

Determinants of User Satisfaction in Mobile Commerce: application of the UTAUT 2 model

Детерминанте сатисфакције корисника мобилне трговине: примена УТАУТ 2 модела

Julija Vidosavljević

University of Kragujevac, Faculty of Economics, Kragujevac, Republic of Serbia,
jvidosavljevic@ef.kg.ac.rs <https://orcid.org/0009-0007-2154-6212>

Veljko Marinković*

University of Kragujevac, Faculty of Economics, Kragujevac / University of Belgrade, Faculty of Economics and Business, Belgrade, Republic of Serbia
vmarinkovic@kg.ac.rs <https://orcid.org/0000-0003-4749-7053>

Dražen Marić

University of Novi Sad, Faculty of Economics, Subotica, Republic of Serbia
drazen.marić@ef.uns.rs <https://orcid.org/0000-0001-9621-7906>

Abstract: According to growing trends, there is an evolution of models that explain consumer behavior in the domain of accepting new technologies. The UTAUT model stands out as one of the most commonly used models, which was created as a result of the integration of many that preceded it. The aim of the study is to determine whether variables – performance expectancy, effort expectancy, social influence, facilitating conditions, price value, hedonic motivation, and habit - influence user satisfaction in mobile commerce. The sample consists of 210 respondents. The study applied descriptive statistical analysis, reliability analysis, correlation analysis, and multiple regression analysis. The results show that variables such as performance expectancy, facilitating conditions, hedonic motivation, price value, and habit are determinants of user satisfaction with mobile commerce services. The research findings can be beneficial for mobile commerce service providers in terms of creating loyalty programs, providing added value, and creating an overall consumer experience that is appealing to customers. Given that previous research, especially in the domestic literature, was focused on some of the earlier established models such as TAM or UTAUT, the originality of this paper lies in the use of the contemporary UTAUT2 model.

Keywords: mobile commerce, UTAUT2, price value, habit, satisfaction

JEL classification: M31, L81

Сажетак: Имајући у виду растуће трендове, долази до еволуирања модела који објашњавају понашање потрошача у домену прихватања нових технологија. Као један од најчешће коришћених модела, који настаје као резултат интеграције бројних који су му претходили, издваја се UTAUT2 модел. Циљ истраживања је утврдити да ли варијабле - очекиване перформанси, очекивани напор, друштвени утицај, олакшавајући услови, ценовна вредност, хедонистичка мотивација и навика - утичу на сатисфакцију корисника мобилне трговине. Узорак чини 210 испитаника. У истраживању су примењене дескриптивна

* Corresponding author

статистичка анализа, анализа поузданости, корелациона анализа и вишеструка регресиона анализа. Резултати показују да су варијабле очекиване перформансе, олакшавајући услови, хедонистичка мотивација, ценовна вредност и навика одређујући фактори задовољства корисника услугама мобилне трговине. Налази истраживања могу бити корисни пружаоцима услуга мобилне трговине у креирању програма лојалности, пружању додатне вредности и обликовању укупног корисничког искуства које је привлачно купцима. С обзиром на то да су се претходна истраживања, посебно у домаћој литератури, фокусирала на неке од раније успостављених модела попут TAM-а или UTAUT-а, оригиналност овог рада лежи у коришћењу савременог UTAUT2 модела.

Кључне речи: мобилна трговина, UTAUT2, ценовна вредност, навика, сатисфакција
ЈЕЛ класификација: M31, L81

Introduction

The eighties are believed to have been the years of personal computers, the nineties were the decade of the internet and e-commerce, while the beginning of the 21st century is associated with the rise of mobile computing and mobile commerce. In a narrower sense, mobile commerce (m-commerce) refers to the entire range of financial transactions through mobile networks. Broadly defined, m-commerce encompasses any applications and services supported by mobile devices and networks (Urbaczewski et al., 2003). Today, with the use of mobile devices and wireless internet connections, m-commerce is becoming a way of doing business that can transform entire industries (Chong, 2013, Momčilović, et al., 2022).

