own field of study will be considered alongside the effects seen when dealing with other occupational areas.

Another area of investigation will be whether students' beliefs about relative earnings are associated with the selection of a preferred area of study. Student expectations of both starting pay and pay after five years are utilized in this analysis. One might expect that students would tend to seek higher returns for their investment in education not only in terms of initial pay, but with regard to a stream of income over time.

The two questions of study were:
1. Does internet usage increase the accuracy of student salary estimates?
2. Do students tend to migrate to fields which are believed to be higher paying?

4. RESULTS

The first question addressed concerns the accuracy of student wage rankings. Table 2 shows the results when student errors in ranking (the absolute value of the difference between student and actual rank) are regressed on gender and internet usage. A simple OLS model was used. As can be seen, internet usage tended to be more important when students considered pay outside of their major area. The gender of the evaluator also seemed to matter, when dealing with occupations outside of one's major. With regard to total estimation error, there was a significant effect for gender, but internet not usage.

Table 3 reveals an intriguing pattern of the gender effect over time. Given that many of the most recent studies used data from the late 1990's, it is not surprising that gender was seen an unimportant characteristic in explaining student accuracy. During that time period, the differences between male and female accuracy was minimal for this sample. As can be seen, the estimates for males have improved over the last few years, while there has been no corresponding change for females. Unfortunately, the cause for this apparent discrepancy is beyond the bounds of this study.

Table 2

Factors Affecting Student Accuracy of Estimates in Business and Other Majors

Major Coefficient	Business	Engineering	Nursing	Education	Liberal Arts	Composite Score
Constant	.859***	.123**	1.053***	.778***	.660***	3.472***
Internet Usage	.029	.255***	-.158**	-.192***	-.052	-.118
Gender	.007	.033	.068	.116*	.100*	.325*
r^2	.001	.034	.012	.021	.004	.006
F	.22	12.5***	4.4**	7.6***	2.5	2.2

*=significant at the .05 level
**=significant at the .01 level
***=significant at the .001 level

The second question to be considered is the extent to which student perceptions are reflected in the popularity of various majors. Human capital models typically make the implicit (or explicit) assumption that high relative returns draw people to an area. The selection of a field of study is also mitigated by tastes, preferences and abilities.

Table 3

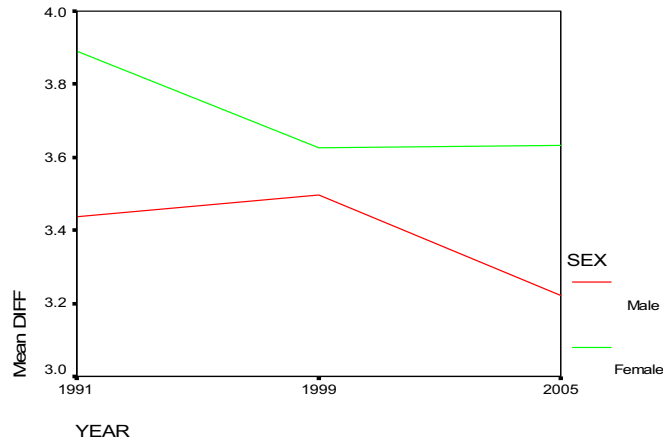**Mean ranking errors of female and male students**

Table 4 depicts the changes in enrollment for various majors at the institution where the sampling occurred. 1991 was the base year from which all comparisons were made. The clearest trends seem to be a movement toward nursing and away from education. The late 90's downturn in business and liberal arts majors merely reflected a brief drop in university enrollment. The resilience of nursing enrollment is difficult to ignore. It appears that the steady drumbeat of alarm over nursing shortage seems to have had an effect.

Table 4
Trends in Student Choice of Major
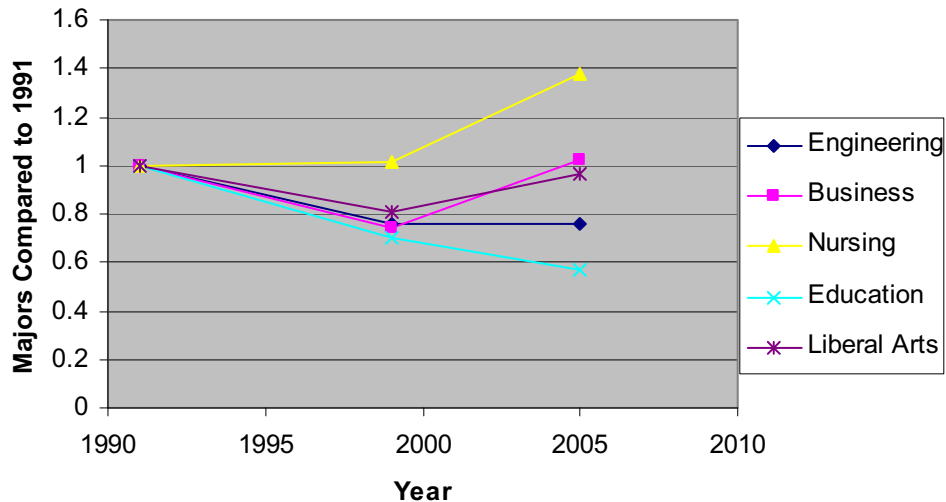
Table 5 reveals an interesting characteristic of student perceptions. The business majors responding to the survey acknowledge that engineering majors have higher starting pay; however, they believe that this advantage will disappear over time. The rigorous nature of technical training may present a barrier to

entry for some individuals and a reasonable psychological defense for one's choice might be that there was little long run gain to be garnered in the unattainable area.

Table 5

Student Assessment of Earnings Growth
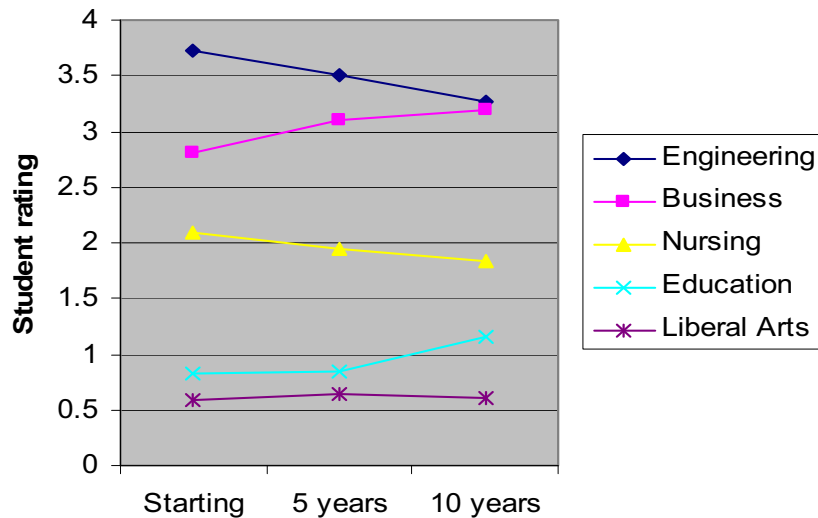
A simple regression was run on the change in majors and student estimation of earnings. The results shown in Table 6 suggest that students might be considering the value of training over a longer period of time. Expected earnings for an occupation, after five years on the job, is more strongly associated with the selection of a major than starting pay. It is also intriguing that individuals seem to place such great value on their potential earnings, 10 years hence. This finding is consistent with the assumptions normally made concerning an individual's decision to invest in human capital.

Table 6

Linkage between Choice of Major and Salary

	Starting Salary	Salary After 5 Years	Salary After 10 Years
Constant	-.330	-.767	-.447
Coefficient	1.254*	1.688**	1.362*
r^2	.252	.330	.242
F	5.711	7.910	5.473

*=significant at the .05 level
**=significant at the .01 level

5. CONCLUSIONS

University students make a major investment in education and they have a great incentive to seek a reasonable return. Knowledge of market wage rates for different occupations can be viewed as an essential element in this process. The results of this study suggest that the widespread usage of the internet has allowed students to form more accurate opinions of pay in areas outside their field of study. It also appears that students behave rationally, in that they migrate toward areas where higher returns might be forthcoming. It appears that students behave fairly conscientiously, in that they place a significant weight on longer term investment returns. A more detailed assessment of exactly which internet based resources provide the most robust and useful information is a viable area of future research, as is the disparate sources that may be chosen by various demographic groups.

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AUTHOR PROFILE:

Dr. Miles M. Smayling received his Ph.D. from the University of Minnesota in 1987. He is currently a professor and Management Department Chair at Minnesota State University.

FINANCIAL INSTRUMENTS REPORTING IN CZECH

Jiri Strouhal, University of Economics Prague, Prague, Czech Republic

ABSTRACT

The most widely discussed standards in terms of their practical implementation include IAS 32, IFRS 7, and IAS 39. Researchers and practitioners state that the greatest benefit of IAS 39 is considered to be the wide application of the fair value method to the measurement of financial instruments. It is true that for a long time, it was the historical costs which were considered as the principal basis of measurement and were also used in the field of reporting of financial instruments.
Paper deals with the problem how to measure the fair value at the not such an active market like Czech one; and stresses the attention to the use of hedge accounting and derivative instruments. The main differences in reporting under Czech GAAP and IFRS are given by the weaker requirements on the information disclosed.

Keywords: Financial Instruments, Harmonisation, Reporting, IFRS, Czech GAAP

1. INTRODUCTION

In 2002, the Council of the European Union issued an order imposing an obligation on companies listed on European stock exchanges to structure their consolidated final accounts according to the IFRS starting from the year 2005 at the latest. If it was not for these uniform accounting standards, there would be 27 different methods of accounting reporting by listed companies in the EU at present (Whittington, 2005, p. 129). Brown & Tarca (2005, p. 201) anticipate that the future of the IASB will definitely be connected with the successful introduction of the IFRS in Europe.

Though the IFRS are not considered as an equivalent method of structuring statements in the Czech Republic, the Accountancy Act establishes a legal obligation for certain accounting units to use the IFRS within the framework of financial statements. This exception applies to consolidating accounting units issuing stocks registered on a regulated securities market in the EU member states. Other consolidating accounting units are given the option to structure their financial statements pursuant to either the Czech standards or the IFRS.

2. LITERATURE REVIEW

Research in the field of accounting harmonization has focused primarily on two basic aspects – the reliability and the correctness of the evaluation (e.g. Aisbitt, 2001; Emenyonu & Grey, 1992 and 1996; Herman and Thomas, 1995). According to Alexander & Nobes (2004), the following factors affecting the development of accountancy in a given country can be defined: colonial and external influences, impact of capital providers, character of the legal system, impact of taxation, impact of the accounting profession.

The reasons why IFRSs are considered beneficial are as follows: facilitated access to foreign capital markets, improved credibility of supranational corporations on domestic capital markets, global comparability of accounting data, improved transparency, improved comprehensibility thanks to a "common accounting language", easier regulation on capital markets, reduced vulnerability of accounting standards to political pressures. Before the IFRS standards were adopted in the EU, it was stock exchanges in particular which required that listed entities submit final accounts in compliance with the IFRS or US GAAP. The previous research dealing with the degree of disclosure (Cooke, 1992; Meek et al., 1995), or the probability of using supranational standards (El-Gazzar et al., 1999; Murphy, 1999; Ashbaugh, 2001; Dumontier and Raffournier, 1998; Leuz and Verrecchia, 2000; Leuz, 2003) indicate a positive correlation between the listing of accounting units on foreign markets and the degree of disclosure and use of supranational standards as the basis for accounting reporting.

The standards most widely discussed in terms of their practical implementation include namely: IAS 32 Financial Instruments: Presentation, IFRS 7 Financial Instruments: Disclosures, and IAS 39 Financial Instruments: Recognition and Measurement. The greatest benefit of the standard IAS 39 is considered to be the wide application of the fair value method to the measurement of financial instruments. It is true that for a long time, it was the historical costs which were considered as the principal basis of

measurement and were also used in the field of reporting of financial instruments. Nevertheless, the importance and volume of derivative transactions, whose value would be zero if the historical costs model were applied, have been on the rise recently. Whittington (2005) therefore emphasises that it is much more appropriate to measure derivatives according to their present values reflected in the fair value through the application of the standard IAS 39. Numerous studies have also dealt with the use of fair values in banks' investment portfolios. For instance, Riffe (1993) and McAnally (1995) analysed the information potential of the requirements of the US standard SFAS 105 for bank entities. Riffe (1993) proved that there was an important causal interaction between the values of off-balance sheet items and the value of the company's equity capital.

Other studies aimed directly at the use of fair values for reporting of financial instruments. Barth et al. (1995) tested how the financial reporting at fair values influenced the volatility of the economic result and how it influenced the price of shares. They demonstrated that the revenues, as well as the amount of equity capital based on reporting at fair values were more volatile than in the event of accounting on the basis of historical costs, and that the price of the shares was significantly influenced by such added volatility.

Pirchegger (2006) is concerned with the fact that accounting units tend to note primarily the high level of disclosure obligations in relation to hedge accounting and the costs related thereto. On the other hand, the primary goal of the standard-issuing authority is the incontestable effort to provide investors with highly relevant information. The fact that the information on hedge accounting should form an indivisible part of the financial statements is motivated by the effort to assure investors that the criteria applicable to the field of hedge accounting were applied correctly rather than by the fact that the information on hedge accounting causes considerable additional costs to accounting units.

Some experts, however, express their concerns regarding the fact that the application of the IAS 39 leads to a certain degree of volatility within the framework of economic results and equity capital, and such volatility may differ from the real economic volatility. Previous studies (e.g. Leftwich, 1981), however, indicate that the application of different accounting rules is not usually connected with any movements of prices of financial instruments unless the application of such rules has further economic consequences. Numerous studies in our professional practice have dealt with the bond between the economic and the accounting concept of hedging. Melumad et al. (1999), for instance, indicates that the application of hedge accounting in compliance with the US standard SFAS 133 leads to deviations from optimum hedging in the economic sense. However, Barnes (2001) draws attention to the fact that these deviations from economic hedging are the very consequence of the set hedge accounting model, pointing out that hedge accounting may motivate poorly performing companies to speculate and influence their economic results on a short-term basis. Several studies have dealt with the information and control effects of hedge accounting (e.g. Jorgensen, 1997; Hughes et al., 2002). The most interesting finding lies in the fact that the voluntary application of hedge accounting leads to a deviation from the optimum hedging strategy (as opposed to the exclusive application of economic hedging without the application of the principles of hedge accounting).

3. REPORTING OF SECURITIES UNDER CZECH GAAP

Similar rules apply to reporting equity securities, either realizable or intended for transactions, both in the Czech Republic and in the system of reporting according to the IFRS. The impacts on the balance are therefore identical as regards the Held for Trading and Available for Sales portfolios. The principal reason, however, lies in the fact that the IFRS information requirements are much more exacting.

The illustrations of reporting long-term bonds (investor's position) indicate that the most important difference lies in the technique of discharging the remainders between the nominal value and the purchasing price of the bond (i.e. amortization of the discount or premium on securities). While the Czech accounting units give a strong preference to the linear distribution of these costs or revenues in time (often motivated by tax relations), the IFRS require definitely that the amortization be based on the effective interest rates. The principal differences in the reported economic results and accounting values of bonds in the respective years are also based on this fact. This anticipation is certainly correct; nevertheless, the backbone of its applicability is a functional and highly transparent market, which seems not to be the case with the Czech market. It is true that the fair value is one of the evaluation bases in the Czech Republic; however, its determination is usually based on pricing models, not the market price. When comparing the evaluation bases of the IFRS and the Czech

conditions, it should also be noted that long-term receivables may not be priced in current values (and, subsequently, amortized costs) pursuant to the Czech regulations, with not only short-term receivables and short-term obligations, but also those with a period of maturity exceeding one year having to be priced and reported in their nominal values by companies operating on the Czech market in compliance with the applicable regulations. The complete ignorance of the time value of money may therefore significantly affect (though in perfect compliance with the statutory requirements) the accounting statements and, eventually, misinform potential investors in the process of making investment decisions.

3.1 Shares

The Czech regulations require that accounting units re-valuate equity securities and ownership shares as at the balance date, applying either the method of equivalence or the fair value, depending on the type of portfolio in which the same are included. The fair value of the given instrument is always considered the optimum information; should it be impossible to determine it, the accounting unit uses an expert evaluation on the basis of an evaluation model. Unfortunately, the optimum situation, i.e. the derivation of the fair value from the market price, seldom occurs in the environment of the poorly transparent Czech stock market, and that is why other models usually have to be employed.

The disadvantages of evaluation on the basis of net value include the differences in evaluation bases used in accountancy, as well as the fact that the application of the principle of precaution is preferred among Czech companies, and the impossibility of re-valuation of certain types of property to higher values (as distinct from the IFRS). Deriving the information on the fair value from the P/E ratio seems to be a good method. Nevertheless, it should be stated that this model fails if the company shows a loss. Besides that, the indicator is hardly available to accounting units in the environment of the Czech market. The principal disadvantage of the dividend discount model lies in the presumption of a constant rate of growth of dividends, which is almost inapplicable in practice. Nevertheless, this presumption is applicable for the calculation of the expected dividend in the course of no more than two subsequent periods; on the other hand, this model fails if the accounting unit concerned does not pay dividends or shows a loss.

Accounting units in the Czech Republic may report equity shares in balance sheets in compliance with their purchase prices if it is impossible to determine the fair value in a reliable manner. Czech companies often opt not to use the equivalence method (to which the right of choice applies) to report capital participations with a significant or decisive influence, reporting them in compliance with their respective purchasing prices (applying adjusting entries if necessary). In the past, when the costs of re-valuating equity securities were allowable for tax purposes only to the amount equal to the revenues from such re-valuations, accounting units often criticised this system, clearly preferring the capital method of re-valuation. As the re-valuation of short-term equity securities has no impact on the tax assessment base at present, this problem has ceased to arise.

3.2 Bonds

The accounting reporting of bonds with a maturity period of less than one year does not show any significant discrepancies with the requirements of the IFRS standards. On the other hand, we should look with a critical eye at the fact that the reporting of these instruments with maturity periods exceeding one year is not consistent with the IFRS. The purchasing costs of investments in bonds increase uniformly with the discount/premium amortization; from the viewpoint of the issuer, however, it should be noted that these contracts are reported in their nominal, not current values.

Accounting reports presented by listed and non-listed companies are not comparable in the field of reporting long-term investments in bonds. Accounting units might prefer the application of Article 7 of the Czech Accounting Act (563/1991) specifying true and fair view; nevertheless, the tax aspects play their role, too.

3.3 Derivative Contracts

The most serious problems in the field of reporting derivative contracts by entrepreneurs manifest themselves in determining the fair values of these instruments, as well as the fair values of off-balance sheet receivables and off-balance sheet payables. The fair value is considered (and defined) as the amount for which the asset could be exchanged or an obligation settled in a transaction between well-informed and willing parties under standard conditions. Nevertheless, the negotiation of derivative financial instruments has entailed and, as can be reasonably feared, will entail an information

asymmetry between the enterprise and the company with whom the contract is negotiated. The overwhelming majority of entrepreneurs is unable to determine the fair values of their derivative contracts, fully relying on the information supplied by financial institutions with whom such contracts are negotiated. Unfortunately, in practice, companies often have only information on the fair values of such instruments, lacking any information on the fair values of off-balance sheet receivables and off-balance sheet payables arising from the negotiated derivative contract.

German and Austrian regulations, for instance, do not require the reporting of derivatives in the balance sheet, the reason being that these derivative contracts are considered by these regulations as uncertain transactions and therefore they are reported in the balance sheet only in the event of any imminent losses from such transactions. On the other hand, accounting units are required to specify the type and scope of financial derivatives held by them, and their fair values and methods of measurement.

In relation to the accounting reporting and disclosure of information on derivative contracts, the following aspects should be mentioned: insufficient information disclosed inconsistent approaches of companies to disclosing information – this applies not only to financial reports of various companies, but even to annual reports of single companies. Thus the comparison and analysis of the disclosed information is made very complicated. The respective pieces of information on the structure of derivatives, their nominal and fair values, types of derivative instruments, their duration, development etc. are usually scattered throughout the annual report. The levels of detail differ, and every company reports data in a different form. For instance, the nominal value is reported with every type of derivative instrument; however, the fair value is reported in summary according to the risk hedged by the derivative concerned. Most accounting units in the Czech Republic declare in their financial statements that they do not use derivatives for speculative reasons. The problem of insufficient information on derivatives persists, carrying with it the risk of making it impossible to differentiate between speculative and hedging transactions, and enabling the misinterpretation of reports. The detailed description of the structure of derivatives allows for an improved detection of the purpose of derivatives. In this respect, it can be said that accounting units in the Czech Republic would find it very problematic to meet the requirements of the IAS 39 and IFRS 7 standards in the field of disclosing information on derivative contracts and their structure.

