Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

Customer Satisfaction towards Mobile Banking Services: Evidence from Madhya Pradesh, India

Anooshi Aafreen[1], Sunil Atulkar[2]
[1]School of Management
Sanjeev Agrawal Global Educational (SAGE) University, Bhopal,
anushikhan8@gmail.com
[2]School of Management
Sanjeev Agrawal Global Educational (SAGE) University, Bhopal

ARTICLE INFO

Received: 05 Nov 2024

Revised: 02 Dec 2024

Accepted: 28 Dec 2024

ABSTRACT

The purpose of the study is to determine the factors that lead to customer satisfaction towards mobile banking services provided by selected banks in India. Data collected from 315 respondents from both public and private sector banks were used to test the hypothetical model using a well-structured questionnaire. The results suggested that the such as awareness of online banking services, security, convenience, self-efficacy, transaction cost and time, and ease of use influence customer satisfaction. Results of multiple regression showed that out of the above-mentioned six factors, awareness of online banking services, security, convenience, transaction cost and time, and ease of use are found to be statistically significant at with customer satisfaction, while self-efficacy shows insignificant results. The study has a regional bias since the respondents belong to the state of Madhya Pradesh, central India. Taking findings into consideration, strategies could be drawn by the bankers to spread their businesses, as a large portion of the population in India is still not using banking services. Thus, the study is quite helpful for the policy makers for developing appropriate strategies for positioning themselves in the competitive marketplace.

Keywords: Customer satisfaction, online banking, convenience, security

Introduction

Online banking is one of the banking services, a relatively new channel and is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution (Compeau and Higgins, 1995; Shah and Clarke, 2009). The fast-paced technology has affected almost all industries, including the banking industry. The banking environment has undergone tremendous changes due to the infusion of innovative practices like Internet banking throughout the world, and India is no exception to this. Globalisation of the Indian economy during the 1990s has also contributed to Internet banking. To implement various recommendations forwarded by the committees in connection with the banking reforms, the Indian government emphasised the need for implementing online banking in the banking sector (Srivastava, 2007). The need for deploying Internet banking in India has been very strong, considering that a significant proportion of the urban population in India today is employed in the information technology industry, and so they have easy access to the Internet, and there is a huge expatriate Indian workforce engaged in various professional pursuits around the world (Kannabiran and Narayan, 2005). Most of the banks in India have introduced customer-friendly online banking facilities with

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

advanced security features to protect customers against cybercrime. Almost 57 per cent of Indian respondents using the Internet prefer banking online and use other financial services due to hassle-free, easy access and time-saving features of online banking (Malhotra and Singh, 2009). At the same time, online banking exposed customers to unforeseen fraud. Reserve Bank of India (RBI) has suggested that banks introduce two-stage authentication to ensure the security of transactions.

Both private and public sector banks mainly design online banking to achieve two objectives. The first objective is to increase customer convenience by fulfilling their requirements, such as online viewing of account details, statement information, bill payment, money transfer, account application, and e-clearance for services like rent and loan payments. The second objective is to reduce operational costs. The present study aims to study the total customer satisfaction with online banking. Though customer satisfaction is multidimensional (Bharadwaj and Mitra, 2016; Kumar, 2016) and has been widely studied in various contexts, the available literature is very scant about customer satisfaction in online banking, especially in India (Patel and Pithadia, 2013; Sureshchandar, Rajendran, and Anantharaman, 2002). This study aims to examine the factors that may influence users to adopt Online banking. The impact of awareness of service, security, knowledge and quality of Internet connection, cost and time savings, keenness to change, perceived ease of use, perceived enjoyment, customer attitude towards using the technology and adoption intention are sought to determine the level of users' acceptance and customer satisfaction towards Online banking. For instance, if the security, perceived usefulness and trust in the bank's website are high, then customer satisfaction will also be high. Online banking has numerous advantages, and at the same time, certain limitations, such as phishing, identity theft, and so on, which keep customers away from using the Online banking service.

