



International Journal of Retail & Distribution Management

The role of self-efficacy and customer satisfaction in driving loyalty to the mobile shopping application

Rakhi Thakur,

Article information:

To cite this document:

Rakhi Thakur, (2018) "The role of self-efficacy and customer satisfaction in driving loyalty to the mobile shopping application", International Journal of Retail & Distribution Management, Vol. 46 Issue: 3, pp.283-303, <https://doi.org/10.1108/IJRDM-11-2016-0214>

Permanent link to this document:

<https://doi.org/10.1108/IJRDM-11-2016-0214>

Downloaded on: 10 April 2018, At: 01:20 (PT)

References: this document contains references to 120 other documents.

To copy this document: permissions@emeraldinsight.com

Access to this document was granted through an Emerald subscription provided by emerald-srm:409465 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

The role of self-efficacy and customer satisfaction in driving loyalty to the mobile shopping application

Loyalty to
the mobile
shopping
application

283

Rakhi Thakur

*Department of Management, S.P. Jain Institute of Management and Research,
Mumbai, India*

Received 9 November 2016
Revised 20 April 2017
5 November 2017
6 November 2017
26 January 2018
Accepted 26 January 2018

Abstract

Purpose – The purpose of this paper is to develop and empirically test a model that examines the relationship between post-adoption self-efficacy, satisfaction, and loyalty in the usage of mobile shopping applications.

Design/methodology/approach – A structured questionnaire was used to collect data from respondents who had used mobile shopping applications to make purchases. Data analysis was done using partial least square structural equation modelling.

Findings – The results show that self-efficacy and satisfaction have a positive impact on continuance intention; however, the same may not lead to advocacy. The results also show that some antecedents of self-efficacy and satisfaction at the post-adoption stage differ from the pre-adoption intention stage.

Practical implications – The findings of the study provide a better understanding of the factors likely to influence loyalty among customers using mobile shopping applications. The findings also provide valuable insights into the factors that e-retailers need to focus to build self-efficacy among their customers using mobile interface.

Originality/value – The contribution of the paper lies in eliciting the differences between customer choice model at the pre-adoption and post-adoption stage for mobile shopping. Furthermore, the study demonstrated the role of a cognitive factor of self-efficacy in loyalty at the post-adoption stage that is pre-dominantly researched with affective factor of satisfaction.

Keywords Word of mouth, Mobile shopping, Structural equation modelling, Loyalty, Self-efficacy, Partial least square, M-retail

Paper type Research paper

1. Introduction

The twenty-first century has seen a paradigm shift in the retail industry by rapid diffusion of web-based technologies. Brick and mortar retailers venturing into e-retail followed by the emergence of pure-play e-retailers changed the retailing landscape in the first decade. The second decade is witnessing the emergence of m-shopping as the new avatar of online retailing. Online retailers are increasingly targeting avid users of smartphones to expand their reach effectively by making huge investments in promoting mobile retail. Mobile applications, or “mobile apps”, are transforming the retail world. A mobile app is similar to a virtual store of that retailer. Retailers have been aggressively promoting usage of mobile apps to their customers in recent years. Initial adoption of mobile retailing and similar technologies in various domains has received considerable attention from researchers across the world (Bitner *et al.*, 2000; Curran and Meuter, 2005). In case of mobile apps, beyond the initial trials, which were led by cash backs, trial coupons, mobile-only offers, there is a need to understand customer experiences acting as enablers and deterrents in continuance usage of mobile apps. The post-adoption customer behaviour towards mobile apps for shopping remains largely unexamined in the academic literature (Taylor and Levin, 2014). With the increasing focus on customer loyalty, it is important to understand the enablers and challenges in fostering loyalty in using mobile apps among customers.



Loyalty has been considered to be a key factor in an organisation's success and sustainability over time (Flavián *et al.*, 2006; Keating *et al.*, 2003). With increasing focus on the web and the mobile devices as modes of business, researchers are investigating the role of loyalty in several e-commerce sectors including online sale of books, groceries, apparel, consumer electronics, etc. (Reichheld and Scheffer, 2000). There is strong literature on the positive effect of post-adoption satisfaction on customer repeat purchase (Casaló *et al.*, 2008; Oliver, 1980; Yoon and Kim, 2000) and advocacy (Bansal and Voyer, 2000; Chevalier and Mayzlin, 2006). Furthermore, some researchers have found the role of self-efficacy in usage continuance (Taylor and Levin, 2014; Wang *et al.*, 2013). Self-efficacy is especially relevant in case of usage of mobile devices. While mobile devices provide advantages of anywhere, anytime convenience, they also add to the challenge of small screen size, unstable environment (usage while travelling, walking, etc.), and chances of errors while entering data as compared to desktops/laptops. However, there is little research on the role of self-efficacy in mobile device usage for shopping and making payments. This study is aimed at exploring self-efficacy (cognitive component) and satisfaction (affective component) as drivers of loyalty in the usage of mobile shopping apps. Towards this aim, the study explores potential drivers of customer loyalty in the mobile application setting that could be useful to enhance previous models explaining online customer loyalty.

This study offers twofold contribution – first, it investigates the role of self-efficacy in addition to satisfaction in the usage of mobile apps for retail. Second, it adds to the body of knowledge by focusing on the post-adoption behaviour of mobile apps that is an enrichment of the existing literature. This is among the initial few studies on post-adoption behaviour towards mobile shopping apps that are fast changing the retailing landscape across the world. In the following sections, conceptual model and hypotheses for the study are drawn based on related literature. This is followed by a description of the research methods and presentation of the findings. The last section of the paper provides conclusions and discussion of the findings as well as research limitations and propositions for future work.

2. Literature review

This study is aimed at exploring the drivers of post-adoption behavioural loyalty towards mobile shopping apps. Researchers have used technology adoption model (TAM) and theories developed in the same genre subsequently (Davis, 1989; Venkatesh *et al.*, 2003) to understand the initial adoption of similar technologies. These theories have essentially looked at usefulness and ease of use of such technologies for initial adoption intention. Other theories in this space have also explored social aspects and self-efficacy with respect to technology usage intention (Bandura, 1982, 1986; Hayashi *et al.*, 2004). Researchers exploring post-adoption behaviour have looked at satisfaction and loyalty through the lens of expectation-confirmation theory (ECT) and theory of exit, voice, and loyalty (Hirschman, 1970). This study looks at an integrative approach building on technology adoption and loyalty theories with specific nuances of consumer behaviour towards relatively newer web and mobile technologies.

2.1 Theoretical underpinning of customer loyalty

Loyalty is a widely researched construct in marketing literature. It has been argued that while the initial trial is a critical step in the adoption process, the ultimate goal is to keep customers continuing using a product on a regular basis. Some of the early studies define loyalty as the repeat purchasing of a particular service or product (Homburg and Annette Giering, 2001). In his seminal work on the theory of exit, voice, and loyalty, Hirschman (1970) proposed that customer responses to a firm's services at the post-adoption stage are based on the performance experience of the organisation. Those facing problems with an organisation's service may decide to stop buying exercising the exit option or raise

complaints to the company representatives utilising the voice option. Another set of customers who have good experiences with the firm continue their relationships thereby expressing loyalty to the firm.

With increasing importance of the virtual environment for making purchases, researchers have been investigating online loyalty extending the concept of traditional loyalty in the consumer's online behaviour. In a meta-analysis of empirical studies on online loyalty, authors looked at around 44 studies in this space (Toufaily *et al.*, 2013). The study observed that e-loyalty is sometimes analogous to the concept of loyalty to a store through repeat visit behaviour and the purchase of various brand items in the store. The authors, in this study, analysed construct operationalization by different scholars and observed that their definitions reflect the behavioural and attitudinal dimensions of loyalty similar to the seminal work of Oliver (1999) or Jacoby and Kyner (1973). Researchers focusing on the behavioural aspect define loyalty as an intention to maintain the behaviour on the web, such as the intention to revisit, reorder, or repurchase while those looking at attitudinal dimension define loyalty as an attitudinal preference, or psychological attachment, accompanied by repeat behaviour. The attitudinal component considers not only the retailer in focus but also the alternatives available including completion. Researchers investigating online have explored the domain through behavioural approach (e.g. Yun and Good, 2007), attitudinal approach (e.g. Yang and Peterson, 2004), or even a composite approach considering attitudinal as well behavioural components (Donio *et al.*, 2006; Ribbink *et al.*, 2004) in their empirical examinations.

As the focus of this study is on customer satisfaction and self-efficacy with the mobile shopping app of a self-chosen retailer(s) and not so much on the competitive offerings, using behavioural loyalty as outcome variable was deemed to be appropriate. Behavioural loyalty may be expressed by customers in multiple ways – by continuing usage of services, and by indirectly promoting usage among other potential and existing customers (e.g. positive word of mouth (WOM)) (Casaló *et al.*, 2008; Kim *et al.*, 2009; Shankar *et al.*, 2003). Accordingly, this study looked at repeat purchase/continuance intention and WOM intention as the two dimensions of loyalty for this study.

