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Quality Aspects of Mobile Banking — Public and Private Sector Banks in India

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ABSTRACT

In response to the increased global competition within the banking industry, financial institutions are diligently exploring the deployment of new banking technologies to improve both the quality of their banking infrastructure and customer. **The purpose of this study** is to assess the quality aspects (information quality and service quality) of mobile banking on perceived satisfaction and word of mouth and the variation in the proposed relationship between public and private sector banks in India. **The research methodology**: for data collection, a survey was conducted on 230 mobile banking users by using a random sampling technique. For analysis we used partial least square structural equation modelling with the help of Smart PLS 4.0. The result depicts that perceived satisfaction is significantly impacted by service quality, and also the impact of perceived satisfaction on word of mouth is positively significant, which indicates the importance of quality parameters during the use of m-banking. Meanwhile information quality was found to have an insignificant effect on perceived satisfaction. The variation demonstrates that the impact of service quality on perceived satisfaction was stronger in the public sector banks than in the private sector banks. The findings of the study will help in improving retention rate of m-banking consumers and determining consumer preference in different sectors of banks.

Keywords: m-banking; information quality; Service Quality; Perceived Customer satisfaction; IS Success Theory; word of mouth; Public sector banks; Private sector banks; Delone and Mclean model

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INTRODUCTION

Mobile banking is an essential aspect of the bank's services and its proliferation allows it to become a preferred electronic method for daily life and business activities [1]. Today, almost all banks offer similar services, but the quality of service is the basis that makes a differentiation between them, and as a cutting-edge technology, mobile banking, helps banks attain those competitive goals [2]. Mobile banking allows banks to offer more competitive and value-added financial services including interactivity, convenience, availability, etc., overcoming geographical and time limits and reducing the cost of cash transactions which accounts for 1.7% of India's gross domestic product [3]. The proliferation of digital banking tools not only helps in enhancing digital financial inclusion but also facilitates cost-effective payment methods by reducing the costs of transactions to one-fiftieth of conventional banking costs, one-tenth of ATM costs, and half of internet banking costs, and thereby improving the quality of life for citizens.[1] It can also be substantiated through the Reserve Bank of India report [4] (2017–2018, 2022–2023) where the value of m-banking transactions in public and private sector banks have increased from rupees 935.8 million to rupees 22 522.9 million from 2017–2018 to 2022–2023 in India and helps the country to record total digital transactions of rupees 72 billion in the financial year 2022.[2]

Banks are accountable for the quality of service they provide and for any technical problems that affect not only the customers' experience with the bank's services but also the bank's reputation. From the consumer's point of view, the quality of m-banking services reflects the overall opinion of m-banking regarding the advantages and potential of mobile content delivery [5]. However, nowadays matching customers' expectations is no longer enough, banks should exceed those to retain customers for the long term [6]. Thus, retaining consumers of m-banking helps banks to streamline marketing activity, maintain client trust, and at last gain a competitive edge [7]. Ultimately, banks must give importance to their quality of services to promote the convenience of customers

[1] URL: https://www.rbi.org.in/Scripts/Statistics.aspx (accessed on 23.06. 2022).

[2] URL: https://www.statista.com.u (accessed on 15.06.2022).

which helps in anticipating an optimistic future in which offering a variety of technological options will boost customer satisfaction and competitiveness [8]. Several studies also suggest that different dimensions like quality aspects [8], information quality [9], competition [10], and word-of-mouth [10], security concern [11] are the areas that need more attention in m-banking.

Thus, the current study is an attempt to examine the service quality and information quality of mobile banking and its effect on customers' perceived satisfaction and how it affects word of mouth in the context of public and private sector banks in India. The findings of the study will help banks to gain a competitive advantage over the quality of services because improved service quality is a need of organizations of all sizes and eventually leads to enhance consumer satisfaction and also active participation in banking services through mobile banking which will foster service continuity and enriches consumers' perception that service providers have the ability and willingness to deliver as promised [12].

In this study, we are examining the perceived quality aspects of m-banking during the actual use of banking products and services, for this the information system (I/S) theory, De Lone & Mclean model (1992, 2003) which has been widely used in various m-banking studies [13–18] was found suitable for the study. Therefore, the novelty of this empirical study is first, to extend the theoretical foundation of quality parameters (information quality and service quality) of information systems by adding one more success dimension (word of mouth) that affects not only banks' reputation but also helps in attracting potential and retaining existing consumers m banking customers. Second, to assess the variation in the proposed quality parameters of m-banking between public and private sector banks in India to validate their impact on customer's perceived satisfaction and word of mouth to promote a healthy competition among financial institutions.

This is how the paper is structured down. The next section provides a theoretical background followed by a review of literature comprising a synthesis of prior work, in addition to the development of hypotheses and then the research methodology that is presented in further in detail. Lastly, the study concludes with discussion and conclusion, theoretical and managerial implications and the last limitations and scope for future studies.

