AN EMPIRICAL RESEARCH ON CUSTOMER PERCEPTION TOWARDS E-BANKING SERVICES

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ABSTRACT
Information Technology is a significant tool which is transforming traditional services into Electronic services and developing a new scale of service channel. The several e-channels like ATMs, Credit and Debit Cards, Tele-banking, Mobile-banking, Online-banking and Smart Cards are changing the face of the Indian banks and compositely known as E-Banking. These channels had affected or transformed the method of delivering the services to consumers and governing better, innovative and efficient services to them.

The result of this study clearly shows that different age group of customer and different occupation group of customers have different perception toward the e-banking services. The results also propose that demographic factors impact significantly internet banking behavior, specifically, occupation and age. Finally, this paper suggests that an understanding about the customer’s perception regarding the e-banking services of public and private sector banks in Udaipur dist of Rajasthan it will help to the bankers to understand the customers need in better way.

1.1 INTRODUCTION OF E-BANKING
E-banking nowadays is the common trend here in our country. No more falling in line in banks, no more waiting tons of hours in the bank, no more days and weeks of waiting. All can be done with one card, one gadget. It’s easy, it works, and most importantly, people like it. But still, some people are having a hard time using this kind of technology mostly people who are used to do things the old traditional way. With the use of advertising, people are now motivated to use E-banking because again, it eliminates the hassle encountered when using the old process of banking.

To face and survive in this cutting edge competition, the banks have to deliver better quality services to the customers because it is only a customer who can evaluate the quality of services. Hence, the service quality has to meet the customers’ specifications and expectations. The banks must know what type of services the customers expect to have and then accordingly serve them the products and services that fulfill their expectations. The banks should be ready to accept changes otherwise their survival will become difficult in the competitive world. Therefore, there is a need to evaluate the customers’ perceptions regarding the recent e-banking services too and improve the services if they are not up to their expectations.

1.2 REVIEW OF LITERATURE
According to Brown (1998) Electronic banking is one of the truly widespread avatars of E-commerce the world over. Various authors define E-Banking differently but the most definition depicting the meaning and features of E-Banking are as follows:

1. Banking is a combination of two, Electronic technology and Banking.
2. Electronic Banking is a process by which a customer performs banking Transactions electronically without visiting a brick-and-mortar institutions.
3. E-Banking denotes the provision of banking and related service through Extensive use of information technology without direct recourse to the bank by the customer.

According to Ahmadksath (2010) the world is changing at a staggering rate and technology is considered to be the key driver for these changes around us. An analysis of technology and its uses show that it has permeated in almost every aspect of our life. Many activities are handled electronically due to the acceptance of information.
technology at home as well as at workplace. Slowly but steadily, the Indian customer is moving towards the internet banking. The ATM and the Net transactions are becoming popular.

But the customer is clear on one thing that he wants net-banking to be simple and the banking sector is matching its steps to the march of technology. E-banking or Online banking is a generic term for the delivery of banking services and products through the electronic channels such as the telephone, the internet, the cell phone etc. The concept and scope of e-banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably (Indiana Department of Financial Institutions).

Source: commons.wikimedia.org

1.3 CONCEPT OF E-BANKING

Electronic banking, also known as Electronic Funds Transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another, rather than by cheque or cash. It may use electronic funds transfer to (Bitner, 1990)

- Withdraw money after checking account from an ATM machine with a personal identification number (PIN), according to our convenience, day or night.
- Instructions by the bank or credit union to automatically pay certain monthly bills from our account, such as our auto loan or mortgage payment.
- Having the bank or credit union transfer funds each month from checking account to our mutual fund account.
- Have government social security benefits check or our tax refund deposited directly into our checking account.

Source: www.securitystateonline.com

Uses of E-BANKING

- Buy groceries, gasoline and other purchases at the point-of sale, using a check card rather than cash, credit or a personal check.
- Use a smart card with a prepaid amount of money embedded in it for use instead of cash at a pay phone, expressway road toll, or on college campuses at the library's photocopy machine or bookstores.
- Use computer and personal finance software to coordinate total personal financial management process, integrating data and activities related to income, spending, saving, investing, recordkeeping, bill-paying and taxes, along with basic financial analysis and decision making.
Need for E-Banking
According to Malika (2012) “One has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. In true Internet banking, any inquiry or transaction is processed online without any reference to the branch (anywhere banking) at any time. Providing Internet banking is increasingly becoming a "need to have" than a "nice to have" service. The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services”. Banks have traditionally been in the forefront of harnessing technology to improve their products, services and efficiency. They have, over a long time, been using.

