Understanding the factors affecting consumers' continuance intention in mobile shopping: the case of private shopping clubs

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Abstract: This study aims to determine the factors affecting the continuance intention in using mobile shopping apps and websites. Within the scope of the study, a research model is proposed that integrates an information systems (IS) expectation-confirmation model (ECM), flow theory, and trust. Structural equation modelling (SEM) was employed to analyse data collected from 518 users of the most popular private shopping clubs in Turkey. The results revealed that the variables of perceived usefulness, satisfaction, and enjoyment directly and significantly affected the consumers' continuance intention in using the private shopping clubs' mobile apps and websites. The focus dimension of the flow experience was not found to have a significant effect on either consumer satisfaction or continuous usage intention. Another interesting result of the study is that, contrary to the general belief in the literature, the trust dimension does not have a significant effect on consumers' continuance intention.

Keywords: mobile shopping; private shopping clubs; expectation confirmation model; flow theory; trust.

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1 Introduction

The proliferation of internet-based mobile devices and advances in mobile internet technology has made mobile devices (e.g., mobile phones, and tablets) as useful as computers today. Various tasks that could only be accomplished with a desktop can now be accomplished using a handheld mobile device (e.g., smartphone, and tablet computer). In fact, mobile devices are now favoured over traditional computers (desktop or laptop) for carrying out various online tasks [Gupta and Arora, (2017), p.2] owing to their characteristic features of ubiquity (virtual tasks can be carried out anytime, anywhere), localisation (reacting to the location of the consumer), personalisation (mobiles tend to be for personal use so the target market, therefore, is individual), and convenience (the mobile maximises flexibility and adapts to consumers' schedules and needs) (San-Martín et al., 2015). This widespread use of mobile technologies and portable devices with Wi-Fi has convinced entrepreneurs, companies, and governments to shift from desktops to mobile services, and has led to the development of strategies in this regard (Shaikh and Karjaluoto, 2015). As a result, many commercial transactions that require mobility, such as banking, ticketing, and payment, can now be carried out through mobile devices (Dinh et al., 2013).

The diversity of transactions, the rapid increase in the number of devices with mobile internet, and mobile-specific innovative apps are gradually increasing the attractiveness of mobile shopping (M-shopping). Many recent studies corroborate this proposition. According to a report by Forrester Research (Husson et al., 2014), media companies and retailers in the US are predicted to make up more than 50% of the online traffic for mobile devices. According to a report published by Criteo (2015) in the last quarter of 2015, m-commerce constituted 20.5% of all digital sales in Turkey. The results of a report published by the research organisation, Insider (2016), underlined how mobile is the primary traffic source for e-commerce websites in Turkey and indicated that mobile devices accounted for 57.7% of the e-commerce website traffic in Turkey as of the third quarter of 2016.

The results of similar studies conducted in Turkey and other countries agree that commercial activities will be intensively carried out through mobile channels in the near future. Mobile devices provide a wide variety of opportunities, ranging from location-based services to proactive reminders. These opportunities have profoundly influenced the retail industry and made it necessary for enterprises to design an online-offline ecosystem in which the user's experience is consistent across different devices and physical shops. In this regard, increasing enterprises' competencies regarding mobile technologies, which have the potential to affect every single step of a shopping journey, will yield a significant advantage for them in the consumer world, which has become increasingly digital.

On the other hand, the benefits of a technology-based system or service depend on the degree to which it is used (Shaikh and Karjaluoto, 2015). In other words, the continuous usage behaviours or sustainable usage phenomena are of critical importance for a technology-based product or service to be beneficial or to provide added value to the consumers (Deng et al., 2010). Therefore, no matter how much investment is made, an M-shopping app needs to be continuously used by its target audience in order for that app to yield the expected benefits. To date, previous studies (e.g., Lu, 2014; Hung et al.,

2012) investigated consumers' continuous use of mobile shopping with several theories and models. However, with few exceptions (e.g., Shang and Wu, 2017; Gao et al., 2015) not much research has been done to study mobile shopping through the lens of an integrated continuance model. In addition, the majority of these studies employed students as sample and it can be argued that a student sample is not generalisable to a population of mobile shoppers from different age groups and levels of income. Thus, in this study, an integrated model which includes only variables that relevant in explaining continuance intention of M-shopping were proposed and applied to a population of users who assure a more accurate representation of Turkish consumer population.

In the current study, the factors affecting the continuous use of M-shopping apps and websites provided by private shopping clubs – a key player in the e-commerce ecosystem in Turkey – were determined. Private shopping clubs were selected as the context of this study due to the following reasons. First, the business model of private shopping clubs has some uniqueness. From consumer perspective, shopping club members should react quickly since the products on sale in the private shopping clubs for short times. In other words, when a campaign is started on the private shopping club, members need to access the system as quick as possible. For this reason, private shopping clubs members may use various types of devices (e.g., smartphone, tablet, etc.) rather than desktops for their shopping activities. From firm perspective, the private shopping clubs do not have a physical store and operate only via the internet. Furthermore, the private shopping clubs have to stay in touch with consumers anytime and anywhere more than other forms of online commerce because their profit model is based on selling a limited amount of stock at a considerable discount for a limited period of time. Since mobile technology provides several features such as location-based services or proactive reminders to allow firms to make more effective advertisements, private shopping clubs make substantial investments on mobile channels (e.g., mobile sites, and mobile applications) more than other shopping websites. Second, the private shopping clubs have very appropriate structure to investigate consumers' continuance intentions in using M-shopping because their continuously updated apps are available in popular apps markets (Apple Store, and Google Play) and their sites/applications are in widespread use. Considering the fact that individuals are still cautious about some mobile services such as mobile payment or mobile ticketing; to identify factors that influence continuance intention in such a widely used mobile service may be valuable for researchers and practitioners.

This study also provides several implications for literature. First, this study validates the original expectation-confirmation model (ECM) within a different context. Since its emergence, the ECM has been tested in a broad range of contexts such as e-learning (Lee, 2010), e-books (Stone and Baker-Eveleth, 2013), mobile instant messaging (MIM) applications (Oghuma et al., 2015), and online travel services (Li and Liu, 2014). However, existing work regarding mobile shopping, and in particular, private shopping clubs is far from enough. Therefore, a major contribution of this study is to add knowledge to the limited body of post adoption research. Second, although the ECM is recognised as a strong framework for understanding users' post-adoption behaviour, it does not take into account context-related factors. Due to the fact that mobile shopping has different characteristics from many online systems, an extended model could shed more light on users' post adoption behaviour. Furthermore, due the inclusion of additional variables; the extended model might account for more variance than accounted by the original model.

Within the scope of the study, a new model was developed synthesising the ECM and flow theory, and this model was analysed using structural equation modelling (SEM). Individuals who belong to generations X and Y, which will constitute a significant part of the future population and labour force, were selected to participate in this study.

The remainder of this paper is organised as follows: in Section 2, we present the theoretical background, the research hypotheses and the research model. Next, we describe the research methodology in Section 3. In Section 4, we describe the results of our analysis. In Section 5, we discuss our findings with theoretical/practical implications. Finally, we conclude the study with discussing the limitations in Section 6.

2 Theoretical background and hypotheses development

2.1 Private shopping clubs

Private shopping clubs are B2C-type electronic shopping systems where products from mainly famous brands are sold with a limited amount of stock at a considerable discount for a limited period of time. The idea of private shopping clubs first appeared in 2001 in France on the website vente-privee.com (Clegg et al., 2016). Having been established by French entrepreneur, Antonie Granjon in order to provide overstock clothing of particular brands at a discount, vente-privee.com gained the attention of consumers and initiated the emergence of similar enterprises in different countries around the world.

The business model of private shopping clubs is designed to place a limited number of products from famous brands for sale at different levels of discount for users who are members of the club. Brands and the club reach a consensus regarding the duration of the campaign, the product categories and brands to be included in the campaign, and the frequency of the campaign. Selected products are sold at discounted prices for a short period of time in the business model termed as 'private shopping club' by vente-privee.com, while users can shop anytime on the traditional e-commerce website (Durmuş et al., 2015). The main aim of this business model – where only members of the shopping club system benefit from advantageous campaigns – is to make consumers believe that they are 'smart shoppers' and to trigger their purchasing impulses (Ayadi et al., 2013). The history of private shopping clubs in Turkey started with the establishment of markofoni.com in 2008 (Çifterler, 2013). Around the same time, the private shopping club model improved dramatically and many private shopping clubs were started as the volume of e-commerce increased and famous brands included private shopping clubs in their main sales channels. As of 2016, Trendyol.com, Morhipo.com, and Markafoni.com were among the leading shopping websites in Turkey with monthly visitor traffic of approximately 117 million, 38 million, and 25 million, respectively (IAB, 2016). Therefore, private shopping clubs have an important place in the Turkish e-commerce ecosystem and are intensively used in e-shopping.

Consumers need to be quick to buy since the campaigns in the shopping club websites are run for short times, such as six hours or one day. As a result, they visit the websites everyday and frequently (Güler, 2013). In recent years, members of private shopping clubs have started to prefer mobile devices that enable an internet connection independently of time/place in order to keep up-to-date regarding the campaigns in the shopping clubs. For example, Trendyol, a leading private shopping club in Turkey,

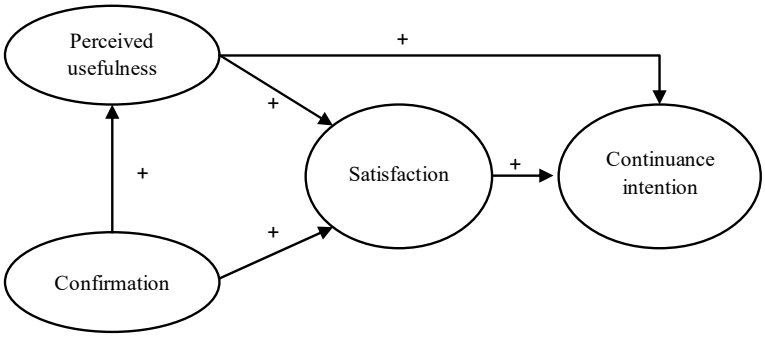
reported that their mobile app was downloaded 5 million times and that 65% of their visitor traffic was mobile-based in 2016 (Webrazzi, 2016). Thus, rather than being a luxury or advantage, it has become a necessity for private shopping clubs to have a presence in mobile channels.