THEORETICAL BACKGROUND

The original Delone and McLean model, 1992 [19] is based on six different aspects of the information system: "System Quality", "Information Quality", "Use", "User satisfaction", "Individual impact" and "Organizational impact". Since 1992, the De Lone and McLean Information system (IS) success Model has been widely used to assess the success of information systems in the context of m- banking studies [10, 12, 13]. In the year 2003, by incorporating service quality and clubbing the individual and organizational impact into net benefits, it was reformulated to set the benchmark for the specification and justification of the dependent variable's measurement in information system studies. The updated multidimensional D & M model (2003) [20] explained the proposed relationships between success dimensions in a procedural way. It means quality parameters affect user satisfaction in a process sense, resulting in some net benefits to the users. Thus, we used this model in a procedural sense, that is, how quality parameters affect perceived satisfaction and result in some WOM in a resultant manner. In this model, we use 'systems quality' and 'service quality' that examine the technical aspect of mobile banking success; 'information quality' assesses semantic; and 'use', 'user satisfaction', and 'net benefit' examine effectiveness success. The extension of the Delone and Mclean I/S Success model is important and admissible in the Indian reference [13] added trust as an extension of the I/S Success model and found satisfaction and intention to use stand as two important precedents of actual usage, and satisfaction mediates the relationship between service quality, information quality, and trust to use m-banking. We found Delone and McLean model appropriate in the study as compared to other models since it provides a better explanation of the quality aspects of information systems in terms of measuring the effectiveness of m-banking and has been widely used in information technologies such as e-banking,

KMS, mobile banking, e-government system, e-commerce websites [13]. This study includes three constructs from D & M model: service quality, information quality, and customer satisfaction as a success dimension, and added Word-of- mouth to the framework (*Fig. 1*). WOM is also an important aspect while making high-risk purchases, consumers trust word-of-mouth more because pre-purchase information

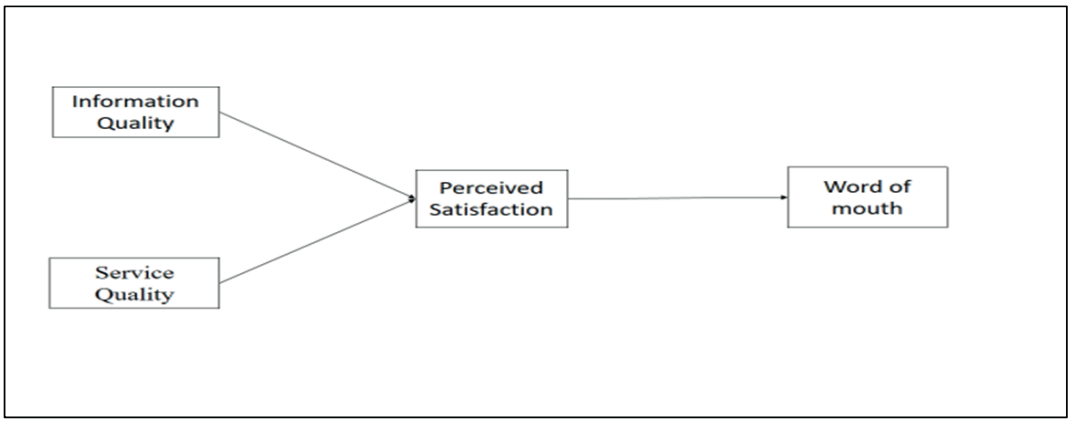

Fig. 1. **Research model for the study**

Source: Compiled by the authors (based on Delone & McLean model).

from others in the form of word-of-mouth either through social media or verbally or any other mode of communications reduces risk, especially for services while post-purchase word-of-mouth is used to help other consumers, prevent mistakes, express anger, or relieve anxiety [21].

LITERATURE REVIEW

Impact of Service Quality on Customer's Perceived Satisfaction

Consumers' service quality assessments are based on their expectations and how well service providers meet them effectively [22]. As customers' needs are changing, their service quality evaluations are also changing. Few studies have investigated service quality in the m-banking context [1, 5, 22–26]. C. Poromatikul et al. [27] found that service quality had a positive and significant impact on mobile banking customer satisfaction. C. Tam and T. Oliveira [12] confirm the importance of "service quality" in m-banking that leads to "customer satisfaction", "trust" and other factors of success. Mobile banking's service quality frame consumers' trust and satisfaction [16]. Service quality impacts the satisfaction and retention decision of customers. Customer satisfaction is a mental state that compares the results of customers' expectations before they buy something with their views after they buy it and banks arrange their business around these service gaps to stay competitive [26]. Customer satisfaction leads to continuation intention [27], Customer satisfaction and service quality strongly mediate the intention-to-use and actual-use relationship in m-banking [13].

Thus, we formulate the following hypothesis.

H1: There is a significant positive impact of perceived service quality on perceived customer satisfaction.

