

Mobile Marketing in the Retailing Environment: Current Insights and Future Research Avenues

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Abstract

Mobile marketing, which involves two- or multi-way communication and promotion of an offer between a firm and its customers using the mobile, a term that refers to the mobile medium, device, channel, or technology, is growing in importance in the retailing environment. It has the potential to change the paradigm of retailing from one based on consumers entering the retailing environment to retailers entering the consumer's environment through anytime, anywhere mobile devices. We propose a conceptual framework that comprises three key entities: the consumer, the mobile, and the retailer. The framework addresses key related issues such as mobile consumer activities, mobile consumer segments, mobile adoption enablers and inhibitors, key mobile properties, key retailer mobile marketing activities and competition. We also address successful retailer mobile marketing strategies, identify the customer-related and organizational challenges on this topic, and outline future research scenarios and avenues related to these issues.

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Keywords: Mobile marketing; Retailing; Interactivity; Wireless; Strategy; Marketing communications

Introduction

Mobile devices are becoming ubiquitous. There is an explosion worldwide in the use of handheld electronic communication devices, such as mobile phones, digital music players, and handheld Internet access devices. As the number of such devices is multiplying, subscriptions to services offered through these devices are expanding.¹ The number of such subscriptions worldwide grew at a compounded annual rate of 24% from 2000 to 2008 with the number of mobile subscribers reaching 4 billion in December 2008 ([International Telecommunications Union 2008](#)).

The huge number of adopters of these devices and of the related services indicates a growing mass audience for mobile electronic communication and promotion, an emerging mobile lifestyle, a popular channel for delivering mobile electronic

services, and a mass market for executing mobile transactions. Communication to this audience can be delivered in the form of text, audio, or video. Consumers cannot only receive information from firms but also initiate interactions, actively sending requests or information to firms.² To reflect these characteristics, we adopt [Shankar and Balasubramanian's \(2009\)](#) definition of mobile marketing as “the two-way or multi-way communication and promotion of an offer between a firm and its customers using a mobile medium, device or technology.”

Mobile marketing is becoming increasingly important in retailing. Due to the time-sensitive and location-sensitive nature of the mobile medium and devices, mobile marketing has the potential to change the paradigm of retailing.³ The traditional model of retailing is based on consumers entering the retailing environment, making location the primary source of competitive advantage. Mobile marketing is turning this paradigm on

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¹ See [Bolton and Saxena-Iyer \(2009\)](#) for a detailed review of interactive services, [Berry et al. \(2010\)](#) for details on innovating with interactive services, [Pagani \(2004\)](#) for details on multimedia service, and [Kleijnen et al. \(2004\)](#) for information on wireless services.

² For expositional ease, we use the term, consumer, and customer, interchangeably, throughout the paper.

³ See [Shankar and Balasubramanian \(2009\)](#) for a detailed review of mobile marketing in general and [Balasubramanian, Peterson, and Jarvenpaa \(2002\)](#) for a review of mobile commerce.

its head. Retailers can now enter the consumer's environment through the mobile device, and, because the mobile device stays with the consumer, the retailer can be anywhere, anytime.

The mobility and the personal nature of the mobile device distinguish it from other electronic devices such as the television (TV) and the personal computer (PC) and other channels, with important implications for retailers. Unlike the TV and PC, the mobile device is a constant companion to the consumer. It is regarded as a personal accessory, is generally not shared, and potentially acts as a gateway to an intimate relationship between the consumer and the retailer. Furthermore, because the device is portable, it is an ideal supplementary channel for virtual e-tailing as well as physical retailing.⁴ Retailers can push sales promotions or fulfillment updates to consumers through the mobile channel for the consumers to access instantly. In the traditional channel, a bricks-and-mortar retailer can interact with a potential customer only when the customer is in the vicinity of the store. In the mobile channel, the retailer can interact with the customer everywhere, enabling the retailer to constantly enter the customer's environment. In this paper, we propose a conceptual framework that comprises three key entities, the consumer, the mobile⁵, and the retailer. The framework addresses a range of related issues such as mobile consumer activities, mobile consumer segments, mobile adoption enablers and inhibitors, key mobile properties, key retailer mobile marketing activities and competition. We also address the retailer mobile marketing strategies that work, identify the customer-related and organizational challenges on this topic, and outline future research avenues related to these issues. We recognize that adoption of mobile devices can also enable consumers and retailers to trade more efficiently, enhance supply efficiency, and reduce price dispersion (Jensen 2007). However, because marketing is the operational theme of the paper, we focus more on the customer side than on the supply side.

Our article builds on and complements related research in important ways. While Shankar and Balasubramanian (2009) provide a review of mobile marketing, we extend it by focusing on the retailing environment. While Bolton and Saxena-Iyer (2009) offer a comprehensive review of interactive services, we focus on the mobile aspects of the retail environment that includes interactive services. Although the mobile can be viewed as a channel, we do not focus on multichannel issues as they are outside the scope of this article and are addressed by Zhang et al. (2010).