There is evidence suggesting that initial adoption and continued use behaviours are influenced by different factors (Karahanna *et al.*, 1999; Parthasarathy and Bhattacharjee, 1998) and pre-adoption models might not be completely applicable to studying post-adoption behaviour. Furthermore, actual usage experience of technology is likely to have a stronger influence on future behaviour as compared to perceptions based on the secondary information before trial. Motivated by these directions, the current study develops a conceptual model that focuses explicitly on the actual continued use of mobile shopping apps over time.

2.2 Mobile retailing

A mobile device is an electronic, portable device that consumers carry with them and engage with frequently during their daily activities (e.g. commuting, working, and shopping). The definition of the mobile device includes not only a mobile phone or smartphone but also other devices such as tablets, mini-tablets, phablets (phone tablets), and wearable technology such as smart watches (Andrews *et al.*, 2016). While internet increased the access and reduced the search costs for the consumers, mobile devices increased the access by being independent of time and place and are customizable based on location and personal profile (Ström *et al.*, 2014). Characteristics of mobile devices that make them unique for the customers as well as firms are portability, personal device, networking across an array of information sources, textual/visual content capability, and convergence (access a wide array of functions and services) (Larivière *et al.*, 2013). By using mobile devices customers get the value that may be informational, personal, social, emotional,

functional, or monetary. At the same time, firms benefit from building deeper relationships, cost reduction, customer co-creation, customer insights, real-time customer tracking, and ability to influence customers using mobile interfaces (Larivière *et al.*, 2013).

Mobile devices enable consumers to interact with desired targets (retailers, brands, other consumers) at all times, including when moving from one location to another (Andrews *et al.*, 2016). Usage of mobile devices for shopping is growing at a tremendous pace keeping pace with adoption of mobile devices. Mobile broadband is more pervasive than fixed broadband around the world especially in emerging markets like China and India, which together account for roughly one-third of mobile handsets worldwide (mobiforge.com). For retailers, customers using mobile devices tend to place orders at a higher rate and with higher ticket size (De Canio *et al.*, 2017; Shankar *et al.*, 2016; Wang *et al.*, 2015). To take higher advantage of the mobile platform, there has been increasing shift among retailers to promote mobile shopping apps[1] for ensuring better data security and preventing competition to get customer data stored in cookies (Krishnamurthy, 2015; Taylor and Levin, 2014). Mobile apps tend to be more user-friendly as compared to mobile websites as apps enable firms to take full advantage of mobile operating systems. Also, content on mobile apps can be tailored for specific mobile operating systems as against mobile web pages that render a more generic content (Xu *et al.*, 2014). While there has been the aggressive promotion of mobile shopping apps by retailers, the literature on enablers and challenges in adoption and usage continuance of the same remains sparse (Downes and Nunes, 2013; Muzellec *et al.*, 2016). This platform, therefore, offers an interesting context to study changing consumer behaviour.

2.3 Hypothesis development and conceptual model

Towards building a conceptual model, satisfaction as the affective component (Oliver, 1980) and self-efficacy as the cognitive component (Bandura, 1982, 1997) acting as predictors of loyalty are the focal constructs in this study. Usability of the mobile interface (studied through aesthetics and navigability), trust in the retailer, and the service experience act as antecedents in the research model. The outcome variable, loyalty, is captured through continuance intention and WOM as consequences. In this section, relevant literature on these constructs in the proposed model and their relationships with respect to loyalty is reviewed in detail.

2.3.1 Satisfaction and self-efficacy. Self-efficacy. Self-efficacy is defined as a judgment of a person of his/her own capability to execute courses of action required for attaining desired performance. In a seminal work on social cognitive theory, Bandura (1982) proposed that individual performance is driven by judgments of one's own skills and not with the actual skill-set. Furthermore, the theory posits that customers' beliefs about their ability will determine their response to the usage of a product or service (Bandura, 1982). The social cognitive theory has been explored by marketing researchers with the aim of testing whether enhancing customers' self-efficacy increases their tendency to purchase products (Dabholkar and Sheng, 2009; Hernández *et al.*, 2010; Mukhopadhyay and Johar, 2005).

Furthermore, researchers have observed that self-efficacy is specific to a given set of tasks, as against generalised perceptions of self-capability (Gist and Mitchell, 1992) and such judgments are idiosyncratic to particular domains. Specific to the domain of technology acceptance, perceived high computer self-efficacy is related to the use of a variety of technologically advanced products (Compeau and Higgins, 1995) that helps in reducing individuals anxiety to use technological innovations (Fagan *et al.*, 2003; Salanova *et al.*, 2000). Researchers in the space of adoption of online technologies are exploring the role of self-efficacy both in the pre-adoption and post-adoption stages (Pappas *et al.*, 2014). Self-efficacy can be important in usage of mobile shopping apps (a technological innovation) as the customer's role in a given service encounter may involve interactions varied

technologies (taking pictures, choosing body shapes for style fit, etc.), with company staff (online chats, call for support), and even other customers (user reviews, sharing product pictures on social media). Researchers have also found that perceived efficacy is likely to move across similar tasks (Bandura, 1997) thereby leading to the understanding of improved self-efficacy after adoption of a system in continuance intention and WOM. There is an increasing interest among researchers on the role of self-efficacy at the post-adoption stage (Dabholkar and Sheng, 2009; Püschel *et al.*, 2010; Wang *et al.*, 2013; Zhao *et al.*, 2008) and requires an in-depth investigation in newer technologies like mobile shopping apps.

Satisfaction. Satisfaction can be defined as a post-usage evaluative judgment concerning a specific decision (Oliver, 1980) and has been used as part of the confirmation/disconfirmation paradigm (Swan and Oliver, 1989). The ECT states that consumers' repurchase intentions are likely to be influenced by their usage experience of that product or service (Anderson and Sullivan, 1993; Oliver, 1980).

Satisfaction has been widely studied with reference to post-purchase behaviour, such as repurchase (Dabholkar *et al.*, 2000) and customer complaints (Oliver, 1980). A less satisfied customer is harder for the company to retain and enhance a close relationship with (Anderson and Srinivasan, 2003). Researchers have proposed that satisfaction in case of services is an affective customer condition arising out of the comprehensive evaluation of customer relationship with the service provider rather than being a transaction-specific phenomenon (Anderson and Sullivan, 1993; Bayus, 1992; Homburg and Annette Giering, 2001). The role of satisfaction in establishing loyalty is being closely investigated with respect to technologies in retail by researchers in current times (Demirci Orel and Kara, 2014; Vesel and Zabkar, 2009). Researchers have specifically explored the role of satisfaction in building loyalty in online retailing environment thereby popularising the terms e-satisfaction and e-loyalty (Anaza and Zhao, 2013; Sahadev and Purani, 2008). The same should be applicable in case of mobile shopping apps which are an extension of online retailing.

Usability. TAM and its subsequent avatars are built on two key constructs – perceives usefulness and perceived ease of use (Davis, 1989; Venkatesh *et al.*, 2003, 2012) that have a strong influence on adoption intention. However, at the post-adoption stage, perceives usefulness is likely to be a pre-requisite for customers to consider usage continuance and other actions demonstrating commitment. Furthermore, perceived ease of use or usability is likely to improve with repeated usage and build self-efficacy and satisfaction at the post-adoption stage. Defined in the literature as the effort required in using a system, usability would refer to mobile phone interface usage for shopping applications in case of this study. Usability would refer to several aspects such as the ease of learning to manage the system, the ease of remembering the basic functions, the degree of error avoidance, and the general satisfaction of the user in terms of manageability. Perceived usability has been found to have a positive impact on the effective customer satisfaction and company preference for future interactions in the literature on satisfaction and loyalty in online and mobile environments (Casaló *et al.*, 2008; Eroglu *et al.*, 2001; Groß, 2015; Thakur, 2014). Existing studies have shown that the aesthetics of the website positively affects customers' online experience, usability perception, and subsequent behaviour (Harris and Goode, 2004). For mobile interfaces, usability refers to the interface simplicity, the perceived ease of navigation, and the ease of conducting the transaction. In the context of this study, where customers are looking at fashion merchandise, navigability and aesthetics form a critical part of the shopping experience and hence usability. This study, therefore, uses interface aesthetics and navigability as two dimensions of usability.

Therefore, the following hypotheses are proposed:

H1. Aesthetics of mobile interface has a positive relationship with post-adoption self-efficacy towards mobile shopping apps.

- H2. Navigability of mobile interface has a positive relationship with post-adoption self-efficacy towards mobile shopping apps.
- H3. Aesthetics of mobile interface has a positive relationship with post-adoption satisfaction towards mobile shopping apps.
- H4. Navigability of mobile interface has a positive relationship with post-adoption satisfaction towards mobile shopping apps.

