

Grcić, Amra; Mekić, Ensar

Article

Predictors of m-continuance intention: Case of users in Bosnia and Herzegovina

Economic Review: Journal of Economics and Business

Provided in Cooperation with:

Faculty of Economics, University of Tuzla

Suggested Citation: Grcić, Amra; Mekić, Ensar (2019) : Predictors of m-continuance intention: Case of users in Bosnia and Herzegovina, *Economic Review: Journal of Economics and Business*, ISSN 2303-680X, University of Tuzla, Faculty of Economics, Tuzla, Vol. 17, Iss. 2, pp. 27-40, <https://er.ef.untz.ba/index.php/er/article/view/74>

This Version is available at:

<https://hdl.handle.net/10419/307815>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/4.0/>

PREDICTORS OF M-CONTINUANCE INTENTION: CASE OF USERS IN BOSNIA AND HERZEGOVINA

Amra Grcić¹ , Ensar Mekić² 

ABSTRACT

Even though researchers are increasingly studying various aspects of m-commerce, few of them focused on factors of m-continuance intention. The main aim of this study is to investigate if consumer innovativeness and social influence are statistically significant predictors of m-continuance intention. Based on the recent literature, first order structural equation model was proposed and tested. The empirical data was obtained from a questionnaire of 241 m-commerce users in Sarajevo Canton. Once the data was collected, factory data analysis was conducted to assure validity and reliability through items' loadings and Cronbach's Alpha values. Furthermore, the scales were tested for convergent validity through partial least-square path modelling using Smart PLS 3 software. For confirmatory factor analysis purpose, individual evaluation of items, variables as well as model fit was made. The results indicated that the effects of consumer innovativeness and social influence on m-continuance intention were significant and positive. It is recommended for future research to investigate the effects of other potential predictors of m-continuance intention with the focus on a larger sample and wider geographical region.

Keywords: social influence, innovativeness, m-continuance intention.

JEL: M30, M31, Z13

1. INTRODUCTION

The technological advancements of the past decade have led consumers to become reliant on digital devices now more than ever. The

development of smartphone devices and mobile applications has changed the way consumers interact with brands and purchase items. Kotler and Armstrong (2018) pointed out that nearly 90% of consumers in the United States would rather give up any other screen, including tablets, computers, and TVs, before giving up their mobile phones. According to data from January 2019, there were 7.676 billion people in the world, and even 5.112 billion are active mobile users (Simon, 2019). Mobile devices have undoubtedly affected consumer purchase behaviours, as well as business marketing strategies. Kotler and Armstrong (2018) defined mobile marketing as "marketing messages, promotions, and other content delivered to on-the-go consumers through their mobile devices" (p. 525). While spending on mobile advertising is growing, findings in January 2019 revealed that 55% of Internet users reported that they made an online purchase via mobile device (Simon, 2019). In order to keep up with the growing popularity of m-commerce, social media companies such as Facebook, Inc. have introduced the "buy button" to enable consumers to purchase directly on app platform. McLean, Al-Nabhani, and Wilson (2018) explained that mobile applications are becoming a powerful service delivery channel because they allow consumers to access products and services on-the-go. In other words, retailers nowadays need to operate multiple distribution channels including website, mobile application, and in-store, in order to keep up with the new customer habits. McLean, Osei-Frimpong, Al-Nabhani, and Marriot (2020) have reported their findings from ComScore for 2017, which show that 82% of the UK and 87% of the US consumers' total smartphone time is spent on mobile applications.

1 International Burch University, Bosnia and Herzegovina, E-mail: amra.grcic@stu.ibu.edu.ba

2 International Burch University, Bosnia and Herzegovina, E-mail: ensar.mekic@ibu.edu.ba

The previously presented data proves that we are witnessing a fundamental change in human behaviour which has a tremendous impact on the global market. These new circumstances have influenced the need to research drivers of consumers' continuance intention to purchase via mobile phones. However, despite the growing need to understand m-continuance intention, we have not found previous research on this topic in Bosnia and Herzegovina (BiH). This study first contributes to the theoretical research gap by examining the influence of consumer innovativeness and social influence on m-continuance intention as the ultimate indicator of successful m-commerce. As one can see in the literature review, the research between these variables was found to be scarce. The practical implication of this study is to provide a better understanding of customers' preferences which lead to m-continuance intention. This data is useful for marketers, advertisers, and m-commerce platform providers. Finally, in order to explore the full potential of practical and theoretical data, this study also provides comparative results on different age and gender groups, educational background and respondents' shopping preferences of mobile websites and applications. Valid and reliable scales were used to determine the measurement instrument which was applied for data collection. The data was collected by an online survey method and analysed by the reliability test and regression analysis. It is expected that the results will provide an important insight for the development of effective marketing strategies, by providing significant data on the influence of consumer innovativeness and social influence on m-continuance intention.

2. LITERATURE REVIEW

The following literature review is a result of examination of highly indexed journals and textbooks. It provides the necessary information which helped identify variables, form the research model and hypotheses, and identify adequate items to measure the variables. The research yielded three variables which are examined in the following paragraphs, namely consumer innovativeness, social influence and m-continuance intention.