2.2 Expectation confirmation model

Studies based on the major theories (e.g., TAM and UTAUT) in information systems (IS) assume that a technological service or product can be used for a long time once it has been used for the first time and that the factors affecting the first use and continued use of the aforementioned innovation or system are the same (e.g. Davis et al., 1989; Karahanna et al., 1999). However, this way of thinking has often been criticised in recent studies and it has been suggested that continuous use should be explained by different structures (Dağhan and Akkoyunlu, 2016). With reference to the view that a precise sustainable use of a recently accepted technology cannot be provided, the phenomenon of continuous use has been investigated using various approaches adopting different perspectives (Hayashi et al., 2004; Limayem and Cheung, 2008; Larsen et al., 2009). One of the most prominent of these approaches is the ECM developed by Bhattacherjee (2001).

The ECM was developed to reveal the variables affecting the information technology users' continuance intention (continuous use) and has its origins in expectation confirmation theory (Oliver, 1980), which is widely used the marketing industry (Bhattacherjee, 2001). The ECM is concerned with the harmony between individuals' decisions to continue to use IS and consumers' repurchasing decisions. This model asserts that an individual's continuance intention in using an information system depends on three different variables: satisfaction, the degree of confirming users' expectations, and the users' post-usage beliefs regarding the benefits of the information system (Thong et al., 2006). The relationships between the variables of the model are presented in Figure 1 (Bhattacherjee, 2001).

Figure 1 Expectation confirmation model



The variable of perceived usefulness was included in the model in order to reflect the post-usage beliefs and refers to users' perceptions regarding the benefits of using a system, service, or technological device. The dimension of perceived usefulness, which contained only extrinsic motivation elements (productivity, time-saving, etc.) in the original form of the ECM, has been extended in some studies to include emotional and

social values (e.g., Hsu and Lin, 2015; Deng et al., 2010), or these values were measured by adding different variables to the model (e.g., Oghuma et al., 2015).

Confirmation is the only independent variable in the model and refers to users' perceptions regarding the consistency between users' expectations from the information system and the real performance of the system. These perceptions are shaped by comparing users' initial expectations and the post-usage benefits to create the confirmation/disconfirmation status regarding the reuse of the system in users' minds. The confirmation or disconfirmation status occurs in three possible scenarios while using a system, service, or technological product. In the first scenario, the benefits of using the system, product, or service meet the user's expectations. In the second scenario, the benefits exceed the user's expectations. In contrast with the first two scenarios, the benefits are below the user's expectations in the last scenario. While the first two scenarios lead to confirmation status, the last scenario leads to disconfirmation status (Alraimi et al., 2015). In other words, when initial expectations regarding IS usefulness (performance, benefits, etc.) are not confirmed in the post-adoption period, users may experience cognitive dissonance (Bhattacherjee, 2001). In order to maintain cognitive balance, users may adjust their usefulness perceptions. Therefore, the ECM posits that confirmation has a positive influence on users' satisfaction and usefulness of IS. On the other hand, users may engage in the same cognitive process to reduce the dissonance they experience in mobile shopping use-related beliefs (e.g., security, concentration, and enjoyment). This argument finds support from Chang and Zhu (2012) for flow experience and Lankton et al. (2014) for trust. Therefore, it can be argued that confirmation has potential influence over perceived enjoyment, concentration and trust.

The dimension of satisfaction refers to the level of emotional satisfaction felt by users as the information system meets their needs and expectations. In the marketing literature, satisfaction is thought to have a key role in ensuring consumer loyalty. In a similar argument, it was proposed that users' satisfaction regarding the use of a technological device or service strengthens their continuance intention in using a device or service (Limayem et al., 2007). Therefore, the factors of perceived usefulness and confirmation in ECM have an effect on the satisfaction factor. In addition, previous studies have clearly showed that people who have had positive experiences of online purchasing are tend to trust online sellers (Chiu et al., 2012; Fang et al., 2014). Due to the high complexity and anonymity associated with mobile commerce, satisfaction with past mobile shopping experience may increase the degree of trust towards mobile sellers. In association with that this study posits that satisfied mobile shopping users are more likely to trust mobile sellers.

In various studies conducted in the field of IS, the dimension of intention has come to the forefront as a strong antecedent in usage behaviours (Venkatesh et al., 2003). As similarly proposed in the theory of reasoned action (Fishbein and Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1991), individuals' intention before the behaviour takes place is the behaviourist intention, which is important in achieving the behaviour. The users' intention in using a technology, in fact, is perceived as a basic indicator of the success of this technology (Martínez-Torres et al., 2008). For this reason, measuring the intention is included in the model and is a target variable in order to predict individuals' real behaviours.

Taking into account the relationships and constructs of the ECM model, the first set of hypotheses was proposed as follows:

H1 Confirmation is positively related to perceived usefulness.

H2 Confirmation is positively related to enjoyment.

H3 Confirmation is positively related to concentration.

H4 Confirmation is positively related to trust.

H5 Confirmation is positively related to satisfaction.

H6 Perceived usefulness is positively related to satisfaction.

H7 Perceived usefulness is positively related to continuance intention.

H8 Satisfaction is positively related to trust.

H9 Satisfaction is positively related to continuance intention.

2.3 Flow theory

Flow experience refers to the state in which an individual is totally immersed in the experience performed for the moment, no matter what action is being carried out (Csikszentmihalyi, 1990). Theorised as flow theory in the studies conducted on happiness by the psychologist Csikszentmihalyi (1975), flow experience explains the psychological state of individuals in the process of focusing on the activity. Studies on different actions in different parts of the world have identified individuals' flow experience in a similar way, in spite of the action-specific characteristics or cultural differences of the participants (Özkara, 2015). Additionally, many studies on flow experience have revealed that individuals can undergo flow experience in actions with very different qualifications (e.g., playing a game, reading a book, or watching a movie) (Pelet et al., 2017). Therefore, it can be proposed that flow experience is a phenomenon that is experienced by all people, independently of the action's qualifications and cultural differences (Özkara, 2015).

Although flow experience is a phenomenon that is experienced in a similar way, in the literature there has been an ongoing disagreement regarding the structuring of this experience (Webster et al., 1993; Novak et al., 2000; Choi et al., 2007; Guo and Poole, 2009; Lee et al., 2007; Pelet et al.., 2017). The ambiguity regarding the antecedents and sub-dimensions of flow is, in particular, still a current issue (Özkara et al., 2016). As illustrated in Table 1, there are serious disagreements and different tendencies on flow theory. However, flow experience is mostly considered in a multi-dimensional manner in studies on the field of IS. The sense of control, curiosity, the transformation of time, concentration, and perceived enjoyment are the most frequently used among these dimensions.

The current study will consider flow experience using only the dimensions of concentration and perceived enjoyment. The reasons for this preference are as follows: first, the dimensions of concentration and perceived enjoyment are the most frequently used dimensions in structuring flow experience (Huang, 2006; Hoffman and Novak, 1996). Besides, at least one of these dimensions has been reported to have a significant effect on e-shopping in the literature (Koufaris, 2002; Guo and Poole, 2009; Domina et al., 2012). Second, while some of the sub-dimensions of flow theory have hedonic characteristics, some are indeed pragmatic. In order to avoid any bias of hedonic or

pragmatic characteristics in the current study, particular attention has been paid to including the two dimensions at the same time by consulting the results of studies in the literature. In this regard, the dimension of perceived usefulness, which is prominent with hedonic features (Huang, 2003; Lowry et al., 2013), and the dimension of concentration, which is prominent with pragmatic characteristics (Huang, 2003; Özkara et al., 2016) were selected in the light of the review of the relevant literature. In conclusion, the dimensions of perceived usefulness and concentration were considered as the sub-dimensions of the flow experience used within the scope of the current study, based on the literature-driven justifications.

Table 1 Important recent studies on flow experience research in the IS field

Study	*Context*	*Dimensions*	*Antecedants*
Pelet et al. (2017)	Social media	Enjoyment, concentration, challenge, control, and curiosity	Telepresence
Huang et al. (2017)	Online game	Flow (one dimensional)	Challenge, skill, and telepresence
Özkara et al (2016)	Online information search	Enjoyment, concentration, Time distortion, perceived control, and curiosity	Challenge/skill balance
Su et al. (2016)	Mobile game	Attention focus, and perceived enjoyment	Challenge human-computer interaction, social interaction, and skill
Kaur et al. (2016)	Social network site	Concentration, enjoyment, machine interaction, social interaction, skill, and playfulness	Not examined
Guo et al. (2016)	E-learning	Concentration, loss of self-consciousness, sense of control, and time distortion	Challenge-skill balance, clear goals, immediate feedback, and telepresence
Liu et al. (2016)	Social commerce	Flow (one dimensional)	Perceived expertise, perceived similarity, and perceived familiarity
Gao et al. (2015)	Mobile purchase	Flow (one dimensional)	System quality, information quality, service quality, privacy and security concerns
Kim and Han (2014)	Mobile advertising	Flow (one dimensional)	Credibility, entertainment, irritation, and incentives
Zhou (2013)	Mobile TV	Attention focus, perceived enjoyment, and perceived control	Perceived ease of use, access speed, and content quality

Enjoyment is regarded as an intrinsic motivation in terms of ensuring the adoption of technology-based services or products by many researchers (e.g., Venkatesh, 2000; Van der Heijden, 2004; Thong et al., 2006; Oghuma et al., 2015). Also, enjoyment has

been studied as one of the dimensions enabling flow experience to be formed in human computer interaction (e.g., Koufaris, 2002; Skadberg and Kimmel, 2004; Gao and Bai, 2014). Since mobile shopping is an environment where human computer interaction exists, enjoyment may be an essential factor in many kinds of activity during mobile shopping experience. For example, Jung and Jung (2012) found that enjoyment has a positive influence on users' satisfaction in IPTV services. Oghuma et al. (2016) confirmed that enjoyment influences user satisfaction and their continuance intention to use MIM applications. Accordingly, following hypotheses were proposed:

H10 Enjoyment is positively related to satisfaction.

H11 Enjoyment is positively related to continuance intention.