Service experience. Customers decide about continuing with the same service provider for a longer duration based on the experience with the service (Roy *et al.*, 2014). Research has found that experience is one of the strongest generators of self-efficacy (Bandura, 1986; Dabholkar and Sheng, 2009). Furthermore, in case of online shopping, it has been observed that a good experience creates positive attitudes, increases customers' self-efficacy, and influences future intentions (Pappas *et al.*, 2014). Customers value self-efficacy based on their experience as they feel more confident when it comes to completing an online purchase (Hernández *et al.*, 2010). Higher perceived service quality results in the development of the positive and favourable attitude towards the service provider which may lead to continuance intentions amongst customers (Cronin *et al.*, 2000). Service experience is the ultimate reason a customer goes to an online channel. Collier and Bienstock (2006) proposed that outcome of a service experience can be captured by order timeliness and order condition. Getting the merchandise delivered in good condition and in a timely manner based on the convenience of the customer is really the key to building efficacy and satisfaction. Modelling on the similar lines for mobile apps, it is proposed that:

- H5. Service experience has a positive relationship with post-adoption self-efficacy towards mobile shopping apps.
- H6. Service experience has a positive relationship with post-adoption satisfaction towards mobile shopping apps.

Trust. Trust has been widely explored as a construct to investigate loyalty to a known brand or service provider, especially in online contexts where the interaction between buyers and sellers is low (Chen and He, 2003; Huang *et al.*, 2004). Commitment-trust theory (Burrell and Morgan, 1994) focuses on establishing, developing, and maintaining successful relational exchanges. The theory proposes that trust is central to successful relationship marketing as it encourages the marketers to work towards preserving relationships, resists short-term alternatives, and not working in an opportunistic manner (Mukherjee and Nath, 2007). Morgan and Hunt (1994) felt that trust exists "when one party has confidence in an exchange partner's reliability and integrity". Empirical results too emphasise the importance of trust in explaining and predicting online purchase behaviour (der Heijden *et al.*, 2003; Jarvenpaa *et al.*, 2000). Mobile shopping involves great uncertainty; therefore, trust is critical to facilitating mobile user behaviour. Recent studies have reported the significant role of trust in adoption and continuance of mobile shopping and similar applications (Hung *et al.*, 2012; Zhou, 2011).

Trust is of utmost importance in the context of this study as the customers may be concerned about product quality and counterfeits that are rampant in fashion merchandise. Researchers have considered trust as an important antecedent to loyalty and satisfaction in their studies (Kim *et al.*, 2009; Verhagen *et al.*, 2006). Examining the commitment-trust relationship in the online retail environment, Mukherjee and Nath (2007) found the key role of electronic trust in customer purchase decisions. There is an increasing amount of literature in recent past on the role of trust in building customer satisfaction and beliefs in an online environment (Kim *et al.*, 2009; Luo *et al.*, 2010; Rampl *et al.*, 2012). At the post-adoption stage, trust is likely to build self-efficacy as well as satisfaction in the service

provider that are likely to mediate the relationship between trust and loyalty. Therefore, this study proposes:

- H7. Trust in retailer has a positive relationship with post-adoption self-efficacy towards mobile shopping apps.
- H8. Trust in retailer has a positive relationship with post-adoption satisfaction towards mobile shopping apps.

Loyalty. Loyalty may be defined as a customer's intention or predisposition to purchase from the same organisation again (Edvardsson *et al.*, 2000). This study has operationalized loyalty with two dimensions – continuance of usage and positive WOM based on extant literature (Brown *et al.*, 2005; Casaló *et al.*, 2008). WOM is defined as “informal, person to person communication between a perceived noncommercial communicator and a receiver regarding a brand, a product, an organization or a service” (Harrison-Walker, 2001). WOM has been found to be more effective than advertising or direct personal sales because it is perceived to be more credible and flexible (Gvili and Levy, 2016).

Satisfaction and loyalty. Bhattacharjee (2001) suggested that users' continuance intention is determined by their satisfaction with the online application. Dis-satisfied customers are likely to churn and look for alternatives (including offerings from competition) to meet their needs (Anderson and Srinivasan, 2003; O'Malley and Tynan, 2000). Researchers have found that higher levels of satisfaction are likely to lead to higher levels of loyalty among customers (Anaza and Zhao, 2013; Anderson and Sullivan, 1993; Shankar *et al.*, 2003). Satisfaction has been widely studied with reference to post-purchase behaviour, such as repurchase (Dabholkar *et al.*, 2000) and customer complaints (Oliver, 1980). Researchers have specifically explored the role of satisfaction in building loyalty in online retailing environment thereby popularising the terms e-satisfaction and e-loyalty (Anaza and Zhao, 2013; Wang *et al.*, 2013). Studies focusing on the usage of mobile shopping have found that customer satisfaction plays a significant role in repeat purchase intention (Hung *et al.*, 2012; Lin and Wang, 2006). One of the recent investigations on the usage of mobile shopping reported a significant increase in customer spending especially for habitual products thereby demonstrating a relationship with continuance intention (Wang *et al.*, 2015). Researchers have also reported an increase in order size and frequency using mobile shopping among returning customers (De Canio *et al.*, 2017). Consistent with Bitner (1992) and Demirci Orel and Kara (2014), this study hypothesises a positive impact of customer satisfaction on usage continuance intention:

- H9. Customer satisfaction has a positive relationship with usage continuance intention towards mobile shopping apps.

Satisfied customers are likely to provide positive WOM about the firm's services (De Matos and Rossi, 2008). Hirschman (1970), in his seminal work on customer loyalty, suggested that customers with a strong attachment to the firm actively look for mechanisms to make themselves influential regarding the products of those firms. Positive WOM is a mode whereby existing customers can influence opinions about the firm's products among potential customers. Researchers are actively investigating the role of satisfaction in driving positive WOM in the retailing environment (Casaló *et al.*, 2008; Liu, 2006; Mazzarol *et al.*, 2007). Therefore, it is proposed that:

- H10. Customer satisfaction has a positive relationship with customer WOM towards mobile shopping apps.

Self-efficacy and loyalty. Studies in social psychology suggest that behavioural intentions are not determined by affective drivers alone such as satisfaction, but also by cognitive

drivers like self-efficacy (Bandura, 1997). Research in technology adoption domain has validated that efficacy beliefs of people about their own abilities significantly impacts their subsequent decision to adopt or reject a technology (e.g. computers, software) (Gravill and Comepeau, 2008). Moreover, recent studies have also found that self-efficacy increases a customer's intention to use a technological innovation repeatedly (Zhao *et al.*, 2010). Following this line of thinking, it is hypothesised that customers' efficacy beliefs after initial trial of mobile shopping apps will have a positive impact on their intentions to continue usage. Hence, it is proposed that:

H11. Customer self-efficacy has a positive relationship with usage continuance intention towards mobile shopping apps.

Scholars have found that customers who believe that they are more efficacious in the use of a particular service are more likely to value the same, and exhibit loyalty through positive WOM (McKee *et al.*, 2006). On the other hand, a customer is unlikely to recommend a service to a friend, colleague, or family until he or she is comfortable in the usage (Cheung and Lee, 2012). This study, therefore, hypothesises that:

H12. Customer self-efficacy has a positive relationship with customer WOM towards mobile shopping apps.

Control variables: age, gender, and academic background. Researchers in the space of consumer adoption and continuance of technological innovations like computers, internet, and other consumer technologies have sparingly studied control variables like gender, age, academic qualifications, and occupation. However, some of the recent researchers have looked at these variables especially on mobile-based technologies. In a study on mobile entertainment among students subjects (Tan *et al.*, 2014), age, gender, and academic qualification were found to have no association with adoption. In another study on m-commerce, age was found to have significant association while gender and education level were found to have no significant association with adoption (Chong *et al.*, 2012). Tan *et al.* (2014), in a study on mobile learning, found that while gender and age had no significant association, academic qualifications lead to different intention to adopt m-learning. Based on such emerging trends, it would be interesting to explore the role of such control variables in continuance intention and WOM. This study, therefore, explores roles of age, gender, and academic background that may lead to the different continuance and WOM intention towards mobile shopping apps.

Conceptual model. Based on the review of relevant literature in this section, a conceptual model for this study was proposed (Figure 1).

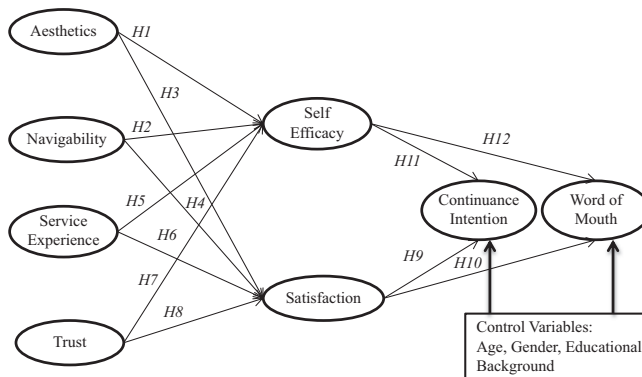


Figure 1. Conceptual model

3. Research methods

3.1 Measures and research instrument

The research model for the study was developed based on a review of the extant literature. The measurement model was developed and tested by identifying scales from previous studies. Measurement items for aesthetics and navigability were adapted from Harris and Goode (2010), service experience from Collier and Bienstock (2006), trust scale was modified from Gefen *et al.* (2003), self-efficacy from Webster and Martocchio (1992), satisfaction from Brockman (1998), continuance intention from Casaló *et al.* (2008), and WOM from Bansal and Voyer (2000). Two scholars with similar research background reviewed the final items. Based on their inputs, the items were slightly modified before the data collection. The final instrument had 29 self-reported items related to eight research constructs.

