

# Achieving Customer Satisfaction through Innovations in Banking – A Study of Commercial Banks in Ambala



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## Abstract

The banking sector plays a key role in a country's economic development and the development of banking sector, in turn, depends upon the range and quality of services they offer to the customers. The challenges like the entry of new competitors, changing ways of banking, dynamics of customer expectations have forced conventional banking to give way to innovative and technology based banking. Moreover, every sector has a great challenge of Customer Satisfaction and being a part of the society, banks are also facing this challenge. The banks are handling these challenges very professionally by providing innovative services to the customers for better business prospects. The banking sector in India has gone through diverse changes in the recent past mainly because of technological innovations. The dreams have become reality. Now the banking services can be availed anytime and anywhere. The focus is shifting from mass Banking to Class banking with the advent of value added and customized products. A majority of the banks have adopted innovative banking by introducing facilities like ATM, RTGS, NEFT, Internet Banking, Mobile Banking, SMS Banking and Cheque Truncation System, etc. with an aim to attract more customers while retaining the existing ones.

The objective of this paper is to find and analyze the Technological Innovation Initiatives taken by Indian Banks, the Customer's Awareness towards the Technological Innovations in banks and the Customer's Satisfaction with the Innovative Services provided by banks.

**Keywords:** Indian Banking Sector, Challenges of Banking, Technological Innovations, Bank Digitization, Banking Products and Services, Digital Technologies, E-Banking, Online Banking, Internet Banking, Mobile Banking, Banking Innovations.

## Introduction

The financial development in Indian banking industry started post-nationalisation in July, 1969 and 6 in April, 1980. The Indian Banking Sector started introducing technology and innovation in 1990s. At present Indian banking sector is very well capitalised and regulated. There are 21 public sector, 22 private sector, 44 foreign, 56 regional rural, 1,574 urban cooperative and 93,913 rural cooperative banks in India. The future of Indian banks look exciting and transformative as it has the potential to become the fifth largest banking sector in the world by 2020 and the third largest by 2025.

Banking environment has gone highly competitive and high-tech today. To survive and progress in the changing market environment, banks are adopting the latest technologies. This adaptability of banks is being taken as an enabling factor that can help in developing more flexible and responsive structure to quickly handle the dynamics of a fast changing market scenario. It is also viewed as a tool for cost reduction and effective communication with people and institutions connected with the banking business. Most of the Banks have started taking on the innovative challenge with the objectives to create more customers while retaining the existing ones. Information technology has created scope for new innovations in the product designing and their delivery in the banking and finance industries. Technology offers a chance for banks to build new systems that address a wide range of customer needs including many that are beyond imagination today. Financial innovation associated with technological change has totally changed the banking philosophy and that

is further transformed by the competition prevalent in the banking industry. Challenging business environment within the banking system has necessitated more innovations in the fields of product, process and market. The banking sector is using Electronic Clearing Services (ECS), Branch Networking, Satellite Banking, Internet Banking, Mobile Banking, Debit Card, Credit Card, Smart Card, Automatic Teller Machine (ATM), Electronic Fund Transfer, RTGS, NEFT, IMPS, EFT, SEFT, Block Chains Technology (BCT), Robotic Software, DEMAT, AI, Advisory Services, Payment Utility bills, fund Transfer, Point of sales Terminals (POS), Tele Banking, Core Banking, Corporate Banking, Insurance Schemes, Cheque Truncation System (CTS), Cheque Books, Travel Cheques and other value added services. Today's digital environment enforces all types of businesses to continuously reconsider their business requirements and Indian Banks have done it very professionally in the recent years and have been the spearhead in transforming from conventional business practices to the truly digital ones by adopting latest digital technologies and innovations like Unified Payments Interface (UPI) and many other. This paper considers all the innovative strategies and policies adopted by banks to retain the existing customers and attract more.

