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Consumer behavioral study on digital banking services (A survey of HDFC Bank, Virar, Mumbai)

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Abstract

This paper surveyed the perception of users on the digital banking technology in banking sector. By the aid of digital banking, customers utilizing it for managing their financial needs smoothly. Several online banking facilities have transformed the way of users and provide immense benefits. In the present study, survey was performed with HDFC Bank, located at suburban city in Mumbai i.e. Virar, analyzed the perception of people towards e-banking services. However, banking sectors revolutionized the idea of digital banking in several ways to anyhow satisfy the customer by customizing the offers, marketing of their pilot projects, taking concern about the security reasons etc. The recent survey focused on questionnaire based on basic queries that further validated by statistical analysis.

Keywords: Digital banking, online banking, HDFC bank, Survey, Virar

Introduction

With the advent of digitalization, the world has changed by using new technologies and the result is cashless future. From the starting of this decade, banking sectors have introduced the word "Digital" and slowly it became value-added opportunity around the globe. Digital banking or e-banking defines the virtual practice where consumers can connect to their related bank's website where one to one interaction services provides advanced platform for their consumers. It converts information into device-readable format that could be processed, stored and securely transmitted to other banks. A customer gets a more convenient platform for various kind of business through digital banking. The facilities provided by bank to their consumers include bill payment, fund transfer, time to time analysis of account statements, shareholding status, loan and mortgage payment etc. The bank is using powerful networks to computerize millions of routine transactions. Gartner Group declared that there has been a rapid growth in digital banking services in the USA, by the end of 2005. It was projected that e-banking also showed a vast expansion in the European Union countries (Kaynak and Harcar, 2005) ^[1]. As we all know that digital banking has a wide scope in the array of banking services such as Internet banking, Mobile banking, Electronic fund transfer, services provided by ATMs, plastic money, bulk transfer and household banking etc. It enhancing the no. of consumers and hence creating a bond between bank and their users. One study conducted by market research firm (New-York) Ipsos-Reid in June, 2002 on consumer behavior declared that only 17% user's thought online banking is not secure for them and around 11% showed unconcern regarding security of their privacy (Fetto, 2002) ^[2]. However, nowadays banking sectors continuously presenting efforts on making all services as popular as can and also informing consumers about the availability of these useful platforms. Few pioneering banks have emerged as promoter of consumer perspectives but some government banks have not bothered about their approach. Mbama and Cajetan, 2018 ^[3] have also concerned about the strategies required to accelerate the digital banking adoption rate among consumers of UK. Similarly in the United States, according to research data report of Federal Reserve Bank of Boston, the year 2017 had an average of 8% of each consumer's total transactions in online purchases is higher as compared to the report of 2015 (Greene and Stavins, 2018) ^[4].

In view of these changes and developments held in UK and US as well as across the developed world, a survey study was undertaken with HDFC Bank Limited, Virar (a suburban city), Mumbai, India, in order to study the perception of people towards e-banking

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services. Moreover, an attempt was also made to evaluate some factors which hinder the adoption rate. The specific research goals taken were as follows:

1. To analyze the demographic and socioeconomic characteristics of users of Internet banking and traditional methods of banking.
2. To analyze the popularity/status of digital banking services among the consumers of Virar.

The required data for above studies was gathered by using a self-designed questionnaire in Virar city in March of 2019. Collected data was further deeply analyzed statistically to achieve insights of consumer behavior for digital banking. Here, we presenting a sample of research questionnaire we selected. It includes 13 queries, related to the objectives of the present study (Figure1).

Survey on Digital Banking & Services in HDFC Bank

Dear Respondent,

We are conducting a research on the customer's satisfaction and the bankers ease of using digital banking. We will appreciate your cooperation in this regard by filling up the questionnaire carefully. I ensure you that the information provided by you will be kept confidential and will be used for academic purpose only.

