

Mobile shopping behaviour : insights into attitudes, shopping process involvement and location.

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Abstract

Purpose: Although there is evidence that adoption of mobile shopping has been slow, the increased functionality offered by smart phones offers significant potential for the development of marketing and retailing through the mobile channel. This article, then, seeks to add to knowledge on consumer shopping behaviour through mobile devices by exploring attitudes to the use of mobiles in shopping, the use of mobile phones at different stages in the consumer decision making process, the impact of involvement on the mobile consumer decision making process and mobile shopping location.

Design/methodology/approach: An online panel survey was conducted with a UK panel of nationally representative consumers. The survey collected data in respect of the following products that were ranked on level of involvement on the basis of the importance and effort consumers' associated with their purchase: bread (lowest), washing powder, DVD, footwear, phone and TV (highest).

Findings: In using their mobile phone in shopping, respondents value its convenience and accessibility. There is higher use of the mobile phone in the information search and consideration of alternatives phases, than in the purchase phase. The extent of use of mobile devices in the decision making process is higher with higher involvement products, in relation to all stages in the decision making process. The most frequent location for the use of their mobile in shopping is at home, which is consistent with the finding that the highest overall use of mobiles occurs in the consideration of alternatives phase. Recommendations are offered for retailers and for further research.

Originality/value: This is the first research to explore the use of mobile phones in different stages in the consumer-decision making process across a number of product categories.

Key words: Mobile shopping; involvement; consumer decision-making; smart phones

Paper type: Research paper

Introduction

There is considerable evidence from industry sources that the use of mobile phones in the shopping process is increasing significantly and every reason to believe that with the increasing adoption of smart phones, with their increased functionality in terms of access to comparison and retailers' websites, that this trend will continue. For example, during 2011 shoppers spent £3billion on purchases made online through a mobile phone, 8% of online sales (Skeldon, 2012), and during the Christmas 2011 sale period, 1 in 3 consumers said that they used their mobile phone to help them to buy gifts (Intersperience, 2012). Furthermore, industry sources also provide evidence that consumers' use of their mobile in the shopping process is not restricted to purchase, and indeed that levels of use for activities such as checking prices, comparing products, gathering product information, and reading user reviews are higher than those for purchase (Charlton, 2011). Further, consumers are availing themselves of the opportunity to use their mobile 'on the move', on the high street or in store (GFK, 2011). These indicators from industry data suggest that further understanding of the way in which consumers use their mobile in the shopping process is of significant interest to marketers, retailers and consumer researchers. As Hung et al. (2012) suggest '*understanding*

consumer behaviour is critical for successful management and development of m-shopping' (p.30). Indeed, as is indicated by Tesco's recent trial of a virtual interactive shop in airports, where consumers can use their mobile as they pass through the airport on their way home to scan and order groceries to be delivered to their home in time for their arrival, the innovation possibilities are endless. If retailers understand the lifestyle of their customers, the mobile channel, and especially the smartphone, has the potential to revolutionise the shopping experience (Wagner, 2011). As Shankar et al. (2011) suggest: '*deep penetration of technological developments such as mobile devices and media among the population has opened up new opportunities to influence shopper attitudes and behaviour, particularly in the retail environment.*' (p.S32)

Despite the potential for the use of mobiles in the shopping process, research into consumer behaviour in this context is relatively limited. A significant proportion of the studies into mobile commerce are preoccupied with the adoption, acceptance and use of mobile shopping, and the utilitarian and hedonic factors that might influence it (e.g. Bigne et al, 2005; Ko et al., 2009; Li et al., 2012; Wu and Wang, 2005; Lu and Su, 2009) or with customer satisfaction (Choi et al., 2006). There are also a number of general conceptual reviews of mobile commerce, mobile marketing and mobile retailing (e.g. Shankar, 2010; Varnali and Toker, 2010). Specifically in the context of smartphones, there are a few very recent studies that variously examine the consumer attitudes towards smart phone marketing (e.g. Persuad and Azhar, 2012; Chiem et al., 2010). No empirical studies have examined consumer behaviour in the smartphone era, taking into account the use of the mobile in different stages of the consumer decision-making process, and variations on the basis of product category.

Accordingly, this research seeks to explore some key aspects of consumer shopping behaviour through the mobile phone. Specifically, the research questions that this study seeks to answer are:

1. What is the relative level of use of mobiles in the shopping process for low, middle and high involvement purchases?
2. What are perceptions regarding the use of mobile phones in the shopping process?
3. What is the relative level of use of mobile phones at different stages in the consumer decision-making process?
4. Are these levels of use at different stages dependent on the product being purchased, and its associated level of involvement?
5. Where are people when they use their mobiles to engage in the different stages of the consumer decision making process?

