EXAMINING THE DETERMINANTS OF THE CUSTOMER'S CONTINUANCE INTENTION IN MOBILE BANKING: INTEGRATING ECM AND D&M MODEL

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Abstract

The study study aims to investigate the determinants of the customer's continuance intention (CIN) to use mobile banking applications. The study established and validated an extended framework based upon the combination of the expectation-confirmation model (ECM) and DeLone & McLean information system success model (D&M Model), by including trust and self-efficacy. A total number of 448 users of mobile banking participated in this research. Based upon the applicable data gathered from a survey, structural equation modelling (SEM) was used to test the proposed research. The results indicate that perceived usefulness, confirmation, system quality, and information quality are the main predictors of satisfaction (SAT). Furthermore, the results revealed that SAT, trust, and self-efficacy significantly impact CIN.

Keywords: Expectation-Confirmation Model, DeLone & McLean Model, Mobile Banking, Continuance Use Intention

JEL Codes: M30, M31

MOBİL BANKACILIKTA MÜŞTERİNİN DEVAMLILIK NİYETİNİN BELİRLEYİCİLERİNİN İNCELENMESİ: ECM VE D&M MODELİNİN BÜTÜNLEŞTİRİLMESİ

Öz

Çalışmanın amacı, müşterinin mobil bankacılık uygulamalarını kullanmaya devam etme niyetinin belirleyicilerini araştırmaktır. Çalışma, güven ve öz yeterliliği dahil ederek beklenti-onay modeli (ECM) ve DeLone & McLean bilgi sistemi başarı modelinin (D&M Modeli) birleşimine dayalı genişletilmiş bir çerçeve geliştirmiş ve doğrulanmıştır. Bu araştırmaya toplamda 448 mobil bankacılık kullanıcısı katılmıştır. Anketten toplanan verilere dayanarak, önerilen araştırma modelini oluşturan değişkenler arası ilişkileri incelemek için yapısal eşitlik modellemesi (YEM) kullanılmıştır. Sonuçlar, algılanan kullanışlılık, doğrulama, sistem kalitesi ve bilgi kalitesinin memnuniyetin ana belirleyicisi olduğunu göstermektedir. Ayrıca, memnuniyet, güven ve öz yeterliliğin devam niyeti üzerinde pozitif yönde bir etkiye sahip olduğu bulgusuna ulaşılmıştır.

Anahtar Kelimeler: Beklenti-Teyit Modeli, DeLone ve McLean Modeli, Mobil Bankacılık, Devamlılık Kullanım Niyeti

JEL Kodları: M30, M31

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1. Introduction

The information revolution and technological advancements have made significantly changed and developed mobile services. Mobile device ownership has been growing steadily in recent years due to advances in mobile services. While the number of mobile devices in the whole globe is 14.9 billion in 2021, it is expected to reach 18.5 billion in 2025 (Statista, 2021). Communication and internet technology have led to the widespread use of the internet in mobile devices. With an increase of approximately 1.7 billion mobile internet users since 2014, about 4 billion people – 51% of the world population- were using mobile internet by the last day of 2020 (GSMA, 2021). Broad penetration of mobile devices and mobile broadband access brought stunning changes to the banking industry. Depending on these technological changes, financial institutions have adapted to mobile banking to provide better customer service and gain competitive advantage.

Mobile banking (M-BNKNG) is accessing mobile banking networks for financial services via the Internet on many different mobile devices used today such as mobile phones, tablets or other types of mobile devices. With the help of M-BNKNG, users can conduct interactive transactions such as bill payment, financial management, fund transfer, and downloading bank statements (Zhou, 2012; Rahi, Mansour, Alharafsheh and Alghizzawi, 2021). The application of banking to mobile technologies has made the services offered by financial institutions to customers easier and brought efficiency to the banking sector (Riquelme and Rios, 2010). M-BNKNG benefits customers with its ubiquity, interaction, flexibility, and accessibility features (Giovanis, Assimakopoulos and Sarmaniotis, 2018). M-BNKNG services free users from time and place-related restrictions and enable them to use M-BNKNG applications anytime and anywhere. M-BNKNG users can complete their banking transactions without going to ATMs and bank branches that are further away from their locations. This situation offers mobile banking users an advantageous and convenient cost and time savings. This technology revitalizes the bank's business by lessening their expenses and expanding the service quality provided (Foroughi, Iranmanesh and Hyun, 2019).

