



# **Customers' Perceived Risk and Attitude towards Adoption of the Digital Banking Services**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/SAJSSE/2021/v12i430312

### Editor(s):

(1) Dr. Ridzwan Che Rus, Universiti Pendidikan Sultan Idris, Malaysia.

### Reviewers:

(1) Vicente Humberto Monteverde, University of Moron, Argentina.

(2) Urvi Amin, Shri Jairambhai Patel Institute of Business Management, India.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/75674>

**Original Research Article**

**Received 15 August 2021**

**Accepted 21 October 2021**

**Published 26 October 2021**

## **ABSTRACT**

Extensive use of technology in the banking sector has redefined the role of a modern banker and banks are not mere purveyors of credit but providers of a number of hi-tech services at the doorsteps of customers anytime, anywhere, and anyhow. The banking industry is currently witnessing healthy competition to adopt new technology. With the advent of Information Technology and its massive application in banking, the delivery of banking services has become more electronic and online. The demand for internet banking (IB) is necessitated by the growing e-commerce transactions and the paradigm shift in banking led by technology. From the perspective of both users and providers, IB is cost-effective, quick, and convenient. IB as a medium of delivering banking services is gaining acceptance from customers and is fast catching up in India particularly in Kerala with almost all the banks offering IB services to their customers. Customers are realizing the comfort of accessing banking services from home and as a result, a number of bank customers have already adopted IB or are on the threshold of adopting it. At the same time, we cannot ignore the various kinds of risks hidden in the IB services. Not only the technological factor but also the social, demographic, and even geographical factors also influence us for being digital.

As a result of the currency demonetization from 8th November 2016, the demand for digital banking services has been increased. This is mainly because of the unexpected financial crisis that emerged due to currency demonetization. So it led to a new digital revolution in the field of the banking industry. Comparing to conventional banking services digital banking will provide a

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different experience to its customers. As a result of currency demonetization, many of the consumers were forced to adopt digital banking services. Hence this descriptive study is trying to reveal the great risk perceived by the banking customers in the banking services and the wild adoption of digital banking as a result of currency demonetization by taking samples from state bank of India and Kerala Gramin bank customers. This study sheds light on different aspects of consumers' perceived risk to analyze the influence of total perceived risk and consumers' willingness to embrace innovation on digital banking services adoption.

*Keywords: Digital banking; currency demonetization; digitalization; perceived risk.*

## 1. INTRODUCTION

Before the global economic crisis of 2008-2009, the banking enterprise created shareholder value through financial leveraging. Today's elevated guidelines and aggressive demanding situations are forcing banks to deleverage and identify alternative sources for value addition. New digital banking models navigate banks in the direction of more customer relationships that add new sources of value [1-4]. The main focus areas is on engaging customers and gaining trust in the key activities such as digital banking: marketing and sales; and account opening and servicing.

The banking sector plays a significant role in the development of an economy. The advent of Information Technology (IT) and its convergence with communication technology have substantially modified the landscape of banking services across the globe [5-9]. Over the past few decades, banks all over the world have been investing substantial amounts of money in Information Technology with the avowed goals of enhancing operational efficiency, competitive position, and product innovation [10,11,12,13]. The use of Information Technology in the banking sector has contributed to the emergence of more flexible and user friendly Self Service Banking Technologies (SSBT) to address the rapid and changing needs of banking customers. It has changed the face of the global banking sector radically, altering the manner in which customers conduct their banking transactions.

### 1.1 Significance of the Study

Banking industry is currently witnessing healthy competition to adopt new technology. With the advent of Information Technology and its massive application in banking, delivery of banking services has become more electronic and online. Internet banking as a medium of

delivering banking services is gaining acceptance from customers and is fast catching up in India particularly in Kerala with almost all the banks offering IB services to their customers [14-16]. Customers are realizing the comfort of accessing banking services from home and as a result, a number of bank customers have already adopted internet banking or on the threshold of adopting it. At the same time we cannot ignore the various kinds of risk hidden in the IB services. Not only the technological factor but also the social, demographic and even geographical factors also influence us for being digital [17-19].