Currently, nearly 7 billion people own smartphones. Comparing this figure to the world's population of 8 billion, it can be concluded that approximately 80% of the population owns a smartphone. In the Republic of Serbia, 95.5% of the population uses a mobile phone, and this percentage is continuously increasing. The segment of the population over 65 years old predominantly constitutes those who do not possess mobile devices. Compared to global statistics, Serbia ranks above the world average in terms of the number of people owning mobile devices. According to the Statistical Office of the Republic of Serbia (2022), the penetration of mobile devices in the Republic of Serbia stands at 123.9%, meaning that there are 123 mobile devices per a hundred inhabitants.

Some of the largest e-commerce markets include China with a share of 52%, the USA with a participation of 12%, the United Kingdom with a participation of 4.8%, and Japan with a 3% share in total trade (Business.com). Serbia is not an exception when it comes to e-commerce trends. Experts anticipate a growth rate of over 20% concerning internet shoppers. In the territory of Serbia, there are currently around four million consumers who have made purchases online, representing significant potential for the development of this purchasing mode (PlutonLogistics). According to the Statistical Office of the Republic of Serbia (2023), the proportion of users who bought a product via the internet in the last three months was 42.3%, while 39% of the country's population has never purchased a product or service online. Regarding mobile commerce worldwide, 79% of smartphone users have made purchases using their mobile devices (Oberlo, 2022). It is predicted globally that mobile commerce will reach a share of 42.9% in total e-commerce (eMarketer, 2023).

As the process of adopting new technologies is extremely complex and influenced by numerous factors, and technologies are subject to development and change, several models

have been identified to explain this process. Most studies in this field, especially those related to the adoption of mobile commerce, investigate this process using intention-based models rooted in cognitive psychology. One of the more contemporary models in this field used as the basis for this paper is the UTAUT 2 model (Unified Theory of Acceptance and Use of Technology) (Venkatesh, 2013). Accordingly, the research subject comprises key determinants that influence user satisfaction in mobile commerce. It is essential to emphasize that, unlike the original UTAUT2 model, user satisfaction is used as the dependent variable, considering it has been proven as a significant predictor of intention, repeat purchases, recommendations, and loyalty (Eggert & Ulaga, 2002; Đurić, 2023). The main aim of the research is to examine whether variables – perceived usefulness, effort expectancy, facilitating conditions, social influence, price value, hedonic motivation, and habit – affect user satisfaction in mobile commerce.

1. Background research

1.1. Technology acceptance models

One of the fundamental models that explains the process of adopting new technologies is the Technology Acceptance Model (TAM). According to its authors, two key determinants for accepting new technologies are perceived usefulness and ease of use (Davis, 1989). The model is based on the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980) and was widely used in initial studies of this process. However, despite its widespread use, TAM is not without limitations. One of its primary limitations is its incomplete explanation of how mobile technology is adopted and used (Molina-Castillo, López-Nicolás & Bouwman, 2008). Furthermore, the model only explains 40% of the variance in information system usage and does not include all factors crucial to accepting new technology (Chong, 2013).

The adoption of new technologies, originally explained by TAM, has been further elaborated upon through its extensions like TAM 2 (Venkatesh & Davis, 2000), TAM 3 (Venkatesh & Bala, 2007), and the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh, 2003). Another reason for the model's evolution lies in the continuous development of new and more sophisticated technology and devices, as well as the necessity to understand the moderating effects of individual, technical, and other characteristics (Sun & Zhang, 2006). Despite providing a detailed explanation of technology acceptance and use, even the UTAUT model has certain limitations. In this context, Venkatesh et al. (2012) propose the use of a new model called the Extended Unified Theory of Acceptance and Use of Technology – UTAUT 2. This model includes seven variables, thus extending the original UTAUT model (Venkatesh et al., 2003) to include hedonic motivation, price value, and habit. By incorporating additional characteristics, this model becomes more consumer-focused compared to UTAUT (Tak & Panawar). Price value is an essential factor concerning consumers and service usage, habit is a fundamental factor in using new technology based on previous research, and hedonic value has been extensively described in prior studies (Kim & Malhotra, 2005) since emotions such as fun and satisfaction are involved in the process of adopting new technologies (Kulviwat, 2009).