Questionnaire:

1. GENDER:

Male
Female

2. AGE:

18-28 Years
28-38 Years
38-48 Years
Above 48 Years

3. EMPLOYMENT:

Student
Business
Professional
Service
Other

4. ANNUAL INCOME:

Upto - 1, 00,000
1, 00,000-3, 00,000
3, 00,000-5, 00,000
Above 5, 00,000

5. EDUCATION:

Illiterate
High School
Intermediate
Graduate
Post Graduate

6. USE INTERNET BANKING OVER TRADITIONAL BANKING METHODS

YES
NO

7. FOR HOW MANY YEARS YOU ARE USING DIGITAL BANKING?

Less than 1 year
1-5 years
5-10 years
10-15 years

8. WHICH CATEGORY OF THE BANKS DO YOU CONSIDER AS MOST TECHNOLOGICALLY ADVANCED?

Public sector banks
Private sector banks

9. ARE YOU AWARE THAT THE BANK PROVIDES YOU FREE PHONE BANKING & NET BANKING SERVICES IF YOU OPEN A NEW SAVINGS ACCOUNT WITH HDFC BANK?

YES
NO

10. WHICH FACTOR PROMOTES YOU TO USE THE NEW TECHNIQUES IN BANKING?

Reduced time of transactions
Cost Effectiveness
Door Step Banking
Technology savvy

11. WHICH INTERNET BANKING SERVICES DO YOU USE?

Connected to the Internet at home or work to do their financial transactions
Uses E - mail
ATM / Debit card service
Credit card service
Online banking services
E - payments
Electronic Fund Transfer (EFTs)/NEFT/RTGS

12. HOW FREQUENTLY DO YOU USE THE FOLLOWING BANKING SERVICES PER MONTH?

OPTIONS	NIL	1-4TIMES	4-8TIMES	8-12TIMES	12&ABOVE
ATM					
Internet Banking					
Phone Banking					
Mobile Banking					
SMS Banking					

13. SATISFACTION ON TECHNOLOGY USAGE

OPTIONS	EXTREMELY DISSATISFIED	DISSATISFIED	NEUTRAL	SATISFIED	EXTREMELY SATISFIED	OPTIONS	EXTREMELY DISSATISFIED
ATMs are conveniently located.							
Accounts information and balance enquiry.							
Account to account transfer.							
Transaction status							
Statement Request							
SMS alerts							
The charges that the bank collects from you are reasonable when compared to other banks.							

Fig 1: Sample questionnaire for studying consumer behavior for digital banking

Findings and Interpretations:

(a) The set of data comprises of 50 individuals or users. The demographic characteristics of the respondents are presented in Table 1.

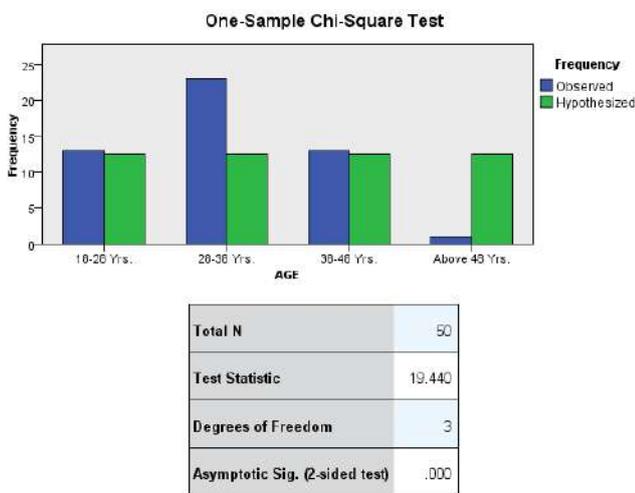
Table 1: Demographic characteristics of respondents

Demographics	No. of respondents	Percentage of Respondents
2.1. Gender:		
Male	27	54%
Female	23	46%
Total	50	100%
2.2. Age:		
18-28 Yrs.	13	26%
28-38 Yrs.	23	46%
38-48 Yrs.	13	26%
Above 48 Yrs.	01	2%
Total	50	100%
2.3. Employment:		
Student	06	12%
Business	20	40%
Professional	02	4%
Service	21	42%
Other	01	2%
Total	50	100%

