Mobile Banking Service in Mongolia: The Role of Online Convenience on the Acceptance and Use Behavior

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Abstract

The goal of this study is to scrutinize the impact of individual online convenience dimensions on mobile banking acceptance and use in Mongolia. A total of 211 valid responses were collected from Mongolian university students who currently use mobile banking application services from local banks. The SmartPLS 3.3 software was used to conduct the confirmatory factor analysis and test the hypotheses. Using structural equation modelling, this research discovered that access convenience, transaction convenience, and possession/post-possession convenience are the main constructs related to the adoption of mobile banking services. Perceived innovation showed a significant positive effect on the adoption of mobile banking technologies. Through practical and theoretical implications, this research aims to assist mobile banking service channels of local and international banks in Mongolia. Identifying which online convenience dimensions impact the adoption and use of mobile banking will contribute to the adoption of competitive strategies for financial institutions and banks.

Keywords: Intention to use, Mobile banking, Online convenience, Perceived innovation, Use behavior

1. Introduction

The spread of the COVID-19 pandemic has affected economies in both developed and developing countries. One of the consequences of COVID-19 is the trend acceleration toward digitalization of businesses, causing a shift from offline traditional services to online. According to Brodersen, Hammami and Katapally (2022), 80.73% of the world's population owns smartphones in 2021, in comparison to 71.43% in 2019. However, one of the industries that have been consistently digitalizing before the spread of COVID-19 is financial services. Moreover, with the pandemic restrictions and lockdowns, there has been even greater adoption of mobile banking services worldwide (Guthrie, Fosso-Wamba and Arnaud 2021). In 2017, there were approximately 0.8 billion mobile banking users, and it is expected to reach over 2.4 billion users worldwide in 2024 (Mullan, Bradley and Loane 2017). Mobile banking app is a cost-effective and innovative technology that allows consumers to use banking services via their smartphones (Oh and Kim 2022). Hanif and Lallie (2021) define a mobile banking app as software that banking users can download and install on their smartphone, which enables them to make banking transactions. Mobile banking not only offers benefits to consumers, but it also offers a range of benefits to banks. For example, banks prefer mobile banking channels as they are more cost-effective and easier to access (Shankar and Jebarajakirthy 2019). On the contrary, consumers favour mobile banking over traditional offline banking since it offers convenient services anywhere and at any time (Al Amin et al. 2021).

Despite the increased number of studies that examined socio-psychological characteristics influencing the acceptance and use of mobile banking services, which included perceived usefulness, ease of use, social influence, attitude, subjective norms, security and personal information related risks, trust, and psychological risks, 'convenience' is the

main reason for adoption and use of mobile banking apps. Previous studies state that consumers prefer companies that save them time and energy (Duarte, e Silva and Ferreira 2018). With the introduction of mobile banking services, banks currently are able to provide more convenience to their consumers, allowing them to manage their banking accounts from any location and at any time. Moreover, previous studies highlight the importance of convenience in consumers' preference for mobile banking over traditional offline banking, which helps consumers to avail transactions by saving their time and effort (Shankar and Rishi 2020).

For a customer, time is becoming the most valuable commodity. Scholars highlight that the consumers' need for convenience prompts businesses to modify their operation systems and emphasize the speed and efficiency of the services they provide (Brown 1990). Prior literature also identifies convenience as one of the critical factors driving customer preference toward the adoption of mobile technologies (De Kerviler, Demoulin and Zidda 2016; Shankar and Rishi 2020). Hence, in comparison to traditional banking, mobile banking technologies extend more flexibility and personalized services (Jebarajakirthy and Shankar 2021), and most bank clients prefer to adopt and avail mobile banking to reduce the time and efforts associated with traditional banking (Duarte, e Silva and Ferreira 2018).

