INTRODUCTION

1.1 Background

In terms of marketing, the product or offering will be successful if it delivers value and preference to the target buyer. The customer chooses between different offerings on the basis of which are perceived to deliver the most value (Kotler, 1999). Customers prefer product or services which they perceive offer the most value. This value is defined as a ratio between what the customer gets and what he gives. Customer delivered value is the difference between the customer value and customer cost (Simon Knox and Stan Maklan, 1998). The customer gets benefits and assumes costs, as shown in this equation:

\[ \text{Value} = \frac{\text{Benefits}}{\text{Costs}} = \frac{\text{Functional benefits} + \text{emotional benefits}}{\text{Monetary costs} + \text{time costs} + \text{energy costs} + \text{psychic costs}} \]

Put it very simply, customer value is created when the perception of benefits received from a transaction exceeds the cost of ownership. The same idea can be expressed as a ratio (Christopher, 1996): Customer value = Perceptions of benefits

The functional benefits could be in terms of products, services, and the response of personnel or image and is the worth in monetary terms of the technical, economic, service, and social benefits a customer or company receives in exchange for the price it pays for a market offering. (James C et al, 1998). This value delivery system also includes all the communications and channel experiences. To meet customer value expectation, companies have to keep an eye on their competitor’s performance. A company must, therefore, develop a competitively superior value position and a superior value delivery system (Michael J Lanning, 1998).

1.1.2 Service Industry and Customer’s Expectation
The terms ‘goods’ and ‘products’ appear to be used interchangeably in much of the literature (Araujo and Spring 2006; Callon 1991, 2002). The service sector is enormously large and varied. It includes banking, transportation, insurance, communication, education, occupation, healthcare, legal service, accounting, tourism, hospitality, and information services. Defining a service is not an easy task and there is no single universally accepted definition of the term. An earlier view of the concept of service was that it was a mere benefit attached to a physical product. Now a major shift has taken place and the concept of service and the service industry has emerged as an industry where it is the services that are the final output of the firms and as such are the products for such firms.

Services are deeds, acts or performances (Berry L.L, 1980). Services are activities, benefits or preference which are offered for sale, are provided in connection with the sale of good (AMA, 1960). Services can also be defined as the action of an organization that maintains and improves the well-being and functioning of people. (Hasenfield Y, Richard. A., 1974). It means any act or performance that one party can offer to another that is essentially intangible and does not result, in ownership of anything. Its production may or may not be tied to a physical product (Kotler, 1990).

It is therefore imperative for service industries to hinge their focus on customer centricity as the crucial aspect of its business. A service firm may achieve success in the marketplace by delivering higher quality service than competitors and exceeding customer’s expectations. The service organization has to identify customer expectation, correctly perceive customer’s wants and select the best service delivery channel (Parasuraman, Zeithaml, and Berry, 1985). Customers expect service basics delivered at a level they believe commensurate with the price they pay. Companies have a significant opportunity to improve their service reputations simply by delivering a higher percentage of the time the basic service customers think they are buying. One influence on the adequate service level is the number of service alternatives customers perceive. If customers perceive that they have alternative suppliers from which to choose, their zone of tolerance is likely to be smaller than if they don’t feel they have this flexibility.
Customers desire for customized, personalized service as well as closer relationships with the firms. Service firms that seek to exceed customer expectations in order to enhance their quality image should capitalize on the best opportunity for doing so service delivery. It is during delivery, when customers directly experience providers’ service skills and “tone,” that firms are best able to augment the service core of reliability in ways that are differentiating. In effect, the process dimensions of service play a different role than the outcome dimension of reliability. This is relevant for both services as well as product industry. It is therefore critical to evaluate how service firms can use their resources most effectively to benefit its customers. There is also a need to comprehend customer participation in service delivery by integrating the diverse literature on customer participation, education and problem management.