1.4 BANK INFORMATION TECHNOLOGY CUSTOMER
Electronic and telecommunication networks for delivering a wide range of value added products and services. The delivery channels include direct dial – up connections, private networks, public networks etc and the devices include telephone, Personal Computers including the Automated Teller Machines, etc. With the popularity of PCs, easy access to Internet and World Wide Web (WWW), Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet Banking, although the range of products and services offered by different banks vary widely both in their content and sophistication.

Changing Scenario of IT in the Years
The technology in Indian industry is changing immensely. Kaushal (2012) identified the changing scenario of IT in the Indian banks in the years of 1990 and 2000 is as follows:

- **HRM/IR**: In 1990, there was a problem of overstaffing, high turnover of IT professionals, absence of attractive terms and career progression for IT technologies.
  In 2000, web based portals were designed for IT training and there was need to set up a separate IT institute for banking industry.

- **EDP/IT Organizational Set-up**: In 1990, telecommunication, security, audit and disaster recovery department set-up was still absent in majority of banks.
  In 2000, need for IT security, audit, control and disaster recovery was felt to minimize IT related risks.

- **IT Management**: In 1990, IT management functioning remained highly centralized.
  By 2000, as IT investment grew and its usage spread, professional IT management was required across the hierarchy of the banks.

- **IT Infrastructure**: In 1990, telecommunication /ATM projects initiated yet to deliver required support both from customers and management.
  By 2000, huge investment was needed to create necessary IT infrastructure and strategies to ensure ROI.

- **Banking Business and its Spread**: In 1990, emergence of new private and foreign banks resulted into need for new products and services.
  By 2000, demand for e-commerce, internet based “One Stop Shopping” of financial services gained momentum.

- **IT Audit, Security and Control for Risk Management**: In 1990, many frauds were yet to surface. ROI in IT was still not done adequately.
  By 2000, relevant software packages were used for IT audit.

- **Management Function and IT Support**: In 1990, there was absence of management support system and decision support system for vital functions of management like credit investment, asset liability management.
  By 2000, indigenous solution for local problems based on technological innovations was needed.

- **IT Audit/Security/Control Related Awareness and Culture**: In 1990, password management yet not adequate, controls and inbuilt audit trials were far from satisfactory.
  By 2000, IT audit and control had been the responsibility of every employee of the bank as IT would become lifeblood of the financial system.

So, technological changes transformed the banking systems and structure mainly in the years 1990 and 2000 and the major changes were related to risk, security, control, IT infrastructure, IT management and organizational set-up.
1.5 OBJECTIVES OF THE STUDY

1. To examine the relationship between the E-Banking services and their acceptance by customers with reference to customers of selected banks.

2. To study the customer perception for the E-Banking services offered to them with reference to customers of selected banks.

1.6 RESEARCH METHODOLOGY

Sampling Procedure
For collecting data from respondents’ convenience sampling procedure is followed. Under this procedure it is taken care of that responses are collected from only those respondents who are able to understand the necessity of the research, and can interpret that any of the fruitful outcomes will definitely benefited them by more supervised advertisement content without misleading and fraud type of information dissemination. One of the major issues was under consideration while selecting the respondents was that the respondents should be aware about the services offered by E-Banking channels and their banks.

1.7 RELIABILITY FOR DATA COLLECTED

Reliability coefficient tested by using Cronbach’s alpha (α) analysis. In order to measure the reliability for a set of two or more constructs, Cronbach’s alpha is a commonly used method where alpha coefficient values range between 0 and 1 with higher values indicating higher reliability among the indicators (Hair, et al., 1992).

Table 1.1: Case Processing Summary

<table>
<thead>
<tr>
<th>Case Processing Summary</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>100</td>
<td>100.0</td>
</tr>
<tr>
<td>Excluded a</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. List wise deletion based on all variables in the procedure.

Source: Author’s Compilation

From the above Table 1.1 it could interpret that total case followed under examinations which were found valid were 100. Total numbers of cases were 100. No missing or excluded cases were recognized. All the responses collected through respondents and governed by the questionaire were systematically filled and specific attention was given to all the respondents if required so that proper and confirmed responses about the issues could be collected.

Table 1.2: Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.897</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author’s Compilation

From above Table 1.2 it could recognized that Cronbach value for the responses of the 100 respondents of the study was found .897 which is an excellent representation of the quality of data and confirms approx 89.7 % reliability of the collected data. Cronbach's a (alpha) is an important psychometric instrument to measure the reliability of data. The reliability coefficient indicates that the scale for measuring trust and commitment is a reliable. So, various statistical tools can be applied and tested.