However, mobile banking users' perceptions of convenience may differ from one setting to another. For that reason, banks must develop a deep understanding of the impact of online convenience on the adoption and use of mobile banking apps. Earlier research has conceptualized convenience as a unidimensional variable to evaluate its impact on the adoption intentions and use behavior of mobile banking services (Shen et al. 2010). A limited number of mobile banking studies focused on online convenience as a multidimensional construct that influences consumer responses. Thus, the main objective of this research is to scrutinize how consumers evaluate the individual dimensions of online convenience in the context of mobile banking by focusing on the consumer experience with the local banks in a Central Asian country, namely Mongolia. Mongolia has been selected for this study, as it leads all other countries in the Central Asia Regional Economic Program (CAREC) with more than 93 percent of the population having a bank account and with more than 55 percent of the population possessing smartphones (Giannetto, Gangi and Altankhuyag 2019). As a result, this research acknowledges the significance of this study for the growth of the banking industry and for making a

contribution to the existing knowledge and literature that determine the influencing factors of the adoption of mobile banking in the context of online convenience. Hence, the variables such as access convenience, search convenience, transaction convenience, evaluation convenience, and possession/post-possession convenience will be utilized as the key dimensions of online convenience for consumers' motivation to use mobile banking apps.

This study endeavors to address the following research question: "How do online convenience dimensions impact intention to use and use behavior in the setting of mobile banking?" To address this question, we use data from an online survey questionnaire of 211 users of mobile banking services. Next, we summarize our findings and provide theoretical and managerial implications. We believe that this research will add value to the existing literature by evaluating online convenience dimensions on adoption behavior in Mongolia and the impact of perceived innovation on use behavior in the mobile banking setting. Finally, limitations and suggestions for future research are discussed.

2. Literature review and hypotheses development

2.1. Online convenience in the context of mobile banking

Prior studies have emphasized the importance of convenience for customer loyalty and customer satisfaction (Kaura 2013; Nguyen, Nguyen, Nguyen 2020). Duarte, e Silva, and Ferreira (2018) affirm that consumer decision-making is significantly influenced by convenience. According to Copeland (1923), convenience is described as the amount of time and effort a person spends using a service or purchasing a product. Thus, in the context of mobile banking, convenience can be described as the amount of time and effort spent utilizing banking services and operations via mobile banking platforms (Sadeghi and Heidarzadeh Hanzaee 2010). Consumer resources such as time and effort are described as non-monetary costs which influence purchase behavior (Shaw and Sergueeva 2019). Thus, the shortage of consumers' availability for visiting banks creates the will to save time and effort when completing day-to-day finances. Recently, consumers have begun to adopt different mobile commerce services for time and effort-saving. In this regard, mobile banking is an option for consumers to complete banking operations conveniently.

According to the existing studies, there is a lack of consensus on the dimensions of online convenience,

as the research has been strictly limited to online shopping (Dekimpe, Geyskens and Gielens 2020; Duarte, e Silva, and Ferreira 2018; Jiang, Yang, and Jun 2013). Berry, Seiders, and Grewal (2002) propose service convenience as a multidimensional construct with five components, such as decision convenience, access convenience, transaction convenience, benefit convenience, and post-benefit convenience. This was later developed into an offline purchase convenience multidimensional instrument, the SERVCON scale, by Seiders et al. (2007). Developed by Beauchamp and Ponder (2010), a set of convenience dimensions that are suitable for both online and offline purchases, included access, search, transaction, and possession dimensions. Later, Jiang, Yang, and Jun (2013) introduced five categories of convenience, such as access, search, evaluation, transaction, and possession/post-possession, based on the consumer purchase stages.

The concept of online convenience in the context of mobile banking began to be discussed in the literature recently (Jebarajakirthy and Shankar 2021; Shankar and Rishi 2020). Similarly, major dimensions that motivate banking clients to use mobile banking platforms for banking services include access convenience (Roy et al. 2018), search convenience (Benoit, Klose, and Ettinger 2017), evaluation convenience (Shankar and Rishi 2020), transaction convenience (Jiang, Yang, and Jun 2013), benefit convenience (Shankar and Rishi 2020), and post-benefit convenience (Duarte, e Silva and Ferreira 2018). Hence, based on these prior findings, the proposed research model presents the relations among the dimensions of online convenience that are important for improving consumers' perceptions

of mobile banking. In addition, we also examine how use behavior is impacted by perceived innovation. Furthermore, the following variables of online convenience have been selected to be applicable for mobile banking and are presented in Fig. 1.

