Consumers' acceptance of E-banking among adult customers

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Abstract

Besides increasing competition and change, the current trend in banking has been the consumer movement from traditional branch banking to stand-alone, online banking. Because of financial uncertainties globally and the financial pressures, the banks have found an opportunity in intergrating its branch banking to electronic banking. The banking industry has adopted e-banking in the form of internet banking, ATM and mobile banking as electronic delivery channels which are known as Self-service Technologies to cut costs and provide anytime anywhere banking services to fulfill ever changing needs of customers. Self-Service Technology is using a service without depending on the service employee directly. There is a great deal of potential in the technology for not just automation but also simplication of the processes in the future.This paper investigates the factors which are affecting the acceptance of e-banking services among adult customers and also prioritize the electronic delivery channels with regard to relative advantage, compatibility, trust/security, usefulness, convenience and ease-of-use. The results showed that trust or credibility of an electronic channel was of prime consideration amongst respondents in adopting new delivery channels. The application of analytical hierarchy process technique suggested that internet banking was the most preferred delivery channel for customers followed by ATM and mobile banking.

Introduction

Owing to growing competition and financial pressures banks are now going in from traditional banking to electronic banking. often called as e-banking, this multichannel strategy gives better reach to banks by way of channels like ATM, Mobile banking and internet banking and there by cutting down on the costs of transactions at the branch. Customers are now making a shift from traditional branch based banking to electronic banking as a part of the strategy to attract new customers while retaining the old ones.

Economic-demographic and political-legal changes have increased customer power and rights whereas deregulation has increased competition in the financial services sector. Consumers are now facing a plethora of financial products and providers ranging from full-service financial department stores to tiny pure online banks. The changing demographic environment includes the emergence of senior bank customer segments, which are forecasted to be important, wealthy segments withhigh purchasing power of financial products and services. Social changes have taken place in cultural values, beliefs and attitudes towards technology and society. As mentioned, technological change, i.e. the diffusion of information and communications technology (ICT), is one of the most significant macro environmental force that shapes the industry. A visible consequence of this can be seen in the emergence of self-service technologies such as e-banking services in general and online banking services in particular. This development has had a heavy impact on traditional bank branchnetwork as well as on deposit banks staff. The reduction in these has been one of the key drivers of the diffusion of online banking. The phrase banking without boundaries has been extensively used describing electronic banking in general and online/Internet banking in particular. Electronic banking is a high-order construct that needs further clarification. It comprises all electronic channels customers use to access their accounts and transfer funds or pay their bills, including telephone, the Internet, mobile phone. E-banking thus means the provision of information or services by a financial service provider to its customers via electronic channels.

As the banks induce the technology, customers are using more and more of technology enabled channels in place of the traditional banking. the main reasons for the success of electronic banking have been there wide spread reach. This makes it easily for customers to do transactions anytime, anywhere rather than standing in queues in the bank. This convenience factor has led to the success of ATMs. Its more economical for banks to open up more ATMs to beat the competition from rival banks. Also, Growing numbers of customers interact with technology to create service outcomes instead of interacting with a service firm employee. Self-service technologies (SSTs) is interfacing via technology to facilitate customer to produce a service independent of involving a service employee directly. ATMs have been the most popular and successful delivery channels of the bank, followed by telephone and Internet banking. Mobile banking has not picked up the way it should have but holds a lot of potential. There is a lot of opportunity for banks to cache on mobile banking with the increased bandwidth and decreasing

mobile tariffs. The customer would prefer convenience of doing banking transactionsthrough any device, at any time and any place.With the current rate of evolution in the wireless industry, the mobile channel is poised to become the de-facto banking channel within the next three years. The purpose of usage of SST can be categorized as customer service, banking transactions and self-help (Meuter et al., 2000). In the banking context customer service denotes getting information about the account balance available, getting statement of accounts, ordering for check books, applying for loans etc. It is increasingly evident that these technological innovations and advances will continue to be a critical component of customer-firm interactions. For a long-term business it is important to have these kind of technology- based interactions. Although many academic researchers have acknowledged a need for greater under-standing in this area (Dabholkar 1996; Fisk, Brown and Bitner 1993), little is known about how interactions with these technological options affect customer evaluations and behavior

The customers are not putting to use all the services offered through one particularSST of the bank. The utilization level varies due to variousfactors. We theorize that the banking customer will weigh the different SST options for carrying outspecific task and finally settles with the option that will best serve the purpose. Thus this study has made an attempt to identify the dimensions influencing the usage of various electronic delivery channels and evaluate the priorities of consumers for the different SST channels in retail banking environment. The purposed of the research was to identify out of three electronic delivery channels (ATM, internet banking and mobile banking) which channel was given maximum importance while using the banking servicesby using Analytical Hierarchy Process (AHP) technique.

