Mobile shopping among young consumers: an empirical study in an emerging market

Sabita Mahapatra
Department of Marketing Management, Indian Institute of Management, Indore, India

Received 9 August 2016
Revised 11 August 2016
30 November 2016
17 January 2017
16 March 2017
3 May 2017
Accepted 8 May 2017

Abstract

Purpose – Superior functionality of smartphones makes them a potential retailing channel, despite their slow adoption. The purpose of this paper is to identify convenience factors that influence consumption experience and intention to continue shopping on a mobile phone.
Design/methodology/approach – This study was carried out on students using a survey method. This study was conducted in the National Capital Region of India due to its large and diverse population. A purposive sampling technique was used to contact 380 respondents.
Findings – The data were analysed using a structural equation model. The results indicate search and possession convenience to be positively related to consumption experience while search, evaluation and post-purchase convenience are positively related to continuance usage intention. The findings of this study provide evidence that mobile phone is an effective channel for shopping due to search, evaluation, possession and post-purchase convenience.
Research limitations/implications – This study used student population between the age group of 20 and 30 years, thereby limiting the generality of the results.
Practical implications – This study provides insights to retailers and brand managers for crafting their mobile marketing strategies.
Originality/value – This study explores and uncovers, for the first time, convenience dimensions of a mobile shopping channel across various stages of consumers' purchase cycle.

Keywords Mobile shopping, Convenience dimensions, Stage of purchase, Consumption experience, Continuance usage intention, Youth, India

Paper type Research paper

Introduction

The ubiquitous presence of mobile networks has resulted in growth of mobile commerce (m-commerce) via hand-held devices (Mahatanankoon, 2007). Technological advancement has offered opportunities for consumers to exercise their choices for shopping channels. As a shopping channel, m-commerce offers convenience of time and place (Balasubramanian *et al.*, 2002). Consumers are able to execute transactions on a smartphone instantaneously, anytime and anywhere as it is personal and handy (Hsieh, 2014). The new channel of purchase on smartphones refers to retail m-commerce. Lai *et al.* (2012, p. 387) note that m-shopping "empowers shoppers with the ability to gather information on the spot from multiple sources, check on product availability, special offers and alter their selection at any point along the path to purchase".

Boyle (2013) found that shopping via smartphones is increasing as consumers are open to use smartphones when a shopping idea strikes them. India is emerging as the top five regions, with more than 1.2 billion people using mobile phones for search, to interact and to shop (Perry, 2016). India is the second-largest smartphone market globally, with growth expected to reach to about 650 million by 2019 (PTI, 2015). It is the youngest country in the world with every third person being a youth and is one of the fastest developing economies with third rank in GDP in terms of purchasing power-parity of approximately $7.28 trillion (Prafull, 2016). This makes India a highly potential and attractive market for many m-commerce players.

International Journal of Retail & Distribution Management

0959-0552
DOI 10.1108/IJRDM-08-2016-0128

Growth in the mobile transactions is progressing quickly, and India's one of the leading online fashion retailers, Myntra, is planning to become a mobile-only marketplace (Sangeetha, 2014). Indian online retail store, Snapdeal, gets 60 per cent of its orders from mobile phones and is expected to grow even more in the future (PTI, 2014). Digital wallets have created a new wave in mobile shopping (m-shopping) by providing exclusive discounts and benefits to attract the customers. Smartphones are used for activities such as searching and comparing products prices or reading reviews (Holmes *et al.*, 2014) and not restricted for shopping. Nevertheless, consumers are using smartphones more for pre- and post-purchasing activities than for making mobile purchases (eMarketer, 2016; Holmes *et al.*, 2014; vor and Hennig-Thurau, 2014). However, most internet users are comfortable with their personal computers to shop online as m-commerce is still in its infancy (eMarketer, 2013). m-Shopping dissemination is still suffering with regard to different technological aspects (e.g. missing well-organised mobile shops and inconvenient and limited screen size of mobile devices) due to concerns regarding safety and security issues, as well as consumers' low level of confidence in mobile platforms (eMarketer, 2015; vor and Hennig-Thurau, 2014; Lai *et al.*, 2012).

Literature shows that channel preference is influenced by ability of the channel to satisfy consumers' needs and expectations (Strebel *et al.*, 2004; Verhoef *et al.*, 2007). It is a well-accepted fact that consumers' perceptions of channel attributes are central to channel choice (Verhoef *et al.*, 2007). Jiang and Rosenbloom (2005) stated that a product/service selling process in e-commerce generally consists of pre-selling service, (information mode, product development, and comparison offering) transaction (trade and finance), physical order fulfilment, and post-selling service. The challenge is in fulfilling the consumer's expectation in every single stage of the shopping process.

Most of the studies on channel choice focus on channel attributes for a particular stage of a purchase cycle, and hence ignore the importance of channel attributes across different stages of the consumer purchase cycle (Strebel *et al.*, 2004). However, knowledge of important channel attributes across each stage of the purchase cycle that influence consumers' channel choice would be insightful both for researchers as well as academicians. The importance of channel attribute differs depending on consumer goal in each stage of the purchase cycle (Balasubramanian *et al.*, 2005; Lee and Ariely, 2006). In the pre-purchase stage, the consumer strives for accurate and relevant information for well-informed decision making (Carlson *et al.*, 2008). In the purchase stage, the consumer aims for evaluating and choosing appropriate product at the best price (Balasubramanian *et al.*, 2005; Hamilton and Chernev, 2010). Finally, in the post-purchase stage, the consumer looks for assistance in using or consuming the selected product and service (Keeney, 1999).

However, there are limited empirical studies on consumer behaviour taking into consideration convenience factor across different purchase cycles, i.e. pre-purchase, purchase and post-purchase, specifically in the context of m-shopping (Persaud and Azhar, 2012). This study would address research questions as to which convenience factors across different purchase cycles would significantly influence consumption experience and continuance usage intention for m-shopping. This study aims to discuss those impediments that impact consumption experience and continued usage of m-shopping. In the current study, the term m-shopping will be referred to as an independent shopping channel for purchasing goods and services through the use of a smartphone. An understanding of convenience dimensions across different stages of a purchase cycle would help to formulate appropriate marketing strategies to manage consumers' channel expectations (Neslin *et al.*, 2006).

The remaining paper will follow a sequence. First, the review of literature for hypotheses development is presented. Next, the methodology for the research is highlighted. Then, result of the study is presented with implications for practitioners. Finally, the limitations and future research are outlined.

Literature review

Increased ownership of smartphones has made them a potential platform for shopping (Tsai and Ho, 2013). Prior research found that perceived ease of use and usefulness of a system influence purchase intention (Gao and Bai, 2014; Li, 2013; Hussein, 2015; Krishanan *et al.*, 2015). As per the study by eMarketer (2013), m-commerce undoubtedly has grown considerably over the last few years and has the potential to transform shopping experience, still desktops or personal computers are the most preferred devices for online purchases. Though consumers have m-shopping experience, yet they seem unwilling to continue shopping using a mobile phone and this is the major cause of its relatively slow growth (Anil *et al.*, 2003). This calls for a need to study and understand the determinants of consumers' continuance of m-shopping (Hung *et al.*, 2007). Most of the existing research works concentrate on identifying major variables of m-shopping behaviour (Kumar and Mukherjee, 2013; Holmes *et al.*, 2014; Ting *et al.*, 2011). While few researchers attributed consumers' attitudes and perception as main determinants of m-shopping (Holmes *et al.*, 2014; Lu and Su, 2009; Lu *et al.*, 2003); few others researchers focused on motivational factor for shopping via a smartphone channel (Childers *et al.*, 2001; Park and Yang, 2006). Significant proportion of research studies has been in the area of acceptance and adoption of m-shopping, utilitarian and hedonic shopping factors (Bigne *et al.*, 2005; Ko *et al.*, 2009; Li *et al.*, 2012) and customer satisfaction related to m-shopping (Choi *et al.*, 2008). The technology acceptance model is the most widely researched area for understanding users' adoption of a smartphone channel for shopping (Kumar and Mukherjee, 2013). Thakur and Srivastava (2013) in their study investigated factors influencing adoption intention of users for m-commerce in India using the technology acceptance model and innovation resistance theory. Results of the study indicated perceived usefulness, perceived ease of use, security, privacy risks and social influence as the most significant drivers for adopting m-shopping. Research study by Sita (2014) adopted the theory of planned behaviour model (Ajzen, 1991) to study acceptance behaviour towards m-commerce. Jih's (2007) study shows a significant and a positive effect of convenience perception on shopping intention. Earlier studies largely concentrated on consumers' acceptance and usage of the new systems (Pantano and Viassone, 2015). Nur (2016) established a relation between transaction convenience and consumer's satisfaction. Research findings have empirically estimated all dimensions of online shopping convenience, e.g. access convenience, information convenience, and transaction convenience, on customer's satisfaction during online purchasing indicating that consumers look for convenience in conducting transaction on internet. Laukkanen (2007), in his study, found a difference between internet and mobile phone users regarding their channel preferences. Hence, it would be inappropriate to assume that online and mobile phone shoppers belong to same category.

