

# A Study on Digital Banking System and Measuring Its Effectiveness among the Customers in Chennai City

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**Abstract:** India's banking sector is booming at a great pace in spite of its relatively small size in comparison of its counterparts in other leading economies. Indian banking sector has been found lucrative by eminent players from the international world. Most if not all banks offer online banking or electronic banking. They have secured websites where clients may enroll their accounts and start banking via the Internet – electronically transfer funds, make bill payments, or invest money. This study reveals the importance of digitalization in the modern era of technology where it has a huge impact on day to day transactions where Digital pervasiveness is real and happening very fast – from connected cars, internet of things, wearable devices, virtual reality, cognitive computing and a lot more. In 2015, 52.7 percent of the global mobile phone population accessed the internet from their mobile phones and this statistic is set to be 61.2 percent in 2018. It's a significant shift from a time when many thought it unlikely that anybody will want to have a personal computer at home. This research paper is to analyze Digital banking system and measuring its effectiveness among the customers in chennai city

**Key Words:** Digital banking services, E-commerce, Customer Delight and customer knowledge.

## I. INTRODUCTION

E-Business is a revolution that is transforming companies round the world, and it is impacting all the industries. E-business is much more than online purchase and implementation of computer applications by the IT departments; or putting up a company website-business affects the whole business and the value chains in which it operates. It enables a much more integrated level of collaboration between the different components of a value chain than ever before. Adopting e-Business also allows companies to reduce costs and improve customer response time. Organizations that transform their business practices stand to benefit immensely from innumerable new possibilities brought about by technology. Although it's early days for e-Business in India, we believe there are greater opportunities over the long term for India and Indian businesses. There is urgent need to usher in farsighted policies & practices to become a major economic force in the emerging world of E-Business. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet.

## II. LITERATURE REVIEW

**Tsoukatos (2016)** identified the main determinants of customers' perception on E-Banking services, examined the effects of service development on customer satisfaction and evaluated banks' performance regarding key E-Banking excellence areas. The study identified that four electronic banking factors namely personalized service, innovation, accessibility and convenience and transaction security. The study found that customers perception on banks underperform in being harmonized with the needs of their customers in all the services and also suggested that special priority should be given to improving security in ATM banking and educating new customers.

**Ching Poon (2016)** studied customers' acceptance of electronic banking services in Malaysia. The researcher identified ten factors such as convenience of usage, accessibility, availability of features, bank management and image, security, privacy, design, content, speed and fees and charges. The result showed that out of ten factors accessibility, convenience of usage, design and content are the major sources of satisfaction privacy and security are the main sources of dissatisfaction. Whereas, the availability of features, speed, service charges and bank management are dangerous to the success of the E-Banking services. Hence, the researcher is to identify that satisfaction level of security point in E-Banking services.

**Mathur and Khan (2017)** examined the recent technological trends issues and challenges in banking sector, identified the penetration, adoption and usage of E-Banking technologies namely ATM, internet banking, phone banking and payment and settlement system and also investigated that the factors influencing the usage by customers. It was concluded that

Indian banks provided online services compare to foreign banks. Even though, customers find it convenient and cost effective way to bank through ATMs, phone banking remains significant for customers' retention and personalized services.. Therefore, it is important to identify the perception of customers' about ATM, Mobile Banking, Internet Banking and Mobile Banking services.

**Elisha (2017)** explored the major attributes responsible for internet banking based on customers' perception on different E-Banking technologies. The study found that E-Banking serves more advantages to Nigerian banking sector. Factor analysis found that security, time factor, queue management, fund transfer, accessibility and user friendly are main factors influencing to E-Banking services. Out of 750 customers, 660 customers were agreed with factor of convenient and flexible of E-Banking services. Hence, now-a-day's most of the departments link with banking sector because all the payments are made through online banking services. In this connection one has to find out the level of awareness urban people in internet banking.