1.2. Hypotheses and research model

Performance expectancy can be defined as “the degree to which the use of technology will provide advantages to users in performing specific activities” (Venkatesh, 2012). Therefore, performance expectancy consists of different attributes of information systems that can offer benefits to users. Users will accept and use new technology if it enhances compared to previous solutions (Chong, 2013; Alalwan, 2017; Verkijika, 2018). In the context of electronic commerce, it is also defined as the extent to which a consumer believes that online shopping will provide access to information, facilitate price comparison, and shorten the decision-making process in purchasing (Kalinić & Marinković, 2016). Concerning this determinant in a paper context, performance expectancy measures the extent to which users consider mobile technology significant in achieving their job-related goals and is often regarded as the most significant driver of intention to use mobile commerce (Park, Yang & Letho, 2007). Numerous studies have investigated the influence of performance expectancy on the intention to use mobile banking. Using the TAM (Technology Acceptance Model), Filipović (2019) state that perceived usefulness has the greatest influence on consumer attitudes towards internet banking. In a study conducted by Zhou et al. (2010) using the UTAUT model, it was confirmed that performance expectancy is the most significant driver of intention for future use. Research by Kalinić et al. (2019), Chong (2013), and Shang & Wu (2017) demonstrates that performance expectancy is a significant determinant of consumer satisfaction in using mobile commerce services. Accordingly, the following hypothesis can be defined:

H1: Performance expectancy has a positive impact on user satisfaction with mobile commerce services.

Effort expectancy represents the degree to which a person believes that using the system will involve minimal effort (Davis 1989). Venkatesh (2012) defines effort expectancy as “the degree of ease associated with the use of technology by users.” Depending on effort expectancy, users decide whether using a certain technology aligns with their daily lives (Park et al., 2018) and thus, in specific studies, stands out as a key driver of new technology acceptance (Zhou, 2011). In many studies, effort expectancy stands out as a driver of intention to use m-commerce (Chou, Li & Ho, 2018). Effort expectancy is identified in various research studies as a significant determinant of user satisfaction in m-commerce (Chong, 2013b; Marinković and Kalinić, 2017). A comparative analysis conducted by Cho (2008) showed that effort expectancy is more significant among American users compared to those in Korea. Research conducted by Shang and Wu (2017) indicates that effort expectancy does not influence user satisfaction in mobile commerce. Conversely, in a study also conducted in the mobile commerce sector (Agrebi & Jallais, 2015), it was shown that this impact is positive. According to research conducted by Tarhini et al. (2016), effort expectancy does not influence the intention to use internet banking. Based on the above, we define the following hypothesis:

H2: Effort expectancy has a positive impact on consumer satisfaction with mobile commerce services.

Social influence is often emphasized as a crucial element in decision-making process within sociology and behavioral sciences (Lu, 2014). It can be defined as the individual process of adopting the culture, norms, and values of a particular social group (Thompson et al., 1991). Users of mobile commerce who are members of complex social networks, including colleagues, friends, experienced users, and public figures, are more susceptible to influence that can stimulate the intention for future behavior (Lu, 2014). In this context, it can be defined as the extent to which a user understands that influential people in their life, such as friends or family, believe that they should use a given technology. Another type of source of social influence includes mass media, television, newspapers, and the like (Venkatesh & Brown, 2001). Social influence is considered most significant in the initial stages of adopting new technology when users lack personal experience with its use and often rely on public opinion (Scheriz et al., 2010). Using the UTAUT model, it has been proven that social influence positively affects the intention to use electronic commerce (Chen et al., 2021). On the other hand, research in the m-banking sector conducted by Alwain et al. (2017) applying the extended UTAUT2 model shows that social influence does not positively affect the intention to use m-banking. In a study conducted by Marinković & Kalinić (2017), social influence emerged as the only observed variable that does not impact user satisfaction when using mobile commerce. Social influence appears as a significant determinant of mobile commerce acceptance in numerous studies (Chou, Li & Ho, 2018; Verkijika, 2018). Accordingly, the following hypothesis can be defined:

H3: Social influence has a positive impact on user satisfaction with mobile commerce services.