Theoretical background and hypotheses development

Continued usage intention

Bhattacherjee (2001) proposed an expectation-confirmation model of information systems to explain users' continuance or repurchase decision. This model suggests that perceived usefulness is a post-consumption expectation and that perceived benefit affects continuance intention. This model has been frequently used to investigate the continued use of information technology. Consumers' continuance intention refers to re-engaging in m-shopping activities. The current study attempts to empirically investigate convenience factors that influence continuance usage. Bhattacherjee (2001) defined continuance usage intention as user's subjective likelihood of continuation. Individuals are more likely to perform behaviours that they believe have beneficial results. Previous research on m-shopping acceptance (Gao *et al.*, 2015; Dmour *et al.*, 2014; Schramm-Klein and Wagner, 2014; Hung *et al.*, 2012) defines continuance intention as consumers' post-purchase

re-engagement in m-shopping activities. Confirmation of expectations regarding convenience influences intention for continued use. Perceived convenience is an important mechanism through which users develop their continuance intentions.

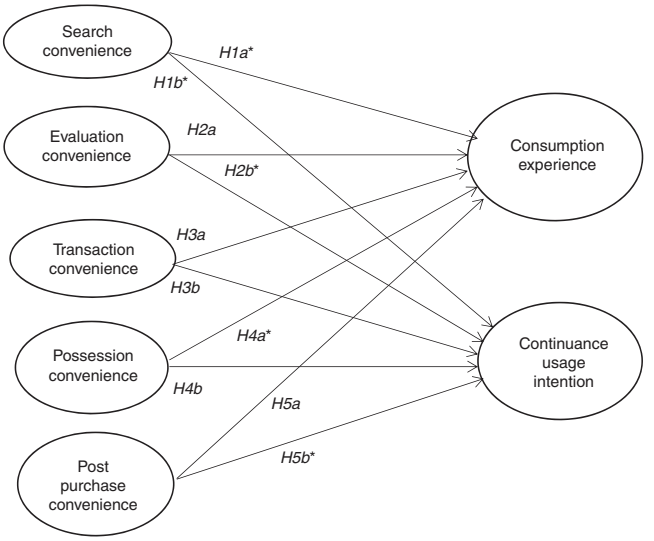
Consumption experience

According to Holbrook and Hirschman (1982), consumption experience consists of three aspects: intention to use, activities involved in consumption, and mental events surrounding the act of consumption. Using a mobile device costs users' mental and physical energy in terms of operating keypad and surfing a mobile website. Consumption experiences are created in the minds of consumers, who in turn evaluate, engage in actions and form future intentions about the consumption activity. The current study focuses on the consumption experience operationalized as a measure of behaviour outcome such as future patronage intention (Mathwick *et al.*, 2001), intention to revisit (Demangeot and Broderick, 2007), and amount of time and money spent (Donovan and Rossiter, 1982).

m-Shopping convenience

Webster's Dictionary defines convenience as "anything that adds to one's comfort or saves work; useful, handy or helpful device, article, service, etc." (Ling *et al.*, 2013). Convenience can be defined as consumers' perceptions of time and effort involved in using a mobile device (Berry *et al.*, 2002). Convenience can be defined as an effortless and efficient shopping experience (Wolfinbarger and Gilly, 2001). Literature on retail convenience emphasised time and effort convenience as most crucial elements (Seiders *et al.*, 2007). Convenience (Vandana and Deepak, 2016) is defined as "ease of usage of tool, which enhances and allows easy payments, completion of shopping task, getting the products delivered, saves time and energy which is required for the shopping process". These benefits particularly in terms of costs are of a significant value when consumer is under pressure (Beatty and Smith 1987). Berry *et al.* (2002) defined shopping convenience in terms of cognitive, physical, and psychological efforts. Seiders *et al.* (2007) defined shopping convenience as fast and easy to access, select and process transactions. Time saving relates to waiting time (Gehrt and Yale, 1993) while effort saving refers to cognitive, physical, and psychological inputs associated with purchase (Berry *et al.*, 2002). Literature on service quality identified ease of use, depth and quality of information, interactivity and security as convenience factors in virtual shopping (Parasuraman *et al.*, 2005; Yang *et al.*, 2005). Jih (2007) argued that transaction and operational convenience impact consumer's online shopping intentions. Colwell *et al.* (2008) developed a multi-dimension service convenience scale in the context of smartphones. Koo *et al.* (2008) and Yang *et al.* (2005) found visual design, information quality, and service delivery convenience resulting in customer satisfaction. Beauchamp and Ponder (2010) differentiated offline and online customers based on access, search, transaction, and possession convenience and found access and search convenience to be more important compared to transaction convenience for online shoppers. In virtual environments, some research contends that convenience is the most crucial benefit.

Although shopping convenience is of strategic importance, research scholars have carried relatively less empirical study to examine the dimensions of convenience of m-shopping. The importance of shopping convenience necessitates an urgent need for managers to understand and focus on those convenience attributes that are considered most important for shopping on a mobile phone. Based on the literature review, the current study proposes a framework (Figure 1) that incorporates search, evaluation, transaction, possession, and post-purchase convenience for different phases of a purchase cycle as antecedents influencing consumption experience and continuation usage intention of shopping on a mobile phone.



Note: *Denotes supported hypothesis

Figure 1.
Proposed model tested

Search convenience

Search convenience refers to the benefit in terms of availability of information with least effort and time (Yu-Min *et al.*, 2016). Channel that provides useful and precise information is perceived as convenient (Avery, 1996). Consumers generally are more comfortable when a channel provides information with least expending of effort and time for search of product or service information (Hardy, 1982; Moorthy *et al.*, 1997; Verhoef *et al.*, 2007). Consumers would avoid a channel if search cost in terms of time and effort is perceived to be high (Verhoef *et al.*, 2007). A channel that is perceived to be more comprehensive to process information influences consumer's preference (Jepsen, 2007; Noble *et al.*, 2005). A digital platform presents information in the form of text, tables, graphs, photos, audios, and videos which makes it more comprehensive, thereby enriching the search experience. Loiacono *et al.* (2007) showed a strong link between information convenience and revisit intention. Thus, the following hypotheses are proposed:

H1a. A positive relationship exists between search convenience and consumption experience.

H1b. A positive relationship exists between search convenience and intention to continue shopping on a mobile phone.