2.1. Consumer innovativeness

Hong, Lin, and Hsieh (2016) researched the effect of consumer innovativeness on perceived value and continuance intention to use a smartwatch. Hong *et al.* (2016) define consumer innovativeness as "a characteristic which relates to an individual's basic tendency to adopt innovations" (p. 265). According to the authors, consumers with higher levels of innovativeness adopt new products earlier than others, and products are often part of their social identification (Hong *et al.*, 2016, p. 265). Innovative consumers are the first buyers in the market who are open-minded to novelty and change. Furthermore, their innovativeness can be considered a part of their social status, because the newest products they purchase portray them as unique individuals. Their innovativeness also means that these consumers are loyal to an innovative product or brand, meaning that they have to own it as soon as it emerges in the market.

On the other hand, He, Zhan, and Hu (2018) define consumer innovativeness in terms of personal innovativeness, hypothesising that personal innovativeness positively influences purchase intention. The researchers explain that innovative individuals are those who "have a strong sense of curiosity and like to seek novelty" (He *et al.*, 2018, p. 1063). According to He *et al.* "consumers with high level of innovativeness are more willing to try new things and adopt new ideas" (p. 1063). These findings show that consumer innovativeness is also influenced by innate factors such as curiosity. One could argue that if innovative consumers are naturally curious and seek novelty, then they will constantly seek new products and experiences, which means that their continuance intention would be related only to highly innovative brands or newest purchase channels, such as m-commerce.

Hwang, Kim, and Kim (2019) researched the influence of consumer innovativeness on intention to use new technology, such as drone food delivery service. According to Hwang *et al.* (2019), innovative consumers prefer purchasing new products and services, which makes them more likely to adopt a new technology (p. 103). One can conclude that innovative consumers have a propensity to buy new products and adopt the usage of new

platforms, which is directly related to consumers' continuous usage of m-commerce as an emerging shopping platform. If consumer innovativeness makes consumers more likely to use new technology, then innovative consumers would be willing to use m-commerce and this can be further related to the before-mentioned research, meaning that their curiosity and acceptance of novelty and new products also means acceptance of new platforms.

One can conclude that innovative consumers eagerly adopt new technology, goods, and services. For the purposes of this article, one can define consumer innovativeness as a personal tendency to buy innovative products, or a preference for new and different buying experience. This allows consumers to eagerly engage in m-commerce as one of the new buying channels. The measurement scale from Lin and Filieri (2015) consists of three questionnaire items which seek information on consumer's fondness of experimenting and willingness to use new information technology.

2.2. Social influence

Zhang, Tao, Qu, Zhang, Zeng, and Zhu (2020) defined social influence in terms of technology acceptance. Zhang *et al.* (2020) explained that social influence means that "people may consider a system useful and choose to use it, if their important referents think they should, even though they themselves are not favourable toward the system in their own minds" (p. 223). In other words, social influence refers to direct influence on individuals, which encourages them to change their behaviour in order to meet the demands of their social environment. Moreover, one can argue that social influence includes social pressure because individuals are willing to modify their behaviour to conform to those whom they perceive as influencers in their social group.

Mouakket (2015) defined social influence in terms of subjective norms which "reflect how the perceptions of important people, such as family and friends, affect an individual" (p. 103). Mouakket (2015) explained that individuals perform certain behaviours to be

accepted within their circle of influence. Subjective norms are defined in terms of "interpersonal influence, including the impact of word-of-mouth from friends and colleagues, and external environmental influences including mass media reports and experienced people" (Mouakket, 2015, p. 103). One can argue that the implications of social influence lie in subjective norms which refer to the belief that those who are deemed as important in a social group will either approve or disapprove of consumer's behaviour. This social situation results in social influence which refers to the consumer's willingness to succumb to the pressure of the peer group or environment. Furthermore, the circle of influence can include closely related consumers, such as family and friends, as well as consumers in the external environment, such as media personalities. Therefore, social influence has broad possibilities of influence, but this paper will concentrate on the influence of those who are closely related to consumers, such as peers, friends, and family.

Jimenez and San Martin (2017) defined social influence in terms of social factors which refer to "the social influences or normative values imposed by others (*i.e.* friends, family, or a group of reference)" (p. 97). Furthermore, Jimenez and San Martin explained that consumers learn or imitate behaviours of their reference agents to be accepted in the group (2017, p. 97). In the context of the authors' research, social influence proved to have an effect on consumer's willingness to purchase products and even to receive mobile advertising. In other words, social influence implies that consumers tend to imitate behaviours of their referent agents because they comply with their expectations and normative values, which results in modifying consumer's behaviour accordingly. This information further expands the beforementioned research, because it means that consumers do not abruptly adopt different behaviour because of the environmental pressure or because of successful communication, but they also undergo a subtler process of imitating their referent agents, which is intertwined with their shared values.

The beforementioned research suggests that consumers value opinions of their reference group and they are influenced to adopt the reference group behavioural patterns, which allows them to be a part of the social group. For the purpose of this article, one can define social influence as attitudes of people in the social circle who are deemed as important to the consumer, and whose attitudes influence the consumer to engage in purchase behaviour. The people in social circle can include friends, relatives, co-workers, or similar, while purchase behaviour implies continuance intention of using m-commerce. The measurement scale from Jimenez and San Martin (2017) consists of three questionnaire items which deal with the influence of reference group to purchase products and services using m-commerce.

2.3. M-Continuance intention

Amoroso and Lim (2017) define continuance intention as "the level of strength of an individual's intent to make a purchase repeatedly via financial mobile app" (p. 695). Moreover, continuance intention is "a proxy of actual continuance behaviour and the individual's perceptions on the likelihood that he/she will engage in continuance behaviour" (Amoroso & Lim, 2017, p. 695). According to Amoroso and Lim (2017), consumers make continuance decisions based on objective experience, such as ease of use and usefulness, and also based on affective responses, such as satisfaction (p. 694). In other words, consumers' continued usage intention can be intentional, or founded on their own objective opinion, and it can be an emotional response to a subjective experience such as satisfaction. One could argue that consumers' continuance intention is of vital importance because it indicates a continuous state of engagement and involvement with technology or application. It signifies a strong bond between the consumer and platform, which results in continued usage.