Literature Review

A customer is able to interact with the bank through technologies like the Automatic Teller Machines (ATM), Internet and Mobile phone besides others. Electronic banking has been defined by Daniel (1999) as services and information delivered through different delivery platforms by banks to its customers that can be used through PC, television or mobile phone. A variety of services are offered by banks through the electronic banking.: there is convenience of time to the customer. They can do transaction at anytime and are not bound by 9-5 timing restrictions of the bank. Also customer can carry out the transaction from anywhere, even at the convenience of the

home. Self Service Technologiess are defined as technological interfaces that assistcustomersdoing service with the bank to produce it without having to get directly involved with the service company employee (Meuter et al., 2000). As banks adopted this technology changed the way customers interacted and received these services from the bank.

Customers attitude and his perceived behavioural control important factors that affect the acceptance of internet banking (Tan 1998). Peer pressure in form of Subjective norms has little affect on adoption of internet banking. the customers compatibility with his value system is an important factor to be considered. Another attitudinal factor that affects adoption is relative advantage.The results from this study have also shown that there are other factors besides attitudinal ones that can help us to better understand the adoption intentions of Internet banking. In particular, self-efficacy toward using Internet banking services and the facilitating condition of perceived government support for Internet commerce, were both found to significantly affect intentions to adopt Internet banking services.

Liao and Cheung (2002) stated that a customer will use Internet banking depending upon the expectations of convenience, user-friendliness, accuracy, security, user involvement and network speed. Hill (2004) laid out characteristics of online banking users in his study. It was mentioned that that demographics do influence the acceptance of electronic self-service tools, such as online banking. Youngsters who are earning high and are trendy are internet banking users accoding to the study.They actively seek out electronic banking channels, and they want to perform all transactions through the same channel.

Mia, Rahman and Uddin (2007) suggested that web based banking service or E-banking, the latest generation of electronic banking transactions, has opened up new window of opportunity to the existing banks and financial institutions. The E-banking sector is highly prohibitive for the new entrants although the inception cost is lower with high growth rate. Customers preferences for the brand, existing network, safety and security, physical existence, bargaining power of the supplier, substitute product of non-banking sectors have made the way difficult.

Internet banking, followed by mobile banking and then ATM is used by customers for basic services like information related transactions or the service requests. (Natarajan and Balasubramanian, 2010). Despite the convenience internet banking offers, ATM is most chosen delivery channel. this is followed by the internet banking. Mobile banking is the least preferred

delivery channel as its adoption still is in fancy stages. Customer acceptance of Automated Teller Machine has been more as it requires very little skill to understand how to use the system. The machine is also very customer friendly. Mobile banking also wins points with customers on this as it is also considered easy to use. This could be attributed to the high adoption of cellphones. Customers find Internet banking difficult to use as you need to be computer proficient to use it. In order to do banking transactions, a computer and a internet connection would be required.

There is a high level of concern in Indian customers for safety and security of transactions. Dixit and Data (2010) found that adult consumers are likely to adopt technology with which low risk is associated that with ones which are perceived as highly risky. So, its important banks consider the attitude of its adult consumers before rolling in a new technology. Another factor affecting the adoption of online banking is the lack of computer knowledge. If a customer has one bad experience with the transaction, he is most likely to discontinue with the electronic banking.

Research Framework

The research framework postulates that a customer considers three factors while evaluating the adoption and usage of various self-service technologies which are: (1) attitude, it describes person's perception towards electronic banking delivery channels (2) subjective norms, which describe the social influence and (3) perceived behavioral control which describes the beliefs about having necessary resources and opportunities to use various e-banking channels.

