



A Study on the Adoption of Online Banking with reference to the Technology Acceptance Model

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ABSTRACT

The Service industry has emerged to be the backbone of social and economic development in a country. In relation to the product sector, service has a vital role contributing significantly to the GDP (Gross Domestic Product) of the economy. One of the significant players in the service industry is the banking and financial services sector. Post liberalization, banking has undergone several reforms and today banks have become more competitive with the sophisticated nature of the services it offers. The arrival of the technology-based services is one reason. One among those services is Online banking where the customer has the privilege to perform his financial transactions and banking needs online via the internet. The customer seeks to enjoy the service as he can carry out the activities just by the click of a mouse. Invariably it becomes a prudent task for the banks to frame tactics for marketing such tech-enabled services. Thus it is necessary for the banks to know those attitudinal factors that lead to adoption of online banking by customers. Several behavioral models have been devised to study adoption, the most widely accepted being Technology Acceptance Model (RAM) devised by Davis et al (1989). This study attempts to determine the various factors of adoption by youngsters using the TAM constructs namely perceived usefulness and perceived ease of use.

Keywords: Online banking, Technology Acceptance Model, Perceived Usefulness, Perceived Ease of Use.

1. INTRODUCTION

The Indian banking sector has witnessed major transformations post liberalization. This transformation led banks to be more and more competitive in nature; the competition existed and still exists not only between nationalized and private sector banks but also within them. This forced banks to give their best service to customers. Customers also has options; to choose from the different banks- if one bank does not fulfill the customers need, he immediately has the option to choose the next bank that serves him better. So it is a tough time for banks to withstand the competitive environment and fulfill the ever increasing customer needs. Among the different technology enabled services or E-banking (Electronic banking) facilities provided by banks, online banking assumes great importance. Online banking or Internet banking helps the customers to perform transactions at the ease and comfort of their home. More and more customers therefore rely on this kind of banking than retail branch banking.

Online banking is defined as system that allows individuals to perform banking activities via internet. Internet banking can be used for retail banking and business-to-business (B2B) transactions, as well as for facilitating large-dollar transfers. As said above, a large number of customers adopt internet banking

every year which is evident by the growing adoption rate of internet or online banking. This is illustrated below in Figure No.1

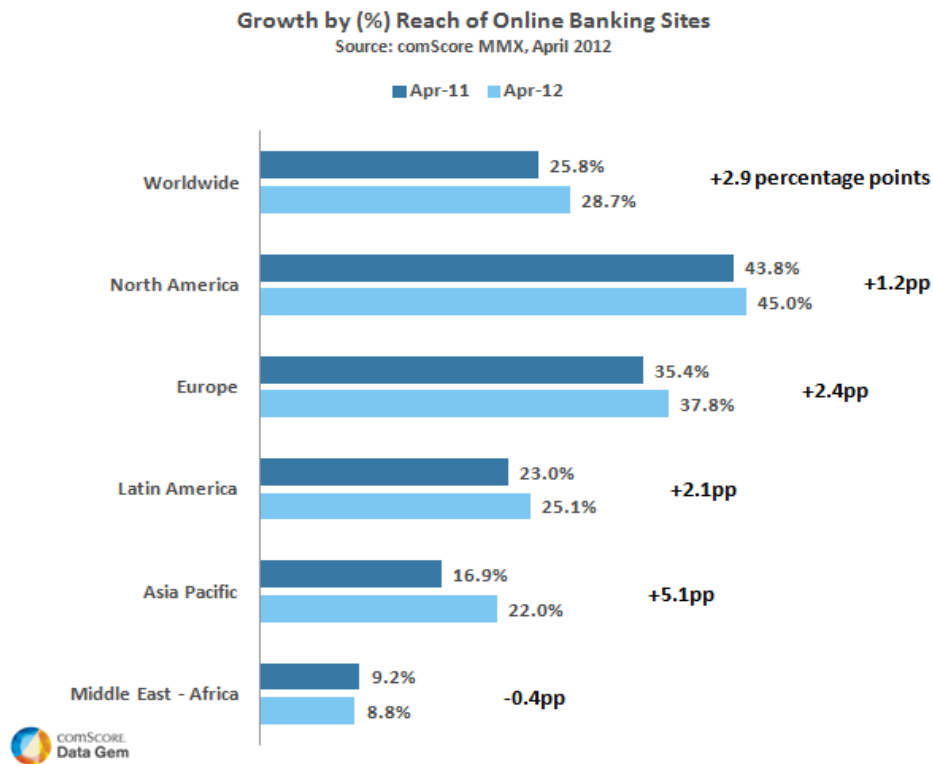


Figure.1 Showing Percentage Growth of Online Sites 2011-12

1.2 TAM Model

The **Technology Acceptance Model (TAM)** is an information systems theory that models how users come to accept and use a technology. It was developed by Fred Davis and Richard Bagozzi (Davis 1989, Bagozzi, Davis & Warshaw 1992).