Wang, Ou, and Chen (2019) defined continuance intention as "the users' long-term use of a specific m-service on a regular basis" (p. 182). The researchers noted that continuance intention is "an important indicator of the long-term viability and success of mobile communication apps" (Wang *et al.*, 2019, p.

182). Furthermore, Wang *et al.* (2019) explained that "it is critical for m-service business managers to devote effort toward retaining existing customers because the unit cost of acquiring a new customer is much higher than that for retaining the existing one" (p.182). Finally, Wang *et al.* (2019) explained that continuance intention can be influenced in a threefold manner: by consumer's rational assessment, by affective response, or by some unconscious process (p. 182). The authors focused on definition of continuance intention as an indicator of long-term sustainability of mobile communication applications. Continuance intention is a result of consumer's experience and it is based on user's overall assessment of an information technology. Moreover, continuance intention is a matter of financial costs, because the research showed that it is less expensive to retain current customers. It can be concluded that even though initial adoption is an important breakthrough for any information technology, users' continued usage determines the ultimate success.

Tran, Pham, and Le (2019) explained that continuance intention "demonstrates the magnitude of a consumer's intention to perform a specified behaviour such as using SNS platforms for rebooking and revisiting the chosen hotel in the future" (p. 312). Furthermore, the researchers claim that "continuance intention is synonymous with future continuance and arguably with repeated purchase for satisfied customers" (Tran *et al.*, 2019, p. 312). Finally, Tran *et al.* (2019) clarify continuance intention as "a significant outcome leading to the performance of a specific behaviour" (p. 315). It is evident that continuance intention is an indicator of consumers' intention to repeat their behaviour in the future. Furthermore, continuance intention implies long-term usage of a satisfied customer, which implies that consumer satisfaction also plays an important role. One may conclude that continuance intention is an antecedent of consumer's actual behaviour.

For the purpose of this article, m-continuance intention can be defined as a consumer's continuous intention to use m-commerce to purchase online. Lu, Yu, Liu, and Wei (2017) used a two-item questionnaire to measure consumer's continuance intention to use mobile shopping.

2.4. Consumer innovativeness and m-continuance intention

Lin and Filieri (2015) researched the influence of consumer innovativeness of airline passengers in China on continuance intention toward online check-in services. The authors' significant hypothesis was that personal innovativeness positively influences continuance intention. Furthermore, Lin and Filieri (2015) argued that "innovative individuals will be eager to repeat a behaviour once they have acknowledged the benefits provided by a specific technology" and that "they will also repeat the usage of a new technology in order to keep up with their lifestyle (how others see them) and their self-image concept" (p. 160). Lin and Filieri (2015) pointed out that previous research provided mixed results on the role of consumer innovativeness on continuance intention. Still, their results showed the direct influence of consumer innovativeness on continuance intention.

Hong, Lin, and Hsieh (2016) researched the influence of consumer innovativeness on continuance intention to use a smartwatch through mediating effects of hedonic and utilitarian value. Continuance intention was considered in terms of balance between continued IT usage decisions and consumers' repeat purchase decisions. Hong *et al.* (2016) explained that "the results demonstrate users' continuance intention not only because of the perceived values, but also because of their own innovativeness" (p. 271). The results were found significant and Hong *et al.* (2016) concluded that "there is an association among consumer innovativeness, hedonic value, utilitarian value, and continuance intention to use a smartwatch" (p. 271). The proposed research model showed that continuance intention is indirectly affected by consumer innovativeness.

Ramayah, Ling, Taghizadeh, and Rahman (2016) researched the influence of personal innovativeness of Chief Executive Officers' (CEOs) website continuance intention. Ramayah *et al.* (2016) hypothesised that small and medium-sized enterprises with more innovative CEOs are more likely to continue their business web presence. Ramayah *et al.* (2016) explained that as innovators, CEOs are risk-

takers and receptive towards new technology, and therefore willing to commit to website as a business channel (p. 152). The hypothesis was proven significant.

When it comes to continuance intention, innovative consumers will have a long-term preference for newer channels, such as online check-in service. Based on these findings and for the purpose of this research, we argue that the same is valid for m-commerce as an emerging channel and that innovative consumers will prefer to purchase via smartphone. Still, the literature review revealed that the direct effect of consumer innovativeness on continuance intention has not been sufficiently researched. For the purpose of this article, m-continuance intention was defined as a consumer's continuous intention to use m-commerce to purchase online. The previous research focused on usage continuance intention and established the relationship between consumer innovativeness and continuance intention, which was the foundation for the research model of this study. The results of this study should make further contributions to the much-needed research into the relationship between these two variables.

2.5. Social influence and m-continuance intention

Chang, Liu, and Shen (2016) researched user trust in social networking sites. The authors hypothesised that there is a positive correlation between social influence and continuance intention for using Facebook and LinkedIn. The results showed that social influence on continuance intention is more significant for Facebook than for LinkedIn, because Facebook is a more popular social network for friends and family. The research of Chang *et al.* (2016) showed a significant relationship between social influence and continuance intention, which was fundamental to the formation of our hypothesis.