#### **Review of Literature**

Cappgemini (December 2016) referred to the "Top 10 Trends in Banking – 2017" with an aim to analyse and find the trends that are likely to drive the dynamics of the banking in the future and highlighted the growing tendency of banks focusing on innovation, by leveraging new technologies.

Aruna R Shet (2015) researched, "Technological Innovations in Indian Banking Sector" and observed the innovations that have contributed to the development of Indian banking and inferred that development of need-based products with low-cost technology is the key to win the market and the competitors.

Sandeep Kaur (2015) studied, "A Study on New Innovations in Banking Sector" and highlighted the innovations in banking sector at national and international level. She also concluded that in future, technology will make the engagement with banks more multi-dimensional and Indian banks will continue to develop and expand banking services.

Maithili RP Singh (March 2014) identified the recent innovative practices in banking sector after a thorough study of studied, "Innovative Business practices in Banking Industry in India" and concluded that new concepts, new benchmarks, new forces are now transforming Indian banking industry.

Dr A Jayakumar and Mr G Anbalagan (December 2012) studied, "A study on Innovations and Challenges in Banking Industries in India" and discussed significant changes in the Indian banking sector, concluded that banks need to restructure themselves and identified the practices which needs to be adopted.

Jim Marous (December 2016), studied, "Retail Banking Trends and Predictions for 2017" and

identified the major trends impacting banks and their services in 2017.

Balachandher et al (2001), E-commerce is now considered to hold the guarantee of a new commercial revolution by offering a reasonably priced and direct way to exchange information and to sell or buy products and services. This revolution in the market place has set in movement a revolution in the banking sector for the provision of a payment system that is compatible with the demands of the electronic marketplace.

According to Alu (2002), IT facilitates financial institutions by minimizing enquiry, saving time, and improving service delivery. In recent decades, investment in computerization and digitization by commercial banks has served to rationalize and optimize operations, improve competitiveness, and increase the variety and quality of services provided.

According to Yasuharu (2003), the implementation of information technology and communication networking has totally changed the way banks and the financial institutions performed in the past. There are numerous structural changes, in store, for financial services industry as a result of the Internet revolution; others forecast a continuation of trends already under way.

#### **Objective of the Study**

1. To find and analyse the technological innovation initiatives by Indian Banks
2. To analyse the Customer's Awareness towards the Technological Innovations in banks.
3. To analyse the Customer's Satisfaction by availing the Innovative Services provided by banks.

#### **Research Methodology**

Being a descriptive research, it is based on primary data collected from customers with the help of a questionnaire specifically designed for the purpose and secondary data as collected from journals, articles, newspapers and magazines. The official websites of banks were considered along with the additional literature. The sample size taken for this study is 150 Customers of different Commercial Banks in Ambala. Journals and research papers were also referred for this study; personal interviews of the banks' employees were conducted regarding their services.

#### **Banking Innovations**

Over the years, the banking sector in India has undergone numerous changes. Most banks have adopted an innovative approach for banking with an objective of creating more value for customers. Today, the customers have an option of electronic payment system along with currency notes. Some of the innovations introduced by Indian Banking Sector are:

#### **Internet Banking**

Internet banking is also known as online, Virtual and Web Banking. Internet Banking facilitates customers to execute transactions with the help of internet. Internet Banking provides all the functions which are offered traditionally at a local bank branch

such as deposit of money, bill payment. ICICI was the first bank to introduce internet banking.

#### **Phone and Mobile Banking**

Phone and mobile banking is one of the latest services that banks are offering. The banks implement this service via Interactive Voice Response System (IVRS) or by employing executives to handle customer queries and transactions on phone or mobile. As of now, only the features like balance/transaction enquiry, stop payment instruction on cheques and small fund transfer are available under this service. Moreover, one single transaction cannot exceed Rs 2500 and total transactions of Rs 5000 per day per customer are permitted under this service. This service is currently available only to KYC and AMC compliant customers.