This study has used only attitude factors to find out which dimensions under this factor are considered more important while prioritizing different SSTs viz. mobile banking, internet banking and ATMs. Attitude is an individuals feelings- positive or negative (evaluative affect) about performing a target behavior.The various dimensions involved in formation of attitude towards adoption and evaluation of various SSTs that have been suggested by various researchers more importantly by Taylor and Todd (1995) were relative advantage, compatibility, trust, usefulness, conveniences and ease-of-use.

*The advantage to carry out a transaction at anytime- anywhere makes relative advantage important criteria for acceptance of electronic banking. electronic banking offers lot of convenience to the customer.*This dimension was further decomposed into correct service and accurate transactions to evaluate which e-banking channel was able to perform and maintain its functions in

varying circumstances.Modern day banking customer would adopt an electronic delivery channel if it is *compatible* with his/her needs of prompt service and its ability to solve their problems quickly and effectively.

Numerous academic studies Liao et al., 1999; Mukherjee and Nath, 2003; Lee et al., 2005) have stated that security/risk/trust/privacy/confidentiality/credibility is one of the most crucialconcerns for people being reluctant to adopt electronic banking. Thus, confidentiality and safe transactions is of paramount importance while evaluating a particular electronic delivery channel.An electronic channel would be adopted if the customer considers it to be more *useful* and effective than other available channels in terms of money saved, time saved and involves less physical effort.Based on 323 empirical testing, Liao andCheung (2002) concluded that *convenience* is one of six determinants of the adoption of online baking. People can bank online to pay bills, check balances, transfer funds,apply for auto loans, mortgages, and checks, and use other complementary servicesjust at the tip of a finger anytime and anywhere. Thus, convenience is a major determinant in prioritizing various electronic delivery channels.Various researches have shown that a complex service requires more technical skills and greater operational efforts to increase its chances of adoption (Cooper and Zmud 1990, Dickerson and Gentry 1983). An individual would be more inclined towards adopting either of the SSTs if new technology is *easy to learn and easy in operating*.

Analytical Hierarchy Process (AHP) Methodology

AHP is a mathematical approach and was introduced by Saaty (1994). It uses multilevel hierarchical structure of objectives or goal, criteria, sub-criteria and alternatives. The pertinent data are derived by using a set of pair-wise comparison. These comparisons are used to obtain the weights of importance of the decision criteria and the relative performance measures (scores) of the alternatives in terms of each decision criterion.

AHP methodology

Perhaps the most creative part of decision making that has a significant effect on the outcome is modeling the problem. In the AHP, a problem is structured as a hierarchy. The overall objective of the problem is positioned at the top of the hierarchy and the decision alternatives are

placed at the bottom. Between the top and bottom levels there are the relevant attributes of the decision problem such as criteria and sub-criteria. The number of levels in the hierarchy depends on the complexity of the problem and the decision model of the problem hierarchy.

This is then followed by a process of prioritization. Prioritization involves eliciting judgments in response to questions about the dominance of one element over another when compared with respect to a property. This requires the analyst to make pair-wise comparisons of elements at each level in the hierarchy relative to each activity at the next higher level. In AHP relational scale of real numbers from 1 to 9 and their reciprocals are used to assign preferences in a systematic manner. When comparing two attributes (or alternatives) with respect an attribute in a higher level, the relational scale proposed by Saaty (1994) is used. The scale is shown in Table 1.

Table I

Intensity of importance on an	**Definition**	**Explanation**
1	Equal importance	Two activities contribute equally to the objective.
3	Moderate importance of one over another	Experience and judgment slightly favor one activity over another.
5	Essential or strong importance	Experience and judgment strongly favour one activity over another.
7	Very strong importance	An activity is strongly favoured and its dominance is demonstrated in practice.
9	Extreme importance	The evidence favouring one activity over another is of the highest possible order of
2,4,6,8	Intermediate values between two adjacent judgment	When compromise is needed
Reciprocals	If activity p has one of the above numbers assigned to it when compared with activity q, then q has the reciprocal value when compared with p.	