### 1.2 Scope of the Study

This study is limited to cover the banking customers of both state bank of India and Kerala gramin bank in Wayanad district, Kerala. The kerala gramin bank mainly covers rural low income customers and state bank of india covers urban high income customers. So by analysing these two banks we could get a clear picture of how two extreme customers are forced to adopt digital banking as a result of currency demonetization.

## 2. STATEMENT OF THE PROBLEM

As a result of the currency demonetization from 8<sup>th</sup> November 2016, the demand for digital banking services has been increased. This is mainly because of the unexpected financial crisis that emerged due to currency demonetization. So it led to a new digital revolution in the field of the banking industry. Although digital banking services have gained a lot of attention, many consumers are still not willing to use them. This is mainly because of the hidden risk factor embedded in digital services [20-22]. This study sheds light on different aspects of consumers' perceived risk to analyze the influence of total perceived risk and consumers' willingness to embrace innovation on digital banking services adoption in the light of currency demonetization.

## 2.1 Objectives of the Study

1. To analyze the perceived risk of customers towards digital banking.
2. To identify the attitude of customers towards digital banking.
3. To identify the awareness level of customers about digital banking.

## 2.2 Hypotheses for the Study

**H0:** There is no significant difference between the type of banking customers and the total perceived risk level of the customers.

**H0:** There is no significant difference between the type of banking customers and the attitude of the customers towards digital banking.

**H0:** There is no significant difference between the type of banking customers and the awareness of the customers towards digital banking.

## 2.3 Research Design

Both the secondary as well as primary data have been used for the study. A structured questionnaire was used to collect primary data from the respondents. For the secondary data, the researcher has depended on various published journals, articles, RBI reports, etc.

## 2.4 Secondary Data

The secondary data for the study were collected from journals, theses, textbooks, websites, and various published records.

## 2.5 Primary Data

These are the first pieces of information collected by a researcher from the respondents directly. The main portion of the data has been collected primarily source through a structured questionnaire, was developed and issued among the customers those who are the enjoyers of digital banking. Primary data was collected from a sample of 200 customers.

## 3. SAMPLING DESIGN

It is a conceptual framework within which the sample should be collected. A purposive sampling method was used in this study to collect the data. Two banks namely SBI and Kerala Gramin bank from the three municipalities were chosen to collect the target

respondents. Respondents were active customers who are frequently using banking services for more than 1 year. The reason for selecting the state bank of India and Kerala Gramin bank is to cover the two extremes of customers from the target population.

### 1) Area of study

The geographical area of Wayanad is chosen for the study.

### 2) Sample size

By considering the nature of the study, samples of 100 customers from both the banks have been selected from two municipalities of Wayanad district, such as sulthan bathery and kalpetta.

### 3) Sampling Technique

The purposive sampling technique has been used for the study.

## 3.1 Reliability Test

The reliability test was used to find out the reliability and consistency of each variable decided in the questionnaire from the pre-test conducted among 50 respondents, 25 each from both the banks. This showed a Cronbach alpha value of more than 0.75 for all the variables in the questionnaire, which is considered to be consistent and reliable. The test shows the overall value of reliability as 0.831. So the questionnaire is considered consistent and reliable.

## 3.2 Statistical Tools Used in the Study

Tools used for analysis

- t-test
- Chi-square test

## 3.3 Limitations of the Study

- The present study was focused only on the banking sector. Therefore be findings cannot be generalized to other industries such as manufacturing, information technology, service sectors, etc.
- The sample was limited to the banking customers (SBI and Kerala Gramin bank only) in the district Wayanad. Hence different results can be obtained from the customers in other districts as well as from other banks.

This is to measure how all other risks such as privacy risk, security risk, performance risk, and time loss risk affect the banking customers.