The M-BNKNG has rapidly grown worldwide because of the information technology (InTe). Due to the advantages of mobile banking to users, Juniper Research (2019) reveals that approximately one-fourth of the world's population used related mobile services from their mobile phones in 2019. In the January-March 2021 period, 55.9 million people used mobile banking services and made 955 million mobile banking transactions in total in Turkey (TBB, 2021). Bank transactions are carried out through mobile banks rather than ATMs or bank branches because of the lower digital transactions cost than ATM or branch transactions (Albashrawi and Motiwalla, 2019). Despite the high mobile banking usage rates in Turkey, Bhattacherjee (2001) states that this high initial adoption is not adequate for long-term success, but that the users of information systems should show continued usage behaviour. Continuance intention (CIN) is specified as a person's choice to use a particular technology that they are currently using (Nabavi, Taghavi-Fard, Hanafizadeh and Taghva, 2016). The subject of CIN has become a noteworthy matter of study in the mobile banking, as the effort and costs of banks to acquire a new mobile banking customers are much higher than current users. (McIlroy and Barnett, 2000). Service providers must know the factors influencing users' CIN to use the M-BNKNG to increase the number of end users.

Extant studies have applied the theories of InTe adoption in technology acceptance model (TAM) (Albashrawi and Motiwalla, 2019; Asnakew, 2020) and expectation–confirmation model (ECM) (Susanto, Chang and Ha, 2016; Kumar, Israel and Malik, 2018; Foroughi et al., 2019; Rabaa'i and AlMaati, 2021; Rahi et al., 2021) to understand the antecedents of CIN to use M-BNKNG. TAM is employed to describe the pre-adoption behaviours of users and has several limitations, while ECM comprehends the continuous usage behaviours of users who take advantage of Internet banking (Joo, So and Kim, 2018; Bhattacherjee, 2001). Besides, DeLone and McLean (2003) developed the information system success model to verify the variables that superbly assess information system success. However, M-BNKNG CIN has rarely been studied compared to a large amount of research on initial adoption. To fill this gap, it is crucial to investigate the factors that affect the CIN of users in M-BNKNG using the ECM and DeLone & McLean information system success model (D&M Model). Due to the uncertainties and risks involved in mobile banking and the escalating importance of self-efficacy about

perceived behavioral control, trust and self-efficacy variables have been integrated into the two combined models.

In general, the primary purpose of this study is to explore the antecedents of CIN in M-BNKNG within the context of Turkey. This study integrates the ECM and D&M Model to test the hypotheses created in the new model and carries out an empirical study. In addition, self-efficiency (SEF) and trust (TRU) are also comprised as the determinants of CIN. Since the ECM consists of only three variables, perceived usefulness (PUS), confirmation (CON), and satisfaction (SAT), and mobile banking CIN, can be affected by many different factors, the ECM and D&M Model are combined. The study, including two model variables and SEF and TRU factors, contributes to the literature on M-BNKNG in two ways. Firstly, the study investigates M-BNKNG continuance intention, in line with the ECM and D&M Model. Secondly, the study extends the models by including self-efficiency and trust to provide a superior insight of CIN in mobile banking.

The structure of the study is as follows. In Section 2 and Section 3 the study presents literature review about ECM, D&M Model, research model and hypotheses development. Section 4 covers sampling and data collection process. Section 5 presents data analysis and results. Finally, last section involves discussion, research conclusion, practical and theoretical implications, limitations and future research directions.

2. Literature

2.1. ECM

Bhattacherjee (2001) introduced the ECM by extending the Consumer satisfaction-dissatisfaction model (CS/D) proposed by Oliver (1980). CS/D model focused on post-purchase behaviour by explaining the link between user SAT and purchase. In the CS/D model the user's intention is the processes of acknowledgement, experience, and continued use (Oliver, 1980). Disconfirmation, occurring based on the comparison of performance of the product during use and users' expectations about a product, causes customer to be satisfied with the relevant product and thus impacts repurchase intention in the CS/D model.

ECM explains user satisfaction level and information systems CIN to use. In the model, user SAT is the most noticeable variable that influences user’s intention for continuous use. CON and PUS are prime determinants of SAT. Besides, CIN use is impacted by PUS and user SAT (Bhattacherjee, 2001). PUS is a variable that represents the beliefs and expectations of individuals about use. Performance in the CS/D model was eliminated by Bhattacherjee (2001) since confirmation in ECM had the same effect on performance belief.

ECM has been used in several studies to understand users’ continued usage of InTe systems. Foroughi et al. (2019) applied the ECM in M-BNKNG, Susanto et al. (2016) in M-BNKNG services, Rahi and Ghani (2019) in internet banking (I-BNKNG), Chong (2013) in mobile commerce, Hsu and Lin (2015) in mobile applications, Tam, Santos and Oliveira (2020) in mobile applications to investigate post-acceptance and post-consumption expectation factors. In Turkey, Altunbaş (2017) employed ECM to understand the factors affecting the preference of the mobile learning applications. Since studies shows that ECM effectively determines user SAT and CIN within the context of banking and mobile commerce, this study adopts ECM as a theoretical base.