Impact of Information Quality on Customer's Perceived Satisfaction

M-Banking users are more satisfied and loyal if the information is high-quality. The quality of the information in m-banking is measured by the accuracy of the information provided [28]. Information quality includes relevance, sufficiency, accuracy, and timeliness [29, 30–32]. Mobile banking customer satisfaction is significantly affected by information quality [2]. Y. Chetioui et al. [33] found information quality affect users' attitudes toward technology. Information quality predicts satisfaction and intention for using mobile banking in Oman and found that service and information quality affects customer satisfaction and mobile banking adoption [15, 31, 34]. While some studies depict the contrary relationship between information quality on customer satisfaction, A. Trabelsi-Zoghlami [35] found a non-significant impact of information quality on the use of m-banking in Morocco during the pandemic. In the context of individual achievement in m-banking, users consider individual performance's importance and found that information quality affected satisfaction [34].

Thus, we proposed the following hypothesis.

H2: Information quality has a significant positive impact on perceived satisfaction.

Impact of Consumer Satisfaction on Word-of-Mouth

Nowadays offering a mobile application is not enough. Bank managers must invest in high-quality systems to

acquire their customers' trust and generate positive word-of-mouth (WOM) for the application and the bank [35]. The more loyal a brand's consumers are, the more likely they are to recommend it to others and make positive WOM [36]. Perceived satisfaction has a direct effect on users' recommendation to use technology [36]. To attain a positive attitude toward the use of mobile banking, word-of-mouth significantly affects factors that contribute to the adoption of mobile banking [11]. With the help of the Elaborated likelihood method, positive e-WOM (argument quality, valence, and consistency) significantly affect the intention to adopt m-banking [37]. In another study, it was found that information quality with other factors like ease of navigation, personalization level, and rewards had a significant relationship between the use of m-banking and e-WOM [38]. To improve brand image and positive word-of-mouth, banks should improve service quality because brand attachment is positively associated with positive WOM in m-banking apps [7].

Based on studies we hypothesize that.

H3: There is a significant positive impact of perceived satisfaction on word-of-mouth.

Moderator Variable (Public Sector Banks and Private Sector Banks)

There are various past studies in which comparisons between public and private sector banks' performance have been examined based on financial metrics. This study assesses the variation between public and private sector banks considering service quality, information quality, perceived satisfaction, and word-of-mouth. The main reason for considering major public and private sector banks in terms of perceived service quality [24] and perceived information quality is to identify the variation between them and enhance the scope of improvement in perceived satisfaction that leads to positive word-of-mouth. Few studies have considered m-banking service quality in public sector banks and private sector banks [24, 26] and customer satisfaction [39].

Based on studies we formulate the hypothesis:

H4(a) The relationship between perceived service quality and customer's perceived satisfaction varies in public and private sector banks.

H4(b) The relationship between perceived information quality and customers' perceived satisfaction varies in public and private sector banks.

H4(c) The relationship between customers' perceived satisfaction and word-of-mouth varies in public and private sector banks.

RESEARCH METHODOLOGY

Measurement Scale

To assess the relationship between the construct, a questionnaire was developed. A survey was implemented for data collection purposes, which is attached in the *Appendix*. We developed a suitable measurement scale by using different relevant studies in the area. We used a 5-point Likert scale, having measures from "strongly disagree" (1) to "strongly agree" (5) for measurement of the constructs (*Appendix*). Customer satisfaction and information quality, scales were adopted from [4, 14, 15, 40]. Service quality was adopted from [4, 15, 41, 42]. Word-of-mouth was adopted from [43].

Data Collection

Data was collected through an online Google form during March, and a survey was conducted in Delhi NCR due to its cosmopolitan nature. After a pilot test with 50 sets of responses, a final online questionnaire was circulated using the non-probabilistic snowball sampling technique and a total 325 responses were received, but only 230 responses with 70.77% response rate were used for further analysis (*Fig. 2*).

Data Analysis

To analyze the proposed research model, structural equation modeling (SEM) with the help of Smart PLS 4.0 was developed by [44, 45]. This study used a three-stage strategy to analyze the data. It examines measurement models, structural models, and multi-group analysis in the context of public sector banks and private sector banks and the complete sample using PLS–SEM [46].

Measurement Model

In the first step we check a common method biasness by [47, 48] (VIF values equal to or less than 3.3, considered free from CMB) and all the VIF values were less than 3.3. For the entire sample as well as for each subgroup, the measurement model was evaluated separately. All the constructs Cronbach's alpha coefficients and composite reliability were measured to test the construct reliability to meet the threshold limit, 0.708 [46]. The Cronbach

Descriptive Statistics		Frequency	Percentage
Gender	"Male"	143	39
	"Female"	87	24
Age	"Below 18 Years."	2	1
	18—25	192	52
	26—35	31	8
	36—45	4	1
	46—55	0	0
	Above 55	1	0
Education	"High school diploma or less"	33	9
	"Bachelor's degree"	102	28
	"Master's degree"	90	24
	"Doctoral Degree"	5	1
Employment	Student	64	17
	Working	157	42
	Unemployed	3	1
	Others	6	2
Banks	Public Sectors	105	28
	Private Sectors	125	34
Do you use mobile banking offered by Indian banks?	Yes	230	70.8
	No	95	29.2