2.4. Annual Income:		
Upto 1,00,000	10	20%
1,00,000-3,00,000	21	42%
3,00,000-5,00,000	17	34%
Above 5,00,000	02	4%
Total	50	100%
2.5. Education:		
Illiterate	0	0%
High School	15	30%
Intermediate	06	12%
Graduate	21	42%
Post Graduate	08	16%
Total	50	100%

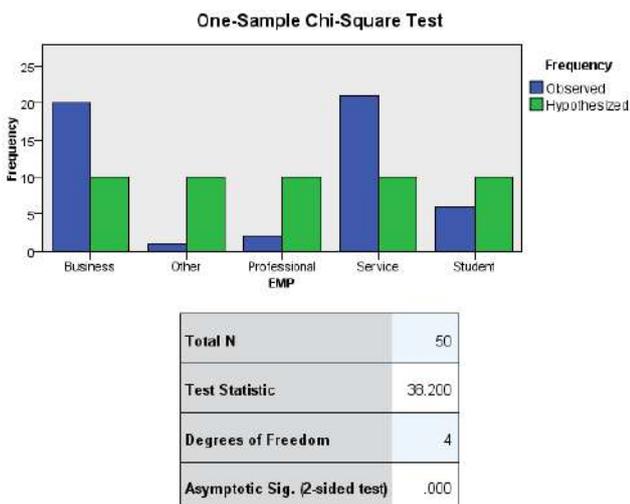
A. Statistical analysis of above data (question 2-5 of questionnaire):

Age: The categories of Age occur with equal probabilities by One-Sample Chi-Square Test (p-value 0.000). Hence null hypothesis rejected.



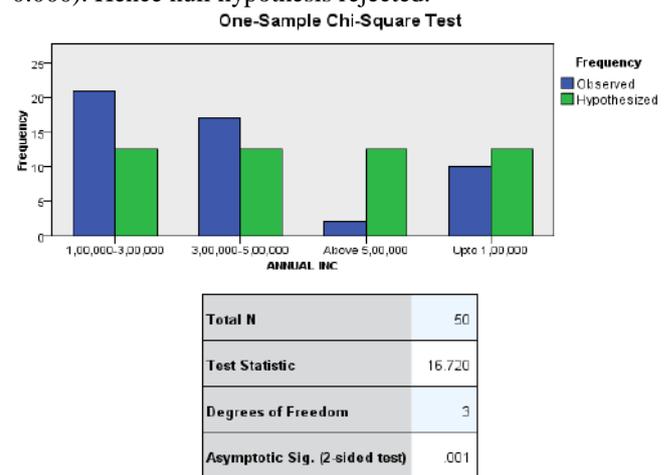
1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 12.500.

Employment: The categories of employment occur with equal probabilities by One-Sample Chi-Square Test (p-value 0.000). Hence null hypothesis rejected.



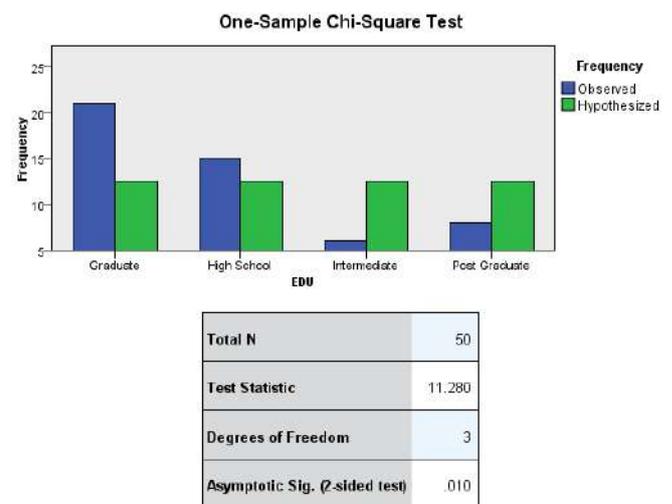
1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 10.