**Masochal et al., (2018)** find out what extent do banks implement innovative banking technologies in marketing strategies and practices and investigated the customers' perceptions on the level of satisfaction gained through the use of technology in transactions with their banks. The findings showed that most of the customers indicated that they were influenced to bank with a bank which uses advanced new banking technologies. Therefore, innovative banking channels namely mobile banking, credit card, debit card, SWIFT and internet banking reflected very low levels of usage by customers and also maximum of customers prefer from E-Banking methods to traditional banking methods. Unluckily, there was a vast gap between ownership and usage of E-Banking resources entailing that there was no effective consumption of technologies owned by rural customers. Therefore, it is necessary to identify what level of modern banking technology services was expected by the urban people

**Joshua and Koshy (2018)** examined the different usage patterns by customers of the technology enabled services provided. In India, most of the banks offering service a mode of electronic banking such as ATMs, internet banking, phone banking and mobile banking. The study was conducted among the customers of some of the leading banks in India who were residing in the selected metro, urban and semi-urban bank centers in India. The findings showed that customers have more aware about ATMs and the level of adoption of other electronic banking means like Internet banking, phone banking and mobile banking in spite of their potential were yet to pick in a big way.

### III. STATEMENT OF THE PROBLEM

The primary benefit of e-banking from the bank customers point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customers money. In India,

the customers of the banks are highly heterogeneous natured which includes illiterate, semi- literate and highly literate. In this circumstance, it is essential to know the effectiveness of electronic banking operations among the customers. E-Banking service is one of the prominent and attractive services offered by both private and public sector banks. E-Banking is completely technology oriented which needs proper awareness, experience and expertise in operating computer and electronic devices. Despite the benefits of digital banking, there have been many challenges which needs to be addressed such as banking marketers should focus on traditional banking habits, security risk, transaction difficulty, technical issues, small budgets, Privacy risk, Confidentiality, Integrity, and authentication. Competition in the industry and less Internet penetration in Indian context are also some of the challenges which needs to be addressed.

### IV. OBJECTIVES OF THE STUDY

- To evaluate the level of awareness on E-Banking services among the customers of nationalised banks
- To measure the level of satisfaction towards E-Banking services among the customers of nationalised banks
- To study the challenges faced by Indian banks in adoption of technology and make recommendations to tackle these challenges.
- To suggest necessary actions that should be considered by the commercial banks in order to increase the impact of e-banking on customer satisfaction.

### V. NEED FOR THE STUDY

Many inventions and revolutions have taken place in the history of banking but no such things have changed the business of banking as fast as the e-banking revolution. E-banking has encouraged real banking behavior closer to neoclassical economic theories of market functioning. As there is presence of absolute transparency of the market, clients (both business and retail) can make comparison of the services provided by various banks easily. Thus, e-banking services whether delivered online or through other mechanisms, have spread quickly in recent years. The study aims to find out the preferences of the customers and effectiveness toward use of the E-banking. During the research, we identify the awareness of internet banking among the customers of different banks too. Also, it aims to find the customer satisfaction relating to E-banking service.

### VI. SCOPE OF THE STUDY

The scope of the study restricted to chennai city and the customers utilizing digital banking system. Banking sector is providing various services to their customers to fulfill the needs and requirements of them. Particularly E-Banking services play a vital role in the present scenario of banking. E-Banking services are technology oriented and customers' needs educations and technical knowledge to operate the E-banking channels. Even though there are plenty of E-Banking

services are available the researcher concentrates on four major E-Banking services such as Automated Teller Machine (ATM), Mobile Banking, Internet Banking and Phone Banking. The awareness and usage of E-Banking services are mostly found among the urban customers. In urban areas only almost all the sectors of banks looking forward to introduce various kinds of electronic channels towards the fulfillment of requirements of educated customers. Therefore, it is essential to know the perception, awareness level and satisfaction level of banking customers those who are using E-Banking services.

## VII. RESEARCH METHODOLOGY

### RESEARCH DESIGN

A research design is purely and simply the framework or plan for a study that guides the collection and analysis of data. It is a blue print that is followed in completing a study.