Evaluation convenience

Evaluation or decision convenience referred to as choice convenience relates to consumers' perceptions of the time and effort associated with making a decision for choices about a product among competing alternatives (Alicia *et al.*, 2014). Litan and Rivlin (2001) suggest that benefits pertain mostly to improved consumer convenience and expanded choices. Smartphones with advanced technologies such as mobile phone apps allow consumers to easily access, identify, compare and order products, and create shopping lists through user-friendly interface and quick response codes. Thus, mobile retail scenario allows consumers to create a virtual shopping list, access a virtual shopping assistant, search, query, compare, and purchase products/services, and share information on the purchase

experience through social networks. These mobile phone apps are convenient and have a perceived value in terms of consumption experience (Kang *et al.*, 2015). Digital technology allows for display of products in a comprehensive manner for consumers to evaluate options, thereby influencing channel choice (Morales *et al.*, 2005). Consumers have the option to customise their requirement (Liao *et al.*, 2005) which results in perceived evaluation convenience. Display of products' features and customised services influences purchase intention (Tong *et al.*, 2012). Customised option provides convenience (Ko *et al.*, 2009; Park, 2014) leading to positive consumption experience and intention to continue shopping on a mobile phone. Thus, this study proposes the following hypotheses:

H2a. A positive relationship exists between evaluation convenience and consumption experience.

H2b. A positive relationship exists between evaluation convenience and intention to continue shopping on a mobile phone.

Transaction convenience

Transaction convenience entails consumers' perceived expenditure of time and effort to make a transaction, which typically involves payment (Alicia *et al.*, 2014). Transaction security and lack of privacy leads to financial risk associated with transactions of money (Bendapudi and Leonard, 1997) which significantly influence channel choice. Wu and Wang (2006) found privacy and security to be critical factors for m-shopping. Risk, involved in mobile monetary transactions, is the major barrier in adoption of mobile marketing (Ng, 2016; Gao *et al.*, 2015; Groß, 2015). Security concern is important in deterring customer from using m-commerce. Clearly, customers have a tendency to use m-commerce if the system is fully protected. People are concerned about unwanted disclosure or misuse of private information. Considering the whole path to purchase, the transaction-processing risk seems to be most critical in situations when the payment transaction is interrupted due to unstable or limited internet access. This may induce consumer to transaction-processing risk having a negative influence on consumers' intention to continue m-shopping. The privacy and security of mobile transactions performed by using smartphones for marking purchases will consequently prevent consumer from m-shopping on a regular basis (Gao *et al.*, 2015; Lai *et al.*, 2012). The study proposes the following hypotheses:

H3a. A positive relationship exists between transaction convenience and consumption experience.

H3b. A positive relationship exists between transaction convenience and intention to continue shopping on a mobile phone.

Possession convenience

Possession convenience refers to effort required for making a purchase to obtain desired products or amend a transaction (Ling *et al.*, 2013). Purchase effort involves consumers' costs in terms of time and difficulty associated with purchase of product on a specific channel (Bhatnagar and Ratchford, 2004). Consumers choose that channel which facilitates buying and possession convenience. Consumers may not prefer a channel if they perceive this process to be too complex, particularly if they lack the necessary resources to perform the task (Park and Kim, 2003). Furthermore, a consumer can physically inspect a product in retail store and then place the order on a mobile phone. Easy and fast settlement of transaction and possession assistance is associated with purchase/possession convenience (Forsythe *et al.*, 2006; Schröder and Zaharia, 2008). Possession convenience and assistance influences channel choice (Johnson *et al.*, 2006; Laukkanen, 2007). While finalising a purchase decision consumer

often want affirmation in form of feedback. Smartphone offers the opportunity to share information efficiently (Carlson and Zmud, 1999) to get assurance about the choice. Ease with which assurance and endorsement on purchase decision can be acquired influence channel prefers (Forsythe and Shi, 2003). Thus, the following hypotheses are proposed:

H4a. A positive relationship exists between possession convenience and consumption experience.

H4b. A positive relationship exists between possession convenience and intention to continue shopping on a mobile phone.

Post-purchase convenience

Hausman and Siekpe (2009) study reported responsive customer service as a crucial antecedent for intention to revisit or avoidance a channel. Responsive service like prompt and accurate after sales service and guidance influences shopping experience (Chen and Dibb, 2010). Smartphone is the most interactive platform (Ko *et al.*, 2005) in terms of "human message interaction" and "human-human interaction". The real-time tracking system provides the advantage of service delivery as promised (Srinivasan *et al.*, 2002). Consumers can easily mail or call helpline to notify service failure on the spot. Customers get immediate service assistance through helpline number or personal assistance on a mobile phone (Chiang and Liao, 2012). Thus, the following hypotheses are proposed:

H5a. A positive relationship exists between post-purchase convenience and consumption experience.

H5b. A positive relationship exists between post-purchase convenience and intention to continue shopping on a mobile phone.

Methodology

Frame of respondents

The current study aims to identify convenience factors that influence consumption experience and intention to continue shopping on a mobile phone. The "average m-shopper" is typically a young, well-educated, price-conscious consumer who values convenience of m-shopping (Jih, 2007; Jih and Lee, 2003). Their experience of online shopping is due to their high affinity for mobile phones (Bigne *et al.*, 2005). Old consumer seems to be reluctant in using m-shopping as it demands cognitive ability to learn new technology (Venkatesh *et al.*, 2012). Therefore, the current study concentrates on young consumers who exhibit high usage of mobile internet. The study was carried out on students between 20 and 30 years of age using a survey method for two months (November and December 2015). The study was conducted in the National Capital Region of India due to its large and diverse population. A purposive sampling technique was used to contact 400 respondents. Respondents were asked a screening question to determine if they had prior experience of m-shopping. Respondents were requested to indicate their response on a Likert scale with 5 as strongly agree to 1 as strongly disagree. The final response used for analysis was 380 resulting in 95 per cent response rate. In total, 62.4 per cent of the respondents were male while 37.6 per cent were female. In all, 46.1 per cent of respondents used mobile phones for services, 34.9 per cent used for purchase of electronic items and books while remaining 19 per cent used for purchase of fashion items and accessories.

Measurement instrument

A structured questionnaire was developed that comprised primarily closed questions to collect data. The questionnaire had two parts. First part addressed the demographic

questions while the second part addressed the main questions pertaining to research objective. Holbrook and Hirschman's (1982) consumption experience scale was adopted. Bhattacherjee's (2001) scale was adopted for continued usage intention. Jiang *et al.*'s (2013) convenience scale was used. Respondents were asked to indicate the products/services they purchase on mobile channel. In this study, all constructs were measured using reflective indicators. The indicators to measure each of the constructs were adopted from the previous studies after verifying the suitability in the contextual setting and wherever required few items in the questionnaire were modified based on a pre-test. Measurement scale can be seen in the Appendix.

Results

Measurement model

The partial least squares (PLS) approach is a latent structural equation modelling technique (Lohmoller, 1989) used to analyse the data that might not have a multivariate normal distribution. It is used for a small sample size (Chin, 1998) and for the analysis of measurement and structural model simultaneously. PLS structural equation model seems most appropriate when the research context is in the early stage and has not been examined extensively (Gefen *et al.*, 2011; Hair *et al.*, 2011, 2013). This approach was preferred as m-shopping research is still in its infancy stage. As suggested by MacKenzie and Podsakoff (2012), the study considered common method bias by sequencing the order of questions appropriately.

Measurement model validation

The measurement model was evaluated by a reliability and validity test. Cronbach's α value for all variables exceeded the minimum cut-off level of 0.70 (Hair *et al.*, 2010). Composite reliability for each latent variable was greater than 0.80, while AVE was greater than 0.50. This indicates strong reliability and convergent validity as shown in Table I. The diagonal values in parentheses were greater than the entries in corresponding rows and columns, indicating discriminate validity as shown in Table II.