Facilitating conditions can be defined as the extent to which an individual believes that the organizational and technical structure can support system usage and provide access to necessary resources (Venkatesh, Morris & Davis, 2003; Tarhini et al. 2016). In other words, facilitating conditions can be seen as consumers' perceptions regarding barriers in the environment or resources that can facilitate the usage of mobile commerce solutions. For instance, the cost or availability of the internet in certain parts of the world can impact the use of mobile shopping applications (Verkijika, 2018). Even the mobile devices themselves can be considered facilitating factors, since mobile commerce is a voluntary activity conducted to attain certain benefits. Smartphones and wireless networks enable the accomplishment of the goal, i.e., making purchases (Venkatesh et al., 2012). Investigating the acceptance of e-commerce, Sim et al. (2018) state that facilitating conditions have a statistically significant impact on user satisfaction. Research conducted by Liu & Forsythe (2011) shows that facilitating conditions have a positive influence on the intensity of online shopping. Numerous studies in the field of mobile commerce (Lai & Lai 2013; Zhou et al. 2010; Chimborazo, Frassetto & Molla, 2021) emphasize the impact of facilitating conditions as a significant driver of purchase intention. Research results indicate that facilitating conditions are a significant determinant of satisfaction in mobile banking usage (Farzin et al., 2021; Faizal, 2020). Considering the above, we can define the following hypothesis:

H4: Facilitating conditions have a positive impact on user satisfaction with mobile commerce services.

Hedonic motivation refers to the pleasure derived from using technology and reflects consumers' perception of the potential enjoyment of this experience (Venkatesh & Brown, 2005). It's important to emphasize that the emotional ambiance significantly impacts customer ultimate buying decision (Rita & Okorie, 2022). Numerous empirical studies demonstrate that hedonic motivation is a crucial driver of intention to use and adopt technologies. Hedonic motivation can be a reason for certain behaviors and arises as a result of the internal satisfaction an individual experiences when buying products (Alimpić & Perić, 2020) or services. In the context of the paper, it pertains to the satisfaction an individual feels when using mobile commerce (Soni, Jain & Kumar, 2019). Paden & Stell (2010) emphasize that utilitarianly motivated consumers search for specific information, while hedonistically motivated consumers seek general information. With the increase in entertaining content during the use of mobile commerce, there is a higher likelihood of consumer acceptance (Farzin et al., 2021; Farah et al., 2018). From the user's perspective, entertainment and enjoyment are crucial in shaping their perception and tendency to accept new systems (Alwain et al., 2015), as evidenced in studies related to "mobile entertainment" (Leong et al., 2013). Even in earlier research, before the construction of the UTAUT 2 model, it was shown that "perceived enjoyment" is a significant driver of the intention to use mobile commerce (Thong, Hong & Tam, 2006). In a study conducted by Farzin et al. (2021), it was proven that hedonic motivation significantly influences the intention to use mobile commerce. Using the UTAUT 2 model, Paramaeswari & Sarno (2021) demonstrate a significant impact of hedonic motivation on the intention to use mobile banking. Based on the above, we can define the following hypothesis:

H5: Hedonic motivation has a positive impact on user satisfaction with mobile commerce services.