2. Literature Review and Hypotheses Development

There are several models in the literature on innovation that predict the user's intention and actual adoption of different innovations. Online banking is an innovation, and some of the models are the technology acceptance model (TAM) of Davis (1986), the theory of reasoned action (TRA) and the theory of planned behaviour (TPB). TAM is one of the most influential extensions of Ajzen and Fishbein's TRA. It was developed by Fred Davis and Richard Bagozzi (Bagozzi, Davis, and Warshaw, 1992; Davis, 1989). TAM replaces many of TRA's attitude measures with the two technology acceptance measures, that is, ease of use and usefulness. The TAM is an information systems theory that models how users come to accept and use a technology. According to the TAM, 'perceived ease of use' and 'perceived usefulness' constructs are believed to be fundamental in determining the acceptance and use of various IT. Using the TAM as a theoretical framework, this study introduces 'perceived credibility' as a new factor that reflects the user's security and privacy concerns in the acceptance of Online banking. It also examines the effect of technology self-efficacy on the intention to use Online banking. In one study by Wang, Wang, Lin, and Tang (2003), based on a sample of 123 users from a telephonic interview, the results support the extended TAM in predicting the intention of users to adopt Online banking. It also demonstrates the significant effect of technology self-efficacy on behavioural intention through perceived ease of use, perceived usefulness and perceived credibility. Thus, the study focused on the following variables influencing customer satisfaction.

2.1 Awareness of Service

Awareness of service is the customer awareness level of the Online banking services provided by banks. The level of awareness is influenced by the amount of information received by the customer (Al-Shomali, Gholami, and Clegg, 2008). If banks can create user-friendly websites providing the kind of security

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

customers demand, the idea of online banking could be profitable for them (Smith, 2006). Awareness creates intention to use Online banking will appear when a customer has a positive attitude towards Online banking (Al-Shomali et al., 2008). Adoption intention also involves the keenness of the customers to change to new technology and the intention to use Online banking. In terms of a consumer-oriented service, the consumer-relevant groups around the individual may influence the individual's adoption. When customers are aware that banks provide online banking services, they tend to use the online banking and they see its usefulness in several ways, such as convenience, time, cost and money.

H1: Awareness of services positively influences customer satisfaction.

2.2 Security

The level of security offered by Online banking services plays an important role in perceived use, especially because of cybercrimes these days. Without an adequate level of security, the use of Online banking will become risky (Lu et al., 2006; Masrek, Syafiq, Halim, Khan, and Ramli, 2018). Security comprises three dimensions: reliability, safety and privacy (Polatoglu and Ekin, 2001). The higher the assurance level of security provided by the Online banking service providers, the greater the benefits that can be received by customers. Research supports the view that convenience and security in Online banking are positively related to customer satisfaction (Vij, 2003). To avoid the risk of cybercrimes, banks are introducing biometric technologies (e.g., fingerprint and facial recognition) to enhance security. Biometric customer applications in bank branches focus on transaction authentication. A transaction in the bank branch could be authorised by the customer with a biometric characteristic. Banks were conservative and risk-averse in their approach to new technologies. The increasing standardisation, growing experiences with biometrics in other application fields like electronic ID documents and the growing damage caused by ID theft and other fraud would facilitate the widespread use of biometrics in banking. Biometric technology helped to prevent identity fraud in banking in future, as well as helped to maintain the banking customer's trust (Koltzsch, 2006). Security also involves maintaining confidentiality and integrity in the customers' accounts. Based on the above, we hypothesise the following:

H2: Security positively influences customer satisfaction.

2.3 Self-Efficacy

Self-efficacy is an individual's ability to use new technology. A customer who often uses technologies, especially the Internet, will find it easy to adjust to Online banking services (Wang, et al., 2003). Hill, Smith, and Mann (1986) found that self-efficacy predicts intentions to use a wide range of technologically advanced products. Thus, an individual who is confident in having the skills to use the technology and the Internet is more inclined to adopt Online banking. Technology self-efficacy was found to exert a significant influence on individuals' expectations of the outcomes of using technologies, their emotional reactions to technologies, as well as their actual technology use. An individual's self-efficacy and outcome expectations were found to be positively influenced by the encouragement of others in their work group, as well as others' use of technology. Thus, self-efficacy is represented as an important individual trait which moderates organisational influences on an individual's decision to use technology (Compeau and Higgins, 1995). In one study, it was found that both subjective norm and technology self-efficacy indirectly played significant roles in influencing the intention to adopt Online banking. Perceived ease of use had a significantly indirect effect on intention to adopt/ use through perceived usefulness, while its direct effect on intention to adopt was not significant (Chan and Lu, 2004). Based on the above, we hypothesise the following:

H3: Self-efficacy positively influences customer satisfaction.