2.2. D&M Model

D&M Model introduced by the DeLone and McLean (1992) was based on a study by Mason (1978). Mason (1978) enlarged the mathematical theory of communications of Shannon and Weaver’s (1949) effectiveness level into three categories. Based on the work of Mason (1978), DeLone and McLean (1992) developed the classification of InTe system achievement. The first emerging D&M model’s variables, such as system quality (SQU), information quality (IQU), user SAT, explain the success of information system (DeLone and McLean, 1992). DeLone and McLean (2003) updated the D&M Model by combining service quality factors. Since DeLone and McLean (2003) claim that SQU

and IQU are appropriate for measuring the information system success and study concentrates on individual's use of M-BNKNG, service quality is excluded from the study.

There are more than a few applications applying the D&M Model, such as mobile banking (Sharma and Sharma, 2019), online commerce (Chen and Cheng, 2009), and mobile learning (Almasri, 2016). Some studies show that D&M Model can bring the other models together. Tam and Oliveira (2016) merge D&M Model with task technology fit model to evaluate the influence of M-BNKNG on parties performance. Mansour (2020) integrated D&M Model and unified theory of acceptance and use of technology (UTAUT) to understand the determinants influencing Islamic banking user intention. Almasri (2016) proposed D&M Model and TAM to explore factors affecting the use of mobile learning.

2.3. Trust (TRU)

TRU refers to the personal belief of the individual that the service provider will fulfill its requirements (Giovanis et al., 2018). TRU is defined as trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis and Schoorman, 1995). TRU is an essential concept for mobile shopping as it lessens uncertainty (Wang, Ngamsiriudom and Hsieh, 2015). TRU comprises three beliefs: ability, integrity, and benevolence (Zahedi and Song, 2008). Ability implies that service suppliers have expertise to meet their obligations regarding the services they provide. Integrity is about honesty which means service suppliers do what they have said to customer and don't trick individuals about the service they offer. Benevolence indicates service providers consider their interests, and individuals' needs, wants and demands.

TRU has been extensively studied because of its essential role. Some studies have used TRU as determinant of the acknowledgement of mobile technologies adoption such as mobile commerce (Abu-Shanab and Ghaleb, 2012), mobile payment (Yan, Md-Nor, Abu-Shanab and Sutanonpaiboon 2009), mobile wallet (Shaw, 2014). Besides, existing research has revealed the effect of TRU on M-BNKNG user behaviour (Kim, Shin and Lee, 2009; Alalwan, Dwivedi and Rana, 2017; Sharma and Sharma 2019; Erdoğan, 2023). Kim et al. (2009) declared relative benefits, the propensity to TRU and structural reassurances are positively associated with initial TRU; initial TRU positively influences M-BNKNG's usage intention. Alalwan et al. (2017) extended UTAUT with TRU and claimed that Jordanian customers' behaviour intentions towards M-BNKNG were significantly affected by TRU. Sharma and Sharma (2019) extended the D&M Model and discovered the relationship of TRU with intention to use in mobile banking.

2.4. Self-Efficacy (SEF)

SEF is defined as people's belief in their ability to complete a particular undertaking productively (Bandurra, 1977). Compeau and Higgins (1995) proclaim that SEF is vital in users' adoption of new technological products and services. Compeau and Higgins (1995) discuss that when individuals use a new technological development, they have performance expectation based on job performance and personal outcome expectation, which can be called a sense of achievement. Bandura (1977) declares that SEF may stem from roots such as performance accomplishments and physiological states. Banking customers with sufficient level of SEF will likely to realize these mobile services as beneficial (Alalwan, Dwivedi, Rana and Williams, 2016).

