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Impact of Information Technology Innovations on Costumer Psyche with respect to Retail Banking in India

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ABSTRACT

India is an emerging economy and the banking sector of India is in restructuring phase of IT revolution. In this competitive era, sustainability without the technology support impossible. Financial services industry is adopting growing number of new technology to attract and retain a much wider customer group with different traits. User's individual technology readiness is a key factor determining the future sustainability of digital platform. Consumer's intention to adjust will depend on the motivating factors i.e. benefits generated from the stated interaction. Service delivery customization, time and place convenience followed by differential pricing will encourage user to migrate to the digital platform. In this study we have collected data using an unstructured questionnaire from existing users of IT based retail banking. A sample of four hundred and twenty nine respondents from Gwalior Region using judgemental sampling technique. Cluster analysis and exploratory factor analysis techniques were used to identify the various groups and key factors leading to customer satisfaction with self service terminals in retail banking.

1. Introduction

Self-service technology integrates various step of service delivery as per consumer wishes, providing easy access to the service at his/her own place without requiring a human agent on the other side, for example, online fund transfer, mobile banking, SMS banking, online service booking etc. The self-service technologies are proposed to have drastic effect on traditional banking model in coming years. This competitive landscape has compelled all entities active in market to change their existing distributions channels for their product and services. Customer nowadays wants to have absolute convenience with no additional cost, in one single click without any time and place restriction. At the same time, implementation cost of new technologies is tremendous. These extended platforms are used for innovative promotions and enables to foster cost effective relationship between institutions and customers essential for existence.

Hence technology will be the platform for future delivery as it reduces the delivery cost and maximize the institutional profitability. Introduction of SST's increases the future sustainability of traditional units, millennial constituting potential customers are self motivated to adopt new delivery channels due their existing exposure to new technological interfaces. Cost savings can be utilized effectively for customizing the service offer for higher customer satisfaction. Self service will eliminate miss selling resulting in loyalty. Hence it will assist banks to leverage their existing network for cater ever increasing customer base. (Bitner et al., 2002).

2. Transformation towards digitalization:

India is demonstrating enormous development i.e. Ciscoglobal networking giant reported digital transformation will have multi-fold increase in *India's internet users* from 373 million (28 percent of population) in 2016 to 829 million (59 percent of the *Indian*population*)* in 2021.IAMAI-IMRB report quoted that Urban *India*has *Internet penetration* 60% approximately*,* along with a potential 750 million users in rural *India.*

As per Reserve Bank of India (RBI) data most of the delivery platform are showing increased usage trend. It is evident that consumer preference is shifting from brick and mortar model to digital platform. There are many banks who have joined the automation initiatives in India like experimenting with E-lounge facility supported by self-service technologies like Token issue machine, Kiosk for updating passbook, ATM for withdrawal and deposit facility, virtual interface for delivery of customizing service like loan processing etc.

SSTs are devices that allow a user to conduct a transaction or to access information in an unassisted manner and/or in an unattended environment. SSTs need to have effective fault handling processes. Common examples of SSTs include automated teller machines (ATMs), information kiosks, financial services centres, bill payment kiosks, lottery kiosks, postal services machines, check-in and check-out terminals. A particularly important example of an SST is an ATM. ATMs typically include devices that perform functions to enable transactions to be executed. To ensure that an ATM remains in service, it is important to be able to detect any faults in an ATM quickly. It has an ability to detect faults from a remote location. Other malfunctions may include failures of currency dispensing mechanisms, customer card readers, receipt printers, journal printers or other components of the machine. In each case, upon sensing a failure condition, the machine is operative to generate signals indicative of the condition.

A self-service machine includes a series of vending machines capable of providing various services such as dispensing purchased items or tickets, in response to the insertion of cash or a card using a communication terminal such as cellular phone or wire/wireless telephone. Automated

banking machines have been developed which perform functions such as dispensing cash, receiving deposits, checking the status of accounts and other functions. Automated banking machines used by consumers are referred to as automated teller machines or "ATMs". Mobile funds transaction device for transferring funds between one bank account or credit facility and another bank account or credit facility, the device having: a card reader device; a communication interface device connected with the output device.