Mouakket (2015) researched the factors influencing continuance intention to use social networking site, namely Facebook, among university students in the United Arab Emirates. The significant hypothesis was that subjective norms have a positive influence on continuance intention towards Facebook. The sample

included undergraduate university students and the findings suggested that users are inclined to revisit social networking sites as a result of social pressure from individuals they consider important. As previously mentioned, subjective norms can be understood as individual's belief that their peer group will approve or disapprove of certain behaviours, while social influence depicts individual's change of behaviour to get the group's approval. Mouakket (2015) showed a significant relationship between subjective norms and continuance intention, which led us to form our hypothesis.

In contrast, Weng, Zailani, Iranmanesh, and Hyun (2017) researched the continuance usage intention of mobile taxi booking application users. The research suggested that subjective norms have influence on behavioural intentions of app users. This led Weng *et al.* (2017) to conclude that "many users decide to make use of an MBT App if it is also used by their friends and is recommended to them" (p. 210). Still, the hypothesis that subjective norm is positively related to app users' continuance intention was proven insignificant. Even though the research of Weng *et al.* exhibited insignificant findings, based on the previous significant research and due to the fact that the relationship between these two variables was previously insufficiently researched, the authors of this paper decided to contribute and conduct research into the relationship between social influence and m-continuance intention. Our intent is further justified by the fact that, to our knowledge, a specific relationship between social influence and m-continuance intention has not been researched.

M-continuance intention was defined for the purpose of this article as a consumer's continuous intention to use m-commerce to purchase online. Literature review revealed that data on the direct influence of social influence on m-continuance intention was not plentiful, but the previous research did focus on continuance intention to use. The review exhibits a positive relationship between social influence and continuance intention as such, which is the foundation for the development of hypotheses in this article.

2.6. Research model and hypotheses

After closely reviewing the appropriate literature, the researchers recognized relevant relationships between the variables. The research hypotheses were structured in accordance to significant relationships between the variables and provided by the research in the literature review. This study proposes the following two hypotheses:

H₁: Consumer innovativeness has a significant and positive effect on m-continuance intention.

H₂: Social influence has a significant and positive effect on m-continuance intention.

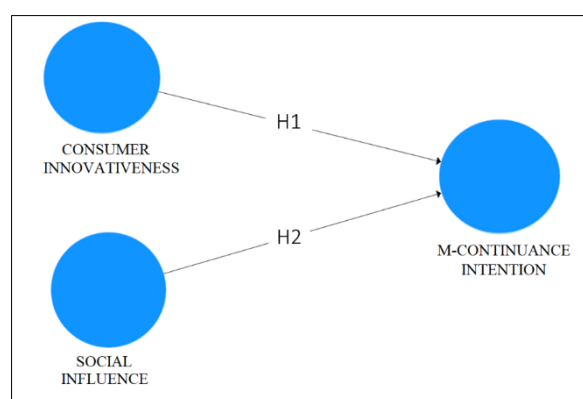


Figure 2.1 Proposed Research Model

Source: Author's own work

3. METHODOLOGY

3.1. Data collection

The data used in this survey was collected by distributing a structured survey. The scales used for the preparation of this instrument were previously used by researchers and proven reliable and valid for measuring consumer innovativeness, social influence, and m-continuance intention. For measurement of consumer innovativeness, the researchers considered the work of Lin and Filieri (2015), while for the measurement of social influence the work of Jimenez and San-Martin (2017) was considered. Finally, the measurement of m-continuance intention was developed from the work of Lu *et al.* (2017).

All the items in the questionnaire were measured with a five-point semantic differential scale. The distributed questionnaire contained questions in five different categories as follows:

- Questions 1-7: demographics
- Questions 8-10: Consumer Innovativeness
- Question 11-13: Social Influence
- Question 14-15: M-continuance intention

The data was collected online, using Google Forms. The respondents who qualified as valid on the basis of the study were those who use m-commerce. The respondents were approached by contacting relevant online groups and forums on Facebook social media, as well as by approaching students of all cycles of study at higher education institutions in Sarajevo Canton. Out of 500 contacted respondents, a total of 241 respondents filled out the survey, giving response rate of 48.2%. The detailed review of the sample characteristics is presented in the first part of the "Results" section.

3.2. Population and sample

Even though it may seem relatively simple to investigate m-commerce of one area in the 21st century, having in mind 1.3 million of digitally illiterate citizens in BiH meaning that 38.7% of the population of BiH cannot use the Internet (Agency for Statistics of BiH, 2016), the population of this study was chosen very carefully. Another factor that discouraged the authors from doing the study at the level of BiH are limited resources of researchers. Accordingly, the goal to investigate m-commerce was localized to Sarajevo Canton as the target population of this study. There are four arguments for conducting this study at Sarajevo Canton level:

In order to use m-commerce, customers should be digitally/computer literate. According to the census conducted in 2013, Sarajevo Canton had the highest computer literacy level compared to all other cantons in the Federation of BiH (see Figure 2.2).

