

# Factors Influencing the Adoption of Internet Banking in Selected Banks of Ethiopia — a Study

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*Abstract* — The breakthrough in information technology occasioned by the introduction of the telecommunications networks and the computer system persist to shape the way banks and their corporate relationships are structured worldwide. The pressure of globalization, consolidation, deregulation and rapidly changing technology made it necessary for banks to re-examine their service delivery systems to suitably position them within this dynamism of information technology.

This research paper is an attempt to examine the factors that play vital role in adoption of internet banking in different banks of Ethiopia. In this research commonly applied empirically supported models of information technology are used in addition to variable Perceived security. This research paper is an attempt to find all the factors which are causes in adoption of internet banking in selected banks of Ethiopia, more specifically in the research area.

*Keywords:* Internet banking, Technology acceptance model, Commercial banks.

## I. INTRODUCTION

SERVICE industry in the world is changing via new technology leading to the way customers are served in many service organizations. Geographical distance has lost its meaning and service availability, convenience, and speed of service distribution determine competitive advantage for organizations, such as banks. To compete in the complex environment, they are forced to deliver the newest and most attractive services that customers are demanding. Many banks in the world offer electronic services which release them from limitations of time and place, providing round the clock services to customers.

Ethiopia has not yet enacted legislation that deals with E-commerce concerns including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright restricting the use of encryption technologies. Low literacy rate is a serious impediment for the adoption of E-banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-banking, they should not only know how to read and write but also possess basic ICT literacy.

E-banking, is a system that enables banks to offer their customers access to their accounts to transact business and obtain information via electronic communication channels such as Automated Teller Machines (ATMs), telephone-banking, home banking, TV based banking (private dialup) and internet banking is becoming a common practice across the developed world [1].

This study focuses on one component of E-banking that is Internet banking. Internet banking is different from Electronic Banking (e-banking) in that the latter is a higher level activity that encompasses not only internet banking, but also Telephone Banking, ATM, TV-banking and other electronic payment systems that are not operated through the Internet.

Currently in Ethiopia Internet banking service is adopted in three commercial banks in Ethiopia, namely; Zemen Bank, United Bank and Commercial Bank of Ethiopia, though the internet banking service in the country is still at infant stage.

The major internet banking activities provided by those banks are: sending money to individuals or companies, keeping track of their account, knowing loan status, transferring money from one of your numerous accounts to another of your account and transferring money from your account to another bank customer account.

*Objectives Of The Study:* The present study is based up on the following objectives in relation to the factors which influence directly or indirectly in adoption of internet banking by the selected banks of Ethiopia.

- To identify the impact of usefulness and ease to use on attitudes of individuals towards the use of internet banking service.
- To investigate the direct and indirect effect of ease of use towards the adoption of internet banking.
- To investigate the impact of security and usefulness on the behavioral intention towards the usage of internet banking in selected commercial banks of Ethiopia.
- To examine the effect of behavioral intention to use on actual usage of internet banking service.

*Significance of the Study:* The finding of this study helps banking institutions to be familiar with those factors that both adversely or favorably affect the adoption of Internet banking solution and take corrective measure to expand internet banking service.

In addition, the study is useful for policy makers to make well-versed decisions by indicating what has to be considered while different rules are set regarding to adoptions of internet banking solution, and also the experience in making the study will enhance and enrich the knowledge of the researcher.

This study will also encourage academician and other interested researchers to carry out more extensive studies in this area.

*Scope of the Study :* The scope of the study is limited to users of internet banking in Adama and Addis Ababa. Addis Ababa is one of the largest and commercial center in Ethiopia which ensures a wide spread of potential respondents to the study and the Adama is a city where enormous business activities are carried out by using available modern banking services

*Limitation of the Study:* The sample in the present study is limited to customers of Addis Ababa and Adama; different results are possible from customers in other Ethiopian cities.

The strategy of data collection also represents a limitation. The use of customer intercept surveys might lead to omission of some customers who do not visit physical bank branches within the time frame of the study.

