

## E-Banking in Emerging Economies: An Empirical Assessment of Benefits and Security Threats among SBI Customers in Bangalore City

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### Abstract

E-Banking stands as a pivotal driver for the ongoing evolution of the banking industry. This modern service, also known as electronic or online banking, is offered by numerous financial institutions, enabling the seamless management of diverse banking activities predominantly through internet platforms, harnessing the power of information technology and communication. The main aim of the study is to examine the demographic profile of the customers, benefits of E-bank to the customers & problems of E-Banking. This research is basically primary sources of data has been collected and descriptive statistics also applied for analysis of the results. The major findings of the study still some of the customers are feeling E-Banking not safe so bank has to educate the customers.

**KEY WORDS:** E-Banking, Benefits of E-Banking, Problems of E-Banking Users etc.

### INTRODUCTION

E-banking, short for electronic banking, represents the digitization of traditional banking services, allowing customers to conduct financial transactions online. This transformation has revolutionized the way individuals and businesses manage their finances, offering unparalleled convenience and accessibility. With e-banking, customers can perform a wide range of banking activities, including transferring funds, paying bills, and accessing account information, all from the comfort of their own home or on the go through mobile devices. One of the key features of e-banking is its 24/7 availability, enabling customers to access their accounts and carry out transactions at any time, day or night, regardless of banking hours or location. This flexibility eliminates the need to visit physical bank branches, saving valuable time and effort for busy individuals. Moreover, e-banking platforms are designed with robust security measures to safeguard customer data and transactions, providing peace of mind and ensuring confidentiality in online banking activities. The adoption of e-banking has also led to greater efficiency and cost savings for both banks and customers. By shifting transactions to digital channels, banks can streamline their operations, reduce overhead costs associated with maintaining physical branches, and pass on these savings to customers in the form of lower fees and competitive interest rates. Additionally, e-banking promotes environmental sustainability by reducing the need for paper-based transactions, contributing to a greener and more eco-friendly banking industry. Furthermore, e-banking offers a plethora of innovative features and services that enhance the overall banking experience for users. These include personalized financial management tools, real-time transaction alerts, and seamless integration with third-party payment platforms. The advent of mobile banking apps has further expanded the reach of e-banking, allowing customers to manage their finances conveniently from their smartphones or tablets, anytime and anywhere with an internet connection. In conclusion, e-banking has emerged as a cornerstone of modern banking, reshaping the industry landscape and empowering customers with greater control and convenience over their financial lives. As technology continues to evolve, we can expect e-banking to evolve as well, introducing new capabilities and enhancing the banking experience even further. Embracing e-banking represents not just a shift in how we conduct financial transactions, but a transformative journey towards a more efficient, accessible, and interconnected banking ecosystem. In today's fast-paced digital age, electronic banking, or e-banking, has become synonymous with convenience, efficiency, and accessibility in the realm of financial services. With the rise of internet connectivity and mobile technology, e-banking offers a plethora of benefits that revolutionize the traditional banking experience. From anytime, anywhere access to account management and streamlined transactions, to enhanced security measures and cost-saving opportunities, the advantages of e-banking are reshaping the way individuals and businesses engage with their finances. Let's delve into the myriad benefits that e-banking brings to the table, empowering customers with greater control and flexibility over their financial lives.

### Review of Literature:

**E. Ibrahim (2019)** This study is conducted on "Mobile Banking and Customer Satisfaction" Information technology is considered as the prime driver for the changes taking place around the globe. Mobile banking is the latest and most innovative service offered and given by the banks., anytime using a mobile handheld gadget and a mobile facility such as Short Message Service (SMS). Mobile Banking refers to requirements of banking and financial facilities with the use of mobile telecommunication devices.

**Khaled Aldiabat (2020)** This study is conducted on "The Effect of Mobile Banking Application on Customer Interaction in the Jordanian Banking Industry" Banks have transitioned from traditional paper-based services to embracing cutting-edge technologies such as mobile banking. The surge in mobile banking adoption is fuelled by the proliferation of mobile devices, outnumbering computers in the market. Research indicates that the Supportive Access factor plays a pivotal role in determining user satisfaction with mobile banking services.

**Ashvini Sanjay Khot (2023)** This study is conducted on "The Impact of Mobile Banking on Customer Satisfaction" Technology is a driving force in the global age and is taking over in every way; mobile and internet banking is just a few examples of the ever developing technology advancements. The purpose of the study was to investigate the effect of mobile banking on customer satisfaction in banks.

**Rajeshkumar D. Kir (2024)** This study is conducted on "An Empirical study on adoption of mobile banking facility among customers of banks in north Gujarat" With the introduction and advancement of mobile technology and devices, bank customers get access to banking service at any time and at any place. Based on literature review, a researcher identified certain factors and data collected through structured questionnaires.