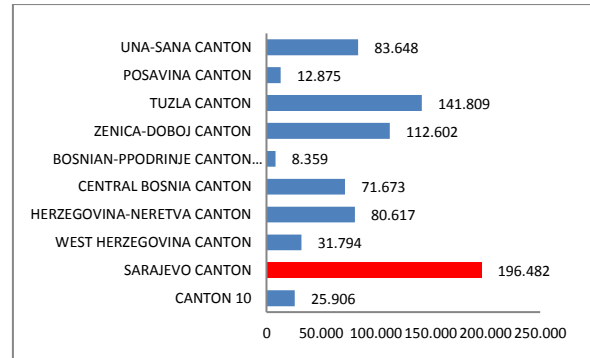


Figure 2.2 The number of computer literate persons

Source: Agency for Statistics of BiH, 2016

- Sarajevo Canton is a multi-ethnic and multi-cultural canton, which is to some extent the representative for BiH as a whole. If observed by ethnicity, there are 50.8% of Bosniaks, 7 % of Croats and 27.2% of Serbs living in the area of this Canton (Agency for Statistics of BiH, 2016);
- Sarajevo is the capital city of BiH and it is economically first among the most developed cantons in Federation BiH. The ranking list of top five cantons in BiH according to development level looks as follows: (1) Sarajevo Canton; (2) West Herzegovina Canton; (3) Herzegovina – Neretva Canton; (4) Tuzla Canton and (5) Bosnian-Podrinje Canton Goražde (Akta, 2018);
- This study conducted at the level of Sarajevo Canton is meant to serve as a pilot project before conducting the replication of the study in the region of BiH. Therefore, the results of this study are to be generalized at the level of Sarajevo Canton, but they aim to serve as a stimulus for a similar study at the level of BiH by future researchers.

3.3. Statistical methods applied

The causal relationships of the hypothetical model shown in Figure 2.1 were tested by means of the partial least square (PLS) path modelling method. Following instructions of Becker, Klein, and Wetzels (2012) the following steps were performed to prepare structural equation model using Smart PLS3: (1) Latent variables were created and related

measurement items were assigned to them; (2) The two independent variables were related to one dependent variable. More precisely, Consumer Innovativeness (CI) and Social Influence (SI) were related to M-Continuance Intention (MCI). The output of the mentioned steps is presented in Figure 2.3.

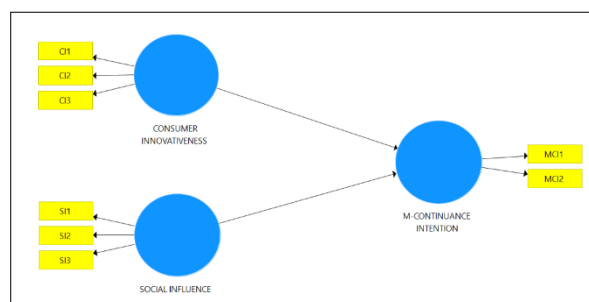


Figure 2.3 Model in Smart PLS 3

Source: Author's own work

This study relied on Software Package for Social Sciences for descriptive analysis while Smart PLS 3, a SEM program has been used for confirmatory factor analysis, model fit and effects analysis.

PLS could be applied in many instances of small samples when other methods fail (Henseler, *et al.*, 2014).

Regular PLS algorithm and Bootstrapping technique were conducted in Smart PLS 3 to conduct exploratory factor analysis, confirmatory factor analysis and investigate direct effects of variables in the model. To ensure stability of results, following recommendation of Hair, Sarstedt, Ringle, and Gudergan (2017), PLS Bootstrapping was completed using 10,000 bootstrap subsamples.

4. VALIDITY, RELIABILITY AND MODEL FIT

To test the construct validity of the instrument, both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were made using Smart PLS 3. The main findings of the two mentioned analyses will be presented in the following paragraphs.

Factor loadings were observed for each item (see Table 4.1). Items with factor loadings greater than 0.5 on the factor with which they

Table 4.1 Loadings of Items per Factors in Measurement Instrument

CODE	ITEM	CONSUMER INNOVATIVENESS	M-CONTINUANCE INTENTION	SOCIAL INFLUENCE
CI1	I like to experiment with new ways of doing things.	0.836	0.308	0.286
CI2	I like to try new products.	0.864	0.362	0.371
CI3	I am among the first in my circle of friends to use new technologies.	0.763	0.308	0.295
MCI1	As a user, I will keep on using mobile shopping.	0.393	0.971	0.440
MCI2	I intend to continue using mobile shopping in the future.	0.380	0.970	0.446
SI1	The people whose opinions I value approve that I use the mobile/cell phone when I purchase and/or search for information about products.	0.385	0.478	0.916
SI2	Most people I am aware of think that I should use the mobile/cell phone to buy some product and/or service.	0.345	0.411	0.927
SI3	It is expected that I use my mobile/cell phone to buy or search for and receive information about products and/or services.	0.226	0.180	0.684

Source: Author's own work

were hypothesized to correspond were considered adequate indicators of that factor (Hair, Black, Babin, & Anderson, 2010).

The numbers presented in Table 4.2 indicate satisfactory loadings of items on the relevant factors, and there was no need for removal of any item(s).

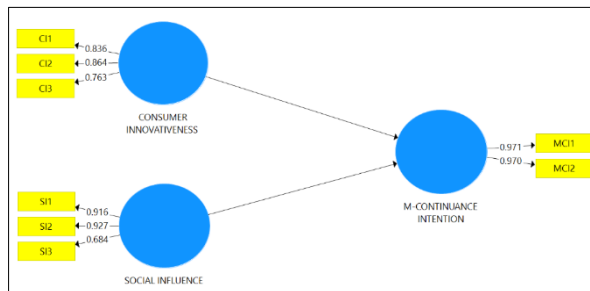


Figure 2.3 Loadings of Items per Factors

Source: Author's own work

Cronbach's (1951) coefficient alpha is widely used to determine the reliability of multi-item scales and assess the internal consistency of model constructs. The reliability of factors in this study has been presented in Table 4.2 below.

values between 0.676 and 0.942, which is above threshold of 0.5 defined by Fornell and Larcker (1981) and Hair, Black, Babin, and Anderson (2010).