Csikszentmihalyi (1990, p.4) describes the flow experience as "the states in which people are so involved in an activity the noting else seems to matter." Hoffman and Novak (1996) highlighted that flow experience is characterised by focusing the activity at hand. Many previous studies regarded concentration as a measurement of flow and examined the influence of concentration in IT and web environments (Jung et al., 2009; Koufaris, 2002). Concentration has potential influence over satisfaction and continuance intention in the mobile shopping context due to several reasons. First, people may use mobile shopping applications or sites in short spare moments such as during a bus journey. In such situation, the individual have to constantly check for destination point and that makes difficult to focus on mobile shopping activity for users. Second, the screen size of today's smartphones may require users to have a greater consideration of the various actions they take from these devices (social media usage, banking, internet surfing, shopping, etc.). Given that fewer mistakes and more benefits are achieved in high concentration work (Engeser and Rheinberg, 2008), it can be assumed that concentration is a dimension that facilitates mobile shopping and affects the user satisfaction and continuance intention positively. Accordingly, following hypotheses were proposed:

H12 Concentration is positively related to satisfaction.

H13 Concentration is positively related to continuance intention.

2.4 Trust

Trust plays a significant role in both offline and online commercial transactions (Yoon, 2002). Bromiley and Cummings (1995) define trust as an individual's belief that the other party that they interact with will act in accordance with their promises, be honest in negotiations, and not display pragmatist behaviours, even in cases of probabilities. According to Ba and Pavlou (2002), trust refers to the belief of one of the parties that the shopping with the other party will be carried out in concordance with his or her expectations. Many studies in the literature have underlined the significant role of trust in sellers by consumers when conducting e-commercial transactions (Gefen et al., 2003; Ratnasingam, 2005).

Researchers indicate that the trust model-perceived as an essential competent in the adaptation and use of technologies such as e-commerce where monetary transactions are intensively carried out (Holsapple and Sasidharan, 2005) – should also be considered as essential in m-commerce apps with a similar business model (Chong et al., 2012; Wei

et al., 2009; Wang et al., 2006). For example, Lin and Wang (2006) indicated that trust is effective in consumer satisfaction and loyalty in m-commerce. Siau and Shen (2003), on the other hand, put forward two types of trust: pre-usage trust and post-usage trust and indicated that trust is influenced by mobile sellers and technologies.

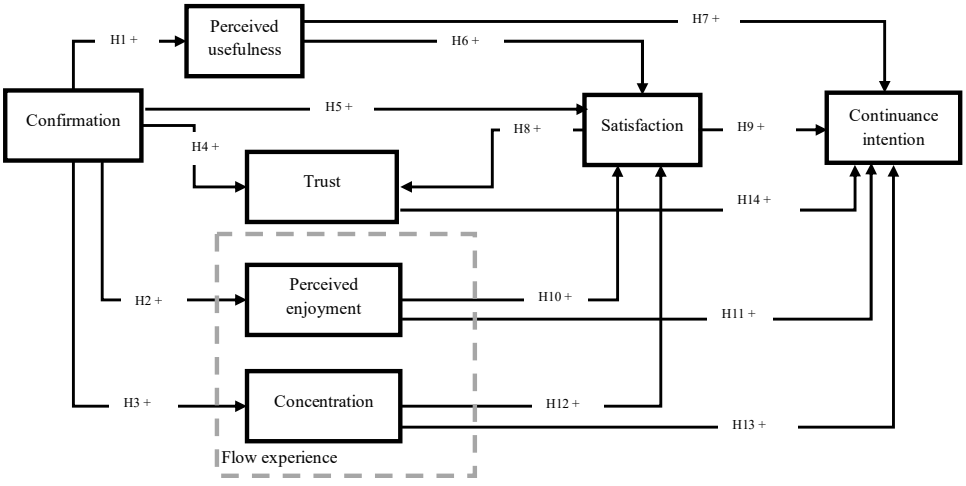
Head and Hassanein (2002) categorised trust in e-commerce into two groups: hard trust and soft trust. Hard trust includes technical solutions, such as encryption and firewalls that are applied in order to protect the confidentiality of data transfer and information. Soft trust, on the other hand, concerns issues regarding seller's service quality and the privacy of personal information. While hard trust-related issues are shaped by technical infrastructure and solutions, soft trust is, rather, formed as a result of emotion-weighted decisions. In the current study, the trust dimension will be limited to only soft trust issues. The reasons for this preference are that the private shopping clubs investigated within the scope of this study, by nature, serve only in virtual environments and that these services – either electronic or mobile – are very similar to each other in terms of safety concerns from Turkish users' point of view. Since special payment options are not presented in the mobile apps of private shopping clubs in Turkey and mobile payment options are the same as those provided on their websites, the financial risk, one of the most essential components of trust, is perceived by Turkish users in both mobile and web shopping. In addition, it was decided to include the issues regarding hard trust, which is noticed mostly for monetary transactions, in this study since we intended to measure the continuance intention in using an app rather than the intention of purchasing it. As a result, the trust dimension in this study will be investigated with post-usage trust and soft trust issues. Accordingly, a final was proposed as follows:

H14 Trust is positively related to continuance intention.

2.5 Research model

Lee and Kwon (2011) categorised studies that investigate sustainable use in web-based services and prefer ECM as a theoretical basis into two groups. The studies in the first group extend ECM by adding one or several variables and the studies in the second group combine ECM with other theories. The studies presented in Appendix A corroborated the views of Lee and Kwon, revealing that researchers extend ECM by adding several variables or combine it with different theories. One of the most important reasons for this is undoubtedly that the factors affecting the continuance usage intention vary according to context and hybrid or extended IS continuance models are more successful in explaining the continuance usage intention, as previously proved empirically (e.g., Recker, 2010; Premkumar and Bhattacherjee, 2008; Hong et al., 2006). Additionally, ECM only involves extrinsic motivation-based beliefs. This leads to the ignorance of other motivation factors that are effective for users to continue using a service or system (Thong et al., 2006). This limitation of ECM has been frequently stated in the literature (Cheng, 2014). In order to eliminate this limitation, this study combined ECM with flow theory, which is an important theory for understanding human-computer interactions and online users' behaviours (Chang and Zhu, 2012). In addition to the aforementioned integrated model, this study also investigated the trust variable, which is frequently included in studies on the adaptation and use of e-commerce. The theoretical model used in this study is presented in Figure 2.

Figure 2 Research model



3 Methods

3.1 Data collection and sample

The survey technique was used in order to collect data within the scope of the study. The survey was based on web and conducted among Turkish mobile shoppers over 2 months. The survey consisted of three sections. In the first section, there were screening questions. In this section, responders were asked if they use the mobile websites or apps of the four big private shopping clubs in Turkey on their mobile devices (tablet computer, smartphone, etc.). If the answer was negative, the survey came to an end automatically. It was also asked the participants to name the private shopping clubs they preferred to use when shopping on mobile, before preceding the other questions. Only participants who indicated that they had been active in at least one of listed private shopping clubs' mobile application or site over six months were allowed to precede the other questions. By excluding the non-users of mobile sites/applications of private shopping clubs, it was ensured that all the remaining respondents were using at least one of the mobile websites or apps of private shopping clubs which are listed in the survey. The second section contained questions about the demographic profiles of respondents. And the last section included items for measuring respondents' continuance intention to use mobile sites or apps of private shopping clubs.

According to Lightner (2003) preferences for e-commerce site characteristics of an online shopping experience were differentiated by demographic data such as age, education and income. In order to yield consistent results and to reduce the effect of demographic variables that are not included in the model, it was aimed to select participants from the same occupational group and with similar income and education levels. For this reason, X and Y generation individuals who belong to a definite job (teacher) and reside in the provinces of İstanbul, Ankara, and Samsun were selected as sample. All participants were working in public elementary and secondary schools in the provinces of Istanbul, Ankara, and Samsun in Turkey. This study selected teachers as

sample because except for the teachers, the salary of public workers can vary from city to city, and teachers have similar education levels, broadly similar access to financial and commercial systems in Turkey. Meanwhile, the research model did not include control variables such income and age. Thus, it is meaningful to conduct the study in a sample with similar demographic characteristics.

In total, there were 523 responses were collected in the survey. After removing the unusable responses that include insincere and missing answers for any item, a total of 518 individuals were found to use private shopping clubs on their mobile phones. With 518 respondents, our sample met the recommended guidelines for using the SEM (Hoelter, 1983). The results regarding the participants' demographics are presented in Table 2.

Table 2 Demographics of respondents

Demographics	*Category*	*Frequency*	*(%)*
Age	21–29	68	13.1
	30–37	189	36.5
	38–44	134	25.9
	45–50	127	24.5
Gender	Male	187	36.1
	Female	331	63.9
Private shopping club used on mobile devices	1v1y	134	25.9
	Markafoni	363	70.1
	Morhipo	322	62.2
	Trendyol	379	73.2
Education	Bachelor	419	80.9
	Master	93	18
	PhD	6	1.2
Private shopping club in which M-purchasing is done	1v1y	81	15.6
	Markafoni	274	52.9
	Morhipo	213	41.1
	Trendyol	289	55.8
	None of the above	104	20.1

3.2 Instruments

The survey form used in the study consisted of two parts. In the first part, the variables that determine the teachers' demographics were used. These variables are the participants' age, gender, education level, and previous experiences of using private shopping club apps and website on their mobile devices.

The items in the second part of the survey measure the factors within the scope of ECM and flow theory. All of the variables in the study model were previously used in different studies, and their validity and reliability were proven. All items were measured using a five-point Likert-type scale (ranging from 1 'strongly disagree' to 5 'strongly agree'). The items measuring 'perceived usefulness' were adapted from the work of Davis (1989) and Bhattacherjee (2001). The items measuring 'confirmation' were

adapted from Bhattacherjee's study (2001). The items measuring 'perceived enjoyment' and 'concentration' were adapted from Ghani and Desphande (1994), Koufaris (2002), and Zhou (2011). The items measuring 'satisfaction' were adapted from Bhattacherjee (2001). The items for 'trust' were adapted from Gefen et al. (2003). The items measuring 'continuance intention' were adapted from Bhattacherjee (2001) and Thong et al. (2006).

Prior to publishing the survey, a backward translation process approach was employed to compare an English version of the questionnaire to a Turkish one in order to ensure consistency and linguistic equivalence of items (Mullen, 1995; Singh, 1995). Thereafter, the opinions of one assessment and evaluation and three IS researchers were consulted and the necessary revisions were done in the light of their recommendations. Based on their feedback, one item was excluded from the item pool since it does not serve the characteristics of the survey. The final survey instrument is presented in Appendix B.