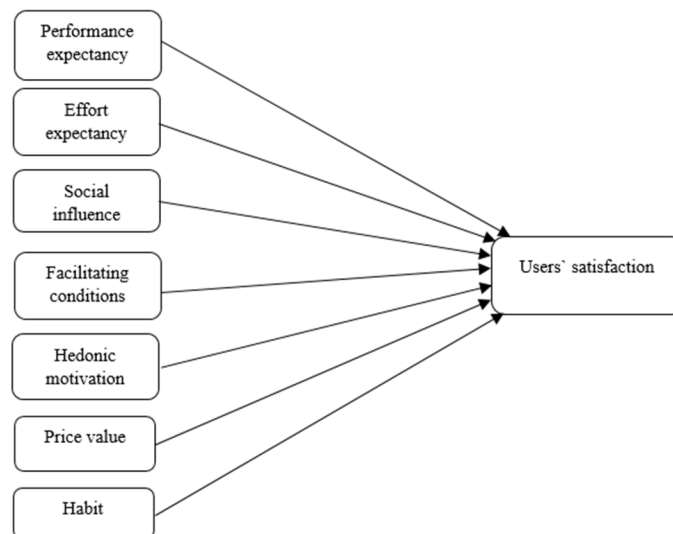
Habit reflects the extent to which people tend to conduct certain behaviors automatically, as a result of learning and acquired knowledge (Venkatesh, 2012; Alwain et al., 2015). When people perform something automatically, their behavior becomes a habit. Habit often stands out as an important determinant of both technology adoption and user satisfaction (Lin & Wang, 2005). Considering that we rely on computer software in everyday life (Hew et al., 2015), it is not surprising that habit is often emphasized as one of the main predictors of intention to use mobile technology (Chuang, 2011). Studies show that habit positively influences the intention to use mobile banking (Farzin, 2021). Research conducted in the field of mobile commerce shows that habit positively affects loyalty in this sector (Lin & Wang, 2006). A study conducted by Kalinić, Marinković, Đorđević & Liebana-Cabanillas (2019) indicates that habit is a significant predictor of using mobile commerce services. According to research in the mobile commerce domain (Tak & Panwar, 2017), it was found that habit is the most significant predictor of using applications for mobile shopping. The results of a study conducted by Dakduk et al. (2020) on the acceptance of mobile commerce in low-income countries show that habit is a significant driver of intention. Based on the above, we can define the following hypothesis:

H6: Habit has a positive impact on user satisfaction with mobile commerce services.

Price value refers to the ratio of the price of technology to the value it delivers. The price/value ratio is an important determinant, since the customer unconsciously analyzes whether the price is in line with his assessment of the product value (Nuševa et al. 2023). Price value is positive when the benefits of using new technology outweigh the costs it incurs (Venkatesh, 2012). In the context of mobile commerce, price value can be observed as the advantage of using mobile commerce compared to the monetary costs of similar transactions done “face-to-face”. For example, the cost of mobile internet required for using mobile commerce applications might be higher compared to the cost associated with using other applications due to the heavy content loading (Verkijika, 2018). In the context of mobile commerce, if consumers perceive that the benefits outweigh the costs of using mobile commerce, price value will significantly impact the consumer decision-making process, their satisfaction, and loyalty (Hew et al., 2015). Examining the factors influencing the acceptance of mobile banking by users in Jordan, Alalwan & Dwivedi (2017) show that price value is indeed a significant determinant. A study conducted in the field of mobile commerce (Verkijika, 2018) demonstrates that price value influences its usage. According to Chong (2013), perceived costs are a significant factor in the satisfaction of mobile commerce users. Considering the above, we can define the following hypothesis:

H7: Price value has a positive impact on consumer satisfaction with mobile commerce services.

Figure 1: Research model



Source: the authors' research

Taking into account the significance of satisfaction, its influence on other behavioral variables (Eggert & Ulaga, 2002), and its presence in numerous studies within the field of m-commerce (Kalinić et al., 2019; Cho, 2008; Chong, 2013; Shang & Wu, 2017; Faizal, 2020),

satisfaction was used as the dependent variable in this study. Figure 1 displays the research model.