In doing so, the investigation has to be done regarding the influences of problem management and customer education on customer participation in the service process and customer loyalty. For each of these relationships, important insights for relationship marketing initiatives have to be framed. Specifically, in the context of services, high incredence properties, such as multi-product financial services, customer education becomes crucial to enhance client participation and loyalty. Finally, there remains a problem of customer education and participation. Financial services may be facing more intense customer service pressure. The substantial costs involved in relationship marketing and the increasing managerial focus on maximizing customers value in more cooperative and long-lasting relationships have to be focused on service firms. (Eisingerich, Andreas Bell, Simon J, 2006).

1.1.3 Technology in Service Industry and Competitive Advantage

Technological development is an essential change which has brought a revolution in the entire service industry. The transformation has led to the emergence of the era of “e-service” (Ronald T Trust and P.K Kannan, 2002). Its main focus is to increase efficiency, save time, reduce cost and cope with the market competition. Firms are making significant investments in information technology to align business strategies, enable innovative functional operations and provide extended enterprise networks. These firms have adopted information technology to foster
changes in managing customer relationships, manufacturing, procurement, the supply chain and all other key activities (Agarwal and Sambamurthy 2002; Barua & Mukhopadhyay 2000). By growing of new technologies, it is important to increase the willingness of people to use new technologies (Meuter et al., 2003). As technology enabled retailing (in the service sector) has grown rapidly worldwide and become globally competitive over the past decade, how to retain existing customers to make repeated purchases (hereafter referred to as repurchase) becomes a more important concern for firms than ever before (Johnson et al. 2008). Among the many influencing factors, trust has been found to be a key predictor of customer retention (e.g., Flavian et al. 2006; Gefen 2002; Qureshi et al. 2009). In today’s hyper-competitive e-commerce environment, while customer trust increasingly becomes an essential factor, empirical studies reveal that the presence of trust alone may not be universally sufficient for triggering customer transaction intentions (Gefen and Pavlou 2006; Liu and Goodhue 2012; Van der Heijden et al. 2003).

Technology readiness developed in order to explain how people achieve their goals by adopting technologies (Parasuraman, 2000)

1.1.4 Internet banking: The Concept

Internet banking also termed as online banking, Internet banking or virtual banking, is an electronic payment facility that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website. Online banking refers to the automated delivery of banking products and services to customers through electronic channels. It means provisioning of information and services by a bank to its customers via computer, telephone or television. It can also mean access to the banking services via kiosks or ATMs located in workplaces or at public locations such as an airport or a railway station.

This definition holds good for the retail electronic banking purposes, as it is the scope of the present study (Daniel 1999). Internet banking includes all the services provided by banks through all types of electronic delivery channels such as telephone, internet, cell phone and so on (Uppal, 2007). It is ‘providing banking service to the customer at his/her office/home or at any other
place or time wherever the person is—be it traveling, shopping or even in a stadium through the preference of electronic technology’ (Sharma, 2007). Banks are now able to process the customer information for a number of purposes. They have the opportunity to market their products and services online and additional financial services like bancassurance can be targeted at the existing customers and prospects, thus facilitating customization to suit the needs of individual customers (Godse, 2005).

This in Indian banking sector has undoubtedly reduced the work pressure among the bankers and also reduced the cost of operation in banks but at the same time led to a mixed bag of feeling among consumers. On one hand, customers feel that self-service technology is convenient, time-saving and flexible and on the other finds lack of security and lack of personal touch. The self-service technology is available through ATM, internet banking or telebanking. Nowadays all banking activities like opening a new account, checking the account balance, fund transfer, depositing or withdrawing money, payment of bills online, buying insurance or any financial products etc can be done through internet banking.

Customers can easily perform the various banking transactions by just a click on the system at any point in time i.e. 24x7 facilities available. Self-service technology has reduced the rush of deposit and withdrawal kiosk in the bank. What exactly the customers perceive regarding the preference of self-service technology has to be tapped.