The remainder of the paper is organized as follows. We outline the basic concepts that underlie mobile marketing, develop a conceptual framework, and discuss the key issues in this framework. We then identify successful mobile marketing strategies and cover the customer-related and organizational managerial challenges that mobile marketing raises. We follow this section with a discussion of future research scenarios and avenues and close by summarizing the key issues and takeaways.

⁴ See Neslin et al. (2006) and Neslin and Shankar (2009) for detailed reviews of multichannel marketing and Zhang et al. (2010) for an overview of multichannel retailing.

⁵ For expositional ease, throughout the paper, we use the term, mobile, to denote the mobile medium, device, channel or technology.

Conceptual Development

We focus on three entities—the mobile, the consumer, and the retailer—and on their inter-relationships. These entities form the building blocks of mobile marketing in the retailing context. The consumer is the center of all marketing strategies, including mobile marketing. The mobile has certain distinctive characteristics with which consumers interact. Finally, the retailer is the focus for managerial decision-making in the retailing context. We review the basic applications and properties of the mobile in the retail environment, discuss the mobile consumer activities and segments, explicate the moderating roles of the primary mobile consumer segments and of the enablers and inhibitors of mobile adoption, and elaborate on the key retailer activities relating to mobile marketing. A framework capturing these elements appears in Fig. 1.

The Mobile

Basic Applications

The basic applications of mobile can be broadly classified as audio and visual. Within audio, the primary components are voice conversations and music. Within visual, the main components are text, data, picture, and video. Different mobile devices offer one or more of these basic applications.

Properties in the Retail Environment

The mobile device exhibits three important characteristics: ultra-portability, location-sensitivity, and untetheredness (Shankar and Balasubramanian 2009). In addition, the mobile device is personal.⁶ Because of its personal nature, the mobile device is not just a technological gadget, but a cultural object as well. As a cultural object, it is part of everyday traditions and practices. The mobile device facilitates or augments personal and social experiences, while protecting the user's security and privacy. The frequent use of the mobile device as a cultural object has led to the mobile lifestyle or way of life in which consumers routinely use mobile devices for several activities, including communicating with others, listening to music, searching for information, conducting transactions, managing daily schedules, and socializing.

While this mobile lifestyle offers important marketing opportunities for retailers, mobile devices pose some challenges as well. The typical mobile device requires only the fingers as the natural input tool, limiting its usage. Moreover, the small screen and fonts limit the digital "real estate." Because many active retail shoppers include older customers, screen size may limit their participation in the mobile medium, making the current interfaces unsuitable. Furthermore, mobile devices invite intrusion of privacy from unscrupulous marketers. Moreover, the virtual environment in the mobile channel is different from the real environment in the traditional retail channel. Metaphors of virtual or digital experience, customer engagement and empowerment create a "life on the screen" (Joy et al. 2009) that are qualitatively different from conventional

⁶ See Varadarajan et al. (2010) for a detailed review of the role of technology in the emerging multichannel and multimedia retail environment.

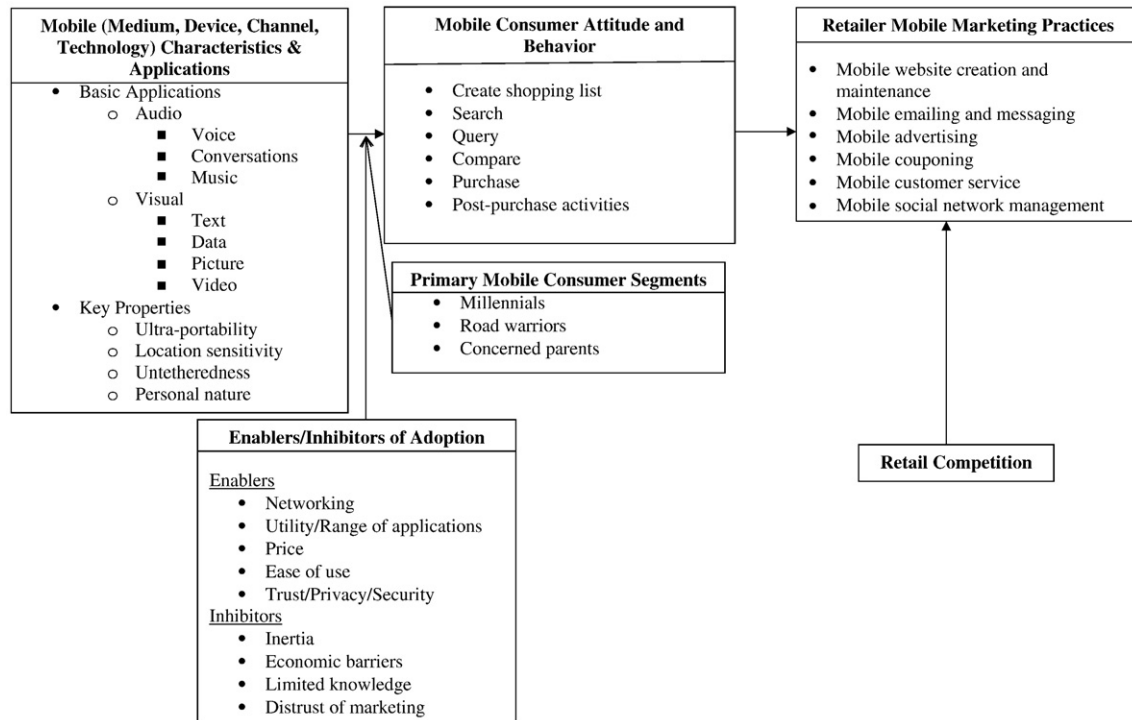


Fig. 1. Conceptual framework of mobile marketing in the retail environment.