The next step involves the weight calculation of each level to obtain the overall score of each SST channel with respect to all sub-criteria and pair wise comparisons of the main selection

criteria. This is done by using an eigenvalue method (mathematical approach used in AHP) is used to determine the relative priority or weight of each attribute with respect to each attribute, one level up in the hierarchy. In addition a consistency parameter is also calculated. According to Saaty (1994),small Consistency Ratio (<0.10) does not drastically affect the ratings. The user has the option to reevaluate the comparison matrix and generally it is done if the value of Consistency Ratio (C.R.) is higher than 0.10.

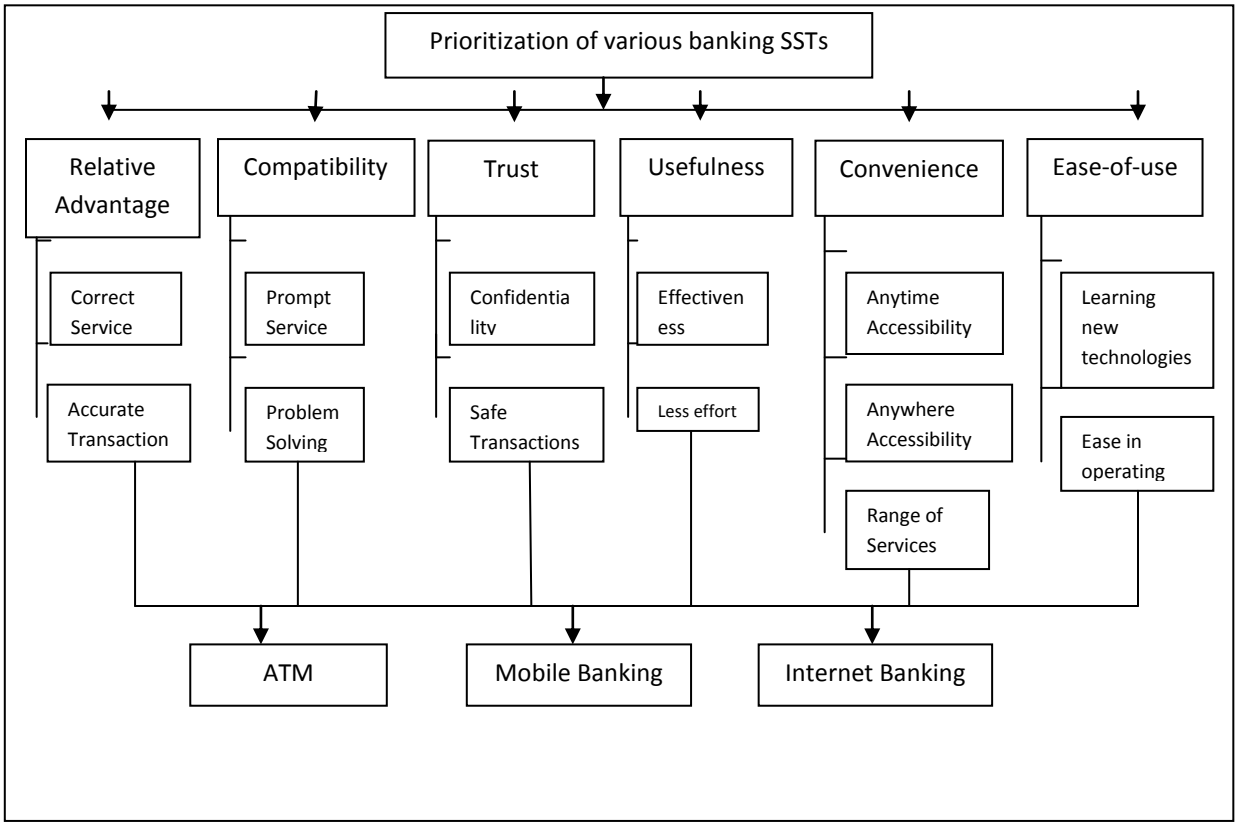
The last step involves, the priorities of the lowest level (alternatives) relative to the top most level (objective or goal) are determined. AHP is about breaking a problem down and then aggregating the solutions of all the sub-problems into a conclusion. It facilitates decision making by organizing perceptions, feelings, judgments, and memories into a framework that exhibits the forces that influence a decision. In the simple and most common case, the forces are arranged from the more general and less controllable to the more specific and controllable.