The next section briefly summarises previous research into mobile marketing and shopping, with an emphasis on recent studies that have been conducted in the smartphone era. Next, the methodology for the research is outlined. This is based on a questionnaire-based survey using a panel. Findings are reported next. The following section offers a critical discussion of the findings. Finally, conclusions and recommendations summarise key themes that emerge from the findings and the critical discussion, and offer recommendations for practitioners and for further research.

Literature Review

As indicated in the introduction, there is a considerable basis of evidence in the practitioner literature that demonstrates the growing use of mobiles in shopping, and many theoretical speculations that this may have significant consequences for the way in which people shop. However, academic research relevant to the topic of this article is sparse.

Early research on the use of mobile technology in shopping tended to focus on the issue of adoption, and in the time-honoured tradition of information systems researchers, variations on the technology adoption model (TAM) (Davis, 1989) were developed to variously explore the drivers affecting the adoption of mobile commerce. For example, Wu and Wang (2005) used a revised TAM to explore the factors that determine user mobile commerce (including banking, shopping, investing, and online services) acceptance in Taiwan; they identified the following as factors affecting behavioural intention to use: perceived risk, cost, compatibility, and perceived usefulness. Lu and Su (2009) also used a revised TAM model to explore the factors affecting purchase intention on mobile shopping websites. They discovered that anxiety has a negative effect on intention to use, whereas enjoyment, usefulness, and compatibility have a positive impact on customers' behavioural intentions. Yang et al. (2012) compared adopters and non-adopters of mobile shopping, and found that idea, efficiency, adventure and gratification shopping motivations are associated with mobile shoppers. On the other hand, Vrechopoulos et al. (2003) explored the critical success factors for mobile commerce in three European countries; they identified lower prices, improved security, improved devices, and effective customer support as critical successful factors. Li and Chen (2012) suggest that the focus should be on the consumption experience, and as such it is important to consider both utilitarian and hedonic factors. They found that emotion was an important aspect of the mobile commerce experience and that utilitarian factors had a negative effect on the consumption experience, whereas hedonic factors had a positive effect. Other researchers have also investigated the impact of hedonic factors, such as aesthetics, escapism, and enjoyment on the user experience (Ko et al., 2009; Li and Yeh, 2010). Taking a different tack, Bigne et al. (2005) examine the impact of gender, age, previous Internet experience, and previous experience as an Internet shopper on consumer mobile buying behaviour in Spain; this allows them to identify young people, of both genders, with experience of Internet shopping as the priority segment who are likely to adopt mobile shopping. Other studies have examined one or more of these 'external variables', including context (McFarland and Hamilton, 2006) and personality (Aldas-Manzano et al., 2009; Mahatanankoon, 2007). Finally, Hung et al. (2012) urge consideration of mobile shopping continuance, and emphasise the pivotal role of trust. The focus of these studies varies from general mobile commerce to more specifically mobile shopping, but none delve more deeply into consumer behaviour.

There is also a related body of research on mobile marketing, summarised by Varnali and Toker (2010), and Shankar et al. (2010). This research is distinct from research on mobile shopping, but since both are based on the same devices some of the insights that it generates regarding consumers' attitudes towards their mobile phones are relevant to the mobile shopping context. For example, it is evident that consumers regard their mobile as 'personal' devices, and are resistant to any form of marketing or commercial messages, and view these as intrusion into their personal space (Muk, 2007; Samanta, Woods, & Ghanbari, 2009). Researchers in mobile marketing have therefore explored how they can encourage consumers to grant 'permission'. Trust is an important determinant of consumer willingness to grant permission (e.g. Grant and O'Donohoe, 2007; Jayawardhena et al., 2009), as is control (Blomqvist et al., 2005). Web-site or message content is also crucial, and needs to be perceived as being relevant, useful and timely, as well as possibly funny and entertaining (Barwise and Strong, 2002; Heinonen and Strandvik, 2003; Li and Yeh, 2010; Siau and Shen 2003; Zhou, 2011).

More recently, there have been a few empirical studies and theoretical discussions on smart phones and their use and potential to revolutionise mobile marketing and shopping. One of the most significant of these is the studies conducted in Canada, which shows that perceived value, shopping style, brand trust, and age are the significant predictors of consumers' intention to participate in mobile marketing, and the same factors, plus education influence intention to participate in location-based mobile marketing (Persaud and Azhar, 2012).