2. Methodology and sample structure

Data collection was conducted in the territory of Central Serbia from May 5th to May 15th, 2023. The sample includes 210 individuals, segmented according to the following characteristics: gender, age, level of education, employment status, and income level. The research was carried out electronically, through a Google form survey. Respondents expressed their level of agreement with statements on a five-point Likert scale (1 - strongly disagree; 5 - strongly agree). The questionnaire included 25 statements, extracted from relevant studies, grouped into 7 factors. To ensure representativeness, the gender structure of the sample, as well as the employment structure roughly correspond to the sample used for the analysis of mobile commerce users by the Statistical Office of the Republic of Serbia (2022). Out of the 210 respondents, 53,81% are female and 46,19% are male. Respondents are predominantly aged 18 to 24 (35.71%), with earnings between 40,000 and 80,000 RSD per month (36.67%). In terms of educational structure, the highest number of respondents have obtained a university degree (44.76%).

The data analysis was conducted using the statistical software SPSS v20. Appropriate statistical analyses were performed using the software. The reliability of variables was determined through reliability analysis. Correlation analysis was used to establish the degree of agreement among variations in formed factors. Multiple regression was utilized to determine the effects of the mentioned variables on user satisfaction in mobile commerce.

3. Research results

The reliability analysis is presented in Table 1. It can be observed that the statements within all factors are reliable, considering the Cronbach's alpha coefficient value exceeding the threshold of 0.7 (Nunnally, 1978). The factor with the highest reliability is Effort expectancy due to the highest Cronbach's alpha coefficient value of 0.957, while the lowest level of reliability occurs in the Social Influence factor with the lowest Cronbach's alpha coefficient value of 0.837.

Table 1: Reliability analysis

Factors	Mean	SD	Cronbach's alpha
Performance expectancy	3.92	1.13	0.906
Effort expectancy	4.21	0.98	0.957
Social influence	3.58	1.02	0.837
Facilitating conditions	4.13	0.88	0.839
Hedonic motivation	3.73	1.03	0.913
Price value	3.91	0.88	0.895
Habit	3.32	1.13	0.833
Customers' satisfaction	3.91	0.93	0.911

Source: the authors' research

Based on the correlation matrix shown in Table 2, it can be concluded that there is a statistically significant degree of linear dependence among all variables, as the p-value is less than 0.001. The highest correlation level occurs between the variables Effort Expectancy and Facilitating Conditions as the Pearson's coefficient value for this pair of variables is the highest at 0.807. Conversely, the lowest correlation level appears between the pairs of variables Perceived Performance and Social Influence, indicated by the lowest Pearson's correlation coefficient value of 0.522.

Table 2: Correlation matrix

Factors	PE	EE	SI	FC	HM	PV	H	SAT
PE	1	0.709**	0.522**	0.670**	0.616**	0.627**	0.719**	0.633**
EE	0.709**	1	0.417**	0.807**	0.675**	0.690**	0.609**	0.577**
SI	0.522**	0.417**	1	0.543**	0.612**	0.620**	0.634**	0.622**
FC	0.670**	0.807**	0.543**	1	0.722**	0.728**	0.627**	0.630**
HM	0.528**	0.573**	0.634**	0.634	1	0.570**	0.598**	0.659**
PV	0.398**	0.269**	0.649**	0.404**	0.570**	1	0.643**	0.585**
H	0.601**	0.459**	0.699**	0.512**	0.598**	0.643**	1	0.376**
SAT	0.633**	0.577**	0.622**	0.630**	0.585**	0.585**	0.736**	1

***The correlation coefficient is significant at the 0.01 level*

Source: the authors' research

Table 3 displays the results of multiple regression analysis measuring the influence of the examined factors on satisfaction. The coefficient of determination is 0.668, meaning that 66.8% of the satisfaction variability is explained by the given regression model. Based on the value of VIF coefficient (values are lower than 5) (Field, 2000), data are suitable for carrying out multiple regression analysis.