3.3 Analytical method

In recent years, data with multiple variables have been analysed with simpler techniques and fewer calculations with the emergence of powerful computers and software (Çokluk et al., 2010). SEM emerged as a result of studies conducted in this regard and is used in many disciplines, such as social sciences, behavioural sciences, and educational sciences.

SEM is defined as a multivariate statistical method used to test models in which casual and mutual relationships between observed and latent (non-observable) variables coexist (Meydan and Şeşen, 2015; Byrne, 2013; Eygü, 2018). In contrast to the traditional multivariate analysis methods that cannot calculate or correct measurement errors, SEM has been used to test many theories owing to its features of clearly considering errors in all analyses and revealing precise results in error calculations, conducting many analyses at once, and facilitating the mediation effect (Meydan and Şeşen, 2015). SEM was chosen as the analysis method in the study owing to all these advantages.

The two-step approach proposed by Anderson and Gerbing (1988) is one of the most preferred methods in studies using SEM. According to this approach, the process of the structural equation model analysis comprises two stages. In the first stage, the measurement model in which the latent variables and all correlational relationships are measured is tested. The accuracy of the measurements regarding the structures in the model is also investigated at this stage. The structural model indicating the relationships between the latent and observed variable is investigated in the second stage (Çokluk et al., 2010). The acceptance or rejection of the hypotheses developed within the scope of the study is determined according to the structural model if the fit indices obtained are in the acceptable range. Considering the recommendations of Anderson and Gerbing (1988) in the literature, the two-step approach was adopted in the current study.

4 Results

4.1 Measurement model

The first step of the two-step approach, the test of the measurement model, evaluates how well the observed variables represent the latent variables by linking the observed

variables with the latent variables through confirmatory factor analysis (CFA). The basic purpose of the measurement model is to ensure the validity and reliability of the measurements of each structure in the model. The measurement model and the structural model in the study were tested using the maximum likelihood technique in AMOS 20.0.

The consistency of a model investigated in SEM analyses with data, or how well the theoretical model explains the data, is determined according to the various fit indices obtained (Byrne, 2013; Hoyle, 1995). These values, which are also called the goodness of fit indices, facilitate the decision to approve or reject a model. The fit indices of the model and the suggested values for these indices (Çokluk et al., 2010; Hair et al., 2010) are shown in Table 3 and are within the acceptable range proposed by the literature. Therefore, the factor structure of the measurement model was consistent with the dataset.

A scale used in scientific research needs to be valid and reliable in order to be standardised and to reveal appropriate information thereafter. CFA was conducted and Cronbach's alpha was used in order to test the construct validity and reliability of the model proposed in this study. A Cronbach's alpha value of 0.70 or above indicates the good internal consistency of the scale (Nunnally, 1978). However, it is suggested the composite reliability coefficient should be calculated for studies using SEM and the overall reliability of the scale should be determined by also considering this coefficient (Ketchen and Bergh, 2005; Raykov, 1997). Hair et al. (2010) stated that composite coefficients between 0.60 and 0.70 are acceptable and values over 0.70 are at a good level. As seen in Table 3, the composite reliability values of all of the scales are significantly over 0.70. As a result, the measurement model was said to be reliable.

According to Cooper and Emory (1995), construct validity involves convergent validity and discriminant validity. Convergent validity tests whether the determined indicators of a factor have considerably higher loads in this factor. In order to ensure the convergent variable of a scale, the average extracted variance (AVE) values should be over 0.50 and the composite reliability coefficient variable should be over 0.70 (Bagozzi and Yi, 1988; Gefen et al., 2003). As shown in Table 4, the composite reliability coefficient is over 0.70, the acceptable value. The calculated AVE values for each structure in Table 4 are higher than the recommended minimum of 0.50 (Fornell and Larcker, 1981). As a result, all of the scales included in the study model fulfil the conditions necessary for convergent validity.

Table 3 Goodness of fit indices for the measurement model and the structural model

Goodness of fit indices	*Good fit*	*Acceptable fit*	*Measurement model*	*Structural model*
X^2/df	$X^2/df \leq 3$	$3 \leq X^2/df \leq 5$	2.295	2.734
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.96	.95
NNFI	$.97 \leq NNFI \leq 1.00$	$.95 \leq NNFI \leq .97$	.97	.96
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI \leq .97$	.97	.96
GFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI \leq .95$	.93	.91
AGFI	$.90 \leq AGFI \leq 1.00$	$.80 \leq NFI \leq 90$	.91	.89
S-RMR	$0 \leq S\text{-}RMR \leq .05$	$.05 \leq S\text{-}RMR \leq .10$	.30	.05
RMSEA	$0 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$	.50	.05

Table 4 Results of confirmatory factor analysis and Cronbach's alpha values

Construct	*Item*	*Factor loading*	*t-value ($p < 0.001$)*	*Cronbach's alpha*	*Composite reliablity (CR)*	*Average variance extracted (AVE)*
CF	CF1	0.91	26.10	0.88	0.888	0.799
	CF2	0.88	24.55			
PU	PU1	0.82	21.71	0.86	0.843	0.642
	PU2	0.81	21.29			
	PU3	0.77	19.60			
PE	PE1	0.86	23.18	0.84	0.852	0.661
	PE2	0.67	16.40			
	PE3	0.90	24.96			
CON	CON1	0.85	23.56	0.92	0.926	0.807
	CON2	0.94	27.84			
	CON3	0.91	26.24			
TR	TR1	0.76	24.29	0.88	0.882	0.714
	TR2	0.67	22.09			
	TR3	0.5	23.16			
SAT	SAT1	0.88	25.20	0.92	0.926	0.806
	SAT2	0.94	27.95			
	SAT3	0.87	24.92			
CI	CI1	0.88	24.93	0.91	0.921	0.747
	CI2	0.75	19.79			
	CI3	0.92	26.85			
	CI4	0.90	26.21			

Table 5 Discriminant validity

	CF	*PU*	*PE*	*CON*	*TR*	*SAT*	*CI*
CF	0.894						
PU	0.676	0.801					
PE	0.662	0.693	0.813				
CON	0.605	0.578	0.597	0.898			
TR	0.832	0.654	0.598	0.573	0.845		
SAT	0.850	0.713	0.603	0.562	0.831	0.898	
CI	0.744	0.754	0.625	0.557	0.702	0.797	0.864

Discriminant validity indicates the degree of discrimination of the relationships between scales or the differentiation between them. In order to ensure discriminant validity, the square roots of the calculated AVE value for each variable should be higher than the correlation value of this variable with other variables (Fornell and Larcker, 1981). The results regarding the discriminant variable are presented in Table 4. The values in bold are the square roots of the mean explained variance of the related variable, and the other

values are the correlation matrices of the factors. As a result, the discriminant validity was ensured owing to the fact that the square root of the AVE for each construct was higher than the correlations across constructs.

4.2 Structural model

After meeting the prerequisites for the measurement model, the structural model was tested. The fitness indices of the structural model are reported in Table 3 and indicated a good model fit. In Figure 2, the results of our tests of the structural model are presented using the standardised coefficients for each path and the R-squared values for perceived usefulness, satisfaction, trust, attention to focus, enjoyment, and continuance intention. The suggested hypotheses tests are also summarised in Table 6. When Figure 2 and Table 6 were investigated, H10, H12, H13, and H14 were rejected since these hypotheses were not statistically supported. Based on these results, ten of the 14 hypotheses proposed in the study were accepted and four of them were rejected.

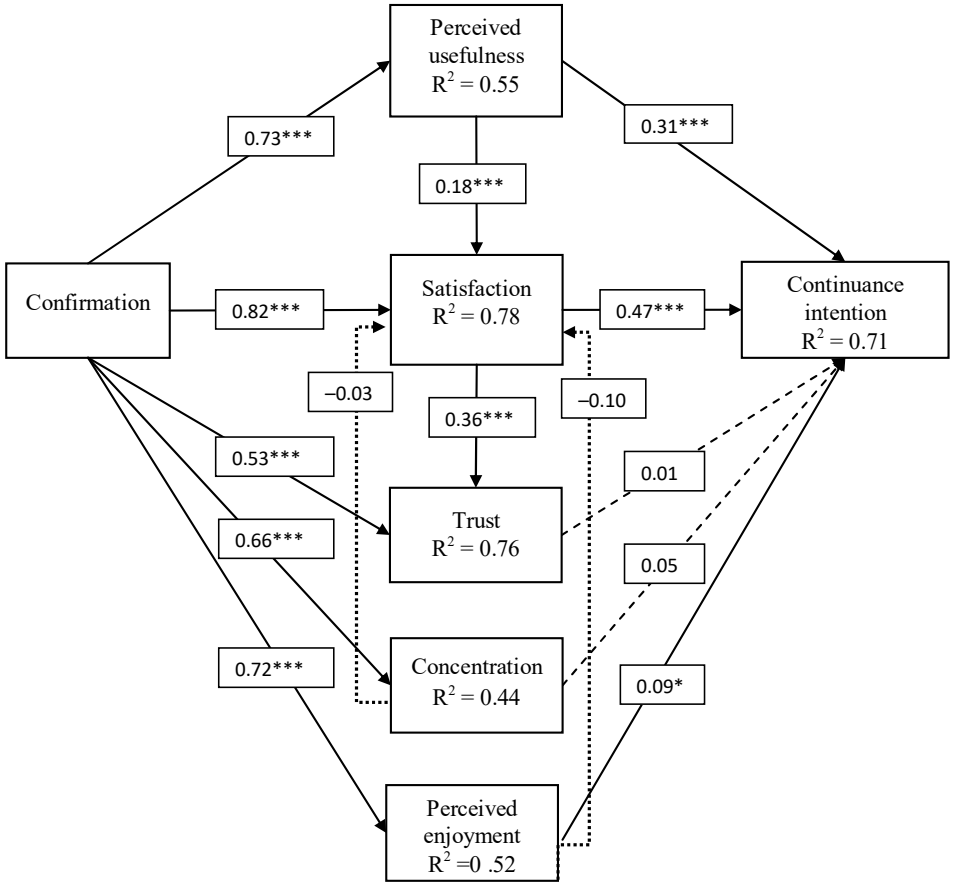
Table 6 Summary of hypotheses testing results