Structural model

The structural model was tested by examining path coefficients, *t*-statistics, and R^2 value. Table III and Figure 1 summarise results of the structural model test. Each hypothesis was tested by checking the statistical significance of the path coefficients (β) between each latent variable and the dependent variable (Hyun and Luis, 2015). Out of ten paths examined, five paths were found to be significant. Search, evaluation, transaction, possession and post-purchase convenience explained 37 per cent of the variance in consumption experience and 33 per cent of the variance in continuance usage intention of m-shopping. Search convenience is significantly and positively related to consumption experience ($\beta = 0.31$, $t = 5.26$, $p > 0.001$) and continuance intention ($\beta = 0.15$, $t = 2.23$, $p > 0.05$) thus supporting *H1a* and *H1b*. These

Table I. Composite reliability and AVE

Constructs	Average variance extracted	Composite reliability	Cronbach's α
Search convenience	0.6171	0.9059	0.8767
Evaluation convenience	0.5496	0.907	0.883
Transaction convenience	0.5505	0.8303	0.7293
Possession convenience	0.5942	0.8541	0.7734
Post-purchase convenience	0.5885	0.8771	0.8256
Consumption experience	0.7169	0.8351	0.6051
Continuance usage intention	0.7551	0.8604	0.678

Table II.
Correlation matrix and discriminant validity

	AVE	Search convenience	Evaluation convenience	Transaction convenience	Possession convenience	Post-purchase convenience	Consumption experience	Continuance usage intention
Search convenience	0.6171	*1*						
Evaluation convenience	0.5496	−0.09	*1*					
Transaction convenience	0.5505	0.08	0.19	*1*				
Possession convenience	0.5942	0.37	−0.34	−0.02	*1*			
Post-purchase convenience	0.5885	0.04	0.12	0.55	0.02	*1*		
Consumption experience	0.7169	0.46	−0.25	−0.03	0.53	0.01	*1*	
Continuance usage intention	0.7551	0.11	0.34	0.30	−0.12	0.47	−0.03	*1*

Notes: Diagonal entries (in italics) represent the square root of the AVE values. All other entries represent the correlation coefficients

Path	*B*	*t*	Sig	Hypotheses supported
H1a: Search convenience → consumption experience	0.311	5.264	**	Supported
H1b: Search convenience → continuance usage intention	0.153	2.237	*	Supported
H2a: Evaluation convenience → consumption experience	0.084	1.287	ns	Not
H2b: Evaluation convenience → continuance usage intention	0.277	5.033	**	Supported
H3a: Transaction convenience → consumption experience	0.056	0.631	ns	Not
H3b: Transaction convenience → continuance usage intention	0.007	0.096	ns	Not
H4a: Possession convenience → consumption experience	0.384	5.095	**	Supported
H4b: Possession convenience → continuance usage intention	0.097	1.671	ns	Not
H5a: Post-purchase convenience → consumption experience	0.033	0.527	ns	Not
H5b: Post-purchase convenience → continuance usage intention	0.441	5.927	**	Supported

Notes: *$p < 0.05$; **$p < 0.001$

Table III.
Path coefficient and hypotheses test

findings are in line with Xu and Paulins's (2005) research finding which found that web page design, navigation and information searching convenience, boost consumers to buy.

Likewise, evaluation convenience was significant and positively related to continuance usage intention ($\beta = 0.27$, $t = 5.03$, $p > 0.001$). Thus, *H2b* is supported. That is, the higher the evaluation convenience, the greater the intention to continue usage of m-shopping. Personalised and localised promotion while on move comes as a special treat to mobile phone users (Jones and Issroff, 2007) that facilitates their evaluation decision. Such features offer a sense of achievement (Babin *et al.*, 1994). Similarly possession convenience is positively related to consumption experience ($\beta = 0.38$, $t = 5.09$, $p > 0.001$) thus supporting *H4a*. Consumers experience a feeling of joy, and pleasure from m-shopping as they can easily download websites on their mobile phone (Chinomona, 2013). Again, post-purchase convenience is significantly and positively related to continuance usage intention ($\beta = 0.44$, $t = 5.92$, $p < 0.001$). Thus, *H5b* is supported.

However, there is no significant and positive relation between evaluation, transaction and post-purchase convenience with consumption experience. Thus *H2a*, *H3a* and *H5a* are not supported, suggesting that evaluation, transaction and post-purchase convenience are not related to consumption experience. This may be due to the fact that these convenience matter more for the high involved product category which requires cognitive and elaborate consideration. High involved products which are priced high and purchased less frequently necessitate evaluation, transaction and post-purchase convenience like physical verification, transaction security and post-purchase physical assistance in form of installation and maintenance. For the high involved product category like consumer durables, a channel that offers evaluation, transaction and possession convenience will encourage customer to continue purchasing from that channel. It is also found that transaction and possession convenience are not related to continuance usage intention. Thus *H3b* and *H4b* are not supported. Jiang *et al.* (2013) concluded that customers need all kinds of convenience while shopping. Today consumers have more options to shop like retail store, teleshopping, online shopping, etc. Hence, there is likelihood that a consumer will like to exercise his right to purchase from multiple channels. Therefore, channel managers cannot expect consumers to continue shopping from a single channel. Hence, channel managers need to be cognizant of a good fit between convenience factors across different purchase cycles for different product categories.

Discussion

As per the study findings, search convenience is found to significantly impact consumption experience and also consumer's continuation usage of m-shopping. The result supports the research finding (Lee and Kim, 2008; Sen *et al.*, 2006) that consumers find mobile platform

comparatively easy and quick to find the required information. The study results confirm with Kollmann *et al.* (2012) findings that search convenience attracts consumer to a particular channel. The study results indicate search convenience as the most influential factor significantly related to consumption experience and continuation usage intention. While evaluation convenience was significantly related to continuation usage intention but not to consumption experience. This may possibly be because consumers are more comfortable to use mobile phone for information search than for purchase. Interestingly, if there is a high level of convenience in pre-purchase activities like information search and evaluation of alternatives, it results in continuation usage intention. Mobile phones facilitate pre-purchase activities such as checking out on product availability, finding a discount offer, and evaluating alternatives particularly for low involvement product. This imply that consumers are still reticent to engage in m-purchasing specifically for high involvement products.

As per the study findings, transaction convenience had no significant relation to consumption experience and continuation usage intention. This is similar to Verhoef *et al.*'s (2007) findings that consumers find it less risky to purchase in real store than on digital platform. Consumer often discontinue m-shopping due to privacy and security concerns. This finding is consistent with Wu and Wang's (2006) study that found privacy protection and perceived risk to influence intention to use m-shopping. Findings also indicate that purchase and post-purchase convenience are not significantly related to consumption experience and continuation usage intention, respectively. As per vor and Hennig-Thurau's (2014) study, m-shopping is still a new approach to many consumers for purchasing goods and services. Knežević *et al.* (2015) found that availability of information, product and service (search and evaluation convenience) are main values of mobile phone applications. As per a Google survey, 42 per cent cited convenience as a major motivating factor for shopping on smartphones (Google Shopper Marketing Council, 2013) which support the results of this study.

Theoretical implications

This study enhances our understanding of how consumers' perceptions of channel convenience across different purchase stages influence their channel choice. This study extends the applicability of expectancy confirmation model to explore the relationships among various convenience factor and consumption experience and continuation usage of m-shopping. Additionally, this study provides an in-depth understanding of the various convenience factors underlying consumption experience and continuation usage of m-shopping.

Managerial implications

Superior customer experience is becoming the motto of all channels. This study seems to be the most appropriate piece of work to provide insights on how to provide convenience across various purchase cycles for an excellent m-shopping experience. Thus, this study aims to identify convenience factors contributing to consumption experience and continuance usage intention. Concentrating on m-shopping continuance usage intention, contribution of the study to literature is therefore remarkable since m-shopping world over is still in its infancy (Nielsen, 2013).