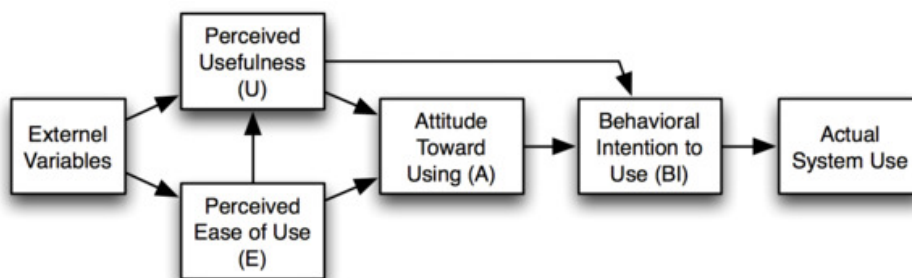


Fig.2 Technology Acceptance Model (Davis 1989, Bagozzi, Davis & Warshaw 1992)

The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

- **Perceived usefulness (PU)** - This was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance".
- **Perceived ease-of-use (PEOU)** - Davis defined this as "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989).

2. THEORETICAL FRAMEWORK

The theoretical framework for the study entitled "A study on the Adoption of Online banking by Youngsters with reference to the Technology Acceptance Model" has been developed on the basis of TAM. The constructs that has an impact on the perceived usefulness (PU) and perceived ease-of-use (PEOU) variables of TAM has been selected from prior researches on a selective basis and the framework has been developed for the study. The variable that relates itself closely to the youth's characteristics were chosen and the research model for the study had been formulated as below:

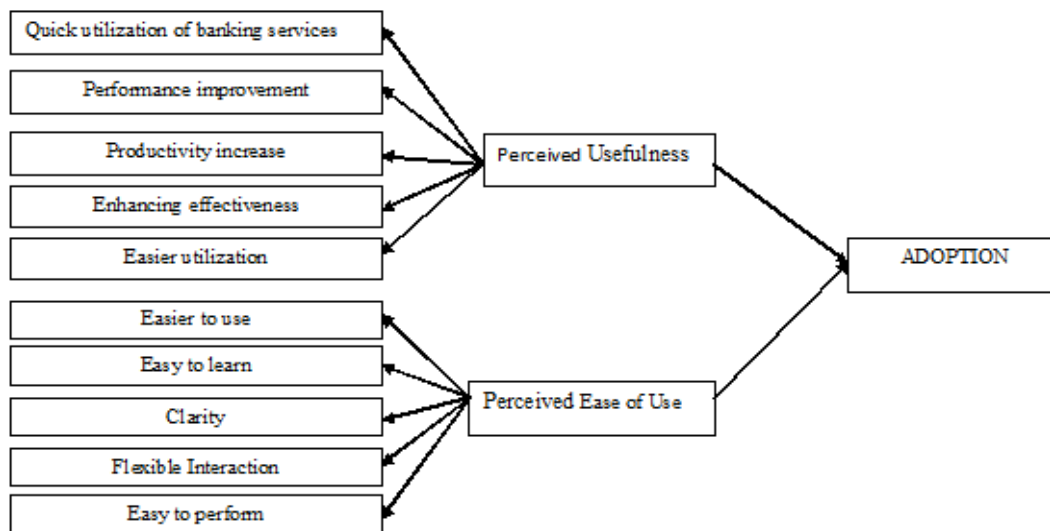


Fig.3 Theoretical Framework

2.1 Literature Review

In their paper "The effect of heterogeneous risk on the early adoption of Internet banking technologies" **Keldon Bauer and Scott E Hein (2005)** explains the influence of perceived risk of a new technology with an old technology. The paper says that when online banking came into existence in the mid 1990s, the early adoption by customers of this technology was found disappointing to most. It was also found that young consumers were early adopters of internet banking where they had high levels of risk tolerance and older customers regardless of their risk tolerances hesitate to adopt the technology for internet banking. The paper is an adoption study limited to the heterogeneous risk factors and risk tolerance levels of the customer segments such as young and older category. This paper does not extend further to study or analyze the other associated factors of adoption of online banking.