**Dr. Hajera Fatima Khan (2025)** This study is conducted on "E-Banking Benefits and Issues" In numerous developed nations, E-banking serves a crucial function as the most cost-effective means of delivering banking services. Additionally, it enables swift domestic and international fund transfers. Recognized as one of the most thriving online ventures, E-banking significantly economizes both time and expenses for customers and businesses alike. Its accessibility via various devices such as PCs, PDAs, and mobile devices with internet connectivity further enhances its convenience.

### Research Methodology:

This study is descriptive research and methodology is used primary sources of data was collected through issuing of questionnaire for 200 customers from State Bank of India E-Banking users in Bangalore City. The sampling technique has been used convenience sampling method. The secondary data was collected from research publications in books, journals and periodicals, dailies and study reports and articles available on the chosen topic. For the purposes analysis of data mean, standard deviation, chi-square test, Z-test, one way ANOVA test etc are used.

### Objectives of the Study:

1. To examine the demographic profile of employees in Wipro Limited, Bangalore
2. To explain the major benefits of E-Banking services provided by the SBI Bank
3. To evaluate the major problems faced by the customers towards E-Banking services

**HYPOTHESIS AND RESULTS:**

- **H0: There is no significant difference between demographic profiles of Customers.**  
**H1: There is a significant difference between demographic profiles of Customers.**

Table No.1 visualizes the demographic profile of E-Banking users of SBI Customers. The overall respondents were numbering, 200

Factors	Categories	No. of Respondents	Percentage
Gender	Male	121	X <sup>2</sup> =2.387 P=0.000 <b>(H0 Rejected)</b>
	Female	79	
Age	18 - 30 Years	86	X <sup>2</sup> =3.712 P=0.064 <b>(H0 Accepted)</b>
	31 - 40 Years	70	
	Above 41 Years	44	
Education	+2	50	X <sup>2</sup> =3.74 P=0.001 <b>(H0 Rejected)</b>
	Graduation	84	
	Post Graduation	66	
Monthly Income	Below 25000	52	X <sup>2</sup> =3.648 P=0.088 <b>(H0 Accepted)</b>
	25000-35000	58	
	35000-45000	46	
	Above 45000	44	
Occupation	Business	62	X <sup>2</sup> =2.111 P=0.000 <b>(H0 Rejected)</b>
	Employed	84	
	Professional	44	
	Others	10	

customers out of that 121 respondents are belongs to male category and 79 respondents are belongs female category. In the context of age pattern, majority of the respondents numbering, 86 Customers belongs to age group of 18-30 years. Further the educational background of the respondents majority numbering, 84 and 66 customers were graduates and post professional qualified respectively. In the context of occupation of customers, majority numbering, 84 and 62 respondents were belongs to employed and business respectively. The monthly income of the customers, majority 58 and 52 respondents were belongs to 25,000-35,000 and below 25,000 respectively.

**Table No.1 shows that Demographic Profile of the Employees**

Source: Field Survey. (Significant level 0.05).

To calculate, chi-square test for data of gender profile, education and occupational background, the P value (Sig 2-tailed) is 0.000, 0.001 and 0.000 which is less than the Alpha value of 0.05, it was found to be significant. Therefore the results indicate that the stated null hypothesis to be rejected and alternative hypothesis is accepted. Further the data of age pattern, and monthly income of the respondents the P value (Sig 2-tailed) is 0.064 and 0.088, which is more than the Alpha value of 0.05, it was found to be insignificant. Therefore the results indicate that the stated null hypothesis to be accepted and alternative hypothesis is rejected.

- **H0: There is no significant difference in perception of customers on e-banking benefits are unequal.**  
**H1: There is a significant difference in perception of customers on e-banking benefits are equal.**

Table No.2 depicts that Benefits of E-banking for Customers. The highest mean and standard deviation were found 4.37 and 1.40 customers are opinioned that PIN based authorization is developed for security for POS transactions using terminals is good experience in the bank. As against the lowest mean and standard deviation were found The site has virtual keyboard to enter Password and User ID was recorded the value of 2.37 and 0.22 respectively. According to the one sample Z-Test, Bank will maintained card information confidentially, Bank will maintained card information confidentially category results, the P value (Sig 2-tailed) is less than the Alpha value of 0.05, it was found to be significant. Therefore the results indicate that the stated null hypothesis to be rejected and alternative hypothesis is accepted. In the context of EFT application of customers data is secure it is not disclosed to third parties, High Malicious software is used for ECS transactions for security purpose category results, the P value (Sig 2-tailed) is more than the Alpha value of 0.05, it was found to be not significant. Therefore the results indicate that the stated null hypothesis is accepted.