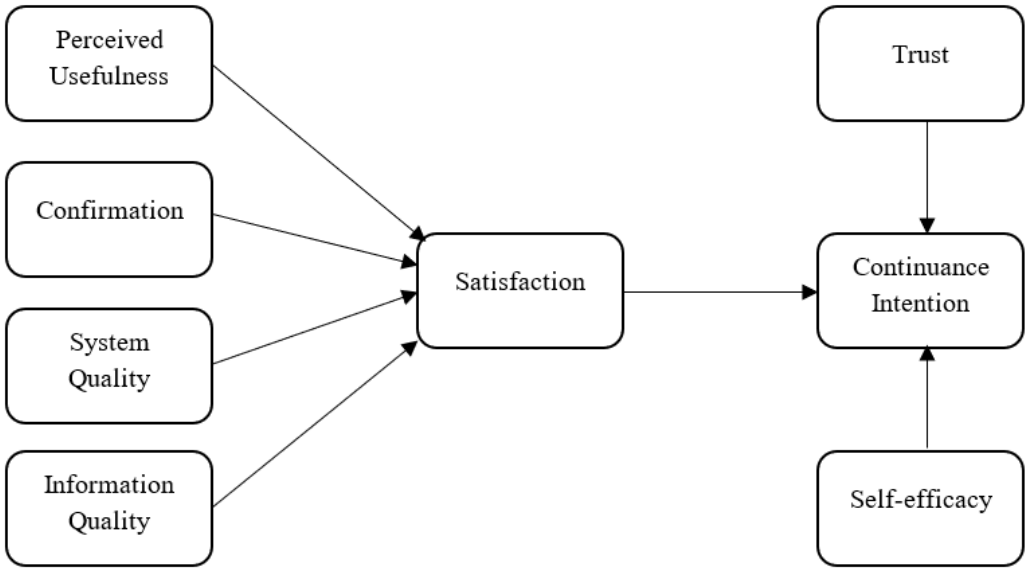
Extant studies have used the SEF as a determinant to comprehend users' consumer adaption in information systems such as M-BNKNG (Alalwan et al., 2016), I-BNKNG (Alalwan, Dwivedi, Rana, Lal and Williams, 2015) and mobile data service (Yang, 2010). Alalwan et al. (2016) suggested a model based on the TAM and found that SEF impacts PUS and perceived ease of use. Alalwan et al. (2015) examined the main factors influencing the I-BNKNG adoption behaviors and indicated SEF is the predictor of Jordanian customer intention of I-BNKNG.

3. Research Model and Hypotheses

Current study researches the factors influencing the CIN of users of M-BNKNG services in Turkey. The developed research model with PUS, CON, SQU, IQU, SAT, TRU, SEF and CIN is illustrated in Figure 1. This study attempts to combine ECM and D&M Model within the context of M-

BNKNG. According to the ECM, SAT is impacted by PUS and CON and SAT is the predictor of CIN. In the D&M Model SQU and IQU are the drivers of SAT. TRU and SEF are added to the proposed model.

Figure 1. Research Model



PUS is defined as "users' perceptions of the expected benefits of using an information system" (Davis, 1989). PUS in TAM affects the intention to adopt information technology and PUS in ECM influences the CIN to use the information technology (Davis, 1989; Bhattacherjee, 2001). PUS is a determinant in determining SAT in M-BNKNG (Yuan , Liu, Yao and Liu, 2016; Foroughi et al., 2019) and I-BNKNG (Rahi and Ghani, 2019). It signifies that when the PUS of M-BNKNG services rises, the users' SAT level escalates. Accordingly, the study suggests the following hypothesis, which includes the PUS and SAT relationship:

H1: PUS has a positive effect on SAT in M-BNKNG.

Bhattacherjee (2001) defined CON as a person's assessment of the expected advantages of using InTe services. If the M-BNKNG service performance outperforms the user's expectation, user post-adoption expectations are confirmed (Yuan et al., 2016). Earlier studies investigating ECM in information system studies have revealed that CON impacts on SAT in M-BNKNG (Susanto et al., 2016; Kumar et al., 2018; Rahi et al., 2021). When the actual usage experience remains the same or exceeds the user's pre-purchase expectation, CON leads to user SAT. Thus:

H2: CON has a positive effect on SAT in M-BNKNG.

SQU, the factor of D&M Model, is defined as "a measure of the success of the service provided from a technical point of view" (Delone and McLean, 2003). SQU includes the easy to use, easy navigation, system tractability, and system trustworthiness of the InTe systems. (Zhou, 2013; Delone and McLean, 2003). Compared to the computer, mobile devices have some constraints such as small screen size, poor navigation, and inconvenient keyboard. Thus, increasing the system quality can deal with these concerns. Extant research, drawing on the D&M Model, found that SQU affects the use of M-BNKNG (Baabdullah, Alalwan, Rana, Kizgin, and Patil, 2019) and the intention to adopt M-BNKNG (Mansour, 2020). Studies which propose using D&M Model reveal that SQU influences SAT in mobile banking (Chung and Kwon, 2009; Tam and Oliveira, 2017; Motiwalla, Albashrawi and Kartal, 2019). Easy-to-use and flexible mobile banking services can boost users' SAT levels. Thus, the following hypothesis, which includes SQU and SAT relationship, is formulated:

H3: SQU has a positive effect on SAT in M-BNKNG.

IQU "measures semantic success, which is the success of the information in conveying the intended meaning" (Delone and Mclean, 2003). IQU includes system attributes such as relevance, correctness, competence, and appropriateness (Zhou, 2013). Since the mobile phone screen is small, the inability to properly design the information unfavourably influences the usage of mobile banking (Lee and Chung, 2009). IQU of mobile banking should be correct, understandable, and consistent. Mansour (2020) found that IQU significantly influences the intention to adopt mobile banking. Studies, developing a framework based upon the D&M Model, reveals that IQU has significant impact on SAT in M-BNKNG services (Tam and Oliveira, 2016; Tam and Oliveira, 2017; Sharma and Sharma, 2019). Thus, following hypothesis is developed, which includes the IQU and SAT relationship:

H4: IQU has a positive effect on SAT in M-BNKNG.