2.2. Online convenience dimensions and hypothesis development

2.2.1. Access convenience

Access convenience is characterized as the perception of clients' time and effort required to avail the services (Benoit, Klose, and Ettinger 2017). It is one of the most significant dimensions of service convenience, obviously, if a consumer does not have access to the service, then there is no possibility of experiencing the service. In the context of mobile banking, in order to avail mobile banking services, consumers must have a mobile device and a mobile banking app (Jebarajakirthy and Shankar 2021). This will allow consumers to use banking services from anywhere, 24/7. Therefore, consumers perceive mobile banking as more accessible than traditional offline banking, which creates an intention to adopt and facilitates continuous use behavior. Accordingly, it is hypothesized as follows:

Hypothesis 1. Access convenience will positively influence the intention to use a mobile banking app.

2.2.2. Search convenience

According to Benoit, Klose, and Ettinger (2017), the time and effort needed to locate and gather details about a certain service or product are referred to as search convenience. The financial
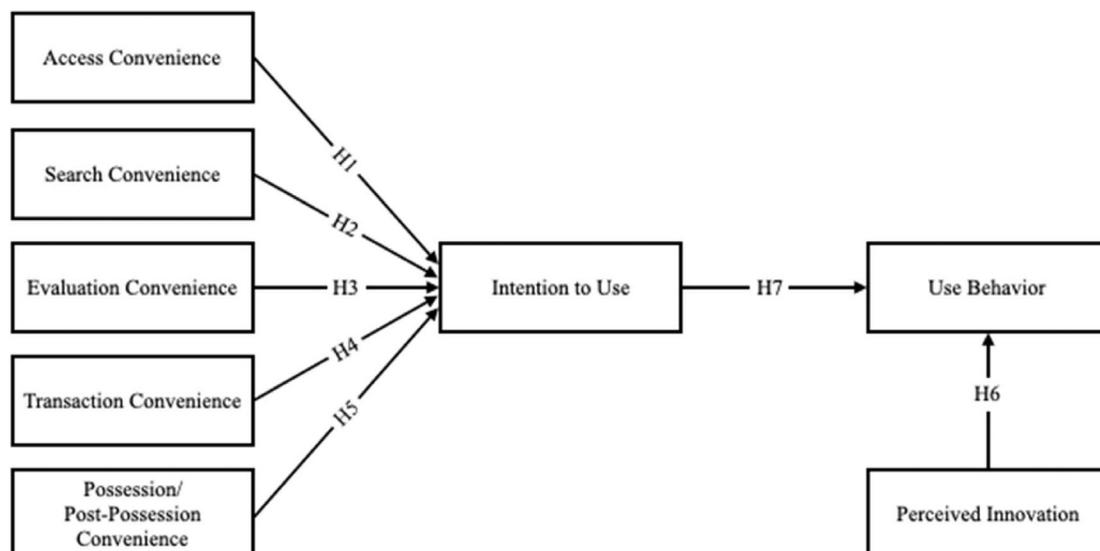

Fig. 1. Proposed model.

institutions and banks can provide numerous tools, such as bank AI agents in online chatting services (Park, Choi, and Shin 2021) and online video tutorials (Shankar and Rishi 2020), where consumers can obtain and retrieve information about banking products or services. Prior to making a purchase decision, consumers frequently search for relevant information about products and services through various online channels (Shankar and Rishi 2020). Thus, up-to-date online information on banking goods and services can assist consumers to reduce time and avoid crowded places, especially during COVID-19, resulting in their intention to adopt mobile banking services. The following hypothesis is proposed as:

Hypothesis 2. Search convenience will positively influence the intention to use a mobile banking app.

2.2.3. Evaluation convenience

Evaluation convenience is characterized as the company website's availability and accessibility of thorough yet comprehensible product descriptions using diverse information components such as text, images, and video (Jiang, Yang, and Jun 2013). It is recognized that the availability of information related to products or services plays a crucial role in customers' purchase decisions. Therefore, consumers tend to evaluate and compare product offers and specifications before making a decision (Karimi, Papamichail, and Holland 2015). In the mobile banking context, consumers are able to have access to online information about banking services and the relevant information without physically going to the bank. Therefore, the following hypothesis is:

Hypothesis 3. Evaluation convenience will positively influence the intention to use a mobile banking app.