experience in the bricks-and-mortar channel. Customers do not move around virtual environments the same way in which they do around physical environments (Hofacker 2008), so retailers have to think about the mobile environment differently from the physical store environment. The challenge facing the retail industry is how to fully transform the cultural object, the mobile lifestyle, and the small screen virtual environment into a commercial proposition in the retailing environment and improve marketing effectiveness.

The Consumer

Mobile Consumer Activities

Retail consumers use the mobile for a variety of activities relating to shopping in the retail environment.⁷ These activities include creating a shopping list, searching for the right products and prices, querying retailers, comparing different items, purchasing items, and indulging in post-purchase activities.

Not all consumers are involved in all of these mobile activities. A study by retail customer experience⁸ found that although 91% of online retail shoppers have a mobile phone, only 29% of online shoppers used a mobile phone as part of the shopping experience, and, the majority of shoppers who used a mobile handset, did not make heavy use of retailer-originated mobile applications. The study also showed that 72% of those who did use a mobile phone, used it to ask someone about a

particular product; 40% of those who used the mobile phone used it to send a photo of the product; 24% of those who used the mobile phone used it to compare prices on the Internet or mobile Web; and 15% of those who used the mobile phone used it to read product reviews on the Internet or mobile Web. The study also found that people who use mobile phones while shopping are not more loyal, more satisfied, or more likely to recommend top retailers' websites than are other shoppers. In fact, of the behaviors studied, only one was found to be different for this group: greater likelihood to purchase offline.

The effects of the mobile on consumer activities are moderated by mobile consumer segments and by the enablers and inhibitors of mobile adoption.

Primary Mobile Consumer Segments

The three most commonly identified segments of mobile users in different studies (e.g., Junco and Mastrodicasa 2007) are the Millennials (teens and tweens), the Road Warriors, and the Concerned Parents.⁹ There are important differences among these three segments with respect to mobile usage, in particular, in the retailing environment.

The Millennials

These consumers are 10–25 year olds, who are proud of their technical prowess as they have grown up in an environment where electronic technologies have been advancing at a very

⁷ For a detailed review of consumer behavior in the emerging multichannel environment, see Dholakia et al. (2010).

⁸ (<http://www.retailcustomerexperience.com/article.php?id=976&na=1> accessed April 12, 2009).

⁹ Some studies suggest the existence of a segment of light users. This segment is typically small and its consumers use the mobile sparsely in the retail environment, so we do not discuss this segment in depth.

rapid rate (Junco and Mastrodicasa 2007). According to the Junco and Mastrodicasa survey, the Millennials quickly adapt to innovations that fit their fast-paced and socially-connected lifestyle and they are somewhat skeptical about the business world and often resent it if retailers intrude into their “private” and exclusive mobile spaces.

The Road Warriors

These consumers work in a variety of occupations, including sales management, consulting, engineering, and law. They adopt new technologies to gain more control over their fast-paced and often stressful lives. The Road Warriors are quite adept at using mobile commerce devices. However, it is unclear if this segment is interested in using these devices for mobile retailing. In contrast, this segment is much more interested in managing the challenges associated with their business and professional lives.

The Concerned Parents

This segment primarily uses the mobile to connect with their children. They use the device to stay in touch and communicate important messages through voice and text and use it extensively while shopping in the environment.

There are differences in mobile usage across geographic areas and across cultures as well. In some parts of the world such as parts of Africa, the basic applications are used, whereas in some parts of Asia and Europe, mobile use is much more sophisticated and advanced than in the U.S.

Mobile consumers may differ from one another in their motivation to use the mobile. A segment of consumers may seek prompt satiation of their members’ desires and because a mobile marketing offer provides an opportunity to gratify one’s needs on the spot, the segment members respond to such offers. Another segment of customers may treat the mobile as a reminder medium. Classical conditioning theory (Pavlov 1927) suggests that, after being exposed to both direct and associated stimuli for some time, this segment of consumers starts to respond directly to the associated stimulus once the direct stimulus is removed. Other segments based on Maslow’s motivation theory can also explain differences in the adoption of mobile devices among consumers (Maslow 1943). Consistent with Maslow (1943), at one end of the spectrum, a segment of consumers who live in underdeveloped regions such as parts of Africa may be using the mobile medium to communicate for fulfillment of subsistence or physiological needs such as hunger and thirst. At the other end of the spectrum, another segment could be using the mobile medium to satisfy self-actualization needs through intelligent video games. Yet another segment may be using mobile devices primarily for networking with friends.