3. Technology Readiness:

It is basically the level of user preparedness to deal with the innovation in an industry. It is essential to realize the capacity to adjust in innovative environment so as to have sustainable model. Technology readiness specifies to "individuals' capacity of utilizing the automated platform for accomplishment of their desired service delivery in personal and professional capacity (Parasuraman, 2000).Technical competence of the user will impacts the satisfaction level and will motivates repeated purchasing behaviour.

4. Drivers Of Technology Readiness:

Technology implementation will not work without the users intention to adjust. Technological up gradations are happening at lightning speed. Technology usage trends are supporting and a reflection of consumer's technology readiness. The main contributing factors are optimism and innovativeness whereas discomfort and insecurity acting as deterrent factors. (Parasuraman et al.,2000) demonstrates the effects of the Technology readiness constructs on consumers' acceptance of a particular technology. Technology readiness has a positive effect on customer's evaluation and utilization of SST in airlines sector (Liljander et al.,2006). (Wang et al., 2014) investigating the role of technology readiness" and customers perception towards technology enabled services (TES) in airline industry like self check-in facility, reservation system etc.

5. User Satisfaction: -

(Chang & Chen, 2008) studied the role of internet experience as a moderator in the relationship between interface quality, satisfaction and e-loyalty: (Cai& Jun, 2003)stated in their paper titled "Internet users' perceptions of online service quality: a comparison of online buyers and information searchers" that service quality is widely accepted as one of the key determinants of online retail' success. Furthermore, this research found that all of the four dimensions significantly influenced online buyers' evaluation of overall online service quality, while only three dimensions, Website design/content, trustworthiness, and communication, had a significant impact on information searchers' assessment of overall online service quality.(Chung & Kwon, 2009) studied "the effect of user's trust level on mobile banking satisfaction:. Therefore, the current study focuses on trust in mobile banking influences the relationship between customer satisfaction and perceptions towards system quality, information quality and information presentation of mobile banking. The model articulates how perceptions of the system quality, information quality and information presentation of mobile banking moderated by trust influence customer satisfaction with this type of service.(Chiu et al, 2007)examined the continuance intention using influence of fairness and quality on learners' satisfaction in web-based learning. This study highlights distributive fairness ,and interactive fairness exhibit necessary positive effects on satisfaction of web-learning. (Chong et al, 2010)empirically examine the factors i.e. perceived usefulness, perceived ease of use, trust and government support that affect the adoption of online banking in Vietnam. The results showed that perceived usefulness, trust and government support all positively associated with the intention to use online banking in Vietnam. Contrary to the technology acceptance model, perceived ease of use was found to be not significant in this study.(Eriksson et al, 2005)modifies the technology acceptance model and applies it to bank customers in Estonia. The study concludes that the perceived usefulness of internet banking is, for banks, a key construct for promoting customer use. (Manzano et al, 2009) studied the role of consumer innovativeness and perceived risk in online banking usage.Risk has been measured as a formative construct. Result shows consumer originality as a key construct to boost e-banking adoption

6. Intention to Continue:

In last few years many researchers have worked on predictive relationship between technology readiness and intention for continued use. Chen and Chen (2009) developed an integrated model to predict individual continuous use of self service technologies based on technology readiness and technology adoption theories. Bhatacherjee (2001) worked on cross sectional study for measuring repurchase consumer behavior in post purchase scenario using expectation-confirmation theory. developed a model for key drivers of consumer's continued intention using e-commerce. Walker; Les; Francis (2002) highlighted the reasons of why customer adopt or reject technologically facilitated means of service delivery. They also constructed a model for predicting the likely adoption or rejection by the customers.

7. Data Analysis

Reliability Values in statistics and psychometrics is the overall consistency of a measure.

