

## **Technology Adoption: A Comparative Study of Old Generation and New Generation Banks**

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### **ABSTRACT**

It is a generally agreed fact that a sound banking system is a pre-requisite for achieving accelerated economic development. Financial system, all over the world has been rapidly undergoing technological change in the past two-three decades. Computer and Telecommunication facilities are the vehicles of this change as Financial Institutions are highly information intensive. The emergence of tech-savvy new generation banks compelled the old generation banks to adopt modern technology in the delivery of banking services. The present study focuses on the extent of adoption of banking technology by the old generation and new generation banks.

Key Words: Old Generation Banks, New Generation Banks, Banking Technology

### **1.0 Introduction**

It is a universally acknowledged fact that a sound banking system is a pre-requisite for achieving accelerated economic development. The banking system, by offering attractive saving schemes and ensuring safety of deposits, brings about desired changes in economic development by acting as a bridge between those who require funds and those who have surplus funds, who may be unable to make an effective use of such funds. Economic development favours the expansion of financial intermediaries like banks in their early stages of development while, later on, a mature and consolidated banking system enhances more efficient investment decisions and faster economic development. The development of the financial system, in the recent past, is aided by banking technology. The emergence of tech-savvy new generation banks compelled the old generation banks to adopt modern technology in the delivery of banking services. The present study focuses on the extent of adoption of banking technology by the old generation banks and the new generation banks.

### **1.1 Review of literature:**

Considerable research has been carried out and is still continuing on the adoption of Technology in banking in India and elsewhere in the world by academicians, researchers and institutions individually outside the banking system and also by institutions within the field of banking system.

The study of Thamaraiselvan Natarajan, et.al (2010) on customers' choice amongst self-service technology channels in retail banking, explores the factors influencing customer choice of self-service technologies in Tiruchirapalli. The result analysis revealed that on the whole ATM is found to be the most preferred channel followed by internet banking and mobile banking with more or less equal weights.

In a study Seranmadevi, R., et.al (2011) analysed the credit card system and E-banking services in Indian banking sector and found that the frequency of usage of credit cards was limited among the Indian customers; they preferred to make purchases using credit cards only 50 times a year and that too during the auspicious occasions.

In a study Sharma Sourabh and Thakur K.S (2011) observed that the computerisation in banks has increased their productivity and profitability. The study examined various factors with reference to the effects of computerisation in public and private sector banks and the advantages of adopting IT in the four major banking operations, i.e. information technologies' strategic advantages, technological knowhow and organizational capacity, decision making process and motivations towards IT.

In a comparative study of Public and Private Sector Banks on customer satisfaction with e-Banking services Sawanth et.al (2013) found that there is a significant difference in customers' satisfaction using e-services in private and public sector banks.

Digital Banking and the customer centric banking study by Manivannan [2017] states that Internet, Wireless gadgets, ATM's, Mobile payment wallets and different digital applications must be broadly provided by all the banking organizations. The study concluded that banking industry is customer centric that should focus to adapt to latest technology.

Liu et al (2020) describe M-banking is an increasingly important distribution channel. Robotics is increasingly being used to automate customer interaction.

A review of the existing literature on the subject of study has been useful in getting an insight into the topic. However, the review made is not an exhaustive one.

## **1.2 Need for the Study**

Financial system, all over the world has been rapidly undergoing technological change in the past two-three decades. Computer and Telecommunication facilities are the vehicles of this change as Financial Institutions are highly information intensive. Thus technology has emerged as the principal driving force for long term economic growth. The advancement in ICT, especially internet and information technology, has provided an altogether new way of interacting and providing banking service to bank customers. ICT based banking services offer value to customers by providing them with anywhere and anytime banking.

Though providing technology based banking products and services have been pioneered in India by the foreign banks and new private sector banks, the old generation private and public sector banks didn't lag behind. The momentum to the adoption of ICT in the Indian banking sector was provided by the recommendations of the successive committees separately headed by C. Rangarajan (1983 and 1989), Saraf (1993) and A. Vasudevan (1999).

There is a need to understand the factors contributing to the acceptance of ICT delivery channels, their level or degree of adoption, the reasons for preferring their service, the extent of usage of each type of E-banking channel and the satisfaction of the respondents.

## **1.3 Statement of the Problem**

The focus of this research has been on the ICT which enables the customers to avail banking facilities with or without the assistance of the employees. The services through these channels offer tremendous advantages to the banks and their customers. For the banks the advantages are reduced transaction cost, higher profitability, lesser crowding in their branches and increased businesses per employee. For the customers these channels offer the convenience of availing banking services from the place of their choice and conducting them any time of the day they wish and want. The status of availability of ICT enabled banking products in the old generation banks and new generation banks may vary.