#### **Wholesale and Retail Banking**

Retail Banking refers to banking wherein banking institutions execute transactions directly with consumers rather than corporate or other banks. It includes the services like Saving, Accounts, Personal Loans, Debit Cards, Credit Cards, Internet Banking. Wholesale Banking refers to conducting banking business with industries and businesses. It includes Fund Based, Non-fund based, Value added and Internet Banking Services.

#### **Automated Teller Machines (ATMs)**

ATMs were introduced by foreign banks and some private sector players in the Indian banking industry in the early 1990s when they suffered from a serious handicap due to the time-lack despite a strong branch network. ATM technology was put to use as a means to overcome this handicap by reaching customers at a lower initial and transactional costs and offering services without hassles. Since then, ATM technology has come a long way and customer acceptance has also increased manifold. Later, Public sector banks also joined ATM networks. More and more banks are joining ATM networks not only for lowering the transaction costs, but also as an effective marketing channel resource.

#### **Branch Networking**

Networking of branches is the computerization and inter-connecting of geographically scattered stand-alone bank branches, into one unified system on a Wide Area Network (WAN) or Enterprise Network (EN) in order to create and share consolidated customer information/records.

#### **Satellite Banking**

Satellite banking is going to be another technological innovation being adopted in the Indian banking industry, which is expected to help in fixing the problem of weak terrestrial communication links in many parts of the country. The use of satellites to establish connectivity between branches will enable banks to establish and reach branches in rural and hilly areas in a better way, and offer better facilities, especially in relation to electronic funds transfers.

#### **Card Based Delivery Systems**

The card based delivery mechanisms like credit cards, debit cards and smart cards etc. designed to execute various banking services electronically have been immensely successful in India since their launch. The popularity of these card

based systems has increased immensely over the past decade. Supported by spreading ATM networks and Point of Sale (POS) terminals, banks have been able to drive more and more customers towards these cards, thereby reducing their costs also.

#### **Cheque Truncation System (CTS)**

Truncation is the process meant to stop the movement of a physical cheque which is to be held at some point on its way to the drawee branch. To truncate a cheque, an electronic image of the cheque is being sent to the drawee branch along with the relevant details like the MICR fields, date of presentation, presenting banks etc. Thus, the CTS reduces the chances of frauds, reconciliation issues, logistics problems and the cost of collection.

#### **Electronic Clearing Service**

The Electronic Clearing Service (ECS) is based on 'Single Debit Multiple Credits' concept and has two components namely ECS Debit Clearing Service and ECS Credit Clearing Service. The transactions like payment of salary to a large number of employees by an employer and interest payments to many customers by banks in a one go etc. Also, banks use this service effectively to collect principal and interests of loans.

#### **Electronic Funds Transfer Systems**

The electronic funds transfer mechanisms were kick started in India with the Electronic Funds Transfer (EFT) System. The EFT System started functioning in 1995 and covered just 15 centres initially where the Reserve Bank handled the clearing houses. A variant of the EFT system called Special EFT (SEFT) scheme was launched with effect from April 1, 2003, for increased coverage of the scheme and for quicker funds transfers. Another variant of the EFT called the National EFT (NEFT) was decided to be implemented on November 2005 in order to broaden the base of the facilities of EFT. This was a retail electronic funds transfer mechanism between the nationwide networked branches of banks.

#### **NEFT**

NEFT is one of the ways for Electronic Funds Transfer. The funds transferred through this method are settled in batches based on Deferred Net Settlement (DNS) and during a specific time period in the day. Currently, the fund transfer requests through NEFT are processed in twelve batches from 8 a.m. to 7 p.m. from Monday to Friday and in six batches between 8 a.m. to 1 p.m. on Saturdays. NEFT does not accept fund transfer requests on Sundays and on bank holidays. NEFT is a service offered by banks without transaction fee.