4. CONCLUSION

The accounting reporting of unlisted companies in the field of financial instruments is to a certain extent affected by requirements compliant with the IFRS international accounting reporting standards. In the field of equity securities, there are identical requirements for the initial recording of purchasing prices; nevertheless, the subsequent re-valuations are carried out in a different manner, depending on the comparability of the assignment of the individual tools to the respective portfolios. The adoption of portfolios applicable in international standards (HFT, AFS) and the subsequent application of identical requirements to them would be beneficial in the field of investments in equity securities in the Czech Republic. In the field of reporting bonds, however, the level of compatibility between the IFRS requirements and Czech regulations is not significant. The issue of amortization of the reminders between the nominal values of bonds and their subscription prices is treated particularly inappropriately (though the solution is relatively elegant in terms of taxation). That is why the introduction of the Held to Maturity portfolio would be beneficial in the Czech Republic on condition that the tax consequences are resolved at the same time, i.e. that the premium amortization is fully allowable for tax purposes from the viewpoint of the investor purchasing a bond. Derivative contracts are recorded in the accounting system in compliance with the IFRS requirements. In this respect, a relatively significant problem lies in the fact that companies negotiating derivative contracts lack the appropriate information and knowledge, as well as in the fact that the amount of disclosed information on such contracts is insufficient.

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AUTHOR PROFILE:
Dr. Jiri Strouhal (Ing., Ph.D., FAIA, CAT, CPA) is Senior Lecturer at the Department of Financial Accounting and Auditing of the University of Economics (Prague). He graduated from the University of Economics in 2003 and passed his Ph.D. studies in 2005. From 2007 he is member of the Board of Czech Chamber of Chartered Accountants and member of the Committee for Education of the Union of Accountants. He provides the advisory in the field of reporting and solves the research projects.

EFFECTS OF STAKEHOLDER ORIENTATION ON AUDIT PROFESSIONALISM AND ORGANIZATIONAL REPUTATION: AN EMPIRICAL INVESTIGATION OF ACCOUNTING FIRMS IN THAILAND

Seerungrat Sudsomboon, Mahasarakham University, Thailand
Phapruke Ussahawanitchakit, Mahasarakham University, Thailand

ABSTRACT

This study attempts to investigate the effects of stakeholder orientation on audit professionalism and organizational reputation through competitive environment as moderator. Here, accounting firms in Thailand are samples of the study. The result shows that corporate mission and stakeholder planning have positive effects on audit professionalism and organizational reputation. Also, corporate culture has a significant and positive influence on audit professionalism. Likewise, audit professionalism is positively related to organizational reputation. However, moderator does not have an effect on the audit professionalism-organizational reputation relationships. Accordingly, stakeholder orientation has both directly and indirectly significant impact on organizational reputation. In the final section of paper, the implications of stakeholder orientation for accounting firms and some suggestions for future research are provided.

Keywords: *Stakeholder Orientation, Understanding Stakeholder, Corporate Culture, Corporate Mission, Stakeholder Planning, Audit Professionalism, Organizational Reputation, Competitive Environment.*

1. INTRODUCTION

In the globalize world, business environments have violently changed. Firms explicitly need to focus on their business operations in order to respect stakeholder goals, such as customer requirements, government policies, supplier expectations, and others. In order to create successful businesses, firms must emphasize in all requirements of stakeholder groups. Donaldson and Preston (1995) concluded that there is a general assumption that companies must address the individual interests of all stakeholder groups in order to be successful, and that those orientations will be positively associated with performance. Which stakeholder is any group or individual who can affect, or be affected by, a particular organization, such as shareholders, employees, competitors, consumers, suppliers and government agencies (Clarkson, 1995). Therefore, firm activities related with stakeholder reflects the performance and reputation of firm.

Accounting firms are business firms. They have revenue for consulting and auditing. Due to auditors who are employees in accounting firms are both insurance provider and information intermediary that provide independent verification of manager-prepared financial statement. Therefore, accounting firms should be aware to belief and value by firm profession. Audit professionalism refers to responsibilities, the public interest, integrity, objectivity, due care and scope and nature of service (Brown et al., 2007). These activities are definitely related to stakeholder groups. The principles of the code of professional conduct establish the high moral and ethical standards that constitute the CPA's ideal public image. If the CPA, auditor or employee in accounting firms has high code of ethics will bring the organizational reputation. Thus, organizational reputation is very important and necessary for accounting firms.

Therefore, the primary purpose of study is to examine the effects of stakeholder orientation on audit professionalism and organizational reputation. The key research questions are how stakeholder orientation influences audit professionalism and organizational reputation and does the audit professionalism affects the organizational reputation by competitive environment as a moderator.

To remainder of this paper is organized as follows. In section II, we provide the relevant literature and hypothesis development. Section III we describe our research methodology and empirical result. Finally, proposes theoretical contributions, directions for future research, and conclusion are discussed in section IV.

2. RELEVANT LITERATURE AND HYPOTHESIS DEVELOPMENT

Stakeholder orientation has been examined extensively in marketing concept. But no one study that in the accounting area. This research attempts to capture the effect of stakeholder orientation on audit professionalism and organizational reputation. This study proposes that stakeholder orientation has a positive effect on audit professionalism and organizational reputation. For competitive environment as moderator are effect to relationship between audit professionalism and organizational reputation, as shown in Figure 1.

FIGURE 1
THE EFFECT OF STAKEHOLDER ORIENTATION ON AUDIT PROFESSIONALISM AND ORGANIZATIONAL REPUTATION
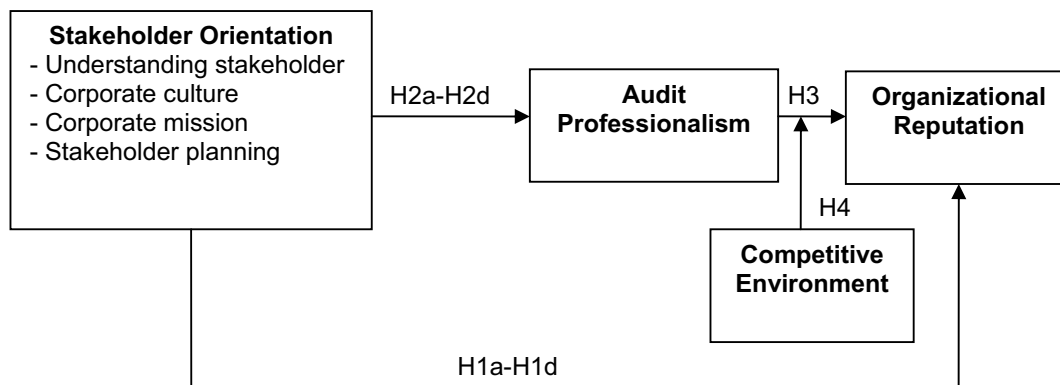
2.1 Stakeholder Orientation

Stakeholder is any group or individual who can affect, or be affected by, a particular organization, such as shareholders, employees, competitors, consumers, suppliers and government agencies (Clarkson, 1995). The range of stakeholder interests encountered by most companies is illustrated by Freeman's (1984) "stakeholder map" which describes the range of groups as: government, political groups, shareholders, financial community, activist groups consumer advocate groups, unions employees, trade associations, competitors and suppliers (Greenley and Foxall, 1996). Greenley and Foxall (1998) examine the relationship between stakeholder orientation and performance. They used four dimensions to investigate related model these are understanding stakeholder, corporate culture, corporate mission and stakeholder planning. Understanding stakeholder refers to action or research to understand the interests of each stakeholder group. Corporate culture is that a set of values, beliefs, and assumptions that guide the decisions and actions of managers. Corporate mission an effective mission statement is of central importance for developing strategies that address stakeholder interests (Campbell and Tewadey, 1990; Cambell and Yeung, 1991). Therefore, the relative importance of each stakeholder group in the mission reflects the attention given to stakeholder. For stakeholder planning, several researchers have identified and explained the importance of planning, both a process for effective management and a means for improving performance (Greenley and Foxall, 1996). Firm performance is not only financial performance, the success of the firm depends on how it is viewed by the public (Thompson and Jones, 1990) that present by perceived organizational reputation and image. Thus, the firm activities related with stakeholder reflects the performance and image of firm to public or interest groups. This leads to the hypothesis as follows:

H1a: A firm with higher understanding stakeholder will have greater organizational reputation.

H1b: A firm with higher corporate culture will have greater organizational reputation.

H1c: A firm with higher corporate mission will have greater organizational reputation.

H1d: A firm with higher stakeholder planning will have greater organizational reputation.

2.2 Audit Professionalism

Professional has various meanings. It relates to ideas about professionals, professionalism, and professionalization attached to an occupational group. From a view point, 'profession' refer to an individual's work as essential to the functioning of a society (Dora, 2006). Frankel (1989) identifies the enhancement for reputation and public trust as one of the primary functions of a code of ethics. The principles of the Code of professional conduct establish the high moral and ethical standards that constitute the CPA's ideal public image. Code of ethics for audit professionalism in this paper refers to responsibilities, the public interest, integrity, objectivity, due care and scope and nature of service (Brown et al., 2007). Which code of ethics related with all of stakeholder group. Thus, stakeholder orientation strategy for accounting firm will have relationship with audit professionalism. Lead to hypothesis:

H2a: A firm with higher understanding stakeholder will have better audit professionalism.

H2b: A firm with higher corporate culture will have better audit professionalism.

H2c: A firm with higher corporate mission will have better audit professionalism.

H2d: A firm with higher stakeholder planning will have better audit professionalism.

The principles of the Code of professional conduct establish the high moral and ethical standards that constitute the CPA's ideal public image. If the CPA, auditor or employee in accounting firm has high code of ethic bring the organizational reputation. Lead to the hypothesis:

H3: A firm with better audit professionalism will have greater organizational reputation.

2.3 Moderating Effects of Competitive Environment

Competitive environment in this study refer to the competition in the accounting firm. With regard to competitive environment literatures, Giroux et, al. (1995) suggest that auditor's performance and behavior are influenced by the environment. Therefore, it was implied competitive environment effect on professionalism of accounting firm and organizational reputation. Lead to hypothesis:

H4: Competitive Environment will moderate the audit professionalism and organizational reputation.

3. RESEARC METHODS

3.1 Sample

Data for the study were collected by way of a survey questionnaire administered to the 450 public accounting firms in Thailand. Those were randomly selected from the directories of Thailand's Department of Business Development, Ministry of Commerce, Thailand. The instrument for this paper is questionnaire which based on the extent review and prior researches. The questionnaire was checked by expertise and any misunderstandings were reduced. A total of 154 questionnaires were received for a 34 percent response rate. Three returned surveys were incomplete, so we have 151 completed research instrument. According to Aaker et al., (2001), the response rate for a mail survey, without an appropriate follow-up procedure, is less than 20%. Thus the response rate of this study is considered acceptable. In addition, non-response bias was investigated by t-test, and results were not significant. Therefore, it was implied that these received questionnaires as non-response bias.

3.2 Reliability and validity

Constructs, multi-item scale, were tested by Cronbarch Alpha to measure reliability of data. Table 1 shows an alpha coefficient higher than .6, (Nunnally, 1978). Alpha coefficients of constructs have values ranging from 0.799 to 0.868, the lowest coefficient for corporate mission and the highest coefficient for stakeholder planning. That is, internal consistency of the measures used in this study can be considered good for all constructs.

Factor analysis is employed to test the validity of data in the questionnaire. Items are used to measure each construct that is extracted to be one only principal component. Table 1 shows factor loading of each construct that presents a value higher than 0.5. Thus, construct validity of this study is

tapped by items in the measure, as theorized. That is, factor loading of each construct should not be less than 0.4. (Hair et al., 2006)

TABLE 1
RESULTS OF MEASURE VALIDATION AND RELIABILITY

Variables	Factor Loading	Cronbach Alpha
Organization Reputation (OR)	0.731-0.880	0.843
Understanding Stakeholder (US)	0.807-0.872	0.854
Corporate Culture (CC)	0.709-0.859	0.823
Corporate Mission (CM)	0.659-0.868	0.799
Stakeholder Planning (SP)	0.850-0.922	0.868
Audit Professionalism (AP)	0.580-0.805	0.820
Competitive Environment (CE)	0.804-0.878	0.791

3.3 Statistic Technique

OLS regression analysis is employed to estimate parameters in hypothesis testing. From the relation model and the hypotheses the following three equation models are formulated:

Equation 1: $OR = \beta_{01} + \beta_{02}US + \beta_{03}CC + \beta_{04}CM + \beta_{05}SP + \varepsilon$
Equation 2: $AP = \beta_{06} + \beta_{07}US + \beta_{08}CC + \beta_{09}CM + \beta_{010}SP + \varepsilon$
Equation 3 $OR = \beta_{11} + \beta_{12}AP + + \beta_{013}CE + \beta_{014}AP*CE + \varepsilon$

Where US is Understanding Stakeholder, CC is Corporate Culture, CM is Corporate Mission, SP is Stakeholder Planning, AP is Audit Professionalism, CE is Competitive Environment, and is ε error term. These regression equations are employed to estimate inferred parameters whether the hypotheses are substantiated and fit an overall model (F value) or not. Then, the model variables and parameters are presented in various tables later.

3.4 Measure

All variables in Table 1 that use the 5-point Likert scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree) and show numbers of items in order to each variable. Stakeholder orientation comprises of understanding stakeholder, corporate culture, corporate mission and stakeholder planning. These dimensions are measured by 4, 4, 4 and 3 items, respectively (Gordon et al., 2005). Audit professionalism is the code of conduct of auditing and measured with 7 items comprised of responsibilities, the public interest, integrity, objectivity, due care, and scope and nature of services (Brown et al., 2007). In addition, we utilize three scale items to evaluate the degree of competitive environments (Dalton et al., 1997).

4. RESULT AND DISCUSSION

This paper is to investigate the effect of stakeholder orientation on audit professionalism and organizational reputation, considered competitive environment is moderator, analyzed by OLS regression model. Thus, the results will be presented by table 2 and 3. Table 2 shows the inter-correlation of all variable to explore relating of each dual variable. Result find that organizational reputation, as would be expected, positively and significantly correlate with understanding stakeholder, corporate mission, corporate culture, stakeholder planning, audit professionalism, and competitive environment.

TABLE 2
PEARSON CORRELATION

Variables	OR	US	CC	CM	SP	AP	CE
Organization Reputation (OR)	1.00						
Understanding Stakeholder (US)	0.72**	1.00					
Corporate Culture (CC)	0.42**	0.45**	1.00				
Corporate Mission (CM)	0.43**	0.59**	0.54**	1.00			
Stakeholder Planning (SP)	0.33**	0.42**	0.71**	0.31**	1.00		
Audit Professionalism (AP)	0.29**	0.24*	0.51**	0.38**	0.51**	1.00	
Competitive Environment (CE)	0.48**	0.38**	0.59**	0.39**	0.52**	0.47**	1.00

*p<.05, **P<.01

Table 3 presents the result of regression analysis of relationships between stakeholder orientation, audit professionalism, and organizational reputation by competitive environment as a moderator.

TABLE 3
RESULT OF REGRESSION ANALYSIS[a]

Independent Variables	Models		
	1	2	3
US	0.158	-0.102	
CC	-0.175	0.304***	
CM	0.413***	0.736***	
SP	0.194**	0.226***	
AP			0.509***
CO			0.279***
AP*CO			-0.001
Adjusted R^2	0.266	0.534	0.299

**p< 0.05, ***p<0.01, [a] Beta coefficients with standard errors in parenthesis.

Model 1 used for tests the H1a to H1d, we predict a firm with high stakeholder orientation will have grater organizational reputation. The result shows two components of stakeholder are corporate mission (CM; β = 0.413,p<0.01) and stakeholder planning (SP; $\beta = 0.194,p<0.05$) has a significant positive effect on organizational reputation, but has not significant with understanding stakeholder and corporate culture. Therefore, Hypothesis H1c and H1d are supported and rejected hypothesis H1a and H1b.

Model 2 tested the relationship between stakeholder orientation and audit professionalism that is H2a to H2d. We predict a firm with higher stakeholder orientation will have better audit professionalism. We find the positive significant of three dimensions of stakeholder orientation. Three dimensions are corporate culture (CC; $\beta=0.304,p<0.01$), corporate mission (CM; β = 0.736,p<0.01)and stakeholder planning (SP; $\beta = 0.226,p<0.0$1) has positive significant on audit professionalism. Thus, hypothesis H2b, H2c and H2d are supported.

Model 3 tested the H3 and H4. We purposed the competitive environment is moderator between audit professionalism and organizational reputation when they have related. The results show that the relationships between audit professionalism and organizational reputation (H3) are supported. Consistent with Rogers et al., (2005) interpreted that the professionalism had recently faced and expanding crisis regarding its veracity and reputation and ultimately its viability as a profession serving the public interest that means existing trustworthy or respectable claims to 'credibility' from public as a good image. But interaction between audit professionalism and competitive climate have not related with organizational reputation. Thus competitive environment is not moderator in this model.

5. CONTRIBUTIONSAND FUTURE DIRECTONS FOR RESESRCH

This paper aimed to provide an obviousness of stakeholder orientation, audit professionalism, and organizational reputation by competitive environmental is moderator. The result show the one of stakeholder orientation not related with audit professionalism and organizational reputation, that is understanding stakeholder. Understanding stakeholder have emphasized the difficulty of analyzing and understanding the diverse interests of stakeholder (Clarkson, 1995) specially, accounting firm in Thailand has small size so they are not aware to investing for developed and research about their stakeholder group. Thus, Institute of Certified Accountants and Auditors of Thailand (ICAAT) or Federation of Accounting professional of Thailand should undertake the development and research about the stakeholder for accounting firm. Future research, related with this model should focus on problem of accounting firms for development and awareness in stakeholder groups by research and understanding.

6. CONCLUSION

This study investigates the effect of stakeholder orientation on audit professionalism and organizational repetition and the role of competitive environment as moderator. Questionnaire is used as an instrument in this research and accounting firm in Thailand are sample. Stakeholder orientation we predict positively effects on professionalism and organizational reputation. The result shows some dimension of stakeholder orientation have significant effect on professionalism and organizational reputation is not surprising because accounting firm in Thailand too small size. Thus, the results are difference with hypothesis which base on western sample.

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AUTHOR PROFILES:

Ms. Seerungrat Sudsomboon earned her M.Acc. at Mahasarakham University, Thailand in 2005. Currently she is a Ph.D. student in Accounting at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

Dr. Phapruke Ussahawanitchakit earned his Ph.D. at Washington State University in 2002. Currently he is an associate professor of accounting, a deputy dean of academic affairs, and a director of graduate studies at Faculty of Accountancy and Management, Mahasarakham University, Thailand.

PROBLEMS OF EMPLOYMENT AND HUMAN RESOURCE MANAGEMENT IN ROMANIAN TOURISM

Magdalena Vorzsak, "Babeş-Bolyai" University Cluj-Napoca, Romania
Carmen Maria Guţ, "Babeş-Bolyai" University Cluj-Napoca, Romania
Valentin Toader, "Babeş-Bolyai" University Cluj-Napoca, Romania

ABSTRACT

The problem of human resources is extremely complex and composite, containing aspects of staff planning, distribution on domains of activity, remuneration and motivation, training and refreshment courses etc. The authors analyze the main achievements and even more the deficiencies, problems presently regarding the management of human resources in the tourism sector in Romania and formulate some solutions in order to improve the quality of work in Romanian tourism units to meet European performance standards.

Keywords*: employment, human capital, tourism, education.*

1. INTRODUCTION - GENERAL DEMOGRAPHIC DEVELOPMENT

NIS data show that Romania's population is continuously diminishing and is affected by the aging phenomenon, which - as a matter of fact - has appeared in most EU member states. Since 1990 the population segment aged up to 14 has been on the decline while the age segment over 65 has increased. For the first time in the last 40 years, in 2002, the percentage of the elderly population (over 60 years of age) has attained the same value as the up to 14 segment, about 18%. The number of births is continuously decreasing, which has been paralleled by the decrease of the population in the 15-19-age category. On the long run, these new demographic tendencies will affect both the educational system and the growing demand for health care services and social security network, while having a negative influence on the economy as a whole, as the number of the inactive people will unbalance the social security system by overwhelming it. In many regions of the country the rate of the demographic dependence has reached a critical value (48.6% in the North-East, 46.7% in the South, 46.5% in the South-West) while the average in Romania is 43.6%.

Dependence on the agricultural sector, together with the important rate of demographic dependence have an overwhelming negative impact on economic development, leading to the economic uncoupling of certain regions of the country, where the remaining active population will be more motivated to migrate towards the urban regions. People tending to migrate are usually the young able to work (aged 20-39), who are looking for better jobs and more attractive life style in the urban regions. Nevertheless it is worth mentioning that there is an opposite migration phenomenon too, characterizing the population of 40 and over, affecting the whole country. It is the case of former employees of reorganized state companies, who have not succeeded in reconvention and have been forced to return to rural regions for subsistence farming. Due to the worsening of socio-economic conditions in urban environment and to the massive migration of the population towards rural areas, the rural population has significantly increased in the latest years (leavers: 115227; newcomers 135764; balance 20537), weight 7.5%. (Romanian Statistical Yearbook, 2006).

As far as the official international migration is concerned, after 1990 Romania has met with massive flow of the population towards different destinations. German ethnic groups have left Romania in great number (ten thousands yearly), for this exodus to diminish after 2001 due to restrictions imposed by Germany. We have also encountered an important flow of permanent emigration to Canada and the USA, while the permanent and temporary emigration for work has attained significant proportions. Unofficial sources show that there are at least 2 million Romanians working temporarily abroad (Spain, Italy, Germany, Hungary etc.). In 2005, Romania recorded a migratory flux of 1.3% of the country's total population. Immigration to Romania had a growing tendency (but to a lesser degree) until 2004, when it

decreased due to restrictions imposed by Romania (especially from the Republic of Moldavia, for work, but also from Germany, the USA and Italy).