2.2.4. Transaction convenience

The speed and ease with which consumers can influence and perform transactions are referred to as transaction convenience (Beauchamp and Ponder 2010). In the context of mobile banking, quick banking operations, such as payment transactions and money transfers, are the major components of transaction convenience (Seiders, Berry and Gresham 2000). One of the major merits of mobile banking is that consumers do not have to physically go to banks and wait in line. This can be attributed as one of the significant contributing factors to the adoption of mobile banking among young Mongolian bank users. Hence, observations lead to the following hypothesis:

Hypothesis 4. Transaction convenience will positively influence the intention to use a mobile banking app.

2.2.5. Possession convenience/post-possession convenience

According to Seiders, Berry and Gresham (2000), possession convenience refers to the speed and ease with which consumers can access desired products. In traditional offline banking, consumers are required to visit a physical bank for banking operations, which takes time and effort. However, on online platforms, there is no need to visit a physical store to possess the product. Hence, consumers can manage their purchases from anywhere with a few clicks (Jiang, Yang, and Jun 2013). In the context of mobile banking, possession convenience refers to the speed and ease with which bank users can complete banking operations from a mobile device (Shankar and Rishi 2020).

Berry, Seiders and Grewal (2002) define post-possession convenience as the consumers' perceived time and effort expenditures when reinitiating contact with a company after purchasing the desired product. In the context of mobile banking, if consumers have any issues related to their completed operations, they can use different mobile banking communication tools, such as chatbots or 24/7 live chats with bank representatives, without having to visit the banks to get it resolved. Hence, mobile banking transactions and banks' post-transaction channels may motivate consumers to adopt mobile banking services. Accordingly, the following is hypothesized as:

Hypothesis 5. Possession convenience/post-possession convenience will positively influence the intention to use mobile banking apps.

2.3. Perceived innovation

Perceived innovation refers to the tendency of a person to try out new information systems (Chang, Cheung and Lai 2005). According to previous studies, perceived innovation has a positive effect on the adoption and use of new technologies (He, Zhan and Hu 2018; Sang 2021). If individuals have relatively limited expertise in new banking services, innovation will play a crucial role in the use behavior of mobile banking apps. People with higher perceived innovation are prone and shown to be curious, communicative, dynamic, venturesome, and stimulation-seeking (Kim, Mirusmonov and Lee 2010). Taking into consideration the age of

respondents, it is appropriate to measure perceived innovation as an influencing factor for the use behavior of mobile banking apps.

Hypothesis 6. Perceived innovation will positively influence the use behavior of mobile banking apps.

2.4. Intention to use

Extensive literature identifies intention to use as a key determinant of use behavior (Venkatesh, Thong and Xu 2012). In this study, intention to use is characterized as trying new products or services that consumers have never used before (Venkatesh et al. 2003), whereat, use behavior (also defined as use continuance) refers to continually maintaining availing of mobile banking services (Venkatesh, Thong and Xu 2012). In the context of mobile banking services, intention to use was identified as a direct and consequential factor in the use behavior. Based on this, it is proposed that:

Hypothesis 7. Intention to use will positively influence the use behavior of mobile banking apps.

3. Research design

The goal of this research was to collect data on the impact of online convenience dimensions on the intention to use and use behavior of mobile banking apps. Grounded on the proposed research framework, a 25-item questionnaire was formulated. The constructs of this study were operationalized based on the existing literature, which was published in peer-reviewed journals; some of the constructs were adapted to fit and adjust to the online convenience in the mobile banking context. Construct measurement items for access convenience were drawn from Jiang, Yang, and Jun (2013) and search convenience items were operationalized from Jiang, Yang and Jun (2013) and Beauchamp and Ponder (2010).

Furthermore, evaluation convenience and transaction convenience items were adopted from Jiang, Yang, and Jun (2013) and Duarte, e Silva and Ferreira (2018). Measurement items for possession/post-possession convenience were adopted from Seiders et al. (2007) and Duarte, e Silva and Ferreira (2018). Perceived innovation items were taken from Kim, Mirusmonov, and Lee (2010). Items for usage intentions and use behavior for mobile banking apps were operationalized by Ajzen and Fishbein (1975) and Bhattacherjee (2001), respectively.