1.1.5 E-Service: It’s Focus

E-service focuses on improving service to customers and expanding the market. The primary aim of e-service is to meet the needs of customers and increase revenue. It provides greater opportunity to sell services and build stronger relationships with the customers (Rayport and Sviokla, 1994). To extend customer-centric services to people and remain competitive, new forms of e-services are opening up which provides greater convenience and support services to customers. The adoption of SSTs does not only depends on user needs but also depends on education, society, nature of the user and the interface of SSTs. Values play a
vital role in the adoption of technology (Lee et al., 2007; Srite et al., 2006). While few people feel hesitation while using SSTs at the public place and these people feel more comfortable at the
private place. This hesitation of adopting new technology presents in all age groups. (Bashir, Zakria: SPM 2010.01).

1.1.6 Technology Intervention and Banking Industry

Technology adoption is a process that starts with the user becoming aware of the technology and ending with the user embracing the technology and making full use of it (Renauld and Van Biljon, 2008). The rapidly changing business environment of the financial services sector has led to an upsurge in innovation-related activities (Blazevic & Lievens 2004). Information technology plays a fundamental role in a firm's ability to enhance business performance through innovations in products, channels and customer segments (e.g., Sambamurthy et al. 2003). Good innovation practices help enhance a firm's competitive advantage (Afuah 1998; Bharadwaj et al. 1993).

Banking sector which is an integral part of service industry has also not remained untouched. It is now realized that in order to remain competitive and provide the best services to customers, latest technology has to be introduced in financial industry also. In the last two decades, the service industry has witnessed tremendous change. The report of Rangarajan Committee on Mechanisation of Banks, 1984 focused the preference of technology-enabled services in the financial sector. In the mid-nineties, the Institute for Development and Research in Banking Technology (IDRBT), Hyderabad, was fixed up as a research and technology center for the Banking sector. Technological development is an essential change which has brought a revolution in the entire service industry. The technology enabled service delivery mediums are referred as self-service technologies (SSTs). Self-service technologies are defined as any technology interface that enables a customer to produce and consume services without direct assistance from firm employees (Meuter et. al.2000).

In the banking sector, the Rangarajan Committee Recommendations (second - 1989), the Saraf Committee Recommendations (1993) and Vasudevan Committee Recommendations (1998) have
played a vital role in the inclusion of technology in the banking processes. The new private sector banks have adopted technology as a competitive tool against the public sector banks. Most of the foreign banks and a few of the old private sector banks have followed the same strategy as the new private banks (Financial Sector Technology Vision Document, 2005, RBI website). It was reiterated by all banks in the post-liberalization era that in order to remain competitive and provide the best services to their customers, need to have the latest technology in place and that technology would be the primary differentiating factor in offering customer-centric services to the customers. Accordingly, irrespective of their ownership status (public sector or private sector), all banks have today leveraged development and deployment of technology to the maximum. ATMs, plastic money, online collection and payment services, electronic fund transfer and clearing services, mobile ATMs, document management systems, smart cards, core banking solutions, branch networking and internet banking are all outcomes of their initiative of technological upgradation (Upadhyay, 2007).

1.1.7 Customization of Technology in the Banking Industry

The first technological change in the banking industry was the introduction of online banking services as Home-link which was fixed up for customers of Bank of Scotland in 1983 by Nottingham Building Society. The system allowed on-line viewing of statements, bank transfers, bill payments etc. Then slowly the banking self-service cropped all over the world. Internet banking was introduced in India in 1996 by ICICI bank with the launch of ‘infinity’ (Rajneesh De and Padmanabhan, 2002). The introduction of technology-enabled banking service delivery probably started off with HSBC bank introducing ATM for the first time in India way back in 1987 (N. Thamaraiselvan and J.Raja, 2007).