2. TENDENCIES AND THE JOB MARKET

The dynamics of the job market has been the result of the reorganization process of the economy and of job opportunities offered by SMEs. According to Romanian Statistical Yearbook data (2006), the occupation rate of Romania's population remained at a relatively stable level between 2002 and 2005 (58%), with a slow declining tendency but at a level mirroring the EU - 27 average (63.4% in 2005). This decrease of the active population is due to the decreasing number of available jobs due to the reorganization of the economy, as well as to the phenomenon of temporary migration for working abroad. Between 1990 and 2001, the number of the employed decreased from 7.5 million to 4.5 million, paralleled by the growing number of the unemployed (the unemployment rate growing from 3% in 1990 to 11.8% in 1999).

After 2000/2001 Romania entered a phase of economic recovery, recording a period of economic growth. Nevertheless the number of the employed remained at the 4 million levels in 2005 too, but the rate of the unemployment dropped to 5.9%. On the other hand it is to be mentioned that the number of the unemployed is much higher than the one shown by statistics, since this latter refers to the recorded unemployed. Anyway surveys show a constant decrease of the unemployment rate, mainly due to the temporary migration for working abroad (about 2 million people in 2005). Important structural changes have occurred. The population working in rural economy has decreased all over the country but this can hardly be considered relevant taking into account the fact that the population occupied with farming, as workers on their own, is not recorded as employed in this sector. The construction sector has been extremely dynamic, being the only one where after 2005 the occupied population has really increased all over the country. The same tendency is to be noticed in the sector of services, the only region where the number of population occupied in this sector has decreased being the South. Between 1996 and 2004 the weight of the urban population occupied in the sector of services has increased from 46.8% to 54.3%, but is still under the EU average. A positive tendency is the development of the private sector, together with the decrease of the weight of the population occupied in the public sector. In 2005 according to National Institute of Statistics, only 21.8% of the occupied population works in the public sector, 75.7% being employed in the private sector.

3. LABOUR FORCE IN THE TOURISM SECTOR

The analysis of Romanian Statistical Yearbook data points out a constant declining tendency of the population engaged in tourism related activities. While in 1990 the number of people working in hotels and restaurants was 186 thousand, in 2001 it dropped to 79 thousand (42% of the 1990 level). Fortunately since 2002 the population occupied in this sector has grown, even if at a slow rate, so as in 2005 the number of hotel and restaurant workers attains 139 thousand people, which represents 71.68% of the 1990 level. The structure per staff categories did not change significantly between 1990 and 2006. The employees represent in 2005 92.8% of the occupied population (90.9% in 1990), the employers 4.8% (6.6% in 1990), private entrepreneurs 1.6% (2.3% in 1990), and unpaid family workers 0.8% (0.2 in 1990). About 90% of the 133 thousand hotel and restaurant workers activate in mostly private societies, which is a positive aspect indicating the constant progress of the privatization process in the tourism sector. In the tourism sector the average age of the occupied population is relatively low: 19.1% are aged between 15 and 24; 33% between 25-34; 25% between 35 and 44; 19.7% between 45 and 54 and only 2.7% over 55, which means that more than a half of the workers has not reached the age of 45 yet. Tourism offers job opportunities to many women. Their share compared to the whole of the population occupied in hotels and restaurants remained relatively stable between 1990 and 2005, constantly exceeding 55% (Ministry of Labour, Social Solidarity and Family, 2007). Bearing in mind all this we can

conclude that the tourism sector keeps occupied exactly those two labor force categories that meet the greatest difficulties in finding a job: young people and women.

If we follow the evolution of the average number of employees of hotels and restaurants, we can notice about the same situation as the one regarding the population occupied in this field (195 thousand in 1990, 90 thousand in 2005 respectively). Actually, between the two indexes there is a close correlation. The general decreasing tendency of the occupied population, as well as of the average number of the employed is due to the combined action of several factors, but mainly to the significant drop in the number of tourists during the period in view, respectively to the removal of accommodation capacities.

4. PROBLEMS OF HRM (HUMAN RESOURCE MANAGEMENT) IN TOURISM

Generally speaking, human resources represent an important factor in achieving performance with a firm. This holds good even more for tourism enterprises, where the customer-employee relationship is a central part of their activities. In tourism, the quality of labor force represents the determining factor in the quality of the tourism product on the whole. The human element, by which the trading and the consumption of the tourism product is conveyed, has a vital role in the development policy of the tourism sector so that no tourism development can possibly conceived without developing suitable labor force. HRM asks for respecting certain compulsory stages: labor force planning, staff enlisting, professional selection, integration of new staff, assessment of performance and promotion of employees, remuneration and motivation of workers, as well as training and refreshing knowledge of the staff (Moldovanu – Schaltz, 2000). How are these activities carried out in the Romanian tourism units?

Labor force planning is a result of the assessment of the firm's staff masses, taking into account the work demand as well as the work offer. In our tourism firms existing jobs are properly described in the job description, but the same cannot be said about knowledge and forecast of work demand. Work demand is forecast without using prognosis techniques, simply on the basis of personal preferences of people in the front line of the firm's activities and on the present intentions of the management of a given firm. Job offer has two main components: internal offer, that is to say the employees who can be transferred or promoted in order to provide the necessary labor force, and the external offer, fueled by redundancy in other economic sectors.

Assessment of the internal offer can be based on data concerning knowledge and skills of the employees, by planning replacements or by succession planning. But creation of a database concerning the employees' skills has hardly started with most firms. In the employees' personal files, of course, there are documents concerning their professional training, but extremely rarely are they taken into account when transfer or promotion is the case. Criteria used for these purposes are mainly subjective and are based more on work experience than on actual performance of the individual. As far as replacement or succession planning are concerned, these are not systematic activities affected in time or considered important for the firm's activity. Replacement of the employees and succession at the firm's management are made ad-hoc, only at the very moment when a post becomes vacant, and problems regarding extra workload falling on other employees worsen, while malfunctions in the firm's activity are require hiring new staff. In case of external labor force offer (especially in industries and the army), the problem lies in the constant lack of qualification in tourism related jobs., which requires attending short term qualification courses organized by tourist agencies (or tourism firms) in agreement with the competent ministry. These courses offer to attendees an official diploma entitling them to practice the job in question.

Staff recruiting is done according to classical methods and criteria, mainly carried out by the firm's own human resource department and not by firms specialized in staff recruiting. Internal recruiting as well as external recruiting is common carried out by formal and informal methods. The selection of the employees is a process of determining which persons suit better the firm's needs as far as skills, abilities and knowledge are concerned. Positions are occupied on the basis of a contest, the main stress falling more on the candidates' knowledge than on their moral and professional qualities. Verifying recommendations is not customary, most recommendations being only formal and their verification subjective.

Integrating new staff is the result of their admission at the selection organized by the firm. From the firm's point of view professional integration of the hired staff is extremely important and has the following objectives: adaptation to new work conditions, accommodation to fellow team members, creating a reassuring atmosphere of confidentiality and belonging. The new employee's rhythm of professional integration depends on his/her personality and temperament, but every time it is a complex and long term process. Forcing this rhythm has negative effects both on the employee (professional misfit), and the firm (growth of staff fluctuation and resuming of the whole process). In the case of most Romanian tourism firms the integration of new staff is reduced to a simple introduction of the employee in front of the staff and, perhaps, to a "welcome" handshake, and the employee is to find out while working what his duties are and who he has to team up with.

Assessment and promotion of the staff is based on judging their achievement during their work. Due to the character of tourism related work objective methods are available (volume of sales, being late or absent, complaints recorded etc.) as well as subjective ones (self-assessment of performance), which are naturally biased by indulgence errors. Remuneration of the staff is a powerful driving force for work at any firm or in any sector. In tourism remuneration is based on legal provisions in force. What is attractive here are the business trip opportunities home and abroad, discovery of new destinations, visiting tourist reception units. But work conditions are hard and stressful.

There are a number of generic weak points in the training and forming of staff for the tourism industry. It is in the first place a problem of awareness in the country of the value of tourism as an economic sector, of the opportunities it offers to many members of the society and of the manner of interaction with visitors. The staff presently hired often has not got the skills and training needed for offering international standard services. The institutions of training and forming mainly offer theoretical knowledge, and graduates often do not possess the practical skills required by employers. Many employees leave the country for working abroad, where salaries and opportunities are viewed to be better, which leads to a crisis of qualified staff. Analysis of the professional training process of the labor force in tourism highlights both the processes and the significant changes due to the modernization of the system, of better relating to European values and exploitation of national traditions, and the numerous deficiencies, incertitude and less positive tendencies. The professional training of tourism workers implies both professional training and perfecting of professional training by public and department schools, at central level by national institutes and directly by economic agents.

Public education is based on the national education system formed by the aggregate of state and private teaching units and institutions and practically covers the whole range of professional training forms: vocational schools, specialized high schools, reconsideration of former apprenticeship, postgraduate schools and universities. Although all these kind of schools provide certificates/diplomas on graduation certifying training of their possessors in a field/job, in most cases they do not guarantee the quality of the training. The result is mirrored in the first place by the great number of graduates unabsorbed by the job market, but also by the poor quality of services offered. Explanation lies in deficiencies such as: the lack of research studies determining real training needs; the ongoing use of syllabus templates lacking clearly set objectives and forms of assessment; the lack of subjects meant to guide graduates during their socio-professional life; the neglect of participative teaching methods centered on students, which would motivate them and stimulate their creativity; the lack of proper laboratory and workshop equipment, teaching aids needed for demonstrations and applications meant to form work skills; the lack of student-centered training and the informative character of the education. Considering all these deficiencies a lack of responsibility becomes visible in the education of young generations in schools, which leads not only to their non-acceptance by the internal market but also to an uncompetitive activity, unable to assure services of a quality meeting requirements of the international market.

In tourism, the need for permanent training becomes obvious. Professional training and refreshment courses as parts of permanent training are the task of the Ministry of Tourism by the National Center of Tourism Education (NCTE) and of the tourism economic agents with observation of regulations in force. NCTE organizes and holds courses and intensive programmes of variable length and form, meeting a vast range of training demands: qualification courses in basic jobs in tourism and hotels; professional

specialization courses for different job and position holders in hotels and tourism (tourist agent/tour operator, national tourist guide, chief receptionist, chief governess, hall manager, specialized cook, chef etc); manager training courses for all managing staff in hotels and tourism, including programmes of information use in specific activities; foreign language courses. These courses and programmes have been conceived to take place in preparatory intensive stages as short as possible, the process having the character of integrated training where complex modules of theoretical training are combined with practical training proper in the application base and units in the tourist industry, using modern audio-visual teaching aids.

In spite of all these positive aspects, it has to be noticed that in case of pre-college education the implementation and periodical actualization of the syllabus is tangled, schooling programmes do not corroborate with demands of the job market, pre-college education does not respond to the needs of the job market. This situation together with that of units/classes of vocational and technical education for tourism with geographic character, scarcely represented mainly in rural areas, with difficulties of organization, with urban and rural inter-zonal differences as far as lack of equipment in schools is concerned demonstrates that there is still a lot to do in the field of investment in specialized human resources, and the Ministry of Education and Research and National Authority of Tourism (NAT) need to get more involved in this field (National Authority of Tourism, 2004). As far as specialized college education is concerned an important syllabus reform is needed in teaching units having specializations in the domain of tourism, hotels and restaurants in order to promote and assure the graduates' practical training for them to integrate easily and efficiently in the activity of economic agents in tourism.

Studies regarding the use of professional training programmes for adults and preferences expressed by the ones directly involved reveal the tendency of most of them to positively appreciate the utility of these forms of training as an extra opportunity for the individual to build a career. The tendency is more marked with pre-qualified young people who prove more mobile from the point of view of professional reconvention. It is necessary in the future for the NAT to set some medium and long term strategic objections for the professional training of adults in and for the sector of tourism, which would take into account the context of the national and European sectoral policy, promotion of life long learning and attaining goals concerning the sectors achievements in the EU member states with tradition in the domain.

5. RECOMMENDATIONS FOR THE FUTURE

In order to counterbalance current deficiencies and to offer a well enough trained and motivated staff in the future, we consider that the following actions are required to be taken:
- Launching campaigns to raise tourism-related awareness, combined with training in schools, among public sector employees and tourism staff at all levels regarding respect for the client;
- Setting up the Consultative Committee for Developing Human Resources, with representatives on the behalf of the private sector (employees), training providers, the Ministry of Education, Tourism and Labor for monitoring the ensuring of quality training services in order to meet the needs of the industry
- Setting up a series of training institutions in the hospitality sector for adult professional training courses
- Revising and updating the course structure, curriculum and syllabus for training courses of specialization in the sector of tourism, hotels and restaurants of the existing institutions of professional training specialization;
- Developing updated occupational standards and European level updated standards;
- Involving international specialists in the training of a team of trainers in the field of tourism, hotels and restaurants in order to provide specialization courses for the existing and future employees, for it to cooperate with the training institutes in the domain of hospitality that offer professional training courses to adults;
- Providing extra training courses for tourist guides besides their college training;

- Training staff for the Tourism Information Center in order to acquire specific abilities of communication and information at the centers;
- Ensuring staff for the Ministry with permanent training in their specialized domain;
- Introducing a tax in the price of accommodation for courses in the domain of hospitality, which would be used by the training course organizer based on the recommendations of the Consultative Committee for Development of Human Resources in Tourism to assure the ongoing character of professional training courses for all sectors of the industry at reasonable prices.

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AUTHORS PROFILES:

Dr. Magdalena Vorzsák earned her Ph.D. at ASE Bucureşti, in 1979. Currently she is a professor of Economics and Strategic Management at the Faculty of Business, from "Babeş-Bolyai" University of Cluj-Napoca, România.

Ms. Carmen Maria Guț is a Ph.D. candidate at the Faculty of European Studies and teaching assistant at the Faculty of Business, from "Babeş-Bolyai" University of Cluj-Napoca, România.

Mr. Valentin Toader is a Ph.D. candidate at the Faculty of European Studies and teaching assistant at the Faculty of Business, from "Babeş-Bolyai" University of Cluj-Napoca, România.

INTERPLAY OF INVESTORS' FINANCIAL KNOWLEDGE AND RISK-TAKING: INITIAL RESULTS

Alex Wang, University of Connecticut-Stamford, Stamford, Connecticut, USA

ABSTRACT

There are a number of possible explanations for investors' risk-taking behavior in investment. One of the explanations is financial knowledge. Using a survey data, this study demonstrates that, at least for investors, their subjective knowledge and objective knowledge were highly correlated. While investors' higher objective knowledge enhanced their subjective knowledge, investors' subjective knowledge rather than objective knowledge elicited investors' risk-taking behavior in investment.

Keywords: Financial knowledge, risk-taking in investment

1. INTRODUCTION

Investors often make poor decisions in taking risks because they do not know how to make good ones. The financial literacy literature suggests that investors' risk-taking behaviors may be associated with their financial knowledge (Edmiston and Gillett-Fisher, 2006). Research suggests that there are two different aspects of financial knowledge, objective knowledge and subjective knowledge. "Subjective knowledge can be thought of as including an individual's degree of confidence in his/her knowledge, whereas objective knowledge refers only to what an individual actually knows" (Brucks, 1985, p. 2). Objective knowledge facilitates financial information acquisition through effective deliberation using newly acquired knowledge, whereas subjective knowledge may increase the reliance on what investors believe they know (Alba and Hutchinson, 2000).

Since limited research had directly investigated the link between risk-taking in investment and financial knowledge (Lyons et al., 2006), this limitation motivated this study's investigation on examining the relations among investors' objective knowledge, subjective knowledge, and risk-taking in investment. Research suggests that knowledge has its specific domain (Alba and Hutchinson, 2000). Thus, this study focuses its investigation on investing in mutual funds as the tested knowledge domain. In the following sections, this study reviewed relevant literature and explained the survey study and data collection. Finally, this study presented the results and concluded with limitations and directions for future research.

2. LITERATURE REVIEW

Research has regarded objective knowledge as accurate information and subjective knowledge as a belief about the state of knowledge (Bettman and Park, 1980; Park and Lessig, 1981; Sujan, 1985; Wang, 2006). Knowledgeable investors can process financial information more easily than novice investors can since an initial categorization is accessible for knowledgeable investors to process the information. Consequently, higher level of objective knowledge facilitates elaboration of the information since the real knowledge may help knowledgeable investors digest the information (Chang, 2004). Investors with lower level of objective knowledge perceive financial information as made up of discrete pieces of attributes. Thus, novice investors may use an attribute-by-attribute processing approach to add or average the overall evaluation. Because of insufficient objective knowledge, novice investors may need to process attributes one by one to reach their decisions (Sujan, 1985; Wang, 2006).

Knowledgeable investors can maximize their skills or proficiencies in comprehending and interpreting financial information. Objective knowledge is data-driven, integrating newly acquired information with existing knowledge. Subjective knowledge is confidence-driven, evaluating newly acquired information with the confidence of knowing. Therefore, disconfirmation may emerge more easily when knowledgeable investors' evaluations indicate discrepancies due to their counter-arguments (Alba and Hutchinson, 2000; Chang, 2004). In reasoning out the discrepancies, knowledgeable investors will generate more external-based elaborative thoughts in relation to internal-based elaborative thoughts. Disconfirmation may also emerge when confident consumers evaluate discrepancies due to their subjective preferences (Alba and

Hutchinson, 2000). In reasoning out the discrepancies, confident investors will generate more internal-based elaborative thoughts in relation to external-based elaborative thoughts (Chang, 2004).

2.1 Financial Knowledge and Risk-Taking Behavior

Hilgert, Hogarth, and Beverly (2003) have explored the importance of the link between financial knowledge and behavior and focused on four broad categories of financial practices: cash-flow management, credit management, saving, and investments. They have found that financial knowledge in a specific area is positively correlated with financial practices in that area. They have also found that learning about financial matters from family, friends, and personal experiences is also highly correlated with positive improvements in financial behaviors. Finally, they have found that those who scored highest on questions relating to credit management, saving, and investing are most likely to exhibit good credit management, saving, and investing habits, respectively. Perry and Morris (2005) have also tested the relationship between financial knowledge and responsible financial behavior and concluded that financial knowledge has the greatest effect on eliciting responsible financial behavior.

Chen and Volpe (1998) have reported that people with higher level of financial knowledge tend to have right opinions and make correct decisions related to savings, borrowing, and investing. Edmiston and Gillett-Fisher (2006) have found that the advanced level of financial knowledge category contains a greater proportion of individuals with a sufficient emergency fund (31.7%) than both the intermediate financial knowledge (12.2%) and low financial knowledge (3.9%) categories. They concluded that individuals with a higher level of financial knowledge made decisions that more closely mirror experts' recommendations than did those with a lower level of financial knowledge.

The level of financial knowledge an individual possesses is likely to be a function of a number of different determinants of risk-taking behavior. Schooley and Worden (1999) have found that investors with higher levels of education hold higher percentages of equity securities in their portfolios. In a more general context, individuals with less education and low incomes have generally been found to have lower financially literacy scores (Kotlikoff and Bernheim, 2001). Hilgert, Hogarth, and Beverly (2003) found financial knowledge to be greatly influenced by an individual's experience with personal financial matters.

While studies regarding financial education, knowledge, and behavior are available, research still does not have a clear understanding of the relationship between financial knowledge and risk-taking behavior. Edmiston and Gillett-Fisher (2006) suggest that even though research has shed light on a number of influential factors, it is important to continue to examine individuals' financial knowledge levels and risk-taking as means of better understanding financial literacy and behavior. This study addresses the critical gap in the literature and provides a starting place for future discussions. Specifically, this study asks the following research question.

RQ: What are the relations among subjective knowledge, objective knowledge, and risk-taking in investment?

3. METHODOLOGY

3.1 Survey Process and Data

To assess the study's research question, an online survey was conducted at the regional level. The online survey was open between September 13, 2006 and November 9, 2006. Recruiting advertisements were post on several finance-related blogs that targeted financial professionals and investors. The online survey was self-administered with participants recording an identifier code in place of their names to ensure confidentiality and promote confidence in providing sensitive information accurately. No personal information was sufficient to identify participants. A total of 293 people responded to the recruiting advertisements and visited the online survey site. As a result, 91 participants eventually completed the online survey, whereas 38 participants answered the survey partially and did not complete the survey. No observations from 91 participants had to be dropped because of missing information. It is important to acknowledge that the survey sample was not randomly selected. However, the advertisements used to

recruit the sample covered a wide range of groups whose members specialized in finance and investment.

3.2 Variables and Measures

This study measured three dependent variables. Past research has demonstrated that objective knowledge and subjective knowledge are distinct constructs with unique measures (Moreau et al., 2001; Park et al., 1994). Objective knowledge reflects what investors know, whereas subjective knowledge reflects what investors think they know. Three bipolar, 7-point semantic differential, scales ranging from one (not at all) to seven (extremely) were used to measure participants' subjective knowledge regarding investing in mutual funds. The three questions asked participants to rate their knowledge of investing in mutual funds, familiarity with investing in mutual funds, and understanding about which financial characteristics are important when investing in mutual funds (Moreau et al., 2001). The mean of these three items determined participants' subjective knowledge score. The mean of participants' subjective knowledge was 4.72 (SD = 1.43), whereas Cronbach's α value for subjective knowledge was .95, indicating that three measures of subjective knowledge were reliable.