#### **RTGS**

RTGS is another payment and settlement systems aimed at small value repetitive transactions, largely for the retail transactions. The introduction of RTGS in 2004 was a great support in the development of infrastructure for Systemically Important Payment Systems (SIPS). RTGS is applicable and available for fund transfers between Rs. 2 lakhs to Rs.10 lakhs, however, the biggest advantage of RTGS is the fastest/real-time settlement facility. The moment transfer instructions are sent, the fund gets transferred almost immediately.

**IMPS**

IMPS is most widely used way of Electronic Fund Transfer across most banks. Unlike other methods of fund transfer, IMPS functions 24/7 allowing a fund transfer at any time of the day. IMPS allows transfer of low value-funds like NEFT but what makes it unique is, it instantly settles the funds. IMPS facility is provided only through the internet and online banking. Many of the digital wallets in India make use of IMPS services for fund transfer. The service fee for IMPS transactions is very low i.e., from Rs. 2.5 to Rs. 15.

**Electronic Clearing Service (ECS)**

ECS is a retail payment system that can be used to execute bulk payments and receipts of a similar and repetitive nature and of relatively smaller amount. This facility has been specially designed for companies and government departments to pay and receive large volumes of payments rather than for funds transfers by individuals.

**E-Wallets/Digital-Wallets**

A digital wallet also known as "e-wallet" refers to an online service that lets an individual to make electronic transactions like purchasing on-line with a computer or using a smart phone to purchase at a store. The digital wallet account of an individual can also be linked to his bank account. One can also upload and store one's IDs and documents using this account. The user can pass his/her credentials to a merchant's terminal wirelessly via near field communication (NFC). The digital wallets are used not just for basic financial transactions but also to authenticate the holder's credentials.

**DEMAT**

DEMAT account is a facility offered by banks to dematerialize stock shares. Every shareholder

needs to have a DEMAT account to purchase and sell shares. A login password and a transaction password are required to access this account and to initiate transfers or purchases of securities.

**Banking through Smart Watch**

After smart phones, this is the time of wearable technology. Now banking transactions can be done using smart watch - be it an Apple Watch, Android Wear or Samsung Gear. It's not only global financial institutions and banks that have developed apps for smartwatches compatible with all major mobile operating systems. But some Indian private sector banks like HDFC, AXIS, ICICI banks have also introduced smart watches apps.

**Robotics**

Bank of Tokyo-Mitsubishi UFJ took a first step toward employing nonhuman staff, with the introduction of a customer service humanoid robot at its flagship Tokyo outlet. These robots can answer basic customer service questions in 19 languages, as well as analysing customers' facial expressions and behaviour. In India, ICICI Bank has already implemented robotics software. Over 200 software robots are now doing over 10 lakh transactions per day for ICICI which is only 10% of its total transactions.

**Open Banking UPIs**

Open banking is a connected network for financial and non-financial services with several service providers. **UPI** (Unified Payment Interface) and **BHIM** (Bharat Interface for Money), a mobile app based on UPI Interface by the National Payments Corporation of India (NPCI) provides opportunity for innovation in the open banking space. Technology is the key support to open banking. BHIM facilitates sending and receiving money to other UPI accounts or addresses.

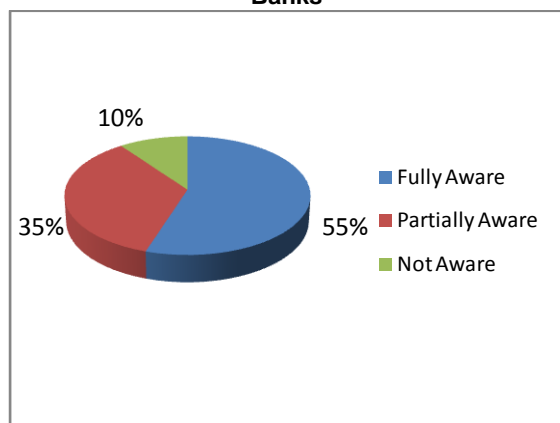
**Table 1: Latest Apps Launched by Indian Banks**