*Hypothesis of the Study:* The present study is based on the following hypothesis, which will be base to the study and findings of the study they are:

- H1: Perceived ease of use positively influences the perceived usefulness of the use of internet
- H2: Perceived ease of use positively influences the attitude towards the use of internet banking
- H3: Perceived usefulness positively influences the intention to use internet banking
- H4: Perceived usefulness positively influences the attitude towards the use of internet banking.
- H5: Attitude positively influences the intention to use internet-banking
- H6: Perceived behavioral intention will have a positive effect on the frequency of Internet banking use.
- H7: Perceived Security has positive relationship with customer’s Intention to use.

**III. RESEARCH METHODOLOGY**

*Source of Data and Collection Methods:* This study has been conducted by using primary sources of data through structured

questioners from internet banking servicer users of selected commercial banks in Addis Ababa and Adama. And also secondary data wherever necessary for the study.

*Sampling Design and Sample Size :* Three commercial banks that adopted internet banking solution were selected for the study i.e. one state owned bank Commercial bank of Ethiopia and two private banks Zemen bank and united bank .

According to survey total internet banking users of selected banks of as on December, 2013, are 14,253.

Commercial Bank of Ethiopia- 1,035,  
Zemen bank - 3,218  
United bank -9,990.

Following formula will be used to calculate the sample size.

At 95% confidence level and P=0.5 are assumed for Equation.  
 $N = N/[1 + N(e)^2]$

where  
*n* is the sample size,  
*N* is the population size, and  
*e* is the level of precision.

Therefore, by considering the above formula, the researcher selects a sample of 400 respondents from the total population to make sound conclusion about the population.

Those respondents have been selected proportionately from each selected commercial banks and simple random sampling technique has been employed in order to select respondents of each selected bank.

Commercial banks which started internet banking solution and customers registered for internet banking service after December 2013 were not considered.

**IV. DATA ANALYSIS AND INTEREPRETATION**  
Descriptive Statistic analysis

TABLE 1 -- BANK WHICH USES IB SERVICES

Banks	Frequency	%
Zemen Bank S.Co.	88	22.6
United Bank S.Co	273	70.2
Commercial bank of Ethiopia	28	7.2
Total	389	100.0

Source: Field Survey

It can be observed from Table 1 and Figure 1 that, proportion of internet banking service customers of commercial banks. 26.0%

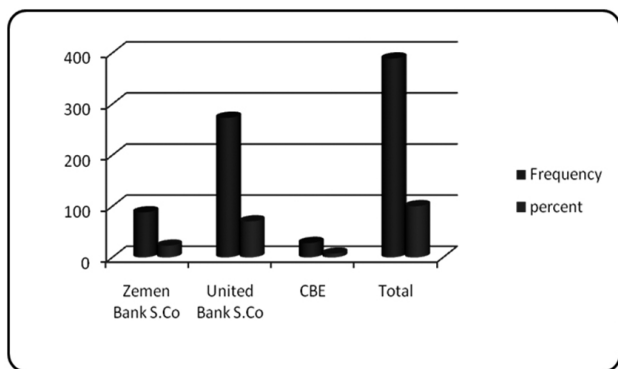


Figure 1. Bank using IB services.

Source: Field Survey

of the respondents are of Zemen Bank, 70.2% of United Bank and 7.2% of the Commercial Bank of Ethiopia. Therefore, a great number of internet banking users belong to United Bank. This indicates that state owned bank is still behind private banks in terms of internet banking.

TABLE 2 -- INTERNET BANKING SERVICE USAGE BASED ON PERIOD OF USAGE

IB service usage years	Frequency	Percent
Less than one year	113	29.0
1year - >3 year	218	56.0
3 years – 6 years	57	14.7
longer than 6 years	1	.3
Total	389	100.0

Source: Field Survey)

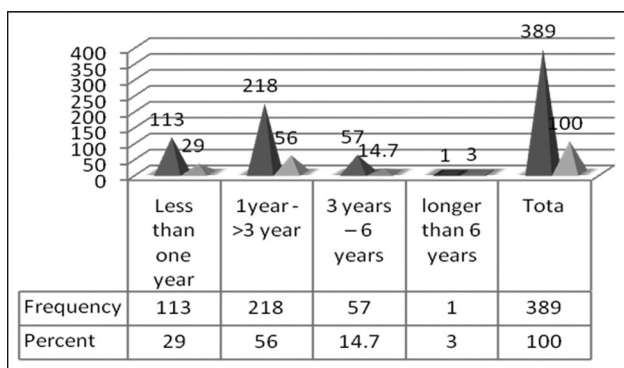


Figure 2. Internet Banking Service based on period of usage.