The total mean score of SBI and Gramin bank customers towards total perceived risk is 3.23 and 2.79 respectively with a standard deviation of .768 for SBI customers and .373 for Gramin bank customers. Mean score values show that SBI customers have more risk than the Gramin bank customers. In order to see whether the difference is statistically significant, an independent sample t-test is conducted and the result is shown in the table below.

From the table:3 of Levene’s test, which helps to decide whether equal variances of means are assumed or equal variances of means are not assumed. Since the *p-value* .000 is lesser than 0.05 equal variance is not assumed.

The test result (with equal variance not assumed) shows a t statistic of 5.151 with 143.30 degrees of freedom. The corresponding two-tailed p-value is .000 which is lesser than 0.05. Therefore, the null hypothesis is rejected at a 5% level of significance, which means there is a statistically significant difference in terms of the total perceived risk of banking customers and the type of the banks. The total perceived risk involves privacy risk, security risk, performance risk, and time loss risk.

**Banking customers (SBI and Gramin Bank) and their attitude towards digital banking.**

**H0:** There is no significant difference between the type of banking customers and the attitude of the customers towards digital banking.

The total mean score of the attitude towards digital banking of SBI and Gramin bank

customers is 2.64 and 2.68 respectively with a standard deviation of .265 for SBI customers and .361 for Gramin bank customers. Mean score values show a difference between the two banks in respect of total perceived ease of use based on the technological factors. In order to see whether the difference is statistically significant, an independent sample t-test is conducted and the result is shown in the table below.

The table of Levene’s test, which helps to decide whether equal variances of means are assumed or equal variances of means are not assumed. Since the *p-value* of .002 is lesser than 0.05 equal variance is not assumed.

The test result (with equal variance not assumed) shows a t statistic of -.955 with 181.92 degrees of freedom. The corresponding two-tailed p-value is .341 which is greater than 0.05. Therefore, the null hypothesis is accepted at a 5% level of significance, which means there is statistically no significant difference in terms of the type of the bank and the attitude of customers towards digital banking.

**Testing the relationship between the type of banking customers (SBI and Gramin Bank) and their awareness towards digital banking services.**

**H0:** There is no significant relationship between the type of banking customers and awareness towards digital banking services.

**Table 1. Banking customers (SBI and Gramin bank) and their total perceived risk**

	Name of the Bank	N	Mean	Std. Deviation	Std. Error Mean
Privacy risk	state bank of India	100	2.63	.738	.073
	Gramin bank	100	2.66	.551	.055
Security risk	state bank of India	100	2.89	.310	.031
	Gramin bank	100	3.39	.616	.061
Performance risk	state bank of India	100	3.37	1.75	.175
	Gramin bank	100	2.84	.503	.050
Time loss risk	state bank of India	100	3.61	.624	.062
	Gramin bank	100	2.79	.617	.061

Source: survey data compiled by authors’

Total perceived risk= privacy risk+ security risk+ performance risk+ time loss risk

**Table 2. Descriptive statistics of banking customers and total perceived risk**

	Name of the bank	N	Mean	Std. Deviation	Std. Error Mean
Total risk	state bank of India	100	3.23	.768	.076
	Gramin bank	100	2.79	.373	.037

Source: survey data compiled by authors’

**Table 3. Independent sample t-test for total perceived risk and type of the bank**

		Leven's Test for Equality of variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig (2-tailed)	Mean difference	Std. Error Difference
Total perceived risk	Equal variances assumed	20.146	.000	5.151	198	.000	.440	.085
	Equal variances not assumed			5.151	143.30	.000	.440	.085

Source: survey data compiled by authors'

**Table 4. Group Statistics of type of the bank and attitude of customers towards digital banking**

	Name of the bank	N	Mean	Std. Deviation	Std. Error Mean
Attitude	state bank of India	100	2.64	.265	.026
	Gramin bank	100	2.68	.361	.036

Source: survey data compiled by authors'