2.4 Time and cost saving

The adoption of innovation largely depends on the cost of innovation. Research supports that high costs associated with innovation are negatively related to the adoption intention and vice versa (Tornatzky and Klein, 1982). For example, in one study, it was found that the cost of the mobile network negatively

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

impacted the adoption intentions of users (Shin, 2010). Similarly, the recent technology reservation system has been adopted due to its low cost. Robinson (2000) believed that the supply of Online banking services enables banks to establish and extend their relationship with the customers. There are numerous advantages to banks offered by online banking, such as mass customisation to suit the needs of each user, innovation of new products and services, more effective marketing and communication at lower costs (Tuchila, 2000). Online banking is a convenient and effective application which allows any individual customer retail or corporate to manage his/her accounts 24 hours a day, and it is accessible from any location as long as there is access to the Internet, and the information provided is current and immediate without any intermediary situation needed (Tan and Teo, 2000).

H4: Time and cost savings positively influence customer satisfaction.

2.5 Ease of use

Perceived ease of use is defined as the degree to which a person believes that using a system would be free from effort (Davis, 1986). The perceived usefulness was central because it determines whether the perceived ease of Internet bank use would lead to increased use of the Internet bank. This innovation attribute has been used in different technologies like e-government and information technology (Lee and Kozar, 2008; Sang, Lee, and Lee, 2009). A well-designed and easy-to-use Internet bank may not be used if it is not perceived as useful. Attitude is defined as an individual's positive or negative feelings about performing a target behaviour. Researchers concluded that the perceived usefulness of Internet banking is a key construct for promoting customer use and suggested that models of technology acceptance should be reformulated to focus more on the key role of the perceived usefulness of the service embedded in the technology (Eriksson, Kerem, and Nilsson, 2005; Kapoor, Dwivedi, and Williams, 2015). Based on the above, we hypothesise the following:

H5: Ease of use positively influences customer satisfaction.

2.6 Convenience

Convenience is also important in maintaining customer trust and increasing user satisfaction. Customers do their business through online commerce as they wish, and convenience means that transactions are completed at the highest level. According to Kheng et al. (2010), users will be more satisfied and loyal to online banking services when their greatest needs are met. User needs and responses should be successfully processed through the bank's website. Valid responses do not only include the fax or email address of the financial institution, but also the validity of the website was found in this study. Website convenience in digital banking refers to the percentage of concluded banking transactions over attempted banking transactions. The users tend to be more loyal and satisfied when their transactions are completed every time with convenience. If the user enjoys Online banking, the level of customer service is immediately lifted to their level.

H6: Convenience positively influences customer satisfaction.

2.7 Customer satisfaction

According to Ranchi and Khudjanov (2011), customer satisfaction is conceptualised as an emotional evaluation and is often used over time. User satisfaction is assessed as the extent to which users believe that the maintenance or use of the facility leads to positive emotions (Rust and Oliver, 1994). According to Cheng and Chan (2009), e-services can be divided into two types: one can be called specific changes, satisfaction can be seen as an emotional response to the performance of specific services, while overall satisfaction is dependent on the performance and services (Shankar et al., 2003). Researchers (Taylor and Cronin, 1994; Parasuraman et al., 1985) consider overall satisfaction as part of the service recommendation because it is related to the impact of users on the work of organisations, affecting the quality of service. Satisfaction is also defined as an analysis of the user's emotional state, which is created by associating negative emotions with the user's initial thoughts about their experiences (Oliver, 1980). In other words, satisfaction is the

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

feeling of satisfaction or dissatisfaction that a person gets by comparing the performance of the product with his/her needs. In the context of online banking service quality, online satisfaction is the extent to which users are satisfied with their past transactions.