Path	*Hypothesis*	*Result*
CF → PU	H1	Supported
CF → PE	H2	Supported
CF → CON	H3	Supported
CF → TR	H4	Supported
CF → SAT	H5	Supported
PU → SAT	H6	Supported
PU → CI	H7	Supported
SAT → TR	H8	Supported
SAT → CI	H9	Supported
PE → SAT	H10	Not supported
PE → CI	H11	Supported
CON → SAT	H12	Not supported
CON → CI	H13	Not supported
TR → CI	H14	Not supported

When the analysis results were investigated in terms of the explained variance of the latent variables, 55% of the variation in perceived usefulness ($R^2 = 0.55$), 52% of the variation in enjoyment ($R^2 = 0.52$), 44% of the variation in concentration ($R^2 = 0.44$), 78% of the variation in satisfaction ($R^2 = 0.78$), and 76% of the variation in trust ($R^2 = 0.76$) were explained. The variables of perceived usefulness, satisfaction, and enjoyment are significant predictors of continuance intention in using the mobile apps and websites of private shopping clubs. 78% of the variance of the satisfaction variable was explained by the variables of perceived usefulness and confirmation of the expectations. The perceived usefulness and confirmation variables were found to have a significant and positive effect on the satisfaction variable, which was explained with quite a high percentage. Confirmation variable explained 55% of the variance in

perceived usefulness ($R^2 = 0.55$), 66% of the variance in concentration ($R^2 = 0.66$), and the 52% of the variance in enjoyment ($R^2 = 0.52$). The variables of confirmation and satisfaction were found to explain 76% of the variance in trust ($R^2 = 0.76$).

Figure 3 Results of structural modelling analysis



Notes: *p < 0.05; **p < 0.01; ***p < 0.001 (t > 1, 960; t > 2.576; t > 3.291).

→ Significant path.

⇢ Non-significant path.

5 Discussion and implications

In this section, the hypotheses proposed in the research model were evaluated according to the findings obtained at the end of the analyses and the variables affecting the continuous usage intention and the relationship among these variables were interpreted. Based on these findings, this study has some implications for both existing literature and practitioners.

5.1 Findings

Our results showed that confirmation, which is the single independent variable in this study, has a statistically significant effect on the perceived benefit, focus, pleasure, satisfaction, and trust. Contrary to the studies in existing literature, which revealed that the effect of confirmation on satisfaction is not significant, or that confirmation had a much more significant effect on perceived usefulness than satisfaction (e.g., Kang et al., 2009; Ayanso et al., 2015), the path analysis in this study revealed that confirmation has the strongest effect on satisfaction and the weakest effect on perceived benefit. These findings are consistent with those in Bhattacherjee's (2001) study. Furthermore, the strong relationship between confirmation and satisfaction was revealed in many studies in the literature that were conducted in different contexts (e.g., Lin et al., 2012; Oghuma et al., 2016). Therefore, it is not surprising that the confirmation variable has a significant effect on perceived usefulness, perceived enjoyment, focus, trust and especially satisfaction variable.

Another important finding of the study is that the perceived usefulness variable has a significant positive effect on the continuance usage intention. In the literature, some studies have proposed that the perceived usefulness does not have a positive significant effect on the users' continuance intention in using mobile commerce apps (e.g., Chong et al., 2012; Zhang et al., 2012); therefore, the finding in the present study of a relationship between the perceived usefulness and continuing to use is valuable.

Another important finding revealed at the end of the analyses is the high explanation variance ($R^2 = 0.71$) observed with the continuance usage intention. The reason for this was that, different variables were added to the variables in the original ECM and these variables were also utilised to explain the continuance usage intention. In this regard, when the effects of focus and pleasure, which are among the flow theory dimensions, on the continuance usage intention are investigated, the relationship between pleasure and the continuance usage intention is significant. However, the focus variable does not have a significant effect on the continuance usage intention. The finding regarding the perceived enjoyment variable is in accordance with the results of different studies in the literature (Chong, 2013; Zhou, 2011).

Focus, which is another variable, investigated under the flow theory was found to have no significant effect on the continuance usage intention and satisfaction. The hypothesis developed based on the assumption that since the screens of mobile devices are relatively smaller than traditional computers, users would be able to focus more and would, therefore, prefer to use mobile channels was rejected at the end of the analyses. Moreover, the user's focus on the activity that they are carrying out in the mobile app or website does not have any effect on the satisfaction with that particular app or website. Therefore, at the end of the current study, it was determined that, contrary to the previous studies conducted in the fields of online shopping (e.g., Koufaris, 2002) and e-learning (e.g., Lee, 2010), for M-shopping users the focus variable does not have an effect on the continuance usage intention and satisfaction.

The trust variable, which was not included in the original ECM but was available in the research model, has been frequently mentioned in studies investigating the use and acceptance of e-commerce and M-commerce apps. It was found in this study that the satisfaction and confirmation variables affected trust and the trust variable affected the continuance usage intention. The highest explanation rate observed in the trust variable ($R^2 = 0.76$) indicates that the confirmation and satisfaction variables have an important

effect on the trust variable. This finding revealed that meeting the expectations and being pleased with using apps are the main sources of the users of M-shopping having trust towards the mentioned apps or websites (the seller).

The most surprising finding of the study is that the relationship between the trust variable and the continuance usage intention variable was found to be insignificant. In the literature, many studies conducted on online environments regarded trust as an important variable affecting the acceptance of use or the continuance usage intention (e.g., Bilgihan, 2016; Fang et al., 2014; Chiu et al., 2012). Contrary to the studies in the literature, which reveal a significant relationship between trust and repurchase (use), there may be several reasons behind the finding revealed in the research model of the relationship between trust and the continuance usage intention. Similar to the reasons proposed in the previous studies, which found an insignificant relationship between the continuance usage intention and trust, the reasons in this study may be specific to the sample, the M-shopping environment, and the operation of the private shopping clubs. For instance, in Hillman and Neustaedter's (2017) study, which investigated the role of trust in m-commerce, they found that the users were not anxious about shopping transactions carried out through popular app stores, such as Apple or Google Play. According to their results, the users' trust in the companies who control the app stores is transferred to the developers who share their apps on these platforms and, in a sense, their trust in the app store controller (Apple, Google, etc.) applies to the developers in these platforms, and the users perceive that the apps were developed by the companies that own these platforms. Since the mobile apps of the private shopping clubs investigated in this study are checked by Google Play and Apple Store, the users may have a similar attitude as the subjects in Hillman and Neustaedter's (2017) study. Thus, the strict security controls of Apple and Google Play may have convinced the users that they would not face any problems regarding security with apps downloaded from these platforms. In another study conducted by Phelan et al. (2016), the users who had concerns, such as their personal data being collected, before using a mobile app took the risk knowingly and willingly after deciding to download the app. Therefore, the users do not perceive there to be any inconvenience regarding the collection and storage of their data by the developers of the app, including their location, their consumption habits, or their phone number. Similar to Phelan et al.'s (2016) study, in this work the members of private shopping clubs do not think that the mobile apps or websites use the data they collected in a way that will negatively affect the users or it may be that the benefit, enjoyment, and satisfaction that the users get from using the apps and websites encourage them to take risks.

5.2 Theoretical implications

This study makes important contributions to the literature. First, all of the relationships that were presented in the original ECM were confirmed in this study. This finding will be helpful for researchers who aim to use the ECM in various mobile environments. Second, in recent years, the ECM was examined in many countries (mostly in developed countries) other than Turkey (e.g., Stone and Baker-Eveleth, 2013; Alraimi et al., 2015; Li and Liu, 2014; Recker, 2010). Thus, the results of this study are valuable for the global generalisability and validity of the ECM. Third, this study reveals a new model by combining the ECM and flow theory, which covers the users' continuance intention in using M-shopping in the post-adoption process, and the extrinsic and intrinsic elements.

The original ECM has been criticised for neglecting the role of users' intrinsic motivation for IT/S usage (Cheng, 2014). Moreover, previous literature related to human behaviour and IT showed the importance of intrinsic motivation factors in explaining user behaviour towards a technology (e.g., Teo et al., 1999; Moon and Kim, 2001; Lin, 2007). Therefore, the integrated ECM prepared in this study, which involves the extrinsic and intrinsic motivation factors (e.g., perceived usefulness, and perceived enjoyment), can be used to explain the continuance intention and behaviour in use M-shopping. Finally, the trust dimension added to the model was found to have no influence on continued use. Since the feeling of trust is tied to different pre- and post-usage premises, the feelings of trust before and after use can be handled separately.

From a theoretical standpoint, this study successfully integrated an extrinsic motivation related factor, namely enjoyment, into ECM in the mobile shopping context. While perceived usefulness, confirmation, and satisfaction explained 44% of the variation in continuance intention in the original work of Bhattacherjee (2001), the proposed research model in this study provided a better explanatory power by explaining 71% of variance. Furthermore, the research model implied that perceived usefulness and satisfaction had the strongest direct effects on the continuance intention. Considering the fact that theoretical research regarding continuous usage intention of mobile shopping is not much, this study is one the first studies that specifically examined mobile shopping from a behavioural point of view.

5.3 Practical implications

This study is important for many stakeholders in M-shopping apps and websites (developers, app/website administrators, investors, product managers, etc.) in terms of the finding that there is an insignificant relationship between trust and the continuance usage intention. For instance, with reference to the relationship found between trust and the continuance usage intention, it can be stated that the users who use M-shopping apps or websites once do not have any concerns about the trust issues with the seller. Therefore, there is no need to expend too much effort on gaining the trust of the users who have shopped once using the app or website. Moreover, the items that highlight the reliability of the app or website in the design can be disabled for the users who have shopped at least once to make room for other items that encourage shopping (advertisement, marketing, campaign, etc.). When it is considered that the screen sizes of mobile devices are smaller compared to computers, the interface designs of the apps and websites need to be much more functional and planned. Therefore, interface designers can employ the method of putting the items that increase trust for users who have shopped at least once while designing an app or website for mobile devices.