Persuading customers to use new technologies in service encounters is generally more challenging than employees’ use of new technologies as far as banks are concerned. In the delivery of the services, since technology can replace a firm’s employees, the use of technology is immensely beneficial to the service provider in that it can standardize service delivery, reduce labour costs and expand the options for provisioning of services. On the other hand, it could be wastage of resources if not widely accepted by consumers. Thus, it is essential that we find out
best ways to design, manage and promote new technologies in order to have the best chance of consumer acceptance (Curran and Meuter, 2005)

The various self-service technology that is provided by banks in India includes self-service kiosks for money deposit and withdrawal, online De-mat services, online loan application, online account opening and updating the details, bill payments, tele-banking etc.

Banking today has become flexible and customized, where the consumers themselves participate in banking transactions or queries thereby saving time and avoiding the rush and hassle at the banking counters. The customers can now easily access their banking details from their place of convenience. But apart from these advantages still a part of customers avoid using Self-service technology. There is a range of social, political and economic factors that constrain the use of technology in banking in India by customers. With poor technological infrastructure and connectivity problems in India, customers are skeptical in using online banking. The security factor and lack of personal relationship also play a key role in making the customers skeptical in using online banking.

This thrust on computerization and automation has led to massive investments in the banking sector in India. For instance, as on March 31st, 2005, public sector banks in India had incurred an expenditure of Rs 9,487 crores on computerization and development of communication network (Manoharan, 2007). These and many other technological innovations have contributed to recent changes in the conduct and character of banking immensely, though with challenges. For example, while money-dealing transactions have become cheaper, investment costs have increased and a broader range of services had to be provided. The cost efficiency of banks has also not improved. Also, banks have developed computationally intensive, ‘arm’s length’ techniques to assess creditworthiness and manage risk. Thus, they have been able to generate new revenue streams from lending to individuals and from fees for money market mediation. This shift has signaled a decline in ‘relational’ banking. Third, new technology and related practices have facilitated the entry of foreign banks into developing countries, where they can exploit ‘arm’s length’, technologically demanding niches in domestic markets. This has not improved the efficiency of host banking systems, nor increased the availability of credit to the productive sector (Costas Lapa visas and Paul Santos, 2008)
1.2 Self-service technology as a Concept

A self-service technology means the use of technology to perform various banking operations by the customers. The new delivery channels such as ATMs, Internet Banking and Telephone Banking along with better access to customer information have reformed the relationship between banks and customers. Banks are now able to process customer information and use it for a number of purposes. They have the opportunity to market their products and services online and additional financial services like bancassurance can be targeted at the existing customers and prospects, thus facilitating customization to suit the needs of individual customers (Godse, 2005). The study investigates important self-service technology - ATMs, Internet banking, and Tele-banking.

1.2.1 Automated Teller Machine

Automated Teller Machine or ATM is a device that allows customers to withdraw cash, or resolve any transactional enquiries, arrange loans and insurance, arrange buying and selling of stocks and advises customers on different savings and investment schemes (Manoharan, 2007). HSBC was the first bank to introduce the ATM concept in India in 1987. The private sector banks have initiated the introduction of ATMs to compete with large public sector banks. ICICI, UTI, HDFC and IDBI together used to account for more than 50% of the ATMs in India about two years ago. ICICI Bank was the first bank to cross the 1000 mark in India (Thamaraiselvan and Raja, 2007).

Today, the current scenario has entirely changed. The public sector banks like SBI, Bank of India, and Union Bank, Allahabad Bank etc are aggressively installing ATMs across the country. It is for certain that ATMs are going to play greater role future. Future ATMs would be more than just cash dispensing machines; they would provide additional value-added services
including several non-banking and non-cash ones (Mohanty, 2007). The common nonbanking services provided by most ATMs are payment of electricity bill, telephone bill, cellular and credit card bill payment, payment of insurance premiums etc. Citibank and ICICI Bank permit transactions relating to mutual fund through ATMs. Citibank ATMs facilitates customers to place orders for demand drafts and fixed deposits. ATM’S of ICICI Bank, IDBI Bank and SBI allow customers to make donations to specific temples or charitable trusts. SBI ATMs allow their customers to pay fees for specified schools or colleges at specified ATM centres, while IDBI ATMs even allows payment for gas bills and subscription payments for selected magazines. Apart from payment services, IDBI ATMs let their customers view news headlines, stock quotes, horoscopes and movies running in theatres (Israni, 2006).