Name of the Bank	Apps Launched by Bank
Axis bank	Airtel Money, Kisan card, Asha Home Loan, Lime Pay
SBI	BOUTIQUE FINANCING SCHEME, Twitter Handle account, E-KYC, SBI Anywhere, YONO, State Bank Freedom, State Bank of India No Queue, Youth of India, First home grown INDEX "COMPOSITE INDEX", eforex, SBI Exclusif, Unnati Credit Card, IMT APP - (Instant Money transfer), TAB BANKING FACILITY, State Bank Freedom App
Canara Bank	M-Wallet, Can Mobile, eInfoBook, Canara Swipe, Canara m Serve, Canara DIYA
ICICI Bank in Odisha	Branch on Wheel
ICICI bank	Tap and pay, M-Pesa, Student Travel Card, iwear, Robotics, Branch on Wheels, POCKET, i-Mobile, Branch on Wheel, ICICI Apathon App, iMobile app for windows phone, India's first "transparent credit card, 'ICICI Apathon', Mera iMobile, Unnati Credit Card, Digital Village Project in Akodara Village of Gujarat, EMI ON DEBIT CARD, Truecaller Pay, Saral Rural Housing Loan' Scheme
HDFC Bank	Chillar, watchbanking, PayZapp, Humanoid Robot IRA, Chatbot Eva, Aadhar Pay, Awareness initiative 'Dhanchayat'
Kotak Mahindra Bank	Facebook-based funds transfer platform - KayPay, Kotak Bharat' mobile banking app - Kotak Mahindra Bank (KMB), Kotak Bharat
Bank of India	Instant money transfer
IndusInd & Federal Bank	Video Conferencing,
Laxmi Vilas Bank	LVB Mobile' app, Mission FinFit
Yes Bank	Yes Mobile 2.0 mobile bank app, Yes Bank, Yes MSME, Yes Corporate
Union Bank of India	U- Mobile, Union Selfie & m-Passbook, Union Sahyog
United Bank of India	United Mobile Banking, United Wallet, United e-Passbook
OBC	OBC mPay, Oriental Saathi, Oriental Sahayak, Oriental Batuaa
Bank of Baroda	mConnect Plus, Baroda mClip, BarodaPedia

Andhra Bank	AB TEJ, AB e-Vyapar, Andhra Bank Selfie Banking
Allahabad Bank	All Mobile, eMPower
Bandhan Bank	MBandhan
PNB	PNB mBanking, PNB MobiEase, Druk PNB Mobile
UCO Bank	UCO Pay, UCO Suvidha prepaid Card
Central Bank of India	Cent Mobile
Punjab and Sindh Bank	PSB mPay
Syndicate Bank	Synd Mobile, Synd Saheli, Synd Bharata QR, <b>Ananya Project</b>
Indian Bank	IndPay, Ind Mobi Easy
Indian Overseas Bank	IOB Mobile, IOB Nanban
Citi Bank	Voice Biometric Authentication, Citi Bank Online(CBOL)