Fig. 2. **Descriptive Profile of Respondents**

Source: Compiled by the authors.

alpha values and CR values were all greater than the suggested value of 0.708 (*Table 1*). Convergent validity is established by the Average Variance Extracted (AVE) for the constructs being higher than the 0.50 threshold limit [49]. The constructs' discriminant validity was examined using two approaches. Initially, we applied the Fornell-Larcker criterion to compare the square root of AVE with its correlation coefficients, the Results show (*Table 2*) that all square roots are higher than their respective correlation coefficient, and the HTMT criterion, as a more conservative approach, should be below 0.90 [50]. It shows HTMT results satisfactory as all constructs have values below the 0.90 value. Thus, the Fornell-Larcker criterion and HTMT 0.90 show the measurement model has sufficient discriminant validity.

Structural Model

After assessing the measurement scale's reliability and validity, we proceed with the VIF multi-collinearity assessment and the values of the VIF should be relatively near to 3 or lower [46]. In the next step, R^2 to assess the dependent constructs' explained variance, to evaluate the structural model's explanatory power [46]. The R^2 values are shown in *Table 3*. An R^2 score of 0.2 is considered to be acceptable [51, 52]. Using structural equation modeling (SEM), standardized estimates and t-statistics of each hypothetical path were analyzed to assess the significance of each hypothesis relationship. Customer satisfaction was predicted by 29% while WOM was predicted by 23.7% through the findings of this empirical study, making the model acceptable [51]. The result shows (*Fig. 3*) that there is a positive and significant effect of service quality on customers' perceived satisfaction while the effect of information quality is insignificant [33]. In addition, customer satisfaction exerts a positively significant effect on WOM. In the next phase, f^2, the size of the effect was evaluated. Next, we calculate the model's predictive relevance suggested by Stone-Geisser's Q^2 [46].

Table 1

Reliability and Convergent Validity

Variables	α	CR	AVE	α	CR	AVE	α	CR	AVE
INFO_	0.940	0.946	0.806	0.934	0.936	0.793	0.937	0.938	0.801
SERVQ_	0.930	0.944	0.827	0.901	0.902	0.772	0.92	0.921	0.806
Sat_	0.929	0.931	0.934	0.877	0.878	0.891	0.901	0.901	0.91
WOM	0.895	0.896	0.905	0.846	0.853	0.866	0.876	0.873	0.887

Source: Compiled by the authors.

Note: * $P < 0.05$, α — Cronbach's alpha, AVE — Average Variance Extracted, CR — Composite Reliability.

Table 2

Discriminant Validity Based on the Fornell-Larcker & HTMT Criterion

	Public Sector Bank				Private Sector Bank				Total			
	INFO_	SERVQ_	Sat_	WOM	INFO_	SERVQ_	Sat_	WOM	INFO_	SERVQ_	Sat_	WOM
INFOQ_	**0.898**	0.842	0.409	0.871	**0.890**	0.878	0.589	0.863	**0.895**	0.862	0.517	0.87
SERVQ_	0.79	**0.909**	0.562	0.864	0.807	**0.878**	0.578	0.900	0.800	**0.898**	0.586	0.886
Satisfaction	0.388	0.528	**0.966**	0.484	0.535	0.515	**0.944**	0.585	0.476	0.534	**0.954**	0.549
WOM	0.800	0.788	0.442	**0.952**	0.767	0.787	0.506	**0.931**	0.787	0.794	0.487	**0.942**

Source: Compiled by authors.

Note: * $p < 0.05$, The diagonal values represent the square root of the mean-variance and the values below the diagonal value (bold) are correlation, and values above the diagonal values are values of HTMT 0.90 criterion.

Multi-Group Analysis (MGA)

Before performing a multi-group analysis, we perform a MICOM analysis. To prove that latent variable differences explain the differences between the two groups. MICOM analysis consists of "configuration invariance"; next "compositional invariance"; and last the "equality of composite mean values" and "variances". First, configuration invariance is assessed. Before performing a multi-group analysis we perform a MICOM analysis [53]. The second stage is to analyze

Fig. 3. **Results of Hypothesis Testing on Research Model**

Source: Compiled by the authors.

compositional invariance, the original c is greater than or equal to 5% quantile, and measurement invariance is partial.

RESULTS OF MULTI-GROUP ANALYSIS

In the last step, we examined the significant differences between the two sector banks in respect of information quality and service quality and their impact on customers' perceived satisfaction & WOM. The results revealed that the difference between the association of service quality and customers' perceived satisfaction was significant, but the difference in the impact of "perceived customer satisfaction" on "WOM" was insignificant. In public sector banks, the impact of "perceived service quality" on "perceived satisfaction" has a stronger impact in contrast to private sector banks. Therefore, commercial banks must dedicate substantial effort to develop long-term relationships with consumer [26] (*Table 4*). While the impact of information quality on customer satisfaction was insignificant, thus it was dropped for multi-group analysis.