This research used an online survey questionnaire to collect the data. The multiple-choice questions using a five-point Likert scale were distributed to be easily administered and analysed. Survey respon-

dents were asked to choose from five answers ranging from 1 to 5, where "1" represents "strongly disagree" and "5" represents "strongly agree". The university students were selected as a sample group, as younger generations are characterized as a technologically savvy generation, therefore, they represent an attractive market for financial institutions. A pilot study was conducted after the development of the questionnaire to ensure that the questions were clearly understood by the respondents. The sample of the pilot study respondents consisted of respondents who own a smartphone and use mobile banking in Mongolia. A total of 25 students participated in the pilot study, with an average time of 9 min for survey completion. Based on the input from respondents, a few small adjustments have been made to the demographic information questions. Lastly, the finalized survey questionnaire was distributed via Google Forms.

Convenience sampling was used in this study to recruit survey respondents. A total of 264 survey questionnaire responses were collected. Of these 264 responses, 53 responses were invalid due to missing data or responses from those who do not own a banking account; thus, 211 responses were valid and used for the data analysis of this study. The demographic information of survey respondents is listed in Table 1. The following table demonstrates that among all survey participants, 71.09% were female and 28.91% were male. The respondents were between the ages of 20−22 (51.66%), 17−19 (35.07%), 23−25 (7.11%), and above 25 (6.16%). Most of the respondents had the experience of using a mobile banking app for more than 6 months (69.67%). Furthermore, more than the majority of the respondents answered that they use mobile banking apps on a daily basis (71.09%).

4. Results and discussion

4.1. Reliability test

For the data analysis, the structural equation modelling technique was utilized in this research. In particular, structural equation modelling (SEM) with partial least squares (PLS) was used, which is suitable for the prediction and exploratory study of structural correlations. Structural equation modelling (SEM) is a comprehensive statistical technique that is used for hypotheses testing, a technique that has high predictive power and a wide range of use in distinct areas, such as marketing, management information systems, operation management, and etc. (Williams, Vandenberg and Edwards 2009). However, before this, the research construct was

Table 1. Sample demographics description.

Construct	Category	Frequency	Percentage (%)
Gender	Female	150	71.09
	Male	61	28.91
Age	17−19	74	35.07
	20−22	109	51.66
	23−25	15	7.11
	Above 25	13	6.16
School Year	1-year (Undergraduate)	52	24.64
	2-year (Undergraduate)	43	20.38
	3-year (Undergraduate)	46	21.80
	4-year (Undergraduate)	70	33.18
Experience duration of using a mobile banking app	1−3 months	36	17.06
	4−6 months	28	13.27
	More than 6 months	147	69.67
Frequency of using a mobile banking app per week	Every day	150	71.09
	A few times a week	37	17.53
	At least once a week	11	5.21
	A few times a month	8	3.79
	At least once a month	5	2.38

examined by performing a confirmatory factor analysis (CFA) using the SmartPLS 3.3.7 software.

Table 2 presents factor loadings for every construct measurement item with values greater than 0.70, with 0.75 (PPC1) ranking the lowest (Hair et al. 2010). EC3, TC4 items were indicated below the 0.7 thresholds, thus, deleted from further analysis. The acceptable threshold for Cronbach's alpha and composite reliability is greater than 0.70 (Hair et al. 2010; Nunnally 1978). The results of this study

indicate that the measurement items are above the acceptable threshold, except for evaluation convenience, which is marked with a 0.65 Cronbach's alpha score. However, previous studies confirm that Cronbach's alpha with a value above 0.60 also appears to be of high reliability (Creswell 2005; Pallant 2002). Thus, evaluation convenience will remain for the analysis of the conceptual model. Likewise, the average variance extracted (AVE) is greater than the recommended threshold of 0.50, with the

Table 2. Assessment of measurement model.