In a study by **Somkiat Mansumittrchai and Husam-Aldin N Al Malkawi(2011)**, in the "Factors Underlying the Adoption of Online Banking by Mexican Customers" prepares a conceptual framework to know the factors of adoption such as difficulty, trust, compatibility, third party concerns, human contact, reference group influence, security and PC (Personal Computer) skills. It was found from the study that most of the adopters were tech-savvy and were willing to explore the doors to internet banking. The study

also focused on non-adopters of Online banking and recorded that trust, security issues and concerns bothered this category of respondents in decision making for adoption.

Walfred M Lassar et al (2005), in the paper titled “The relationship between consumer innovativeness, personal characteristics, and online banking” explores the relationship between consumer innovativeness, self efficacy on the internet, internet attitudes, and online banking adoption, while controlling for personal characteristics. The study integrates the technology acceptance model (TAM) and adoption of innovation framework to develop predictions of online banking acceptance. The results confirm a positive relationship between internet related innovativeness and online banking, they also surprisingly show that general innovativeness is negatively related to online banking.

U Syed Aktharsha and H Anisa (2011), in their work: “A Study on mediating effects on technology Adoption in Internet banking from Customer perspective” intended to understand the preferences of the customers of Indian banks on technology-based services. According to the study, customers are very comfortable and willing to use e-banking channels and verified that technology adoption relative advantage is one of the most important mediating effects of technology awareness by customers. It also recommends two practical implications and recommendation for banks-push strategy and pull strategy. In the study, “Determination of User adoption of E-payment services”, **Dr Wen Shan Lin et al (2009)** examines the various diffusion of innovation attributes and its relationship to adoption. The adoption here refers to that of E-payment services like Web-ATM service. The data has been analyzed using Structured Equation Model (SEM) to validate the relationship among variables. Finally the study concludes by substantiating that proper efficacy and experiences on using the Web-ATM related services will actually determine the respondent’s preferences and perceived risks on adopting them. The research does not focus on banking via online though it revolves around an aspect related to cashless banking.

In the research paper titled “Customer Self-Efficacy in Technology-Based Self-Service” that came in the Journal of Service Research, **Jacqueline van Beuningen et al (2009)** states self efficacy has an important role to play in relation to the perceptions of banking services, the intention of customers to continue transactions online and their evaluation of service quality. This study was done with reference to online stock payments and not in the banking sector. It showed that many factors will help to build self efficacy in which engagement is a relatively new factor that adds to the credibility of the service.

3. RESEARCH METHODOLOGY

The research paper titled “**A study on the Adoption of Online banking with reference to the Technology Acceptance Model**” is a descriptive research. The objectives of this research are the following:-

1. To find out whether there exists a relationship between the theoretical constructs (PU and PEOU) and adoption of online banking.
2. To find out variables affecting PU and PEOU
3. To give suggestions based on the findings.

The intention of this research paper is to understand whether any relationship exists between Perceived Usefulness and Perceived Ease of Use to adoption of Online banking by youngsters. A survey instrument in the form of a questionnaire was developed through data collected from respondents.

The sample for this study is the post graduate students from an educational institute. Convenience sampling method was used. The reason for selecting students as respondents is because they are current bank customers having experience with traditional retail branch banking and most likely to be familiar with internet and hence Internet banking as well. The sample size was 100 and data collected through questionnaires distributed among students. Each questionnaire item was scored on a five-point Likert scale (1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly disagree). The limitation of this research is that the actual association between these variables to adoption has not been studied and only the evidence of relationship is researched.