Cronbach's Alpha values of all first order latent variables conform to the rule of thumb defined by Cronbach and Richard (2004), and this is confirmed by composite reliability scores which are all higher than the recommended cut-off of 0.7 (Fornell and Larcker, 1981; Hair, Black, Babin, and Anderson, 2010).

According to Schmiedel, Brocke, and Recker (2014), discriminant validity is ensured once the AVE value for each construct exceeds the squared correlation between that and any other construct in the factor correlation matrix. Table 3 indicates a full compliance to this rule.

Considering factor loadings of all items higher than 0.4, composite reliability scores higher than 0.7, and AVE values higher than 0.5, it could be concluded that all the conditions of convergent validity are met in this study.

Goodness of fit (GoF) represents the measure that accounts for the model quality at both the

Table 4.2 Construct Validation

Factor	C's α >0.7	CR >0.7	AVE >0.5	Consumer Innovativeness (CI)	Social Influence (SI)	M-Continuance Intention (MCI)
Consumer Innovativeness (CI)	0.759	0.862	0.676	0.822		
Social Influence (SI)	0.938	0.970	0.942	0.398	0.970	
M-Commerce Continuance Intention (MCI)	0.817	0.885	0.722	0.389	0.456	0.850

Note 1: The right-hand part of the table displays construct correlations and square roots of AVE on the diagonal).

Note 2: For full name of 1st order latent variables, please see Table 2.

Note 3: C's α = Cronbach's Alpha

Source: Author's own work

PLS Bootstrapping is completed using 10,000 bootstrap subsamples indicating all AVE

measurement and the structural models (Sanchez, 2013). To calculate GoF for this study, the formula proposed by Wetzels,

Odekerken-Schröder, and Oppen (2009) has been applied. GoF values are explained as follows: GoF small = 0.1, GoF medium = 0.25, and GoF large = 0.36 (Wetzels et al, 2009). After application of their formula, the GoF value for the model investigated in this study is 0.45, which is characterized as a large goodness of fit.

5. RESULTS

5.1. Descriptive statistics

The questionnaire provided 241 valid responses in total. There were 131 female and 110 male respondents, which shows that both genders are equally active m-commerce users. Most of the respondents (65.6%) are young adults aged between 20-30 years, followed by 60 respondents (25.7%) aged 30-40. Only 18 respondents are 40-50 years old and there are

3 respondents older than 50 years. Most respondents, 111 precisely, are college graduates with bachelor's degree (see Table 5.1).

As shown in Table 5.1., most respondents (66.8%) use m-commerce 1-5 times a month, followed by 43 respondents (17.8%) who use m-commerce 6-10 times a month. Only 6 respondents reported that they use m-commerce more than 10 times a month. When it comes to the number of applications used, 80 respondents reported that they own at least 1 application, followed by 74 respondents who use only 2 applications, and 47 respondents who use at least 3 different applications.

The respondents prefer a diverse number of applications and their answers include more than 9 different applications. The most used application is E-bay with 36.5% of the respondents, followed by 19.5% users of Ali

Table 5.1 *Sample Characteristics*

Variable	Demographics	Number	Valid Percent
Gender	Male	110	45.6%
	Female	131	54.4%
	Total	241	100%
Age	20-30	158	65.6%
	31-40	62	25.7%
	45-50	18	7.5%
	51+	3	1.2%
	N/A	/	/
	Total	241	100%
Education	High school	61	25.3%
	Bachelor	111	46.1%
	Master	67	27.8%
	Doctorate	2	0.8%
	Total	241	100%
M-Commerce Usage Frequency (Times/month)	1-5	161	66.8%
	6-10	43	17.8%
	11+	6	2.5%
	N/A	30	12.4%
	Total	241	100%
M-Commerce Apps Installed (number of apps installed on a respondent's smartphone)	1 App	80	33.2%
	2 Apps	74	30.7%
	3 Apps	47	19.5%
	4 Apps	15	6.2%
	5 + Apps	20	8.3%
	N/A	5	2.1%
	Total	241	100%

Source: Author's own work

Express. The usage also depends on whether the respondent prefers mobile applications or mobile websites, which can be

statistically significant direct and positive relationship between SI and MCI. Accordingly, hypothesis 2 was supported.

Table 5.2 *M-commerce preferences*

Variable	Preference	Valid Percent
M-Commerce Application Preference	E-bay	36.5%
	Ali Express	19.5%
	Amazon	11.2%
	Wish	6.6%
	OLX	4.6%
	Safari	2.1%
	Geogle	4.1%
	Good Food	0.8%
	Donesi	3.3%
	Other	5%
	N/A	6.2%
M-Commerce Usage Preference	Mobile application	68%
	Mobile website	30.3%
	N/A	1.7%

Source: Author's own work

5.2. Empirical findings

All empirical findings are summarized in Table 5.3 below.

Table 5.3 *Hypotheses' tests*

Hypothesis	Path in the Model	Direct Effect	Hypothesis Status
H1	CI -> MCI	P = 0.000* t = 3.746	Confirmed
H2	CI -> MCI	P = 0.000* t = 5.367	Confirmed

Note 1: *Significant at 95% confidence interval

Source: Author's own work

H1: Consumer innovativeness has a significant and positive effects on m-continuance Intention.