The research instruments had three sections: an introductory section to explain the purpose of the study, a section with items corresponding to research constructs (rated on seven-point Likert scales anchored in “strongly disagree” (1) through to “strongly agree” (7)), and descriptive data. To reduce the occurrence of primacy and recency effects, three different versions of the questionnaire were designed.

3.2 Research context

The research context taken in this study was mobile shopping apps in India with a specific focus on fashion and lifestyle category. This category was deemed to be suitable for the study due to three reasons. First, it is the fastest-growing category in Indian market with a CAGR (2010-2015) of 85 per cent (Euromonitor International, 2016) and an increasing number of players are joining the sector. The study, therefore, is likely to have implications for a large number of practitioners and scholars. Second, customer motives and experiences in this category would have rational as well as hedonic aspects giving more depth to this research as against categories like grocery which would be primarily driven by utilitarian motives. Finally, usage of mobile apps in this category would bring challenges of small screen size and ability to visualise unstandardised product (like apparel), thereby bringing deep insights on self-efficacy dimension.

The study looked at leading fashion e-retailers like Myntra, Jabong, Fashion and You, and lifestyle e-retailers like Snapdeal, Flipkart, and Amazon. Accordingly, specific reference was given to these portals offering mobile shopping applications in introductory section in the research questionnaire as per the objective of this study.

3.3 Research procedures and participants

As the focus of this study was to understand the mobile shopping behaviour of fashion products including apparel, accessories, and lifestyle products, the respondents were advised to focus on e-retailers that specialise in these categories. The respondents were asked to select a mobile shopping application they had last purchased something from and to complete the entire questionnaire for that mobile shopping application only. A set of 424 responses were found to be complete and usable out of the total 1,500 questionnaires distributed. The qualified respondents were current users of mobile devices for shopping (31 per cent female; 66 per cent below 30 years of age; 82 per cent with professional experience of over five years). This sample size exceeds the recommended minimum for such research (Bentler and Chou, 1987; Hair *et al.*, 2010).

4. Data analysis and results

A standard three-step process was used to test the proposed model. First, an exploratory factor analysis (EFA) was performed using SPSS followed by validation of measurement model through confirmatory factor analysis. Finally, relationships between constructs were

analysed using path analysis. Partial least squares (PLS) structural equation modelling (SEM) technique was used for model assessment. PLS-SEM imposes minimal restrictions on measurement scales, sample size, and residual distributions (Chin *et al.*, 2003) and does not assume multivariate normal distributions which are foundations in covariance-based structural equation models (Fornell and Bookstein, 1982). Also, satisfaction and loyalty measures have been observed to be skewed by researchers (Peterson and Wilson, 1992) and therefore may not meet the multivariate normality assumptions required by the covariance-based SEM thereby making PLS more suitable technique for the analysis. Furthermore, PLS-SEM is an appropriate technique for this study as this is an exploratory research with a complex model (Hair *et al.*, 2011). This study used SmartPLS software for PLS analysis.

4.1 Measurement model

As a preliminary step before main analysis, common method variance was tested using Harman's single-method test (Podsakoff and Organ, 1986). The factor analysis did not produce a single factor or one general factor that accounted for the majority of the variance. Each factor accounted for more than the 5 per cent cut-off thereby establishing that common method variance was not a concern.

To analyse the data, EFA procedures were employed using principal component analysis with varimax rotation separately for independent and dependent variables (Conway and Huffcutt, 2003). A total of 26 items converging into eight factors were retained as proposed in the conceptual model. Three items were dropped due to low loadings and cross-loadings following standard statistical procedures (Hair *et al.*, 2010). The value of Cronbach's α was above the recommended 0.7 for each of the constructs (Fornell and Larcker, 1981). Subsequently, the measurement model was tested for validity and reliability. Table I depicts the final items with standardised loadings, the value of composite reliability (CR), and Cronbach's α for each of the constructs (Fornell and Larcker, 1981). Table II depicts the intercorrelations and the square root of average variance for discriminant validity (Fornell and Larcker, 1981; Hair *et al.*, 2010). Intercorrelations between the dimensions were significant and below 0.80, thus (severe) multicollinearity is not a concern in the present data (Tabachnick *et al.*, 2001). Although the correlation between service and satisfaction is slightly above 0.7, the relatively high CR measures (>0.7), and the large sample can effectively protect the data against eventual deleterious effects of multicollinearity (Grewal *et al.*, 2004). The complete model demonstrates evidence of convergent validity (significant loadings, $CR > 0.70$, $AVE > 0.50$ for all the constructs) and discriminant validity (square root of AVE of each construct greater than the correlations with other constructs) (Bagozzi and Yi, 2012; Fornell and Larcker, 1981).

4.2 Structural model

Having assessed the proposed research model in terms of reliability and validity for measuring items and constructs, the structural model was assessed. PLS uses a combination of R^2 values (coefficient of determination), Stone-Geisser's predictive relevance (Q^2), path coefficients, t -values, and significance level for assessing model fit (Figure 2).

4.2.1 Coefficient of determination (R^2) and Stone-Geisser's predictive relevance (Q^2). The R^2 value refers to the percentage with which the variation in the dependent variable is explained by independent variables; it is used as an indicator of the overall predictive power of the model. The R^2 value (see Table III) of 0.59 for continuance intention and 0.26 for WOM indicates that the theoretical model explained a substantial amount of variance in post-adoption customer loyalty. In addition, the model accounts for 56 per cent of the variance in customer satisfaction and 47 per cent of the variance for self-efficacy towards mobile shopping applications. Given the minimum 10 per cent criterion (Falk and Miller, 1992),

Construct	Indicator item	Item	Std. loading
Satisfaction ($\alpha = 0.827$; CR = 0.883)	SAT1	I think that I made the correct decision to use mobile application for making purchases	0.793
	SAT2	The experience that I have had in making purchases using mobile applications has been satisfactory	0.815
	SAT3	In general terms, I am satisfied with the way mobile applications carry out transactions while making purchases	0.769
	SAT4	In general, I am satisfied with the service I have received from mobile applications for making purchases	0.845
Self-efficacy ($\alpha = 0.863$; CR = 0.917)	SE1	I feel comfortable dealing with mobile applications for making purchases	0.902
	SE2	I know how to make a purchase through mobile applications	0.912
	SE3	I am good at evaluating the performance of mobile application for making a purchase	0.851
Continuance intention ($\alpha = 0.908$; CR = 0.942)	CI1	I will continue using mobile application for making purchases in the future	0.930
	CI2	Given a chance, I predict I will continue using mobile application for making purchases in the future	0.921
	CI3	It is likely that I will continue using mobile application for making purchases in the future	0.902
Word of mouth ($\alpha = 0.756$; CR = 0.859)	WOM1	I would recommend using mobile applications for making purchases to my friends	0.843
	WOM2	I will recommend mobile applications for making purchases to other customers	0.756
	WOM3	I will point out the positive aspects of mobile applications for making purchases if anybody criticise it	0.844
Navigability ($\alpha = 0.862$; CR = 0.916)	NAV2	This mobile shopping application provides directions for using the interface	0.874
	NAV3	Navigation through this mobile shopping application is intuitively logical	0.904
	NAV4	There are useful navigational aids on this mobile shopping application	0.882
Aesthetics ($\alpha = 0.789$; CR = 0.905)	AES1	I like the look and feel of this mobile shopping application	0.901
	AES2	Overall appearance of this mobile shopping application is attractive	0.907
Service experience ($\alpha = 0.889$; CR = 0.923)	FSE1	This e-retailer gives the customer multiple delivery time options (e.g. next day, 3- to 5-day delivery, or 5- to 7-day delivery)	0.845
	FSE2	The time between placing and receiving an order is short	0.886
	FSE3	This e-retailer's orders are protectively packaged when shipped	0.884
	FSE4	All orders by this e-retailer are delivered undamaged	0.846
Trust ($\alpha = 0.849$; CR = 0.894)	TR1	I think that mobile application service providers usually fulfils the commitments it assumes	0.793
	TR2	I think that mobile application service providers deliver authentic products to meet the needs of its users	0.656
	TR3	I think that mobile application service providers are concerned with the present and future interests of its users	0.854
	TR4	I think that mobile application service providers offer good quality products to meet the needs of users	0.790

Notes: $n = 421$. α , Cronbach's α ; CR, construct reliability

Table I.
Measures and
statistics of constructs
in measurement model

Table II.
Discriminant validity
(Fornell–Larcker
criterion)

	1	2	3	4	5	6	7	8
Aesthetics	<i>0.924</i>							
Continuance intention	0.499	<i>0.923</i>						
Service experience	0.350	0.632	<i>0.872</i>					
Navigation	0.473	0.591	0.666	<i>0.881</i>				
Satisfaction	0.391	0.655	0.728	0.630	<i>0.816</i>			
Self-efficacy	0.501	0.742	0.574	0.592	0.625	<i>0.882</i>		
Trust	0.176	0.207	0.148	0.121	0.143	0.228	<i>0.822</i>	
Word of mouth	0.473	0.544	0.345	0.438	0.391	0.478	0.091	<i>0.815</i>