User SAT is defined as "the extent to which an application helps the user create value for the firm's internal or external customers" (Delone and Mclean, 2003, p.20). SAT is an essential determinant in post-adoption behavior and affects the information system use (Bhattacherjee, 2001). Earlier research within the context of M-BNKNG has revealed the significant effects of users' SAT with CIN in ECM (Susanto et al., 2016; Kumar et al., 2018) and D&M Model (Sharma and Sharma, 2019; Motiwalla et al., 2019). If users' M-BNKNG SAT is extreme based on their preceding usage experience, they will go on using Internet banking. Thus, the following hypothesis is derived for SAT and CIN:

H5: SAT has a positive effect on CIN in M-BNKNG.

TRU can be defined as loyalty to the service provider based on the user's expectation for future service offerings (Zhou, 2013). Prior studies have confirmed that the TRU significantly impacts behavioural CIN from various technological perspectives, such as in Internet banking (Rahi et al., 2021) and mobile purchases (Gao, Waechter and Bai, 2015). In mobile banking, TRU has a particular position in pushing individual CIN using the services (Hanafizadeh, Behboudi, Koshksaray and Tabar, 2014; Asnakew, 2020). A high level of TRU gives rise to user CIN in mobile banking applications. It means that if TRU of M-BNKNG services is high, the CIN of the user will soar.

H6: TRU has a positive effect on CIN in M-BNKNG.

SEF refers to the capabilities and skills that the user is aware of after using the relevant product and service (Foroughi et al., 2019). In the study SEF is related to the person's stable decision to carry on employing mobile banking services. Lots of studies have approved a positive connection between SEF and CIN in M-BNKNG (Susanto et al., 2016; Foroughi et al., 2019) and mobile shopping (Thakur, 2018). It is estimated that SEF plays a substantial role in individuals' CIN to make use of M-BNKNG. Thus, the study derives following hypothesis about SEF and CIN relationship:

H7: SEF has a positive effect on CIN in M-BNKNG.

4. Methodology

4.1. Sampling and Data Collection

As the study investigates M-BNKNG user CIN, the survey was conducted on mobile banking customers in Turkey. The survey was administered to the people who used M-BNKNG services and questioned for persons eagerness to participate in the study. If the parties reached an agreement, they were instructed to furnish information about their CIN towards M-BNKNG applications. The survey data were collected for 15 days from 14 September 2022 to 28 September 2022 from customers who used mobile banking channels. In total, 469 surveys were collected. 21 responses were excluded due to the incomplete answers, thus samples of 448 respondents were ultimately used for further analysis. Most respondents are the male (51.56%) and aged between 29-38 years (32.59%). About 27.46 percent of the respondents have used M-BNKNG for 3-5 years, and 33.04 percent of respondents have used mobile banking 2-4 times a week. Table 1 shows the profile of mobile banking respondents who participated in the study.

Table 1. Responder's Profile

Demographic Factors	Category	Frequency	Percentage
Gender	Male	231	51.56%
	Female	217	48.44%
Age	18-28	101	22.54%
	29-38	146	32.59%
	39-48	120	26.79%
	Above 48	81	18.08%
Mobile Banking Usage	Below 1 year	69	15.40%
	1-2 years	101	22.54%
	3-5 years	123	27.46%
	Above 5 years	155	34.60%
Weekly usage of mobile banking	Once a week	139	31.03%
	2-4 times	148	33.04%
	5-6 times	107	23.88%
	More than 7	54	12.05%

4.2. Measurements

The study surveyed M-BNKNG users to collect the empirical data for hypotheses testing. In the first part of the survey, the study focused on the demographic characteristics of M-BNKNG participants, and the last part of the survey includes items to measure the PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN in the research framework. All measurement items about M-BNKNG were adapted from Bhattacherjee (2001), Kim et al. (2004), Vatanasombut, Igbaria, Stylianou and Rodgers (2008) and Susanto et al. (2016). PUS, CON, SAT, and CIN scales were obtained from Bhattacherjee (2001). SQU and IQU were drawn from Kim et al. (2004). Four items of TRU were adopted from Vatanasombut et al. (2008) and four items of SEF were taken from Susanto et al. (2016). The items about M-BNKNG were measured using a seven-point Likert scale from “strongly disagree” to “strongly agree”.