Finally, studies that examine the integration of smart phones into everyday life are important in understanding the relationship that consumers have with their smart phones. Matthews et al. (2009) looked at the tasks that users conduct with their smart phones and discovered that their use depended significantly on context, including users' other devices, and the places and situations that they encounter. Many use smart phones in concert with other computers, and employ their phones in different ways for new tasks. Wey et al. (2011) showed that their participants had their smart phone in the same room for 90% of the time. Barkhuus and Polichar (2011) investigated the use of smart phones in everyday life through a diary study, and found that *'users used phones in highly individual manners; mixed and adapted existing functions to meet their own priorities; added some functions and ignored others to create their own portfolio; and blended their use with the specifics of their everyday lives.'* (p. 629). This assertion is consistent with the findings of studies associated with demographic and psychosocial factors on mobile shopping behaviours (e.g. Aldas-Manzano et al., 2009; Bigne et al., 2005; McFarland and Hamilton, 2006) and should alert researchers and practitioners to the dangers of generalisations.

Methodology

Research design

Although there have been a number of studies that seek to examine the factors that affect the adoption of mobile shopping, and other aspects of the mobile technology experience, it was deemed appropriate to undertake an exploratory study and to focus on the profiling of behaviour. This is because much of the previous research was conducted on the basis of earlier generations of mobile technologies, and research on consumer behaviour in the smartphone era is as yet sparse. In addition, since the key objective was to gather a profile of consumer behaviour, it was important to gather a significant number of responses suggesting that a quantitative approach was appropriate. Accordingly, a questionnaire-based survey, distributed online to an established market research panel, with a profile representative of the UK population was conducted (Saunders et al., 2012). It is acknowledged that internet panel surveys provide the quickest, cheapest and most efficient way of gathering data (Albaum et al, 2010).

Questionnaire design and distribution

A structured questionnaire was developed in partnership with a market research agency, Bryter. The questionnaire comprised primarily closed questions, because using closed questions made it easier for respondents to provide the data required, and to analyse the data (Wilson, 2003). The majority of the questions were designed to provide categorical data – i.e. they achieve a categorisation of a specific behaviour (Saunders et al, 2012).

Questions based on semantic differentials were used to identify the emotional drivers associated with the use of a mobile phone in shopping. A few open-ended questions were also asked; these were to ensure that all areas were covered rather than to explore some of the reasoning behind responses (Wilson, 2003). General questions relating to shopping behaviour

were asked, as well as a series of repeat questions asking for specific behaviours relating to the purchase of six products expected to be found in the majority of homes. The six products were chosen at the extremes of the spectrum of buying behaviour. Bread and washing powder were expected to be habitual (low involvement) purchases, whereas a TV and a mobile phone were expected to be extensive (high involvement) purchases (based on Solomon et al., 2006). Purchase of a DVD or Blu-Ray disc and footwear were chosen to be in the mid ground. A simple three-stage model of the consumer decision-making process was used, viz: information search, comparison and evaluation of alternatives, and purchase. More extensive models, based on for example, Shankar, et al., (2011) and Solomon et al., (2006) were considered, but regarded as potentially confusing for respondents.

The questionnaire was divided into the following sections:

- 1- *Segmentation and classification* – focussing on demographic data (gender, age, location, income, adopter status, and internet access).
- 2- *Purchases and purchase decision-making behaviour* – focussing on importance, effort and information seeking associated with products in each of the six product categories.
- 3- *Consumer behaviour through mobile phone* – focussing on activities performed during consumer decision making with a mobile phone (information search, compare and evaluate alternatives, and purchase) and their location at the time of performing the activity (at home, at work, in a retail store, high street/shopping centre, travelling, out and about).

The questionnaire was designed so that questions appeared on the screen one at a time, such that the response to earlier questions affected subsequent routing through the questionnaire.

The questionnaire was pre-piloted initially through a structured interview with one panellist, and then further piloted through a small subset of the panel. Modest amendments were made to the questionnaire design as a result of the piloting.

A nationally representative sample of 1005 consumers was selected via a research panel as this provides the most cost effective way of targeting a specific group of consumers. The panel chosen was the Toluna research panel, which in total has 364,092 panellists available for questioning in the UK (Toluna, 2012). Panel members were emailed and asked to complete the survey through a secure online link, over a three-week period in early 2012. Responses were closely monitored to ensure they remained representative according to demographic statistics available from the Office for National Statistics (<http://www.statistics.gov.uk/>). If one demographic segment was not responding well, follow up emails were sent to seek to improve the representativeness of the results.