DISCUSSION AND CONCLUSION

Technology, rival branding, consumer education, security, and organization synchronization make it harder to retain and gain mobile banking customers, so to retain and expand their mobile banking consumer base, banks must improve and update their services. Customers always want convenience, security, and full control over the required financial services. New technologies in the financial industry gave the customers more freedom and convenience than ever. Innovative technology-based services not only satisfy the customers but also enable the financial institutions to become more cost-effective and sustainable [54]. This research supports past studies that considered service quality, information quality, customer satisfaction, and word-of-mouth [2, 55]. The purpose of the study is to examine the quality aspect of mobile banking on perceived satisfaction and word-of-mouth, and examine the variation in the proposed relationship between public sector and private sector banks in India. Quality makes the basis to make a difference between service providers, and when customers use competent mobile banking services, they may perceive banks as possessing the expertise and ethical standards necessary to ensure superior service quality. In this study we found that service quality was positively significant and similar to the findings like [2, 5, 12, 26, 56]. The findings pointed out that the improvement in service quality provided by mobile banking would accordingly enhance the perceived value to the consumers. Previous studies have found that "self-banking" is emerging to be the method of choice for customers [57]. Meanwhile information quality was found insignificant and consistent with the findings of [33]. Public sector banks are widely believed to possess extensive knowledge about their products in contrast to their counterparts in the private sector [26]. The service quality shows significant variation between public and private sector banks [2, 13]. As user experience is subject to variation due to intangible feature of service quality, customer satisfaction is based upon the attainment of their desired outcomes, and this satisfaction is positively associated with repeat

Table 3

Result of Hypothesis Outcome-Structural Model Evaluation

Relationship	B	T	P	Confidence interval 95%	R-square	Adjusted R^2	Q2predict	f2
Public Sector Bank								
INFO ->Sat	−0.078	0.529	0.298	[−0.331; 0.155]	0.281	0.267	0.235	0.003
SERVQ_ -> Sat_	0.59	4.022	0	[0.333; 0.823]				0.182
Sat ->WOM	0.442	4.889	0	[0.269; 0.571]	0.196	0.188	0.296	0.243
Private Sector Bank								
INFO ->Sat	0.342	3.074	0.001	[0.155; 0.517]	0.306	0.294	0.275	0.059
SERVQ_ -> Sat	0.239	1.917	0.028	[0.020; 0.430]				0.029
Sat ->WOM	0.506	6.839	0.000	[0.368; 0.615]	0.256	0.25	0.374	0.344
Complete								
INFO ->Sat	0.136	1.418	0.078	[−0.027; 0.291]	0.29	0.286	0.27	0.009
SERVQ_ -> Sat_	0.425	4.296	0	[0.256; 0.582]				0.092
Sat ->WOM	0.487	8.879	0	[0.390; 0.571]	0.237	0.234	0.363	0.311

Source: Compiled by the authors.

Table 4

Result of Multi-Group Analysis

Relationships	Difference (Public Sector Bank — Private Sector Bank)	p-value
H4a	0.351	0.033*
H4c	−0.064	0.591

Source: Compiled by the authors.

Note: * significance exists at 0.05 level, two-tailed.

purchases, brand loyalty, and the dissemination of favorable word-of-mouth recommendations (Khan et al. [25]). The result of the study shows the impact of customer satisfaction on WOM was significant in several related studies [35–37, 38, 58] but there was no significant variation between public and private sector banks.

Theoretical Implication

This study makes significant contributions to the IS success theory by introducing WOM as one of the dependent variables & also one of the success dimensions apart from satisfaction, loyalty, and net benefit. Numerous studies examine customer satisfaction in the context of pre-purchase, intention to purchase, or to adopt a new technology but only a few studies have considered perceived satisfaction and WOM after the purchase process or during the actual use process that affect WOM. The impact of perceived satisfaction on WOM during the actual use of mobile banking, and shows a significant and positive relationship between them. The findings will support future studies to find the other factors related to perceived satisfaction and word-of-mouth, and their relation to mobile banking. This study also finds the variation between public and private sector banks with regards to their m-banking quality aspects and their effect on perceived satisfaction and WOM to enhance the scope of improvement in m-banking and support the base theory to make a comprehensive mechanism of comparison and promote other factors to be included to analyze the other aspects for assessing variation.

Managerial Implication

It is quite important for any financial institution to assess the quality variables so that they can comprehend clients' needs and also recognize their psychology [2] and determine user preference among various services to improve the retention rate [59]. Furthermore, the impact of word-of-mouth not only

affects existing consumers but also potential consumers, so it must be improved with positive word-of-mouth. In emerging countries, people share information and advice with friends and family so banks must try to focus on positive word-of-mouth and enhancing customer satisfaction by improving the quality criteria of m-banking.

LIMITATIONS AND SCOPE FOR FUTURE STUDIES

This study also has some flaws that need to be pointed. First, a small portion of the Indian population, future research may examine the effect of various cultural and demographic aspects of respondents. Second, based on limited quality aspects of mobile banking, future studies may include other quality aspects of mobile banking like system quality, interface design quality, etc. Third, this study employed a cross-sectional approach, which limits an examination of changes in user behavior over some time, so the future studies may include a longitudinal approach to enhance the scope of the future studies. Fourth, future research may include pre and post-behavior of mobile banking consumers and their comparisons concerning other different types of banks and other financial institutions to make the study more effective.

