

ADOPTION AND ACCEPTANCE OF INTERNET BANKING IN BURDWAN DISTRICT

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ABSTRACT

Improvements in wireless technologies and increased advance technology have led to a growing trend in Internet banking activities on a global scale. The banking industry has undergone a dramatic change, since internet penetration and the concept of internet banking. Internet banking is defined as an internet portal, through which customers can use different kinds of banking services. Internet banking has major effects on banking relationship. This work has been undertaken with an objective to study that the factors influence Internet banking adoption in Burdwan District. Hypotheses are formulated based on three factors and to determine whether the hypothesis is being supported by our research model or not. The study makes significant knowledge about perception of Internet Banking in Burdwan District, West Bengal.

KEYWORDS: *Adoption, Burdwan District, Internet Banking, Perception, Technology Acceptance Model*

INTRODUCTION

Access to finance, especially by the poor and vulnerable groups usually residing in rural areas is an essential requisite for employment, economic growth and poverty alleviation. Nowadays, banks have welcome wireless and mobile technology into their board room to offer their customers the freedom to pay bills, planning payments, review account balances, recent transfer or mini statement, review credit card balances, status on cheque, stop payment on cheque, change of pin, ordering cheque books, bill payment processing, access to loan statements, domestic fund transfer, mobile recharging and many financial products and services have become available over the internet. This has thus become an important distribution channel for a number of banks. In recent years, the internet banking has become a useful platform to easy access banking services. In many countries, internet banking has gained wide acceptance and India is no onlooker to this phenomena. Banks in India stated embracing technology in a massive way in the 90's, led in particular by the new private banks and multinational banks. The growing competitions and growing expectations led to increased awareness amongst banks on the role and importance of technology in banking, forcing banks to go in for the latest technologies so as to meet the threat of competition and retain their customer base. There are lots of benefits through adoption of Internet banking for the banks and their customers. On the whole, Internet banking increases operational efficiencies and reduces costs, besides giving a platform for offering value added services to the customer.

Our study makes significant knowledge in relation to adoption of factors affecting Internet banking in Burdwan District, West Bengal, India.

TECHNOLOGY ACCEPTANCE MODEL (TAM)

The technology acceptance model seems to be the most widely accepted model for IT innovation. The TAM is an adaptation of the theory of reason action TAR [1]. Specifically tailored for modeling user acceptance of new information technology [2] TAR suggests the social behavior is motivated by an individual's attitude towards carrying out the behavior. It posits that the actual usage of technology can be predicted by user's behavioral intention and his/her attitude towards use, which in turn are influenced by the technology's perceived ease of use and perceived usefulness. Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance their performance. Perceived ease of use (PEU) is defined as the degree to which a person believes that using a particular system would be free of physical and mental effort [1, 3]. Various other authors suggest that there are other possible factors that might affect Internet banking adoption such as perceived risk [4, 5, 6, 7]

Perceived Usefulness (PU)

PU is recognized as having a strong positive effect on Internet Banking. PU is the degree to which a person believes that using a particular system would enhance their performance [8]. PU is the extent to which a person believes that using a particular system will enhance his or her performance. The new technology is determined by the extent to which a person believes that it is cost effective in providing goods or services compared to the current method [2, 9]. Therefore, if the consumer perceives internet banking to have perceived usefulness, then the consumer is more likely to perceive internet banking as easy to use and reliable and also influence perception of internet banking.

Perceived Ease of Use (PEU)

PEU is dependent upon the frequency of using the IB services on a regular basis. Perceived ease of use is defined as the degree to which a person believes that using a particular system would be free of physical and mental effort [2, 10]. Ease of use identifies as one of the three important characteristics from the customers' perspective for adoption of innovative service [11]. This technological innovation must be easy to use to ensure customer acceptance.

Perceived Reliability (PR)

PR is one of the major influencing factors, according to Internet Banking around the establishment and use of new technologies for financial transactions is that of security and trust [12, 13]. The need for security of personal details and financial information is therefore critical to the success of IB. As a result the perception of risk involved in using Internet banking, the more likely that it will be adopted [14, 15]

DATA COLLECTION AND RESEARCH QUESTIONNAIRE

The data for this study was collected through survey conducted in Burdwan district, West Bengal. A total of 250 questionnaires were distributed through mail and Google drive to the people inhabiting in the Burdwan district regarding their usage of Internet Banking (IB) services, of which only 130 respondents provided their response to this survey with a 52 percent rate of response. The questionnaire consisted of two sections, in the first section it is concerned with the personal details of the respondents, whereas in the second section it consisted of only Likert five point scale (1= strongly disagree, SD; 2 = disagree, D; 3= neutral, N; 4= agree, A; 5= strongly agree, SA) regarding their perception with the IB services. Table (1) shows the questions used to measure the internet banking adoption.