Source: Field Survey

It can be observed from Table 2 and Figure 2 that, there is a big variation in terms of usage of internet banking based on usage period. More percentage is found in 1-3 years of usage *i.e.* 56% this fact indicates that the customers are slowly moving towards internet banking as banks moving to adopt the internet banking system. This fact may be due to various reasons among all country’s economy and infrastructure situations.

TABLE 3 -- SUMMARY OF DESCRIPTIVE STATISTICS

Variables	Frequency	%	Mean	Max.	Min.	SD
Actual usage			1.81	4	1	.933
Up to 10 times	177	45.5				
11 to 20 times	145	37.3				
21-30 times	31	8.0				
Over 30times	36	9.3				
Total	389	100.0				
Perceived Ease of Use			4.55	5	3	.626
Neutral	28	7.2				
Agree	119	30.6				
Strongly agree	242	62.2				
Total	389	100.0				
Perceived usefulness			4.80	5	4	.397
Agree	76	19.5				
Strongly agree	313	80.5				
Total	389	100.0				
Attitude			4.49	5	1	.918
Strongly disagree	11	2.8				
Disagree	16	4.1				
Neutral	1	.3				
Agree	103	26.5				
Strongly agree	258	66.3				
Total	389	100.0				
Intention to use			4.49	5	1	.918
Strongly disagree	9	2.3				
Disagree	9	2.3				
Neutral	9	2.3				
Agree	137	35.2				
Strongly agree	225	57.8				
Total	389	100.0				
Perceived Security			4.38	5	1	.749
Strongly disagree	1	.3				
Disagree	3	.8				
Neutral	48	12.3				
Agree	132	33.9				
Strongly agree	205	52.7				
Total	389	100.0				

(Source: Field Survey)

*Descriptive statistic for dependent variables:* Actual use of Internet banking was measured with a 5-point Likert scale to record agreement with overall frequency of use in prior 30

days, an absolute estimate of use in the same period and the mean value of actual usage of internet banking service is 1.81.

This indicates that the 45.5% respondents responded that they used less than 10 times within last 30days where 37.76% respondents responded that they used up to 11-20 times with in last 30days.

*Descriptive statistic for in dependant variables:* The study also attempted to know how much usage of internet banking is easy for the customers or for respondents and the mean value for perceived ease of use is 4.55. This indicates that 30.6% respondents replied that they agree with ease of using of internet banking and 62.2 % of respondents replied that they strongly agree with ease usage of internet banking. From descriptive statics table, it can be seen that most of the respondents strongly agreed that internet baking is easily usable, learnable, flexible to interact with it, and it does not need complicated knowledge. From 389 respondents only 28(7.2%) of them did not give any responses on questions related with perceived ease of use of internet banking.

Further, it was attempted to assess the usefulness of internet banking in the life of respondents. From Table 3, it can be observed that the mean value for perceived usefulness is 4.8, indicating that 80.46% strongly agree with usefulness of internet banking. Besides, 19.5% agreed with the usefulness of internet banking. Most of the respondents strongly agreed with usefulness of internet baking and they replied that internet baking is time saver and improves the performance of utilizing banking services.

In addition, the study attempted to assess the attitude of respondents towards internet banking and the mean value of attitude is 4.9. This indicate that 66.32 % of respondent strongly agreed that using of internet banking creates attitudinal change: they responded, internet banking transaction is a good idea, pleasant, and the wise idea.