Enablers/Inhibitors of Mobile Usage in the Retailing Environment

In this section, we briefly discuss some key factors that enable or hinder greater mobile usage in the retail environment. We start with the enablers and then discuss the inhibitors.

Enablers

The Technology Acceptance Model (TAM) suggests that perceived usefulness and perceived ease-of-use are the two important factors that determine adoption of any technology (Davis 1989). Many enablers fall under these categories of factors. First, networking is a key enabler. Networking increases perceived usefulness. Both the Millennials and the Road Warriors value mobile devices as these help them stay in touch with other people. Whereas the Millennials prefer to use the mobile primarily for social networking, that is, to keep in close contact with their friends and family members, the Road Warriors use the mobile primarily for professional networking, that is, being in touch with their business colleagues. Retailers should design and pitch their offers differently to these segments based on the difference in the purpose of primary usage.

Second, the range of mobile applications increases usefulness and thus enhances adoption. In particular, location-based services enhance consumer utility and lead to fast adoption by a large number of consumers.

Third, price is an important enabler. Because the mobile device and applications may fall under discretionary spending for many consumers, prices of the mobile device and applications should be within the budgets of targeted users. Fourth, the ease-of-use of the device and its applications greatly increase adoption, consistent with TAM model’s prediction (Davis 1989). Finally, trust with the application, service provider, and the retailer—which includes privacy and security—can enhance perceived usefulness and enable wider and deeper adoption of mobile devices and applications (e.g., Davis 1989; Peltier, Milne and Phelps 2009; Urban, Amyx and Lorenzon 2009).

Inhibitors

A number of factors may inhibit both the use of mobile devices and the acceptance of mobile marketing devices and offers. Some of these inhibitors are consistent with the paradoxes of technology (Mick and Fournier 1998). First, there is consumer inertia to new technology adoption (Yadav and Varadarajan 2005). In the context of the mobile, some consumers typically resist adopting mobile technology, consistent with the disengaging dimension of Mick and Fournier (1998). Second, economic barriers (e.g., limited disposable income) play a key role in inhibiting the adoption of mobile devices and the acceptance of mobile offers from retailers. Third, lack of knowledge (or mobile literacy) limits the adoption and use of a mobile device. In this sense, retailers are faced with the challenge of educating consumers about the benefits of their mobile offers. From an organizational standpoint, retailers face another challenge. Many retail managers lack specific knowledge of mobile marketing in the retail context. This inhibitor is similar to the incompetence dimension proposed by Mick and Fournier (1998). Fourth, another inhibitor is the fact that a key segment such as the Millennials distrusts marketing and advertising practices. This segment typically seeks an environment free of marketing pressures. As a result, the Millennials are rather quick to resist “outsiders” (e.g., retailers), whom they perceive as intruding into their private and special mobile space.

The Retailer

Mobile Marketing Practices

The mobile consumer activities discussed earlier lead to several mobile marketing practices or initiatives by the retailer. To satisfy customer needs profitably, given consumer attitudes and behaviors and their differences across segments with regard to the mobile, retailers engage in a number of mobile marketing practices. These practices include: mobile website creation and maintenance, mobile emailing and messaging, mobile advertising, mobile couponing, mobile customer service and mobile social network management.

According to a study by Cisco¹⁰, retailers differ in the use of these practices (Cisco 2008). The study found that approximately 6% of retailers surveyed had web pages and a URL specifically designed for mobile use, approximately 42% of retailers offered their customers the ability to view product information on a mobile device through reformatted web pages or specific mobile pages; approximately 15% offered the ability to conduct transactions (e.g., make purchases); approximately 10% used Short Messaging Service (SMS) to provide information or answers to customers' questions; and roughly 17% provided the capability to connect to communities of interest. Furthermore, according to the study, approximately 52% provided customer reviews for products, 50% had advanced visualization tools, 50% provided multimedia such as the video, and 50% offered customer support through multiple channels. Some retailers use mobile devices and services extensively in supply chain management and logistics (Shankar, O'Driscoll, and Reibstein 2003). Our focus, however, is on customer-facing retailer mobile marketing practices.

Mobile website creation and maintenance. Creating and maintaining a robust mobile website is important to enable consumers to search, compare and use it as a channel for transactions. Nysveen et al. (2005) show that for the three different brands they surveyed, there were positive effects of mobile channel (SMS/MMS Multi Media Service) usage on brand satisfaction, marketing investments in direct and indirect customer relationships, and traditional channel usage. Their results suggest that SMS (MMS) additions are perceived as complementary (supplementary) to the retailer's traditional channel.

Mobile emailing and messaging. For the segment of consumers that views the mobile medium as a reminder medium, retailers can text-message reminders to opt-in customers for refilling orders together with suitable color cues. Once a consumer gets conditioned to such reminders, a retailer can draw the consumer to its nearby store using a particular ringtone or a specific color. Alternatively, the customer can directly place an order for an item through the mobile device, and the item could be shipped directly to the customer.