Notes: Values below the diagonal are correlations between the constructs. Italic diagonal elements represent the square root of average variance extracted (AVEs) for the relevant construct

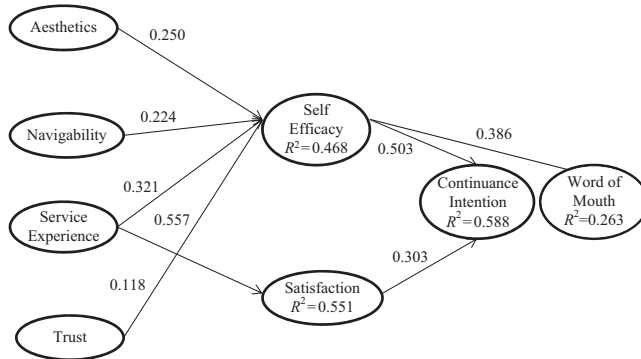


Figure 2.
PLS path model
estimation

Table III.
Results for R^2 and Q^2
predictive relevance

Endogenous latent variable	R^2	Q^2
Continuance intention	0.588	0.497
Satisfaction	0.550	0.349
Self-efficacy	0.467	0.355
Word of mouth	0.263	0.149

which suggests that the R^2 value of a dependent variable should be at least 10 per cent in order to make any meaningful interpretation, the theoretical model demonstrated substantive explanatory power.

Using the blindfolding procedure, Stone-Geisser’s predictive relevance (Q^2) was evaluated (see Table III). It was found that the model had good predictive relevance for all of the endogenous variables considering Q^2 values larger than 0 for all the endogenous constructs, i.e. continuance intention, WOM, customer satisfaction, and self-efficacy.

Path coefficients. The path coefficients indicate the strengths of the relationships between constructs (Chin and Marcoulides, 1998). This study used a bootstrapping resampling procedure (with 400 samples) to estimate the significance of paths in the structural model. The results of the path analysis are presented in Table IV that summarises the analysis of relationships between different constructs.

Self-efficacy and satisfaction. The results show that self-efficacy is significantly associated with aesthetics, navigability, and service experience at 95% level of confidence, while it is associated with trust at 90% level of confidence. The results thereby support

Table IV.
Significance testing of the structural equation model path coefficients

Hypothesis	Path posited	Path coefficient	<i>t</i> -value	<i>p</i> -value	Sig. level
<i>H1</i>	Aesthetics→self-efficacy	0.250	2.635	0.004	***
<i>H2</i>	Navigability→self-efficacy	0.224	1.889	0.029	**
<i>H3</i>	Aesthetics→satisfaction	0.093	1.007	0.157	
<i>H4</i>	Navigability→satisfaction	0.183	1.613	0.054	
<i>H5</i>	Service experience→self-efficacy	0.321	2.660	0.004	***
<i>H6</i>	Service experience→satisfaction	0.557	5.422	0.000	***
<i>H7</i>	Trust→self-efficacy	0.118	1.454	0.073	*
<i>H8</i>	Trust→satisfaction	0.021	0.261	0.397	
<i>H9</i>	Satisfaction→CI	0.303	2.987	0.000	***
<i>H10</i>	Satisfaction→WOM	0.175	1.553	0.060	
<i>H11</i>	Self-efficacy→CI	0.543	5.199	0.000	***
<i>H12</i>	Self-efficacy→WOM	0.386	3.223	0.000	***

Notes: **p* < 0.1; ***p* < 0.05; ****p* < 0.01

H1, *H2*, *H5*, and *H7*. Furthermore, the results show that customer satisfaction has a significant positive association with service experience, whereas it has an insignificant association with aesthetics, navigability, and trust. Therefore, *H6* is supported while *H3*, *H4*, and *H8* are rejected.

Continuance intention and WOM. The results validate that post-adoption continuance intention is significantly related to customer satisfaction as well as with self-efficacy, thereby supporting *H9* and *H11*, respectively. Furthermore, the results show that WOM was significantly associated with self-efficacy; however, the same was not significantly associated with customer satisfaction thereby supporting *H12*.

Control variables. The results of data analysis in this study found no significant relationship of age, gender, and academic background in the continuance intention as well as WOM intention towards mobile shopping apps.

5. Discussion, implications, and limitations

5.1 Findings

The key objective of this study has been to analyse the role of customers' self-efficacy and satisfaction in building post-adoption loyalty towards mobile retail applications. The results of this study indicate somewhat interesting picture. First, service evaluations, i.e. service experience and navigability serve as experiential cues and influence customers' self-efficacy and satisfaction in the post-adoption stage. Aesthetics and trust were found to have a mixed influence on customers' self-efficacy and satisfaction. While aesthetics do help in build self-efficacy, its role in building satisfaction has not been found to be significant. This finding may be attributed to the expectations of customers at the post-adoption stage of interface aesthetics as pre-requisite and not really a delight. Interestingly, customers do not find trust as a significant contributor to self-efficacy as well as to satisfaction. This finding indicates that trust in the retailer related to honouring the order with the expected authentic merchandise is a strong pre-requisite for customers to try a new mobile application. However, once adopted, trust seems to be moving out of the scheme of consideration from the minds of the consumers. Furthermore in India, in around 80 per cent of online purchases, the payments are made using "cash on delivery" mode after checking the product at the receipt. Trust-related aspects with reference to financial fraud and product quality, therefore, have low relevance in the post-adoption stage. Also, leading fashion retailers like Myntra allow customers to try out the clothes and return in case of issues related to feel, colour, size, fit, etc. This makes trust somewhat less important as customers are assured of refund in case of expectation mismatch from the merchandise.

Second, customers' self-efficacy beliefs increase customer usage continuance intentions as well as a propensity to spread positive WOM. Retailers must find ways to increase customer confidence by enhancing customer experiences for fostering usage continuance as well as advocacy. In this space, fashion retailer abof.com offers a 3D virtual trial room where customers can instantly view themselves in any product by inputting their basic body proportions. Some retailers offer online demos on the mobile interface and on their websites to help customers experience the service to build confidence in the usage.

Third, in alignment with the literature, the results demonstrate that satisfaction from the services would lead to future usage intentions among an existing set of customers (Gustafsson *et al.*, 2005; Wang *et al.*, 2013). Furthermore, the study revealed that though satisfied consumers are likely to continue using the services, the same might not become advocates. In this space, retailers may consider offering incentives to advocates for referring their services to their friends (Kumar *et al.*, 2010). Some online retailers like Fashion and You and 99 labels follow a similar approach.

5.2 Theoretical implications

This study provides a number of theoretical contributions to marketing literature by offering insights into loyalty and advocacy dynamics in an online environment. Customer satisfaction has traditionally been regarded as a fundamental determinant of long-term consumer behaviour (Oliver, 1980). Researchers emphasise that the more satisfied the customers are, the greater is their retention (Anderson and Sullivan, 1993; Kim *et al.*, 2009; Shankar *et al.*, 2003) and higher is the positive WOM generated through them (Chu and Kim, 2011; De Matos and Rossi, 2008). This research, however, depicted that while retention or continuance intention of a satisfied customer is high, the same may not necessarily lead to positive WOM.

Furthermore, researchers have traditionally focused on satisfaction as affective antecedent of loyalty; however, cognitive antecedent in the form of self-efficacy has been ignored (Pappas *et al.*, 2014; Wang *et al.*, 2013). Self-efficacy has been found to have a significant association with both continuance intention and WOM intention. While scholars have explored the role of self-efficacy in adoption intention, the same has largely been unexplored in building loyalty. The significant role of self-efficacy in building usage continuance intention and advocacy is an important contribution to this study. With the repeated usage of mobile shopping app, customers are likely to build more self-efficacy in the post-adoption stage thereby leading to continuance intention and likelihood of spreading positive WOM. Self-efficacy is of high significance for mobile retailing as mobile phones are first devices to access internet in India; however, small screen size leads to shopping anxiety especially in fashion merchandise category. This research contributes to a better understanding of the factors that influence self-efficacy of consumers at a post-adoption stage in case of mobile shopping. This study provided evidence of interface evaluation (aesthetics and navigability) as well as retailer evaluations (service experience) at a post-adoption stage in building self-efficacy, which is important for firms. At the pre-adoption stage, it may be difficult to change individuals' beliefs about themselves via commercial messages; however, this study has demonstrated that usage experience may enhance self-belief that in turn may lead to loyalty.

Another valuable contribution of this study is the establishment of the insignificance of trust in the development of satisfaction at the post-adoption stage. While researchers have reported the strong role of trust in usage intention at the trial stage and in developing satisfaction (Gefen *et al.*, 2003; Mukherjee and Nath, 2007; Sirdeshmukh *et al.*, 2002), this study found that the relationship may change at the post-adoption stage. At the post-adoption stage, trust becomes a hygiene factor and does not impact the service evaluation any further. This finding calls for further research on the role of trust at the post-adoption stage.