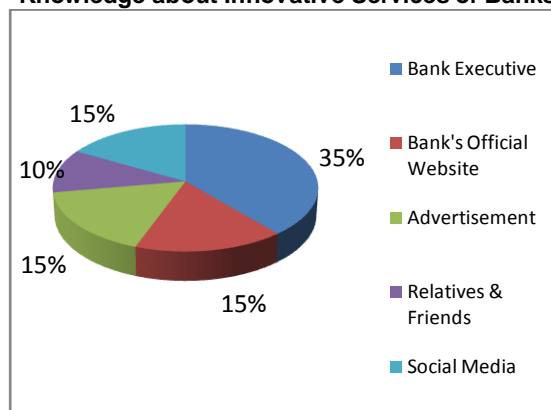
**Findings and Interpretations**

**Graph-1: Level of Awareness of Customers Regarding Innovative Services Provided by the Banks**



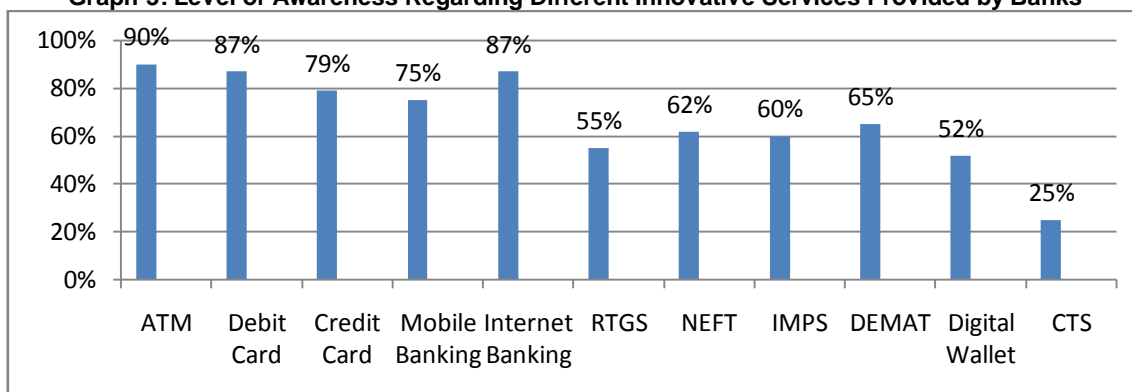
As shown in Graph-1, the overall percentage of the customers who are Fully Aware about the Innovative Services provided by the banks is 55% and those who are Partially Aware are 35% and the percentage of customers having no awareness are 10%. It can reasonably be concluded that nearly 90% of the population is having awareness about e-banking services.

**Graph-2: Sources from where Customers get Knowledge about Innovative Services of Banks**



The Graph-2 indicates the percentage distribution of the sources of information from where the customers get the knowledge about the Innovative Services of the Banks. It shows that they get the knowledge mostly i.e. 35% through Bank Executives, then equally i.e. 15% each from Bank's Official Website, Advertisement and Social Media. The data shows that only 10% of the customers get this knowledge from Relatives & Friends.

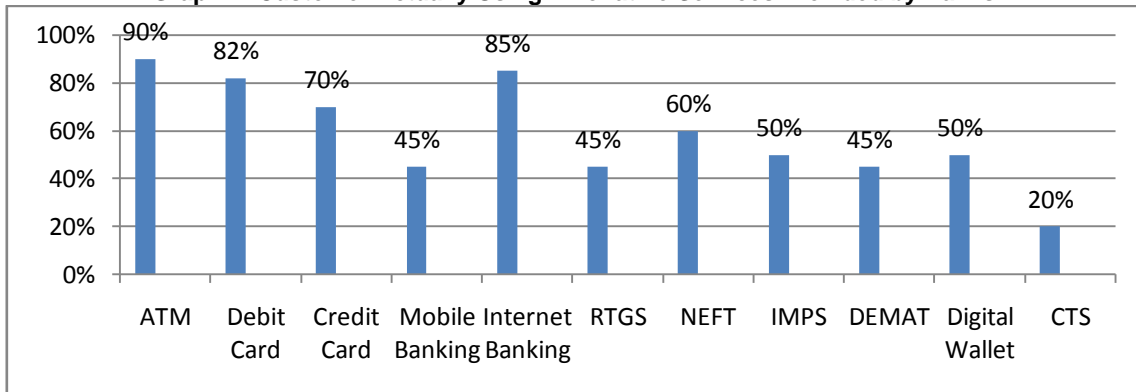
**Graph-3: Level of Awareness Regarding Different Innovative Services Provided by Banks**



The Graph-3 shows the Awareness Levels of Customers regarding innovative services like ATM, Debit Card, Credit Card, Mobile Banking, Internet Banking, RTGS, NEFT, IMPS, DEMAT, Digital Wallet

and CTS provided by banks, of which ATM, Debit Card and Internet Banking have come out as most well known services to the customers.