Since the trust variable investigated in this study reflects the trust process after the use of website/app, the variables that are effective in this process are user satisfaction and meeting their expectations (confirmation). In other words, the more the user's expectations are met by the M-shopping app and the user is satisfied by the app, the higher the user's trust will be. For instance, if the mobile apps or websites of private shopping clubs can present the advantages of M-shopping and provide an uninterrupted and high-quality service, they can be considered as having made an important step towards meeting the expectations of users. To summarise, each shopping transaction conducted through a private shopping club's mobile app or website increases the trust in the seller as long as it meets the expectations of the users.

In light of the findings of this study, a mobile app or website that meets the user's expectations contributes to the user's trust in the seller and the continuation of the shopping activities. Additionally, members of generations X and Y are considered as the generations who use the computers most effectively. Therefore, unlike the silent generation and the baby boomer generation, they use technological products not only for their needs but also for enjoyment. For this reason, including hedonic elements can be important for M-shopping apps whose target group is the X and Y generations in terms of maintaining continuity.

6 Conclusions, limitations, and future research

The aim of this study was to investigate the factors that affect consumers' continuance intention in using M-shopping apps and websites. In this direction, a theoretical model formed through combining the ECM and flow theories was explained in detail and tested. Finally, in the light of the findings, the factors that affect consumers' continuance intention in using M-shopping were discussed based on the previous literature and, after the evaluation of the proposed hypotheses, particular implications were provided.

Although this study makes important contributions to the understanding of individuals' M-shopping continuance behaviours, this study has limitations that may be addressed by future research. First, the scope of this study was limited to the field of M-shopping. If we consider that many kinds of mobile commerce (mobile games, mobile payment, mobile banking, etc.) exist, comparing the results to different kinds of mobile commerce may increase the reliability of the generalisations that can be made on sustainable use in M-shopping and mobile commerce. The second important limitation is the sample used in the study, which was limited to teachers. Since their yearly incomes, working conditions, free time periods, and educational backgrounds are similar, the results can only be generalised to individuals with similar educational backgrounds and incomes. Thus, when the effects of demographic variables on technology use and consumer decisions are considered, the findings should be tested on individuals with different incomes and educational backgrounds to determine if the same structures are applicable. Finally, 29% of the continued use variable, which was the target variable in the study, could not be explained. In this respect, different models can be included in the study to increase the explained variance in continuance intention in using M-shopping websites and apps.

References

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

Al-Maghrabi, T. and Dennis, C. (2011) 'What drives consumers' continuance intention to e-shopping? Conceptual framework and managerial implications in the case of Saudi Arabia', *International Journal of Retail & Distribution Management*, Vol. 39, No. 12, pp.899–926.

Alraimi, K.M., Zo, H.J. and Ciganek, A.P. (2015) 'Understanding the MOOCs continuance: the role of openness and reputation', *Computers & Education*, Vol. 80, pp.28–38.

Anderson, J.C. and Gerbing, D.W. (1988) 'Structural equation modeling in practice – a review and recommended 2-step approach', *Psychological Bulletin*, Vol. 103, No. 3, pp.411–423.

Ayadi, N., Giraud, M. and Gonzalez, C. (2013) 'An investigation of consumers' self-control mechanisms when confronted with repeated purchase temptations: evidence from online private sales', *Journal of Retailing and Consumer Services*, Vol. 20, No. 3, pp.272–281.

Ayanso, A., Herath, T.C. and O'Brien, N. (2015) 'Understanding continuance intentions of physicians with electronic medical records (EMR): an expectancy-confirmation perspective', *Decision Support Systems*, Vol. 77, pp.112–122.

Ba, S. and Pavlou, P.A. (2002) 'Evidence of the effect of trust building technology in electronic markets: price premiums and buyer behavior', *MIS Quarterly*, Vol. 26, No. 3, pp.243–268.

Bagozzi, R.P. and Yi, Y. (1988) 'On the evaluation of structural equation models', *Journal of the Academy of Marketing Science*, Vol. 16, No. 1, pp.74–94.

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

Bilgihan, A. (2016) 'Gen Y customer loyalty in online shopping: an integrated model of trust, user experience and branding', *Computers in Human Behavior*, Vol. 61, pp.103–113.

Bromiley, P. and Cummings, L.L. (1995) 'Transactions costs in organizations with trust', in Bies, R., Sheppard, B. and Lewicki, R. (Eds.): *Research on Negotiations in Organizations*, Vol. 5, pp.219–247, JAI Press, Greenwich, CT.

Byrne, B.M. (2013) *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, 2nd ed., Taylor & Francis, New York.

Chang, Y.P. and Zhu, D.H. (2012) 'The role of perceived social capital and flow experience in building users' continuance intention to social networking sites in China', *Computers in Human Behavior*, Vol. 28, No. 3, pp.995–1001.

Cheng, Y-M. (2014) 'Extending the expectation-confirmation model with quality and flow to explore nurses' continued blended e-learning intention', *Information Technology & People*, Vol. 27, No. 3, pp.230–258.

Chiu, C-M., Hsu, M-H., Lai, H. and Chang, C-M. (2012) 'Re-examining the influence of trust on online repeat purchase intention: the moderating role of habit and its antecedents', *Decision Support Systems*, Vol. 53, No. 4, pp.835–845.

Choi, D.H., Kim, J. and Kim, S.H. (2007) 'ERP training with a web-based electronic learning system: the flow theory perspective', *International Journal of Human-Computer Studies*, Vol. 65, No. 3, pp.223–243.

Chong, A.Y.L. (2013) 'Mobile commerce usage activities: the roles of demographic and motivation variables', *Technological Forecasting and Social Change*, Vol. 80, No.7, pp.1350–1359.

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.

Çifterler, Ö. (2013) *Elektronik Pazarlamada İnternet Reklamcılığı: Özel Alışveriş Siteler Üzerine Bir İnceleme*, Master dissertation, Marmara University.

Clegg, S.R., Schweitzer, J., Whittle, A. and Pitelis, C. (2016) *Strategy: Theory and Practice*, 2nd ed., SAGE Publications, London.

Çokluk, Ö., Şekercioğlu, G. and Büyüköztürk, Ş. (2010) *Multivariate Statistics for the Social Sciences: SPSS and LISREL Applications*, Pegem Akademi, Ankara.

Cooper, D.R. and Emory, C.W. (1995) *Business Research Methods*, Richard D. Irwin. Inc., Chicago.

Criteo (2015) *2015 U.S. Digital Future in Focus* [online] http://eticaretmag.com/turkiyede-mobilticaret-online-perakendenin-yuzde-20sini-olusturuyor-arastirma/ (accessed 12 November 2017).

Csikszentmihalyi, M. (1975) 'Play and intrinsic rewards', *Journal of Humanistic Psychology*, Vol. 15, No. 3, pp.41–63.

Csikszentmihalyi, M. (1990) *Flow: The Psychology of Optimal Performance*, Cambridge University Press, New York.

Dağhan, G. and Akkoyunlu, B. (2016) 'Modeling the continuance usage intention of online learning environments', *Computers in Human Behavior*, Vol. 60, pp.198–211.

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.

Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989) 'User acceptance of computer technology: a comparison of two theoretical models', *Management Science*, Vol. 35, No. 8, pp.982–1003.

Deng, L.Q., Turner, D.E., Gehling, R. and Prince, B. (2010) 'User experience, satisfaction, and continual usage intention of IT', *European Journal of Information Systems*, Vol. 19, No. 1, pp.60–75.

Dinh, H.T., Lee, C., Niyato, D. and Wang, P. (2013) 'A survey of mobile cloud computing: architecture, applications, and approaches', *Wireless Communications & Mobile Computing*, Vol. 13, No. 18, pp.1587–1611.

Domina, T., Lee, S-E. and MacGillivray, M. (2012) 'Understanding factors affecting consumer intention to shop in a virtual world', *Journal of Retailing and Consumer Services*, Vol. 19, No. 6, pp.613–620.

Durmuş, B., Erdem, Y.C., Özçam, D.S. and Akgün, S. (2015) 'Türk giyim sektöründe yeni bir e-ticaret modeli: özel alişveriş siteleri', *Öneri Dergisi*, Vol. 11, No. 44, pp.17–32.

Engeser, S. and Rheinberg, F. (2008) 'Flow, performance and moderators of challenge-skill balance', *Motivation and Emotion*, Vol. 32, No. 3, pp.158–172.

Eygü, H. (2018) 'Trafik kazalarını etkileyen faktörlerin yapısal eşitlik modeli ile incelenmesi', *Elektronik Sosyal Bilimler Dergisi*, Vol. 17, No. 66, pp.838–851.

Fang, Y., Qureshi, I., Sun, H., McCole, P., Ramsey, E. and Lim, K.H. (2014) 'Trust, satisfaction, and online repurchase intention: the moderating role of perceived effectiveness of e-commerce institutional mechanisms', *MIS Quarterly*, Vol. 38, No. 2, pp.407–427.

Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*, Addison-Wesley, Reading.

Fornell, C. and Larcker, D.F. (1981) 'Structural equation models with unobservable variables and measurement error: algebra and statistics', *Journal of Marketing Research*, Vol. 18, pp.382–388.

Gao, L. and Bai, X. (2014) 'Online consumer behaviour and its relationship to website atmospheric induced flow: insights into online travel agencies in China', *Journal of Retailing and Consumer Services*, Vol. 21, No. 4, pp.653–665.

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

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.

Ghani, J.A. and Deshpande, S.P. (1994) 'Task characteristics and the experience of optimal flow in human-computer interaction', *Journal of Psychology*, Vol. 128, No. 4, pp.381–391.

Güler, C. (2013) *The Role of Word of Mouth Marketing in the Diffusion Process of Private Shopping Clubs*, Master dissertation, Marmara University.

Guo, Y.M. and Poole, M.S. (2009) 'Antecedents of flow in online shopping: a test of alternative models', *Information Systems Journal*, Vol. 19, No. 4, pp.369–390.

Guo, Z., Xiao, L., Van Toorn, C., Lai, Y. and Seo, C. (2016) 'Promoting online learners' continuance intention: an integrated flow framework', *Information & Management*, Vol. 53, No. 2, pp.279–295.

Gupta, A. and Arora, N. (2017) 'Understanding determinants and barriers of mobile shopping adoption using behavioral reasoning theory', *Journal of Retailing and Consumer Services*, Vol. 36, pp.1–7.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010) *Multivariate Data Analysis*, 7th ed., Pearson, New York.

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, p.139.

