

AN EXPLORATORY STUDY OF THE EFFECT OF IN-STORE RECOMMENDATION TECHNOLOGY ON SHOPPERS' SEARCH BEHAVIORS

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ABSTRACT

This research examines the clickstream sequences of 568 customers who used in-store iPad kiosks featuring a sommelier-designed wine recommendation application. Five distinct types of wine stores participated in the study and shopper's search behaviors were analyzed using descriptive empirics, network visualization, and first-order Markov models. The results indicate that shoppers' search behaviors vary systematically across the stores, with price-oriented search behaviors more predominant in stores with less variety and frequent promotions, and product-oriented search behaviors more predominant in stores with greater variety or more specialty selections. This research grounds our understanding of shoppers' search behaviors more firmly in real world phenomena and holds implications not only for deploying in-store technology but also for designing layouts, displays, employee training, communications, and other retail touchpoints.

Keywords: *Recommendation applications, In-store technology, Search behavior, Clickstream, Markov models, Wine shoppers*

1. INTRODUCTION

Retailers continue to experiment with technologies that can provide effective first points of contact with shoppers, often as a replacement for frontline employee interactions (Baxendale et al., 2015; Hoyer et al., 2020). Such technologies include interactive storefront windows, digital displays, mobile applications, service robots, and augmented reality (Bertacchini et al., 2017; Dacko, 2017; Pantano, Priporas, & Foroudi, 2019). While human touchpoints remain crucial for facilitating shopper engagement and ensuring service quality, technology can perform certain kinds of tasks more efficiently or comfortably such as retrieving personalized information, locating products, and providing comparisons or recommendations (Immonen, Sintonen, & Koivuniemi, 2018; Vannucci & Pantano, 2019).

Whereas much attention has been paid to the spread and functionality of in-store technologies, relatively few studies have directly observed shoppers' interactions with the technology (Alexander & Kent, 2020; Cavalinhos, Marques, & Salgueiro, 2021). The present research addresses this issue by documenting shoppers' usage of a sommelier-designed application installed on iPad kiosks in various wine stores in the United States. Wine retail is an ideal context for studying how in-store technology may impact shoppers' search behaviors, as shoppers are receptive to tools that help them navigate unfamiliar or complex categories such as wine (Beck & Rygl, 2015; Berger et al., 2010; Bolton et al., 2018).

The remainder of this paper contains four additional sections. Section 2 reviews the literature to identify key factors that influence in-store search behaviors for wine. Section 3 describes the in-store application used to capture shoppers' search behaviors. Section 4 describes the data and results of the study, while Section 5 derives the managerial implications of the research and identifies key limitations and opportunities for future work.

2. SHOPPER KNOWLEDGE, RETAIL TECHNOLOGY, AND IN-STORE SEARCH BEHAVIORS

Wine is an information- and option-rich product category (Chaney, 2000; Lockshin & Corsi, 2012). Thus, it is not surprising that shopper knowledge is one of the largest influences on the nature and extent of in-store search behaviors (Ferreira, Lourenço-Gomes, & Pinto 2022). Such knowledge can be self-activated