Construct	Indicators	Mean	SD	Factor Loading (>0.7)	Cronbach's Alpha (>0.6)	CR (>0.7)	AVE (>0.5)
Access Convenience (AC)	AC1	4.20	0.99	0.91	0.89	0.93	0.82
	AC2	3.99	1.06	0.91			
	AC3	3.82	1.03	0.89			
Search Convenience (SC)	SC1	4.00	1.02	0.85	0.79	0.88	0.71
	SC2	3.78	1.04	0.88			
	SC3	3.62	1.02	0.80			
Evaluation Convenience (EC)	EC1	3.66	1.00	0.93	0.65	0.84	0.73
	EC2	3.47	1.01	0.77			
Transaction Convenience (TC)	TC1	3.96	1.02	0.86	0.78	0.87	0.69
	TC2	3.87	1.05	0.83			
	TC3	3.63	1.09	0.79			
Possession/Post-Possession Convenience (PPC)	PPC1	3.55	0.99	0.75	0.87	0.90	0.65
	PPC2	3.42	1.05	0.77			
	PPC3	3.64	0.99	0.85			
	PPC4	3.71	0.96	0.85			
	PPC5	3.74	0.96	0.81			
Perceived Innovation (PI)	PI1	3.73	0.99	0.91	0.83	0.90	0.75
	PI2	3.44	1.15	0.92			
	PI3	3.69	1.02	0.76			
Intention to Use (IU)	IU1	4.06	0.96	0.88	0.87	0.92	0.80
	IU2	4.05	0.92	0.90			
	IU3	4.04	0.93	0.89			
Use Behavior (UB)	UB1	4.00	0.93	0.89	0.89	0.93	0.82
	UB2	3.96	0.99	0.92			
	UB3	3.96	0.94	0.92			

Note: The model fit is indicated by SRMR = 0.067 (Henseler et al. 2014).

possession/post-possession convenience being the lowest score of 0.65 (Gefen, Straub and Boudreau 2000; Hair et al. 2010). Moreover, as shown in Table 3, the discriminant validity of this research is accepted because all AVE scores are greater than correlations between the constructs of the proposed model (Fornell and Larcker 1981). Finally, the results of Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) represent reasonable internal consistency; thus, the proposed measurement items will be used for the analysis of the proposed model and hypothesis testing of the study.

4.2. Hypothesis testing

This study proposes that the research model is predictive of intention to use mobile banking apps by $R^2 = 0.368$ and its use behavior by $R^2 = 0.736$. The results in Table 4 show the results of the hypothesis testing for each construct. It can be seen that access convenience ($\beta = 0.24$, $p < 0.05$), transaction convenience ($\beta = 0.19$, $p < 0.05$), possession/post-possession convenience ($\beta = 0.23$, $p < 0.05$) increase the consumers' the intention to use of mobile banking apps. Therefore, hypotheses H1, H4, and H5 are supported. Similarly, perceived innovation has a significant positive impact on the use behavior

of mobile banking apps ($\beta = 0.13$, $p < 0.05$). Thus, hypothesis H6 is supported. However, search convenience ($\beta = 0.02$, $p > 0.05$) and evaluation convenience ($\beta = 0.07$, $p > 0.05$) are not statistically correlated with the intention to use of mobile banking apps, resulting rejection of hypotheses H2 and H3. Finally, intention to use ($\beta = 0.77$, $p < 0.001$) positively influences the use behavior, thus, hypothesis H7 is supported. To reiterate, based on the results of this research, hypotheses H1, H4, H5, H6 and H7 were supported, while hypotheses H2 and H3 were not supported (Table 4). Figure 2 presents the model analysis results.

5. Discussion

This study contributes to an existing knowledge of the factors influencing young Mongolians' intentions to use and use behavior of mobile banking services. It further assists to recognize the challenges that banks and financial institutions may face in accelerating the implementation of mobile banking technologies. The aim of this research was to scrutinize the impact of online convenience dimensions on intention to use and use behavior in the context of mobile banking. The findings of this study exhibit that an access convenience (H1) is proven to have a significant influence on the intention to use of mobile banking. This result is in accordance with previous literature, in which respondents believe that consumers have the intention of adopting mobile banking because they can access banking services anytime from anywhere (Jebarajakirthy and Shankar 2021; Jiang, Yang and Jun 2013). Likewise, it is indicated that transaction convenience (H4) significantly impacts mobile banking adoption among consumers. This implies that consumers can be motivated to adopt mobile banking because of the ease of banking and little

Table 3. Assessment of discriminant validity (Fornell-Larcker criterion).

