CHAOS, GRANULARITY, AND INSTABILITY IN ECONOMIC SYSTEMS OF COUNTRIES WITH EMERGING MARKET ECONOMIES: RELATIONSHIPS BETWEEN GDP GROWTH RATE AND INCREASING INTERNAL INEQUALITY

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ABSTRACT

Starting from empirical observations of macroeconomic data from emerging market economies recorded in the second decade of the 2000s, an economic analysis was conducted on these economies' prerogatives and prospects, with special attention given to possible risks of systemic instability and the general soundness of their social and socio-economic structures. These assessments seem particularly relevant, not only for the countries in question, but because of their growing influence in determining international economic balance in the network of relations with developed countries at large.

Indeed, alongside good performance trends in production growth, distribution of new wealth that has exacerbated inequalities can be discerned. Moreover, emerging countries' economic policies often show a general accommodation to the sole objective of production growth, whilst neglecting to maintain equilibrium within the combined arrangement of all (other) macroeconomic variables.

Hence, at first we investigated the constitutive dynamics of these phenomena, using an income diffusion model based on a Pareto probability distribution, then on rheology for the analysis of the peculiar new wealth flows distributed over these countries' populations as well as any spontaneous redistribution effects induced by transactions among resident agents. At that point, applying the Dynamic New Keynesian model, we represented the system and studied solutions. Finally, we offer a proposal for constant government monitoring of each system, adopting control procedures capable of intervening – by way of economic and monetary policy instruments – where trends showed certain critical levels of instability in the economic system, which are observable from the trajectory diagrams.

Keywords*: Emerging Market Economies, Macroeconomic Dynamics, Monetary Policy Control, Wealth Distribution, Local Stabilization Systems*

1. INTRODUCTION

The focus of this paper begins from the hypothesis that – especially in emerging countries – an increase in internal inequality correlates with a certain rise in annual GDP growth rate [34], [04]. The idea is that the greater the wealth produced, at times of positive percentage change (recorded within the series of ratios between the years n and the years $n-1$ of absolute GDP values), the more the flows of that same wealth become increasingly *granular* in form, with the spontaneous behaviour of the distributive *effort* differing among the agents (residents) involved in that country's general business activity [45]. This is because, during peak fluctuations, it has been noted that the newly dispensed wealth is poorly *absorbed*, there being little time to smooth out the transition, resulting in the formation of income "granules".

Specifically, concentrations of new wealth can be observed, albeit with an asymptotic trend, among those population segments that originally had more significant holdings of fixed assets. This is motivated by Keynesian wage *viscosity* [32], [20], [38] among the lower and middle classes, which can be partially mitigated by adaptive macroeconomic policies [26], which are however lacking *ipso facto* in countries with emerging economies.