Thirty-seven questions were used to measure participants' objective knowledge regarding investing in mutual funds. Ten multiple-choice questions were used to reflect participants' objective knowledge regarding investing in mutual funds (Celsi and Olson, 1988), whereas 27 true-false questions were used to measure participants' objective knowledge about investing in mutual funds (Moreau et al., 2001). Each correct answer was given one point, and the mean of objective knowledge was 28.41 (SD = 3.74). The highest objective knowledge score was 34, whereas the lowest score was 11. The results revealed that the study captured a range of participants' objective knowledge scores even though participants' objective knowledge was at the high end of the range. A 7-point scale ranging from one (not at all) to seven (extremely) was used to ask participants how often they would take risks in investment. The mean of participants' risk-taking in investment was 3.34 (SD = 1.52).

4. RESULTS

To examine the relations among subjective knowledge, objective knowledge, and risk-taking in investment, a series of linear regression models were used to test for a mediation effect (Baron and Kenny, 1986). Subjective knowledge was regressed on objective knowledge (β = .34, p < .001), F (1, 89) = 11.24, p < .001, R^2 = .11. The results revealed that participants' higher objective knowledge enhanced their subjective knowledge. Risk-taking was regressed on objective knowledge (β = .01, p < .95), F (1, 89) = .004, p < .95, R^2 = .00. The results revealed that participants' objective knowledge did not elicit higher risk-taking. Risk-taking was regressed on objective knowledge (β = -.09, p = .415) and subjective knowledge (β = .29, p < .01), F (2, 88) = 3.45, p < .036, R^2 = .07. The results revealed that the effect of objective knowledge was not evident, and participants' higher subjective knowledge elicited higher risk-taking in investment. The results did not reveal a mediation effect among subjective knowledge, objective knowledge, and risk-taking in investment.

5. DISCUSSION

Alternatively, this study examined the link between financial knowledge and risk-taking in investment from an investor-centered perspective. The findings highlighted the relationship between investors' subjective knowledge and risk-taking behavior. The results were consistent with previous research as objective knowledge enhanced subjective knowledge. However, the results also revealed that objective knowledge did not influence risk-taking in investment. The results suggested that investors' confidence level initiated investors to take more risks, and investors' confidence levels were influenced by their objective knowledge.

To integrate the findings, the results revealed that subjective knowledge might be the key to investors' risk-taking. Research has documented that subjective knowledge reflects self-confidence in information processing and decision-making (Campbell and Kirmani, 2000). While accuracy of investment information processing is dependent on objective knowledge, self-accessed knowledge may be more likely to be

efficient in relying on one's own processing skills and, as a result, may affect the acceptance of financial decisions. Research has suggested that financial knowledge in a specific area is positively correlated with financial practices in that area. Acquiring objective knowledge about financial matters is highly correlated with positive improvements in financial behaviors (Hilgert et al., 2003) since this type of knowledge has the greatest effect on eliciting responsible financial behavior (Perry and Morris, 2005). Thus, participants' objective knowledge did not elicit higher risk-taking in investment. This explanation is reasonable since it is hard to have absolute accuracy when taking risks. In other words, risk-taking is encouraged when investors are confident in making their investments.

In sum, investors who consider themselves unfamiliar with investing may find taking risks in investment undesirable. They may not be confident in their knowledge to take risks. In contrast, investors with higher level of subjective knowledge may find it easier to accept risk-taking behaviors because of higher confidence level. They could make bad decisions because they might not use their objective knowledge to make decisions. However, they are more likely to make a decision based on the confidence level of their self-assessed knowledge.

5.1 Limitations and Directions for Future Research

The variation in the correspondence between subjective knowledge and objective knowledge raises an important future research issue concerning knowledge calibration. For example, some investors like to search information about mutual funds for fun. They constantly read reviews regarding mutual funds but purchase little mutual funds. They seem to have high objective knowledge about choosing a mutual fund but they are not able to accumulate their direct experiences to build up their confidence. In other words, direct experiences are not available to match up with their experiences of information search.

Investors can also be overconfident in believing what they think they know, compared to what they actually know. They can invest in mutual funds but never know how to choose a mutual fund. They purchase mutual funds through their retirement plans but do not understand the impact of different attributes of mutual funds. In either case of knowledge calibration, either subjective knowledge or objective knowledge could be the determinant of risk-taking. If investors are overconfident while there is not enough capacity of true knowledge, they may make bad decisions. If investors are actually knowledgeable but less confident, subjective knowledge may not elicit risk-taking behaviors. The whole point of understanding interplay of financial knowledge and behavior in financial literature is so important that future research regarding the knowledge calibration is definitely worthy of investigation.

Another limitation of this study involves the type of financial products used in this study. Attitudes toward different financial products may moderate investors' attitudes and behaviors regarding their investments. Thus, future study should use different financial products to examine the relationship between financial knowledge and risk-taking behaviors. Finally, the evaluative nature or valence of the experience (e.g. whether it was a positive or negative experience) may also affect investors' subjective knowledge and objective knowledge (Campbell and Kirmani, 2000). Since product-related experiences may offer unambiguous information about the product, knowledge assessments based on past product-related experiences may lead to knowledge assessments that may or may not coincide with the level of subjective and objective knowledge. This may also affect investors' risk-taking behaviors. Thus, future research should examine the effect of relevant product-related experiences that may determine the extent of the difference between subjective and objective knowledge on investors' risk-taking behaviors (Chang, 2004).

6. CONCLUSION

With increasingly complex financial products in the marketplace, investors' financial literacy has become ever more important. Using a survey data focusing on investing in mutual funds as tested knowledge domain and risk-taking in investment, this study demonstrated that, at least for investors, their subjective knowledge and risk-taking behaviors were highly correlated. It was investors' subjective knowledge that elicited their risk-taking behaviors.

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MORE MONEY OR MORE BALANCE? HR CHALLENGES OF ATTRACTING SKILLED LABOUR IN THE COAL INDUSTRY

Connie Zheng, RMIT University, Melbourne, Australia

ABSTRACT

With recent boom of the resource industry and tighten labour market conditions, attraction and retention of quality and skilled labour has become the key human resource management (HRM) challenge to many mining companies operating in Australia. In this paper, it is intended to examine whether the provision of work-life balance (WLB) programs could have helped coal companies -mostly located in the central Queensland of Australia - improve their abilities to attract and retain the scare human resources under the tight labour market. A case study approach was adopted to explore a range of WLB policies and programs used by the coal companies. The findings suggest that various WLB strategies were adopted to address the coal workforce specific needs. However, the compensation strategy was used more predominantly as an organisational attraction and retention strategy, despite a growing interest in offering WLB programs as a contingency to safeguard employees' health and wellbeing and attract female labour into the industry.

Keywords: HRM; work-life balance (WLB); attraction & retention, coal industry, Australia

1. INTRODUCTION

Recruitment and retention of quality and skilled labour has been the key human resource management (HRM) challenge for many coal mining companies operating in the central Queensland of Australia, where skilled labour shortage is a regional issue (Miles et al., 2004; Rolfe, 2005). The tight labour market in the region increases the needs for employers to improve working conditions and employment practices in order to maintain skilled labour and sustain the industry's long-term growth. A number of recent reviews of HR and employment practices in the Australian mining industry (eg. Waring, 2005; Zheng et al., 2007) tend to also suggest that employers in the industry have adopted workplace changes, and created flexibility to meet specific needs of the industry's workforce.

The mainstream WLB literature and a handful of empirical studies (see for example, Osterman, 1995; Cappelli, 2000; Perry-Smith & Blum, 2000; Saltzstein et al., 2001; Nord et al., 2002; Hammer et al., 2003; Clifton & Shepard, 2004; Grandey et al., 2005) seem reaching an unanimous conclusion: some types and/or comprehensive WLB programs offered by organizations lead to positive outcomes on enhancing employee well-being and job satisfaction. Subsequently these outcomes create a positive outlook for organizations to attract and retain quality employees who in turn help them achieve better performance in terms of organizational efficiency, productivity, as well as overall market performance.

The WLB programs commonly mentioned in the literature tend to fall into the following five general categories: 1) flexible working hours; 2) health and wellness programs (eg. gym membership, free regular health check-up provided by employers); 3) sufficient leaves as required to meet family/life needs; 4) childcare benefits or subsidies and 5) organisational understanding and general support (eg. regular communication, information about work and family balance, career counselling, work & family stress management program etc.) (see Bardoel et al., 1999; Perry-Smith & Blum, 2000; Saltzstein et al., 2001; Clifton & Shepard, 2004; Kopelman et al., 2006). The list is certainly not exhaustive, with some using over 100 items to

categorise what help employees achieve WLB (Bardoel et al., 1999) and other categorising 21 HR policies and practices into four main WLB programs (Kopelman et al., 2006).

In the Australian context, De Cieri et al. (2005) argue that WLB has gradually emerged as 'a strategic issue and a key element of an organization's employee attraction and retention strategies' (p. 91). The authors further state that there is a need for Australian organizations in the current business environment 'to adopt HRM strategies and policies that accommodate the work/life needs of a diverse workforce' (De Cieri et al., 2005: 92). Consistent with this line of argument, it is envisaged that the emergent challenge for the coal mining companies in Australia is to develop the capability to attract, motivate and retain a highly skilled, flexible and adaptive workforce. Therefore, it is likely that the coal-mining firms would have developed an approach to HRM/WLB strategies that could cater the different and specific needs of the industry's labour force in order to increase their competitive advantage. Nevertheless, the workforce characteristics in the coalmines are quite different from those in the mainstream Australian labour market. Therefore, WLB strategies adopted by coal companies may also be different from the common types of WLB policies and programs identified in the literature. In the context of these issues, the following three research questions are the main concern of the current study:

a) Are there comprehensive WLB programs available in coalmines? If so, what are they?

b) Are they part of the overall organizational HRM strategies?

c) How effectively have they addressed the recruitment and retention issues?

2. RESEARCH METHODS

To answer the above questions, eight individuals representing eight coal companies among a total of 12 big and small coal companies operating in the central Queensland region (ACA, 2006) were interviewed. These individuals held managerial positions in which they were able to provide in-depth knowledge of their companies' management strategies. All interviews were conducted in the period of October and November 2006. The length of each interview ranged from 30-45 minutes. Each participant was asked to answer ten formal questions. The questions relate to the change of work practices and employment relations, HRM strategies, work-life balance programs, key factors contributing to attraction and retentions and evaluation of the effectiveness of HRM/WLB approaches taken by the coal industry. All interviews were taped and transcribed subsequently.

3. RESULTS

Instead of covering the answers to each interview question individually, here I summarize the major findings in order to answer the three research questions raised previously.

3.1 WLB policies and programs

During the interview, the interviewees were asked to provide any official WLB document or brochure, after they answered the question '*Do you have any work-life balance program in place? If so, what are they?*' Only two companies were able to provide such document. It seems that many WLB programs were inherent in the organizational HRM strategies (see De Cieri et al., 2005).

A range of WLB programs seem fit in the five categories as derived from the earlier literature review. However, the overall contents and emphasis on specific items are quite different from the mainstream discussion on WLB programs. For example, flexible working hours does not imply that coal workers can choose any hours that they want to work. They may be able to pick the preferred shifts in the rostering system. The use of rotation of work and job-sharing is also limited to a couple of companies who largely useed this approach to enhance employees' personal development, not necessarily for work-life balance purpose. Flexi-place to work and part-time working arrangements are applied mostly to those working as support roles, predominantly female in the office, not miners or contractors on-site; the latter tend to mostly work on a full-time or shiftwork basis.

Relatively less has been mentioned about childcare benefits as a part of WLB programs, this is quite different from the empirical studies discussed earlier. Instead, support to community partnership programs is regarded as important in assisting the workforce and their families to be engaged in the regional and local community. This is often provided in conjunction with company sponsorship of the Youth Centre, job postings and school information to spouses and their children.

Leave options are also less specifically mentioned, in reference to various types of leave (eg. parental, bereavement, sick and carer leave). This is probably because the workforce in the industry is dominated by men, and main social and caring roles still fall predominantly on women (Grandey et al., 2005). However, leave for special occasions is a unique provision, though ambiguous. This could range from allowing leave for attending kids' spelling contest, to seeing doctors or health professional, to taking full-pay leave for attending seasonal football match.

It is widely acknowledged that the majority of miners work less than half year annually and often work on the pattern of 7-day on 7-day off or 5-day on 4-day off (Beach et al., 2003). The allowance (ie. in the form using company car, subsidies of fuel or airfare) of using DIDO/FIFO (drive-in-drive-out and fly-in-fly-out) pattern of work-life is also common.

The concern for health and safety is reflected in an extensive mention of medical support services provided to workers as an important part of WLB programs. Most companies provide regular health check-up, not only to workers but also to their family members to ensure that they are all fit for work and fit for life. In some cases, health consultants and physiotherapists are regularly brought in to the sites. Informal mentoring arrangement between supervisor and subordinates to discuss work-life issues is also evident in a number of cases (Matthews & Jenkins, 2006).

Building an organizational culture and supporting environment that focuses on leadership development, safety awareness and workforce wellbeing is also important in implementing WLB programs. The concentration on leadership development follows the current wave of emphasising management control over employment conditions, instead of unions (Waring, 2005). The purpose of this concentration and how the company acts upon the concept is expressed quite nicely by one interviewee:

> 'For anyone in the supervisor or leadership position, we have spent fairly amount of effort, trying to educate them and train them on what it means to be a good leader, so probably that has been one of the biggest cultural changes. Our focus is to really try and help our employees to focus on good leadership skill so we can maintain good relationship, and build trust between employees and management'.

The industry seems gradually moving away from the unions' control, even though the majority of interviewed companies still have unionized workforce, but the percentage of the unionized workforce is decreasing. In responding to a sub-question on '*how do you then manage the communication between management and employees*?', this manager answers:

> '*We have open door policy for all managers, employees can come to talk to managers whenever they have issues and concerns. We also have regular lunch hour meetings, whereby our company CEO would come and eat with employees, and talk to them, so problems they face can be addressed directly and timely, rather than leaving them to be further brewed into unnecessary stress and grief.*'

In summary, the distinctive WLB programs provided tend to address coal workers' specific needs for accommodation, shiftwork arrangement, DIDO/FIFO work-life pattern, medical and health support and community partnership which are beneficial to families and kids. Managers interviewed tend to suggest that employee's health and wellbeing can be enhanced by provision of safety work environment and by encouragement of more direct communication between leaders/managers and employees.

3.2   Linking WLB to attraction and retention

The answers to the interview question 'how have these work-life balance programs helped attract and retain your workforce?' are diverse. On one hand, managers believe that a comprehensive set of HR/WLB strategies help achieve the goal of attraction and retention in the mist of current severe competition for quality labour in the region. On the other hand, some managers interviewed tend to treat WLB programs as a company showcase; they were unsure about the overall effect on attraction and retention. As a manager comments,

> '*in essence, we still have this belief that if we do the right things, people will flow to us. However, this is not necessarily so in our situation. We have programs, we have policies, they are all there, but people still leave, regardless*'.

Even though the company has a significant reduction in turnover, this may not be entirely due to the provision of WLB programs as commented by one interviewee in the following:

> '*I told you about what we have done in terms of taking care of our people. But let's get real. Under the current environment, PAY is the key to reduce the high turnover rate. We used to have over 60% staff turnover rate for a number of years. Last year, we started offering better remuneration; we brought that down to 6% - a huge reduction. Perhaps this is also due to our easy roster system?*'

Indeed, all interviewees suggest competitive remuneration is the best strategy they used to attract and retain staff. Only two interviewees expressed more explicitly that there is a need to incorporate compensation packages with a range of other HR/WLB strategies in order to enhance their companies' ability to attract more contractors and retain quality employees. So it tends to suggest that WLB programs are necessary, but wages are more elastic under the tight labour market conditions to determine whether workers would stay or leave.

4. DISCUSSIONS & CONCLUSIONS

Examining the diverse responses from the eight coal mining companies, with the reference to their adoption of HR/WLB strategies, it is found that employee retention is a complex issue in the context of coalmines, and solving the problem of attraction and retention by merely addressing the issue of work-life balance is not sufficient, as factors influencing retention may cover the combined effect of remuneration, career development opportunities, general employment conditions, employees' satisfaction with work and work culture (Beach et al. 2003). Indeed, competitive remuneration is overwhelmingly regarded as the best retention strategy in the coalmines; therefore it seems that money still spins the wheel around more effectively than other HR measures, even though the provision of WLB programs is also considered important.

The ranges of WLB programs in the coalmines are found to be distinctively different from the WLB policies and practices of the mainstream industries. Most notably, coal companies would largely concentrate on developing WLB strategies in the areas of accommodation subsidies, shiftwork design, safety requirement, medical support and community partnership programs to meet industry specific operation and workforce needs. Therefore, HR professionals, when design work-life and family friendly policies and practices in different industry, ie. coal industry, need to take the specific contexts, such as internal structure and external environment into consideration, which is in line with the recent debate on strategic HRM (Schuler and Jackson, 2000).

Finally, it is found that the provision of WLB policies and programs is constrained by organizational size. Two companies that have official WLB documents in place are large companies. The larger companies tend to have a more systematic WLB programs, whilst smaller companies rely on flexibility and their provision tend to be case-based, depending on different situation and individual employee. We have seen that the effects of both formalized and informalized policies and practices actually achieve similar results on retention. Therefore, the contextualisation of HRM/WLB strategies is very important (Schuler and Jackson, 2000), as it is certainly in the case of the Australian coal industry.

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A NEW DECOMPOSITION OF TOBIN'S Q

Curt Scheutz, South Stockholm University, SWEDEN
Claes Hägg, Stockholm University, SWEDEN

ABSTRACT

The Tobin's q of a firm is the firm's market value divided by the replacement cost. Ideally the q therefore should be higher than 1. The actual profitability can be measured as the annual profit divided by the firm's replacement cost. This will be denoted as E/C. The stock market's expectations regarding the firm's profitability can be measured as the P/E ratio, i.e. the price of the stock divided by the annual profit. If these two ratios are multiplied, we get the ratio P/C, which is identical to Tobin's q. This indicates a simple way of analyzing the impact of the two mentioned aspects of the q. Our conclusion is that the decomposition of the firm's Tobin's q gives a good illustration of the impact of expectations and profitability on the q.

Key words: Tobin's q, P/E ratio, profitability, decomposition, reflexivity.

1. INTRODUCTION

When the price of gold rises it becomes more interesting to extract the precious metal from rock. Those who already have functioning gold mines obviously have an advantage over owners of gold deposits that cannot be processed immediately. Therefore in the first case the market value of the resources is higher than the replacement cost, i.e. what it costs to put a mine into business. The firm with an already functioning mine has a kind of monopoly advantage that gives it a Ricardian rent.

The market value of a firm and the replacement cost of its assets are of vital importance to the management not only in the mining industry. If the market value is higher than the replacement cost, the firm will survive and will be able to finance its investments via the stock market. In the opposite case – if the replacement cost is higher – the firm is susceptible to take-over bids.

The Tobin's q of a firm is the firm's market value divided by the replacement cost. Ideally the q therefore should be higher than 1. In the following, we are going to discuss the conditions required to assure this. We will especially try to explain the impact of the actual profitability of the firm and the stock market's expectations regarding the firm's future profitability.

2. THE DECOMPOSITION OF TOBIN'S Q

The actual profitability can be measured as the annual profit divided by the firm's replacement cost. This will be denoted as E/C. The stock market's expectations regarding the firm's profitability can be measured as the P/E ratio, i.e. the price of the stock divided by the annual profit. If these two ratios are multiplied, we get the ratio P/C, which is identical to Tobin's q. This indicates a simple way of analyzing the impact of the two mentioned aspects of the q.

The mining industry exemplifies that Tobin's q has been regarded as a measure of profitability due to monopoly advantages. Under expansive business conditions, a firm that has already constructed a plant has advantages over other firms whose plants are not yet completed. In our model, such an advantage would result in a relatively high E/C. However, if the advantage were only temporary, P/E would not be exceptionally high. It follows that in many cases Tobin's q is a measure describing the managerial skill, regarding risk taking and innovations.

For example, available data show that in June 2007, the Swedish investment company Investor had a Tobin's q of 0.8 , while another investment company, Öresund, had a q of 1.2 .The P/E ratios were 6.4 and 4.3 respectively. The profitability ratios (E/C) were 0.13 and 0.28 . The q of the first firm can be decomposed as $0.8 = 6.4 \cdot 0.13$, while the second firm's decomposition is $1.2 = 4.3 \cdot 0.28$. The conclusion obviously is that the second firm has a higher current profitability but lower expectations for the future.