Respondent profile

The demographic profile of the respondents in this study can be summarised thus:

- 46% men, 54% female, a slight skew over the national average of 49%/51%
- Biggest age group was 65 or older with 22% of total respondents, but the respondents were well distributed over all age groups, with a mean age of 45.5.
- Respondents were located in all parts of the UK, with 27% living in London or the South East of England. 84% lived in England, 9% in Scotland, 5% in Wales and 2% in Northern Ireland
- 26% of respondents refused to give their income. Of those who did, 35% fell into the low category (up to £28k), 26% into the medium category (between £28 and £62k)

and 13% in the high category (over £62k). The mean income of respondents was £34,277

Two profiling statistics that were specific to this study were adopter status and products used to access the Internet:

- With respect to adopter status, the largest sub-group classified themselves as being in the 'majority' category, with 63% of respondents saying they tend to wait for new products to be more established before buying them. 19% of respondents classified themselves as early adopters, and 18% as laggards.
- With respect to products used to access the Internet, 58% used either a smartphone or a standard mobile, with 75% of these using a smartphone. 84% used a laptop, 16% a tablet, and 65% a desktop. Many access the Internet through more than one device, with the average number of devices used being 2.12.

Findings

What is the relative level of use of mobiles in the shopping process for low, middle and high involvement purchases?

Table 1 shows the percentage of respondents who have used their mobile in shopping for the various categories of products included in this study, and compares the level of use of mobile phones for shopping with the level of use of computers. Interestingly, there is some evidence of use of mobile phones across all of the product categories, but the number of users is lower than for computers in all categories. For both mobile phones and computers, the percentage of respondents who have used them for shopping increases in line with the level of involvement associated with the purchase, peaking for high involvement purchases such as phones and televisions.

Insert Table 1

What are perceptions regarding the use of mobile phones in the shopping process?

Respondents were asked to respond to a bank of semantic differential questions, in order to collect insights into their feelings about shopping through different channels. Table 2 shows the responses for the use of mobile phone, and computer, respectively. The net score column has been calculated by adding the percentages in the two most positive columns together, and deducting the percentages in the two most negative columns.

Insert Table 2

Table 2 shows that respondents associated convenience, together with accessibility with the use of their mobile for shopping. They are relatively ambivalent about whether the use of their mobile in this context is cheap, helpful, or simple. They are negative about trust, fun, excitement, clarity, and friendliness, so they perceive a number of negative aspects of using their mobile phone for shopping, suggesting that either the mobile phone is not suitable for this purpose, or that consumers are still acclimatising to its use in this context. Interestingly, similar data for a computer showed a higher positive values on all attitudes, with convenience and accessibility once again ranking highest, and also simplicity, helpfulness and cheapness receiving strong rankings.

What is the relative level of use of mobile phones at different stages in the consumer decision-making process?

Through a bank of related questions, respondents were asked about use of their mobile phone for the three stages in the consumer decision-making process, in relation to six products. Table 3 consolidates this data showing percentages of the total number of responses in relation to each of the six products. Data relates to responses, rather than people (with the total number of possible responses for each channel and stage being 6 x 1005, or 6030), but nevertheless shows over the population the extent of use of various devices at different stages in the shopping process. Table 3 compares the use of mobiles with the use of computers, tablets, and shopping in store.

It is important to note that this data includes all products, including low and high involvement products; this might lead to a lower percentage response than might be encountered with a focus on only high involvement products. Although the overall figures are relatively low, it is very evident that there is a considerably higher level of use of the mobile phone in the information search and review of alternatives parts of the process than there is in the purchase stage. Similar patterns exist for all of the other channels, but, for example compared with computers, there is an even greater emphasis on these stages relative to the purchase stage for mobile. In addition, the only channel in which the purchase stage is the most important is in store.

Insert Table 3

Are levels of use at different stages in the shopping process dependent on the product being purchased, and its associated level of involvement?

Table 4.1 lists the actions that are presented to respondents in the questions relating to the different stages in the consumer decision-making process. Responses have been consolidated from the answers to these questions to generate Tables 4.2, 4.3 and 4.4. Table 4.1 shows that for all products some respondents make use of their mobile phone for each of the stages in the decision making process. However, the overall use of the mobile phone is higher for the high involvement products, TV and phone, middle ranking for DVD and footwear, and low for washing powder and bread. For all products, the mobile is important in evaluating alternatives, and in pre-purchase activities such as checking stock or finding a discount voucher or promotion, even in low involvement purchases such as powder or bread. Information search is also relatively important, but much more so for high or medium involvement purchases, such as footwear and DVD. These patterns are very similar to those for use of a computer (Table 4.3), but, in general, differ from the patterns for retail, where purchase becomes a much more significant activity (Table 4.4).

Insert Table 4

Where are people when they use their mobiles to engage in the different stages of the consumer decision making process?