	AC	EC	IU	PI	PPC	SC	TC	UB
AC	0.90							
EC	0.56	0.85						
IU	0.50	0.45	0.89					
PI	0.65	0.56	0.64	0.87				
PPC	0.61	0.69	0.55	0.76	0.81			
SC	0.68	0.72	0.47	0.64	0.67	0.84		
TC	0.39	0.42	0.45	0.43	0.60	0.47	0.83	
UB	0.44	0.44	0.85	0.62	0.50	0.45	0.36	0.91

Table 4. The summary of direct hypothesis testing.

No.	Hypothesis	Path Coefficient (β)	Std Error	t-value	p-value	Results
H1	Access Convenience → Intention to Use	0.24	0.09	2.54*	0.011	Supported
H2	Search Convenience → Intention to Use	0.02	0.11	0.13	0.897	Not Supported
H3	Evaluation Convenience → Intention to Use	0.07	0.10	0.75	0.454	Not Supported
H4	Transaction Convenience → Intention to Use	0.19	0.08	2.23*	0.026	Supported
H5	Possession/Post-Possession Convenience → Intention to Use	0.23	0.12	1.97*	0.048	Supported
H6	Perceived Innovation → Use Behavior	0.13	0.06	2.35*	0.019	Supported
H7	Intention to Use → Use Behavior	0.77	0.05	14.00***	0.000	Supported

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Significant at the level 0.05 level.
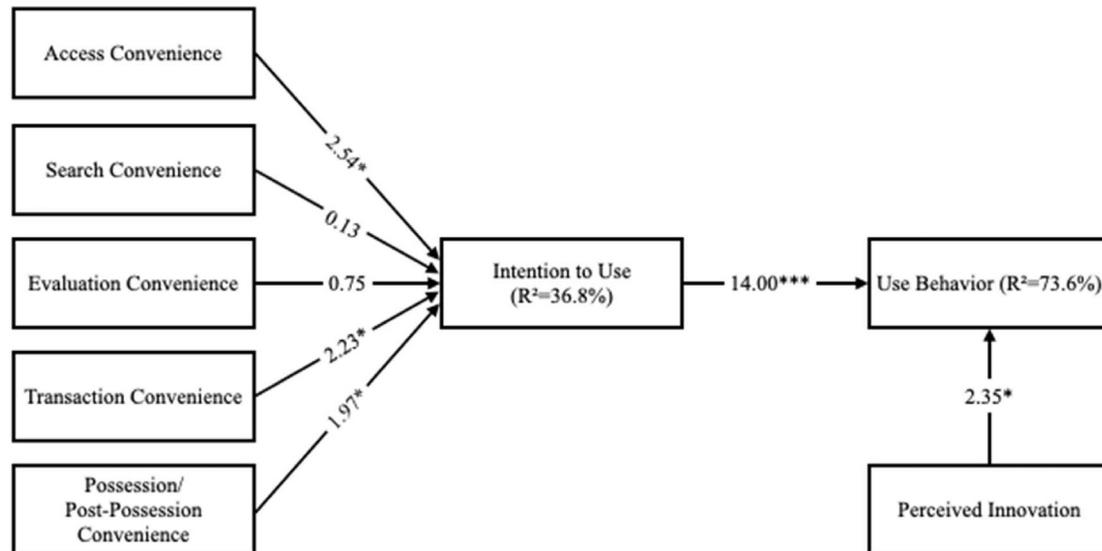
Fig. 2. Model analysis results.

effort required to avail banking transactions over mobile banking platforms.

Possession/post-possession convenience (H5) also has a significant impact on mobile banking adoption. This finding is also consistent with previous research (Shankar and Rishi 2020). In the context of mobile banking, possession/post-possession convenience refer not only to availing the service but also to receiving the service in case consumers face any issues. Hence, this suggests that if consumers have a substantial degree of possession/post-possession convenience, consumers might be inclined to adopt and use mobile banking services.

The research results indicate that search convenience (H2) and evaluation convenience (H3) do not have a significant impact on the acceptance of mobile banking services. These findings are also consistent with prior studies (Reimers and Chao 2014; Shankar and Rishi 2020). According to Jebar-ajakirthy and Shankar (2021), due to the fact that all banks provide similar products and services, search convenience and evaluation convenience have less impact on the acceptance of mobile banking apps. Besides, seeking information on products, services, and feedback can be similar for both mobile banking users and non-users.