Meanwhile, the study attempted to assess what is intention of the respondents to use internet banking. Table 3 shows that the mean value of intention to use internet banking is 4.44, indicating that out of 389 respondents, 225 (57.8%) and 137 (35.2%) strongly agree and agree respectively with future using of Internet Banking, regular base using of Internet Banking and they recommended others so as to use internet banking .

Finally, the study investigated that security of internet banking and the mean value of perceived security is 4.38, revealing that 205 (52.7%) and 132 (33.9%) of them strongly agree and agree with security of internet banking.

Therefore, it can be observed that, the most of the respondents strongly agree with the security of internet banking. This means

that using of internet banking is highly secured; it uses to transmit sensitive information and provides mental satisfaction during transmitting personal or sensitive information.

*Econometric Analysis:* (Diagnostic test) to show how the estimation technique used for this study is appropriate and the hypothesis tests regarding the coefficient estimates are correctly made, a diagnostic test was conducted by using SPSS software.

Goodness of fit of tests:

Goodness fit test through  $R^2$

To examine the factors influencing the adoption of internet banking, the researcher included five explanatory variables (perceived ease of use, perceived usefulness, attitude, intention to use and perceived security) and one dependent variable (Actual usage).

The goodness of fit of the model can be measured by the square of the correlation coefficient also called  $R^2$ . The most common goodness of fit statistic is  $R^2$ . That  $R^2$  is the square of the correlation between the value of the dependent variable and fitted values from the model. This square of the correlation coefficient ( $R^2$ ) is always lying between 0 and 1. If this correlation is high (close to one), the model fits the data well, while if the correlation is low (close to zero), and the model is not providing a good fit to the data.

Consequently, as it is shown on table 4.4 the value of adjusted  $R^2$  is 0.559, indicating that the independent variables in the model are explaining 56% of the variations on the dependent variables. It can be seen that the model of the study is providing a good fit to the data.

Goodness fitness through ANOVA.

The significance value of F-statistic or regression model in general, from the table shows 0.000. Thus, the statistical significance of the regression model that is used for the study is less than 0.05. (i.e.  $P < 0.000$ ). It is indicating that, over all, the model used for the study is significantly good enough in explaining the variation on the dependent variable.

*Test of Multi Collinearity:* Multi Collinearity is defined as the extent to which a variable can be explained by other variables in the analysis or an explanatory variable demonstrates near linear dependence with another explanatory variable.

The effects of multi-collinearity make it difficult to determine the contribution of each independent variable as the effects of independent variables are mixed or confounding. Problems of multi-collinearity among predictors can result in an overestimation of the standard deviation of the regression coefficients. Tolerance above 0 1, Variance Inflation Factor (VIF) value below 10 indicates no major multi-collinearity

TABLE 4 -- GOODNESS FIT TEST THROUGH R<sup>2</sup>

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Durbin-Watson
					R Square Change	F Change	Sig. F Change	
1	.751 <sup>a</sup>	.564	.559	.249	..559	.907	.000	1.965

a. Predictors: (Constant), Perceived Security, Attitude, Perceived Ease of Use, Perceived usefulness, Intention to use

b. Dependent Variable: Actual usage

(Source: Field survey and SPSS)

TABLE 5 -- GOODNESS FITNESS THROUGH ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.956	5	.791	.907	.000 <sup>b</sup>
	Residual	333.967	386	.872		
	Total	337.923	389			

a. Dependent Variable: Actual usage

b. Predictors: (Constant), Perceived Security, Attitude, Perceived Ease of Use, Perceived usefulness, Intention to use

TABLE 6 -- SUMMARY OF REGRESSION ANALYSIS

Hypothesis	Dependent variable	Independent variable	$\beta$	t-value	p-value	Collinearity Statistics	
						Tolerance	VIF
H1	Attitude	Perceived ease of use	0.379	5.725	0.000	1.000	1.000
H2	Perceive usefulness	Perceived ease of use	0.675	10.611	0.000	1.000	1.000
H3	Intention to use	Perceive usefulness	0.408	6.764	0.000	1.000	1.000
H4	Attitude	Perceive usefulness	0.392	6.359	0.000	1.000	1.000
H5	Intention to use	Attitude	0.788	25.138	0.000	1.000	1.000
H6	Actual usage	Intention to use	0.387	0.227	0.060	1.000	1.000
H7	Intention to use	Perceived security	-0.011	-1.218	0.081	1.000	1.000

issues. It can be observed that, the Tolerance and VIF values at both cases are 1.00 of individual output. It can be concluded that there is no problem of multi-collinearity in this study.