Income: The categories of income occur with equal probabilities by One-Sample Chi-Square Test (p-value 0.000). Hence null hypothesis rejected.



1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 12.500.

Education: The categories of education occur with equal probabilities by One-Sample Chi-Square Test (p-value 0.010). Hence null hypothesis rejected.



1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 12.500.

B. Interpretation of above data (question 2-5 of questionnaire):

From the analysis it was depicted that majority of respondents (54%) are males and around 46% of the

consumers belonged to the age of 28-38 Years. It was found that vast group of customers belonged to service class followed by business class. With regard of income, 42% majority of the respondents fell between the income group of 1,00,000-3,00,000 followed by income group between 3,00,000-5,00,000 having 34% of respondents. The analysis also found that most of the respondents were graduates and hence it can be concluded that these users were well-familiar about the digital banking services.

Use of Internet banking over traditional banking

Other than the demographic characteristics of respondents the next information of the research questionnaire is use of internet banking over traditional banking. Data used for analysis was same as above i.e. 50 users (Table 2).

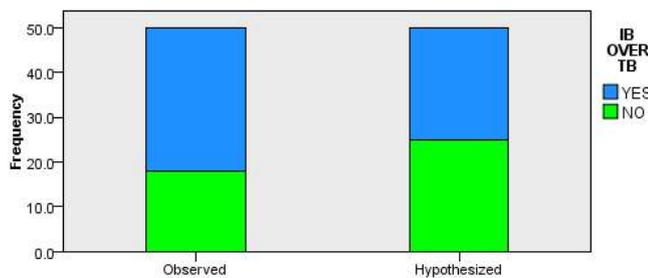
Table 2: IB/TB (Internet Banking over traditional banking) category

Options	No. of respondents	Percentage of Respondents
Yes	32	64%
No	18	36%
Total	50	100%

A. Statistical analysis:

The categories of IB/TB occur with equal probabilities by one sample chi square test (p-value 0.066). Hence null hypothesis rejected.

One-Sample Binomial Test



Total N	50
Test Statistic	32.000
Standard Error	3.536
Standardized Test Statistic	1.838
Asymptotic Sig. (2-sided test)	.066

B. Interpretations

According to the results, 64% of respondents among studied consumers prefer internet banking over traditional banking methods. It is now concluded for this category that more than 50% of people like to use digital banking services provided by HDFC Bank, Virar, Mumbai.

For how many years you are using digital banking?

Selected individuals were asked for the duration, by means of digital banking. Table 3 describes the percentage of respondents.

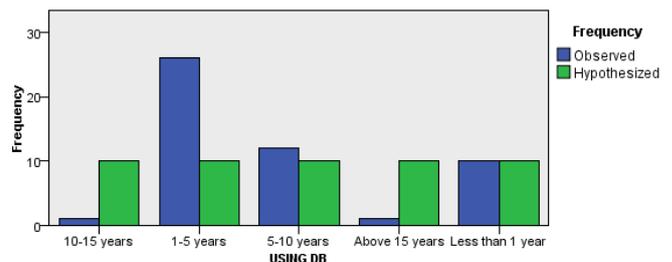
Table 3: Study of duration of using digital banking among selected group

Options	No. of Respondents	Percentage of Respondents
Less than 1 year	10	20%
1-5 years	26	52%
5-10 years	12	24%
10-15 years	1	2%
Above 15 years	1	2%
Total	50	100%

Statistical analysis

The categories for using digital banking occur with equal probabilities by one-sample chi square test (p-value 0.000). Hence null hypothesis rejected.

One-Sample Chi-Square Test



Total N	50
Test Statistic	42.200
Degrees of Freedom	4
Asymptotic Sig. (2-sided test)	.000

1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 10.