The general relationship is illustrated in Figure 1. The sloping line connects all points where Tobin's q is equal to 1. Points below this line have a q less than 1. The opposite holds for points above the line. It can be seen that there are innumerable possible combinations of profitability and expectations that result in the same value for q.
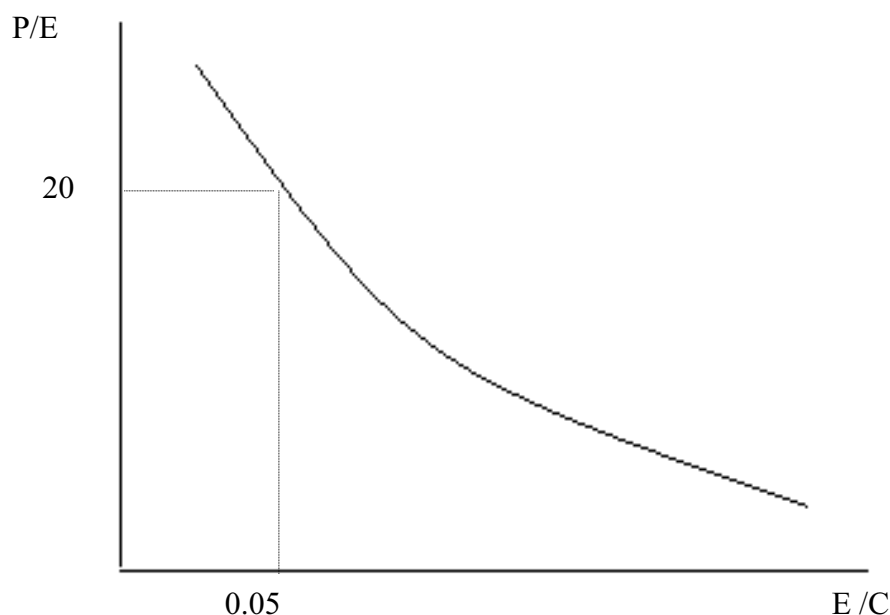
Figure 1. The line shows Tobin's q equal to 1.

It should be noted that we are here talking about the market value (P) and the replacement cost (C) of the firm's equity, i.e. the total value of the firm's assets minus debt. Other researchers, like Lindenberg and Ross (1981), have focused on the market value and replacement cost of total assets. We find that our approach is more relevant from the management's point of view since the Tobin's q of equity determines if take-over bids are likely.

3. THE THEORY OF REFLEXIVITY

Our decomposition of Tobin's q can also be connected to George Soros' theory of market reflexivity. The reflexivity theory has two basic hypotheses: (1) Stock markets are always biased in one direction or another. (2) Stock markets can influence the events that they anticipate (Soros, 2007; Subrahmanyam and Titman, 2001). In our context, the expectations are described by the P/E ratio, while the ratio E/C describes the fundamentals. A market bias will have an immediate impact on the market value (P). Soros' second hypothesis means that expectations affect the so-called fundamentals, especially the profit (E), and therefore affect the E/C ratio. The reflexivity theory has been subject to different evaluations (Neely, 1999 and Alvarez, 2002). However, it seems to shed some light on our subject.

We can imagine the following self-reinforcing process. First expectations are getting higher, which means that P/E rises. This increases the q, which gives the firm further opportunities to issue shares. Then, through the stock market's influence on fundamentals, E/C rises, which also increases q. This gives an impetus to even higher expectations and so on until the bubble breaks and a reversed self-reinforcing process starts. Examples of such processes are readily found in many industries, for example in fast-growing innovative firms in information and telecom.

4. CONCLUSION

The decomposition we have been discussing gives no causal relationship behind the Tobin's q of a firm. On the other hand, for illustrative purposes it can be used by management, especially when changes in the q are observed. Our conclusion therefore is, that the decomposition of the firm's Tobin's q can be of value as an analytical tool.

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AUTHOR PROFILES:

Dr. Curt Scheutz earned his Ph. D. at Stockholm University in 1988. Currently he is an associate professor of finance at the South Stockholm University.

Dr. Claes Hägg earned his Ph. D. at Stockholm School of Business 1974. Currently his is an associate professor of finance at Stockholm University.

CONVENTIONAL ANALYSIS OF DATA OBTAINED FROM LIKERT SCALES IS FLAWED

Nicholas Beaumont, Monash University, Caulfield East, Victoria, Australia

ABSTRACT

Social scientists often use Likert scales to collect data. Likert scales reduce an assumedly continuous range of responses to (typically) five or seven discrete values. The distribution of the discrete sample thus obtained differs from the distribution of the source population.

In particular, the extreme points of a Likert scale may truncate and therefore be very poor representations of portions of the original distribution. This truncation especially implies that the interval statistical methods habitually used by social scientists to analyse data obtained from Likert scales can generate erroneous inferences about the source population. A lesser problem is that Likert scale data exemplifies grouping and an adjustment allowing for grouping should be made when Likert data is analysed.

In this paper we give the simple calculations needed to demonstrate these claims. These calculations conclusively demonstrate that using interval statistical tests on samples obtained by Likert coding (Likert samples) can give very misleading results. We do not lightly assert that papers that have used interval statistics to analyse data derived from Likert scales should be reworked and that researchers should eshew parametric analysis of Likert data.

Keywords: grouped data, statistical tests, bias, inefficiency, truncation, Likert scales.

INTRODUCTION

Social scientists often use Likert scales to collect data thereby recoding an assumedly continuous range of responses to (typically) five or seven discrete values (the samples thus obtained are hereafter referred to as Likert samples). The distribution of a sample obtained by recoding continuous data obviously differs from the distribution of the population if only because it is discrete. We show that the recoding inherent in Likert scales implies that the parametric statistical methods social scientists habitually apply to Likert samples will generate wrong inferences about the source population.

This paper shows that Likert samples often have distributions that are very different from the assumedly normal populations from which they are drawn; in particular their means, variances, skewness, and kurtoses can be very different from those of the source population. It follows that interval statistical tests based on Likert samples may give grossly biased and inefficient estimates of population parameters.

Likert scales yield ordinal data but social scientists often apply parametric statistical techniques to Likert data. The ordinal/interval issue is discussed below. This paper demonstrates that, aside from this once much debated issue; there are two other problems inherent in applying interval methods to Likert scale data; the problems of grouping and truncation. We strongly recommend that researchers cease applying parametric statistical methods to Likert scale data or, at the very least, lessen errors by using scales with at least seven points.

HOW FREQUENTLY IS LIKERT DATA USED?

There are quite strong indications that many researchers are using parametric techniques on Likert data. Four bibliographic databases (three of journals and one of dissertations) were searched: first for the word "Likert", second for the combination "Likert AND ("t test" OR "t-test")". For each database and the two search choices, the total number of articles or theses containing these keyword combinations was noted (see Table 1). In some cases, it was possible to search the full text, in other cases only the citation (comprising title, abstract, and other elements). Note that the journal databases are not mutually exclusive and that searches were restricted to scholarly journals and dissertations.

The ABI/INFORM database, pertains to "virtually every aspect of global business"; it "indexes and abstracts significant articles from more that 800 business and management periodicals". (http://library.dialog.com/bluesheets/html/bl0015.html). The Business Source Premier database provides "the full text for more than 2,300 journals" pertaining to "all disciplines of business, including marketing, management, MIS, POM, accounting, finance and economics". (http://www.ebscohost.com/thisTopic.php?topicID=2&marketID=1). The ERIC (Educational Resources Information Center) database is a bibliographic database that contains education-related documents and journal articles (library.dialog.com/bluesheets/html/bl0001.html).

We assume that a large proportion of papers containing the word "Likert" described using Likert scales to obtain data and that a large proportion of the papers containing the combination Likert AND ("t test" OR "t-test") used t-tests to analyse Likert data. This assumption is collaborated by the author's knowledge of papers presented at conferences, and theses examined. We infer that a significant proportion of the social science research industry's output is based on a seriously flawed methodology part of whose output is papers promulgating wrong decisions on statistical hypotheses.

PAST WORK

Social researchers often enquire into individuals' attitudes, reactions, or inclinations. Typical questions pertain to respondents' happiness at work, assessments of people, policies, and/or organisations, and attitudes to social questions such as capital punishment. Responses are often collected using five or seven point Likert scales typically anchored by responses such as "very unhappy" and "very happy" that are coded 1 through 5 or 1 through 7. The frequent assumption is that, unless the source distribution is not obviously two tailed, it is approximately normal. In this paper, we assume, with some reservations, that the source population is approximately normally distributed.

Likert scales (Likert, 1932) are used frequently by social and business researchers. Essentially respondents are asked to choose an option indicating their degree of agreement with a statement. The options are usually symmetric about some midpoint ("neither good nor bad"). A small (typically 5, 7, or 9) odd number of options is usually offered but an even number may be used to force a non-neutral choice.

Social scientists have endured protracted controversy over the validity of applying interval statistics and methods to analyse data derived from Likert scales. Strictly speaking, Likert scales yield ordinal, not interval, data. Consider a five point Likert-like scale anchored by "very unhappy" and "very happy" in which the responses are coded as -2, -1, 0, +1, +2 (throughout this paper it is convenient to translate traditional scales of 1, 2, 3, 4, 5 to -2, -1, 0, +1, +2). There are no grounds for supposing that the "distance" (assuming that it is meaningful to define distance in this context) between "very unhappy" and "unhappy" is equal to the distance between "unhappy" and "neither happy nor unhappy" or that the distance between "very unhappy" and "unhappy" is half that between "neither happy or unhappy" and "very happy". The codes 1, 2, 3, 4, 5, would be better replaced by A, B, C, D, and E. The data obtained from Likert scales is ordinal, not interval.

There has been sharp, albeit dated, debate (Gaito, 1980; Labovitz, 1967, 1970, 1975; Stevens, 1946, 1951) on the validity of applying interval statistics and tests to ordinal data (exemplified by Likert samples). Gaito, Labovitz, and Stevens opine that this is permissible in some, perhaps most, circumstances; the contrary view is best espoused by Siegel & Castellan (1988). Gardner (1975) best summarises the debate, in particular by posing two questions (p 45).

1. Given a particular measuring instrument (e.g. a question in a survey), how does one decide upon its strength [level of men measurement]? (i.e. nominal, ordinal, interval, or ratio).

2. Having decided upon its strength, what kinds of statistical procedure are appropriate in dealing with the data?

An ordinal scale as defined in as one in which only transformations that preserve order are permitted. An interval scale is one in which only linear transformations are permitted. The distinction between an ordinal and interval scale may not be clear-cut. For example, the same question is asked in a number of different ways and the responses of each individual are averaged, this average, derived from an ordinal scale might have some aspects of interval measurement. The assumption is that, for an individual respondent,

the "differences" between e.g. "happy" and "very happy" are drawn from a single distribution. The average of several responses will approach this distribution's mean although different respondents having markedly different mental constructs and internal scales would invalidate this "hand waving" argument (Russell & Bobko, 1992, p 339).

Individuals answering a Likert-type question are confronted by the instruction to convert some sort of mental construct such as satisfaction to one of five codes (Beal & Dawson, 2007). The mental construct is sometimes referred to as the "latent" or "true" variable and the process of converting them to measurable responses is sometime referred to as "operationalisation" (Russell & Bobko, 1992, p 336). It is difficult to assert that all respondents have some sort of internal scale on which the five possible responses are equally spaced or that this spacing is the same for all respondents.

Russell & Bobko (1992) conducted experiments in which they compared moderated regressions based on data collected from two groups of well educated people. One group gave answers using a conventional 5 point Likert scale; the other group was asked to use a graphical method allowing them to give more precise responses. The moderated regression coefficients obtained from the former group were larger that those from the latter group. It would be interesting to know how many, and to what degree, members of the latter group exploited opportunities to respond 3.1 or 3.12 instead of simply 1, 2, 3, 4, or 5.

Beal & Dawson (2007)note that a response such as "very unsatisfactory" to a request such as "Rate George Bush's performance" may indicate depth of feeling rather than an assessment of performance. They allude to other chronic difficulties of surveys and Likert scales: Some respondents are more conservative than others, rarely using scales' extremes. Respondents tend to answer blocks of similar questions similarly and not notice that some questions negatively phrased. Respondents may get careless, even facetious, towards the end of a long questionnaire or be reluctant to answer some painful questions truthfully. Informants may not know whether their company is more profitable than the industry average and either guess or not answer. Respondents may not have a good command of English, and misinterpret questions especially if they are phrased negatively.

Gardner's second question raises more difficulties. All statistical tests rely on various assumptions, for example that the population being studied is normally distributed (see e.g. Siegel (1988). It is not easy, theoretically or mathematically, to weaken the assumption of normality underlying many tests, although there are many empirical studies demonstrating that many statistical tests, for example the t-test, are still extremely accurate for non-normal distributions except perhaps for pathological distributions unlikely to be encountered in practice.

Many researchers have used simulations to study the effect of parametric tests on ordinal data invariably finding that the tests work well in as much as they give the same results as weaker nonparametric tests such as Mann-Whitney. A practical consideration is that while the Mann-Whitney test of medians is nearly as powerful ($3/\pi$) as the t-test; nonparametric tests of association are much weaker than parametric tests of correlation or regression (Siegel & Castellan, 1988, Chapter 9). This paper implies that researchers should use ordinal tests of association such as the Gamma statistic (Siegel & Castellan, 1988, pp 291-298) instead of interval tests such as Pearson's correlation coefficient, despite ordinal tests of association being less powerful than interval tests.

In a sense, resurrecting the debate over ordinal v. interval methods is peripheral to this paper. The problem is that using a Likert scale to encode responses drawn from an underlying, continuous, distribution is a recoding that destroys information. As will be shown, mapping a continuous distribution to five or seven discrete values sometimes grossly misrepresents the original distribution. Conclusions drawn from parametric statistical tests applied to Likert samples cannot be safely applied to the source population: The sample and the population have different distributions.

THE PROBLEM ILLUSTRATED

It is easy to see that statistical estimates obtained from samples of grouped data can give wrong estimates of the underlying population parameters. There are two sources of error: grouping and

truncation errors. We illustrate these in Figure 1 through Figure 3; for simplicity, we have assumed that a five point Likert scale comprising the points -2, -1, 0, 1, 2, has been used. In all figures, we assume that the groups that these codes represent are bounded by (-∞, -1.5), (-1.5, -.5), (-.5, .5), (.5, 1.5), (1.5, ∞) respectively.

Grouping error

Consider the interval (.5, 1.5) in Figure 1. Likert coding implies that all degrees of a variable such as satisfaction ranging from e.g. 0.5 to 1.5 are coded as 1. Shepherd (1898), showed that if the mean and standard deviation of a continuous two-tailed distribution were calculated using, not the original data, but the mid points of uniform intervals of width *h,* then the estimation of the mean would not be materially affected but the variance would be underestimated by $h^2/12$. This can be seen in a qualitative way: under the normal curve there is more data in the left-hand half of the interval (.5, 1.5) than in the right-hand half. The midpoint (1.0) does not perfectly represent the "centre of mass" of the interval and using it to calculate the variance overestimates the true variance.

When calculating the mean of any two-tailed distributions, under very general conditions the bias inherent in the interval (.5, 1.5) is almost exactly compensated for by opposite biases in other intervals: calculations of the mean are not affected by grouping. However, if the distribution, exemplified by

Figure 4, is *not* two-tailed, grouping also affects the calculation of the mean (Kendall & Stuart, 1977, Vol 2, p72, Exercise 18-25).

The grouping error is not discussed further but we strongly recommend that researchers use Shepherd's correction to the variance and (for non-two-tailed distributions) mean. The cost of calculation is trivial and using the admittedly small correction would mean that some results now wrongly reported as insignificant would not be so reported. Not using Shepherd's correction is tantamount to throwing away a few percent of painfully acquired data.

Truncation error

Truncation errors resulting from Likert coding of continuous distributions can be much more serious. Consider the interval (1.5, ∞), represented by the code 2 in Figure 1which depicts a *N(0, 1)* distribution . Respondents who might have responded 3 or 4 if responses such as "extraordinarily well satisfied" were available were forced to respond 2: "very satisfied". Their responses have been truncated; all responses in the interval (1.5, ∞) are recoded as 2, a considerable distortion for some respondents. Fortuitously the truncation effect nearly exactly cancels out Shepherd's correction (1/12 or 0.08333).   The relevant probabilities are given in Table 2. The sample mean and variance are calculated as 0.0 and 1.01769. This accuracy is fortuitous because the population mean was near the centre of the Likert scale (minimising truncation errors) and the standard deviation was comparable with interval width, an unusually favourable set of circumstances. The next two examples illustrate more problematic cases.

Consider Figure 2 in which the population distribution is *N(1,1)* and the same intervals (-∞, -1.5), (-1.5, -.5), (-.5, .5), (.5, 1.5), (1.5, ∞) and codes (-2,-1,0, 1, 2) are used to collect data. The probability of a measurement falling in each of the five intervals is given in Table 3. It is straightforward to calculate the mean and variance obtained from Likert coding (0.9269 and 0.8432 respectively). Likert coding has introduced appreciable error primarily because the measurement 2 poorly represents the distribution's substantial right-hand tail. The appreciable number of respondents who might have responded 3 ("extraordinarily well satisfied") or 4, have been coded as 2. It is clear that because the Likert samples do not represent the population, it is not safe to apply conclusions obtained from statistical tests applied to samples, to the source population.

Consider Figure 3 which represents *N(0,2)* whose relevant probabilities are summarised in

Table 4. The mean and variance obtained from Likert coding are respectively 0.0 and 2.1622. Likert coding has introduced considerable error because the codes -2 and 2 poorly represent the population's tails. In this case, the underestimation of variance is likely to lead to statistical tests of hypotheses being wrongly accepted. It is easy to see that Likert coding underestimates the dispersion when the standard deviation exceeds 1 and that naively using interval statistics on Likert data collected from a population *N(1,2)* would yield even worse distortions.

NUMERICAL FINDINGS

The statistics obtained from applying a coding based Likert scales comprising either five or seven points to different normal distributions were calculated using a simple computer program. In technical terms, this entailed calculating, by integration, certain expectations of normal distributions over intervals such as (-∞, -1.5), and summing over all such intervals.

The results are summarised in Table 5 though
Table 8. Especially when the meeting is different from zero, and/or the standard deviation is different from one 1 (the Likert scale unit), Likert sample statistics are different from population statistic and cannot be safely used to estimate population parameters.
These errors are especially apparent in Table 5 and Table 6 pertaining to five-point Likert scales. Each cell of Table 5 gives the mean that would be calculated using a five point Likert scale coding from a normal population with the mean and standard deviation labelling the row and column respectively. For example, in Table 5 the figure 0.794 is the mean that would be expected from a Likert sample drawn from a distribution with mean 1 and standard deviation 1.5.   Similar comments apply to Table 6 which gives the standard deviation calculated from Likert data. and
Table 8 give analogous results for seven point Likert scales. In
Table 8, observe the figure 1.039 = $\sqrt{(1 + 1/12)}$ for mean = 0 and SD = 1 which is almost entirely attributable to the grouping effect.

IMPLICATIONS

It is easy to see that sampling from an assumedly normal distribution using Likert coding yields a sample that has a discrete and sometimes far from normal distribution (see

Table 9 and that give skewness and kurtosis respectively).

Suppose that the mean, size, and standard deviation of a Likert sample are used as input to a t-test and it is shown that the sample mean is significantly different from zero. Unfortunately, it is not safe to apply this conclusion of significance to the source population. Because the distribution of a Likert sample can be very different from the distribution of the source population, there are no grounds for supposing that conclusions drawn from statistical tests applied to Likert data are valid for the source population.

Contrast this with sampling a normally distributed variable with interval level of measurement.   The distributions of samples of means can be expressed exactly in terms of the population's parameters and the sample size.   Therefore, sample statistics can be used to make inferences about the source population.   This is not the case for Likert coding: Likert coding loses information about the source population; it is not possible to reconstruct the source population's distribution from a Likert sample.

Likert coding is a recoding: all points in e.g. (1.5, ∞) are recoded as 2 exemplifying Greene's (1997: 437) discussion of "attenuation"; the fact that imperfect knowledge of the data biases estimates of population parameters towards zero. Likert coding sacrifices information.

It is clear that it is generally unsafe to assume that statistical tests found to be significant for a Likert sample apply to the original population. Recall that Likert samples can have means and variances very different from those of the source population (see Table 5 through
Table 8) and, in some cases, their skewness and kurtosis (Table 9 and) demonstrate marked non-normality.

CONCLUSION

Grouped data, exemplified by Likert scales, are commonly used in the social sciences. The distribution of a sample collected using Likert coding is different from the distribution of the population from which it was drawn.   This implies that if, for a Likert sample, an interval statistical test is significant, one cannot conclude that this test would be significant if applied to the original population.

It is unsafe to apply parametric statistical tests to a Likert sample and assume that the test pertains to the source population. If parametric tests must be used, they are safer when the mean is near zero and the

standard deviation close to one. Seven point scales are less susceptible to error than five point scales. We strongly recommend that only non-parametric methods be applied to Likert data.

The use of the Likert data in several statistical procedures merits investigation. For example, we note that some researchers use regression analysis where the dependent and independent variables are both Likert coded. The assumption that latent variables such as job satisfaction and supervisor's politeness are linearly related seems heroic and it is likely that the effects of coding errors will multiply. We wish to investigate this issue and validity of using techniques and measures such as factor analysis and Cronbach's's alpha with Likert data.

Because Likert coding ostensibly preserves the source population's order, it is generally assumed that conclusions from non-parametric tests of Likert samples can be applied to the population. However, Likert coding does not perfectly preserve order. If x and y, x<y are two measurements in the source population that are recoded to p and q respectively, we only know that p ≤q. Strictly greater than relationships are translated into greater than or equal to relationships. We do not know whether this is material to ordinal tests.