**Table No.2 shows Benefits of E-Banking for Customers**

Particulars	Mean	SD	Z -Test	Sig-H0
Bank will maintained card information confidentially	3.00	1.01	3.17	0.000 <b>(H0=Rejected)</b>
The site has virtual keyboard to enter Password and User ID	2.37	0.22	3.20	0.002 <b>(H0=Rejected)</b>
Bank implemented for structured data services for secure the data for customers	3.65	1.42	3.85	0.000 <b>(H0=Rejected)</b>
PIN based authorization is developed for security for POS transactions using terminals	4.37	1.40	2.00	0.523 <b>(H0=Accepted)</b>
EFT application of customers data is secure it is not disclosed to third parties	3.20	1.54	4.01	0.044 <b>(H0=Accepted)</b>
High Malicious software is used for ECS transactions for security purpose	3.50	0.36	2.78	0.099 <b>(H0=Accepted)</b>

Source: Field Survey. (Significant level 0.05).

- **H0: There is no significant difference in issues encountered by customers.**  
**H1: There is a significant difference in in issues encountered by customers.**

Table No.3 depicts that problems of E-Banking users. The highest mean and standard deviation were found 4.5 and 0.53 customers are opinioned that Problems of anti-virus/anti-malware software threats from hackers is good experience in the bank respectively. As against the lowest mean and standard deviation were found Problem in wireless access protocol this will struck the NEFT websites was recorded the value of 2.42 and 0.03 respectively. According to the one sample T-Test, Technical problems such as, account money is debited but cash not received, Problems in Virtual Private networking access (VPN) to access credit cards & Problem of hacking password and PIN, the P value (Sig 2-tailed) is less than the Alpha value of 0.05, it was found to be significant. Therefore the results indicate that the stated null hypothesis to be rejected and alternative hypothesis is accepted. In the context of Problem in Advanced Encryption Standard (AES), it leads to machine time

out, the P value (Sig 2-tailed) is more than the Alpha value of 0.05, it was found to be not significant. Therefore the results indicate that the stated null hypothesis is accepted.

**Table No.3 shows the Problems of E-Banking users**

Particulars	Mean	SD	Z -Test	Sig-H0
Technical problems such as, account money is debited but cash not received	4.03	1.31	1.57	0.001 ( <i>H0=Rejected</i> )
Problems of anti-virus/anti-malware software threats from hackers	4.50	0.50	2.15	0.004 ( <i>H0=Rejected</i> )
Problems in Virtual Private networking access (VPN) to access credit cards	4.00	1.34	1.78	0.001 ( <i>H0=Rejected</i> )
Problem in Advanced Encryption Standard (AES), it leads to machine time out	3.22	1.54	1.85	0.523 ( <i>H0=Accepted</i> )
Problem of hacking password and PIN	4.20	0.03	1.52	0.004 ( <i>H0=Rejected</i> )
Problem in wireless access protocol this will struck the NEFT websites	2.42	1.53	1.65	0.099 ( <i>H0=Accepted</i> )

Source: Field Survey. (Significant level 0.05).

### OBSERVATION

1. Most of the respondents expressed satisfaction with the promptness of responses to their inquiries. Over 60% of them affirmed receiving quick responses, whether through telephone or online channels.
2. Nearly all respondents believe that the bank ensures security by safeguarding account details, PINs, and maintaining confidentiality of account information, while also providing robust transactional password mechanisms.
3. Some banks lack effective guidance on utilizing online banking, often characterized by non-intuitive interfaces and cluttered designs, leading to potential user errors.
4. Ensuring maximum security in financial transactions is essential to minimize fraud while simultaneously delivering efficient service to users.
5. The absence of adequate regulations, policies, and legislation regarding e-banking leaves customers vulnerable to internet fraud.

### CONCLUSION

In today's era of globalization, electronic banking stands out as a pivotal driver in advancing the banking sector by addressing critical challenges. It offers a pathway for fostering customer loyalty within the Indian banking industry, achieved through tailored training initiatives and streamlining banking processes for enhanced customer familiarity. With the younger demographic increasingly recognizing the convenience and advantages of electronic banking, it is poised to become not just a viable but a preferred mode of banking across India in the foreseeable future. The prevalence of prepaid payment instruments, particularly mobile wallets, underscores a shifting trend in payment behaviors. Efforts by the Government of India and various agencies to fortify the safety and reliability of electronic banking through digital channels are underway, reflecting a commitment to enhancing security measures. As more customers opt for the convenience of online and mobile banking, physical branch visits are declining, marking a significant shift towards digital banking solutions. This trend reflects the evolving landscape of banking practices in India, where electronic banking is becoming increasingly integrated into daily transactions, aligning with the current socioeconomic context of the nation.

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