Hypothesis 1 was supported with the following indicators: (1) p value of 0.000; (2) t value of 3.746. Both indicators are demonstrating a strong and direct relationship between CI and MCI.

H2: Social influence has a significant and positive effects on m-continuance Intention.

According to p value of 0.000 as well as t value of 5.367, one may conclude that there is a

6. DISCUSSION

The popularity of m-commerce has been increasing in the past decade and even a developing economy such as BiH has been

affected. The primary objective of this article is to demonstrate how consumer innovativeness and social influence affect m-continuance intention. The theoretical contribution of this article is that it provides further information on the relationship between social influence and m-continuance intention. The hypothesis was significant, leading us to co-

include that social influence does affect m-continuance intention. Furthermore, research on the relationship between consumer innovativeness and m-continuance intention was scarce. This article provides data which proved a significant relationship directly between consumer innovativeness and m-continuance intention, which would be a notable contribution to m-commerce.

First, the results reveal that consumer innovativeness has a direct influence on m-continuance intention. According to these results, one may conclude that more innovative consumers will have a higher tendency to continuously use m-commerce. This may be attributed to the fact that m-commerce is an emerging channel and therefore more interesting to consumers who seek new experiences. Moreover, the usage of this channel may have become a part of their social status because innovative consumers like to portray themselves as unique. M-commerce allows them to purchase products on-the-go and gives them the opportunity to experience newly designed websites and applications. Furthermore, these results have managerial implications because it is evident that businesses which target innovative consumers should consider investing in m-commerce channels. This decision could even be a long-term reward because innovative consumers will be more loyal to m-commerce because it is still developing.

Secondly, the results reveal that social influence has a direct influence on m-continuance intention. It was previously mentioned by Zhang *et al.* (2020) that consumers adapt their behaviour to remain a part of their social group. In other words, if their peers continuously use m-commerce, consumers may imitate this behaviour and become long-term users as well. The practical implication is that marketers, advertisers, and m-commerce platform providers should be aware of social influence as the way consumers conform to their social environment. As previously mentioned in the Literature Review, social influence involves leadership, socialisation, peer pressure, and conformity. One can argue that it can be valuable for businesses to recognise the social implications of their presence on m-commerce channels because satisfied peer

leaders can bring a group of long-term users. It can be concluded that social circle approval of m-commerce influences m-continuance intention.

According to these results, we can conclude that a personal tendency to buy innovative products or a preference for new and different buying experience is an indicator of m-continuance intention. Attitudes of people in individual's social circle who are deemed as important to the consumer can influence the consumer to continuously engage in purchase behaviour, meaning that the individual will be inclined to continue purchasing means of m-commerce.

7. CONCLUSION

The main objective of this study was to investigate the relationship between factors of purchase behaviour, namely consumer innovativeness and social influence, and m-continuance intention. After literature review, two hypotheses were proposed and tested using Structural Equation Modelling (SEM).

As a canton with the highest number of computer literate persons, multi-ethnic and multi-cultural n, with the capital city of BiH and ranked economically as first among the most developed cantons in the Federation of BiH, Sarajevo Canton has been selected as the population of the study. The survey comprised of fifteen questions was delivered to 500 respondents, and a total of 241 respondents filled out the survey giving the response rate of 48.2%. The sample seems well distributed in terms of gender, age and other characteristics.

Prior to hypotheses testing, factory data analysis was conducted to assure validity and reliability through item loadings and Cronbach's Alpha values. In addition, the scales were tested for Convergent validity through partial least-square path modelling using Smart PLS 3 software. Using Goodness of Fit Index, model fit was confirmed as well. The results indicated that effects of Consumer Innovativeness and Social Influence on M-Continuance Intention were significant and positive.

It is recommended for future research to investigate effects of other, additional potential predictors of m-continuance intention with a focus on a larger sample and wider geographical region.