Head, M.M. and Hassanein, K. (2002) 'Trust in e-commerce: evaluating the impact of third-party seals', *Quarterly Journal of Electronic Commerce*, Vol. 3, No. 3, pp.307–326.

Hew, J-J., Lee, V-H., Ooi, K-B. and Lin, B. (2016) 'Mobile social commerce: the booster for brand loyalty?', *Computers in Human Behavior*, Vol. 59, pp.142–154.

Hillman, S. and Neustaedter, C. (2017) 'Trust and mobile commerce in North America', *Computers in Human Behavior*, Vol. 70, pp.10–21.

Hoelter, J.W. (1983) 'The analysis of covariance structures: goodness-of-fit indices', *Sociological Methods & Research*, Vol. 11, No. 3, pp.325–344.

Hoffman, D.L. and Novak, T.P. (1996) 'Marketing in hypermedia computer-mediated environments: conceptual foundations', *Journal of Marketing*, Vol. 60, No. 3, pp.50–68.

Holsapple, C.W. and Sasidharan, S. (2005) 'The dynamics of trust in B2C e-commerce: a research model and agenda', *Information Systems and E-Business Management*, Vol. 3, No. 4, pp.377–403.

Hong, S.J., Thong, J.Y.L. and Tam, K.Y. (2006) 'Understanding continued information technology usage behavior: a comparison of three models in the context of mobile internet', *Decision Support Systems*, Vol. 42, No. 3, pp.1819–1834

Hoyle, R.H. (1995) *Structural Equation Modeling: Concepts, Issues, and Applications*, SAGE Publications, Thousand Oaks, CA.

Hsu, C.L. and Lin, J.C.C. (2015) 'What drives purchase intention for paid mobile apps? – An expectation confirmation model with perceived value', *Electronic Commerce Research and Applications*, Vol. 14, No. 1, pp.46–57.

Huang, H-C., Huang, L-S., Chou, Y-J. and Teng, C-I. (2017) 'Influence of temperament and character on online gamer loyalty: perspectives from personality and flow theories', *Computers in Human Behavior*, Vol. 70, pp.398–406.

Huang, M.H. (2006) 'Flow, enduring, and situational involvement in the web environment: a tripartite second-order examination', *Psychology & Marketing*, Vol. 23, No. 5, pp.383–411.

Huang, M-H. (2003) 'Designing website attributes to induce experiential encounters', *Computers in Human Behavior*, Vol. 19, No. 4, pp.425–442.

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, p.29.

Husson, T., Ask, J.A., Johnson, C., Parrish, M. and Kwan, E. (2014) *Predictions 2014: Mobile Trends for Marketers: Navigate beyond the Hype to Drive Near-Term Results*, Research Report, Forrester Research.

IAB (2016) *IAB Türkiye İnternet Ölçümleme Araştırması 2016* [online] http://www.connectedvivaki.com/hangi-site-ne-kadar-tiklaniyor-aralik-2016-gemius-verileri/ (accessed 22 December 2017).

Insider (2016) *Türkiye E-Ticaret Ekosistemi Raporu* [online] https://webrazzi.com/2016/12/30/turkiyede-mobil-trafikteki-satin-alma-payi-2016-ucuncu-ceyrekte-yuzde-25-artti/.

Jung, C.H. and Jung, Y.S. (2012) 'Determinants of the user's satisfaction and continued usage intention in IPTV services', *The Society of Digital Policy & Management*, Vol. 10, No. 4, pp.137–146.

Jung, Y., Perez-Mira, B. and Wiley-Patton, S. (2009) 'Consumer adoption of mobile TV: examining psychological flow and media content', *Computers in Human Behavior*, Vol. 25, No. 1, pp.123–129.

Kang, Y.S., Hong, S. and Lee, H. (2009) 'Exploring continued online service usage behavior: the roles of self-image congruity and regret', *Computers in Human Behavior*, Vol. 25, No. 1, pp.111–122.

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.

Kaur, P., Dhir, A., Chen, S. and Rajala, R. (2016) 'Flow in context: development and validation of the flow experience instrument for social networking', *Computers in Human Behavior*, Vol. 59, pp.358–367.

Ketchen, D.J. and Bergh, D.D. (Eds.) (2005) *Research Methodology in Strategy and Management*, Vol. 2, Elsevier Ltd., Boston, MA.

Kim, Y.J. and Han, J. (2014) 'Why smartphone advertising attracts customers: a model of web advertising, flow, and personalization', *Computers in Human Behavior*, Vol. 33, pp.256–269.

Koufaris, M. (2002) 'Applying the technology acceptance model and flow theory to online consumer behavior', *Information Systems Research*, Vol. 13, No. 2, pp.205–223.

Lankton, N., McKnight, D.H. and Thatcher, J.B. (2014) 'Incorporating trust-in-technology into expectation disconfirmation theory', *Journal of Strategic Information Systems*, Vol. 23, No. 2, pp.128–145.

Larsen, T.J., Sorebo, A.M. and Sorebo, O. (2009) 'The role of task-technology fit as users' motivation to continue information system use', *Computers in Human Behavior*, Vol. 25, No. 3, pp.778–784.

Lee, K.C., Kang, I. and McKnight, D.H. (2007) 'Transfer from offline trust to key Online perceptions: an empirical study', *IEEE Transactions on Engineering Management*, Vol. 54, No. 4, pp.729–741.

Lee, M.C. (2010) 'Explaining and predicting users' continuance intention toward e-learning: an extension of the expectation-confirmation model', *Computers & Education*, Vol. 54, No. 2, pp.506–516.

Lee, Y. and Kwon, O. (2011) 'Intimacy, familiarity and continuance intention: an extended expectation – confirmation model in web-based services', *Electronic Commerce Research and Applications*, Vol. 10, No. 3, pp.342–357.

Li, H. and Liu, Y. (2014) 'Understanding post-adoption behaviors of e-service users in the context of online travel services', *Information & Management*, Vol. 51, No. 8, pp.1043–1052.

Lightner, N.J. (2003) 'What users want in e-commerce design: effects of age, education and income', *Ergonomics*, Vol. 46, Nos. 1–3, pp.153–168.

Limayem, M. and Cheung, C.M. (2008) 'Understanding information systems continuance: the case of internet-based learning technologies', *Information & Management*, Vol. 45, No. 4, pp.227–232.

Limayem, M., Hirt, S.G. and Cheung, C.M. (2007) 'How habit limits the predictive power of intention: the case of information systems continuance', *MIS Quarterly*, Vol. 31, No. 4, pp.705–737.

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.

Lin, H-F. (2007) 'Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions', *Journal of Information Science*, Vol. 33, No. 2, pp.135–149.

Lin, T-C., Wu, S., Hsu, J.S-C. and Chou, Y-C. (2012) 'The integration of value-based adoption and expectation – confirmation models: an example of IPTV continuance intention', *Decision Support Systems*, Vol. 54, No. 1, pp.63–75.

Liu, H., Chu, H., Huang, Q. and Chen, X. (2016) 'Enhancing the flow experience of consumers in China through interpersonal interaction in social commerce', *Computers in Human Behavior*, Vol. 58, pp.306–314.

Lowry, P.B., Gaskin, J.E., Twyman, N.W., Hammer, B. and Roberts, T.L. (2013) 'Taking 'fun and games' seriously: proposing the hedonic-motivation system adoption model (HMSAM)', *Journal of the Association for Information Systems*, Vol. 14, No. 11, pp.617–671.

Lu, J. (2014) 'Are personal innovativeness and social influence critical to continue with mobile commerce?', *Internet Research*, Vol. 24, No. 2, pp.134–159.

Martínez-Torres, M.R., Toral Marín, S., Garcia, F.B., Vazquez, S.G., Oliva, M.A. and Torres, T. (2008) 'A technological acceptance of e-learning tools used in practical and laboratory teaching, according to the European higher education area', *Behaviour & Information Technology*, Vol. 27, No. 6, pp.495–505.

Meydan, C.H. and Şeşen, H. (2015) *Yapısal Eşitlik Modellemesi AMOS Uygulamaları*, 2nd Edition, Detay Yayıncılık, Ankara.

Moon, J-W. and Kim, Y-G. (2001) 'Extending the TAM for a world-wide-web context', *Information & Management*, Vol. 38, No. 4, pp.217–230.

Mullen, M.R. (1995) 'Diagnosing measurement equivalence in cross-national research', *Journal of International Business Studies*, Vol. 26, No. 3, pp.573–596.

Novak, T.P., Hoffman, D.L. and Yung, Y.F. (2000) 'Measuring the customer experience in online environments: a structural modeling approach', *Marketing Science*, Vol. 19, No. 1, pp.22–42.

Nunnally, J.C. (1978) *Psychometric Theory*, McGraw-Hill, New York.

Oghuma, A.P., Chang, Y., Libaque-Saenz, C.F., Park, M.C. and Rho, J.J. (2015) 'Benefit-confirmation model for post-adoption behavior of mobile instant messaging applications: a comparative analysis of KakaoTalk and Joyn in Kore', *Telecommunications Policy*, Vol. 39, No. 8, pp.658–677.

Oghuma, A.P., Libaque-Saenz, C.F., Wong, S.F. and Chang, Y. (2016) 'An expectation-confirmation model of continuance intention to use mobile instant messaging', *Telematics and Informatics*, Vol. 33, No. 1, pp.34–47.

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.

Özkara, B.Y. (2015) *Investigation of the Effect of Flow Experience on Information Satisfaction in the Context of Consumers' Online Information Search*, Doctoral dissertation, Osmangazi University.

Özkara, B.Y., Özmen, M. and Kim, J.W. (2016) 'Exploring the relationship between information satisfaction and flow in the context of consumers' online search', *Computers in Human Behavior*, Vol. 63, pp.844–859.

Pelet, J.E., Ettis, S. and Cowart, K. (2017) 'Optimal experience of flow enhanced by telepresence: evidence from social media use', *Information & Management*, Vol. 54, No. 1, pp.115–128.

Phelan, C., Lampe, C. and Resnick, P. (2016) 'It's creepy, but it doesn't bother me', Paper presented at the *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*.

Premkumar, G. and Bhattacherjee, A. (2008) 'Explaining information technology usage: a test of competing models', *Omega*, Vol. 36, No. 1, pp.64–75.