5. Results

The study model investigating users' CIN in M-BNKNG was tested using structural equation modelling (SEM) by AMOS 24. Considering the recommendations of Anderson and Gerbing (1988) for researchers using the structural equation model, the study conducted Confirmatory Factor Analysis (CFA) to test the M-BNKNG’s measurement model including PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN variables. It assessed the structural model by testing relationships between PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN constructs.

5.1. Measurement Model

The study calculated the measurement model in terms of six different indices within the recommended level of Hair et al. (2010) and the overall model was considered accepted since all the model-fit indices meet the acceptance thresholds (GFI=0.928; AGFI=0.914; NFI=0.933; CFI=0.978; RMSEA=0.034).

The results are presented in Table 2. Factor loading of items outstrips cut-off point of 0.50, and they are statistically significant at lower than 0.001 (Hair et al., 2010). It can be observed from Table 2 that the Cronbach’s Alpha and composite reliability (CR) values for PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN range from 0.796-0.918 and 0.802–0.920 respectively, which are above the recommended range of 0.7. Average variance extracted (AVE) values for PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN constructs are greater than corresponding level of 0.50 (Hair et al., 2010). Consequently, the results of M-BNKNG indicate the reliability and convergent validity of the data.

Table 2. Measurement Model Evaluation

Construct	Item	Loading	Cronbach's Alpha	CR	AVE
Perceived Usefulness	PUS1	0.772	0.869	0.870	0.692
	PUS2	0.829			
	PUS3	0.891			
Confirmation	CON1	0.696	0.796	0.802	0.577
	CON2	0.686			
	CON3	0.880			
Service Quality	SQU1	0.749	0.877	0.878	0.644
	SQU2	0.764			
	SQU3	0.831			
	SQU4	0.862			
Information Quality	IQU1	0.705	0.865	0.868	0.624
	IQU2	0.825			
	IQU3	0.889			
	IQU4	0.728			
Satisfaction	SAT4	0.883	0.918	0.920	0.744
	SAT3	0.789			
	SAT2	0.895			
	SAT1	0.881			
Continunace Intention	CIN1	0.758	0.855	0.857	0.667
	CIN2	0.828			
	CIN3	0.862			
Self-efficacy	SEF1	0.853	0.883	0.884	0.656
	SEF2	0.835			
	SEF3	0.787			
	SEF4	0.764			
Trust	TRU4	0.834	0.895	0.896	0.684
	TRU3	0.763			
	TRU2	0.817			
	TRU1	0.891			

To check the discriminant validity using the Fornell and Larcker (1981) criterion, the study compares the correlations among the variables with the square roots of the AVE values. Table 3 shows that calculated AVE square root values, ranging between 0.759-0.862, are greater than all correlations between PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN constructs. From the analyses of PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN constructs and their items, it is deduced that the study's measurement model is reliable and valid.

Table 3. Discriminant Validity

	PUS	CON	SQU	IQU	SAT	CIN	SEF	TRU

PUS	*0.831*							
CON	0.230	*0.759*						
SQU	0.217	0.212	*0.802*					
IQU	0.119	0.086	0.075	*0.789*				
SAT	0.290	0.303	0.388	0.249	*0.862*			
CIN	0.124	0.133	0.257	0.181	0.542	*0.816*		
SEF	-0.125	-0.114	-0.015	0.018	-0.098	0.124	*0.809*	
TRU	0.084	0.082	0.125	0.076	0.224	0.473	0.084	*0.827*