5.3 Managerial implications

5.3.1 Main constructs. The study found that the usability measured through navigability and aesthetics has a significant relationship with customer self-efficacy in using mobile shopping app. Customers using mobile shopping app have to visualise the product being purchased using a very small display area, i.e. the screen size of the mobile device. As against a physical environment where the customer can touch, feel, and try on a product, a mobile shopping app limits the product-customer interaction thereby leading to lack of confidence in the customer regarding making the product purchase. A user-friendly interface with intuitive navigation, interactive features, and easy checkout is likely to build the confidence among customers and thereby enhance efficacy to continue using the shopping app for making purchases. Furthermore, interactive assistance helping customers in choosing the products based on purchase history and complementarities is likely to increase customer efficacy in the usage of a shopping app. Therefore, investing in user-friendly navigation and appealing aesthetics that make shopping using a mobile app easy and enjoyable is absolutely essential for retailers.

Furthermore, the results of this study found that service experience as per customers' convenience is likely to generate both self-efficacy as well as satisfaction for continuance intention and eventually positive WOM. Convenience is one of the key reasons for which customers shop using mobile apps as compared to other channels. It is, therefore, absolutely essential for retailers to ensure good service experience to customers. This may be in the form of offering timely/flexible delivery as per customers' convenience including providing an option to choose delivery time and location. Furthermore, fashion being an unstandardised category, easy returns in case of expectation mismatch is an essential part of service experience that retailers should focus on.

E-retailers may further develop/strengthen measures to gauge visitors' opinions on satisfaction with the relative effectiveness of the various interactive tools and their service strategies. Excellent customer responsiveness reinforces the continued use of those interactivity tools and features that influence an application's self-efficacy and satisfaction among its users. The study has confirmed that these are predictors of loyalty, and positive WOM, the most desired outcomes for e-retail practitioners.

5.3.2 Control variables. The study indicates that there were no confounding effects of age, gender, and academic background in the continuance intention as well as WOM intention towards mobile shopping apps. Therefore, retailers may consider uniform marketing strategies irrespective of age, gender and academic background of users. This study, however, looked at only urban customers with higher education levels. Scholars may want to explore the impact of similar demographic control variables in a more diverse customer profile.

5.4 Limitations and directions for future research

There are some limitations of this study to consider. The study used the mobile application in retailing as a generic category rather than taking the mobile application of a specific retailer. While this provided ability to cover a large number of categories, it may be beneficial to replicate the study at a mobile application level. Second, a single-country sample was used for this study. Replication of this research in multi-country settings might be useful in generalising the results of the study or comparing the nation-specific preferences. Third, given the focus on utilitarian aspect at the post-adoption stage, this study has not incorporated hedonic service attributes, such as enjoyment, which may affect usage continuance and WOM intentions as well. Furthermore, this study focused on urban, educated, mass-affluent customers only. Future studies may look at expanding customer profile and investigate the possible confounding role of education, geography (urban/rural), and social class as control variables. Also, the role of mobile-application-specific deals in

retaining customers that are emerging in recent times was not studied and may be explored in future. Finally, this study did not establish formal causal relationships, as the study was conducted using a cross-sectional survey approach. Replicating this study in experimental setting could help in establishing causal relationships between constructs.

Note

1. A mobile application ("app") is a software application designed to run on smartphones, tablet computers, and other mobile devices.

References

- Anaza, N.A. and Zhao, J. (2013), "Encounter-based antecedents of e-customer citizenship behaviors", *Journal of Services Marketing*, Vol. 27 No. 2, pp. 130-140.
- Anderson, E.W. and Sullivan, M.W. (1993), "The antecedents and consequences of customer satisfaction for firms", *Marketing Science*, Vol. 12 No. 2, pp. 125-143.
- Anderson, R.E. and Srinivasan, S.S. (2003), "E-satisfaction and e-loyalty: a contingency framework", *Psychology & Marketing*, Vol. 20 No. 2, pp. 123-138.
- Andrews, M., Goehring, J., Hui, S., Pancras, J. and Thornswood, L. (2016), "Mobile promotions: a framework and research priorities", *Journal of Interactive Marketing*, Vol. 34, pp. 15-24.
- Bagozzi, R. and Yi, Y. (2012), "Specification, evaluation, and interpretation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 8-34.
- Bandura, A. (1982), "Self-efficacy mechanism in human agency", *American Psychologist*, Vol. 37 No. 2, p. 122.
- Bandura, A. (1986), *Social Foundations of Thought and Action: A Social Cognitive Theory*, Prentice-Hall, NY.
- Bandura, A. (1997), *Self-Efficacy: The Exercise of Control*, Macmillan, New York, NY.
- Bansal, H.S. and Voyer, P.A. (2000), "World-of-mouth processes within a services purchase decision context", *Journal of Service Research*, Vol. 3 No. 2, pp. 166-177.
- Bayus, B.L. (1992), "Brand loyalty and marketing strategy: an application to home appliances", *Marketing Science*, Vol. 11 No. 1, pp. 21-38.
- Bentler, P.M. and Chou, C.P. (1987), "Practical issues in structural modeling", *Sociological Methods & Research*, Vol. 16 No. 1, pp. 78-117.
- Bhattacharjee, A. (2001), "Understanding information continuance: an expectation-confirmation model", *MIS Quarterly*, Vol. 25 No. 3, pp. 351-370.
- Bitner, M.J. (1992), "Servicescapes: the impact of physical surroundings on customers and employees", *Journal of Marketing*, Vol. 56 No. 2, pp. 57-71.
- Bitner, M.J., Brown, S.W. and Meuter, M.L. (2000), "Technology infusion in service encounters", *Academy of Marketing Science. Journal*, Vol. 28 No. 1, pp. 138-149.
- Brockman, B.K. (1998), "The influence of affective state on satisfaction ratings", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, Vol. 11, pp. 40-50.
- Brown, T.J., Barry, T.E., Dacin, P.A. and Gunst, R.F. (2005), "Spreading the word: investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context", *Journal of the Academy of Marketing Science*, Vol. 33 No. 2, pp. 123-138.
- Burrell, G. and Morgan, G. (1994), *Sociological Paradigms and Organisational Analysis*, Heinemann, London.
- Casaló, L.V., Flavián, C. and Guinaliú, M. (2008), "The role of satisfaction and website usability in developing customer loyalty and positive word-of-mouth in the e-banking services", *The International Journal of Bank Marketing*, Vol. 26 No. 6, pp. 399-417.
- Chen, R. and He, F. (2003), "Examination of brand knowledge, perceived risk and consumers' intention to adopt an online retailer", *Total Quality Management & Business Excellence*, Vol. 14 No. 6, pp. 677-693.
- Cheung, C.M.K. and Lee, M.K.O. (2012), "What drives consumers to spread electronic word of mouth in online consumer-opinion platforms", *Decision Support Systems*, Vol. 53 No. 1, pp. 218-225.

- Chevalier, J.A. and Mayzlin, D. (2006), "The effect of word of mouth on sales: online book reviews", *Journal of Marketing Research*, Vol. 43 No. 3, pp. 345-354.
- Chin, W.W. and Marcoulides, G.A. (1998), "The partial least squares approach for structural equation modeling", in Marcoulides, G.A. (Ed.), *Modern Methods for Business Research. Methodology for Business and Management*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 295-336.
- Chin, W.W., Marcolin, B.L. and Newsted, P.R. (2003), "A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study", in DeGross, J.I., Jarvenpaa, S. and Srinivasan, A. (Eds), *Information Systems Research*, Vol. 14, Citeseer, pp. 189-217.
- Chong, A.Y.L., Chan, F.T.S. and Ooi, K.B. (2012), "Predicting consumer decisions to adopt mobile commerce: cross country empirical examination between China and Malaysia", *Decision Support Systems*, Vol. 53 No. 1, pp. 34-43.
- Chu, S.-C. and Kim, Y. (2011), "Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites", *International Journal of Advertising*, Vol. 30 No. 1, pp. 47-75.
- Collier, J.E. and Bienstock, C.C. (2006), "Measuring service quality in e-retailing", *Journal of Service Research*, Vol. 8 No. 3, pp. 260-275.
- Compeau, D.R. and Higgins, C.A. (1995), "Computer self-efficacy: development of a measure and initial test", *MIS Quarterly*, Vol. 19 No. 2, pp. 189-211.
- Conway, J.M. and Huffcutt, A.I. (2003), "A review and evaluation of exploratory factor analysis practices in organizational research", *Organizational Research Methods*, Vol. 6 No. 2, pp. 147-168.
- Cronin, J.J. Jr, Brady, M.K. and Hult, G.T.M. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76 No. 2, pp. 193-218.
- Curran, J.M. and Meuter, M.L. (2005), "Self-service technology adoption: comparing three technologies", *Journal of Services Marketing*, Vol. 19 No. 2, pp. 103-113.
- Dabholkar, P.A. and Sheng, X. (2009), "The role of perceived control and gender in consumer reactions to download delays", *Journal of Business Research*, Vol. 62 No. 7, pp. 756-760.
- Dabholkar, P.A., Shepherd, C.D. and Thorpe, D.I. (2000), "A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study", *Journal of Retailing*, Vol. 76 No. 2, pp. 139-173.
- Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-340.
- De Canio, F., Ieva, M. and Ziliani, C. (2017), "Beyond the 'mobile versus PC' dichotomy: profiling online shoppers based on device usage", *MERCATIE COMPETITIVITÀ*, Vol. 2017 No. 2, pp. 99-121.
- De Matos, C.A. and Rossi, C.A.V. (2008), "Word-of-mouth communications in marketing: a meta-analytic review of the antecedents and moderators", *Journal of the Academy of Marketing Science*, Vol. 36 No. 4, pp. 578-596.
- Demirci Orel, F. and Kara, A. (2014), "Supermarket self-checkout service quality, customer satisfaction, and loyalty: empirical evidence from an emerging market", *Journal of Retailing & Consumer Services*, Vol. 21 No. 2, pp. 118-129.
- der Heijden, H., Verhagen, T. and Creemers, M. (2003), "Understanding online purchase intentions: contributions from technology and trust perspectives", *European Journal of Information Systems*, Vol. 12 No. 1, pp. 41-48.
- Donio, J., Massari, P. and Passiante, G. (2006), "Customer satisfaction and loyalty in a digital environment: an empirical test", *Journal of Consumer Marketing*, Vol. 23 No. 7, pp. 445-457.
- Downes, L. and Nunes, P.F. (2013), "Big-bang disruption", *Harvard Business Review*, Vol. 91 No. 3, pp. 44-56.
- Edvardsson, B., Johnson, M.D., Gustafsson, A. and Strandvik, T. (2000), "The effects of satisfaction and loyalty on profits and growth: products versus services", *Total Quality Management*, Vol. 11 No. 7, pp. 917-927.