Ratnasingam, P. (2005) 'Trust in inter-organizational exchanges: a case study in business to business electronic commerce', *Decision Support Systems*, Vol. 39, No. 3, pp.525–544.

Raykov, T. (1997) 'Estimation of composite reliability for congeneric measures', *Applied Psychological Measurement*, Vol. 21, No. 2, pp.173–184.

Recker, J. (2010) 'Continued use of process modeling grammars: the impact of individual difference factors', *European Journal of Information Systems*, Vol. 19, No. 1, pp.76–92.

San-Martín, S., Prodanova, J. and Jimenez, N. (2015) 'The impact of age in the generation of satisfaction and WOM in mobile shopping', *Journal of Retailing and Consumer Services*, Vol. 23, pp.1–8.

Shaikh, A.A. and Karjaluoto, H. (2015) 'Making the most of information technology & systems usage: a literature review, framework and future research agenda', *Computers in Human Behavior*, Vol. 49, pp.541–566.

Shang, D. and Wu, W. (2017) 'Understanding mobile shopping consumers' continuance intention', *Industrial Management & Data Systems*, Vol. 117, No. 1, pp.213–227.

Siau, K. and Shen, Z.X. (2003) 'Building customer trust in mobile commerce', *Communications of the ACM*, Vol. 46, No. 4, pp.91–94.

Singh, J. (1995) 'Measurement issues in cross-national research', *Journal of International Business Studies*, Vol. 26, No. 3, pp.597–619.

Skadberg, Y.X. and Kimmel, J.R. (2004) 'Visitors' flow experience while browsing a web site: its measurement, contributing factors and consequences', *Computers in Human Behavior*, Vol. 20, No. 3, pp.403–422.

Stone, R.W. and Baker-Eveleth, L. (2013) 'Students' expectation, confirmation, and continuance intention to use electronic textbooks', *Computers in Human Behavior*, Vol. 29, No. 3, pp.984–990.

Su, Y.S., Chiang, W.L., Lee, C.T.J. and Chang, H.C. (2016) 'The effect of flow experience on player loyalty in mobile game application', *Computers in Human Behavior*, Vol. 63, pp.240–248.

Teo, T.S., Lim, V.K. and Lai, R.Y. (1999) 'Intrinsic and extrinsic motivation in internet usage', *Omega*, Vol. 27, No. 1, pp.25–37.

Thong, J.Y.L., Hong, S.J. and Tam, K.Y. (2006) 'The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance', *International Journal of Human-Computer Studies*, Vol. 64, No. 9, pp.799–810.

Van der Heijden, H. (2004) 'User acceptance of hedonic information systems', *MIS Quarterly*, Vol. 28, No. 4, pp.695–704.

Venkatesh, V. (2000) 'Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model', *Information Systems Research*, Vol. 11, No. 4, pp.342–365.

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.

Wang, Y.S., Lin, H.H. and Luarn, P. (2006) 'Predicting consumer intention to use mobile service', *Information Systems Journal*, Vol. 16, No. 2, pp.157–179.

Webrazzi (2016) *Trendyol 2016'da Yüzde 80 Büyüdü, 1 Milyar TL Ciroya Ulaştı* [online] https://webrazzi.com/2017/01/09/trendyol-2016da-yuzde-80-buyudu-1-milyar-tl-ciroya-ulasti.

Webster, J., Trevino, L.K. and Ryan, L. (1993) 'The dimensionality and correlates of flow in human-computer interactions', *Computers in Human Behavior*, Vol. 9, No. 4, pp.411–426.

Wei, T.T., Marthandan, G., Chong, A.Y.L., Ooi, K.B. and Arumugam, S. (2009) 'What drives Malaysian m-commerce adoption? An empirical analysis', *Industrial Management & Data Systems*, Vol. 109, Nos. 3–4, pp.370–388.

Yoon, S.J. (2002) 'The antecedents and consequences of trust in online-purchase decisions', *Journal of Interactive Marketing*, Vol. 16, No. 2, pp.47–63.

Zhang, L.Y., Zhu, J. and Liu, Q.H. (2012) 'A meta-analysis of mobile commerce adoption and the moderating effect of culture', *Computers in Human Behavior*, Vol. 28, No. 5, pp.1902–1911.

Zhou, T. (2011) 'Understanding mobile internet continuance usage from the perspectives of UTAUT and flow', *Information Development*, Vol. 27, No. 3, pp.207–218.

Zhou, T. (2013) 'The effect of flow experience on user adoption of mobile TV', *Behaviour & Information Technology*, Vol. 32, No. 3, pp.263–272.

Appendix A

Table A1 Previous studies using the expectation confirmation model as a theoretical base

Study	*Context*	*Theory*	*Variables*	*Results (significant relationships)*
Hew et al. (2016)	Mobile social commerce	ECM+	CFSMIP, CI, PU, CON, SAT, and BL	CON → PU; CON → SAT; PU →CI; PU → SAT; SAT → CI; SAT → BL; CFSMIP → PU; CI → BL
Oghuma et al. (2016)	Mobile instant messaging	ECM+	CI, CON, ENJ, UI, PU, SAT, SEC, and SQ	CON → SAT; CON →PU; CON → ENJ; CON → UI; CON → SEC; PU → SAT; PU → CI; ENJ → SAT; ENJ → CI; UI → SAT; SAT → CI; SQ → SAT; SQ → CON
Dağhan and Akkoyunlu (2016)	E-learning	CM; ECM; TCT; ISSM	CI, CON, IQ, SAT, SQ, SYQ, PU, PV, OE, and UV	CON → SAT; PV → CI; PV → SAT; PU → CI; SAT → CI; OE → SAT; UV → SAT; UV → CI; SQ → SAT; SQ → CON; SYQ → SAT; SYQ → CON; SYQ → PV; IQ → PV; IQ □ SAT; IQ → CON
Alraimi et al. (2015)	MOOC	ECM+	CI, CON, ENJ, PU, SAT, PO, and PR	CON → SAT; CON → PU; CON → ENJ; CON → PR; CON → PO; PO → ENJ; PO → PU; PR → SAT; PR → ENJ; ENJ → SAT; ENJ → CI; PU → SAT; PU → CI
Li and Liu (2014)	Online travel services	ECM+	CI, CON, PU, SAT, and WOM	CON → SAT; CON → PU; PU → SAT; PU → CI; PU → WOM; SAT → CI
Stone and Baker-Eveleth (2013)	E-textbooks	ECM	CI, CON, PU, and SAT	CON → SAT; CON → PU; PU → SAT; PU → CI; SAT → CI
Chang and Zhu (2012)	Social networking sites	ECM; flow	CI, CON,SAT,FE,BRSC, and BOSC	CON → SAT; CON → BRSC; CON → BOSC; CON → FE; BRSC → SAT; BRSC → CI; SAT → CI
Al-Maghrabi and Dennis (2011)	E-shopping	ECM; TAM	CI, ENJ, PU,SP, STQ, and TR	PU → CI; PU → ENJ; TR → PU; STQ → TR; SP → ENJ; SP → CI; STQ → ENJ; STQ → PU; ENJ → CI

Notes: CM: cognitive model; ECM+: extended ECM; flow: flow theory; ISSM: information systems success model; TAM: technology acceptance model; and TCT: technology continuance theory. BL: brand loyalty; BRSC: bridging social capital; BOSC: bonding social capital; CFSMIP: concern for social media information privacy; CI: continuance intention; CON: confirmation; ENJ: enjoyment; IQ: information quality; OE: outcome expectations; FE: flow experience; PS: perceived security; PO: perceived openness; PR: perceived reputation; PU: perceived usefulness; PV: perceived value; SAT: satisfaction; SEC: security; SP: social pressure; SQ: Service Quality; STQ: Site Quality; SYQ: system quality; TR: trust; UI: user interface; UV: utilitarian value; and WOM: word of mouth.

Appendix B

Table B1 Measurement scale and items

Construct	*Measurement items*	*References*
Confirmation (CF)	CF1: My experience with using mobile sites/applications of private shopping clubs was better than I expected.	Bhattacherjee (2001)
	CF2: The service level provided by the mobile sites/applications of private shopping clubs was better than I expected.	
Perceived usefulness (PU)	PU1: Using mobile site s/applications of private shopping clubs increases my productivity in shopping.	Davis (1989) and Bhattacherjee (2001)
	PU2: Using mobile site s/applications of private shopping clubs helps me accomplish things quickly.	
	PU3: Using mobile site s/applications of private shopping clubs makes shopping easier for me.	
Perceived enjoyment (PE)	PE1: I feel that using mobile site s/applications of private shopping clubs is fun.	Ghani and Deshpande (1994), Koufaris (2002) and Zhou (2011)
	PE2: I feel that using mobile sites/applications of private shopping clubs is exciting.	
	PE3: I feel that using mobile sites/applications of private shopping clubs is enjoyable.	
Concentration (CON)	CON1: When using mobile sites/applications of private shopping clubs, I was absorbed intensely in the activity.	Ghani and Desphande (1994), Koufaris (2002) and Zhou (2011)
	CON2: When using mobile sites/applications of private shopping clubs, my attention was focused on the activity.	
	CON3: When using mobile sites/applications of private shopping clubs, I concentrated fully on the activity.	
Trust (TR)	TR1: Based on my experience with using mobile sites/applications of private shopping clubs in the past, I know they are trustworthy.	Gefen et al. (2003)
	TR2: Based on my experience with using mobile sites/applications of private shopping clubs in the past, I know that they are not opportunistic.	
	TR3: Based on my experience with using mobile sites/applications of private shopping clubs in the past, I know they keep their promises to their customers.	
Satisfaction (SAT)	SAT1: I am satisfied with using mobile sites/applications of private shopping clubs.	Bhattacherjee (2001)
	SAT2: I am pleased with using mobile sites/applications of private shopping clubs.	
	SAT3: I am contented with using mobile sites/applications of private shopping clubs.	
Continuance Intention (INT)	INT1: I intend to continue using mobile sites/applications of private shopping clubs rather than discontinue its use.	Bhattacherjee (2001) and Thong et al. (2006)
	INT2: My intentions are to continue using mobile sites/applications of private shopping clubs than use any alternative means.	
	INT3: I intend to continue using mobile sites/applications of private shopping clubs in the next six months.	
	INT4: In the future, I will keep using mobile sites/applications of private shopping clubs as regularly as I do now.	