Scale reliability:

Technology Readiness: Reliability Statistics

Cronbach's Alpha	N of Items
.839	21

User Interface Satisfaction:Reliability Statistics

Cronbach's Alpha	N of Items
.887	21

Cluster Analysis: -

Based on the cluster analysis we have tried to identify the clusters into homogenous groups having similar traits. A total of three clusters have been identified from the given analysis. These groups are homogenous traits within but heterogeneous traits with other groups. Grouping is based on the level of technology friendly indicating user readiness for adopting for the needful changes according to the advancement in the user interface features.

Number of Cases in each Cluster

Cluster	1	114.000
	2	180.000
	3	135.000
Valid		429.000
Missing		.000

Cluster naming based on the traits

Cluster No.	Name
1.	Innovators
2.	Oblivious
3.	Tech-Savvy

Cluster 1:- Innovators. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are aware about new banking technologies available and always use to be first in their circle to use the technologies.

TRI7	Technology makes me more productive in my personal life.
TRI8	I am among the first in my circle of friends, to acquire new technology when it appears.
TRI9	People come to me for advice on new technologies usage.
TRI10	I sometimes feel that my friends are learning technology usage faster than me.
TRI11	I usually figure out new high-tech products and services without help from other.
TRI12	I enjoy finding solutions for the challenges of new technologies.
TRI13	I keep up to date with the latest technological developments in my areas of interest.
TRI14	Toll free number is not helpful because they don't explain things in easy way.
TRI15	Call centre executives sometimes take advantage of users.
TRI16	Help manuals are never written in simple language.
TRI17	Technology products are not designed for use by ordinary public.
TRI18	Self service technology seems to fail at the worst possible time.
TRI21	Technology lowers the quality of relationships by reducing personal interaction.

Cluster 2:Oblivious. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people hesitate in using the technology in banking and are more inclined towards traditional way of banking.

TRI19	**I don't consider it safe in adopting new banking technologies.**
TRI20	I do not feel safe doing online transaction.

Cluster 3:- Tech-Savvy. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are using new technologies in their daily life which increases their quality and efficiency of work.

TRI1	New technologies contribute to a better quality of life.
TRI2	Technology in banking gives me more freedom of accessibility.
TRI3	Technology gives people more control over daily lives.
TRI4	Learning to use technologies can be rewarding in near future.
TRI5	Technology enables me to work more efficiently.
TRI6	I prefer to use the advanced technologies available.

Factor Analysis

On the basis of factor analysis, we have with us 7 factors from the output.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	4020.415
	Df	496
	Sig.	.000

The components or the variables are forming the part of factors are given in the tables shown above. The basis of these is the loading factors. After studying the statements that are forming a part of these factors we have given them name as follows:-

Factor No.	Name
1	Improve in quality of daily life (Improvement seekers)
2	Future expectations
3	Ease in learning (Fast learners)
4	Meeting expectations (Expectation Fulfilment)
5	Support via help centres (Support seekers)
6	Performance of technology(Performance drivers)
7	Loyalist

Factor – 1 Improvement seekers

TRI1	.790	New technologies contribute to a better quality of life.
TRI2	.763	Technology in banking gives me more freedom of accessibility.
TRI4	.709	Learning to use technologies can be rewarding in near future.
TRI3	.687	Technology gives people more control over daily lives.
TRI5	.653	Technology enables me to work more efficiently.
TRI6	.559	I prefer to use the advanced technologies available.
TRI7	.470	Technology makes me more productive in my personal life.

Factor – 2 Future expectations

UIS13	.744	I say positive things to friends and relatives to do business with my bank.
UIS14	.656	I will keep on doing business with my techno-savvy bank in future too.

UIS19	.565	I expect to do more business with my bank in future.
UIS7	.400	Automation of service delivery leads to productivity.

Factor – 3 Fast learners

UIS2	.710	Interaction with system applications is clearly understandable.
UIS1	.703	Learning to operate self service technologies is easy.
UIS4	.572	Correcting mistakes is easy.