## **1.4 Objectives**

The major objective of this study has been an analysis of the application of the ICT in the banking sector in Dakshina Kannada (DK) district of Karnataka state. However, the specific objectives of the study have been:

1. To analyse the awareness of ICT enabled banking services in the select old generation and new generation banks in DK district.
2. To analyse the availability and awareness of the E-banking services.

## **1.5 Hypotheses**

In order to achieve the objectives this study has set the following hypotheses for testing/verification.

1. The Customer awareness of ICT products differs between old generation banks and the new generation banks.
2. The level of application of ICT differs between old generation banks and new generation banks

### **1.6 Sources of Data**

The study required the inputs from users and non-users of ICT based banking services. The study has been extended to rural and semi-urban areas besides urban areas. Since the study has been planned to cover the perception of the ICT based banking products in urban, semi-urban and rural areas, samples of the customers have been drawn from all the three types of centres. This study is restricted to ICT enabled banking services such as ATMs, Credit Cards and Internet Banking. The present study depended both on the primary and secondary sources of data. The secondary sources of data primarily consisted of the following:

- Published studies in various international and national journals and conference proceedings, those studies which deal with the adoption of E-banking services, studies on customer satisfaction and service quality perceptions of these channels.
- Articles related to the above areas/ topics published in periodicals and valued volumes and journals.
- Information contained in websites such as those of the RBI, the banks and so forth.
- Unpublished studies pertaining to the above topics.

### **1.7 Analysis and Discussion:**

An analysis of the views gathered from a total of six executive respondents of the sample banks through a structured interview schedule revealed that the new generation private sector bank was the front runner in the implementation of computerisation as it entered the Core Banking Solutions (CBS) system in 1994. The old private sector bank entered the CBS system in the year 2000 and the public sector bank in 2003.

**1.7.1 Awareness of ICT Based Banking Services:** Regarding the provision of E-banking by the banks and the extent of the use of electronic banking by the customers, it was reported that all the banks are providing ATM, Internet Banking, and Credit Cards. The E-banking products like ATMs, EFT services and credit Cards are used by the respondents of all bank groups.

Table 1: Awareness of ICT Based Banking Services

Awareness	Type of Bank			
	Public Sector Bank	Old Pvt. Sector Bank	New Private Sector Bank	Total
	No. of Respondents (customers)	No. of Respondents (customers)	No. of Respondents (customers)	No. of Respondents (customers)
(01)	(02)	(03)	(04)	(05)
ATM	154 (100)	149 (100)	102 (100)	405 (100)
Credit Cards	135 (87.7)	112 (75.2)	96 (94.1)	343 (84.7)
	$\chi^2=18.462$ , $p=0.000$ , d. f=2 HS			
Net-Banking	103 (66.9)	97 (65.1)	89 (87.3)	289 (71.4)
	$\chi^2=16.975$ , $p=0.000$ , d. f=2 HS			

All the respondents under survey are aware of the ATM service delivery channel 84.7 per cent of the respondents is aware of Credit Cards, 71.4 per cent of the respondents is aware of Internet Banking. There is a highly significant difference in the awareness of Credit Cards, and Internet Banking products of the new private sector banks as against the old generation banks as shown by the chi-square test. This shows that the awareness of the E-banking services of respondents of the new private sector banks is more than that of the respondents of old generation banks. Thus the hypothesis that customer awareness of ICT products differs between old generation banks and the new generation banks is proved and accepted.

### 1.7.2 Details of the Availability of E-banking Services of Different Bank Groups:

Availability and awareness of the availability of the E-banking services determines the actual use of these services by the customers. The customer response to availability and non-availability of E-banking services and results of chi square test are presented in Table 2.

The Descriptive Statistics on the Level of Adoption of ICT services among the bank groups is presented in Table 2

Table 2

**Descriptive Statistics on the Adoption of ICT Services of Different Bank Groups**

Type of bank	N	Mean	Std. Deviation	Median	Level of adoption (%)
(01)	(02)	(03)	(04)	(05)	(06)
Public Sector Bank	154	4.10	1.76	4.00	58.63
Old Pvt. Sector Bank	149	4.11	1.88	4.00	58.77
New Private Sector Bank	102	5.89	1.57	6.00	84.17
Total	405	4.56	1.92	5.00	65.11
Kruskal-Wallis test value=79.530 d. f=2 p=0.000 HS					

The level of adoption of ICT in the old generation banks has been around 59 per cent and in the new private sector banks it has been 84 per cent. The study found that there is a highly significant difference among the respondents of the new private sector banks and other two groups of banks in availing themselves of E-banking services as shown by the Kruskal-Wallis test. Hence, the hypothesis that **the level of application of ICT differs between old generation banks and new generation banks** is proved and accepted.

**Conclusion:** The research results show that the awareness of the E-banking services of respondents of the new private sector banks is more than that of the respondents of old generation banks. Further, there is a significant difference in technology adoption between the new generation and old generation banks as proved from the awareness and availability of e-banking services.

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