Note: Diagonal terms (in italic) are the square roots of the AVE

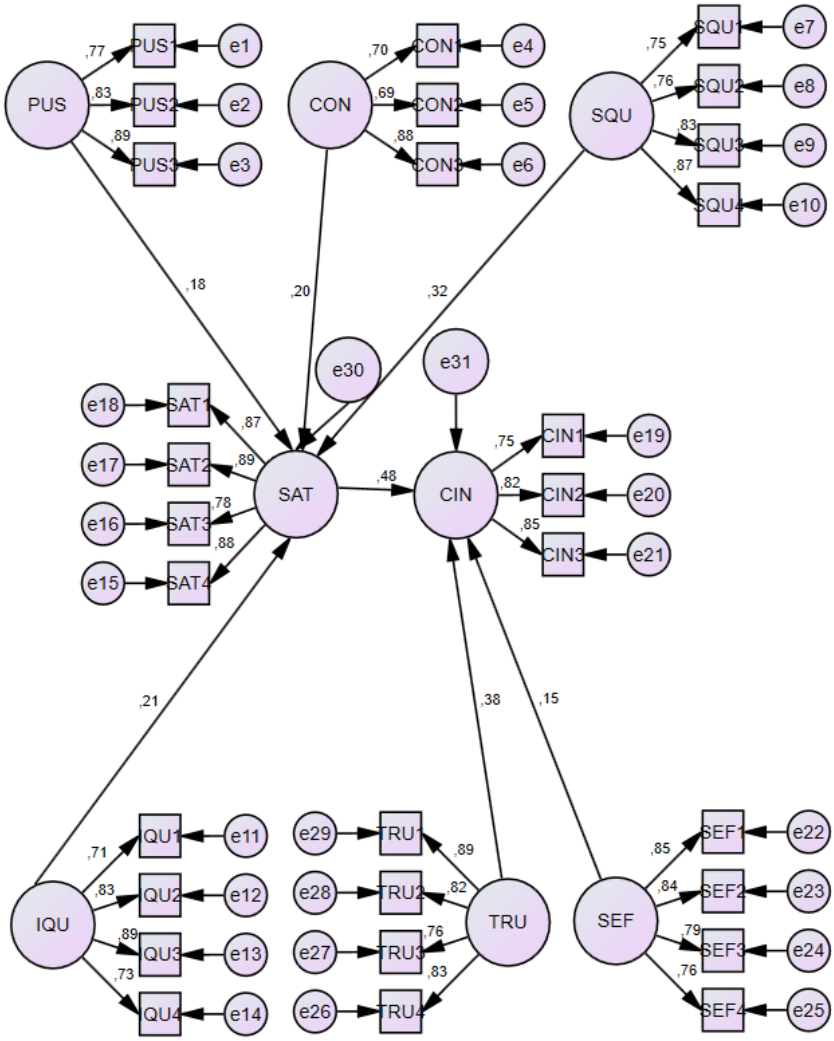
5.2. Structural Model

The fit indices of the structural model of the study about M-BNKNG are noticed to be within their appropriate level ($\chi 2/df=1.522$; GFI=0.915; AGFI=0.902; NFI=0.922; CFI=0.969; RMSEA=0.039). Since the six model fit measures meet the evaluation criteria (Hair et al., 2010), the structural model reflected a excellent fit with the data accumulated. According to Table 4, all hypotheses involving PUS, CON, SQU, IQU, SAT, TRU, SEF CIN are supported. Results showed SAT is predicted by PUS ($\beta_{PUS-SAT} = 0.177$, $t = 3.662$, $p < 0.001$), CON ($\beta_{CON-SAT} = 0.202$, $t = 4.025$, $p < 0.001$), SQU ($\beta_{SQU-SAT} = 0.320$, $t = 6.402$, $p < 0.001$), and IOU ($\beta_{IQU-SAT} = 0.205$, $t = 4.211$, $p < 0.001$) hence, H1, H2, H3, and H4 are supported respectively. SAT ($\beta_{SAT-CIN} = 0.484$, $t = 9.633$, $p < 0.001$), TRU ($\beta_{TRU-CIN} = 0.377$, $t = 7.712$, $p < 0.001$), and SEF ($\beta_{SEF-CIN} = 0.147$, $t = 3.225$, $p < 0.01$) are statistically significant in explaining CIN, thus confirming hypotheses H5, H6, and H7. The R2 values are 0.223 and 0.411 for the SAT and CIN, respectively. In other words, the results show that the model can explain 22.3% of the variance in SAT and 41.1% of that in CIN.

Table 4. Results of Hypotheses Tests

Hypothesis	Relationship	Standard Coefficient	SE	t-value	p-value	Decision
H1	PUS -> SAT	0.177	0.040	3.662	0.000	Supported
H2	CON -> SAT	0.202	0.046	4.025	0.000	Supported
H3	SQU -> SAT	0.320	0.043	6.402	0.000	Supported
H4	IQU -> SAT	0.205	0.051	4.211	0.000	Supported
H5	SAT -> CIN	0.484	0.052	9,633	0.000	Supported
H6	TRU -> CIN	0.377	0.036	7.712	0.000	Supported
H7	SEF -> CIN	0.147	0.037	3.225	0.001	Supported

Figure 2. AMOS Output of Structural Model



6. Discussion and Implications

6.1. Discussion

This study examined the leading factors influencing the CIN of use of M-BNKNG by applying an integrated model of ECM and D&M Model. The study extended the proposed model with the TRU and SEF factors. The investigation found that hypotheses involving PUS-SAT, CON-SAT, SQU-SAT, IQU-SAT, SAT-CIN, TRU-CIN and SEF-CIN relationships are accepted.

PUS was found to be the meaningful factor determining CIN to adopt M-BNKNG. This result, including PUS and SAT link, is consistent with the results of earlier M-BNKNG's studies (Yuan et al., 2016; Foroughi et al., 2019). When the users perceive that M-BNKNG is beneficial, they will be more likely to have a higher SAT. CON-SAT relationship, another result obtained from the research, is coherent with previous findings (Kumar et al., 2018; Rabaa'i et al., 2021; Rahi et al., 2021). If the M-BNKNG's service level exceeds user's expectation, this is expected to increase user SAT.