Factor – 4 Expectation Fulfilment

UIS11	.710	I think that I have made the correct decision to use the technology platform.
UIS12	.703	My bank's services meet my expectation.
UIS10	.572	Bank's reputation as technology service provider plays a key role in satisfaction.

Factor – 5 Support seekers

TRI16	.752	Commercial offers are framed keeping in mind its target segment.
TRI17	.665	My bank's interface is concerned with future interest of its users.
TRI15	.596	I believe that techno savvy youth will prefer automation more than others.

Factor – 6 Performance drivers

UIS9	.749	I have no experience of delay in execution of online transactions.
UIS8	.672	Performing tasks is always simple.
UIS18	.431	Technology platform is receptive to the needs of users.
UIS16	.420	Commercial offers are framed keeping in mind its target segment.

Factor – 7 Loyalist

TRI21	.723	Technology lowers the quality of relationships by reducing personal interaction.
UIS21	.647	I would be loyal to existing bank due to superior technology support
UIS20	.571	I would recommend my bank to others due to technology superiority.

Factor – 1

The following table shows the variables forming part of Factor 1 i.e. Improve in quality of daily life. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people think that latest banking technology provides them better quality of life and also help them to increase their efficiency.

Factor – 2

The following table shows the variables forming part of Factor 2 i.e. Future Expectations. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are those people who recommends to their friends and family and also continue to do future business.

Factor – 3

The following table shows the variables forming part of Factor 3 i.e. Ease in Learning. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are tech-savvy and easily understands the commands.

Factor – 4

The following table shows the variables forming part of Factor 1 i.e. Meeting Expectations. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people think that the technology provided by their banks meet their expectations.

Factor – 5

The following table shows the variables forming part of Factor 1 i.e. Support via Help Centres. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are happy with the automatic technology and the help centres of the banks.

Factor – 6

The following table shows the variables forming part of Factor 1 i.e. Performance of Technology. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are somehow happy with the execution of the technology and they also under it easily.

Factor – 7

The following table shows the variables forming part of Factor 1 i.e. Loyalty. The variables falling under this cluster shows the response of people. After a thorough analysis and looking at the variables, it is analysed that these people are loyal to their banks and would recommend to their friends.

8. Conclusions

Innovators are those groups of people who are always ready to use the advance technology available and also find solution to the problems faced by them and also help their friends in finding solutions.

Oblivious are those groups of people hesitate in using the technology in banking and are more inclined towards traditional way of banking.

Tech-Savvy are those groups of people are using new technologies in their daily life which increases their quality and efficiency of work.

After doing cluster analysis, we applied the factor analysis on our data and after its analysis we came to know that there are 9 factors formed but only 2 variable was falling into 8^{th} and 9^{th} categories so we ruled it out and were left with 7 factors whom we named them as Improve in quality of daily life, Future expectations, Ease in learning, meeting expectations, Support via help centres, Performance in technology.

Improve in quality of daily life: - These people think that latest banking technology provides them better quality of life and also help them to increase their efficiency.

Future Expectations: - These groups of people are those who recommends to their friends and family and also continue to do future business.

Ease in Learning: - These groups of people are tech-savvy and easily understand the commands.

Meeting Expectations: - These groups of people are happy with the automatic technology and the help centres of the banks.

Supports via help centres: - These people groups are somehow happy with the execution of the technology and they also under it easily.

Loyalty: - These groups of people are loyal to their banks and would recommend to their friends.

We can conclude that as India is a developing country and it is also moving towards the era of digital banking but still majority of people don't prefer to use digital banking or automation in banking instead they prefer to have manual banking because they don't consider it safe. Only the youth are supporting and faster adopting of self service technologies in banking as compared with the older generation. Proper training and advertisement is must for the educating the people and enabling them to use the automatic banking as it is safer and easily accessible from any type of device such as mobile, computer etc.

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