According to the results, perceived innovation has been conceptualized as one of the predispositions to adopting and using new technologies. The findings are in accordance with existing studies (Kim, Mirusmonov and Lee 2010). Study results illustrate that consumers with innovative characteristics tend to make use of mobile banking apps. Additionally, perceived innovation has a significant positive

impact on the use behavior of mobile banking apps. This means that customers who perceive themselves as 'innovators' are more likely to continuously use mobile banking services. Finally, the results indicate that the intention to use mobile banking services has a significant positive impact on consumers' use behavior. This finding is also consistent with prior research in the banking service sectors (Ivanova and Kim 2022; Thusi and Maduku 2020; Venkatesh, Thong, and Xu 2012).

6. Conclusion

In Central Asian countries, the adoption of mobile banking technologies is expanding with rapid smartphone penetration. Lee and Marlowe (2003) accentuate that intensified competition among financial institutions highlights the importance of customer decision-making. This research empirically evaluates the influence of online convenience on acceptance intention and use behavior; and the impact of perceived innovation on use behavior. In the context of mobile banking, recent studies have scrutinized the relationship between online convenience dimensions and behavioral intentions. Hence, this research included a new variable, the perceived innovation. Having this variable seemed reasonable since the respondents of this survey are from the younger generation (93.9% of respondents are aged 17−25), who were raised during the digital boom; also, they rely on digital technologies for most aspects of their lives (Kymäläinen, Seisto and Malila 2021).

This research maintains theoretical and managerial implications. Theoretically, there are two major

contributions to the existing knowledge. Firstly, this study contributes to the literature on online convenience and the acceptance of banking technologies in Mongolia. The model of this study presents a 36.8% variance in intention to use and a 73.6% variance in use behavior. According to Chin (1998), R^2 values of 73.6% and 36.8% are identified as substantial and moderate, respectively. Similarly, recent studies indicated a 57.8% variance in use behavior (Shankar and Rishi 2020). In other words, the proposed research model has meaningful explanatory power and thus enhances the scant literature on multidimensional online convenience in the context of mobile banking.

Moreover, this study is one of the first to survey the impact of the perceived innovation on use behavior. The results show that perceived innovation is a strong predictor of use behavior among young bank clients. Earlier studies pinpointed the importance of perceived innovation in the pre-adoption stage (Lin 2011; van Klyton, Tavera-Mesías, and Castaño-Muñoz 2021), however, this study considers the impact of perceived innovation in the post-adoption phase.

There are managerial implications of this study as well. According to the results, some important strategies need to be implemented to improve the overall online convenience of mobile banking services. This will provide an understanding for decision-makers in banks on how consumers' experience of convenience can lead to technology acceptance and use. For instance, in order to enhance access convenience, banks should deliver services in which customers can have guaranteed access from anywhere and at any time. This can include a secure login to a mobile banking account via different electronic devices. Following this, with the aim to improve transaction convenience, banks should offer fast and reliable operations for payment and money transfer transactions. Moreover, customers need to get assurance of security and successful completion of transactions. Possession and post-possession convenience further play a significant role in the acceptance of banking technologies as well. Therefore, banks should ensure that if mobile banking users experience difficulties while or after availing the service, they can receive prompt service and resolution via the app. It can be argued that AI-based chatbots, online chats or 24/7 call centers can assist in enhancing possession and post-possession convenience.

7. Limitations and future research

We acknowledge that there are several limitations of this study, which can pave the way for future research opportunities. To begin with, the data was collected using a convenience sampling approach, hence the findings of this research cannot be generalized to the entire population. Furthermore, due to the low number of male students who responded to this survey, this research did not evaluate the moderating effects of gender. However, the following studies can assist to resolve this issue and anticipate a deeper understanding of customers' acceptance intentions based on the demographic variables. Lastly, this research did not measure the effects of other influencing factors that could possibly impact acceptance intention and use behavior in Mongolia. The proposed model could be further validated and modified in different settings within this geographical region.

Conflicts of interest

The authors declare that there is no conflict of interest.

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