- Eroglu, S.A., Machleit, K.A. and Davis, L.M. (2001), "Atmospheric qualities of online retailing: a conceptual model and implications", *Journal of Business Research*, Vol. 54 No. 2, pp. 177-184.
- Euromonitor International (2016), *Retailing in India, Country Report*, available at: www.euromonitor.com/retailing-in-india/report
- Fagan, M.H., Stern, N. and Wooldridge, B.R. (2003), "An empirical investigation into the relationship between computer self-efficacy, anxiety, experience, support and usage", *The Journal of Computer Information Systems*, Vol. 44 No. 2, p. 95.
- Falk, R.F. and Miller, N.B. (1992), *A Primer for Soft Modeling*, University of Akron Press, Akron, OH.
- Flavián, C., Guinaliu, M. and Gurrea, R. (2006), "The role played by perceived usability, satisfaction and consumer trust on website loyalty", *Information & Management*, Vol. 43 No. 1, pp. 1-14.
- Fornell, C. and Bookstein, F.L. (1982), "Two structural equation models: LISREL and PLS applied to consumer exit-voice theory", *Journal of Marketing Research*, Vol. 19, pp. 440-452.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.
- Gist, M.E. and Mitchell, T.R. (1992), "Self-efficacy: a theoretical analysis of its determinants and malleability", *Academy of Management Review*, Vol. 17 No. 2, pp. 183-211.
- Gravill, J. and Compeau, D. (2008), "Self-regulated learning strategies and software training", *Information & Management*, Vol. 45 No. 5, pp. 288-296.
- Grewal, R., Cote, J.A. and Baumgartner, H. (2004), "Multicollinearity and measurement error in structural equation models: implications for theory testing", *Marketing Science*, Vol. 23 No. 4, pp. 519-529.
- Groß, M. (2015), "Mobile shopping: a classification framework and literature review", *International Journal of Retail & Distribution Management*, Vol. 43 No. 3, pp. 221-241.
- Gustafsson, A., Johnson, M.D. and Roos, I. (2005), "The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention", *Journal of Marketing*, Vol. 69 No. 4, pp. 210-218.
- Gvili, Y. and Levy, S. (2016), "Antecedents of attitudes toward eWOM communication: differences across channels", *Internet Research*, Vol. 26 No. 5, pp. 1030-1051.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory & Practice*, Vol. 19 No. 2, pp. 139-152.
- Hair, J.F., Black, B., Babin, B. and Anderson, R.E. (2010), *Multivariate Data Analysis 7th Pearson Prentice Hall*, Prentice-Hall, Upper Saddle River, NJ.
- Harris, L.C. and Goode, M.M.H. (2004), "The four levels of loyalty and the pivotal role of trust: a study of online service dynamics", *Journal of Retailing*, Vol. 80 No. 2, pp. 139-158.
- Harris, L.C. and Goode, M.M.H. (2010), "Online servicescapes, trust, and purchase intentions", *Journal of Services Marketing*, Vol. 24 No. 3, pp. 230-243.
- Harrison-Walker, L.J. (2001), "The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents", *Journal of Service Research*, Vol. 4 No. 1, pp. 60-75.
- Hayashi, A., Chen, C., Ryan, T. and Wu, J. (2004), "The role of social presence and moderating role of computer self efficacy in predicting the continuance usage of e-learning systems", *Journal of Information Systems Education*, Vol. 15 No. 2, pp. 139-154.
- Hernández, B., Jiménez, J. and Martín, M.J. (2010), "Customer behavior in electronic commerce: the moderating effect of e-purchasing experience", *Journal of Business Research*, Vol. 63 No. 9, pp. 964-971.
- Hirschman, A.O. (1970), *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*, Vol. 25, Harvard University Press, Cambridge.

- Homburg, C. and Annette Giering, C. (2001), "Personal characteristics as moderators of the relationship between customer satisfaction and loyalty – an empirical analysis", *Psychology & Marketing*, Vol. 18 No. 1, pp. 43-66.
- Huang, W., Schrank, H. and Dubinsky, A.J. (2004), "Effect of brand name on consumers' risk perceptions of online shopping", *Journal of Consumer Behaviour*, Vol. 4 No. 1, pp. 40-50.
- Hung, M.-C., Shih-Ting 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.
- Jacoby, J. and Kyner, D.B. (1973), "Brand loyalty vs. Repeat purchasing behavior", *Journal of Marketing Research*, Vol. 10 No. 1, pp. 1-9, available at: <http://doi.org/10.2307/3149402>
- Jarvenpaa, S.L., Tractinsky, N. and Vitale, M. (2000), "Consumer trust in an Internet store", *Information Technology and Management*, Vol. 1 Nos 1/2, pp. 45-71.
- Karahanna, E., Straub, D.W. and Chervany, N.L. (1999), "Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs", *MIS Quarterly*, Vol. 23 No. 2, pp. 183-213.
- Keating, B., Rugimbana, R. and Quazi, A. (2003), "Differentiating between service quality and relationship quality in cyberspace", *Managing Service Quality*, Vol. 13 No. 3, pp. 217-232.
- Kim, J., Jin, B. and Swinney, J.L. (2009), "The role ofetail quality, e-satisfaction and e-trust in online loyalty development process", *Journal of Retailing & Consumer Services*, Vol. 16 No. 4, pp. 239-247.
- Krishnamurthy, K. (2015), "Could this be the reason whyetailers want to go app-only?", *The Economic Times*, Bengaluru, 9 July, available at: <http://economictimes.indiatimes.com/industry/services/retail/could-this-be-the-reason-whyetailers-want-to-go-app-only/articleshow/47996140.cms>
- Kumar, V., Petersen, J.A. and Leone, R.P. (2010), "Driving profitability by encouraging customer referrals: who, when, and how", *Journal of Marketing*, Vol. 74 No. 5, pp. 1-17.
- Larivière, B., Joosten, H., Malthouse, E.C., van Birgelen, M., Aksoy, P., Kunz, W.H.H. et al. (2013), "Value fusion: the blending of consumer and firm value in the distinct context of mobile technologies and social media", *Journal of Service Management*, Vol. 24 No. 3, pp. 268-293.
- Lin, H.-H. and Wang, Y.-S. (2006), "An examination of the determinants of customer loyalty in mobile commerce contexts", *Information & Management*, Vol. 43 No. 3, pp. 271-282.
- Liu, Y. (2006), "Word of mouth for movies: its dynamics and impact on box office revenue", *Journal of Marketing*, Vol. 70 No. 3, pp. 74-89.
- Luo, X., Li, H., Zhang, J. and Shim, J.P. (2010), "Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: an empirical study of mobile banking services", *Decision Support Systems*, Vol. 49 No. 2, pp. 222-234.
- McKee, D., Simmers, C.S. and Licata, J. (2006), "Customer self-efficacy and response to service", *Journal of Service Research*, Vol. 8 No. 3, pp. 207-220.
- Mazzarol, T., Sweeney, J.C. and Soutar, G.N. (2007), "Conceptualizing word-of-mouth activity, triggers and conditions: an exploratory study", *European Journal of Marketing*, Vol. 41 Nos 11/12, pp. 1475-1494.
- Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.
- Mukherjee, A. and Nath, P. (2007), "Role of electronic trust in online retailing: a re-examination of the commitment-trust theory", *European Journal of Marketing*, Vol. 41 Nos 9/10, pp. 1173-1202.
- Mukhopadhyay, A. and Johar, G.V. (2005), "Where there is a will, is there a way? Effects of lay theories of self-control on setting and keeping resolutions", *Journal of Consumer Research*, Vol. 31 No. 4, pp. 779-786.
- Muzellec, L., Feenstra, F., de Faultrier, B. and Boulay, J. (2016), "Children's experiences and parents' perceptions of retailers' mobile applications", *International Journal of Retail & Distribution Management*, Vol. 44 No. 11, pp. 1118-1131.
- O'Malley, L. and Tynan, C. (2000), "Relationship marketing in consumer markets – rhetoric or reality?", *European Journal of Marketing*, Vol. 34 No. 7, pp. 797-815.