REFERENCES

1. Jun M., Palacios S. Examining the key dimensions of mobile banking service quality: an exploratory study. *International Journal of Bank Marketing*. 2016;34(3):307–326. DOI: 10.1108/IJBM-01–2015–0015
2. AL-Zu'bi K., Al-Gasawneh J. An integrated model of mobile banking service quality and customers' satisfaction: Evidence from Jordanian mobile banking users. *International Journal of Data and Network Science*. 2022;6(4):1609–1918. DOI: 10.5267/j.ijdns.2022.4.017
3. Chaouali W., Souiden N., Ladhari R. Explaining adoption of mobile banking with the theory of trying, general self-confidence, and cynicism. *Journal of Retailing and Consumer Services*. 2017;35:57–67. DOI: 10.1016/j.jretconser.2016.11.009
4. Tam C., Oliveira T. Understanding the impact of M-banking on individual performance: DeLone & McLean and TTF perspective. *Computers in Human Behavior*. 2016;61:233–244. DOI: 10.1016/j.chb.2016.03.016
5. Arcand M., Prom Tep S., Brun I., Rajaobelina L. Mobile banking service quality and customer relationships. *International Journal of Bank Marketing*. 2017;35(7):1068–1089. DOI: 10.1108/IJBM-10–2015–0150
6. Alalwan A.A., Dwivedi Y.K., Rana N.P. Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*. 2017;37(3):99–110. DOI: 10.1016/j.ijinfomgt.2017.01.002
7. Rajaobelina L., Prom Tep S., Arcand M., Ricard L. The relationship of brand attachment and mobile banking service quality with positive word-of-mouth. *Journal of Product & Brand Management*. 2021;30(8):1162–1175. DOI: 10.1108/JPBM-02–2020–2747
8. Al Tarawneh M.M., Nguyen T.P., Yong D.G., Dorasamy M.A. Determinant of M-banking usage and adoption among millennials. *Sustainability*. 2023;15(10):8216. DOI: 10.3390/su15108216
9. Baabdullah A.M., Alalwan A.A., Rana N.P., Kizgin H., Patil P. Consumer use of mobile banking (M-banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*. 2019;44:38–52. DOI: 10.1016/j.ijinfomgt.2018.09.002
10. Singu H.B., Chakraborty D. I have the bank in my pocket: Theoretical evidence and perspectives. *Journal of Public Affairs*. 2022;22(3): e2568. DOI: 10.1002/pa.2568
11. Singh S., Srivastava R.K. Understanding the intention to use mobile banking by existing online banking customers: An empirical study. *Journal of Financial Services Marketing*. 2020;25(3–4):86–96. DOI: 10.1057/s41264–020–00074-w
12. Tam C., Oliveira T. Understanding mobile banking individual performance: The DeLone & McLean model and the moderating effects of individual culture. *Internet Research*. 2017;27(3):538–562. DOI: 10.1108/IntR-05–2016–0117
13. Sharma S.K., Sharma M. Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*. 2019;44:65–75. DOI: 10.1016/j.ijinfomgt.2018.09.013
14. Geebren A., Jabbar A., Luo M. Examining the role of consumer satisfaction within mobile eco-systems: Evidence from mobile banking services. *Computers in Human Behavior*. 2021;114:106584. DOI: 10.1016/j.chb.2020.106584