REFERENCES

1. Agency for Statistics of Bosnia and Herzegovina. (2016). *Cenzus of population, households and dwellings in Bosnia and Herzegovina, 2013*. Sarajevo: Agency for Statistics of Bosnia and Herzegovina.
2. Akta. (2018). Ovo su najrazvijenije i najnerazvijenije općine u FBiH u 2017. godini. Sarajevo, Bosnia and Herzegovina: Akta.ba. Retrieved from <https://www.akta.ba/vijesti/ovo-su-najrazvijenije-i-najnerazvijenije-opcine-u-fbih-u-2017-godini/91717>
3. Amoroso, D., & Lim, R. (2017). The mediating effects of habit on continuance intention. *International Journal of Information Management*, 37(6), 693–702. <https://doi.org/10.1016/j.ijinfomgt.2017.05.003>
4. Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models. *Long Range Planning*, 45, 359–394. doi:<http://dx.doi.org/10.1016/j.lrp.2012.10.001>
5. Chang, S. E., Liu, A. Y., & Shen, W. C. (2017). User trust in social networking services: A comparison of Facebook and LinkedIn. *Computers in Human Behavior*, 69, 207–217. <https://doi.org/10.1016/j.chb.2016.12.013>
6. Cronbach, L. J. (1951). Coefficient alpha and the structure of tests. *Psychometric*, 16, 297–334.
7. Cronbach, L. J., & Richard, J. S. (2004). My Current Thoughts on Coefficient Alpha and Successor Procedures. *Educational and Psychological Measurement*, 64(3), 391–418. doi:10.1177/0013164404266386
8. Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
9. Hair, J. F., Sarstedt, M., Ringle, C., & Gudergan, S. P. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). Thousand Oaks: Sage.
10. Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis*. NJ, USA: Prentice-Hall, Inc. Upper Saddle River.
11. He, X., Zhan, W., & Hu, Y. (2018). Consumer purchase intention of electric vehicles in China: The roles of perception and personality. *Journal of Cleaner Production*, 204, 1060–1069. <https://doi.org/10.1016/j.jclepro.2018.08.260>
12. Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., . . . Calantone, R. J. (2014). Common Beliefs and Reality About PLS: Comments on Ro“nkko” and Evermann (2013). *Organizational Research Methods*, 17(2), 182–209. doi:10.1177/1094428114526928
13. Hong, J.-C., Lin, P.-H., & Hsieh, P.-C. (2017). The effect of consumer innovativeness on perceived value and continuance intention to use smartwatch. *Computers in Human Behavior*, 67, 264–272. <https://doi.org/10.1016/j.chb.2016.11.001>
14. Hwang, J., Kim, H., & Kim, W. (2019). Investigating motivated consumer innovativeness in the context of drone food delivery services. *Journal of Hospitality and Tourism Management*, 38, 102–110. <https://doi.org/10.1016/j.jhtm.2019.01.004>
15. Jiménez, N., & San-Martín, S. (2017). Attitude toward m-advertising and m-repurchase. *European Research on Management and Business Economics*, 23(2), 96–102. <https://doi.org/10.1016/j.iedeen.2016.12.001>
16. Kotler, P., & Armstrong, G. (2018). *Principles of marketing* (Seventeenth edition). Pearson Higher Education.
17. Lin, Z., & Filieri, R. (2015). Airline passengers' continuance intention towards onli-

- ne check-in services: The role of personal innovativeness and subjective knowledge. *Transportation Research Part E: Logistics and Transportation Review*, 81, 158–168. <https://doi.org/10.1016/j.tre.2015.07.001>
18. Lu, J., Yu, C., Liu, C., & Wei, J. (2017). Comparison of mobile shopping continuance intention between China and USA from an espoused cultural perspective. *Computers in Human Behavior*, 75, 130–146. <https://doi.org/10.1016/j.chb.2017.05.002>
19. McLean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a Mobile Applications Customer Experience Model (MACE)- Implications for Retailers. *Journal of Business Research*, 85, 325–336. <https://doi.org/10.1016/j.jbusres.2018.01.018>
20. McLean, G., Osei-Frimpong, K., Al-Nabhani, K., & Marriott, H. (2020). Examining consumer attitudes towards retailers' m-commerce mobile applications – An initial adoption vs. Continuous use perspective. *Journal of Business Research*, 106, 139–157. <https://doi.org/10.1016/j.jbusres.2019.08.032>
21. Mouakket, S. (2015). Factors influencing continuance intention to use social network sites: The Facebook case. *Computers in Human Behavior*, 53, 102–110. <https://doi.org/10.1016/j.chb.2015.06.045>
22. Ramayah, T., Ling, N.S., Taghizadeh, S.K., & Rahman, S.A. (2016). Factors influencing SMEs website continuance intention in Malaysia. *Telematics and Informatics*, 33, 150–164. <https://doi.org/10.1016/j.tele.2015.06.007>
23. Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: Smart PLS GmbH, <http://www.smartpls.com>.
24. Sanchez, G. (2013). PLS Path Modeling with R. Berkeley: Trowchez Editions.
25. Retrieved from <http://www.gastonsanchez.com/PLS Path Modeling with R.pdf>
26. Schmiedel, T., Brocke, J., & Recker, J. (2014). Development and validation of an instrument to measure organizational cultures' support of Business Process Management. *Information & Management*, 51, 43–56. [doi:http://dx.doi.org/10.1016/j.im.2013.08.005](http://dx.doi.org/10.1016/j.im.2013.08.005)
27. Simon, K. (2019). *Digital 2019: Global Digital Overview—DataReportal – Global Digital Insights*. <https://datareportal.com/reports/digital-2019-global-digital-overview>
28. Tran, L. T. T., Pham, L. M. T., & Le, L. T. (2019). E-satisfaction and continuance intention: The moderator role of online ratings. *International Journal of Hospitality Management*, 77, 311–322. <https://doi.org/10.1016/j.ijhm.2018.07.011>
29. Wang, W.-T., Ou, W.-M., & Chen, W.-Y. (2019). The impact of inertia and user satisfaction on the continuance intentions to use mobile communication applications: A mobile service quality perspective. *International Journal of Information Management*, 44, 178–193. <https://doi.org/10.1016/j.ijinfomgt.2018.10.011>
30. Weng, G. S., Zailani, S., Iranmanesh, M., & Hyun, S. S. (2017). Mobile taxi booking application service's continuance usage intention by users. *Transportation Research Part D: Transport and Environment*, 57, 207–216. <https://doi.org/10.1016/j.trd.2017.07.023>
31. Wetzels, M., Odekerken-Schröder, G., & Oppen, C. (2009). Using PLS Path Modeling for Assessing Hierarchical Construct Models: Guidelines and Empirical Illustration. *MIS Quarterly*, 33(1), 177–195.
32. Zhang, T., Tao, D., Qu, T., Zhang, X., Zeng, J., Zhu, H., & Zhu, H. (2020). Automated vehicle acceptance in China: Social influence and initial trust are key determinants. *Transportation Research Part C*, 112, 220–233. <https://doi.org/10.1016/j.trc.2020.01.027>