Mobile advertising. Retailers also use the mobile medium to advertise their image and products. For customers who have opted-in to receive marketing messages, retailers send periodic messages. Retailers typically do image advertising through static pictures or video and do product advertising by highlighting new products or products with special offers.

Mobile couponing. Retailers are increasingly using mobile couponing as a key marketing tactic. Mobile coupons are gaining rapid consumer acceptance and are providing retailers with high returns on investment (ROI) (Dickinger and Kleijnen 2008). Typically, a retailer invites consumers through other media (e.g., in-store, print media, outdoor media) to send a text message to the retailer, asking for mobile coupons. The retailer then sends to those who had responded, mobile coupons can be redeemed at the retailer's stores at the time of purchase. This couponing tactic is generally effective because consumers self-select the offering. Moreover, the returns are directly measurable. Because the costs of such a couponing tactic are modest, the net returns tend to be high as well. Importantly, the retailer gets to expand its database of customers who can be targeted for future offers. Despite these benefits, a major drawback of mobile couponing is that it inadvertently sensitizes customers to coupons, potentially eroding the equities of the couponed brands.

Mobile customer service. The mobile is ideal for handling customer service issues. Many retailers offer online order tracking feature, answer customer queries regarding product information, and provide post-purchase service, all through the mobile. Some retailers also offer bill payment service through the mobile device. Effective mobile customer service strategy calls for retailers to meet their customer needs by enhancing the convenience of shopping.

Mobile social network management. Retailers create, facilitate, or manage their own social networks with their customers. They use these user networks to "listen-in" as well as to influence customers. They could use the social network theory to target key customers for persuasive communication. The social network theory posits that the location and strength of the relationships among actors in a social network more strongly influence the action and behavior of actors than do individual traits (Barnes 1972). In the context of mobile marketing, a deep understanding of the nodes, the inter-relationships within the network of mobile device users, and network segmentation can help retailers develop a better targeting strategy. This theory suggests that by understanding the online and offline social structures of actors in relevant networks, retailers can formulate suitable promotional strategies for their customers. One such strategy is the use of substantial mobile promotional offers directed at actors with sizeable social capital as these actors tend to serve as the nodes in their networks. For example, Ford and its dealers have invited 40 influential bloggers to test drive three Ford models — Ford Flex, Ford Fusion, and Lincoln MKS — during Spring 2010 and to share their experiences on their blogspots and at TheFordStory.com (Communications World 2010).

¹⁰ (http://newsroom.cisco.com/dlls/2008/prod_060308.html accessed April 12, 2009).

Retailer mobile marketing has a temporal dimension as well. Retailers could communicate instant offers to mobile consumers who are in the vicinity of their bricks-and-mortar stores with a time expiration deadline to induce immediate shopping. The success of such an offer depends on whether consumers need the item on which the offer is made, whether the offer is attractive, and whether the cost savings are worth the time for the consumers.

The mobile also allows retailers to collect more granular data associated with the activities of their customers. Customer data management is an important part of retail management (Verhoef et al. 2010).

Competition and Retailer Mobile Marketing

Retail competition also affects retailer mobile marketing activities. There is heightened competition among retailers in the mobile marketing context. A consumer can walk into a retail store and check prices at a competitor store (say Amazon.com) using her mobile device. Applications, such as those from Snaptell in iPhone and Google's Android phone, allow consumers to take pictures of items in the store, compare related pictures and videos, and search across retailers. After careful comparisons, consumers can even order the same or similar items from competitors' online stores through their mobile devices.

Mobile couponing can also lead to greater competition among retailers. Typically, retailers use mobile couponing to retain customers. Retailers can send mobile coupons to those who have opted-in periodically and when consumers are close to their physical store to induce them to purchase and improve loyalty. However, mobile couponing by competing retailers could lead to a prisoner's dilemma if competitive retailers adopt the same mobile couponing strategy and if a consumer has opted-in to the retailers' mobile messaging services. For example, a consumer, who is at a mall or road that is close to both a CVS drug store and a Walgreen drug store, may get alerts from both the stores with mobile coupons. The consumer can compare the offers and choose one store to visit if the consumer perceives that the set of offers from one store is superior to those from the other store. In such a scenario, the retailers may be forced to offer competitive coupons and accept lower paid prices to avoid the risk of losing consumers to one another.

One possible solution to such a prisoner's dilemma is for a retailer to offer coupons on items not offered by the competing retailer. This strategy will likely result in the consumer visiting different stores and cherry picking the items based on mobile coupons from these stores.

Retailers still need answers to several important questions. From which physical and virtual locations do consumers access retail stores? What is their contact history with the stores from inception to final purchase or abandonment? What mobile marketing strategies help retailers surmount the inhibitors? How can retailers improve the credibility of their mobile offers? How can retailers partner with manufacturers in creating compelling offers?