Thus, to fulfill the objective of the study 40 adult customers of a nationalized bank providing services through all three electronic delivery channels were selected randomly.

Results

Hierarchy Formulation:

Figure I



In this study the hierarchy is indicated in figure 1 which includes four levels. The top level of the hierarchy represents the ultimate goal of the problem while the second level of the hierarchy consists of six main channel selection criteria, viz. Relative Advantage, Compatibility, Trust, Usefulness, Convenience and Ease-of-use. At the third level, these criteria are further segregated into sub-criteria that may affect the consumer's choice for a particular electronic delivery channel. Finally, the banks alternate delivery channels are represented at the bottom level of the hierarchy.

Pair-wise comparison and determination of weights of criteria and sub-criteria:

The pair-wise comparison matrix of three criteria with respect the overall objective of the present problem is given in Table 2. Here the elements of level 2 are arranged into a matrix and judgments are made according to the Saatys scale given in Table 1.

Table 2

	Relative advantage	**Compatibility**	**Trust**	**Usefulness**	**Convenience**	**Ease-of-use**	***Priority Values***
Relative advantage	1	7	1/5	7	6	6	*0.266*
Compatibility	1/7	1	1/6	1/6	5	5	*0.099*
Trust	5	6	1	6	6	5	*0.409*
Usefulness	1/7	6	1/6	1	4	4	*0.135*
Convenience	1/6	1/5	1/6	1 / 4	1	4	*0.057*
Ease-of-use	1/6	1/5	1/5	1 / 4	1 / 4	1	*0.034*

Consistency Ratio = 0.086

It can be inferred from the matrix that relative advantage dimension had very strong dominance over compatibility and usefulness. The respondents considered strongly important the adoption of a SST if it provides better advantage in terms of correct and accurate service over convenience and ease-of-use. However, trust dimension had shown strong dominance over relative advantage and ease-of-use dimension. Also, respondents considered dominance of trust dimension over

compatibility, convenience and usefulness to be in between strong and very strong importance. Similarly other matrix values were inferred and priority values (relative weights) of criteria with respect to the objective were calculated. The priority column in table 2 indicate that trust dimension of the delivery channel have the most dominant influence on the choice of a particular electronic delivery channel with a priority of 0.409. As the value of C. R. is below the critical value of 0.10, therefore there is no need to reconsider the pair-wise comparison matrix.

The next step is concerned with finding the priorities of various sub-criteria (Level 3) with respect to the corresponding criteria (Level 2), which are situated one level up in the hierarchy. The pair-wise comparison between the sub-criteria of relative advantage and derived priority values are shown in table 3.

Table 3

Relative Advantage	**Correct Service**	**Accurate Transaction**	***Priority Values***
Correct Service	1	1/6	*0.142*
Accurate Transaction	6	1	*0.857*

Consistency Ratio = 0

It can be inferred from table 3 that accurate transactions were considered to be in between strong and very strong importance over correct service while selecting a banking self-service technology. The priority column indicate that accuracy of transactions with priority value of 0.857 have major influence while evaluating the services of a bank in terms of relative advantage.

The pair-wise comparison between the sub-criteria of compatibility and derived priority values are shown in table 4.

Table 4

Compatibility	**Prompt Service**	**Problem Solving**	***Priority Values***
Prompt Service	1	1/6	*0.142*
Problem Solving	6	1	*0.857*

C.R. = 0

The results of sub-criteria of compatibility dimension as shown in table 4 were found to be quite similar to the sub-criteria of relative advantage dimension. The results suggest that respondents give solution to their varied problems, with priority value of 0.857, much more importance than to quick and prompt service.

The pair-wise comparison between the sub-criteria of trust and derived priority values are shown in table 5.

Table 5

Trust	**Confidentiality**	**Safe Transactions**	***Priority Values***
Confidentiality	1	1/5	*0.166*
Safe Transactions	5	1	*0.833*

C.R. = 0

According to results as shown in table 5 customers consider safety in banking transactions as essential and give it strong importance over confidentiality of transactions. The priority value of 0.833 of safe transactions has the most dominant influence on trust property of an e-banking channel. Thus, credibility of an electronic channel would be predominantly influenced if it can provide safe and secure services.