Table 1: Incidence of Keywords in Some Bibliographic Databases

Source	Keyword or words	Number of items containing the keyword or keyword combination	Notes
ABI	Likert	15493	Only articles in academic journals were selected
ABI	Likert AND ("t test" OR "t-test")	3283	
ABI	Likert AND ordinal	873	
Proquest interdisciplinary dissertations and theses	Likert	7460	Citations and abstracts searched.
Proquest interdisciplinary dissertations and theses	Likert AND ("t test" OR "t-test")	991	
ERIC	Likert	1283	Restricted to journals pertaining to social sciences
ERIC	Likert AND ("t test" OR "t-test")	11	
Business Source Premier	Likert	13719	Primarily academic journals, pertaining to business.
Business Source Premier	Likert AND ("t test" OR "t-test")	2658	Primarily academic journals, pertaining to business.

Table 2: Probabilities for a Likert Scale modelling *N(0,1)*

Interval	(-∞,-1.5)	(-1.5,-.5)	(-.5,.5)	(.5,1.5)	(1.5,∞)
Probability	0.0668	0.2417	0.3829	0.2417	0.0668
Midpoint	-2	-1	0	1	2

Table 3: Probabilities for a Likert Scale modelling *N(1,1)*

Interval	(-∞,-1.5)	(-1.5,-.5)	(-.5,.5)	(.5,1.5)	(1.5,∞)
Probability	0.0062	0.0606	0.2417	0.3829	0.3085
Midpoint	-2	-1	0	1	2

Table 4: Probabilities for a Likert Scale modelling *N(0,2)*

Interval	(-∞,-1.5)	(-1.5,-.5)	(-.5,.5)	(.5,1.5)	(1.5,∞)
Probability	0.2266	0.1747	0.1974	0.1747	0.2266
Code	-2	-1	0	1	2

Table 5: Means Calculated from a Five Point Scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.25	0.157	0.248	0.249	0.240	0.224	0.206	0.188	0.172
0.50	0.500	0.500	0.496	0.477	0.445	0.409	0.373	0.341
0.75	0.843	0.752	0.740	0.707	0.659	0.606	0.554	0.507
1.00	1.000	0.999	0.977	0.927	0.862	0.794	0.728	0.668
1.25	1.157	1.241	1.201	1.132	1.052	0.970	0.892	0.821
1.50	1.500	1.477	1.405	1.317	1.225	1.134	1.046	0.966
1.75	1.841	1.685	1.581	1.480	1.380	1.282	1.188	1.101
2.00	1.977	1.840	1.724	1.618	1.515	1.414	1.317	1.226

Table 6: Standard Deviations Calculated from a Five Point Scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00
0.00	0.213	0.570	0.801	1.009	1.175	1.300	1.396	1.470
0.25	0.368	0.577	0.799	1.004	1.167	1.293	1.389	1.465
0.50	0.500	0.584	0.794	0.987	1.146	1.271	1.370	1.447
0.75	0.368	0.577	0.781	0.959	1.111	1.236	1.337	1.418
1.00	0.213	0.567	0.758	0.918	1.063	1.188	1.293	1.379
1.25	0.368	0.564	0.720	0.864	1.002	1.128	1.238	1.329
1.50	0.500	0.543	0.662	0.796	0.931	1.059	1.174	1.272
1.75	0.365	0.478	0.587	0.716	0.851	0.982	1.102	1.207
2.00	0.149	0.370	0.497	0.629	0.766	0.900	1.025	1.136

Table 7: Means Calculated from a Seven Point Scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.25	0.157	0.248	0.250	0.250	0.246	0.239	0.229	0.217	0.205	0.193
0.50	0.500	0.500	0.500	0.499	0.492	0.477	0.457	0.433	0.409	0.385
0.75	0.843	0.752	0.750	0.747	0.735	0.712	0.681	0.646	0.610	0.574
1.00	1.000	1.000	1.000	0.994	0.975	0.942	0.901	0.854	0.807	0.761
1.25	1.157	1.248	1.249	1.237	1.209	1.166	1.114	1.057	0.999	0.942
1.50	1.500	1.500	1.496	1.476	1.436	1.382	1.319	1.252	1.184	1.118
1.75	1.843	1.752	1.740	1.707	1.654	1.588	1.515	1.438	1.362	1.288
2.00	2.000	1.999	1.977	1.927	1.859	1.782	1.700	1.615	1.532	1.450
2.25	2.157	2.241	2.201	2.132	2.050	1.963	1.873	1.782	1.692	1.605
2.50	2.500	2.477	2.405	2.317	2.224	2.129	2.033	1.937	1.843	1.751

Table 8: Standard Deviations Calculated from a Seven Point Scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50
0.00	0.213	0.570	0.804	1.039	1.268	1.473	1.648	1.794	1.916	2.018
0.25	0.368	0.577	0.804	1.039	1.266	1.469	1.643	1.789	1.911	2.014
0.50	0.500	0.584	0.804	1.037	1.259	1.458	1.630	1.775	1.897	2.000
0.75	0.368	0.577	0.803	1.033	1.247	1.439	1.607	1.751	1.873	1.978
1.00	0.213	0.570	0.802	1.025	1.229	1.412	1.575	1.717	1.840	1.946
1.25	0.368	0.577	0.800	1.012	1.204	1.377	1.535	1.675	1.799	1.907
1.50	0.500	0.584	0.794	0.992	1.169	1.333	1.486	1.625	1.750	1.860
1.75	0.368	0.577	0.781	0.961	1.125	1.281	1.429	1.566	1.692	1.806
2.00	0.213	0.567	0.758	0.919	1.071	1.220	1.364	1.501	1.629	1.745
2.25	0.368	0.564	0.720	0.864	1.007	1.150	1.292	1.429	1.559	1.678
2.50	0.500	0.543	0.662	0.796	0.934	1.074	1.215	1.353	1.484	1.607

Table 9: Skewness calculated from five point scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.25	0.090	0.021	-0.016	-0.106	-0.237	-0.352	-0.434	-0.487
0.50	0.000	0.000	-0.040	-0.212	-0.455	-0.674	-0.836	-0.943
0.75	-0.090	-0.023	-0.077	-0.314	-0.637	-0.942	-1.178	-1.342
1.00	0.000	-0.008	-0.127	-0.401	-0.768	-1.136	-1.440	-1.663
1.25	0.090	-0.004	-0.180	-0.459	-0.839	-1.247	-1.608	-1.891
1.50	0.000	-0.054	-0.218	-0.478	-0.848	-1.275	-1.683	-2.023
1.75	-0.091	-0.105	-0.224	-0.454	-0.800	-1.230	-1.670	-2.062
Or2.00	-0.021	-0.098	-0.195	-0.394	-0.710	-1.127	-1.584	-2.017

Table 10: Kurtosis calculated using a Five point scale

Standard Deviation

Mean	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00
0.00	0.046	0.358	1.187	2.621	4.141	5.499	6.646	7.601
0.25	0.083	0.325	1.167	2.563	4.085	5.465	6.636	7.610
0.50	0.063	0.291	1.104	2.400	3.921	5.362	6.600	7.627
0.75	0.083	0.320	1.000	2.160	3.666	5.184	6.520	7.630
1.00	0.046	0.338	0.860	1.879	3.341	4.924	6.371	7.588
1.25	0.083	0.268	0.701	1.586	2.968	4.582	6.131	7.468
1.50	0.063	0.171	0.545	1.302	2.564	4.160	5.787	7.244
1.75	0.080	0.124	0.407	1.033	2.148	3.674	5.339	6.902
2.00	0.021	0.094	0.289	0.786	1.737	3.148	4.801	6.441

**Figure 1: The Normal Curve
N(0,1)**
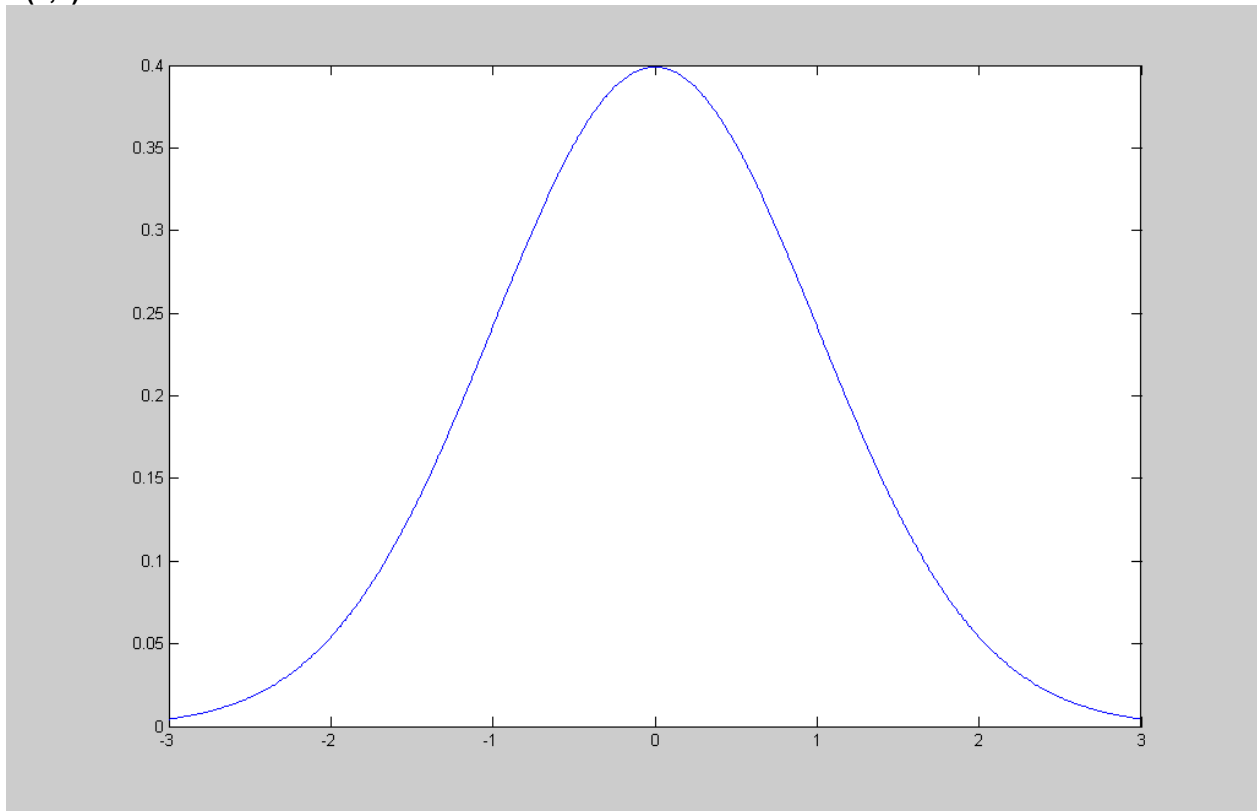
Figure 2: Normal Curve N(1,1)
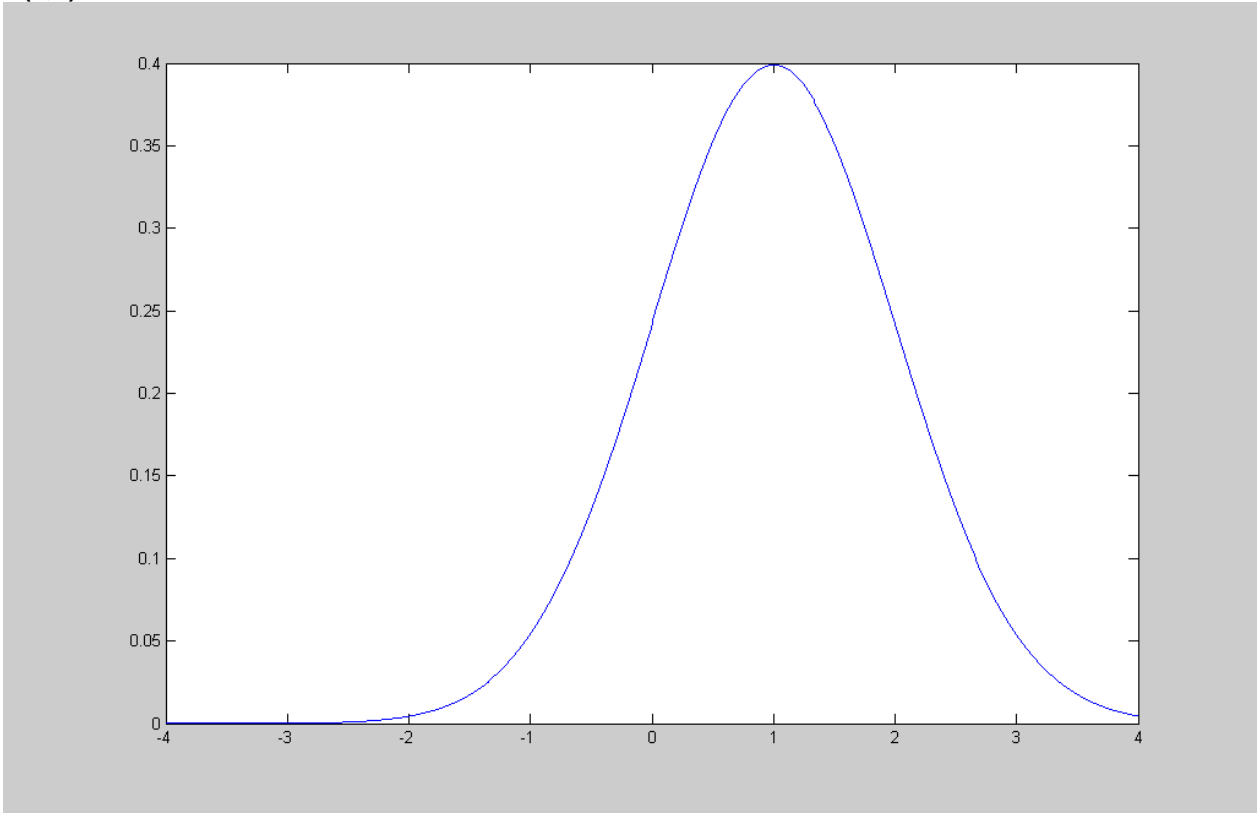
Figure 3: Normal Curve N(0, 2)
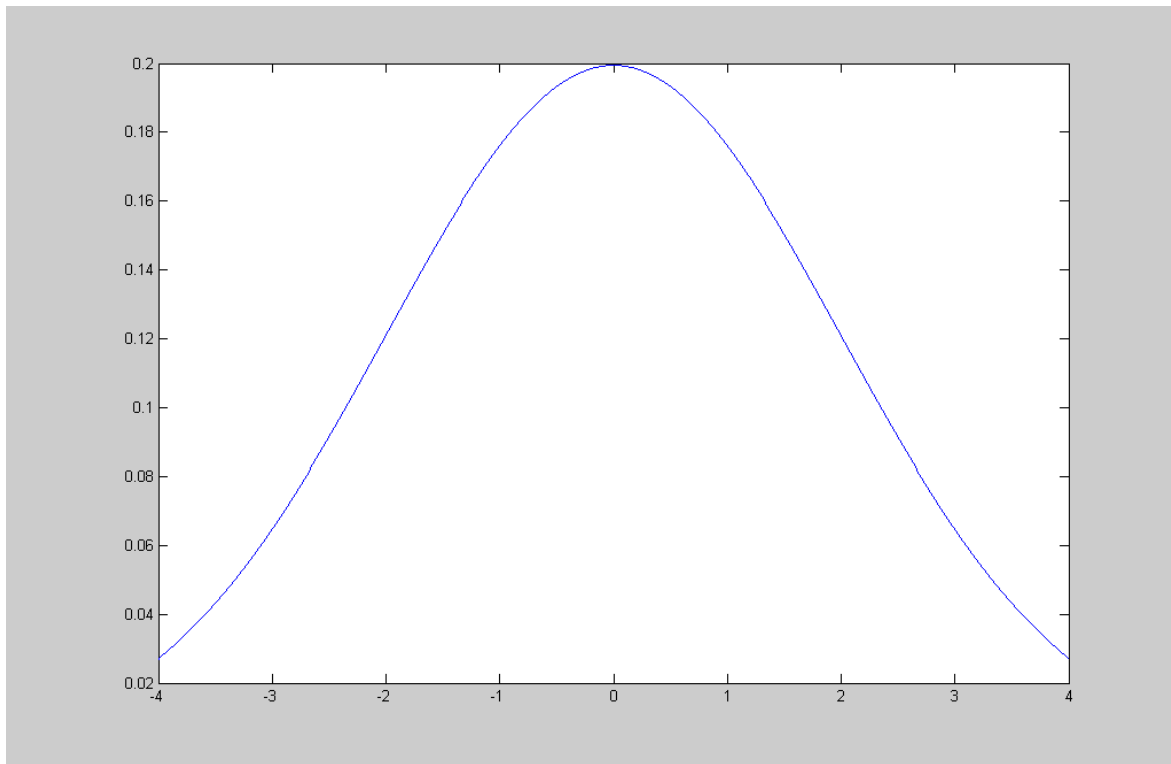
Figure 4 A One-tailed Distribution:
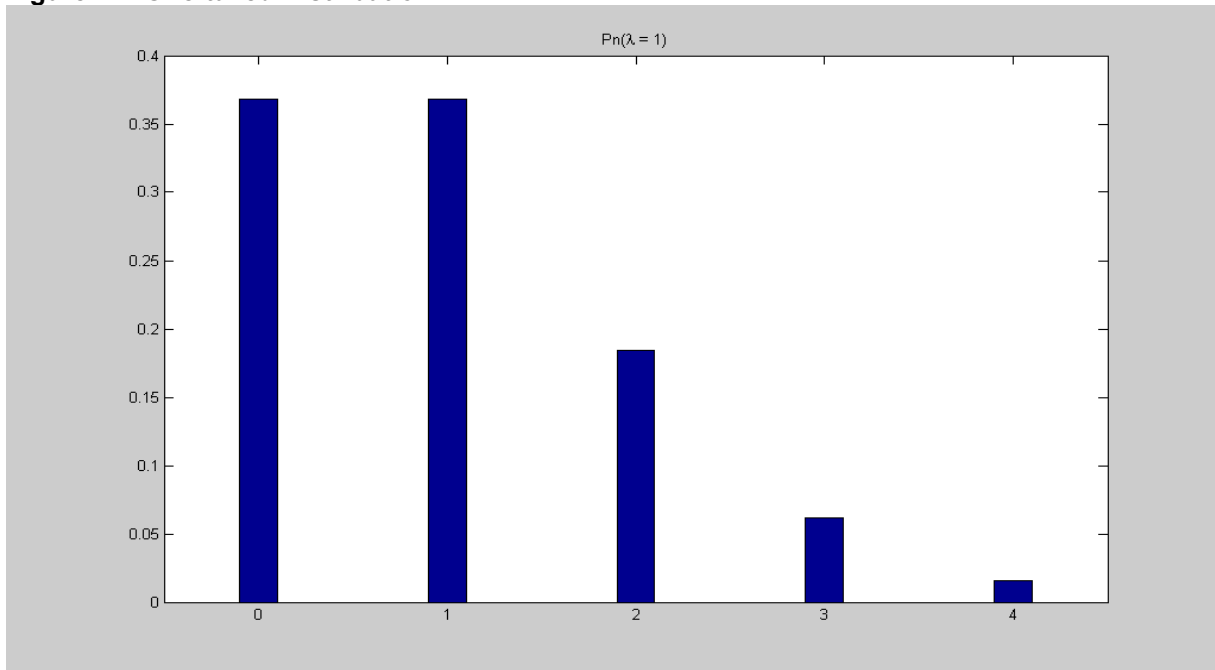
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THE CONVERGENCE PROCESS OF EUROPEAN ACCOUNTING CURRICULA

Alexandra I. Muţiu, Babeş Bolyai University, Cluj-Napoca, Romania
Adriana Tiron Tudor, Babeş Bolyai University, Cluj-Napoca, Romania

ABSTRACT

The purpose of our research is to draw a solid theoretical framework to be used in future empirical research in field of accounting education. We develop a qualitative research in accounting education at European academic accounting education level by analyzing the key factors that influence the reform in academic accounting education and the reasons behind them. We use analytical induction for systematic examination of similarities between accounting educational references at European and international level in order to develop our research. Also we use deductive reasoning to reach our conclusions from previously known facts. Being a qualitative research, our study presents an exploratory approach. We try to prove our research findings using logic of confirmation by citing the arguments, which represent the baseline of issuing ideas.

Keywords: Accounting Education, Accounting Profession, International Educational Standards, Universities' Curricula

1. INTRODUCTION

In recent years, at least three major factors had a significant impact on the business environment for which teachers prepare graduates: technology, globalization and the increased concentration of power among certain markets investors. In this context, running businesses in a world where advanced technology, globalization of commerce and complex transactions become extremely challenging. Nowadays, accounting goes beyond producing information, accountant's role being more crucial in decision-making process. In this way, management's expectations are very high where the accountant's work is concern: they want the best possible information almost instantly. But these expectations can't be met by an accountant who doesn't have the proper accounting education. Bedford Report (AECC, 1986) underlined this phenomena fifteen years ago by saying: "…corporate managers prefer the advice of accounting information experts who understand the organization as a whole and the strategic and tactical problems of senior management; technical knowledge of financial reporting continues to be required, but in addition, the more capable accounting executives need to know how to design, diagnose, and monitor systems for planning and controlling operations and for evaluating proposals submitted by others. We can take a broad view over the accountant's work and state that theirs main scope is to add value to the company."