Setting up of ATMs, have enabled banks to shift 50 to 80 percent of their respective cash transactions to this channel. This has resumed in substantial cost savings for the banks as the cost of transactions using ATM is only about 25 to 30 percent of the cost of branch transactions. (Nair, 2005).

1.2.2 Internet Banking

The use of the Internet for providing banking services like obtaining the account balance, payment of utility bills, and transfer of funds, ordering demand drafts, or applying for a loan is referred as Internet Banking. ICICI Bank was the first one to introduce the concept of online banking in 1996 with the launch of ‘Infinity’. After ICICI Bank, HDFC Bank, Citibank and IndusInd Bank were the banks to introduce online banking (Rajneesh De and Padmanabhan, 2002). Initially, online banking facility only provided information for queries to the customers but later facilities like fund transfer, preparing demand drafts etc. were introduced. The recommendations of Vasudevan committee on technological upgradation of banks in India also gave impetus to the implementation of internet banking on a large scale (Mann and Sahni, 2007).

Internet banking has several advantages from customer’s perspective. It can enable customers to avail banking services from their point of convenience, make 24 x7 banking service available and also save the time of customers since they do not have to waste time in visiting the bank.
It is also seen that Internet banking has several advantages for bankers as well. It helps bankers to reduce the cost of operation by having fewer customers visiting the bank, help economics since there is no investment in employees and also less rush in the bank.

There are certain issues in the preference of Internet Banking. The main issues in internet banking today relate to security, authentication, non-repudiation, internet banking business continuance plan, customer awareness creation about security aspects and security awareness breach detection and reporting. These issues are not only important for the banks but also they are essential to building customer confidence and preference (Kumar et al., 2007). In an emerging economy like India, there are a large number of retail bank customers who are yet to start using this cost effective and convenient delivery channel (Kumar, V. R., & Bose, S. K. 2016).

RBI provided a report in 2001 regarding the banking services offered by Internet Banking. As per the RBI’s classification in their Report of Internet banking (2001) the levels of banking services offered through the internet can be categorized into three types:

The basic level service is the banks’ websites which disseminate information on different products and services offered to customers and members of the public in general. In the next level are simple transactional websites which allow customers to submit their instructions, applications for different services queries on their account balances etc.; but do not permit any fund-based transactions on their accounts.

### 1.2.3 Tele banking

Tele-banking is offered by the banks through a technology known as Interactive Voice Response System (IVRS) (Kunjukunju, 2008). In tele-banking, a customer speaks to a phone banking officer for any banking transaction by authenticating his/her identity through a numeric or verbal password or through security questions asked by the banker.
The pioneering bank to offer tele-banking services in India was ICICI bank in the year 1999, followed by HDFC Bank and IDBI bank (Aithal, 2008). Among public sector banks, State Bank of India, Bank of Baroda and Corporation Bank are the one which has started offering this service to their customers.

According to TRAI telecom subscription report, March 2016 saw 7 million new mobile subscribers added on various telecom networks. The number of mobile subscribers has become 405.18 percent of the basic landline subscribers as on March 31, 2007 (Srivastava, 2008).

Hence it was, needed to introduce tele-banking. Tele-banking refers to providing banking and financial services through the mobile technology.

Services such as account balance enquiry, account statement enquiry, cheque status enquiry, cheque book request, fund transfer between accounts, credit/debit alerts, minimum balance alerts, bill payment alerts, bill payments, recent transaction history, information requests on interest rates/ exchange rates etc. are offered through tele banking.