4. ANALYSIS

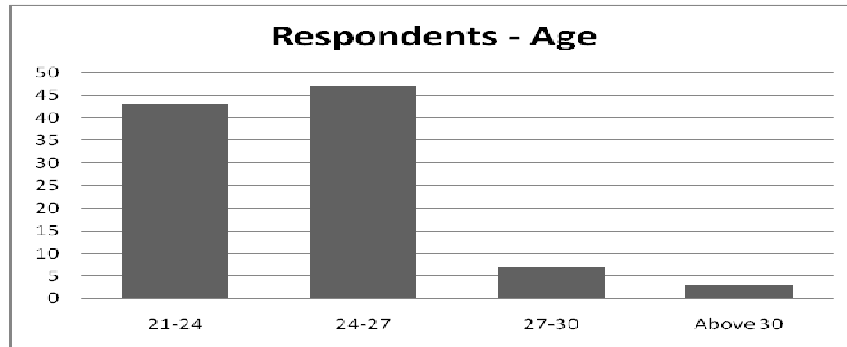


Fig. No.4

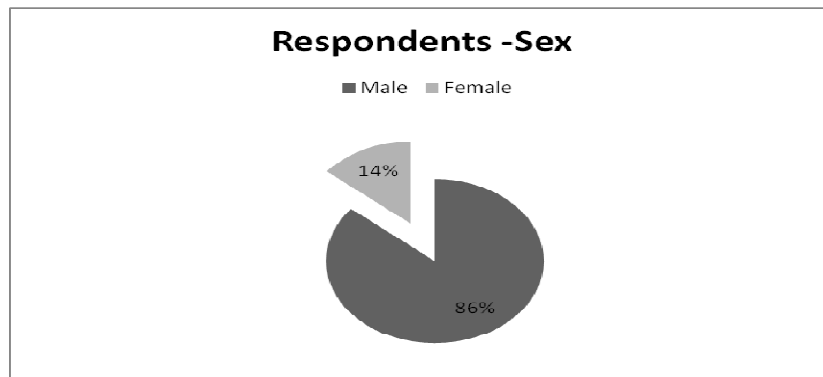


Fig No.5

The figures above show the profile of the respondents. It is clear that 86 male and 14 female respondents underwent the survey. 43 of them belonged to the age group of 21-24 years, 47 respondents belonged to 24-27 years, 7 belonged to 27-30 years category and 3 respondents were above 30 years.

Table No. 2 Correlations

		Mean PU	Overall Perceived Usefulness
Mean PU	Pearson Correlation	1	.832**
	Sig. (2-tailed)		.000
	N	100	100
Overall Percieved Usefulness	Pearson Correlation	.832**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The table shows that Perceived Usefulness (PU) is related to the five various variables as indicated in the research model. Thus it can be implied that PU is related to quick utilization of banking services, performance improvement, productivity increase, enhancing effectiveness and easier utilization.

Table No.3 Correlations

		Mean PEOU	Overall Perceived Ease of Use
	Pearson Correlation	1	.889**
Mean PEOU	Sig. (2-tailed)		.000
	N	100	100
	Pearson Correlation	.889**	1
Overall Perceived Ease of Use	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

The table above shows that Perceived Ease of Use (PEOU) is related to the five various variables as indicated in the research model. The variables are easier to use, easy to learn, clarity, flexible Interaction and easy to perform.

In the next set of tables given below, correlation has been done to know whether there is relationship between PU and PEOU to adoption. The results show that relationship exists between PU and adoption of Online banking and relationship also exists between PEOU and adoption of Online banking.

Table No.4 Correlations

		Mean PU	Mean Of Adoption
	Pearson Correlation	1	.818**
Mean PU	Sig. (2-tailed)		.000
	N	100	100
	Pearson Correlation	.818**	1
Mean of adoption	Sig. (2-tailed)	.000	
	N	100	100

5. DISCUSSION & FINDINGS

The research is an attempt to find out whether there is any relationship between Perceived Usefulness and Perceived Ease of Use to the adoption of online banking. The correlation tests conducted shows the confirmation of this relationship. The relationship between the variables such as quick utilization of banking services, performance improvement, productivity increase, enhancing effectiveness and easier utilization and PU is found to be significant. The same is the case with relationship of PEOU and its variables such as easier to use, easy to learn, clarity, flexible Interaction and easy to perform. Finally, the test has also been done to find out whether PU and PEOU have a relation to adoption which is also found to be significant.

6. CONCLUSION

The study is a minor attempt to find out the existence of relationship between theoretical constructs (Perceived Usefulness and Perceived Ease of Use) to adoption of online banking. Online banking, being an independent variable can be related and associated with several factors that influence the customer's intention to use and adopt it. Several studies show that the variables used to relate to the theoretical constructs were inevitable to the study. Hence those variables were selected. Thus correlation tests were done to prove once again that they are related as in prior researches. The research results can be further developed to conduct studies showing significant associations between adoption and other variables towards online banking.

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