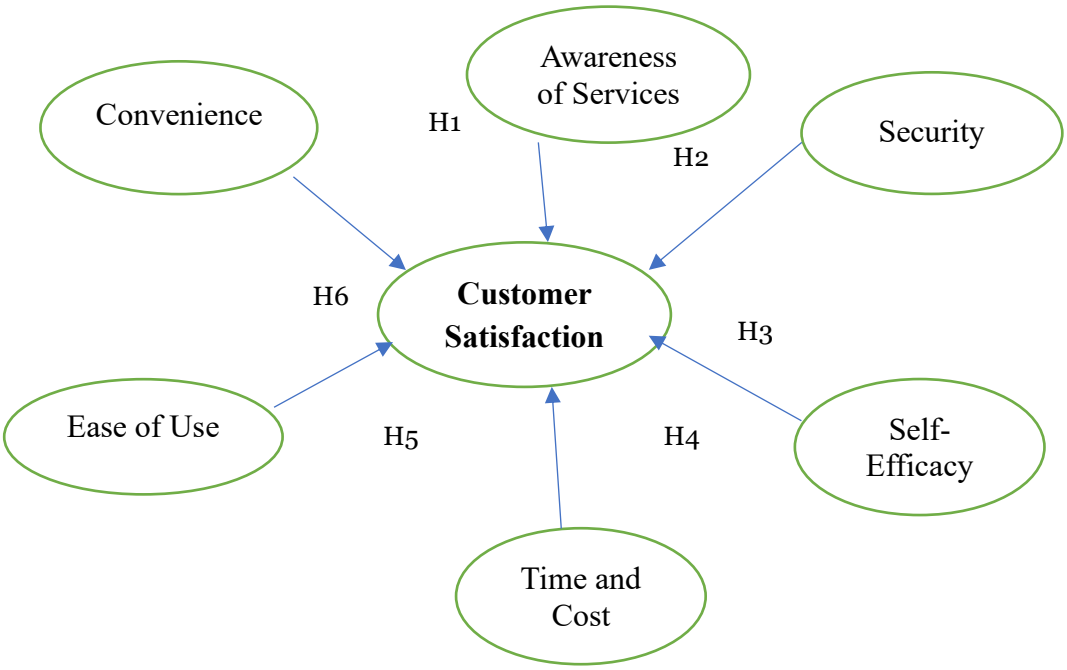

Figure 1: Proposed Framework

Research methodology

The research instrument was first validated by academic experts and then tested to add value to the survey. The sample of this study mainly includes 315 bank customers using online banking services. Some of the participants met certain standards and were therefore asked to contribute to the study via e-mail. The survey instrument was developed using a five-point Likert-type scale, disagree (1) to agree (5). The items are from the variable's awareness of online banking services, security, convenience, self-efficacy, transaction cost and time, and ease of use influence customer satisfaction. Therefore, initially 387 participants were targeted via online survey using a convenience sampling method, but after removing missing responses, the data was reduced to 315 participants. All the samples were collected from two public sector and two private sector banks of Bhopal, Madhya Pradesh.

Table 1: Demographic details

Demographics	Frequency	%

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

Age		
21–30	78	25
31–40	141	45
41–50	54	17
Above 50	42	13
Gender		
Male	173	55
Female	142	45
Education		
Under Graduate	61	20
Graduate	152	48
Post Graduate	102	32
Occupation		
Private Organisation	136	43
Public Organisation	79	25
Business	51	16
Students	49	16

Data analysis and results

This research utilises SEM as a part of Smart PLS 3.2. (Sarstedt et al., 2014), by utilising a bootstrap resampling methodology of 1,000 (Hair et al., 2011). This technique is used to evaluate both the estimation and structural model. Analysts (Hair et al., 2011; Henseler et al., 2014) suggest that PLS-SEM is very rational and effective to use for breaking down complex models. PLS, introduced by Joreskog and Wold (1979), is capable of explaining the connection between latent variables. A latent variable is an unnoticed variable which is connected with the other identifiable factors. Hence, this technique can function with the unnoticed factors and to determine the measurement error in the improvement of such unnoticed variables (Chin, 1998). The assessment of single-item reliability is done by evaluating simple correlation (standardised loadings). According to Tabachnick and Fidell (2007), items are considered to be reliable when their value is above 0.55, and according to Table 2, all the items are regarded as reliable. Furthermore, convergent validity is determined by using two methods given by (Fornell and Larcker, 1981): Cronbach's alpha and Composite reliability, Average variance extracted (AVE).