Successful Mobile Marketing Strategies

For retail mobile strategies to be successful, retailers need a sound understanding of their target customers. Some segments

of the population adopt mobile marketing offers quickly and develop a sub-culture around the phenomena (e.g., Texting, Tweeting, and Flickring). Retailers who better understand these segments and their behavior can be more successful in their mobile marketing strategies than others.

Mobile advertising is increasingly becoming challenging in the retailing environment because of its intrusive nature and the limited screen size of the mobile device (Shankar and Hollinger 2007). To be effective, most mobile advertising should be permission-based (Barwise and Strong 2002; Shankar and Hollinger 2007). Retailers can use mobile advertising effectively if they get consumers to opt-in, use short text messages, make the messages relevant (the right message to the right customers), and use it primarily as a reminder vehicle (Blum and McClellan 2006).

The success of mobile couponing depends on getting the customers to opt-in by offering strong value propositions. An example of a successful mobile coupon campaign is by Planet Funk, a fashion retailer, which reportedly experienced a redemption rate of 91% and an ROI of 377% with 15% of the coupon users opting-in to receive future offers (Mobile Marketer 2009). The Kroger supermarket chain offers a program in which consumers can redeem manufacturer coupons through their mobile phones (Ailawadi et al. 2009; Wall Street Journal 2009).

Mobile word of mouth marketing that allows consumers to review products and read reviews can also be effective. For example, Sephora, the beauty products retailer, offers a feature that allows consumers in its stores to read product reviews by other buyers on their cell phones (Wall Street Journal 2009). This practice has improved awareness and store traffic for Sephora (Wall Street Journal 2009).

Mobile marketing through product matching is a new application that may potentially lock-in loyal retail customers. Amazon.com has launched on the Apple App Store, an iPhone application that makes it possible to take a picture of a product and then send it to the online retailer, which will try to match it with products in its inventory (Information Week 2008). Such a feature reduces the incentive for a customer to switch to a competitor store.

Retailers could view mobile marketing as an opportunity to enhance customer loyalty. Retailers often make a distinction between public consumers (those whose contact information is not easily available) and private consumers (those whose contact history is available). Mobile marketing has the potential to identify public consumers and collect information from them.

As discussed earlier, the Millennials pose a special challenge for marketers because they are skeptical about commercial activities. To overcome this inherent skepticism, retailers may strive to create a partnership with a "good cause." For instance, the mobile message could emphasize the link between the firm and green retailing or the link to a worthwhile charity. Similarly, the Millennials are very interested in peer-to-peer (P2P) communications. Given this reality, retailers could incorporate P2P communications (e.g., user-generated ads) in their marketing strategies.

Retailers need to be aware of the ethical issues associated with mobile marketing strategies. Mobile users are concerned

Table 1
Summary of some Key Issues in Mobile Marketing in the Retailing Environment.

Key questions	Current insights	Future research avenues
Who are the primary mobile users?	Millennials, Road Warriors and Concerned Parents are the key mobile user segments. Many of these users are tech-savvy. The Millennials' primary use of the mobile medium is for social networking. They lead a mobile life style and resent marketing intrusions. The Road Warriors' primary use is for productivity and convenience. Concerned Parents use the mobile mainly to keep in touch with their kids. Retailers should focus on social utility for the Millennials and convenience for the Road Warriors and Concerned Parents.	What is the role of the retailer in the decision process of these segments? What micro segments are more valuable than others to retailers?
What are the enablers of mobile usage?	Networking, utility/range of applications (including location-based benefits), price, ease-of-use, and trust/privacy/security are important enablers.	What are the relative influences of these enablers? How do these influences vary across different segments and in the retailing environment?
What are the inhibitors of mobile usage?	Inertia, economic barriers, limited knowledge, and distrust of marketing practices inhibit the use of the mobile medium and acceptance of the mobile offer. Source credibility affects the acceptance of a mobile marketing offer.	How can retailers surmount the inhibitors? How can they improve the credibility of their mobile offers? How can retailers partner with manufacturers in creating compelling offers?
What mobile marketing strategies are successful?	Mobile marketing will have to be "opt-in" to work. Targeted mobile couponing is associated with high redemption rate and ROI. Facilitation of product reviews improves word of mouth effect. Product matching improves customer retention. Marketing strategies will have to take care of privacy and security issues to be successful.	What are the best ways for retailers to join the conversations in social networks? What product placement strategies work best for retailers? How should retailers allocate their marketing spending across different mobile marketing vehicles?

about privacy and security of the information that they share online. Mobile pricing is another area where not much is known.¹¹ Likewise, although much is known about online satisfaction and loyalty (e.g., Shankar, Smith, and Rangaswamy 2003), there is a dearth of research on mobile satisfaction and loyalty.

We still have a limited understanding of the best mobile marketing practices for retailers. Several questions remain open for future research. What are the best ways for retailers to participate in the conversations in social networks? What product placement strategies work for retailers? How should retailers allocate their marketing spending across different mobile marketing vehicles?

A summary of some of the key issues, current insights, and future research avenues appears in Table 1. Overall, research in mobile marketing, in particular, in the retailing environment, is in its infancy with many important unexplored questions.

