The Future of Retailing☆

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Abstract

Retailers have embraced a variety of technologies to engage their customers. This article focuses on "The Future of Retailing" by highlighting five key areas that are moving the field forward: (1) technology and tools to facilitate decision making, (2) visual display and merchandise offer decisions, (3) consumption and engagement, (4) big data collection and usage, and (5) analytics and profitability. We also suggest numerous issues that are deserving of additional inquiry, as well as introduce important areas of emerging applicability: the internet of things, virtual reality, augmented reality, artificial intelligence, robots, drones, and driverless vehicles.
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In the rapidly evolving retail landscape, consumers' needs still drive their purchase decisions. Shoppers make most consumption decisions, yet newer technologies (e.g., Internet of things, robots), newer business models (e.g., subscription models), and big data/predictive analytics suggest that the shopping process is on the verge of a quantum leap into an unknown shopping realm. The result is a powerful need to understand critical retailing areas in which innovations are changing the game, so that we can better understand where the retailing field will be evolving in the future.

In modern, multifaceted, omnichannel environments, consumers are bombarded with information about goods and services. Retailers that can connect with their customers by providing targeted information and offering value stand apart and have the potential to create deep customer engagement. Technology can help retailers target appropriate consumers; technology also enables consumers to make better informed decisions about which products or services to consume. Yet not all consumer decisions rely on extensive information searches and detailed decision processes. Some decisions are spontaneous, produced quickly while shopping online or in stores, often prompted by strategic visual presentations and merchandise assortments crafted by the retailer.

A purchase provides the retailer a multitude of disparate information, including transactional data (e.g., price paid, quantity purchased, shopping basket composition), consumer data (e.g., gender, age, family composition), and environmental data (e.g., temperature). Retailers that can draw effective insights from big data can make better predictions about consumer behavior, design more appealing offers, better target their customers, and develop tools that encourage consumers to make purchase decisions that favor their products. Thus, big data can initiate beneficial, cyclical processes of consumer consumption and engagement that in turn lead to enhanced profitability.

This special issue of the *Journal of Retailing* explores five key topic areas: (1) technology and tools to facilitate decision making, (2) visual displays and merchandise offers decisions, (3) consumption and engagement, (4) big data collection and usage, and (5) analytics and profitability. This paper introduces these areas by integrating the insights provided in the articles contained in this special issue. Fig. 1 provides a visual overview of these topics.
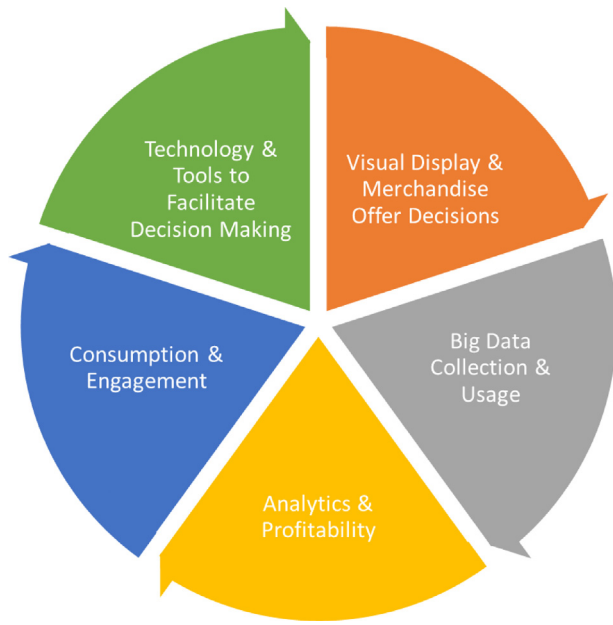
Fig. 1. Organizing framework.

Technology & Tools to Facilitate Decision Making

Technological change continues to be a game changer for retailing that can simultaneously benefit consumers and retailers. For example, technology enables consumers to make more informed decisions, receive more targeted and beneficial offers, and obtain faster service. It also assists retailers in reaching appropriate consumers at lower costs, due to technologically created efficiencies. Inman and Nikolova (2017) draw attention to how technologies can benefit both consumers and businesses, which ultimately enhance the businesses' profitability. They highlight mobile apps, scan-and-go technologies, self-check-outs, QueVision, and smart shelf technology. For example, self-check-out technology helps shoppers scan, bag, and pay for products without any need to interact with a cashier. Customers thus gain control; retailers enjoy reduced labor costs from the fewer number of cashiers required. QueVision gives retailers insights into how many registers are needed and the expected wait times, using data garnered from infrared sensors over store doors and cash registers, predictive analytics, and real-time data feeds from point-of-sale systems. Using this technology, grocery retailers have been able to reduced wait times from more than 4 min to less than 30 s. Thus, QueVision improves the customer experience, through shorter wait times, and benefits the firm in the form of happier, less stressed employees.

The introduction of smartphones have revolutionized shopping. From mobile apps, to geo-fenced targeted offers, to constant access to the online environment, the advances in this realm have led to constantly changing consumer expectations and to retailers' enhanced ability to connect with consumers. Scan-and-go technologies allow customers to use their smartphones to scan items as they shop, then use the retailer's app to pay. Amazon is pushing this innovation even further, removing the need for consumers to scan items, through their Amazon Go

technology. Amazon Go allows customers to scan their smartphone as they enter the store, pick up the products they want, and leave. Computer vision, sensor fusion, and deep learning technologies automatically detect when products are taken from or returned to shelves and keep track of items in a virtual cart. After consumers leave the store, they are charged and sent an automatic receipt. All customers need is a smartphone, an Amazon account, and the Amazon Go app (Amazon 2016). These new technologies are revolutionizing the consumer shopping experience and will set new expectations of what shopping can or should be in the future.

Mobile technology also allows retailers to offer relevant offers that reflect locational information (e.g., time of day, weather, location), using location-based applications (e.g., Google maps) (Grewal et al. 2016). For example, feel-good products can be promoted effectively when the weather is bad (Rosman 2013). Similarly, mobile promotions can take advantage of indoor positioning information gathered using iBeacons in order to offer location relevant promotions.

Personalizing technologies to make them user specific clearly has benefits for both consumers and retailers. However, a personalization–privacy paradox warrants consideration. Personalizing information for customers can both enhance and diminish consumer engagement with the firm, because consumers may recognize how much data and information retailers have about them and begin worry about their privacy. Retailers therefore need to be careful to use their knowledge about customers in a way that balances out this personalization–privacy paradox (Aguirre et al. 2015).

We question whether these new technologies will affect all types of retailing and all types of shoppers in the same way. Retailers use their apps to deliver a variety of promotions; perhaps these apps would be especially useful for retailers that adopt high–low pricing strategies or discount retailers. Alternatively, perhaps retailer apps are primarily good for reaching deal-prone customers. Another consideration pertains to the store, such that small stores could serve as delivery/pick-up points for online retailers, or they might focus more on meeting shoppers' social needs (Magi 2003), in that social shoppers are overrepresented in smaller store formats.

Visual Display & Merchandise Offer Decisions

Today's consumers are bombarded with merchandise and offers. The question is how to design and deliver offers that stand out. Understanding this can help retailers decide how, when, and where to display merchandise (and associated offers), according to the channel format (in store or online). Manufacturers also recognize the importance of ensuring that consumers pay attention to their merchandise and offers, such that they seek ways to make their merchandise stand out from the competition on the shelf or online.

Kahn (2017) highlights the need for manufacturers and retailers to account for a "visual salience bias" and make assortments easier for consumers to process. She recommends several key strategies for doing so, such as reducing the size of the assortment presented, reducing information intensity, making sure