The most obvious finding from the data in Table 5 is that, despite the rhetoric concerning the value of locational marketing and 'the brand on the move' through mobile devices, consumers do their mobile shopping activities at home. Across all products, an average of 32% of information search, 47% of review of alternatives, and 35% of purchase activity through mobile phones took place at home. Usage in a retail store or shopping centre, and 'out and about' were generally also significant. Interestingly, the percentage of respondents who used their mobile phone in those activities associated with reviewing

alternatives is relatively high for all categories. Drilling deeper into the data, there is evidence that the importance of different locations, vary by product. For example, just 5% of eligible shoppers used their mobile in store to find information on a loaf of bread, compared to 13% for a TV. Conversely, 17% of eligible shoppers used a mobile as part of the purchases stage for a loaf of bread, compared to 8% for a TV.

Insert Table 5

Discussion and conclusion

This study shows that respondents are beginning to use mobile phones in the shopping processes associated with a wide range of products, but also that there is a long way to go before they are as widely used in the purchase process as computers. Respondents valued convenience and accessibility that they associated with the use of their mobile for shopping. They are relatively ambivalent about whether the use of their mobile in this context is cheap, helpful, or simple. They are negative about trust, fun, excitement, clarity, and friendliness, so they perceive a number of negative aspects of using their mobile phone for shopping, suggesting that either the mobile phone is not suitable for this purpose, or that consumers are still acclimatising to its use in this context. Earlier research suggests enjoyment and emotion are important drivers of mobile shopping adoption (Li and Chen, 2012; Lu and Su, 2009; Yang et al., 2012). If, however, consumers perceive mobile shopping to be primarily utilitarian and concerned with convenience and accessibility, this might hinder the uptake of mobile shopping. Importantly, consumers were negative about trust; this is consistent with Wu and Wang (2005)'s finding that perceived risk impacted on intention to use mobile shopping, and with studies in mobile marketing that emphasise the importance of trust in encouraging consumers to engage (Grant and O'Donohoe, 2007; Jayawardhena et al., 2009).

Two of the other main findings of this research offer insights into the effect of product category and its associated involvement level in the consumer decision process, and the use of mobiles in the different stages in the consumer decision making process. Interestingly, there is a considerably higher level of use of the mobile phone in the information search and review of alternatives parts of the process than there is in the purchase stage. However, the overall use of the mobile phone is higher for the high involvement products, TV and phone, middle ranking for DVD and footwear, and low for washing powder and bread. For all products, the mobile is important in the evaluating alternatives, and in pre-purchase activities such as checking stock or finding a discount voucher or promotion, even in low involvement purchases such as powder or bread. Information search is also relatively important, but much more so for high or medium involvement purchases, such as footwear and DVD. These patterns, are very similar to those for use of computers, but, differ from the patterns for in store, where purchase/transact becomes a much more significant activity.

Finally, this study explored the location of the use of mobiles in shopping. Interestingly and counter to the much heralded locational marketing opportunities that mobiles and smart phones, in particular, are said to offer, respondents suggested that their home was the most common location for mobile shopping activities, although some mobile shopping activities were also conducted, in a retail store or shopping centre, and 'out and about'. In addition, the location of mobile shopping depends on product category.

In conclusion, this study has gathered useful data on consumer behaviour in the context of mobile shopping. Since previous research on mobile shopping in general, and more specifically recent research that relates to the smart phone era is very limited, there is

considerable scope for further research. Given some of the ambiguities regarding drivers for mobile shopping, and the benefits that shoppers feel that it delivers, more studies on the consumer experience of mobile shopping, and how they perceive it to deliver benefits, relative to other channels, would be welcome. More specifically, it would be valuable to explore further the use of mobiles at different stages in the consumer decision-making process, and in respect of different product categories. Finally, the issue of location has important implications for the development of mobile shopping applications and marketing, and is probably linked with the way in which the mobile, as a communication device, if not a transaction device, has been domesticated into everyday life; this issue warrants further exploration.

The findings from the research reported in this article also have consequences for practice. It is recommended that retailers who are seeking to build a presence in the mobile channel should:

1. View the mobile channel as a distinct channel, and not just a replication of the internet. For example, mobile devices will be used on the move, but also at home; they may both supplement and supplant current internet-based services.
2. Accept that for the present at least the mobile channel is more about marketing and promoting products, than about direct sales, and develop their strategies accordingly; it is likely that many items browsed on a mobile may be purchased online through a computer or in store.
3. Develop an understanding of the way in which consumers use the mobile channel for their specific product portfolio, and customise their offering and communication accordingly.

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