In addition to this the presence of multicollinearity can also be tested using the correlation matrix. The result of the correlation matrix if, not greater than the maximum index of 0.80 Thong (1999). Hence in the study the correlation of the variables has a maximum figure of 0.787, qualifying no multi Collinearity.

*Test of autocorrelation:* The test for autocorrelation was made by using Durbin and Watson (1951). Durbin--Watson (DW) is a test for first order autocorrelation i.e. it tests only for a relationship between an error and its immediately previous value. DW is approximately equals to  $2(1 - \hat{\rho})$ , where  $\hat{\rho}$  is the estimated correlation coefficient between the error term and its first order lag (Brooks 2008). There for at this study the calculated DW is 1.965 and this is nearer to 2, definitely has no auto correlation problem.

*Test of normality:* Normality test was performed by using a histogram and plotting the normal probability plot (p-p plot). If the histogram appears to at least resemble a bell shape curve and all the residuals were located along the diagonal line of p-p plot, it was assumed that the normality requirement has been met.

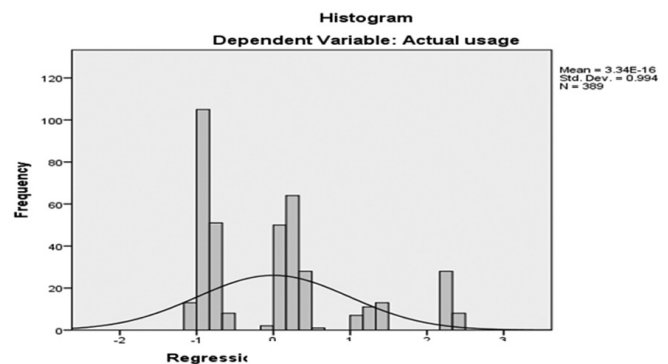


Figure 3: Histogram

Source: Out of SPSS, 2014



TABLE 7 -- PEARSON'S CORRELATION COEFFICIENTS OF THE STUDY VARIABLES

Variables		Correlations					
		Actual usage	Perceived Ease of Use	Perceived usefulness	Attitude	Intention to use	Perceived Security
Actual usage	Pearson Correlation	1	.296*	.125**	.025	.112	-.090
	Sig. (1-tailed)		.030	.001	.209	.061	.006
	N		389	389	389	389	389
Perceived Ease of Use	Pearson Correlation		1	.475**	.281**	.200**	.047
	Sig. (1-tailed)			.000	.000	.000	.177
	N			389	389	389	389
Perceived usefulness	Pearson Correlation			1	.307**	.188**	.069
	Sig. (1-tailed)				.000	.000	.088
	N				388	389	389
Attitude	Pearson Correlation				1	.787**	.010
	Sig. (1-tailed)					.000	.423
	N					389	389
Intention to use	Pearson Correlation					1	.049
	Sig. (1-tailed)						.169
	N						389
Perceived Security	Pearson Correlation						1
	Sig. (1-tailed)						
	N						389

\* Correlation is significant at the 0.05 level (1-tailed).

\*\* Correlation is significant at the 0.01 level (1-tailed).