Albrecht [2002, p. 43] highlights the value chain accountants are involved in: business process, data and information ending up with knowledge and decision process. He concludes his theory that academics are teaching too much at the lower end of the value chain (n.a. business process, data, information) and not enough at the upper level. Hilton [2005, p.5] strengthens the same idea: "adding value can be done through providing information for decision making and planning, and proactively participating as part of the management team in the decision-making and planning processes; assisting managers in directing and controlling operational activities; assessing the organization's competitive position and working with other managers to ensure the organization's long-run competitiveness in its industry".

The unprecedented crisis moments caused by corporate scandals like Enron and WorldCom originated sensitive questions regarding the accounting professionalism: are the accountants prepared for these moments? Are they well trained professionally speaking in order to face the challenges? [Tiron and Mutiu, 2007]. In order to learn from the facts, professors should give students in upper-level accounting classes the opportunity to apply their knowledge of the scandals through critical-thinking exercises that encourage them to explore the economic, social, political and ethical implications of accounting decisions [Titard, Braun and Meyer, 2004, p.56] Within the 150th Anniversary Conference of Chartered Accountants of Scotland held in Edinburg in 2004, Graham Ward, former president of IFAC said: "given the recent regulatory developments in the light of corporate collapses, it is especially important to

demonstrate our professionalism. This demonstration is fundamental to the success of tomorrow's accountants because our professionalism – our very license to operate - is being questioned."

The aim of accounting education is to assist accountants in acquiring the knowledge and the practical experience for performing at the highest possible quality level. In this way, professional bodies, which provide professional knowledge for practitioners, play a particular role on the one hand and, on the other hand, universities, which provide modern education curricula. By having the main target to serve the business profession, universities should adapt their curricula according to the market needs.

In this circumstance the future of the accounting education depends on how proactive teachers are and on the way universities can meet the necessities of the economic world's ongoing change. High trade literature (Albrecht and Sack in 2000 and 2002, Dusch and Wambsganss in 2006, Hurt in 2007, etc) reflects concerns regarding the perilous academic accounting education is. Moreover, the accounting profession's organisms (IFAC, IAAER, UNCTAD, GAE, AAA, ACCA, etc.) are demanding changes in accounting education to be made before the image of the profession will be affected. The future image of the accounting profession undoubtedly depends on the improvements made in the quality of education.

2. METHODOLOGY
The research methodology is based on scientific epistemology. A critical and mostly inductive research has been generated the obtaining of verifiable knowledge which contributes through their value to the development of the scientific knowledge in this area. Our vision is to build new hypothesis and opinions supported by the preliminary analyze of the present knowledge and specific phenomena. Besides inductive research, deductive research is also playing an important role in the consolidation process of the research's results.

The research methodology implies gathering all possible existing theory, concepts, ideas and opinions of high rated specialists and a comparative approach of different visions on two levels: conceptual (literature and existing regulations) and de facto (the actual stage of European academic accounting education).

The proposed research's topic is based on fundamental research which focuses on analyzing information by description, offering the useful instruments in order to perform analyze, launching ideas and believes. It allows, based on existing theories and concepts, to draw essential marking lines in the accounting education domain which assure the pre-requisite of the research.

The first phase of the research is represented by offering a general overview of one of the most important aspect of the nowadays accounting profession: accounting education. Starting with the actual necessity of an accountant's work: to involve itself in decision making process and underlining his/her power in creation value process, our research reaches a sensitive issue: accountant professionalism. A key role in this matter is played by the accounting academic education. High rated articles and papers, reports and recommendations were investigated through a harshly documentation in order to identify the preoccupation of specialists over the last almost twenty years.

The second phase of the research was devoted to examination process of the governmental acts, reports and standards issued by International and European professional organisms.

The documentation process followed by observation helped us to use a comparative approach on both levels: International and European in order to identify the requests of the most active by professional organisms. By offering explanations on similarities and differences observed in our effort to establish a linked relation, we designed a necessity's perimeter of academic accounting education in Europe. We continued in depth our research at European academic accounting education level by analyzing the key factors that influence the reform in academic accounting education and the reasons behind them.
The tools used in this phase permitted us to draw scientific conclusions. Based on the achieved results and using observation and direct analyze we identified possible answers for the questions: Why is academic education in a continuing reform period, in general and at European level in particular; what is the degree of harmonization accounting curricula at university level?

3. RESULTS
Accounting education has become one of the most debated issues in the international trade literature, particularly over the past twenty years. The importance of developing an accounting education was

continuously signaling by the scientific world: Albrecht and Sack in 2000 warned against the uncertain and risky future of accounting education in the context of great international bankruptcies and scandals; Gabbin in 2002 underlined the idea of a deadlock in accounting education, due to its lack of adaptation to the realities of the economic environment, has started to develop first in USA and after in Europe. Moreover, a significant number of representative professional organizations (AECC in 1986 issued the *Bedford Report*, IMA published three studies: *Counting More, Counting Less* in 1999; *The Practice Analysis of Management Accounting* in 1996 and *What Corporate America Wants in Entry-Level Accountants* in 1994; UNCTAD issued in 1991 *The Report from the 16th session* which stated that a new model curriculum represents an imperative need for a global accounting profession.) and big audit and accounting companies have militated (in 1989 the top eight multinational companies published *The Big 8 White Paper*) to put this burning topic in the scene of universities and professional accounting bodies. Later on, in 2005, IFAC and IAEAR joined their forces and brought an important contribution to the establishment of an international accounting education framework by issuing the implementation strategy for accounting education providers.

The designing process of accounting curricula represents a great challenge both at academic level and long life learning education program. In this respect, Barsky, Massey and Thibodeau published their findings in 2003 regarding the core competencies and drawn up ways these competences can be integrated in the Accounting curricula. Based on Bolt-Lee and Foster's work (who identified the AICPA's competencies framework regarding accounting education in 2003), Stout, Borden, German and Monahan developed in 2004 a master of accountancy program in compliance with AICPA's requests. In addition, in 2004, Carr and Mathews described the way accounting curricula was improved in New Zeeland University as a reaction from the CPAs Institute, and, in the same year, Ahmad and Gao described the problems faced during the last fifty years in order to develop the accounting curricula.

A major role in accounting education has been playing by IAESB, who published so far eight education standards in order to support training of professional accountants. International Education Standards (IES) for professional accountants are considered to be generally accepted good practice standards in the field of education and professional development. IESs establish the essential elements of the education process at a certain level, being internationally recognized. Moreover, its role is to ensure quality and uniformity in accounting education, which represents the ground for attaining the convergence of international accounting, auditing and public sector standards. IES provides a uniform general global framework for education; they promote convergence in the application of technical and practice standards, contributing to the cooperation of accounting practitioners, university teachers, representatives of the business community and the public. In order to achieve its goal, IESs stipulate a certain level of required professional knowledge, professional skills, values, ethics and professional attitudes, developing a continuing education approach over the whole duration of life.

IES framework defines the objectives and functioning procedures of EDCOM (IFAC Technical Committee on Control Education), the aim and the area of applicability of IESs and ways in which standards can be adopted and applied. IESs are structured on two levels: the stage of prequalification of a professional accountant and the continuing professional training of professional accountants. IES 1 to 6, implemented starting with January 2005, are related with the first mentioned level, focusing on academic stage and continuing with training stage required for obtaining the quality of expert accountant or licensed accountant. IES 7, came into force with January 2006, is concerned with the continuing professional training of professional accountants, throughout their whole active life in the profession. These standards are: IES 1 - Entry Requirements to a Program of Professional Accounting Education - describes the requirements for the access of IFAC members to a professional program, IES 2 - Content of Professional Accounting Education Programs - establishes the knowledge and competences required for the work of a professional accountant, IES 3 - Professional Skills - includes a series of required professional skills and emphasizes that general education assists in developing these skills, IES 4 - Professional Values, Ethics and Attitudes - establishes the required professional values, ethics and attitudes and the minimum study areas, IES 5 - Practical Experience Requirements - aims to make sure that candidates have the practical experience necessary for becoming professional accountants, IES 6 - Assessments of Professional Capabilities and Competence - stipulates a final evaluation before the qualification as a professional accountant, IES 7 - Continuing Professional Development - stipulates that lifelong learning and continuing professional education is compulsory for all professional accountants. In addition, we have to mention the existence of the IES 8

- Competence Requirements for Audit Professionals - which prescribes competence requirements for audit professionals. In order to better understanding of IES, IAESB issued guidelines and papers whose role is to assist IES application.

One of the aims of the IESs is to identify the subject areas that need to be covered, rather than to suggest actual courses that should be taken [Introduction to IES, pct. 23]. In this sense, we have to be conscious that not the title of the course is important but the body of the discipline is the one who define the area is covered or not. In this way, Albrecht and Sack indicated that is not sufficient to change the curricula by adding more several new courses (Cheng, 2007). In their opinion, curricula need a drastic reform.

IFAC requests to all member bodies to ensure the conformity of national regulations with IES, admitting the existence of different education processes and systems as well as development stages [Introduction to IES, pct. 24]. As a consequence, IFAC member bodies are implementing IES at national level, and this situation is available at European Union level too. Furthermore, IFAC issued in 1996 the International Education Guideline no.9 (IEG 9) on pre-qualification education, assessment of professional competence and experience requirements of professional accountants and divides professional education in organizational and business knowledge, information technology knowledge and accounting and accounting related knowledge. According to this, accounting and accounting related knowledge should cover the following subjects: financial accounting and reporting, management accounting, taxation, business and commercial law, auditing, finance and financial management and professional ethics. Concerning the requirements on information technology knowledge, reference is made to the International Education Guideline no. 11 (IEG 11) Information Technology in the Accounting Curriculum.

IFAC supports UNCTAD on pre-qualification education, assessment of professional competence and experience requirements of professional accountants. UNCTAD has issued in 1999 the Global Curriculum for the Professional Education of Professional Accountants and revised in 2003 the Guideline for a Global Accounting Curriculum in order to promote global harmonization of professional qualification requirements, which can serve as a benchmark and would cut time and cost of negotiating mutual recognition agreements. This detailed model curriculum can be used as a starting point by countries wishing to bring their system of qualification into line with global requirements [Karreman, 2000].

At European level, the conformity to IES is approved by the 8th EU Directive, revised in May 2006 which laid down common standards for the education, training and qualification of statutory auditors. Moreover, a Communication of the European Union on the Reinforcement of the Role of Statutory Auditing in EU stipulates: in order to ensure the continuous relevance of educational requirements, the content of the curriculum should be evaluated in relation to relevant developments in business practice and financial reporting (e.g. IAS), taking into account the international researches and developments. Such an evaluation should be based on international directions in the field of education such as IFAC International Education Standards for Professional Accountants.

Another significant act is The European Union General Directive on mutual recognition. The European Commission is currently involved in harmonizing process of different professions within the EU. Regarding accounting profession, they are confronted with problems concerning mutual recognition, even at European level there is a European Qualification Framework which defines categories of learning outcomes for a qualification. The European Qualification Framework (EQF) defines Level 6 qualifications (or learning outcomes) as "providing access to professional employment opportunities and are often career entry qualifications for professional and managerial work". The Lisbon European Council in 2000 concluded that increased transparency of qualifications should be one of the main components necessary to adapt education and training systems in the Community to the demands of the knowledge society. Furthermore, the Barcelona European Council in 2002 called for both closer cooperation in the university sector and the improvement of transparency and recognition methods in the area of vocational education and training.

As a matter of market globalization process, eight of Europe's leading accountancy Institutes from Europe are working together to bring their professional qualifications closer together through the Common Content Project. The Project's objective seeks to unify the professional entry-level qualifications of the participating Institutes, while ensuring that those qualifications remain high level

and meet changing public expectations. It maximizes the common elements of the professional qualifications while retaining national elements unique to each country. The Common Content focuses on the following services provided by professional accountants: assurance and related services, performance measurement and reporting, strategic and business management, financial management and taxation and legal services.

The Institutes have identified the learning outcomes that entry-level professional accountants need to achieve and the knowledge, skills and attributes they need to acquire in order to provide these services. One of its main provisions consists in entry-level professional accountants' description: an entry-level professional accountant should be capable of performing those aspects of the services of professional accountants that are specified in the common learning outcomes and national learning outcomes. The achievement of the common and national learning outcomes will need the achievement of interdisciplinary and other competencies and attributes. A Skills Framework was developed in order to specify for the entry level of professional accountant the next aspects: the cognitive and behavioral skills required to apply the learning outcomes in the five service areas, the integrative and multidisciplinary skills required to bring together the learning outcomes and knowledge in the above service areas, the professional values, ethics and attitudes required of such an individual and the appropriate methods of assessment to provide evidence of achievement of the skill level set for each statement.

4. CONCLUSIONS

The European universities have been confronted with two great challenges in Burlaud, Herniet and Perez opinion (2005, p.232) like: the implementation of international accounting education standards overlapping the transition to the European education system with the three degrees: bachelor's, master's and doctoral degree throughout Bologna process.

Bologna process generated a huge movement concerning the academic curricula for accounting specialization. Firstly, the important changes in the life of companies and in economic environment were taking into consideration the modernization of academic accounting curricula. According to the Accounting Sectorial Report, issued by UNEP DTIE in 2002, the main factors that significantly influence the academic accounting curricula are: the technical revolution (e-commerce, real-time reporting, web-based reporting, new reporting languages, etc), the emergence of global and regional quality control issues, the convergence of global capital markets (which led accounting standard setters worldwide to concentrate their resources on capital market focused convergence issues) and the degree of sustainability (going at corporate level, new area like environmental financial accounting and management accounting or sustainability accounting has to be developed). Secondly, the academic educational system was aligning the scheme LMD: license (3 years), master (2 years), doctorate (3 years), in the majority of European countries. The third, but not the least in importance, was the reorganizing process of the curricula totally or in part in accordance with the exigency of international educational standards issue by IFAC. The main scope of restructuring the academic diplomas was made with a double purpose: to achieve a greater compatibility and comparability of degree structures, credit systems and quality assurance procedures and for relieving the free movement of students between European universities and extend prospects for mutual accreditation or recognition of degrees by European Union member states as part of a public service for European higher education. By doing so, intra-European academic mobility would be encouraged and the attractiveness of Europe as a study destination for non-Europeans would also be greatly enhanced.

The results obtained so far permit us to make some judgments between both International and European regulations and at European level, between European regulations itself. The first comparison we performed is between the requirements comprised in the 8th EU Directive with those issued by IAEAR, especially IEG 9. From the association of these two regulations we can observe from the beginning the entry requirements are quite comparable. Going deeper in the substance of the regulations, we can observe the first difference: the 8th EU Directive requires a university entrance level qualification since IEG 9 an education level equivalent to that for admission into a recognized university degree program or its equivalent is set as minimum. The second discrepancy in between is referring to requirements on general education: while the 8th EU Directive contains no requirements on general education IEG 9 is more specific: it states that, although general education requirements vary greatly from program to program and from country to country, a part of the education program must focus on the development of general knowledge, intellectual skills and communication skills through a broad range of subjects that provide students with a grounding in arts, sciences and humanities. We can notice from here that IEG 9 is more detailed and its setters were preoccupied to clarify all possible aspects to

avoid future misunderstanding. In addition, we can underline their interest in this field by going as far as possible in depth of the problem's substance in order to cover all the aspects of the issue.

The second comparison was made between the Common Content Project and the IES. According to the Common Content Report from January 2007, IES 1 – 6 have been reviewed and compared against the skills framework. The result of the comparison shows that the Common Content Project covers IES from 1 to 7 regarding the service area. Moreover, the Skills Framework recommendations go to a greater level of detail in some areas and sufficiently meet all areas. These findings can explain successfully why the Common Content Project is considered to become a benchmark for the most European university and this trend certify it will become the reference point in European accounting education.

Another second level comparison can be done at European level between the 8th EU Directive and the Skills Framework. The findings show us the Skills Framework cover all the items within the 8th Directive. Additionally, from a comparison on learning outcomes issue between the European Qualification Framework (EQF) and the requirements of the Common Content Project we can conclude the prior regulation covers almost closest EQF.

As a final remark, we can stress that the achievement of a global accounting education at Europe is just a matter of time in which the majority of universities will proceed to adjust their accounting curricula with Common Content Project. Definitely, factors like universities' independence and autonomy and national policy on accounting education play a crucial role in this matter.

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FLOW-GRAPH MODEL FOR CYCLE TIME ANALYSIS IN ROBOTIC CELLS

Kaveh Salehi-Gilani, Ryerson University, Toronto, Ontario, Canada
Sareh Shafiei-mofared, Ryerson University, Toronto, Ontario, Canada
Kouroush Jenab, Ryerson University, Toronto, Ontario, Canada

ABSTRACT

The main purpose of this paper is to study the cycle time in a robotic cell. The central robot is used to load, unload and, move the parts among machines. Assuming deterministic robot traveling, loading and unloading time elements and stochastic part process time element, this paper focuses on examining the scenarios composed of the part sequencing methods and the robot moves in the cell. A flow-graph model is developed to analyze the cycle times for the scenarios where the part processing time element is stochastic.

Keywords: *Cycle time, Robotic cell, Cellular manufacturing, Simulation, Flow-graph.*

1. INTRODUCTION

Robots are being used more and more in industry as a substitute of human work force. The precision and productivity aspect of robots are the major reasons manufacturing has gone through a huge technological achievements in such a short time. There are two major part sequencing and robot move in the robotic cell called *flow-shop* and *open-shop*. The order of operation in flow-line dictates the robot moves from one machine to the next one in a linear fashion, which means the robot will not move until the part is ready for transfer to the next machine. In open-shop, the robot has the freedom to serve (i.e., loading, unloading, part transfer) the machines in different orders resulting in cycle time variations. A great deal of work has been put into analyzing the part sequencing and robot moves in a robotic cell shown in Figure 1. The main purpose of the researches in this field is to analyze the cycle time. However, to find optimum scenario based on minimum cycle time, the existing approaches experienced the NP-complete problems when the number of machines is increased. Also, to simplify the problem, the analytical methods assume the part processing and robot traveling times are deterministic. Otherwise, the simulation technique was used to study the cycle time.

Figure 1 Robotic cell layout
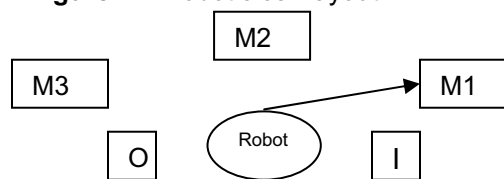
Hall et al (1988) explored the scheduling of operations in a manufacturing robotic cell that respectively produces a family of similar parts on two or three machines. Liu & Lin (1993) developed two dynamic sequencing models through the use of concurrent modeling capabilities of colored and timed Petri nets. Crama et al (1994) examined cyclic scheduling problems that exist in a robotic flow-shops as well as models for such problems, and the complexity of solving these problems. Kamoun et al (1995) studied the scheduling problems that were associated with robot-served manufacturing cells. The layout of the cells was in such a way that machines are configured in flow-shop orientation. Hwang & Cheng (1998) considered the fact that when we consider the problem of no preemptive scheduling of a set of tasks in a processor for which no feasible solution exists, some tasks may have to be rejected so that a schedule can be generated for the rest. Agnetis & Pacciarelli, (2000) investigated the productivity gained by the additional flexibility introduced by the FMCs. Authors proposed new lower bounds for the 1-unit and 2-unit robot move cycles under the new problem domain for the flow-shop type robot move cycles. Brauner & Finke (2001) worked on the so-called robotic cells (flow-shops with a central robot that carries out the transfers of the parts between the machines). Che et al (2003) explored the 2-degree cyclic scheduling of identical parts in a buffer less robotic flow-shop where there are two identical parts enter and leave the

system in a cycle. Gultekin et al (2003) studied a flexible manufacturing cell with identical processing time on which the loading and unloading of machines were made by a robot. Sriskandarajah et al (2004) determined the optimum sequence of the robotic cell and the manner in which parts were moved to maximize the long-run rate of repetitive production of parts. Dawandei et al (2005) provided a classification scheme for robotic cell scheduling problems that was based on three characteristics: machine environment, processing restrictions, and objective function. Masoudi & Maalej (2006) dealt with a flexible manufacturing cell using simulation model. The goal was to optimize part transfer cycle by considering the productivity as performance criteria. Droubouchevitch et al (2006) tried to determine the robot move sequence and the sequence in which parts were to be processed so as to maximize the productivity.

All above, the necessity of having an analytical model to analyze the cycle time in a robotic cell where the time elements are stochastic becomes important. Therefore, building upon the proven application of flow-graph model, we investigate the flow-graph theoretical and practical benefits in analyzing the cycle time of a robotic cell.