Interpretations

According to the above results and statistical analysis, it could be confirmed that about 52% of people are using digital banking from 1-5 years followed by the group, using digital banking from 5-10 years.

Category of the bank considered as most technologically advanced

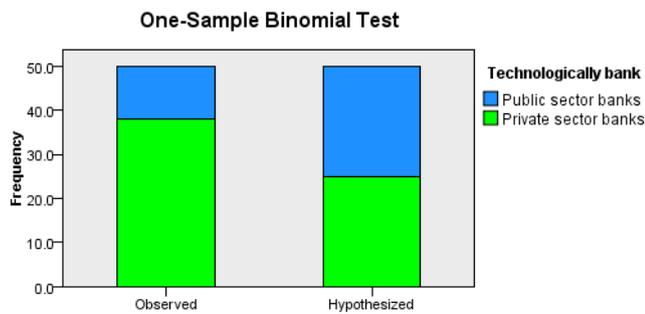
Here, majority was asked for their choice for public v/s private sector banks. The percentage of respondents can be seen in table 4.

Table 4: Percentage of respondents for their choice for most technologically advanced bank

Options	No. of Respondents	Percentage of Respondents
Public Sector Banks	12	24%
Private Sector Banks	38	76%
Total	50	100%

Statistical analysis

The categories for technologically advanced bank's choice occur with equal probabilities by one-sample chi square test (p-value 0.000). Hence null hypothesis rejected.



Total N	50
Test Statistic	12.000
Standard Error	3.536
Standardized Test Statistic	-3.536
Asymptotic Sig. (2-sided test)	.000

Interpretations:

Here, it is found that 76% of respondents consider banks of private sector in comparison to public sector as a most technologically advanced. The percentage we found showing that majority of populace believe it as a first

choice.

Awareness regarding free mobile banking & net banking facilities

The purpose of this inquiry is to identify no. of respondents where they know that opening of new savings account with HDFC Bank Limited gets the facility to use free service of mobile banking and net banking. Let’s look at the percentage data of respondents in following table:

Table 5: Analysis of percentage data for awareness of people

Options	No. of Respondents	Percentage of Respondents
Yes	47	94%
No	3	6%
Total	50	100%

Factors for promotion of banking technique

However, there are several factors which can directly or indirectly influence the promotion of any bank. In our questionnaire, we selected four factors such as reduced time of transactions, cost effectiveness, door step banking and technology savvy as a key to identify which factor is preferred more. As a result, it will promote new banking techniques. Table 6 shows the data of respondents for this case.

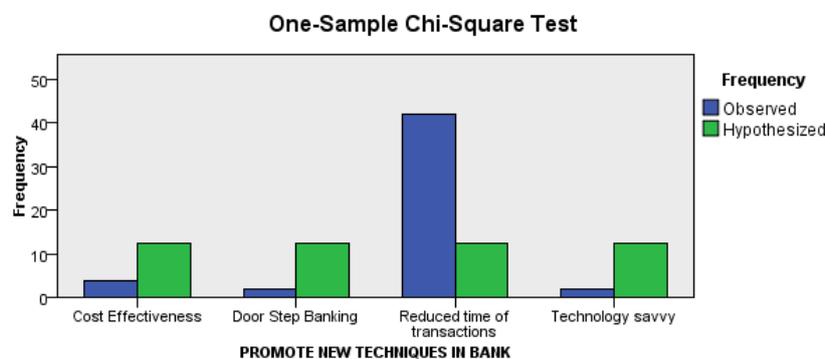
Table 6: Data showing percentage of respondents for their preference why they use digital banking

Options	Percentage of respondents those consider digital banking because of	Percentage of respondents those not prefer
Reduced time of transactions	84%	16%
Cost Effectiveness	8%	20%
Door step banking	4%	20%
Technology savvy	4%	47%

Statistical analysis:

The categories considered for promotion of banking

techniques occur with equal probabilities by one-sample chi square test (p-value 0.000). Hence null hypothesis rejected.