The results indicated that search, evaluation, transaction, possession and post-purchase convenience differently influence consumption experience and continuance usage intention of m-shopping. As per the study result, evaluation convenience influenced continuance usage intention for m-shopping. Customised and easy-to-understand product descriptions on smartphone results in evaluation convenience. Mobile phone as a channel should focus on improving consumption experience, for example, display of products in 3-D presenting or animations. Due to 3G and 4G technology, selection of product based on detailed

information is now becoming possible at just one touch on a smartphone. Text, graphics, and video presentation of features enhances the evaluation of a product on a mobile platform. A mobile platform should offer dynamic drop-down menus with multiple layers of information and walk-through tours featuring avatar to guide and assist consumer while navigation on mobile channel. The design of the website should be simple with a visualised map featuring a quick and automatic sorting and classification based on user command to enhance sorting with minimise efforts. A user-friendly website makes navigation easy with less cognitive effort and time. Instantaneous customer feedback and peer reviews provide the advantage of effortless evaluation within no time before finalising and placing order. The mobile recommender systems can assist consumers based on shopping preferences, location, shopping list, shopping history and browsing behaviour.

According to Cheng *et al.* (2006), consumers' perception on risk is a useful predictor of m-commerce adoption intention. Features like certified encryption, multi-tier authentication, real-time PIN generation, assurance of secure transactions by sending confirmation code and adopting privacy and security policies, and indemnifying consumers in case of fraud can prove useful.

Mobile handset with up-to-date technologies such as fingerprint recognition, digital wallets, heartbeat rate, retinal recognition and other sophisticated technologies would attract and retain more consumers to mobile platforms. M-vendors need to pay attention to legal and technological assurance, safe transaction and provisions for refunds and return guarantees (Khalifa and Shen, 2008; Wu and Wang, 2006; Zhou, 2013). Simple and flexible payment methods can improve transaction convenience.

The findings of the study indicated possession convenience influenced consumption experience. This is because the online check-out process does not have the hassle of lengthy queues. Timely, accurate and personalised services assistance through interactive videos (Pan, 2014) can be provided to customers as a retention strategy. Furthermore, results suggest that post-purchase convenience influence continuation usage of m-shopping. The convenience factors like easy tracking of product movement, cancellation, etc., can make this channel attractive. An innovative method of tracking customer's transaction history and linking to location-based promotions incentives would entice consumer to this channel. Facility to monitor on-time delivery and service quality can enhance post-purchase convenience. In an event of incomplete orders or damaged products, a special app should be designed and made handy for addressing such issues.

Managers should understand and assist consumers by addressing convenience in each stage of the purchase cycle. For example, managers can provide updated information regarding product availability, user-friendly price and product comparison tools, and mobile phone based applications to help consumers check for product availability. Customers should be educated and made aware of smartphone features like global positioning system and radio service system that provide location-specific information, services, special offers and customised discounts (Cherian and Rudrapatna, 2013).

In order to expand the loyal customer base, retailers need to consider how to improve convenience in each purchase stage. The most frequently purchased products/services on mobile phones as per the study results were accessories, electronic, other routine items like tickets and services. This may be due to the fact that customers are already familiar with these product categories and possibly because such category does not require elaborate search, planning or cognition consideration. Smartphone and tablets as pocket size devices are controlled by finger touch. From ergonomic and technological point of reference, smartphones can provide more personal and interactive shopping experience. As customers find value in m-shopping their spending and purchase on this platform will increase, hence retailers should prioritise their investment on supporting and expanding this channel more specifically for routine or low involvement product. Policy should be made not to

impose surcharge fee for making payment on mobile phones. Based on the study results, it can be concluded that managers need to understand and provide superior customer convenience across different purchase cycles to ensure mobile phones emerge as a successful shopping platform. Hung *et al.* (2012, p. 30) suggest "understanding consumer behaviour is critical for successful management and development of m-shopping". This study therefore will be of great use to the practitioners aiming to revolutionise the shopping experience on smartphones.

Limitation and future research

The study had few limitations, which in turn suggest avenues for further research. This study used student population aged between 20 and 30 years, thereby limiting generality of the results. Future research might replicate the study in other countries and on other age groups. Moderating influence of demographic and psychographic can be tested in future study. The extrinsic factor like buying situation can be investigated as a mediator for future research.

References

Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211.

Alicia, I.-Y., María, P.M.-R. and Agustín, Á.-H. (2014), "What differentiates internet shoppers from internet surfers?", *The Service Industries Journal*, Vol. 34 No. 6, pp. 530-549, available at: http://dx.doi.org/10.1080/02642069.2014.871536

Anil, S., Ting, L.T., Moe, L.H. and Jonathan, G.P.G. (2003), "Overcoming barriers to the successful adoption of mobile commerce in Singapore", *International Journal of Mobile Communications*, Vol. 1 Nos 1/2, pp. 194-231.

Avery, R.J. (1996), "Determinants of search for nondurable goods: an empirical assessment of the economics of information theory", *Journal of Customer Affair*, Vol. 30 No. 2, pp. 390-420.

Babin, B.J., Darden, W.R. and Griffin, M. (1994), "Work and/or fun: measuring hedonic and utilitarian shopping values", *Journal of Consumer Research*, Vol. 20 No. 4, pp. 644-656.

Balasubramanian, S., Peterson, R.A. and Jarvenpaa, S.L. (2002), "Exploring the implications of m-commerce for markets and marketing", *Academic of Marketing Science Journal*, Vol. 30 No. 4, pp. 348-361.

Balasubramanian, S., Raghunathan, R. and Mahajan, V. (2005), "Consumers in a multichannel environment: product utility, process utility and channel choice", *Journal of Interactive Marketing*, Vol. 19 No. 2, pp. 12-30.

Beatty, S.E. and Smith, S.M. (1987), "External search effort: an investigation across several product categories", *Journal of Consumer Research*, Vol. 14, pp. 83-95.

Beauchamp, M.B. and Ponder, N. (2010), "Perceptions of retail convenience for in-store and online shoppers", *The Marketing Management Journal*, Vol. 20 No. 1, pp. 49-65.

Bendapudi, N. and Leonard, L.B. (1997), "Customer's motivations for maintaining relationships with service providers", *Journal of Retailing*, Vol. 73 No. 1, pp. 15-37.

Berry, L.L., Seiders, K. and Grewal, D. (2002), "Understanding service convenience", *The Journal of Marketing*, Vol. 66 No. 3, pp. 1-17.

Bhatnagar, A. and Ratchford, B.T. (2004), "A model retail format competition for nondurable goods", *International Journal of Research Marketing*, Vol. 21 No. 1, pp. 39-59.

Bhattacherjee, A. (2001), "Understanding information systems continuance: an expectation confirmation model", *MIS Quarterly*, Vol. 25 No. 3, pp. 351-370.

Bigne, E., Ruiz, C. and Sanz, S. (2005), "The impact of internet user shopping patterns and demographics on consumer mobile buying behaviour", *Journal of Electronic Commerce Research*, Vol. 6 No. 3, pp. 193-209.

Carlson, J.R. and Zmud, R.W. (1999), "Channel expansion theory and experiential nature of media richness perception", *Academy of Management Journal*, Vol. 42 No. 2, pp. 153-170.

Carlson, K., Janiszewski, C., Keney, R., Krantz, D., Kunreuther, H. and Luce, M.F. (2008), "A theoretical framework for goal based choice and for prescriptive analysis", *Marketing Letters*, Vol. 19 No. 3, pp. 241-254.

Chen, J. and Dibb, S. (2010), "Consumer trust in the online retail context: exploring the antecedents and consequences", *Psychology and Marketing*, Vol. 27 No. 4, pp. 323-346.

Cheng, T.C.E., Lam, D.Y.C. and Yeung, A.C.L. (2006), "Adoption of internet banking: an empirical study in Hong Kong", *Decision Support Systems*, Vol. 42 No. 3, pp. 1558-1572.

Cherian, S.S. and Rudrapatna, A.N. (2013), "LTE location technologies and delivery solutions", *Bell Labs Technical Journal*, Vol. 18, pp. 175-194.

Chiang, I.P. and Liao, Y.S. (2012), "Exploring the key success factors of mobile commerce in Taiwan", *26th International Conference on Advanced Information Networking and Applications Workshops*, pp. 369-374.