The results obtained from data analysis demonstrate that SQU and IQU are the positive determinants of the user SAT. SQU and IQU relationship is consistent with several earlier studies (Tam and Oliveira, 2017; Motiwalla et al., 2019; Sharma and Sharma, 2019). These findings imply that the elevated level of SQU and IQU delivered by M-BNKNG's providers boosts the level of SAT. When mobile banking is straightforward and provides user with sufficient information, it will enhance users' SAT level.

Hypothesised results showed SAT significantly influenced on user CIN to adopt M-BNKNG This result for M-BNKNG is consistent with prior findings (Kumar et al., 2018; Motiwalla et al., 2019). When the users are satisfied and pleased with the M-BNKNG services, they will always attempt to use

mobile banking services at every possibility. Besides, the outcomes of this study indicated that TRU and SEF influence mobile banking potential users' CIN. The relationships betweem TRU-CIN and, SEF-CIN about M-BNKNG are also in line with the findings of other studies (Hanafizadeh et al., 2014; Foroughi et al., 2019; Asnakew, 2020). The present findings suggest that users with higher TRU and SEF are more likely to have higher CIN in making use of M-BNKNG. Users are likely to feel a higher level of risk and insecurity, as users do not interact directly with bank staffs when using mobile banking services (Susanto et al., 2016). Service providers of mobile banking that always present trustworthy information leads to continuance intention in users. Besides, users who can perform mobile banking transactions by themselves continue to use mobile banking with a higher probability than other customers.

6.2. Implications

This study, which proposes a model including PUS, CON, SQU, IQU, SAT, TRU, SEF, CIN variables, offers various contributions to the theory and M-BANKNG literature. Firstly, to the the author's knowledge, this study provides a theoretical insight into the factors contributing to CIN in mobile banking using ECM and D&M Model as a base model. Although mobile banking adoption has received significant attention, users' post-adoption behaviour, CIN, has hardly ever been examined within the context of M-BNKNG. The study has strengthened the existing understanding of M-BANKNG user behaviour from a continuance perspective. Secondly, study extends the base model by integrating TRU and SEF factors. It generates new quantifiable information about the determinants that influence the CIN of Turkish users of M-BNKNG. By extending the models, study better explains the CIN of M-BNKNG applications users.

The present study provides some insights for service providers of mobile banking. First, service quality, information quality, confirmation and perceived usefulness should be increased to rise the user's mobile banking satisfaction. These findings suggests that banks must design better mobile banking services by focusing on these factors. This result is possibly one of the most important managerial lessons to be learned since executives and marketing managers nowadays are likely consider that as the processes in the M-BNKNG system become more steady, the significance of assessing the overall quality of the system reduces. Banks can improve system quality by designing easy-to-navigate applications and concentrating on the visuals of mobile banking applications. Reliable, accurate, sufficient, and comprehensive information is vital to mobile banking customers. Besides, information relevant to user's needs and not outdated may improve the information quality. Banks should serve in a way that is beneficial to the customer and should enhance the user's living effectiveness by boosting system speed, lessening system down time, and adding features to the mobile banking application. The time saving and easy operation of M-BNKNG services raises the perceived usefulness. Service providers should fulfill the user's expectation, leading to satisfaction. The bank that does not meet the expectations will cause dissatisfied customers, and this will adversely affect continuance intention of the users. Second, the result of the study contributes the service providers to identify the determinants that give rise to continuous M-BANKNG use. By understanding the satisfaction, trust, and self-efficacy factors, banks can enhance user's intention to continue usage. Banks should also boost user's satisfaction by meeting their needs and wants. Banks should concentrate on developing trust on M-BANKNG services to preserve their customers. Banks may improve self-efficacy by providing frequently asked questions sections, call center, or support videos. When users can't perform the mobile bank transactions using a manual or help, service providers should emphasize the role of interface design.

7. Conclusions

As mobile banking is an emerging service, examining the factors that influence CIN is significant. Based on these purposes, the research aims to explore mobile banking user CIN with the extension of ECM and D&M Model. Findings of the study indicate that SQU has potent effect on users' SAT. Besides, IQU, CON and PUS significantly affects SAT. Likewise, the results revealed the impacts of SAT, TRU, and SEF on customers' CIN with M-BNKNG services. The results of this research contribute to the literature on M-BANKNG and deliver important knowledge to service provider of mobile banks.

This study has several limitations. First, this study concentrated on Turkish M-BANKNG services users. Future studies should employ the proposed model in new countries as people living in other countries may have different thoughts, assessments, and reactions to M-BANKNG. Second, the proposed model explains 41.1% of variance in customer's CIN toward use of M-BANKNG, implying that some critical predictors may be missing. Future research may add other factors such as compatibility, credibility, and cost.

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