4.1 Reliability and Validity Analysis

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

To ascertain discriminant validity, cross-loadings, the square root of the average variance extracted and the heterotrait-monotrait ratio of correlations (HTMT) are analysed. The matrix of correlation in Table 3 demonstrates that for every pair of constructs, the correlation among latent variables is lower than the square root of the average variance extracted (AVE) of every construct. Hence, the results follow the criterion given by Fornell and Larcker (1981). Furthermore, the cross loadings of each item demonstrate that all the loadings are higher on their particular constructs compared to their corresponding constructs, and the differences between cross loadings is higher than the recommended standard limits of 0.1 (Gefen and Straub, 2005; Raza et al., 2018).

Table 2: Reliability and validity

Constructs	Items	Loadings	Cronbach's α	Composite reliability	AVE
AWA	AWA1	0.769	0.71	0.82	0.73
	AWA2	0.652			
	AWA3	0.821			
SEC	SEC1	0.849	0.72	0.83	0.78
	SEC2	0.653			
	SEC3	0.801			
SEF	SEF1	0.821	0.83	0.78	0.67
	SEF2	0.658			
	SEF3	0.742			
	SEF4	0.698			
TAC	TAC1	0.681	0.842	0.88	0.76
	TAC2	0.632			
	TAC3	0.731			
	TAC4	0.689			
EOU	EOU1	0.714	0.88	0.92	0.71
	EOU2	0.810			
	EOU3	0.685			
CON	CON1	0.704	0.83	0.91	0.74
	CON2	0.692			

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

	CON3	0.763			
CUS	CUS1	0.785	0.853	0.85	0.83
	CUS2	0.863			
	CUS3	0.685			

Table 3: Correlation Matrix

	AWA	**SES**	**SEF**	**TAC**	**EOU**	**CON**	**CUS**
AWA	**1**						
SES	0.831	**1**					
SEF	0.732	0.780	**1**				
TAC	0.757	0.764	0.814	**1**			
EOU	0.711	0.689	0.699	0.712	**1**		
CON	0.732	0.694	0.723	0.702	0.789	**1**	
CUS	0.641	0.59	0.638	0.624	0.671	0.63	**1**

By referring to Table 2, it can be realised that all the variables are reliable as they meet the criteria of both Cronbach's alpha, given by Tabachnick and Fidell (2007), and Composite reliability, set by Nunnally et al. (1967). According to these criteria, the Cronbach's alpha and Composite reliability should exceed 0.70. The determination of convergent validity is set up for a construct if the AVE (average variance extracted) is above 0.5 (Fornell and Larcker, 1981) and all the constructs meet this standard, which is acceptable, as seen in Table 2. Further, we also performed a statistical check for multicollinearity using the variance inflation factor (VIF) for each of the independent variables. The VIF was less than 2, and our results support that multicollinearity is not a problem.

Table 4: Regression Analysis

Hypotheses	**Beta**	**t-value**	**p-value**	**Result**
H1: Awareness of services positively influences customer satisfaction.	0.232	2.721	0.041	Supported
H2: Security positively influences customer satisfaction.	0.145	2.565	0.007	Supported
H3: Self-efficacy positively influences customer satisfaction.	0.213	1.823	0.063	Not Supported

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

H4: Time and cost savings positively influence customer satisfaction.	0.129	4.307	0.020	Supported
H5: Ease of use positively influences customer satisfaction.	0.255	2.281	0.007	Supported
H6: Convenience positively influences customer satisfaction.	0.234	5.470	0.008	Supported

Based on the regression analysis through SmartPLS, the resulting value for awareness of services (t-value=2.721; p=0.041), Security (t-value=2.565; p=0.007), time and cost (t-value= 4.307; p=0.020), ease of use (t-value= 2.281; p= 0.007) and convenience (t-value= 5.470; p=0.008) shows positive significant influence on the customer satisfaction towards mobile banking services offered by public and private sector banks.

Similarly, the resulting value for the self-efficacy (t-value=1.823; p=0.063), shows an insignificant effect on customer satisfaction towards mobile banking services offered by public and private sector banks. Thus, the hypotheses H1, H2, H4, H5 and H6 were accepted, while the H3 hypothesis was rejected by the researcher, as they show insignificant influence.

Findings and Discussion

The study revealed very interesting results. First, when the awareness of the service of online banking is perceived to be high. The operational implication is to make the customers aware of the service. Second, the security of online banking services motivates customers to prefer the online services and generate perceived usefulness of online banking. Next, the time and cost involvement play a vital role in impacting the customer service of online banking services, along with ease of use and convenience. While the self-efficacy of the customer is not directly related to customer satisfaction, but plays an important role.