15. Kim S., Lee J., Yoon S.-H., Kim H.-W. How can we achieve better e-Learning success in the new normal? *Internet Research*. 2023;33(1):410–441. DOI: 10.1108/INTR-05–2021–0310
16. Li T. Applying the IS success model to mobile banking apps. Master degree theses. Lethbridge: University of Lethbridge; 2014. 168 p. URL: https://opus.uleth.ca/server/api/core/bitstreams/91a5a566–0f58–4762-a76a-a1fb099b4296/content
17. Urbach N., Ahlemann F. Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory and Application (JITTA)*. 2010;11(2):2. URL: https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1247&context=jitta
18. Motiwalla L.F., Albashrawi M., Kartal H.B. Uncovering unobserved heterogeneity bias: Measuring mobile banking system success. *International Journal of Information Management*. 2019;49:439–451. DOI: 10.1016/j.ijinfomgt.2019.07.005
19. DeLone W.H., McLean E.R. Information systems success: The quest for the dependent variable. *Information Systems Research*. 1992;3(1):60–95. DOI: 10.1287/isre.3.1.60
20. DeLone W.H., McLean E.R. The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*. 2003;19(4):9–30. DOI: 10.1080/07421222.2003.11045748
21. Jalilvand M.R., Samiei N. The impact of electronic word of mouth on a tourism destination choice: Testing the theory of planned behavior (TPB). *Internet Research*. 2012;22(5):591–612. DOI: 10.1108/10662241211271563
22. Al-Gasawneh J.A., Al Khoja B., Al-Qeed M.A., Nusairat N.M., Hammouri Q., Anuar M.M. Mobile-customer relationship management and its effect on post-purchase behavior: The moderating of perceived ease of use and perceived usefulness. *International Journal of Data and Network Science*. 2022;6(2):439–448. DOI: 10.5267/j.ijdns.2021.12.010
23. Mostafa R.B. Mobile banking service quality: A new avenue for customer value co-creation. *International Journal of Bank Marketing*. 2020;38(5):1107–1132. DOI: 10.1108/IJBM-11–2019–0421
24. Kant R., Jaiswal D. The impact of perceived service quality dimensions on customer satisfaction: An empirical study on public sector banks in India. *International Journal of Bank Marketing*. 2017;35(3):411–430. DOI: 10.1108/IJBM-04–2016–0051
25. Khan A.G., Lima R.P., Mahmud M.S. Understanding the service quality and customer satisfaction of mobile banking in Bangladesh: Using a structural equation model. *Global Business Review*. 2021;22(1):85–100. DOI: 10.1177/0972150918795551
26. Paul J., Mittal A., Srivastav G. Impact of service quality on customer satisfaction in private and public sector banks. *International Journal of Bank Marketing*. 2016;34(5):606–622. DOI: 10.1108/IJBM-03–2015–0030
27. Poromatikul C., De Maeyer P., Leelapanyalert K., Zaby S. Drivers of continuance intention with mobile banking apps. *International Journal of Bank Marketing*. 2020;38(1):242–262. DOI: 10.1108/IJBM-08–2018–0224
28. Purwati A.A., Mustafa Z., Deli M.M. Management information system in evaluation of BCA mobile banking using DeLone and McLean model. *Journal of Applied Engineering and Technological Science (JAETS)*. 2021;2(2):70–77. DOI: 10.37385/jaets.v2i2.217
29. Petter S., DeLone W., McLean E.R. Information systems success: The quest for the independent variables. *Journal of Management Information Systems*. 2013;29(4):7–62. DOI: 10.2753/MIS 0742–1222290401
30. Sharma S.K., Gaur A., Saddikuti V., Rastogi A. Structural equation model (SEM)-neural network (NN) model for predicting quality determinants of e-learning management systems. *Behaviour & Information Technology*. 2017;36(10):1053–1066. DOI: 10.1080/0144929X.2017.1340973
31. Akter S., D'Ambra J., Ray P. Development and validation of an instrument to measure user perceived service quality of mHealth. *Information & Management*. 2013;50(4):181–195. DOI: 10.1016/j.im.2013.03.001
32. Oliveira T., Faria M., Thomas M.A., Popovič A. Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM. *International Journal of Information Management*. 2014;34(5):689–703. DOI: 10.1016/j.ijinfomgt.2014.06.004
33. Chetioui Y., Lebdaoui H., Hafid N. Mobile banking usage in the postpandemic era: Demystifying the disparities among divergent user segments in a majority-Muslim country. *Journal of Islamic Marketing*. 2023;14(12):3053–3084. DOI: 10.1108/JIMA-08–2022–0232