Managerial Challenges

In such fast-changing technological and marketplace environments, retailers face several mobile marketing challenges from both customer and organizational perspectives.

Customer-Related Challenges

Continuous learning about the behavior of the mobile customer is an imperative for retailers. Additional questions on retail customer behavior include: How mobile is the target consumer? Where and how does mobility create value and trust for the customer? As trust is emerging as an important differentiator in the online and mobile environments (Bart et al. 2005), where and how does mobility enhance consumer trust and retailer brand differentiation? Retailers may want to use the insights from answers to these questions to create trusted destination mobile sites and trusted offers for their core shoppers.

Another important challenge in mobile marketing is improving the acquisition and enhancing the retention of customers. Retailers need to better understand social networking in the mobile context to attract and retain customers even as multichannel retailing is continually being redefined. To boost customer retention, retailers can work with the shopper to let the shopper create and update shopping lists, plan shopping within a budget, and send text messages of promotional offers in the store for items that the shopper has bought before or in which she has an interest. Retailers can customize these services and offers to each shopper.

Privacy and security will continue to pose challenges (Peltier, Milne, and Phelps 2009). Retailers must ensure that user privacy and security is integrated into their approach while crafting their mobile strategies. They may wish to identify and

¹¹ For a detailed review of retail pricing in the online and offline environments, see Grewal et al. (2010).

choose the critical new capabilities that their shoppers would really value and execute them superbly.

An important issue is the allocation of marketing spending across the push and pull elements through the mobile medium (Ailawadi et al. 2009). How much of push and pull marketing activities should a retailer undertake through the mobile medium? What offer should a retailer provide to a consumer who is in a mall that houses one of that retailer's stores? For example, if the consumer is closer to its competitor's shoe department, should the retailer text an instant discount offer on its shoes? By the same token, if the consumer is at another store buying an item that is not sold by the retailer, should the retailer prompt the consumer with an offer on a related item? What push strategy should the same retailer use through its sales persons once the customer is in the store?

Another allocation trade-off in the mobile medium relates to investment in brand versus customer assets. Should retailers use mobile marketing activities to invest more in the retailer brand assets than in their customer assets? Brand building will call for a differentiation-focused communication, whereas targeting high lifetime value customers would require customized promotions through the mobile medium.

Finally, retailers may want to use their understanding of customer preferences and behavior on the mobile medium to make strategic decisions on when to launch new applications or services. When it comes to new mobile marketing applications, should a retailer try to move first or wait for others to pioneer and enter later? There are customer or demand-based advantages and disadvantages of entering first in Internet-enabled marketplace (Varadarajan, Yadav, and Shankar 2008). Do these advantages and disadvantages extend to the mobile medium as well?

Organizational Challenges

In addition to the customer-related issues, retailers face several organizational challenges in managing mobile marketing. These challenges primarily relate to organizational culture and the lack of mobile lifestyle within organizations.

With regard to organizational culture, a key question is: how should retailers create and foster a culture where mobile marketing plays an important role in the firm's marketing strategy as well as corporate strategy? What competencies do retailers need to develop to fully leverage the potential offered by mobile marketing? How can retailers create a consumer-focused organization that responds to consumers' mobile life style changes and needs?

Creating a sound organizational culture can enable retailers to leverage mobile marketing opportunities in a timely fashion. According to Jon Stine, Manager, Director of Internet Business Solutions at Cisco, a retailer who takes full advantage of the mobile medium could see increases of as much as 19% net margin in 3 years. And yet, according to him, only 2% of retailers in the United States have websites that are enabled specifically for mobile devices.

With regard to mobile lifestyle, a challenging issue for many retailers is bridging the gap between managers and consumers,

who differ in demographics and mobile-savvy. Most retail managers are older than the typical mobile device users, who are tweens, teenagers, and young adults. These managers do not quite share the mobile lifestyle of the younger consumers. As a result, these managers are somewhat slow in empathizing with their consumers and in catching up with their evolving behavior. How can retailers tackle this issue effectively?

Future Research Scenarios and Avenues

There are several promising research avenues. Looking out into the future, we speculate that new advances in technology will reshape the mobile marketing landscape in the retailing environment in many ways. First, we predict that the convergence of devices will continue to alter retailer strategies. Communication, computing, entertainment, and education technologies and devices are constantly converging (Ancarani and Shankar 2003). For example, already mobile technologies such as radio frequency identification (RFID) and 3-D scanning are becoming increasingly commercial and getting integrated with other handheld devices. Retailers should anticipate these changes and better understand how to integrate the different functions and to leverage their mobile marketing strategies to capitalize on the advances. More research is needed on how mobile technology changes should guide retailers.

As technological advances open up a vast array of future possibilities, how should retailers prepare themselves for being not just mobile-ready, but also mobile-savvy to seize business opportunities? We foresee a few feasible strategies for retailers.