It has been observed that the banking firm that offers services must deliver outstanding service quality to succeed in most developing countries, including India. Customers are now rating banks higher for their "high-touch" qualities rather than their "high-tech" components as a result of the growing use of electronic banking. It's unclear how to operationalise customer satisfaction in the banking sector. and the same criteria that determine service quality should be used to operationalise it. Therefore, the banking sector will undoubtedly adopt the aforementioned suggestions made by the researcher. Similar future research is suggested in order to significantly add to the body of knowledge now available on customer satisfaction in the Indian banking sector. Study concludes that across all Indian states, and in addition to making a distinction between the general public and banks in the private sector, with bigger sample sizes. To ascertain the importance of consumer satisfaction, more research is required.

According to the findings study concludes that most customers are quite satisfied with mobile banking as long as it is convenient and makes transactions easier. The majority of customers preferred mobile banking over digital payment apps, debit/credit cards, and mobile banking when it came to digital banking. For a number of reasons, including the fact that mobile is a handy device that they can use at any time, customers prefer mobile banking over other practical options. The banking sector should also be aware of security threats and provide customised services to help customers feel more comfortable and secure when utilising digital banking in the modern day. Due to the banking app's simplicity of use, the majority of customers use online banking, according to the balanced average result. Service is essential to

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

banks, and they must also train their employees to deal with customer concerns so that they can build customer confidence in the bank's online service package and employee availability.

Customers also understood that these benefits were not the only factors affecting them, which they felt were essential for success and survival in today's competitive environment. All things considered, the results show how highly educated the people who use mobile banking are. The findings of the study show that customers prefer mobile banking services. They can save money and time as a result. must know how their account is doing and whether they can move their money from one place to another. Customer satisfaction tends to rise when each of these elements gets better. On the other hand, shortcomings in any of these areas could result in discontent.

To ascertain the importance of consumer satisfaction, more research is required. impact the financial outcomes of the banking industry as well as other service industries. To investigate issues related to mobile banking at a deeper level and the strategies that banks should employ to increase e-satisfaction and e-loyalty, more research is required. website convenience is the of; E-customers will be happier with a website that makes it easier for them to communicate with the bank because convenience is the main factor that determines the quality of mobile banking services.

Limitations and Future Research Directions

The present study is not without limitations. First, the common method bias, which is common in survey research, is one potential problem that needs to be acknowledged. We tried to reduce the common method bias and social desirability bias by maintaining confidentiality in the survey. There is a problem of generalisability because the sample is from some private and public sector banks. However, the selection of banks was such that the results from this study are expected to be generalisable across all other banks in India. Thus, the present study adds to the existing literature and contributes to this in several ways. It extends the TAM for testing and validating the attributes in the model in the Indian context. The findings from the study are significant in bringing to light the insights into the extent to of online banking is perceived by customers. It also offers a theoretical basis for dwelling on the problems associated with online banking and infrastructure.

The results from the study are useful to practitioners, too. From the banker’s perspective, the key drivers of customer satisfaction in online banking are identified as proposed in this research model, which are useful for enhancing the design and features of online banking. From the researchers’ perspective, this study provides a platform for future refinement by identifying potential moderators (e.g., demographic variables). To increase customer satisfaction, it is necessary to examine the frequency of online activities of customers and provide them with guidelines and instructions. Further, it is also important to gain trust among customers about the safety and security features of online banking. Bankers need to keep abreast of the latest technology and the structure of online transactions. Additionally, bankers need to communicate with the customers and seek suggestions to improve the services. Protection of accounts by tight security enhances trust and increases customer satisfaction. Consistent with existing research, technology-allowed transactions provide convenience through various delivery channels.