34. Azizah Q.N., Hidayat T., Riana D., et al. Understanding impact of M-banking on individual performance of the DeLone & McLean method and TTF perspective. *Journal of Physics: Conference Series*. 2020;1641:012009. DOI: 10.1088/1742–6596/1641/1/012009
35. Trabelsi-Zoghlami A., Berraies S., Ben Yahia K. Service quality in a mobile-banking-applications context: Do users' age and gender matter? *Total Quality Management & Business Excellence*. 2020;31(15–16):1639–1668. DOI: 10.1080/14783363.2018.1492874
36. Brown T.J., Barry T.E., Dacin P.A., Gunst R.F. Spreading the word: Investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context. *Journal of the Academy of Marketing Science*. 2005;33(2):123–138. DOI: 10.1177/0092070304268417
37. Mehrad D., Mohammadi S. Word of mouth impact on the adoption of mobile banking in Iran. *Telematics and Informatics*. 2017;34(7):1351–1363. DOI: 10.1016/j.tele.2016.08.009
38. Zalloum L., Alghadeer H., Nusairat N. The effect of using mobile banking services applications on electronic word of mouth: The mediating role of perceived trust. *International Business Research*. 2019;12(9):62–80. DOI: 10.5539/ibr.v12n9p62
39. Adholiya A., Dave P., Adholiya S. Determinants of customer satisfaction for mobile banking services-an empirical evidence from public and private sector banks at Udaipur, Rajasthan. *International Journal of Applied Services Marketing Perspectives*. 2012;1(1):1–6.
40. Hair J.F., Risher J.J., Sarstedt M., Ringle C.M. When to use and how to report the results of PLS-SEM. *European Business Review*. 2019;31(1):2–24. DOI: 10.1108/EBR-11–2018–0203
41. Parasuraman A., Zeithaml V.A., Malhotra A. E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*. 2005;7(3):213–233. DOI: 10.1177/1094670504271156
42. Anderson E.W., Sullivan M.W. The antecedents and consequences of customer satisfaction for firms. *Marketing Science*. 1993;12(2):125–143. DOI: 10.1287/mksc.12.2.125
43. Parasuraman A.B., Zeithaml V.A., Berry L. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*. 1988;64(1):12–40.
44. Ringle C.M., Wende S., Will A. SmartPLS 2.0 M3. Computer software. 2005.
45. Madan K., Yadav R. Behavioural intention to adopt mobile wallet: A developing country perspective. *Journal of Indian Business Research*. 2016;8(3):227–244. DOI: 10.1108/JIBR-10–2015–0112
46. Kock N., Lynn G.S. Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for information Systems*. 2012;13(7). DOI: 10.17705/1jais.00302
47. Kock N. Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*. 2015;11(4):1–10. DOI: 10.4018/ijec.2015100101
48. Fornell C., Larcker D.F. Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*. 1981;18(3):382–388. DOI: 10.1177/002224378101800313
49. Henseler J., Ringle C.M., Sarstedt M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*. 2015;43(1):115–135. DOI: 10.1007/s11747–014–0403–8
50. Hair J.F., Jr., Sarstedt M., Ringle C.M., Gudergan S.P. Advanced issues in partial least squares structural equation modeling. Thousand Oaks, CA: SAGE Publications, Inc.; 2017. 272 p.
51. Ozili P.K. The acceptable R-square in empirical modelling for social science research. In: Social research methodology and publishing results: A guide to non-native English speakers. Hershey, PA: IGI Global; 2023:134–143. DOI: 10.4018/978–1–6684–6859–3.ch009
52. Henseler J., Ringle C.M., Sarstedt M. Testing measurement invariance of composites using partial least squares. *International Marketing Review*. 2016;33(3):405–431. DOI: 10.1108/IMR-09–2014–0304
53. Kumar V.R., Lall A., Mane T. Extending the TAM model: Intention of management students to use mobile banking: Evidence from India. *Global Business Review*. 2017;18(1):238–249. DOI: 10.1177/0972150916666991
54. Chung N., Kwon S.-J. The effects of customers' mobile experience and technical support on the intention to use mobile banking. *Cyberpsychology & Behavior*. 2009;12(5):539–543. DOI: 10.1089/cpb.2009.0014
55. De Leon M.V., Atienza R.P., Susilo D. Influence of self-service technology (SST) service quality dimensions as a second-order factor on perceived value and customer satisfaction in a mobile banking application. *Cogent Business & Management*. 2020;7(1):1794241. DOI: 10.1080/23311975.2020.1794241

56. Al-Eisa A.S., Alhemoud A.M. Using a multiple-attribute approach for measuring customer satisfaction with retail banking services in Kuwait. *International Journal of Bank Marketing*. 2009;27(4):294–314. DOI: 10.1108/02652320910968368
57. Aghdaie S.A., Faghani F. Mobile banking service quality and customer satisfaction (application of SERVQUAL model). *International Journal of Management and Business Research*. 2012;2(4):351–361.
58. Bhattacherjee A. Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*. 2001;25(3):351–370. DOI: 10.2307/3250921
59. Atsmon Y., Kuentz J.F., Seong J. Building brands in emerging markets. *McKinsey Quarterly*. 2012;(4):50–57.

APPENDIX

Survey Data

Construct	Items	Reference
Information Quality	The information displayed on my mobile banking app is sufficient for my needs	T. li, 2014 [16]
	The information provided by the m-banking app is understandable	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
	The information provided by the m-banking app is useful	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
	The information provided by the m-banking app is up-to-date	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
	The information provided by the m-banking app is error-free and detailed information	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
Service Quality	The responsible service personnel provides services related to the m banking app at the promised time	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
	Does the m-banking app service responsible personnel show a sincere interest in solving problems when you face them?	Parasuraman et al. (1988a, p. 23) [43]
	M-banking applications protect information about my transactions	Parasuraman et al. (2005) [41]
	Are m-banking app personnel always willing to help you?	Urbach et al. (2010) [17]; Tam and Oliveira (2016) [4]
	Do the m-banking service personnel understand your specific needs?	Parasuraman et al. (1988a, p. 23) [43]
Customer Satisfaction	The experience that I have had with my mobile banking app has been satisfactory	T. li (2013) [16]
	I am satisfied with the manner in which mobile banking has carried out transactions	Anderson and Sullivan (1993) [42]

Appendix (continued)

Construct	Items	Reference
Word of mouth	I would recommend the mobile banking app to my friends and family to use it	Madan and Yadav (2016) [45]
	I have a worthy experience with mobile banking apps, I would recommend friends to download the apps of services	

Source: Compiled by the authors.

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M.N. Koti — identify the topic, literature review, data collection, analysis and conclude the results.
P. Verma — reviewed the paper and conclusion of the study.
N. Singh — reviewed the paper and discuss the study.

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