Childers, T.L., Carr, C.L., Peck, J. and Carson, S. (2001), "Hedonic and utilitarian motivations for online retail shopping behaviour", *Journal of Retailing*, Vol. 77 No. 4, pp. 511-535.

Chin, W. (1998), "Commentary: issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. 7-16.

Chinomona, R. (2013), "The influence of market related mobile activities on the acceptance of mobile marketing and consumer intention to purchase products promoted by SMS in South Africa", *The Journal of Applied Business Research*, Vol. 29 No. 6, pp. 1897-1907.

Choi, J., Seol, H., Lee, S., Cho, H. and Park, Y. (2008), "Customer satisfaction factor of mobile commerce in Korea", *Internet Research*, Vol. 18 No. 3, pp. 1212-1217.

Colwell, S.R., Aung, M., Holden, V. and Holden, A. (2008), "Toward a measure of service convenience: multiple-item scale development and empirical test", *Journal of Services Marketing*, Vol. 22 No. 2, pp. 160-169.

Demangeot, C. and Broderick, A.J. (2007), "Conceptualising consumer behaviour in online shopping environments", *International Journal of Retail & Distribution Management*, Vol. 35 No. 11, pp. 878-894.

Dmour, H.A., Alshurideh, M. and Shishan, F. (2014), "The influence of mobile application quality and attributes on the continuance intention of mobile shopping", *Life Science Journal*, Vol. 11 No. 10, pp. 172-181.

Donovan, R.J. and Rossiter, J.R. (1982), "Store atmosphere: an environmental psychology approach", *Journal of Retailing*, Vol. 58 No. 1, pp. 34-57.

eMarketer (2013), "Tablets, smartphones drive mobile commerce to record heights", available at: www.emarketer.com/newsroom/index.php/emarketer-tabletssmartphonesdrive-mobile-commerce-record-heights/ (accessed 27 April 2014).

eMarketer (2015), "Why mobile shopping remains an upper-funnel affair", available at: www.emarketer.com/Article/Why-Mobile-Shopping-Remains-Upper-Funnel-Affair/1012661 (accessed July 2016).

eMarketer (2016), "Most digital buyers will make purchases via a smart phone by 2017", available at: www.emarketer.com/Article/Most-Digital-Buyers-Will-Make-Purchases-via-Smartphone-by-2017/1013590 (accessed July 2016).

Forsythe, S., Liu, C., Shannon, D. and Gardner, L.C. (2006), "Development of a scale to measure the perceived benefits and risks of online shopping", *Journal of Interactive Marketing*, Vol. 20 No. 2, pp. 55-75.

Forsythe, S.M. and Shi, B. (2003), "Customer patronage and risk perceptions in internet shopping", *Journal of Business Research*, Vol. 56 No. 5, pp. 867-875.

Gao, L. and Bai, X. (2014), "A unified perspective on the factors influencing consumer acceptance of the internet and of things technology", *Asia Pacific Journal of Marketing and Logistics*, Vol. 26 No. 2, pp. 211-231.

Gao, L., Waechter, K.A. and Bai, X. (2015), "Understanding consumers' continuance intention towards mobile purchase: a theoretical framework and empirical study – a case of China", *Computers in Human Behaviour*, Vol. 53, pp. 249-262.

Gefen, D., Ridgon, E.E. and Straub, D.W. (2011), "Editor's comments: an updated and extension to SEM guidelines for administrative and social science research", *MIS Quarterly*, Vol. 35 No. 2, pp. 3-15.

Gehrt, K.C. and Yale, L.J. (1993), "The dimensionality of the convenience phenomenon: a qualitative re-examination", *Journal of Business and Psychology*, Vol. 18 No. 2, pp. 163-180.

Google Shopper Marketing Council (2013), "Mobile in-store research how in-store shoppers are using mobile devices", Google Research, April, available at: www.thinkwithgoogle.com/research-studies/mobile-in-store.html (accessed 17 December, 2014).

Groß, M. (2015), "Mobile shopping: a classification framework and literature review", *International Journal of Retail & Distribution Management*, Vol. 43 No. 3, pp. 221-241.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 18 No. 2, pp. 139-152.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data 624 Analysis*, 7th ed., Pearson Prentice-Hall, Upper Saddle River, NJ.

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage, Thousand Oaks, CA.

Hamilton, R. and Chernev, A. (2010), "The impact of product line extensions and consumer goals on the formation of price image", *Journal of Marketing Research*, Vol. 47 No. 1, pp. 51-62.

Hardy, A.P. (1982), "The selection of channels with seeking information: cost/benefit vs. least-effort", *Information Process and Management*, Vol. 18 No. 6, pp. 289-293.

Hausman, A.V. and Siekpe, J.S. (2009), "The effect of web interface features on consumer online purchase intentions", *Journal of Business Research*, Vol. 62 No. 1, pp. 5-13.

Holbrook, M.B. and Hirschman, E.C. (1982), "The experiential aspect of consumption: consumer fantasies, feeling and fun", *Journal of Consumer Research*, Vol. 9 No. 2, pp. 132-140.

Holmes, A., Byrne, A. and Rowley, J. (2014), "Mobile shopping behaviour: insights in to attitudes, shopping process involvement and location", *International Journal of Retail & Distribution Management*, Vol. 42 No. 1, pp. 25-39.

Hsieh, C.T. (2014), "Mobile commerce: accessing new business opportunities", *Communications of the IIMA*, Vol. 7 No. 1, p. 9.

Hung, M.C., Hwang, H.G. and Hsieh, T.C. (2007), "An exploratory study on the continuance of mobile commerce: an extended expectation-confirmation model of information system use", *International Journal of Mobile Communications*, Vol. 5 No. 4, pp. 409-422.

Hung, M.-C., Yang, S.-T. and Hsieh, T.-C. (2012), "An examination of the determinants of mobile shopping continuance", *International Journal of Electronic Business Management*, Vol. 10 No. 1, pp. 29-37.

Hussein, Z. (2015), "Explicating students' behaviours of e-learning: a viewpoint of the extended technology acceptance", *International Journal of Management and Applied Science*, Vol. 1 No. 10, pp. 68-73.

Hyun, S.Y. and Luis, G.O. (2015), "Influencing factors of trust in consumer-to-consumer electronic commerce with gender and age", *International Journal of Information Management*, Vol. 35 No. 3, pp. 352-363.

Jepsen, A.L. (2007), "Factors affecting consumer use of the internet for information search", *Journal of Interactive Marketing*, Vol. 21 No. 3, pp. 21-34.

Jiang, L.A., Zhilin, Y. and Minjoon, J. (2013), "Measuring consumer perceptions of online shopping convenience", *Journal of Service Management*, Vol. 24 No. 2, pp. 191-214.

Jiang, P. and Rosenbloom, B. (2005), "Customer intention to return online price perception, attribute-level performance, and satisfaction unfolding over time", *European Journal of Marketing*, Vol. 39 Nos 1/2, pp. 150-174.

Jih, W.J. (2007), "Effects of consumer-perceived convenience on shopping intention in mobile commerce: an empirical study", *International Journal of E-Business Research*, Vol. 3 No. 4, pp. 33-48.

Jih, W.-J.K. and Lee, S.-F. (2003), "An exploratory analysis of relationships between cellular phone uses' shopping motivators and lifestyle indicators", *Journal of Computer Information Systems*, Vol. 44 No. 2, pp. 65-73.

Johnson, K.K.K., Yoo, J.J., Rhee, J., Lennon, S., Jasper, C. and Damhorst, M.Y. (2006), "Multi-channel shopping: channel use among rural consumers", *International Journal of Retail and Distribution Management*, Vol. 34 No. 6, pp. 453-466.

Jones, A. and Issroff, K. (2007), "Motivation and mobile devices: exploring the role of appropriation and coping strategies", *ALT-J: Research in Learning Technology*, Vol. 15 No. 3, pp. 247-258.

Kang, J.-Y.M., Mun, J.M. and Johnson, K.K.P. (2015), "In-store mobile usage: downloading and usage intention toward mobile location-based retail apps", *Computers in Human Behaviour*, Vol. 46, pp. 210-217.