#### Descriptive Research Design

Descriptive research design includes surveys and fact findings, enquires of different kinds. The major purpose of Descriptive research is description of state of affairs, as it exists at present. In social business research, we quiet often use the term Ex post facto research for descriptive studies. When the researcher is interested in knowing the characteristics of certain groups such as age, occupation, experience etc, a descriptive study is necessary. Hence the researcher has chosen descriptive research method for the study.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.908	50

#### Inference:

The Cronbach's alpha coefficient for 50 items is 0.908 suggesting that the items have high level of internal consistency.

### CHI SQUARE ANALYSIS

#### CHI SQUARE TEST

Null hypothesis (H<sub>0</sub>): There is no significant difference between the overall ratings of E-banking services and the occupation of the respondents.

Alternate hypothesis (H<sub>1</sub>): There is significant difference between the overall ratings of E-banking services and the occupation of the respondents.

#### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	93.778 <sup>a</sup>	9	.000
Likelihood Ratio	121.769	9	.000
Linear-by-Linear Association	29.690	1	.000
N of Valid Cases	140		

## VIII. SAMPLING METHODOLOGY

### Population:

The study of various characteristics relating to items \ individual belong to a particular group is called as population. The population of the study consists of the different target respondents like Employee, Businessmen, Students and professional Using electronic banking services of nationalised banks

### Sampling Method/ Technique:

The sampling technique used was non-probability sampling method is adopted in this study. It refers to the technique where the probability of each cases being selected from the total population is known. The sampling technique used is a combination of stratified plus judgment sampling which is used in solving everyday business problems and making public decisions. The sample size is 140

### DATA COLLECTION METHODS

The present study has employed both the primary and secondary data. Primary data are generated by a study specifically designed to accommodate the needs of the problem at hand. The methods used were direct survey from the Customer using E-Banking services. Here secondary data were collected from the records available in the company and through the internet.

### DATA ANALYSIS

#### RELIABILITY TEST

a. 1 cells (6.2%) have expected count less than 5. The minimum expected count is 4.20.

**Inference:**

The Pearson chi square significant value is 0.0 which is lesser than 0.05. Hence reject null hypothesis. Therefore, there is significant difference between the overall ratings of E - banking services and the occupation of the respondents.

**ONE WAY ANOVA ANALYSIS**

Null hypothesis (H<sub>0</sub>): There is no significant between the experience level of the customer using internet banking ANOVA

facility and their perception toward the internet banking services.

Alternate hypothesis (H<sub>1</sub>): There is significant between the experience level of the customer using internet banking facility and their perception toward the internet banking services.

		Sum of Squares	df	Mean Square	F	Sig.
E TICKET BOOKING	Between Groups	46.200	3	15.400	10.247	.000
	Within Groups	204.400	136	1.503		
	Total	250.600	139			
ACCOUNT OPENING AND CHEQUE BOOK REQUEST	Between Groups	26.600	3	8.867	10.767	.000
	Within Groups	112.000	136	.824		
	Total	138.600	139			
FUND TRANSFER	Between Groups	34.650	3	11.550	18.700	.000
	Within Groups	84.000	136	.618		
	Total	118.650	139			
TRANSACTION HISTORY AND BANK STATEMENT	Between Groups	3.850	3	1.283	1.039	.008
	Within Groups	168.000	136	1.235		
	Total	171.850	139			
DEMAND DRAFT/D-MAT ACCOUNT STATEMENT	Between Groups	19.600	3	6.533	12.205	.000
	Within Groups	72.800	136	.535		
	Total	92.400	139			

**Inference:**

Here p values are lesser than 0.05. Hence reject null hypothesis. Therefore, there is significant between the experience level of the customer using internet banking facility and their perception toward the internet banking services.