Total N	50
Test Statistic	93.040
Degrees of Freedom	3
Asymptotic Sig. (2-sided test)	.000

1. There are 0 cells (0%) with expected values less than 5. The minimum expected value is 12.500.

Interpretations

According to the data collected from query no. 8 and 9, it could be combinedly interpret that about 94% of people have an idea that if they open a new savings account with HDFC bank, they will be availed by free mobile and net banking services. On the other hand, 84% of consumer believes that by the aid of digital banking, it will reduce the time of transactions. Rest 16% prefers it as cost effective, door step banking and technology savvy.

Among various which internet banking service preferred by user

In this section, analysis was based on the internet services used by the customers. As the study based on 50 individuals, they were asked for few digital banking features providing by banking sectors. Table 7 combines the data for the same.

Table 7: Data showing percentage of respondents, using different online banking services

Options	No. of respondents	Percentage of Respondents who use
Connected to the internet at home or work to do their financial transactions	4	8%
Uses E-mail	7	14%
ATM/Debit Card service	9	18%
Credit card service	8	16%
Online banking services	7	14%
E- payments	8	16%
Electronic fund transfer (EFTs)/NEFT/RTGS	7	14%

A. Analysis and interpretations:

The service of ATM/Debit cards is using by near about 18%

Table 9: Analysis of level of satisfaction among users

Options	Extremely Dissatisfied	Dissatisfied	Neutral	Satisfied	Extremely Satisfied
ATMs are conveniently located.	0%	4%	2%	64%	30%
Accounts information and balance enquiry.	0%	2%	4%	68%	26%
Account to account transfer.	0%	4%	6%	48%	42%
Transaction status	2%	4%	8%	36%	48%
Statement Request	0%	6%	10%	50%	34%
SMS alerts about specific information to the bank services / new products.	4%	2%	6%	56%	32%
The charges that the bank collects from you are reasonable when compared to other banks.	4%	6%	6%	50%	34%

A. Analysis and interpretations

According to data collected 48% to 68% people are satisfied while using the mentioned services in table 9 and at the same time they are satisfied with the charges impose by the bank for using the different digital banking services when compared to other banks.

Conclusion

In the present research, the author studied the intention, perception and customer tendency to evaluate the use and attitude towards digital banking. The survey also demonstrated that technology has greatly influenced the bank customers in order to encourage them to conduct their banking needs in an innovative manner. However, they have

of the respondents among various services provided by bank.

Utilization of banking services per month:

Following data (Table 8) of 50 respondents explain the various services utilized by customers that how frequently they use the required services per month.

Table 8: Data showing percentage of respondents for utilization of various banking services

Options	Nil	1-4 Times	4-8 Times	8-12 Times	12 & Above
ATM	2%	18%	52%	22%	6%
Internet Banking	2%	34%	50%	10%	4%
Phone Banking	8%	42%	38%	10%	2%
Mobile Banking	6%	46%	32%	14%	2%
SMS Banking	8%	22%	54%	14%	2%

A. Analysis and interpretations:

According to the study it is analyzed that 52% of the population use ATM services at least more than 6 to 8 time per month, 50% of the respondents use internet banking more than 6 to 8 times per month, 42% of the people use phone banking 1 to 3 times in a month, 46% of the people use mobile banking 1 to 4 times in a month, and 54% of the people are using SMS banking 4 to 8 times per month.

Satisfaction of technology use:

The following (Table-9) data of respondents showing the percentage of level of satisfaction while using the online/ internet banking services:

good awareness regarding ATMs, uses of credit cards, internet and mobile banking but banking sectors need to target more digital banking models so as to enhance the positive perception of customers. As per current era of digital banking, now bank can target more on serving their products to more customers. This survey was only an overview to explore the use of digital banking among 50 respondents and hence the survey was done to investigate the approach of digital banking among customers.

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