

The Third Wave of Marketing Intelligence

Raymond R. Burke

Kelley School of Business, Indiana University, Bloomington, USA

Introduction

During the last 25 years, marketing research in retail settings has been transformed by technological change. The first wave of change occurred when retailers adopted point-of-sale (POS) systems with UPC barcode scanning. This provided companies with real-time data on purchase transactions and accurate estimates of product sales and market share. Retailers used this information in combination with shelf space allocation and product inventory information to measure the productivity of their stores. By modeling these data as a function of causal variables, such as product price, display activities, and feature advertising, marketers were able to assess the performance and profitability of their marketing investments (e.g., Blattberg and Neslin 1990). UPC scanning served as the foundation for syndicated research services such as A.C. Nielsen and Information Resources, and led to the development of brand and category management. Scanner data are in widespread use today and support many critical business decisions.

The second wave of change occurred when retailers started to track and analyze the purchases of individual shoppers. Some retailers, especially in the grocery industry, launched frequent shopper and customer loyalty programs to collect these data (see, e.g., chapter by Reinartz in this book). Shoppers who participate in such programs typically identify themselves with loyalty cards at the point of sale in exchange for price discounts or other incentives. Companies can also identify repeat customers by requesting their telephone numbers, capturing information from credit and debit cards, reading “cookies” stored on their computer disk drives, etc. This information is often combined with geodemographic and behavioral data from other public and private sources to create a profile and purchase history for each customer or household. These data can be used to estimate customer value and loyalty, measure individual-level response to direct mail and other targeted promotions, and conduct shopping basket analyses to identify product complementarities among other applications (Berson, Smith, Thearling 2000; Ravi, Raman, Mantrala this book). Once again, innovation led to the emergence of

new industries (data mining, data warehousing) and new practices (customer relationship management, or CRM).

Both types of data collection and analysis only became practical with the advent of the computer. With UPC scanning, the digital representation of aggregate consumer purchases, broken down by time and region, made it possible to measure the impact of temporal and geographic changes in marketing activities (e.g., product price, promotion, assortment, and advertising) on sales. With CRM, the digital representation of individual customer characteristics and purchase patterns allowed marketers to analyze shopper preferences and tailor marketing activities on a one-to-one basis. In both cases, the analyses that could be performed depended on the accuracy and detail of the representation of stimulus and response conditions.

The third wave of change is just beginning to take hold in retail stores. The technology drivers are the digital representation of the shopping environment and the real-time tracking of customers as they enter the store, walk through the aisles, and select and purchase products. Like the earlier innovations, it provides the capability to capture variations in consumer behavior over time and across people, but it adds to the mix the critical element of context. This new wave of marketing intelligence provides marketers with the tools to measure consumer response to the in-store environment and manage the shopping process. It is the foundation for *customer experience management*.

Each generation of marketing intelligence has enhanced our understanding of how marketing, customer, and environmental factors affect consumer behavior and store performance (see Table 1). In the following sections, this chapter reviews the genesis of customer experience management, describes the tools available for tracking customer behavior and measuring store performance, and discusses two case studies conducted by the author. The paper concludes with a discussion of the challenges in conducting computer-based observational research and future directions.

The Advent of Customer Experience Management

Marketers have discovered that the retail context has an impact on consumer behavior that goes beyond product assortment, pricing, and promotion issues. The shopping environment is the medium through which consumers connect with products. It affects the time consumers spend in the store, how they navigate through the aisles, and how they allocate their attention and money across departments and categories. It affects whether they notice a new product or promotion. It influences their framing of the purchase decision and their likelihood of buying complementary products. And it determines their shopping enjoyment and intention to return in the future. Manufacturers and retailers have found that it is to their mutual benefit to design shopping environments that effectively engage consumers and help to convert demand into purchase (see Burke 2005).