Keeney, R. (1999), "The value of internet commerce to the customer", *Management Science*, Vol. 45 No. 4, pp. 533-542.

Khalifa, M. and Shen, K.N. (2008), "Explaining the adoption of transactional B2C mobile commerce", *Journal of Entrepreneur Information Management*, Vol. 21 No. 2, pp. 110-124.

Knežević, B., Delić, M. and Knego, N. (2015), "Smartphones and mobile applications as shopping tools – attitudes of young retail consumers in Croatia", *Handel Wewnętrzny*, Vol. 5 No. 358, pp. 188-202.

Ko, E., Kim, E.-Y. and Lee, E.-K. (2009), "Modeling consumer adoption of mobile shopping for fashion product in Korea", *Psychology and Marketing*, Vol. 26 No. 7, pp. 669-687.

Ko, H., Cho, C.H. and Roberts, M.S. (2005), "Internet uses and gratifications: a structural equation model of interactive advertising", *Journal of Advertising*, Vol. 34 No. 2, pp. 57-70.

Kollmann, T., Kuckertz, A. and Kayser, I. (2012), "Cannibalization or synergy? Consumers' channel selection in online-offline multichannel systems", *Journal of Retail and Consumer Services*, Vol. 19 No. 2, pp. 186-194.

Koo, D.M., Kim, J.J. and Lee, S.H. (2008), "Personal values as underlying motives of shopping online", *Asia Pacific Journal of Marketing and Logistics*, Vol. 20 No. 2, pp. 156-173.

Krishanan, D., Khin, A.A. and Teng, L.L. (2015), "Attitude towards using online banking in Malaysia", *British Journal of Economics, Management and Trade*, Vol. 7 No. 4, pp. 306-315.

Kumar, A. and Mukherjee, A. (2013), "Shop while you talk: determinants of purchase intentions through a mobile device", *International Journal of Mobile Marketing*, Vol. 8 No. 1, pp. 23-37.

Lai, J.-Y., Debbarma, S. and Ulhas, K.R. (2012), "An empirical study of consumer switching behaviour towards mobile shopping: a push-pull-mooring model", *International Journal of Mobile Communication*, Vol. 10 No. 4, pp. 386-404.

Laukkanen, T. (2007), "Customer preferred channel attributes in multi-channel electronic banking", *International Journal of Retail & Distribution Management*, Vol. 35 No. 5, pp. 393-412.

Laukkanen, T. (2007), "Internet vs mobile banking: comparing customer value perceptions", *Business Process Management Journal*, Vol. 13 No. 6, pp. 788-797.

Lee, H.H. and Kim, J. (2008), "The effects of shopping orientations on consumers' satisfaction with product search and purchases in a multi-channel environment", *Journal of Fashion Marketing Management*, Vol. 12 No. 2, pp. 193-216.

Lee, L. and Ariely, D. (2006), "Shopping goals, goal concreteness, and conditional promotions", *Journal of Consumer Research*, Vol. 33 No. 1, pp. 60-70.

Li, C.Y. (2013), "Persuasive messages on information system acceptance: a theoretical extension of elaboration likelihood model and social influence theory", *Computers in Human Behaviour*, Vol. 29, pp. 264-275.

Li, M., Dong, Z.Y. and Chen, X. (2012), "Factors influencing consumption experience of mobile commerce: a study from experiential view", *Internet Research*, Vol. 22 No. 2, pp. 120-141.

Liao, S., Li, Q. and Xu, D. (2005), "A Bayesian network-based framework for personalization in mobile commerce applications", *Communications of the Association for Information Systems*, Vol. 15, pp. 494-511.

Ling, A.J., Zhilin, Y. and Minjoon, J. (2013), "Measuring consumer perceptions of online shopping convenience", *Journal of Service Management*, Vol. 24 No. 2, pp. 191-214.

Litan, R.E. and Rivlin, A.M. (2001), "Projecting the economic impact of the internet", *The American Economic Review*, Vol. 91 No. 2, pp. 313-317.

Lohmoller, J. (1989), *Latent Variable Path Modelling with Partial Least Squares*, Physica Verlag, Heidelberg.

Loiacono, E., Watson, R. and Goodhue, D. (2007), "Web Qual: an instrument for consumer evaluation of websites", *International Journal of Electronic Commerce*, Vol. 11 No. 3, pp. 51-87.

Lu, H.-P. and Su, P.Y.-J. (2009), "Factors affecting purchase intention on mobile shopping web sites", *Internet Research*, Vol. 19 No. 4, pp. 442-458.

Lu, J., Yu, C.-S., Liu, C. and Yao, J.E. (2003), "Technology acceptance model for wireless internet", *Internet Research: Electronic Networking Applications and Policy*, Vol. 13 No. 3, pp. 206-222.

MacKenzie, S.B. and Podsakoff, P.M. (2012), "Common method bias in marketing: causes, mechanisms, and procedural remedies", *Journal of Retailing*, Vol. 88 No. 4, pp. 542-555.

Mahatanankoon, P. (2007), "The effect of personality traits and optimum stimulation level on text message activities and m commerce intention", *International Journal of Electronic Commerce*, Vol. 12 No. 1, pp. 7-30.

Mathwick, C., Malhotra, N. and Rigdon, E. (2001), "Experiential value: conceptualization, measurement and application in the catalog and internet shopping environment", *Journal of Retailing*, Vol. 77 No. 1, pp. 39-56.

Moorthy, S., Ratchford, B.T. and Talukdar, D. (1997), "Consumer information search revisited: theory and empirical analysis", *Journal of Consumer Research*, Vol. 23 No. 4, pp. 263-277.

Morales, A., Barbara, E.K., McAlister, L. and Susan, M.B. (2005), "Perceptions of assortment variety: the effects of congruency between consumers' internal and retailers' external organization", *Journal of Retailing*, Vol. 81 No. 2, pp. 159-169.

Neslin, S.A., Grewal, D., Leghorn, R., Venkatesh, S.S., Teerling, M.L., Thomas, J.S. and Verhoef, P.C. (2006), "Challenges and opportunities in multi-channel customer management", *Journal of Service Research*, Vol. 9 No. 2, pp. 95-112.

Ng, M. (2016), "Factors influencing the consumer adoption of Facebook: a two country study of youth markets", *Computers in Human Behaviour*, Vol. 54, pp. 491-500.

Nielsen (2013), "The mobile consumer – a global snapshot", available at: www.nielsen.com/content/dam/corporate/uk/en/documents/Mobile-Consumer-Report-2013.pdf (accessed July 2016).

Noble, S.M., Griffith, D.A. and Weinberger, M.G. (2005), "Consumer derived utilitarian value and channel utilization in a multi-channel retail context", *Journal of Business Research*, Vol. 58 No. 12, pp. 1643-1651.

Nur, Y. (2016), "Effects of convenience online shopping and satisfaction on repeat-purchase", *Journal of Internet Banking and Commerce*, Vol. 21 No. 2, pp. 1-20.

Pan, W.T. (2014), "Using data mining for service satisfaction performance analysis for mainland tourists in Taiwan", *International Journal of Technology Management*, Vol. 64 No. 1, pp. 31-44.

Pantano, E. and Viassone, M. (2015), "Engaging consumers on new integrated multichannel retail settings: challenges for retailers", *Journal of Retailing and Consumer Services*, Vol. 25, pp. 106-114.

Parasuraman, A., Zeithaml, V. and Malhotra, A. (2005), "E-S-Qual: a multiple-item scale for assessing electronic service quality", *Journal of Service Research*, Vol. 7 No. 3, pp. 213-233.

Park, C. and Kim, Y. (2003), "Identifying key factors affecting consumer purchase behaviour in an online shopping context", *International Journal of Retail & Distribution Management*, Vol. 31 No. 1, pp. 16-29.