1.8 ANALYSIS OF RELATIONSHIP BETWEEN DEMOGRAPHIC VARIABLES AND USAGE OF E-BANKING SERVICES
Analysis of relationships between demographic variables of respondents and related usage of E-Banking services by the respondents will be presented in this section of the research paper. In order to investigate the relationship between demographic variables like educational qualification, age, gender and occupation and the usage of E-Banking services by the respondents following hypotheses were formulated.

**H₀₁**: There is no relationship between the Gender and usage of E-Banking service.

**H₁₁**: There is relationship between the Gender and usage of E-Banking service.

**H₀₂**: There is no relationship between the Age and usage of E-Banking service.

**H₁₂**: There is relationship between the Age and usage of E-Banking service.

**H₀₃**: There is no relationship between the Educational Qualification and usage of E-Banking service.

**H₁₃**: There is relationship between the Educational Qualification and usage of E-Banking service.

**H₀₄**: There is no relationship between the Occupation and usage of E-Banking service.

**H₁₄**: There is relationship between the Occupation and usage of E-Banking service.

### Consequences of Examination of Relationship between Demographic Variables and Usage Pattern of E-Banking services by the Respondents

#### Table 1.3: Test of Homogeneity of Variance for Gender and Usage of E-Banking

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Usage Pattern of E-Banking services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene Statistic</td>
<td>df1</td>
</tr>
<tr>
<td>.728</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Primary Data

#### Table 1.4: One Way ANOVA for Gender and Usage of E-Banking Services

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Usage Pattern of E-Banking services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum Squares of df</td>
<td>Mean Square</td>
</tr>
<tr>
<td>Between Groups</td>
<td>5.236</td>
</tr>
<tr>
<td>Within Groups</td>
<td>245.32</td>
</tr>
<tr>
<td>Total</td>
<td>250.556</td>
</tr>
</tbody>
</table>

Source: Primary Data

Levene’s Test for Equality of Variance is performed to test condition that the variances of both samples are equal or not. A high value results normally in a significant difference, but in Table 1.3 result sig. = .523, which could interpret as no equal variance.

In the Table 1.4 the variation (Sum of Squares), the degrees of freedom (df), and the variance (Mean Square) are given for the within and the between groups, as well as the F value (F) and the significance of the F (Sig.). Sig. indicates whether the null hypothesis – the population means are all equal – has to be rejected or not. As it can see, there is good difference between the two Mean Squares (5.236 and 2.503), resulting in a non significant difference \( F = 2.091; \text{Sig.} = 0.058 \). The Sig. value is higher than the Sig. level of 0.05. This means that \( H₀₁ \)
must be accepted which states that there is no relationship between the gender and usage pattern of E-Banking services offered to them by their banks. Both male and female equally use the E-Banking services and shows positive response for it.

**Table 1.5: Test of Homogeneity of Variance for Age and Usage of E-Banking Services**

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Usage Pattern of E-Banking services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene Statistic</td>
<td>df1</td>
</tr>
<tr>
<td>1.235</td>
<td>3</td>
</tr>
</tbody>
</table>

**Source: Primary Data**

**Table 1.6: One Way ANOVA for Age and Usage of E-Banking Services**

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Usage Pattern of E-Banking services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of Squares</td>
</tr>
<tr>
<td>Between Groups</td>
<td>6.532</td>
</tr>
<tr>
<td>Within Groups</td>
<td>253.69</td>
</tr>
<tr>
<td>Total</td>
<td>260.222</td>
</tr>
</tbody>
</table>

**Source: Primary Data**

According to Table 1.5 it could interpreted that because sig. = .003 so equal variance could be assumed. According to Table 1.6 it could interpret that there is difference between the two Mean Squares (2.177 and 2.642), resulting in a significant difference ($F = 0.823; \text{Sig.} = 0.032$). The Sig. value is lower than the Sig. level of 0.05. This means that $H_{02}$ must be rejected which states that there is relationship between the age and usage pattern of E-Banking services offered to respondents by their banks. Thus the usage of E-Banking services is not equal for the different age group (Under 20 Years, 21-30 Years, 31-40 Years and Above 41 Years) people / respondents.