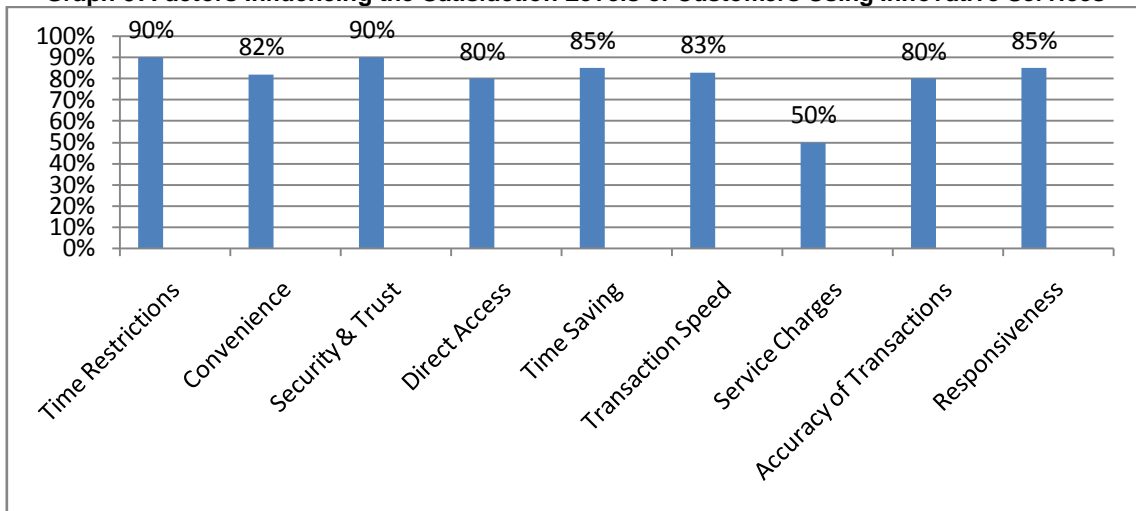
**Graph-4: Customer Actually Using Innovative Services Provided by Banks**



The Graph-4 depicts the %ages of the customers actually using the different innovative services offered by their banks. This graph shows the same trend as Graph-3 that shows awareness levels. We can clearly make out that ATM at 90% is the most

prominent service being used and admired by a majority of the bank customers; this is closely followed by the Internet Banking (85%) and Debit Card (82%) and rest of the services are less popular and moderately used by the customers.

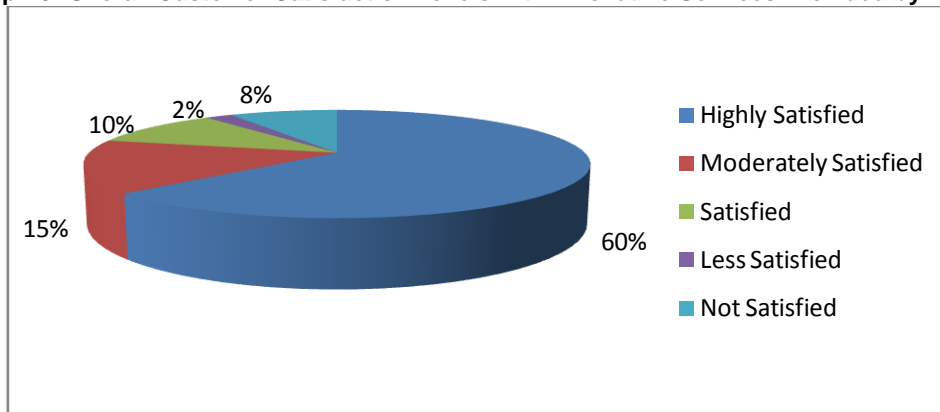
**Graph-5: Factors Influencing the Satisfaction Levels of Customers Using Innovative Services**