Park, J.H. (2014), "The effects of personalization on user continuance in social networking sites", *Information Processing & Management*, Vol. 50 No. 3, pp. 462-475.

Park, K. and Yang, S. (2006), "The moderating role of consumer trust and experiences: value driven usage of mobile technology", *International Journal of Mobile Marketing*, Vol. 1 No. 2, pp. 24-32.

Persaud, A. and Azhar, I. (2012), "Innovative mobile marketing via smartphones: are consumers ready?", *Marketing Intelligence & Planning*, Vol. 30 No. 4, pp. 408-443.

Schramm-Klein, H. and Wagner, G. (2014), "Broadening the perspective one-commerce: a comparative analysis of mobile shopping and traditional online shopping", *Journal of Research Management*, Vol. 36 No. 2, pp. 119-130.

Schröder, H. and Zaharia, S. (2008), "Linking multi-channel customer behaviour with shopping motives: an empirical investigation of a German retailer", *Journal of Retailing and Consumer Services*, Vol. 15 No. 6, pp. 452-468.

Seiders, K., Voss, G.B., Godfrey, A.L. and Grewal, D. (2007), "SERVCON: developing and validation of a multidimensional service convenience scale", *Journal of the Academy of Marketing Science*, Vol. 35 No. 1, pp. 144-156.

Sen, R., King, R.C. and Shaw, M.J. (2006), "Buyers' choice of online search strategy and its managerial implications", *Journal of Management Information System*, Vol. 23 No. 1, pp. 211-238.

Sita, M. (2014), "Adoption of m-commerce in India: applying theory of planned behaviour model", *Journal of Internet Banking and Commerce*, Vol. 19 No. 1, pp. 1-17.

Srinivasan, S.S., Anderson, R. and Ponnavolu, K. (2002), "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol. 78 No. 1, pp. 41-50.

Strebel, J., Erdem, T. and Swati, J. (2004), "Consumer search in high technology markets: exploring the use of traditional information channels", *Journal of Consumer Psychology*, Vol. 14 Nos 1/2, pp. 96-104.

Thakur, R. and Srivastava, M. (2013), "Customer usage intention of mobile commerce in India: an empirical study", *Journal of Indian Business Research*, Vol. 5 No. 1, pp. 52-72.

Ting, D.H., Ling, S.F., Patanmacia, T.S., Low, C.G. and Ker, G.C. (2011), "Dependency on smartphone and the impact on purchase behaviour", *Young Consumers*, Vol. 12 No. 3, pp. 193-203.

Tong, C., Wong, S.K.S. and Lui, K.P.H. (2012), "The influences of service personalization, customer satisfaction and switching costs on e-Loyalty", *International Journal of Economics and Finance*, Vol. 4 No. 3, pp. 105-114.

Tsai, J.P. and Ho, C.F. (2013), "Does design matter? Affordance perspective on smartphone usage", *Industrial Management & Data Systems*, Vol. 113 No. 9, pp. 1248-1269.

Vandana, A. and Deepak, K. (2016), "Creation of a conceptual model for adoption of mobile apps for shopping from e-commerce sites – an Indian context", *Procedia Computer Science*, Vol. 91, pp. 609-616.

Venkatesh, V., James, Y.L. and Thong, X.X. (2012), "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology", *MIS Quarterly*, Vol. 36 No. 1, pp. 156-178.

Verhoef, P.C., Neslin, S.A. and Vroomen, B. (2007), "Multichannel customer management: understanding the research shopper phenomenon", *International Journal of Research Marketing*, Vol. 24 No. 2, pp. 129-148.

vor and Hennig-Thurau, T. (2014), "German digitalization consumer report", Research Report No. 2, available at: www.rolandberger.de/media/pdf/Roland_Berger_German_Digitalization Consumer_Report_20140718.pdf (accessed July 2016).

Wolfinbarger, M. and Gilly, M.C. (2001), "Shopping online for freedom, control, and fun", *California Management Review*, Vol. 43 No. 2, pp. 34-55.

Wu, J.-H. and Wang, Y.-M. (2006), "Development of a tool for selecting mobile shopping site a customer perspective", *Electronic Commerce Research and Applications*, Vol. 5 No. 3, pp. 192-200.

Xu, Y. and Paulins, V.A. (2005), "College students' attitudes toward shopping online for apparel products", *Journal of Fashion Marketing and Management*, Vol. 9 No. 4, pp. 420-433.

Yang, Z., Cai, S., Zhou, Z. and Zhou, N. (2005), "Development and validation of an instrument to measure user perceived service quality of information presenting web portals", *Information & Management*, Vol. 42 No. 4, pp. 575-589.

Yu-Min, W., Hsin-Hui, L., Wei-Chun, T. and Yi-Ling, F. (2016), "Understanding multi-channel research shoppers: an analysis of Internet and physical channels", *Information System and E-Business Management*, Vol. 14 No. 2, pp. 389-413, doi: 10.1007/s10257-015-0288-1.

Zhou, T. (2013), "An empirical examination of the determinants of mobile purchase", *Personality Ubiquitous Computer*, Vol. 17 No. 1, pp. 187-195.

Website:

Boyle, C. (2013), "Retail mobile commerce forecast: shoppers turn to smartphones first", Emarketer, available at: www.emarketer.com/Article/More-Shoppers-Reach-Mobile-Browse-Buy/1009615

Perry, N. (2016), "VentureBeat feature: India's m-commerce landscape in 2016", available at: https://blog.beaconstac.com/2016/01/venturebeat-feature-indias-m-commerce-landscape-in-2016/ (accessed December 2016).

Prafull (2016), "Top 10 largest economies of the world", available at: https://syskool.com/2016/04/largest-economy-world.html (accessed December 2016).

PTI (2014), "M-commerce to contribute up to 70 per cent of online shopping: experts, the economics times", available at: http://economictimes.indiatimes.com/industry/services/retail/m-commerce-to-contribute-up-to-70-per-cent-of-online-shopping-experts/articleshow/45324328.cms (accessed December 2016).

PTI (2015), "India to have 651 million smartphones, 18.7 million tablets by 2019", available at: http://economictimes.indiatimes.com/industry/tech/hardware/india-to-have-651-million-smartphones-18-7-million-tablets-by-2019/articleshow/46112338.cms (accessed December 2016).

Sangeetha, C. (2014), "Myntra set to become 'mobile-only' by 2015", BusinessLine, available at: www.thehindubusinessline.com/features/smartbuy/tech-news/myntra-set-to-become-mobileonly-by-2015/article6719828.ece (accessed December 2016).

Appendix. Description of variables

Search convenience

Mobile phone is a user-friendly platform for making purchases.
Navigation on a mobile phone is easy and comfortable.
Mobile phone helps me to find desired products quickly.
The product classification is easy to follow.
Mobile phone provides sufficient information on different goods/services within the same category.

Evaluation convenience

On a mobile phone, I am able to compare goods/services of different brands.
I am able to find information about goods/services on various search sites simultaneously.
Mobile phone helps me to view information on goods/services in both text and graphics for better understanding.

Transaction convenience

Payment through a mobile phone is simple and convenient.
Mobile phone offers payment flexibility with different payment options.
I am able to review my order before finalising and payment.
I feel safe to do transactions on a mobile phone*.

Possession convenience
Goods/services delivered are undamaged.
I received all the goods/services ordered.
Goods/services delivery is timely.
The prices of delivered goods/services are identical to those on the ordered.

Post-purchase convenience
It takes little effort to return unwanted goods/services.
It takes little effort to cancel unwanted goods/services.
My personal information is not misused.
I am able to provide feedback after consumption of goods/services.

Continued usage intention
I intend to continue doing m-shopping than other approach.
I intend to continue doing m-shopping rather than discontinue it.

Consumption experience
In future, I will invest more time on m-shopping.
In future, I will invest more money on m-shopping.
In future, I will frequently use m-shopping.

Corresponding author
Sabita Mahapatra can be contacted at: sabita@iimidr.ac.in