References

Journal of Information Systems Engineering and Management
2025, 10(1s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

[1] Al-Shomali, S. A., Gholami, R., and Clegg, B. (2008). Internet banking acceptance in the context of developing countries: An extension of the technology acceptance model. European Conference on Management of Technology, Nice, France.
[2] Bagozzi, R. P. (1981). Attitudes, intentions and behaviour: A test of some key hypotheses. Journal of Personality and Social Psychology, 41(4), 607–627.
[3] Bagozzi, R., Davis, Fred., and Warshaw, P. (1992). Development and Test of a Theory of Technological Learning and Usage. Human Relations, 45(7), 659–686.
[4] Bharadwaj, S. G., and Mitra, D. (2016). Customer satisfaction and long-term stock returns. Journal of Marketing, 80, 116–121.
[5] Botelho, D. (2007). Consumer behaviour on the internet: Trust and perception of security control in the Brazilian context. Conference Proceedings American Marketing Association, 18, 174–189.
[6] Boyes, G., and Stone, M. (2003). E-business opportunities in financial services. Journal of Financial Services Marketing, 8(2), 176–189.
[7] Casaló, L. V., Flavián, C., and Guinalíu, M. (2007). The role of security, privacy, usability and reputation in the development of online banking. Online Information Review, 31(5), 583–603.
[8] Chan, S., and Lu, M. (2004). Understanding internet banking adoption and use behaviour: A Hong Kong perspective. Journal of Global Information Management, 12(3), 21–43.
[9] Chau, P. Y. K., and Hu, P. J. H. (2002). Investigating healthcare professionals' decisions to accept telemedicine technology: An empirical test of competing theories. Information and Management, 39(4), 297–311.
[10] Chen, T. Y. (1999). Critical success factors for various strategies in the banking industry. International Journal of Bank Marketing, 17(2), 83–91.
[11] Chiemeke, S. C., Evwiekpaefe, A., and Chete, F. (2006). The adoption of internet banking in Nigeria: An empirical investigation. Journal of Internet Banking and Commerce, 11(3), 1–10.
[12] Chua, E. K. (1980). Consumer intention to deposit at banks: An empirical investigation of its relationship with attitude, normative belief and confidence, academic exercise. Faculty of Business Administration, National University of Singapore.
[13] Compeau, D. R., and Higgins, C. A. (1995). Computer self- efficacy: Development of a measure and initial test. MIS Quarterly, 19(2), 189–211.
[14] Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. Management Science, 35(8), 318–339.
[15] Eriksson, K., Kerem, K., and Nilsson, D. (2005). Customer acceptance of internet banking in Estonia. International Journal of Bank Marketing, 23(2/3), 200–216.
[16] Fishbein, M., and Ajzen, I. (1975). Belief, attitude, intention and behaviour: An introduction to theory and research. Reading, MA: Addison-Wesley.
[17] Gerrard, P., and Cunningham, J. B. (2003). The diffusion of internet banking among Singapore consumers. International Journal of Bank Marketing, 21(1), 16–28.
[18] Hasan, I., Maccario, A., and Zazzara, C. (2002). Do internet activities add value? The Italian bank experience (Working Paper). Berkley Research Center, New York University.
[19] Herington, C., and Weaven, S. (2007). Can banks improve customer relationships with high quality online services? Managing Service Quality, 17(4), 404–427.
[20] Hill, T., Smith, N. D., and Mann, M. F. (1986). Communicating innovations: Convincing computer phobics to adopt innovative technologies. Advances in Consumer Research, 13, 419–422.
[21] Jayawardhena, C., and Foley, P. (2000). Changes in the banking sector: The case of internet banking in the UK. Internet Research: Electronic Networking Applications and Policy, 10(1), 19–30.