Source: SPSS output

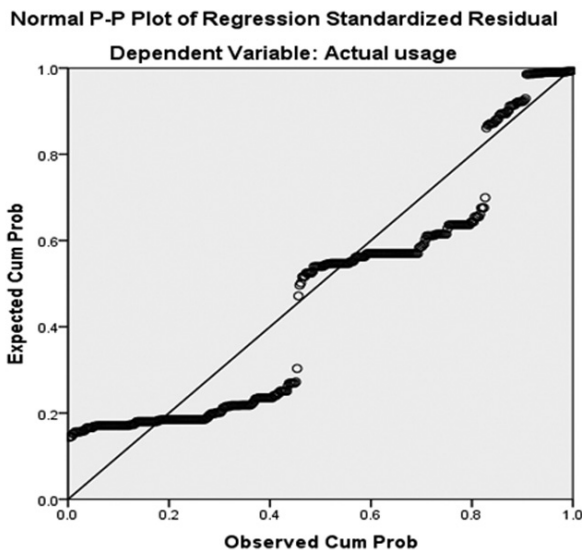


Figure 4. Normal p.p plot  
Source: Field survey and SPSS

Therefore, in this study the data are normally distributed. It can be concluded that, no problem of normality. In fact the dotted on the plot line seems near away from the line passing through the origin, but this is due to large number of observation.

*Reliability of Measurement:* Cronbach’s alpha test showed an acceptable degree of internal consistency in the scales and groups we considered, being in all the cases over the 0.7. As indicated in the table, the test result is between 0.702 and 0.894 i.e. Cronbach’s alpha of Perceived ease of use (PEU) is 0.793, 0.888 for Perceived usefulness (PU), 0.723 for Attitude (ATT), 0.894 for Intention to use (ITU), and Cronbach’s alpha of Perceived Security is 0.702. Therefore, based on the test, the results for the items are reliable and acceptable.

*4.2.3 Model Specification:* To test the hypotheses formulated a series of simple linear regression analyses was conducted to calculate direct and indirect path coefficients. Simple linear regression is a useful statistical method for exploring the relationship between dependent and independent variables and can be described by the following equation:  $Y = a + bx$

TABLE 9 -- SUMMARY OF RELIABILITY TEST RESULT

Category (Item)	Number of Item in the category	Cronbach's Alpha
Perceived ease of use (PEU)	5	0.793
Perceived usefulness (PU)	6	0.888
Attitude (ATT)	4	0.723
Intention to use (ITU)	4	0.894
Perceived Security	4	0.702

Source: SPSS

where “x” and “y” are classed as independent and dependent variables and “b” is the slope of the line and “a” is the intercept *i.e.* where the line cuts the y-axis.

The full regression model for determinants of actual usage of internet banking is, given as follows:

$$IBAU = \alpha + \beta_1PEOU + \beta_2PU + \beta_3ATT + \beta_4ITU + \beta_5PS + \varepsilon$$

where:

- AU Actual usage of internet banking,
- PEOU perceived ease of use,
- PU perceived usefulness,
- ATT Attitude of customers,
- ITU Intention to use,
- PS perceived Security and
- $\varepsilon$  is the error term for any missing variable, assumed to distribute normally with zero mean and  $\sigma$  standard deviation and is independent of the error terms associated with all other Observations.
- $\alpha$  the intercept value of the regression surface.

*Hypotheses testing and interpretation of results:* Hypotheses are considered supported when path coefficients are significant at the 0.05 level. The path coefficients were calculated using simple linear regression technique for the following:

*Perceived ease of use and Attitude:* Hypothesis H2, that Perceived ease of use positively influences the attitude towards the use of internet banking, was supported ( $\beta = 0.379$ ,  $t = 5.725$  and  $p < .001$ ). This result is consistent with the findings of prior studies that used either TAM model (Wang et al. 2003). This suggests that if bank customers perceive an Internet banking system is easy to use, they might adopt that system or use it in preference to other Internet banking systems perceived as hard to use and statistically significant at 1%.

*Perceived ease of use and perceived usefulness:* Hypothesis H1, that Perceived ease of use positively influences the perceived usefulness of the use of internet banking was supported ( $\beta = 0.675$ ,  $t = 10.611$  and  $p < .001$ ). It is consistent with findings of prior studies. The path coefficient values for perceived

ease of use to perceived usefulness was higher than values for perceived ease of use to attitudes towards the use of internet banking, which indicates that although the direct effects of perceived ease of use on to users attitude remain important over the time but indirect through perceived usefulness will be more weighted by the existing users as their experience with Internet banking system increases.