**Table 1.7: Test of Homogeneity of Variance for Educational Qualification and Usage of E-Banking Services**

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Usage Pattern of E-Banking services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene Statistic</td>
<td>df1</td>
</tr>
<tr>
<td>1.624</td>
<td>4</td>
</tr>
</tbody>
</table>

**Source: Primary Data**
Table 1.8: One Way ANOVA for Educational Qualification and Usage of E-Banking Services

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Usage Pattern of E-Banking services</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Groups</td>
<td>5.231</td>
<td>4</td>
<td>1.307</td>
<td>0.5283</td>
<td>0.042</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>235.12</td>
<td>95</td>
<td>2.474</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>240.351</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data

According to Table 1.7 it could be interpreted that because sig. = .016 so equal variance could be assumed. According to Table 1.8 it could interpret that there is a difference between the two Mean Squares (1.307 and 2.474), resulting in a significant difference ($F = 0.5283; \text{Sig.} = 0.042$). The Sig. value is lower than the Sig. level of 0.05. This means that $H_0$ must be rejected which states that there is a relationship between the educational qualification and usage pattern of E-Banking services among the respondents. Thus, the usage pattern of E-banking services among the respondents is not equal for the respondents of different qualification background like below secondary, higher secondary, graduate, post graduate and professional degree holder. Means educational qualification significantly affects the usage pattern of E-banking services.

Table 1.9: Test of Homogeneity of Variance for Occupation and Usage of E-Banking Services

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Usage Pattern of E-Banking services</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.235</td>
<td>5</td>
<td>194</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Source: Primary Data

Table 1.10: One Way ANOVA for Occupation and Usage of E-Banking Services

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Usage Pattern of E-Banking services</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Groups</td>
<td>2.123</td>
<td>5</td>
<td>0.4246</td>
<td>0.0735</td>
<td>0.032</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>542.78</td>
<td>94</td>
<td>5.774</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>544.903</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data

According to Table 1.9 it could be interpreted that because sig. = .023 so equal variance could be assumed. According to Table 1.10 it could interpret that there is a difference between the two Mean Squares (0.4246 and 5.774), resulting in a significant difference ($F = 0.0735; \text{Sig.} = 0.032$). The Sig. value is lower than the Sig. level of 0.05. This means that $H_0$ must be rejected which states that there is a relationship between the occupation and
usage pattern of E-Banking and related services. Thus the usage pattern of E-Banking and related services is not equal for the respondents of different occupation background like student, Govt. Service, Private Service, business and Professional. It could easily be interpret that a working person will frequently use the E-Banking channels like ATM, Internet Banking rather than students, at the very same time person working in private jobs, businessman and professional uses E-Banking services frequently rather than the government service associated persons.

Table 1.1: Status of Hypotheses established for analysis the relationship between demographic variables and Usage Pattern of E-Banking services

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Hypotheses</th>
<th>Difference</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>H01</td>
<td>Non Significant</td>
<td>Accepted</td>
</tr>
<tr>
<td>2.</td>
<td>H02</td>
<td>Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>3.</td>
<td>H03</td>
<td>Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>4.</td>
<td>H04</td>
<td>Significant</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Author’s Compilation

So by the acceptance and rejection of hypotheses formulated for investigating the relationship between demographic variables like educational qualification, age, gender and occupation and the usage of E-Banking services by the respondents it could interpreted that age, educational qualification and occupation are the significant variables and usage of E-Banking and related services varies according to age, education, Occupation and only gender variable did not found significant means there is no variation for gender (male and female) for the usage of E-Banking services.

CONCLUSION

So we could better conclude that E-Banking service had improved quality of Banking services which significantly improving the customer satisfaction, customer base, banks benefits and many more. It was also observed that customers are deriving several benefits from the E-Banking over their traditional way of banking. Several negative and positive factors significantly affecting the adoption but banks should work to eliminate the negative issues.

SUGGESTIONS FOR BANK CUSTOMERS

Following issues should be administered by the customers for successful implementation of technological development of methods implementation in banking activities.

1. Customer should be curious to make himself literate for the new trends of banking activities.
2. Customer should show his positive participation in training program organized by banks for them.
3. Customer should ask for help as and when they face any problem in any E-Banking activities.
4. Customer should submit their feedback to improve the quality of services.
5. Customer should follow the guidelines supervised for availing any E-Banking service.
6. Customer should carefully read all the help directions or files properly so that they could make themselves aware for the system or procedure of E-Banking.
7. Positive participation in development of E-Banking activities.

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Indiana Department of Financial Institutions, http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad=rja&ved=0CEsQFjAE&url=https://www.in.gov/dfi/WHAT_IS_ELECTRONIC_BANKING_MINI.doc&ei=XgbyUrzRBoOxrgfkb4DnDg&usg=AFQjCNHwrvRpMhPfQ97PsCjgSou7fylJHiA&sig2=tSKxc5npwKONG2PLs7iFSw&bvm=bv.60799247,d.bmk

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