**ONE SAMPLE SIGN TEST**

Test Statistics<sup>a</sup>

	TRASFER OF FUNDS - ONLINE BILL PAYMENT	MAKE ENQUIRY ON THE TRANSACTIONS CHECKING ACCOUNT BALANCE	ORDER A CHEQUE BOOK/ACCOUNT STATEMENT - PAY UTILITY BILLS
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Null hypothesis (H<sub>0</sub>): There is no significant difference in the usage of internet banking services for various purposes by the respondents.

Alternate hypothesis (H<sub>1</sub>): There is significant difference in the usage of internet banking services for various purposes by the respondents

Z	-1.737	-4.900	-.684
Asymp. Sig. (2-tailed)	.082	.000	.494

**Inference:** It is found that the Z value is not within the acceptance region of null hypothesis ( $Z = -1.96$  to  $1.96$ ) in respect of purpose like make enquires on checking account balance .therefore  $H_0$  is rejected. Hence there is significant difference in the usage of internet banking services for various purposes by the respondents. In respect of purpose like transfer of funds online bill payment and order a cheque book, the Z value is within the acceptance region. Therefore  $H_0$  is accepted. Hence there no significant difference in the usage of internet banking services for various purposes by the respondents.

#### IX. FINDINGS OF THE STUDY

- The Cronbach's alpha coefficient for 50 items is 0.908 suggesting that the items have high level of internal consistency.
- The Pearson chi square significant value is 0.0 which is lesser than 0.05. Hence reject null hypothesis. Therefore, there is significant difference between the overall ratings of E -banking services and the occupation of the respondents.
- From the One Way Anova Analysis it is found that Here p values are lesser than 0.05. Hence reject null hypothesis. Therefore, there is association between the experience level of the customer using internet banking facility and their perception toward the internet banking services.
- From the One Sample Sign Test, it is found that the Z value is not within the acceptance region of null hypothesis ( $Z = -1.96$  to  $1.96$ ) in respect of purpose like make enquires on checking account balance. Therefore,  $H_0$  is rejected. Hence there is significant difference in the usage of internet banking services for various purposes by the respondents.

#### SUGGESTIONS AND RECOMMENDATIONS

- After analyzing the findings, the following suggestions have been made to the group and great care has been taken in making these suggestions for improvement of Audience response to Audience perception through different choices:
- It is suggested that the bankers should take measures for developing confidence about E-Banking operations among older generations.
- Availability cash in ATM center is always problematic aspect among the customers. Hence, it is suggested that the bankers took care of the availability of cash in ATM centers particularly in remote ATM locations.
- Internet security is the one of the prominent set back of E-Banking operations in many times. It is suggested that the bankers should take initiative and

measures for a perfect E-Banking security system such as bio- metric and iris recognition etc.

- The bankers should take efforts to popularize the remaining mobile banking services such as fund transfer, statement of accounts, ticket booking, utility bill payments, De mat account services, inter mobile payment services etc. The businessman and private employee have more knowledge about E-Banking services than government employee.

#### X. CONCLUSION

Banking industry is playing a vital role in the economic development of a country and it became a globalized service sector in the present scenario. In banking industry, technological advancement has brought a significant change in banking services. In the current situation, Indian commercial banks are providing plenty of E-Banking services for their customers. ATM, Mobile banking, Internet banking, Phone banking, Electronic fund transfer, Debit card, Credit card, Corporate banking terminal, SWIFT, point of sale, RTGS, NEFT are the foremost E-Banking channels. According to the study, almost all commercial banks are offering E-Banking services for their customers. ATM, mobile banking, internet banking and phone banking channels are frequently used by the customers. According to the customers' perception and level of awareness on individual E- Banking channels, ATM and mobile banking are well known services. The level of satisfaction on E-Banking services, cash withdrawal and balance enquiry facilities in ATM channel, SMS alerts and fund transfer in mobile banking services, viewing account balance, online bill payment and RTGS in internet banking services and check account balance in Phone banking services are the most satisfying services. Based on the empirical evidences this study concludes that commercial banks' customers are moderately aware about the foremost E-Banking channels of ATM, mobile banking, internet banking and phone banking channels and satisfied in all the services that are related to the four channels.

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