Retailers should embrace the power of the personal nature and portability of mobile devices, which eminently distinguish mobile marketing from both online and offline marketing. Marketing communications using offline media such as television, print, radio, and billboards direct brand-related information from manufacturers and retailers to consumers. In online communications, in particular, via search advertising, consumers seek relevant brand-related information from manufacturers' and retailers' websites. In contrast, mobile devices facilitate two-way information exchanges: a consumer's mobile device can communicate both its spatio-temporal location and product needs to all nearby retailers, whereas a subset of retailers can transmit relevant marketing information such as the store's location, product availability, quality, price, and coupon in its response to the customer's mobile device-initiated requests.

To illustrate the future role of the personal nature of mobile devices, consider a consumer with a mobile device that contains a personal shopping or to-do list. The mobile device can send a reminder in real-time when the device automatically detects the user's presence in a shopping neighborhood, where the to-do items can be bought. For example, suppose a consumer has stored a voice message in his mobile phone, "buy flowers and a bottle of wine when wife's boss and her husband arrive for dinner at home on a certain date." As the consumer is driving home on the appointed date and stops on the way to fill gas, his mobile phone can remind him about this "to-do" item when it detects that he can execute this transaction successfully at this

gas station. Suppose he responds in real-time through a voice input to remind him later at a grocery store near home, then the device can remind him of nearby grocery stores as he approaches his home. To make this mobile marketing scenario happen, a retailer needs software applications that synchronize calendar (e.g., MS Outlook), GPS (e.g., Garmin), and a reminder service (e.g., <http://www.reqall.com/>). All these applications exist, but retailers should also be *mobile-ready* to transmit their marketing communications to customers' mobile devices at the right time. Thus, unlike online and offline communications, mobile marketing offers a unique opportunity, to synchronize user information from his calendar (temporal), GPS (spatial), and shopping lists (customer needs).

To illustrate the future role of the portability of mobile devices, consider a customer with a RFID-enabled mobile device that also contains a personal shopping list. When he walks into a grocery store, the store's RFID reader can identify him and match his preferred brands to the listed items. The mobile device can display an in-store aisle-by-aisle route using the GPS, update the invoice in real-time as items are added in the shopping cart, and make an electronic payment as he walks out the store without having to wait in line to pay. To make this mobile marketing scenario happen, retailers need item-level RFID tags. This capability exists with the Metro AG's Future Store Initiative in Germany.¹²

Mobile marketing by retailers will likely be different across countries. Sultan, Rohm, and Gao (2009) report differences between U.S. and Pakistani customers in the acceptance of mobile marketing offers. The Internet has significantly affected international marketing practices (Shankar and Meyer 2008). Because retail environments significantly differ across countries as well, we anticipate that retailer mobile marketing will be different across countries in important ways. Future research could address the elements, directions, and magnitudes of such differences.

Against the backdrop of continuing technology advances, changing mobile readiness and the increasing mobile-savvy of the retailer, how will mobile technology alter marketing communications? We predict not only increased spending on mobile communications to furnish location-specific information, but also greater expenditures on offline marketing, albeit at a slower rate, to build brand image and create cross-media synergies (Naik and Raman 2003; Naik and Peters 2009). Already, user-generated marketing on the Internet through video sites such as YouTube, social networking sites such as Facebook, and short-message information sites such as Twitter, is turning marketing communications upside down (Holdern 2007). We expect the trend to accelerate in the mobile medium. Moreover, we expect retailers whose marketing strategy is based on consumer advocacy through this user-generated media to be most successful. To capture the hearts and minds of customers and get them to be advocates and evangelists, we recommend that retailers associate themselves with causes that are near and dear to their key target customers. For example, all else equal, a retailer who uses biodegradable materials, practices

energy efficiency, or donates a part of its profits to a noble cause could benefit from customer advocacy based mobile marketing.

Conclusion

Mobile marketing, which involves two- or multi-way communication and promotion of an offer between a firm and its customers using a mobile medium, device, or technology, is growing in importance in the retailing environment. It has the potential to change the paradigm of retailing from one based on consumers entering the retailing environment to retailers entering the consumer's environment through anytime, anywhere mobile devices. We proposed a conceptual framework that comprises three key entities, the mobile, the consumer, and the retailer. The framework addressed a range of related issues such as mobile consumer activities, mobile consumer segments, mobile adoption enablers and inhibitors, key mobile properties, key retailer mobile marketing practices and competition. We also addressed successful retailer mobile marketing strategies, identified the customer-related and organizational challenges on this topic and outlined future research scenarios and avenues related to these issues.

Acknowledgments

This work is based on the ideas and discussions generated during the Thought Leadership Conference entitled "Emerging Marketing Perspectives in a Multichannel, Multimedia Retailing Environment" held at the Mays Business School, Texas A&M University, College Station, during January 28–30, 2009. We thank Manjit Yadav and three anonymous reviewers for their thoughtful comments on an earlier version of the paper. We thank MaryAnn Wyckoff for her comments during the conference workshop. We thank Ying Zhu for research assistance.

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¹² (see <http://www.future-store.org/fsi-internet/html/en/375/index.html>).

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