Table 1: Formulated Questionnaire

Statements	SA	A	N	D	SD
1. Internet Banking enables people to conduct financial transactions more quickly.					
2. Internet banking makes it easier to conduct banking transactions.					
3. Internet banking provides convenience since it is available 24 hours, 7 days of the week.					
4. Internet Banking saves time compared to traditional banking.					
5. Learning to use internet banking is easy.					
6. Using Internet Banking is as safe as using other modes of banking.					
7. Internet banking is reliable and can be used for my banking transactions.					
8. I am aware of the services that could be done using internet banking.					
9. I am aware of the security and privacy issues of Internet Banking.					

METHODOLOGY

In this research, we have utilized Microsoft Excel and Microsoft Word along with SPSS (Statistical Package for Social Sciences) version 12 was used as the analysis tool to determine the results for this research study. This SPSS software helped us to determine the impact of all the factors on adoption of internet banking and also to understand the relationship between the various factors in the adoption of internet banking.

Hypotheses Development

This study has postulated to test the following hypotheses:

- H1. Perception level of consumers on IB has a strong influence over PU.
- H2. Perception level of consumers on IB has a strong influence over PEU.
- H3. Perception level of consumers on IB has a strong influence over PR.
- H4. PU has a strong impact on PEU.
- H5. PU has a strong impact on PR.
- H6. PU has a strong impact on adoption of IB.
- H7. PEU has a significant relation over adoption of IB.
- H8. PR has a strong impact on adoption of IB.

Hypotheses Testing

In this study we have performed t test to determine whether the hypothesis formulated beforehand is being supported by our research model or not. The estimated t values are provided along with the t critical value as well as the p value for each of the hypothesis. The results represent the confirmation of the model as shown in Figure 1. The results of the hypothesis testing are shown in Table 2. The relationship between perception and perceived usefulness was found to be statistically significant, thereby supporting hypothesis 1 (H1) as $t > t_{critical}$ ($t=45.650$, $t_{critical} = 1.975$) or $p < 0.05$. The relationship between perception and perceived ease of use was found to be statistically significant, thereby supporting hypothesis 2 (H2) as $t > t_{critical}$ ($t=47.528$, $t_{critical}=1.975$) or $p < 0.05$. The relationship between perception and perceived reliability was found to be statistically significant, thereby supporting hypothesis 3 (H3) as $t > t_{critical}$ ($t=48.196$,

$t_{critical}=1.973$) or $p < 0.05$. The relationship between perceived usefulness and perceived ease of use was found to be statistically significant, thereby supporting hypothesis 4 (H4) as $t > t_{critical}$ ($t=48.196$, $t_{critical}=1.973$) or $p < 0.05$. The relationship between perceived usefulness and perceived reliability was found to be statistically significant, thereby supporting hypothesis 5 (H5) as $t > t_{critical}$ ($t=4.0605$, $t_{critical}=1.9694$) or $p < 0.05$. Similarly, the relationship between perceived usefulness and adoption of IB was found to be statistically significant, thereby supporting hypothesis 6 (H6) as $t > t_{critical}$ ($t=59.69$, $t_{critical}=1.975$) or $p < 0.05$. Also, there is a significant relationship between perceived ease of use and adoption of IB and thereby supporting hypothesis 7 (H7) statistically as $t > t_{critical}$ ($t=53.670$, $t_{critical}=1.974$) or $p < 0.05$. Also, we found significant relationship between perceived reliability and adoption of IB and supporting hypothesis 8 (H8) statistically as $t > t_{critical}$ ($t=39.258$, $t_{critical}=1.973$) or $p < 0.05$. Hence, the entire hypotheses is supported.