1.1 Notation and assumptions

The following notations are used to describe the operations in a robotic cell:
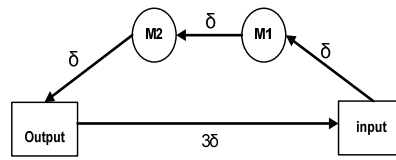
I/O	Input / output of the robotic cell
m	Total number of machines in a robotic cell.
δ	Time the robotic arm spends to move from one machine to the next.
E	Time taken by the robot to pick up/drop off the part at I/O or the time taken by the robot to load and unload a part onto any machine.
P_i	Manufacturing processing time on the machine i with mean μ_i and standard deviation σ_i, $i=1,2,\ldots, m$
$M_i{}^-$	Denotes the robot activity of loading a part on machine M_j.
$M_i{}^+$	Denotes the robot activity of unloading a finished part from machine M_j.
T_j	Represents the jth cycle time
S_j	Represents the jth cycle sequence
E	$E = (e_1,.., e_m, M_i{}^h)$, represents the current state of the system, where e_i is Ø if machine M_i is free and is Ω) if machine M_i occupied by a part, and h is '-' if the robot has just loaded machine M_i and is '+" if the robot has just unloaded machine M_i.
E^*	State of the cell in which all machines are occupied with parts and the robot is empty at I/O.
K	Total number of part types
w	Transmittance, which is equivalent of the flow-graph model
p	Probability of transmission
$M_t(s)$	Moment generating function (MGF)

- We also define the pickup, load, unload, and drop operation performed by the robot as $\delta > 0$.
- The input buffer, I, machines, $M_1, M_2, \ldots, M_m$
- The position of the robotic cell at any given time of time is defined as $(Ø, Ω, M_i)$. Ø or Ω could be replaced by either I or O to show if a particular machine is occupied or available.
- All the machines are assumed to be buffer less.
- $\alpha = 4\delta + 4\varepsilon, \ \beta = 4\delta + 2\varepsilon$

2. ROBOTIC CELL CYCLE TIME

Consider a flow-shop with a single part and two-machine robotic cell, the sequence starts with the movement of the robot to the input. We assume there is always a part available at the input when the robot arrives. The part is then picked up and moved to M_1. The M_1 is loaded and the robot is idle until the part is processed. The part is then moved to $M2$ and the robot waits until the machine finishes the job. The part is unloaded and moved to output, where it is dropped. The robot moves back to the initial position (I) and the cycle repeats as shown in Figure 2.

Figure 2   Cycle sequence S$_1$

The state of the system is shown with $E = \{e_1, e_2, e_3\}$ where $e_1, e_2 = \{\emptyset, \Omega\}$ means that the corresponding machine is either available or occupied by a part. Also, $e_3= \{l, O, M_1^-, M_2^-, M_1^+, M_2^+\}$ refers to the robot status that would be at input, output, loading *M1*, loading *M2*, unloading *M1*, unloading *M2*, respectively. Using this notation, the state transition in a cycle shown in Figure 2 can be expressed by

$$S_1 = (\phi,\phi,I) \rightarrow (\Omega,\phi,M_1^-) \rightarrow (\Omega,\phi,M_1^+) \rightarrow (\phi,\Omega,M_2^-) \rightarrow (\phi,\Omega,M_2^+) \rightarrow (\phi,\phi,O) \rightarrow (\phi,\phi,I)$$

Therefore, the cycle time can be written as

$$\begin{aligned} T_1 &= \varepsilon + \delta + \varepsilon + 3\delta + \varepsilon + \delta\varepsilon + P_1 + \varepsilon + \delta + \varepsilon + P_2 \\ &= 6\varepsilon + 6\delta + P_1 + P_2 \end{aligned} \tag{1}$$

Having the same situation in an open-shop, there are several options that the robot may take to complete a cycle. For example in Figure 3, the cycle starts by robot positioning the initial position (*I*), followed by picking up, moving and loading the part on M_1, then waits until the part is processed. The part is picked up and moved to M_2 where it is loaded. At this point machine 1 is available; therefore, the robot then moves back to the input (*I*), picks up another part and move it to M_1 and loads it on M_1. Robot then moves back to M_2 and picks up the part that has been processed and drops it at output (*O*). It then moves back to *M1* and picks up the part that has been processed and moves it back to M_2 (which is available now). Robot waits until M_2 has finished the job. The part is then picked up from M_2 and moved to output (*O*) where it is dropped.

Figure 3   Cycle sequence S2
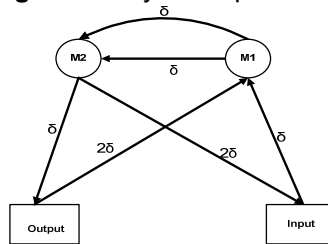
The state transition for this option is

$$S_2 = (\phi,\phi,I) \rightarrow (\Omega,\phi,M_1^-) \rightarrow (\Omega,\phi,M_1^+) \rightarrow (\phi,\Omega,M_2^-) \rightarrow (\phi,\Omega,I) \rightarrow (\Omega,\phi,M_1^-) \rightarrow (\Omega,\phi,M_2^+) \rightarrow (\Omega,\phi,O) \rightarrow$$
$$(\Omega,\phi,M_1^+) \rightarrow (\Omega,\phi,M_2^-) \rightarrow (\phi,\Omega,I)$$

Therefore, the cycle time can be defined as follows:

$$\begin{aligned} T_2 &= \varepsilon + \delta + \varepsilon + 2\delta + w_1 + \varepsilon + \delta + \varepsilon + 2\delta + \varepsilon + \delta + \varepsilon + \delta + w_2 \\ &= 6\varepsilon + 8\delta + w_1 + w_2 \end{aligned} \tag{2}$$

where $w_1 = \max(0, a - 4\delta - 2\varepsilon - w_2)$ (3) and $w_2 = \max(0, b - 4\delta - 2\varepsilon)$ (4) are the robot waiting time at M_1 and M_2.. This approach may be used for a three machine robotic cell to find the optimal scenario. However, due to infinite state for a cell with 4 and more machines, the cycle time analysis is being complicated.

3. FLOW-GRAPH MODEL

Consider a robotic cell including three machines and a robot in center. To analyze the cycle time for different scenarios in this robotic cell, a flow-graph-based model is developed. Using stepwise reduction feature, the large-scale, complex robotic cell can be simplified. As shown in Figure 4, the flow-graph model is made up of several nodes and links. The node represents the machine in the cell and the link shows the loading, unloading, robot traveling and part processing times, which is a function of deterministic and stochastic time elements so called transmittance (e.g., A, B, C, D). Having a closed flow-graph, the flow-graph model can be simplified by using the moment generating function (MGF). The general form of MGF is $M_t(s)$ and is calculated via $M_t(s) = \int e^{st} f(t) \bullet dt$ .where t is a time random variable.

For example, if the time element is normally distributed with μ and σ, the MFG is $M_t(s) = e^{\mu s + \frac{1}{2}\sigma^2 s^2}$. The ultimate goal here, is to reduce a complex flow-graph into an equivalent transmittance w. To do so, the entire closed-loop structure is replaced by a dummy transmittance that links the first node to the last (in our case, I to O). This dummy link is represented by w and can be easily calculated through using the topology Equation (5). Equal the TP function to zero would enable us to solve for w. (Jenab and Dhillon, 2005)

$$TP = 1 - \sum_{i=1}^{l} L_i + \sum_{i}^{l}\sum_{j}^{l} L_i \bullet L_j + ... = 0 \qquad (5)$$

where L_i is a first order loop and L_i and L_j are second order loops. The first order loop is used when there is only one disjointed loop in the flow-graph. The second order loop is product of two disjoint loops in the flow-graph. To illustrate the concept of flow-graph and its implementation, we will apply the theory on the cycle sequence S_2 in Figure 4.

Figure 4   Cycle sequence for three machines in the robotic cell
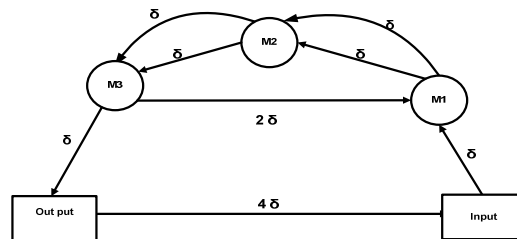
It should be noted that probability plays an important role in TP equation; therefore, in these kinds of situations, we will consider a probability of p for one path, and $(1-p)$ for the other one. In Figure 5, we assume that $Pi \sim N(\mu i, \sigma i) \quad \forall i$, and loading/unloading and traveling time elements (i.e., ε, δ) are constant. In order to find the TP equation, we will need to explore L_i, which represents an independent loop. In Figure 4, there exist two disjoint loops as follows:

$$L_1 = \frac{ABCD}{w} \text{ , and } L_2 = \frac{BCD}{w} \text{ . Therefore, TP equation is } TP = 1 - \left[\frac{ABCD}{w} + \frac{BCE}{w} \right] = 0 \qquad (6)$$

Solving for w will yield: $w = \dfrac{1}{ABC + BCD}$ \qquad (7)

Even though the time elements may have any type of distribution functions, here, we assume that A, B, C, D, and E follow a normally distribution function, therefore, the enables us to

find: $A = e^{(2s+\delta)s}$, $B = e^{(\mu_1+2s+\delta)S+\frac{1}{2}\sigma_1^2+S^2}$, $C = e^{(\mu_2+2s+\delta)S+\frac{1}{2}\sigma_2^2+S^2}$, $D = p \bullet e^{(\mu_3+2s+\delta)S+\frac{1}{2}\sigma_3^2+S^2}$ and

$E = (1-P).e^{(2s+\delta)S}$. By substituting A, B, C, D, and E into Equation (9), w can be found:

$$w = \cfrac{1}{p.e^{(\mu_1+\mu_2+\mu_3+8s+4\delta)+\frac{1}{2}(\sigma_1^2 s+\sigma_2^2+\sigma_3^2)S^2} + (1-p).e^{(\mu_1+\mu_2+6s+4\sigma)S+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2}} \qquad (8)$$

In order to find expected value of the cycle time, $E[T_c]$, we need to find the first derivative of w with respect to S, and set S to zero. Therefore:

$$\frac{\partial W}{\partial S} = \cfrac{[p.[(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2+\sigma_3^2)S].e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)S+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2}}{[[p.e^{(\mu_1+\mu_2+\mu_3+6s+4\delta)+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2+\frac{1}{2}(\sigma_1^2+\sigma_2^2+\sigma_3^2)S^2} + (1-p).e^{(\mu_1+\mu_2+6s+4\sigma)S+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2}}$$

$$\cfrac{+(1-p).[(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2)S].e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)S+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2}}{+(1-p).e^{(\mu_1+\mu_2+\mu_3+6s+4\delta)S+\frac{1}{2}(\sigma_1^2+\sigma_2^2)S^2+\frac{1}{2}(\sigma_1^2+\sigma_2^2+\sigma_3^2)S^2}]^2} \qquad (9)$$

Setting S=0, will give us the expected valued of a random variable of time $E[T_c]$.

$$\frac{\partial W}{\partial S}\bigg|_{S=0} = p.(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(1-p).(\mu_1+\mu_2+6\varepsilon+4\delta) \qquad (10)$$

Because the probability p of a robot taking a specific path cannot exceed 1, a table that would show the value of $E[T_c]$ for each assumed value of p can be constructed. Also, to find the variance of the cycle time, the second derivative of w is required for Equation (11): $\sigma^2(T_c) = E(T_c^2)-[E(T_c)]^2$ \qquad (11)

By substituting S=0 into $\dfrac{\partial^2 w}{\partial s^2}$, $E(t^2)$ can be calculated.
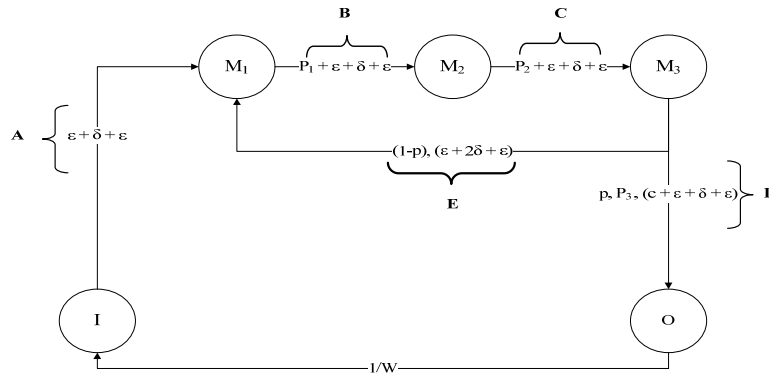
$$\frac{\partial^2 w}{\partial s^2} = -p.((\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2+\sigma_3^2).e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)})+(p).[\mu_1+\mu_2+6\varepsilon+4\delta)]$$

$$.((\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2+\sigma_3^2))+(1-p).[\mu_1+\mu_2+6\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2)]+$$

$$(1-p).(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)+(\mu_1^2+\mu_2^2+\mu_3^2))+(p).[\mu_1+\mu_1+6\varepsilon+4\delta)]+$$

$$((1-p).(\mu_1+\mu_2+6\varepsilon+4\delta)+[2p+2(1-p)]^2.p[\mu_1+\mu_2+8\varepsilon+4\delta)+(\sigma_1^2+\sigma_2^2+\sigma_3^2].$$

$$.e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)})+[(1-p)(1-p).[\mu_1+\mu_2+6\varepsilon+4\delta)] \qquad (12)$$

Thus,

$$E[t^2] = p.[(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)]^2 +(1-p)[\sigma_1^2+\sigma_2^2+\sigma_3^2).e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)} +$$
$$(p).[\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta] \qquad (13)$$

Figure 5   Flow-graph model for cycle sequence S2

Using Equation (11), the simple form of variance is

$$
\left\{
\begin{array}{l}
(\sigma_1^2 + \sigma_2^2 + \sigma_3^2).e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)}) + p.(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta) + \\
(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta)^2 + (\sigma_1^2 + \sigma_2^2 + \sigma_3^2).(\sigma_1^2 + \sigma_2^2) + \\
+ (1-p).(\mu_1 + \mu_2 + 6\varepsilon + 4\delta) + (1-p)(\mu_1 + \mu_2 + 6\varepsilon + 4\delta) + p(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta) + \\
(1-p).(\mu_1 + \mu_2 + 6\varepsilon + 4\delta) + [(2p + (1-p)]^2.p[(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta) + (\sigma_1^2 + \sigma_2^2 + \sigma_3^2)] \\
(.e^{(\mu_1+\mu_2+\mu_3+6\varepsilon+4\delta)}) + (1-p)^2.(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta) + \\
p(1-p)(\mu_1 + \mu_2 + 6\varepsilon + 4\delta)] + 2p(1-p)(\mu_1 + \mu_2 + 6\varepsilon + 4\delta)^2(\mu_1 + \mu_2 + \mu_3 + 6\varepsilon + 4\delta)
\end{array}
\right\}
\tag{14}
$$

Performing this process for all potential scenarios, the optimum scenario(s) with minimum cycle time can be found.

4.   CONCLUSION

This paper deals with the cycle time in a single part and multi-machine robotic cell. This robotic cells can be classified to flow-shop and open-shop based upon the possibility of robot moves among the machines. Depending robot moves and part sequencing, several scenarios can be formed. The number of the scenarios can be increased with the increase of the number of machines that lead to the NP-complete problem. This complexity also can be doubled when time elements (i.e., robot traveling, loading, and unloading times, part processing time) are stochastic. To deal with such situation, we developed the flow-graph model for the single part and multi-machine robotic cell when stochastic processing time is stochastic. Using reduction techniques and MGF, this model enables us to find the expected value of and standard deviation of the cycle time for all scenarios regardless of the size of the cell.

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WORKERS' INDUSTRIAL MILITANCY AND DEPENDENCY UPON THE STATE LEVER: THE PARADOX OF INDUSTRIAL RELATIONS IN HONG KONG

Grace O. M. Lee, City University of Hong Kong, Hong Kong

ABSTRACT:

Hong Kong was reverted from British rule back to China in 1997 and has since been integrated with its motherland as a special administrative region (SAR) under China's novel policy of 'one country two systems'. It is the purpose of this paper to explore and ascertain how labor and industrial relations have evolved during the last ten years of Hong Kong's experience as a highly autonomous entity, able to conserve its capitalist fabrics and lifestyle as guaranteed by the Basic Law (its 'mini-constitution') which China promulgates.

Hong Kong's post 1997 industrial relations arena has been compounded largely by waves of economic recession and labor market gluts, which follow closely after the political handover. Labor market doldrums pervaded for almost the first decade of the rule of the SAR government. Unemployment was high and widespread, affecting especially such vulnerable industries and trades as manufacturing, retail services, catering, building and construction and even transport and financial servicing. Trade unions were largely docile in coping with the pressure of layoff exercises as business lay off their employees because of closures or restructuring to save on labor overheads.

Such vicissitudes has bred an urban sub-class of workers located at the periphery of the labor market, most either of whom are unemployed, or on casual hiring on a part-time basis, or engaged by subcontractors on outsourced contracts. They are mostly low paid and inarticulate in representing collectively their interests as organized labor. Instead, expectations are placed upon the government to intervene with effective advantage to uplift them from urban poverty. A patent example has been the labor movement's lobby for government to legislate on minimum wage level and standard work hours. However, the government, anxious not to pervert a 'free' labor market, has been lukewarm in responding to these demands. Instead, it initiates a basically voluntaristic policy measure of encouraging employers and employees in the low pay industries to participate and enroll in a wage protection movement in the hope of bettering the wage conditions of the low pay workers.

In retrospect, organized labor in Hong Kong has been limited in representing and defending the industrial interests of the Hong Kong work force, especially the disadvantaged and marginal groups, in spite of its widened participation and influence in electoral politics. Besides,

the labor movement has been afflicted during the post-1997 years, by the problem of membership attrition due to retirement of aging members, as well as the drain of its vanguard blue-collar members displaced from employment due to their obsolescence in the withering manufacturing and construction industries. Collective bargaining that is union-based has remained undeveloped and sparse, partly because of employers' ethos not to recognize trade unions and partly due to the reluctance of the SAR government to legislate on mandatory collective bargaining rights, for fear of antagonizing capital and the business sector. However, pockets of collective bargaining activity, largely sustained in the traditional trades by custom and practice, is still recognizable during the post-1997 period. Typically, they are conducted periodically between the employer associations and the trade unions for reviewing and adjusting industry-wide pay norms. The Hong Kong Federation of Trade Unions, close to China and hitherto the largest union centre in the SAR, and its affiliates has been most active in performing such bargaining exercise, which are multi-employer in nature.

In the wake of an industrial relations impasse perpetuated by a growing urban sub-class (due to factors such as globalization and polarization between the rich and the poor) as well as a SAR administration anxious to rope-dance between capital and labor (rather than being resolved to intervene to uplift the industrially disadvantaged from their depressant conditions), there have been recent signs that Hong Kong workers might rise in arms to defend their collective interest and articulate their demands for protecting their wage and employment conditions. The explosion in their consciousness was vividly illustrated recently by an almost unprecedented case of worker militancy waged by the bar benders in a declining branch of the building and construction industry. The workers' offensive was probably provoked by their disillusion with the government's visible hands perceived as ineffective in protecting labor's cause. There was also a plight shared by the bar benders that their retreat, almost continuous since the trade declined because of receding activities in infrastructural building and private housing projects, would inflict upon them profound hardship if not arrested promptly. In a way, the proposal by their employers and the latter's associations in 2007 for a further annual cutback in their daily wage put the last straw on the camel's back. The workers were pushed into a defensive position of reluctant militancy to fight to halt the downward wage spiral.

The bar benders staged a trade-wide strike, which lasted for three months, almost, paralyzing most of the territory's construction projects. The employer associations stood firm initially but conceded finally in yielding to the bar benders' demands. The success, won by the embattled workers in a hard way, was landmark in demonstrating the capacity of the under-privileged in waging industrial unrest if they felt extremely deprived and threatened in their economic and occupational interests.

This paper hence proceeds to examine the typicality of the above case in the development of post-1997 industrial relations in Hong Kong and asks if the SAR administration should attach better attention to the grassroots grievances in society, if industrial and social stability were to be sustained and industrial exploitation were to be contained.

USES OF DATA MINING TO ENHANCE DECISION MAKING IN ACADEMIC INSTITUTIONS

Shamsul Chowdhury, Roosevelt University, Schaumburg, Illinois, USA.

ABSTRACT:

The purpose of the paper is to investigate how the academic institutions can be benefited from enhancing their decision making by using data mining (DM) techniques integrated with their DSS (Decision Support Systems) environment.

The main objective of the integrated environment is to help the decision maker to get access to accurate and reliable data in a timely manner to provide support and services to the students in particular and the community at large on a daily basis. Further the integrated environment would help the decision maker with research data for future planning. Key issues in the process are the identification of data sources and validation of the data quality. An academic institution usually captures data from student body during enrollment and creates enrollment reports, trends and other type of reports and statistics for decision-making.

The paper will present an on-going work in an academic institution in the mid-west, USA. The institution is a community college and serves the educational needs of a population of about 650,000 residing in more than 50 demographically diverse communities. The paper will demonstrate how the institution has successfully integrated DM capabilities into their DSS environment. The paper will further show the DM capabilities, which are offered by SPSS's Clementine and SAS's Enterprise Miner. It will also provide a comparative evaluation of these two software packages as to their effectiveness in academic program intervention and prediction.

Keywords: *Data Mining; DSS Environment; Data Quality; System Integration;*

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AUTHOR PROFILE:

Dr. Shamsul Chowdhury earned his Ph.D. from the University of Linköping, Sweden in 1990. He has taught at the Linköping University and Jönköping International Business School in Sweden for many years as an Assistant/Associate Professor. Currently he is an associate professor of Information System at the Walter E Heller College of Business Administration, Roosevelt University, Chicago; IL. He has a broad interest and expertise in Database Oriented System development.

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