**Table 5. Independent sample t-test for an attitude of customers towards digital banking**

		Leven's Test for Equality of variances		t-test for Equality of Means				
		F	Sig.	T	df	Sig (2-tailed)	Mean difference	Std. Error Difference
Attitude towards digital banking	Equal variances assumed	10.14	.002	-.955	198	.341	-.042	.044
	Equal variances not assumed			-.955	181.92	.341	-.042	.044

Source: survey data compiled by authors'

**Table 6. Type of the banking customers (SBI and Gramin Bank) and awareness towards digital banking services**

Name of the Bank		Awareness about digital banking services		Total
		yes	no	
Name of the banker	State bank of India	93	7	100
	Gramin bank	66	34	100
Total		159	41	200

Source: survey data compiled by authors'

**Table 7. Chi-square test on the type of the banking customers and awareness towards digital banking services**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.365 <sup>a</sup>	1	.000
Likelihood Ratio	23.968	1	.000
Linear-by-Linear Association	22.254	1	.000
N of Valid Cases	200		

Source: survey data compiled by authors'

Table 6: shows the awareness level of the respondents towards digital banking services. Among the 100 respondents from SBI, 93 of them have been said that they are aware of the digital banking services and only 7 said that they are unaware. At the same time among the 100 Gramin bank customers, it has been found that 34 of them are unaware of the digital banking services and 66 of them are aware of it. From this itself, we can understand that the awareness level of two banking customers towards digital banking services is completely different.

For testing the relationship between the type of the bank and awareness towards digital banking services chi-square test has been applied. The result of the chi-square test is given in the table. From the table, it is found that the chi-square value obtained is less than .05.hence the hypothesis is rejected. This means there is a relationship between the type of bank and their awareness of digital banking services.

### 3.4 Findings of the Study

- The study reveals that there is no significant difference between the type of bank and the perceived privacy risk of the customers. It means a type of bank does not have any influence on the perceived privacy risk of the customers. Irrespective of the banks it affects equally every customer.
- The study reveals that there is statistically no significant difference in terms of the type of the bank and the attitude of customers towards digital banking. From this, we can understand that the nature of the banks does not influence customers' attitudes towards digital banking.
- The study reveals that the awareness level of two banking customers is completely different. SBI customers are more aware of digital banking than Gramin bank customers.
- It has been found that the majority of the SBI customers wish to use both the branch as well as digital banking services together. At the same time majority of the Gramin, bank customers wish to continue with branch banking.

### 3.5 Suggestions

- Digital banking should be easily accessible by the users; this should be in terms of approach or convenience,

availability, understanding, and suitability. It should also be suitable for all categories of customers.

- Banks should organize seminars and conferences to educate the customer regarding the use of online banking as well as the security and privacy of their accounts.
- Some elder customers are hindered by a lack of computer skills. They need to be educated on the basic skills required to conduct online banking. Banks must emphasize the convenience that online banking can provide to elder people, such as avoiding long queues.
- Banks should develop e-banking services software in regional language and should use the most commonly used phrases, names, and shortcuts in the software.

## 4. CONCLUSION

A sound and effective banking system is the backbone of an economy. The economy of a country can function smoothly without any hassles if the banking system is capable of meeting the new challenges posed by the technology and other external as well as internal factors. The importance and role of information technology for achieving this objective cannot be undermined. Technology advances have accelerated changes resulting in higher production of goods & services. Information technology has transformed the functioning of business across the world. It bridged the gap in terms of both reach and the coverage of the system and in the process enabling better decision making based on the latest and accurate information and improvement in efficiency through various new processes, products, and services offered by both state-owned banks, private sector banks, and foreign banks and financial institutions.

In a country like India being full digitalization of the banking industry is not an easy thing. Because the majority of the population still struggling for better education. They are not easy to access the digital facility. The sudden demonetization has made an impact among the people, but they learned to cope up with the change. The study indicates that irrespective of the nature of the bank, the sudden demonetization affected everyone. Hence before being digital the banks should provide awareness classes to their customers. Only the proper and

systematic awareness campaigns, mock classes, usage of vernacular languages in the digital banking services, etc. can lead to the reduction of the rate of risk among the customers.

## CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the authors.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Agboola AA. "Electronic Payment Systems and Telebanking Services in Nigeria", *Journal of Internet Banking and Commerce*. 2006;11(3), December 2006.
2. Agarwal R, Venkatesh V. Assessing firm's web presence: A heuristic evaluation procedure for the measurement of usability. *Information Systems Research*. 2002;13(2):168-186.
3. Ahangar RG. An investigation into the determinant of customers' preferences and satisfaction of internet banking (empirical study of Iranian Banking Industry). *Journal of Applied Sciences*. 2011;11(3):426-437. DOI:10.3923/jas.2011.426.437
4. Aladwani AM, Palvia PC. Developing and validating an instrument for measuring user-perceived web quality. *Information & Management*. 2002;39:467-476.
5. Ang L, Dubelaar C, Lee BC. To trust or not to trust? A model of internet trust from the customer's point of view. In *Proceedings of the 14th Bled Electronic Commerce Conference*. 2001;40-52. Bled, Slovenia.
6. Araujo I, Araujo I. Developing trust in internet commerce. *Proceedings of the center for Advances Studies Conference on Collaborative Research*, October 6-9. Toronto, Ontario. 2003;1-15.
7. Balachandher Krishnan Guru, Santha Vaithilingam, and Norhazlin Ismail. "Electronic Banking in Malaysia: A Note on Evolution of Services and Consumer Reactions", *Journal of Internet Banking and Commerce*. 2000;5(1).
8. Balwinder Singh, Pooja Malhotra. "Adoption of Internet Banking: An Empirical Investigation of Indian Banking Sector", *Journal of Internet Banking and Commerce*. 2004;9(2).
9. Batagan L, Pocovnicu A, Capsizu S. E-Service quality management. *Journal of Applied Quantitative Methods*. 2009;4(3):372-381
10. Alain Yee-Loong Chong, Keng-Boon Ooi, and Binshan Lin. "Online banking adoption: an empirical analysis" *International Journal of Bank Marketing*, Emerald Group Publishing Limited. 2010;28(4):267-287.
11. Allen F, McAndrews J, Strahan P. E-finance: An Introduction, Working Paper No. 01-36, Financial Institutions Center, Wharton University, Philadelphia, PA,7 October; 2001.
12. Kaur P, Joshi MM. E-commerce in India: A Review. *International Journal of Computer Science and Technology*. 2012;3(1): 802-804.
13. Killawala A. Mobile Banking Service. Reserve Bank of India Monetary and Credit Information Review. 2011;7(9):1-4.
14. Dhekra Azouzi, "The Adoption of Electronic Banking in Tunisia: An Exploratory Study", *Journal of Internet Banking and Commerce*. 2009;14(3).
15. Eriksson K, Kerem, Nilsson D. Customer acceptance of internet banking in Estonia. *International Journal of Bank Marketing*. 2005;23(2):200216.
16. Kamal KG, Ipshita B. Development of an instrument to measure internet banking service quality in India. *Journal of Arts, Science & Commerce*. 2012;3(2/2):11-25.
17. Bauer HH, Hammerschmidt M, Falk T. Measuring the quality of e-banking portals. *International Journal of Bank Marketing*. 2005;23(2):153-175. DOI: 10.1108/02652320510584395
18. Bodo Land, Mark Colgate, "Relationship quality, online banking, and the information technology gap", *International Journal of Bank Marketing*. 2003;29:37.
19. Dandayudhapani sp. "E-banking practices and customer satisfaction-In Tanjavur district, Tamilnadu, An empirical study," *Journal of Marketing Research*. 2012;42
20. Dangwal RC, Sakalani K, Anand S. "E-banking: the upcoming technology and associated Innovations". *Professional Banker*, January. 2010;26-31.
21. Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*. 1989;13:318-339.

22. Dekimpe MG, Parker PM, Savary M. Journal of Marketing Research. 2000; "Global Diffusion of Technological 37(1):37-59. Innovations - a Couple Hazard Approach,"

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