Table 2: Result of Hypotheses Tests

Hypothesis	Relationship		Means		Variance		t-statistics	t Critical two tail value	Remarks
H1	Perception	PU	37.086614 17	13.393700 79	30.540057 49	3.6691663 54	45.650834 08	1.975287 508	Supported
H2	Perception	PEU	37.086614 17	12.417322 83	30.540057 49	3.6736657 92	47.528965 88	1.975287 508	Supported
H3	Perception	PR	37.086614 17	11.275590 55	30.540057 49	5.8837645 29	48.196370 15	1.973771 337	Supported
H4	PU	PEU	13.393700 79	12.417322 83	3.6691663 54	3.6736657 92	4.0605795 62	1.969422 365	Supported
H5	PU	PR	13.393700 79	11.275590 55	3.6691663 54	5.8837645 29	7.7229300 58	1.969939 406	Supported
H6	PU	Adoption of IB	13.393700 79	2.7716535 43	3.6691663 54	0.3522059 74	59.692936 88	1.975905 331	Supported
H7	PEU	Adoption of IB	12.417322 83	2.5354330 71	3.6736657 92	0.6316710 41	53.670828 33	1.974185 191	Supported
H8	PR	Adoption of IB	11.275590 55	2.0314960 63	5.8837645 29	1.1577302 84	39.258509 28	1.973691 44	Supported

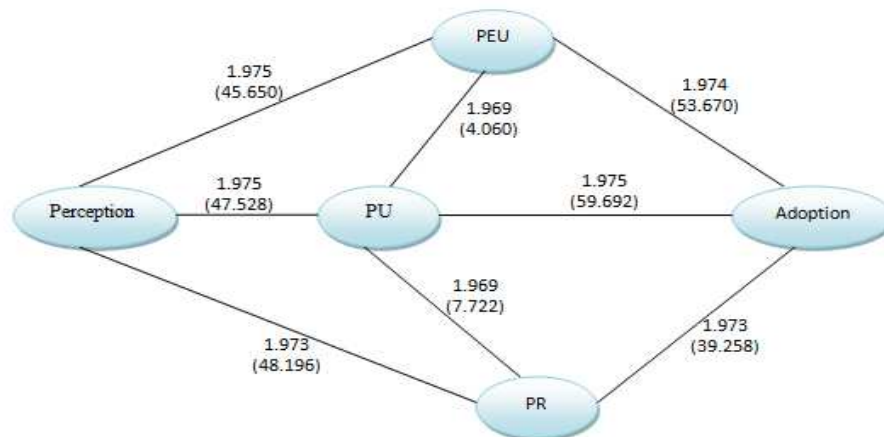


Figure 1: Hypotheses Testing Model

The r square values and standard error are 0.966 and 1.02 respectively, shown in Table 2. Perceived ease of use and perceived usefulness are both influenced by perception to some extent. All relationships are positive showing that the relationship exists. Perception influences perceived usefulness to a large extent, while perceived ease of use and perceived reliability has the least influence on internet banking adoption in Burdwan District. Table 3 shows the t -test results. In sum, all hypotheses have been proved, in that perception, perceived usefulness, perceived ease of use, perceived reliability clearly have a positive effect on the use of internet banking adoption.

Table 2: Regression Analysis and Standard Error

Regression Statistics								
Multiple R	0.982855							
R Square	0.966005							
Adjusted R Square	0.965733							
Standard Error	1.022998							
Observations	127							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	3717.232	3717.232	3551.976	1.18E-93			
Residual	125	130.8156	1.046525					
Total	126	3848.047						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	5.261001	0.541661	9.712712	5.87E-17	4.188986	6.333016	4.188986	6.333016
X Variable 1	0.79564	0.01335	59.59845	1.18E-93	0.769219	0.822062	0.769219	0.822062

Table 3: t- Test Results

t-Test: Two-Sample Assuming Unequal Variances			
		Perception	Adoption
Mean		40	37.08661
Variance		46.60317	30.54006
Observations		127	127
Hypothesized Mean Difference		0	
df		242	
t Stat		3.7381	
P(T<=t) one-tail		0.000116	
t Critical one-tail		1.651175	
P(T<=t) two-tail		0.000231	
t Critical two-tail		1.969815	

LIMITATION AND FUTURE RESEARCH

The result of this study shows that PU, PEU and PR are the important factors of internet banking adoption. The study has a few important limitations that affect generalizations of the findings. The relatively small size of the sample limits generalization of the outcome of this study. This study was conducted to explore the factors influencing intention to adopt internet banking services. Further study can enhance the hypotheses research model and include the factors of re-intention or continue using new technology. In this study, the respondents were only selected from Burdwan district West Bengal, India. However, it would be interesting to test this research model in other states in India and compare the result with this study. These limitations pave the way for future studies. Further more, another interesting avenue for further research could be a detailed study on Internet banking usage including respondents from different states in India.

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