1.3 Relevance of the study

The needs and preference of customers have been analyzed to benefit the customers as well as the banks. While the study would help reconfigure internet banking strategies by making self-service technology more customer-centric, it would help understand customer needs and enhance customer preference successfully. A comparative analysis of public and private sector banks would also help to appreciate the newer perspectives w.r.t. self-service and meet emerging customer needs most effectively. The study also provides a recommendation on how these self-service technologies can enhance customer perceptions regarding quality and preference so that customers move less to banks thereby decreasing the operational cost of the bank.

As preference of self-service technology would reduce the cost of operations and rush in the bank since the lesser customer would visit the bank for the various services, this study would be helpful to the banking industry with regards to self-service technology.

The study would also enable bank officials in identifying the appropriate demographic segments where the self-service technology is widely adopted. The practicing bank managers
and officials can frame effective strategies for making the adoption level of self-service technology high. The study will help to make the self-service technology more customer-centric in relation to customer quality and preference. It will help to examine how these self-service technologies can enhance customer perceptions regarding quality and preference.

1.4 Area of Research

The study explores the customer preference towards self-service technology in Indian banking sector and compares the public and private sector banks in Jharkhand. This is done by identifying the appropriate demographic segments where the self-service technology has still been adopted widely by customers. The self-service technology which has been taken into consideration is ATM services, internet banking and telebanking services.

The study also strives to comprehend the difference in preferences of customers, if any, between public sector banks (SBI and Bank of India) and private sector banks (HDFC & ICICI) in Jharkhand regarding the self-service technology. SBI and Bank of India have been taken under public sector banks and HDFC and ICICI Bank as private sector banks.

The reason for selecting the above-mentioned banks is:

1. SBI has been ranked the top bank in India based on tier 1 capital by “The Banker magazine” in 2014.

2. Bank of India focuses on the choice of Corporate, Medium Business and Upmarket Retail Customers and Developmental Banking for Small Business, Mass Market and Rural Markets.”

3. ICICI Bank is the biggest private sector bank and has been the first bank to launch the concept of online banking in 1996 called - ‘Infinity’.
4. HDFC Bank’s vision is to build sound customer franchises across distinct businesses so as to be the preferred provider of banking services for target retail and wholesale customer segments, and to achieve health growth in profitability, consistent with the bank's risk appetite.

It is observed that the vision of all the selected banks is found on the objective of customer’s preference, and winning a stand in the competitive market. In this study, the need of the customers has been analyzed to reconfigure internet banking strategies so that the facilities could be more customer-centric in relation to customer quality and preference. The focus is also to identify appropriate demographic segments where the self-service technology has still not been widely adopted. It also studies the difference in customers’ preference if any, between public sector banks (SBI and Bank of India) and private sector banks (HDFC & ICICI) in Jharkhand regarding the self-service technology.

1.5 Chapter Scheme

Chapter one: It deals with the executive summary, the introduction to the study, its background, the relevance of the study.

Chapter two: It deals with the literature review which contributed towards this research.

Chapter three: It deals with the research objectives and the hypothesis of the research.

Chapter four: This chapter deals with the research design and methodology that has been used for this study.

Chapter five: It deals with the analysis of the data collected and findings from the present study.

Chapter six: It contains suggestions, conclusion and scope for further research.
1.6 Conclusion

This study finds out the demographic factors that influence the adoption self-service technology like ATMs, internet banking, telebanking and internet banking in Jharkhand. The study analyses the adoption pattern of self-service technology.

The study helps to identify appropriate demographic segments where the self-service technology is still not widely adopted in Indian banking sector and provide the areas for improvements of the services by banks. Accordingly, suggestions have been given to improve the adoption level of the self-service technology. It could be helpful for bank management in India to improve the self-service technology.

Initiatives are not only taken by the private banks and foreign banks but public sector banks are also providing and improving the self-service technology.