Research Article

[22] Joseph, M., McClure, and Joseph, B. (1999). Service quality in the banking sector: The impact of technology on service delivery. International Journal of Bank Marketing, 17(4), 182–191.
[23] Kannabiran, G., and Narayan, P. C. (2005). Deploying internet banking and e-commerce: Case study of a private sector bank in India. Information Technology for Development, 11(4), 363–379.
[24] Kapoor, K. K., Dwivedi, Y. K., and Williams, M. D. (2015). IRCTC mobile ticketing adoption in an Indian context. International Journal of Indian Culture and Business Management, 11(2), 155–183.
[25] Karjaluoto, H., Mattila, M., and Pento, T. (2002). Electronic banking in Finland: Consumer beliefs and reactions to a new delivery channel. Journal of Financial Services Marketing, 6(4), 346–361.
[26] Khalil, M. N., and Pearson, J. M. (2007). The influence of trust on internet banking acceptance. Journal of Internet Banking and Commerce, 12(2), 1–10.
[27] Koltzsch, G. (2006). Innovative methods to enhance transaction security of banking applications. Journal of Business Economics and Management, 7(4), 243–249.
[28] Kumar, V. (2016). Introduction: Is customer satisfaction (Ir) relevant as a metric? Journal of Marketing, 80(5), 108–109.
[29] Lee, Y., and Kozar, K. (2008). An empirical investigation of anti- spyware software adoption: A multi-theoretical perspective. Information Management, 45(2), 109–119.
[30] Liao, Z., and Cheung, M. T. (2002). Internet based e-banking and consumer attitudes: An empirical study. Information and Management, 39(4), 283–295.
[31] Ling, M. G., Lim, S. F., Tan, K. B., and Huat, S. (2016). Understanding customer satisfaction of internet banking: A case study in Malacca. Procedia Economics and Finance, 37(1), 80–85.
[32] Lu, S. C., Lai, K. H., and Cheng, T. C. E. (2006). Adoption of internet service in linier shipping: An empirical study of shippers in Taiwan. Transport Reviews, 26(2), 189–206.
[33] Malhotra, P., and Singh, B. (2009). The impact of internet banking on bank performance and risk: The Indian experience. Eurasian Journal of Business and Economics, 2(4), 43–62.
[34] Masrek, M. N., Syafiq, M., Halim, A., Khan, A., and Ramli, I. (2018). The impact of perceived credibility and perceived quality on trust and satisfaction in mobile banking context. Asian Economic and Financial Review, 8(7), 1013–1025.
[35] Mohan, H., Ahmad, N., Kong, Q. C., Yew, C. T., Liew, J., Kamariah, N., and Mat, N. (2013). Determinants of the internet banking intention in Malaysia. American Journal of Economics, 3(3), 149–152.
[36] Mols, N. P. (2000). The internet and services marketing: The case of Danish retail banking. Internet Research: Electronic Networking Applications and Policy, 10(1), 7–18.
[37] N. (2002). The relationship between service quality and customer satisfaction: A factor specific approach. Journal of Service Marketing, 16(4), 363–379.
[38] Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., and Pahnila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. Internet Research, 14(3), 224–235.
[39] Polatoglu, V. N., and Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of internet banking services. International Journal of Bank Marketing, 19(4), 156–165.
[40] Prompattanapakdee, S. (2009). The adoption and use of personal internet banking services in Thailand. The Electronic Journal on Information Systems in Developing Countries, 37(6), 1–31.
[41] Shah, M., and Clarke, S. (2009). E-banking management: Issues, solutions and strategies. Hershey, PA: IGI Global.
[42] Shin, D.-H. (2010). MVNO services: Policy implications for promoting MVNO diffusion. Telecommunications Policy, 34(10), 616–632.
[43] Smith, A. D. (2006). Aspects of strategic forces affecting online banking. Services Marketing Quarterly, 28(2), 79–97.

[44] Srivastava, R. K. (2007). Customer's perception on usage of internet banking. Innovative Marketing, 3(4), 67–77.
[45] Suh, B., and Han, I. (2002). Effect of trust on customer acceptance of internet banking. Electronic Commerce Research and Applications, 1(3), 247–263.
[46] Sureshchandar, G. S., Rajendran, C., and Anantharaman, R.
[47] Talukder, A. K. (2018). Effect of perceived service quality of commercial banks on customer satisfaction. International Journal of Management, Technology and Engineering, 8(12), 593–602.
[48] Tan, M., and Teo, T. S. H. (2000). Factors influencing the adoption of internet banking. Journal of the Association for Information Systems, 1(1), 1–42.
[49] Taylor, S., and Todd, P. A. (1995). Understanding information technology usage: A test of competing models. Information Systems Research, 6(2), 144–176.
[50] Tornatzky, L. G., and Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. IEEE Transactions on Engineering Management, 29(1), 28–43.
[51] Vimala, V. (2016). An evaluative study on internet banking security among selected Indian Bank customers. Amity Journal of Management Research, 1(1), 63–79.
[52] Walker, R. H., and Johnson, L. W. (2005). Towards understanding attitudes of consumers who use internet banking services. Journal of Financial Services Marketing, 10(1), 84–94.
[53] Wang, Y., Wang, Y., Lin, H., and Tang, T. (2003). Determinants of user acceptance of internet banking: An empirical study. International Journal of Service Industry Management, 14(5), 501–519.