The pair-wise comparison between the sub-criteria of usefulness and derived priority values are shown in table 6.

Table 6

Usefulness	**Effectiveness**	**Less Effort**	***Priority Values***
Effectiveness	1	6	*0.857*
Less Effort	1/6	1	*0.142*

C.R. = 0

The results as shown in table 6 indicate that customers have given higher importance to effectiveness in terms of time and money saved than physical effort involved in availing of banking services. While evaluating the usefulness of banking delivery channel customers perceive effectiveness which enhances performance to be of higher priority and importance (0.857 vs. 0.142) than amount of effort involved.

The pair-wise comparison between the sub-criteria of convenience and derived priority values are shown in table 7.

Table 7

Convenience	**Anytime Accessibility**	**Anywhere Accessibility**	**Range of Service**	***Priority Values***
Anytime Accessibility	1	5	6	*0.668*
Anywhere Accessibility	1/5	1	6	*0.256*
Range of Services	0.166	0.166	1	*0.075*

C.R. = 0.065

The matrix values in Table 7 shows that anytime accessibility sub-criteria was considered strongly important than anywhere accessibility and nearly very strongly important over range of services. However, dominance of accessibility of services anywhere was found to be in between strongly and very strongly important over range of services. Thus, range of services provided through different electronic delivery channels was found to be least important as was also indicated by priority values. With a value of 0.668 services being available and accessible at any time of day was considered to be more important and was given highest priority over other sub-criteria implying it be of maximum influence over convenience dimension when a customer will evaluate the choice of an electronic channel.

The pair-wise comparison between the sub-criteria of ease-of-use and derived priority values are shown in table 8.

Table 8

Ease-of-use	**Learning new technologies**	**Ease in operating**	***Priority Values***
Learning new technologies	1	0.25	*0.2*
Ease in operating	4	1	*0.8*

C.R. = 0

According to the results in Table 8 ease in operating the electronic delivery channels was found to more moderately important than strongly important over the apprehension of learning new technologies. The priority values show that adopters who are allowed to experiment with an

innovation felt more comfortable with the technology. If electronic delivery channels are easy to operate then certain fears of the unknown gets minimized and customers would be more likely to adopt.

The next step involved finding relative weights of three electronic banking delivery channels i.e. respondents were asked to indicate their degree of importance for ATM, internet banking and mobile banking. The priority values of different SSTs were shown in Table 9.

Table 9

	ATM	**Internet Banking**	**Mobile Banking**	***Priority Values***
ATM	1	1/7	6	*0.221*
Internet Banking	7	1	7	*0.711*
Mobile Banking	1/6	1/7	1	*0.067*

C.R. = 0.0339

The matrix values in Table 9 shows that internet banking dominated very strongly over ATM and mobile banking. The priority value of internet banking was found to be 0.711 indicating maximum importance and high preference being assigned by the respondents. ATMs were given second preference as shown by the priority values.

The next step was to calculate global weights of sub-criteria with respect to three different electronic banking channels. This was done by multiplying the relative weight of sub-criteria with the weight of delivery channel and then summing up. The, global weights of all the sub-criteria corresponding to three SSTs were calculated and were shown in table 10.

Table 10

	Relative Advantage (0.266)	**Compatibility (0.099)**	**Trust (0.409)**	**Usefulness (0.135)**	**Convenience (0.057)**	**Ease-of-use (0.034)**	***Overall Priority***
ATM	0.220	0.198	0.208	0.199	0.221	0.231	*0.210*
Internet Banking	0.701	0.699	0.678	0.711	0.713	0.678	*0.692*
Mobile Banking	0.066	0.107	0.067	0.059	0.101	0.058	*0.071*

The results in table 10 indicate that internet banking was found to be the most preferred electronic banking delivery channel followed by ATM and mobile banking. The priority values as shown in the table suggest that on all the criteria's customers have given more importance to internet banking over other two delivery channels. Highest preference was given to convenience dimension as internet provide anywhere and anytime accessibility to banking services. Also it was found that customers preferred a delivery channel which enhances their performance and involves less physical effort. The respondents found internet banking to provide quick and correct services when compared with ATM and mobile banking as it scored highly in terms of relative advantage.