Table 3: Multiple regression analysis

Factors	Mean	SD	Cronbach's alpha
Performance expectancy	3.92	1.13	0.906
Effort expectancy	4.21	0.98	0.957
Social influence	3.58	1.02	0.837
Facilitating conditions	4.13	0.88	0.839
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Price value	3.91	0.88	0.895
Habit	3.32	1.13	0.833
Customers' satisfaction	3.91	0.93	0.911

Source: the authors' research

We can conclude that perceived performance has a statistically significant positive influence on mobile commerce user satisfaction ($\beta = 0.121$; $p < 0.1$). Effort expectancy ($\beta = 0.080$; $p > 0.1$) and Social influence ($\beta = 0.006$; $p > 0.1$) do not have a statistically significant impact on mobile commerce user satisfaction. Facilitating conditions also have a

statistically significant impact on mobile commerce user satisfaction ($\beta=0.133$; $p < 0.1$). The influence of hedonic motivation on satisfaction is statistically significant ($\beta=0.168$; $p < 0.01$). Price value has a positive, statistically significant impact on mobile commerce user satisfaction; however, considering the β coefficient value, this impact is the weakest among all tested variables ($\beta=0.119$; $p < 0.05$). Habit has the strongest impact on mobile commerce user satisfaction due to the highest β coefficient value ($\beta=0.376$; $p < 0.01$).

4. Discussion

Based on the results of multiple regression analysis, it has been established that perceived performance significantly impacts user satisfaction in mobile commerce services, confirming the first hypothesis. These findings align with numerous studies in the field of mobile commerce (Kalinić et al., 2019; Chong, 2013; Shang & Wu, 2017) where this influence has been confirmed. It is reasonable that meeting and surpassing consumers' expectations, regarding service provision and benefits received, will influence an increase in consumer satisfaction. Furthermore, consumers' perception that online shopping facilitates easier access to information, price comparisons, and a shorter purchasing process will contribute to an increase in their satisfaction. In addition, effort expectancy does not have a statistically significant impact on user satisfaction in mobile commerce services, rejecting the second hypothesis. These results are consistent with the findings of the study conducted by Tarhini et al. (2016), in which effort expectancy does not influence the intention to use internet banking. Similarly, the results of the research conducted by Shang and Wu (2017) show that effort expectancy does not affect the satisfaction of mobile commerce users. These findings contradict the results of the study conducted by Agrebi & Jallais (2015), which demonstrated a positive impact. The obtained results can be explained by the fact that users have mastered the use of m-commerce applications, which have become part of their everyday routine. Additionally, the applications are intuitive and easy to use, as well as compatible with other similar technologies.

Moreover, social influence also stands out as a variable that does not have a statistically significant impact on user satisfaction in mobile commerce services, thus rejecting the third hypothesis. The obtained results correspond with the findings of the study conducted by Marinković & Kalinić (2017), where social influence was the only variable that did not affect user satisfaction in m-commerce. Additionally, a study conducted in the mobile banking sector (Alwain et al., 2017) and acceptance of commerce (Jambulingam, 2013) also showed that social influence is not a significant driver of intention to use m-commerce. These results contradict numerous studies (Chen et al., 2021; Chou, Li & Ho, 2018; Verkijika, 2018) where social influence was shown to be a significant determinant of m-commerce use. The obtained results can be explained by the fact that users rely on m-commerce for other benefits such as discounts, free delivery, ease of use, etc., and recommendations from social groups and media incentives do not have a sufficiently significant influence on users.

The results indicate that facilitating conditions significantly influence user satisfaction in mobile commerce, confirming the fourth hypothesis. The obtained results align with numerous studies in the field of m-commerce (Lai & Lai, 2013; Zhou et al., 2010;

Chimborazo, Frasset & Molla, 2021), confirming the impact of facilitating conditions on the intention of future use, and in mobile banking (Farzin et al., 2021; Faizal, 2020) where the impact of the observed variable on satisfaction was confirmed. In today's conditions, it is crucial to have adequate infrastructure that will primarily enable appropriate use of m-commerce and subsequently provide advantages over traditional shopping methods. Multiple regression analysis shows that hedonic motivation is a significant driver of user satisfaction in m-commerce services, confirming the fifth hypothesis. The findings are consistent with studies conducted by Farzin et al. (2021) in the field of m-commerce and Paramaswari & Sarno (2021) in the field of mobile banking. The rapid development of mobile commerce and intense competition lead users, besides fulfilling basic shopping functions, to seek an overall experience that is more engaging.