The Graph-5 presents the percent responses about diverse factors influencing the customers' satisfaction levels regarding the innovative services facilitated by the banks. Out of these factors, Time Restrictions (90%) and Security & Trust (90%) influence the satisfaction levels of the

customers the most. Time Saving, Responsiveness and Transaction Speed are the next most influencing factors followed by the others like Convenience, Direct Access, Accuracy of Transactions and Service Charges.

**Graph-6: Overall Customer Satisfaction Levels with Innovative Services Provided by Banks**



The Graph-6 presents the Overall Satisfaction Levels of the customers regarding the innovative services provided by their banks. The

trend, as portrayed in graph, clearly suggests that 60% of the customers are highly satisfied with these services, whereas 15% of them are little less i.e.

moderately satisfied, 10% are just satisfied, 2% are less satisfied and 8% of the customers are not satisfied.

#### Conclusion

The technological innovations and advancements are likely to keep happening especially in the banking sector to add more customers to banks' clientele. As per this study, though most of the people are using these innovative services but still there are people who are not using these services thoroughly due to various concerns like insecurity and fear of hidden costs etc. So banks need to come up with appropriate solutions to remove the apprehensions and prejudices of the customers through awareness campaigns and more meaningful advertisements to make Innovative Banking popular among the people of all ages and income groups. Further, with ever increasing consumer expectations, banks should constantly strive to introduce innovative and customized services to stay competitive. Technological Banking is an innovative way to carry out banking operations that is quickly becoming a necessity. It is a tried and tested strategic weapon for banks to remain profitable in a volatile and competitive marketplace of today.

For a rapid and sustainable growth and acceptability of internet banking in India, the government and banks together will have to ensure more safety and privacy of e-transactions through technology and by implementing the more stringent RBI guidelines for different aspects of technology based banking.

#### References

A Jayakumar and Mr G Anbalagan (December 2012), "A study on Innovations and Challenges in Banking Industries in India", *International Journal of Marketing, Financial Services & Management Research*.

Agrawal Sunita, Jain Ankit, "Technological Advancement In Banking Sector In India: Challenges Ahead", *Abhinav- National Monthly Refereed Journal Of Research In Commerce & Management*.

Aruna R Shet (2015), "Technological Innovations in Indian Banking Sector", *International Journal of Scientific Engineering and Research (IJSER)*.

Balachandher Krishnan Guru, Santha Vaithilingam, Norhazlin Ismail, and Rajendra Prasad, (2001) "Electronic Banking in Malaysia: A Note on Evolution of Services and Consumer Reactions."

Capgemini (December 2016), "Top 10 Trends in Banking – 2017", [www.capgemini.com/banking](http://www.capgemini.com/banking).

JimMarous (December 2016), "Retail Banking Trends and Predictions for 2017", [thefinancialbrand.com](http://thefinancialbrand.com).

Maithili R P Singh (March 2014), "Innovative Business practices in Banking Industry in India", *Voice of Research*.

Sandeep Kaur (2015), "A Study on New Innovations in Banking Sector", *International Journal of Science and Research (IJSR)*.

Singh Kanhaiya, Pandey U.S., "Technological Innovation in Indian Banking Sector – Use Of IT Products", *International Journal of Management and Strategy*.

<http://www.rbi.org.in/scripts/PublicationReportDetails.aspx?ID=243>

<http://bankinnovation.net/tag/trends-in-banking/>

<http://www.springer.com/economics/financial+economics/book/978-3-7908-2332-5>

<http://www.internetbanking.com>

[www.netbanking.com](http://www.netbanking.com)

<https://gkindiatoday.com/apps-launched-by-banks/>