Summary and Conclusion

With increasing competition and emphasis on reducing costs banks have adopted electronic means to deliver variety of services to their customers. Also as customers reducing willingness to visit physical branch of a bank their inclination towards adoption of online delivery channels was found to be increasing. Under such scenario an attempt has been made through this study to find out which dimensions were considered by individuals while evaluating a particular electronic delivery channel. The study also tried to find out that which delivery channel under study viz. internet banking, ATM and mobile banking was preferred over one by using Analytical Hierarchical Process (AHP). The application of AHP enabled to capture accurately the channel preferences when related to different channel selection criteria.The results of the study suggest internet banking to be the most preferred channel in comparison to ATM and mobile banking. While understanding the influence of various dimensions on different SSTs it was found that convenience dimension has maximum influence over the usage and adoption of intent banking. The respondents found ATMs easy to use and learn and mobile banking to be compatible to their needs. It was found that patronage of internet banking has increased as respondents have given it more importance on all the criteria than other electronic delivery channels.

References

- Cooper, R.B. and Zmud, R.W. (1990), "Information Technology Implementation Research: A Technological Diffusion Approach," *Management Science,* (36:2), pp. 123-139.

- Dabholkar, Pratibha, A . (1996), "Consumer Evaluations in New Technology-Based Self-Service Options: An Investigation of Alternative Models of Service Quality," *International Journal of Research in Marketing,* 13 (1), pp. 29-51.
- Daniel, E. (1999), "Provision of Electronic Banking in the UK and the Republic ofIreland," *Internal Journal of Bank Marketing* 17(2), 72-82.
- Dickerson, M.D. and Gentry, J.W. (1983), "Charecteristics of Adopters and Non-Adopters of Home Computers," *Journal of Consumer Research,* pp. 225-234.
- Dixit N. and Data S.K. (2010),"Acceptance of E-Banking Among Adult Customers: An Empirical Investigation in India", *Journal of Internet Banking and Commerce,* 15 (2).
- Fisk, Raymond, P., Brown, S.W., and Bitner, M.J. (1993), "Tracking the Evolution of the Services Marketing Literature," *Journal of Retailing,* 69 (1), 61-103.
- Hill, K. (2004), "Study: Demographics Vs Marketing' *CRM daily.*
- Lee, E. J., Kwon, K. N. & Schumann, D. W. (2005), "Segmenting the non-adopter category in the diffusion of Internet banking," *International Journal of Bank Marketing,* 23(5), 414-437.
- Liao, S., Shao, Y., Wang, H. & Chen, A. (1999), "The adoption of virtual banking: An Empirical Study," *International Journal of Information Management,* 19(1), 63-74.
- Liao, Z., & Cheung, M. T. (2002), "Internet based E-Banking and Consumer Attitudes: AnEmpirical Study," *Information and Management,* 39, 283–295.
- Meuter, M.L., Ostrom, A.L., Roundtree, R.I. and Bitner, M.J. (2000), "Self-service Technologies: Understanding Customer Satisfaction with Technology-based Service Encounters", *Journal of Marketing,* October, pp. 48-52.
- Mia, M.A.H., Rahman, M.A. and Uddin, M.M. (2007), "E-banking: Evolution, Status and Prospects,"*Cost Manage,* 35(1): 36-48.
- Mukherjee, A. & Nath, P. (2003), "A Model of Trust in Online Relationship Banking,*International Journal of Banking Marketing,* 21(1), 5-15.
- Natarajan T. and Balasubramanian S.A. (2010), "Customer's Choice Amongst Self Service Technology (SST) Channels in Retail Banking: A Study Using Analytical Hierarchy Process (AHP)", *Journal of Internet Banking and Commerce,* vol. 15 (2).

- Saaty, T.L. (1994), "How to Make a Decision: The Analytic Hierarchy Process", *Interfaces,* Vol. 24 (6), pp. 19-43.
- Tan, M. (1998), "Plugging into the Wired World: Perspectives form Singapore", *Information, Communication and Society,* (1:3), pp. 217-245.
- Taylor, S. and Todd, P.A. (1995), "Assessing IT usage: The Role of Prior Experiences", *MIS Quarterly,* (19:3), pp. 561-570.