- Oliver, R.L. (1980), "A cognitive model of the antecedents and consequences of satisfaction decisions", *Journal of Marketing Research*, Vol. 17 No. 4, pp. 460-469.
- Oliver, R.L. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 63 (Special Issue), pp. 33-44.
- Pappas, I.O., Pateli, A.G., Giannakos, M.N. and Chrissikopoulos, V. (2014), "Moderating effects of online shopping experience on customer satisfaction and repurchase intentions", *International Journal of Retail & Distribution Management*, Vol. 42 No. 3, pp. 187-204.
- Parthasarathy, M. and Bhattacharjee, A. (1998), "Understanding post-adoption behavior in the context of online services", *Information Systems Research*, Vol. 9 No. 4, pp. 362-379.
- Peterson, R.A. and Wilson, W.R. (1992), "Measuring customer satisfaction: fact and artifact", *Journal of the Academy of Marketing Science*, Vol. 20 No. 1, pp. 61-71.
- Podsakoff, P.M. and Organ, D.W. (1986), "Self-reports in organizational research: problems and prospects", *Journal of Management*, Vol. 12 No. 4, pp. 531-544.
- Püschel, J., Mazzon, J.A. and Hernandez, J.M.C. (2010), "Mobile banking: proposition of an integrated adoption intention framework", *The International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 389-409.
- Rampl, L.V., Eberhardt, T., Schütte, R. and Kenning, P. (2012), "Consumer trust in food retailers: conceptual framework and empirical evidence", *International Journal of Retail & Distribution Management*, Vol. 40 No. 4, pp. 254-272.
- Ribbink, D., Van Riel, A.C.R., Liljander, V. and Streukens, S. (2004), "Comfort your online customer: quality, trust and loyalty on the internet", *Managing Service Quality: An International Journal*, Vol. 14 No. 6, pp. 446-456.
- Reichheld, F.F. and Schefter, P. (2000), "E-loyalty", *Harvard Business Review*, Vol. 78 No. 4, pp. 105-113.
- Roy, S.K., Lassar, W.M. and Butaney, G.T. (2014), "The mediating impact of stickiness and loyalty on word-of-mouth promotion of retail websites", *European Journal of Marketing*, Vol. 48 Nos 9/10, pp. 1828-1849.
- Sahadev, S. and Purani, K. (2008), "Modelling the consequences of e-service quality", *Marketing Intelligence & Planning*, Vol. 26 No. 6, pp. 605-620.
- Salanova, M., Grau, R.M., Cifre, E. and Llorens, S. (2000), "Computer training, frequency of usage and burnout: the moderating role of computer self-efficacy", *Computers in Human Behavior*, Vol. 16 No. 6, pp. 575-590.
- Shankar, V., Smith, A.K. and Rangaswamy, A. (2003), "Customer satisfaction and loyalty in online and offline environments", *International Journal of Research in Marketing*, Vol. 20 No. 2, pp. 153-175.
- Shankar, V., Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S. and Morrissey, S. (2016), "Mobile shopper marketing: key issues, current insights, and future research avenues", *Journal of Interactive Marketing*, Vol. 34, pp. 37-48.
- Sirdeshmukh, D., Singh, J. and Sabol, B. (2002), "Consumer trust, value, and loyalty in relational exchanges", *Journal of Marketing*, Vol. 66 No. 1, pp. 15-37.
- Ström, R., Vendel, M. and Bredican, J. (2014), "Mobile marketing: a literature review on its value for consumers and retailers", *Journal of Retailing and Consumer Services*, Vol. 21 No. 6, pp. 1001-1012.
- Swan, J.E. and Oliver, R.L. (1989), "Postpurchase communications by consumers", *Journal of Retailing*, Vol. 65 No. 4, pp. 516-533.
- Tabachnick, B.G., Fidell, L.S. and Osterlind, S.J. (2001), *Using Multivariate Statistics*, Allyn and Bacon, Boston, MA.
- Tan, G.W.H., Ooi, K.-B., Leong, L.-Y. and Lin, B. (2014), "Predicting the drivers of behavioural intention to use mobile learning: a hybrid SEM-neural networks approach", *Computers in Human Behaviour*, Vol. 36, pp. 198-213.
- Taylor, D.G. and Levin, M. (2014), "Predicting mobile app usage for purchasing and", *International Journal of Retail & Distribution Management*, Vol. 42 No. 8, pp. 759-774.

- Thakur, R. (2014), "What keeps mobile banking customers loyal?", *International Journal of Bank Marketing*, Vol. 32 No. 7, pp. 628-646.
- Toufaily, E., Ricard, L. and Perrien, J. (2013), "Customer loyalty to a commercial website: descriptive meta-analysis of the empirical literature and proposal of an integrative model", *Journal of Business Research*, Vol. 66 No. 9, pp. 1436-1447.
- Venkatesh, V., Thong, J. and Xu, 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. 157-178.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly*, Vol. 27 No. 3, pp. 425-478.
- Verhagen, T., Meents, S. and Yao-Hua, T. (2006), "Perceived risk and trust associated with purchasing at electronic marketplaces", *European Journal of Information Systems*, Vol. 15 No. 6, pp. 542-556.
- Vesil, P. and Zabkar, V. (2009), "Managing customer loyalty through the mediating role of satisfaction in the DIY retail loyalty program", *Journal of Retailing & Consumer Services*, Vol. 16 No. 5, pp. 396-406.
- Wang, C., Harris, J. and Patterson, P. (2013), "The roles of habit, self-efficacy, and satisfaction in driving continued use of self-service technologies: a longitudinal study", *Journal of Service Research*, Vol. 16 No. 3, pp. 400-414.
- Wang, R.J.H., Malthouse, E.C. and Krishnamurthi, L. (2015), "On the go: how mobile shopping affects customer purchase behavior", *Journal of Retailing*, Vol. 91 No. 2, pp. 217-234.
- Webster, J. and Martocchio, J.J. (1992), "Microcomputer playfulness: development of a measure with workplace implications", *MIS Quarterly*, Vol. 16 No. 2, pp. 201-226.
- Xu, J., Forman, C., Kim, J.B. and Ittersum, K. Van (2014), "News media channels: complements or substitutes? Evidence from mobile phone usage", *Journal of Marketing*, Vol. 78, pp. 97-112.
- Yang, Z. and Peterson, R.T. (2004), "Customer perceived value, satisfaction, and loyalty: the role of switching costs", *Psychology & Marketing*, Vol. 21 No. 10, pp. 799-822.
- Yoon, S.-J. and Kim, J.-H. (2000), "An empirical validation of a loyalty model based on expectation disconfirmation", *Journal of Consumer Marketing*, Vol. 17 No. 2, pp. 120-136.
- Yun, Z.-S. and Good, L.K. (2007), "Developing customer loyalty from e-tail store image attributes", *Managing Service Quality: An International Journal*, Vol. 17 No. 1, pp. 4-22.
- Zhao, A.L., Koenig-Lewis, N., Hanmer-Lloyd, S. and Ward, P. (2010), "Adoption of internet banking services in China: is it all about trust?", *The International Journal of Bank Marketing*, Vol. 28 No. 1, pp. 7-26.
- Zhao, X., Mattila, A.S. and Tao, L.-S.E. (2008), "The role of post-training self-efficacy in customers' use of self service technologies", *International Journal of Service Industry Management*, Vol. 19 No. 4, pp. 492-505.
- Zhou, T. (2011), "An empirical examination of initial trust in mobile banking", *Internet Research*, Vol. 21 No. 5, pp. 527-540.

About the author

Rakhi Thakur is an Associate Professor at S.P. Jain Institute of Management and Research, Mumbai, India. Her papers have appeared in *Journal of Retailing and Consumer Services*, *Internet Research*, *International Journal of Bank Marketing*, *International Journal of Retail and Distribution Management*, *Journal of Business Strategy*, and *Journal of Indian Business Research*. She had held management positions in ICICI Prudential Life Insurance Company, Tata Consultancy Services, and Shoppers Stop Limited before moving to academia. Her research interests include consumer behaviour, e-commerce, retail marketing, and global marketing. Rakhi Thakur can be contacted at: rakhi.thakur@spjimr.org

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgrouppublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com