The analysis results show that price value is a significant driver of user satisfaction in m-commerce, confirming the sixth hypothesis. The obtained results correspond to the findings of earlier research conducted by Alalwan & Dwivedi (2017) and Verkijika (2018) in the field of m-commerce, and Chong (2013) in the field of mobile banking. The results indicate that consumers attach significance to the relationship between price and quality when conducting mobile commerce. Quality influence customer satisfaction (Mitic & Brzaković, 2023) and price can be a significant motivator, especially considering that this type of shopping is still unfamiliar to a certain number of users.

Conclusion and implications

Considering current trends, it is evident that mobile commerce will become the most common form of conducting electronic commerce in the near future. It is not excluded that it might even surpass traditional purchase methods. The increasing use of technology has led to the emergence of numerous models that explain its acceptance. Besides the most commonly used TAM and UTAUT models, the UTAUT 2 model stands out, which, unlike the previous ones, includes the highest number of variables and primarily focuses on consumers.

The conducted research has the following theoretical and practical implications. Primarily, this paper allows for the expansion of existing knowledge about determinants of user satisfaction in the use of mobile commerce. The aim of the study is to test the influence of the mentioned variables on mobile commerce user satisfaction. The originality of the paper resides in the use of the UTAUT 2 model, which is more contemporary and applicable compared to the UTAUT model, primarily due to its broader scope and inclusion of additional variables. Additionally, unlike the original UTAUT 2 model, this paper includes user satisfaction as a dependent variable, considering its significance regarding its impact on consumer loyalty, recommendations, and repeat purchases. To the author's knowledge, there are few studies, especially in domestic literature, that test the influence of these variables on mobile commerce user satisfaction, and this research fills that gap.

The contribution of the conducted research is reflected in the following practical implications. Since habit has been shown as the most significant determinant of user satisfaction in mobile commerce services, it is essential to transform the use of m-commerce

from occasional usage to habit. This can be achieved by offering conveniences such as loyalty programs that will stimulate consumers for more regular use of this form of commerce. The next most significant determinant of user satisfaction is hedonic motivation. It is crucial to make the experience engaging, and service providers can primarily use interesting animations in the context of application design, as well as an engaging presentation of products or services. Users' hedonic motivation can be increased through their involvement in the product presentation process (e.g., a special section on the page that pulls images from social media platforms where the user tagged the company). Facilitating condition, as a significant determinant of user satisfaction, relate to the required knowledge, resources, and compatibility with other technologies. Providers of m-commerce services need to provide software that is user-friendly and compatible with other solutions already in use. Also, considering resources such as internet availability, providers can enable users to browse product and service pages when they are offline and do not have access to the internet network. Given the significance of price value for user satisfaction, companies can introduce options such as free delivery, discounts for loyal customers, as well as the aforementioned loyalty programs to stimulate increased purchases, personalized offers, the opportunity to purchase products at reduced prices ahead of other users, and similar incentives. As perceived performance is also an important determinant of user satisfaction in m-commerce services, the recommendation for companies is to highlight the advantages of mobile commerce over other forms of commerce through intensive marketing campaigns.

The conducted research has several limitations. The study included only the variables of the UTAUT 2 model. The effects of UTAUT 2 variables were measured on one dependent variable – user satisfaction. Considering these limitations, future research can include participants from other countries. Furthermore, future research directions could involve incorporating trust or other variables important for user satisfaction. It is also possible to analyze the influence of variables such as customer loyalty or interpersonal communication that will represent a dependent variable of the model. Additionally, it is possible to test the moderating influence of a variable (such as trust) on consumer satisfaction.

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