Both the hypotheses H1 and H2 thus support argument that “perceived ease of use may actually be an informal predecessor to perceived usefulness, as opposed to a parallel, direct determinant of system usage and 1% significant level.

*Perceived Usefulness and Intention:* Hypothesis H3, that Perceived usefulness positively influences behavioral intention to use internet banking, was supported ( $\beta = 0.408$ ,  $t = 6.764$  and  $p < .001$ ). The result is expected and consistent with prior studies that used TAM in Internet or mobile banking context. This suggests that if banks customers perceive Internet banking to be a useful to carry out financial transactions than traditional branch banking, they will adopt or use the services, and at 1% statistically significant.

*Perceived usefulness and attitude for internet banking services:* The hypothesis H4, that Perceived usefulness positively influences the attitude towards the use of internet-banking, was supported ( $\beta = 0.392$ ,  $t = 6.285$  and  $p < .001$ ), which was expected since most of the studies that uses and have found perceived usefulness is one of the key factor that influence attitude adoption or use of Internet banking services Chau (2000) and Pikkarainen et al. (2004) This suggests that if bank customers perceive that Internet banking has a useful over branch banking in accessing accounts from any location and at any time, and provides greater control and flexibility in managing their accounts, they may adopt it and use it, and 1% significant level.

*Attitude and intention to use internet banking services:* The support ( $\beta = 0.788$ ,  $t = 25.138$  and  $P < .001$ ) for hypothesis H5 that Attitude positively influences the intention to use internet banking the findings of the result showed that Internet banking services in Ethiopia fitted with the hypothesis and the technological acceptance model.

*Intention to use and Actual usage of internet banking services:* Actual usage was measured as the number of times in a month user used Internet banking services. The hypothesis H6 that, Perceived behavioral intention will have a positive effect on the frequency of Internet banking usage is not supported ( $\beta = 0.387$ ,  $t = 0.227$  and  $p > .001$ ) and the result conflicts with findings of prior study.

*Perceived security and intention to use internet banking service:* There was a weak and negative relationship between perceived

TABLE 10 -- SUMMARY REGRESSION ANALYSIS

Hypothesis	Dependent variable	Independent variable	B	t-value	p-value
H1	Perceive usefulness	Perceived ease of use	0.675	10.611	0.000
H2	Attitude	Perceived ease of use	0.379	5.725	0.000
H3	Intention to use	Perceive usefulness	0.408	6.764	0.000
H4	Attitude	Perceive usefulness	0.392	6.359	0.000
H5	Intention to use	Attitude	0.788	25.138	0.000
H6	Actual usage	Intention to use	0.387	0.227	0.060
H7	Intention to use	Perceived security	-0.011	-1.218	0.081

security and intention to use Internet banking. Consequently, hypothesis H7, that Perceived Security has positive relationship with customer’s Intention to use internet banking, was not supported ( $\beta = -0.011$ ,  $t = -1.218$  and  $p > .001$ ). This conflicts with the findings of prior studies Chan and Lu (2004) and Pavlou (2001). Perceived security associated with Internet banking have been found major obstacle to Internet banking adoptions in many countries across the world. One explanation for the deviation from could be that respondents did not perceive security associated with Internet banking system, and in significant at 5% and 1% significant level.

V. FINDINGS

Findings of the Study: Based upon the above discussion and findings following recommendations are given:

- The result of the study was found to influence perceived ease of use either directly or indirectly through its effects on attitude or perceived usefulness.
- The perceived ease of use was found to affect directly attitudes towards adoption of internet banking significantly, which confirms the importance of the role of ease of use variable that reflects users’ concern of effortlessness of the Internet banking environment and confirms that difficulty of use can discourage attitude. Therefore, banks adopt as easy as possible adopting in internet banking services.
- Perceived ease of use exhibited a significant indirect effect on attitudes towards adoption of internet banking through perceived usefulness. This suggests that the easier Internet banking is to use, the greater will be a user’s feeling of determination and which in turn might motivate user to explore features and benefits of service and thereby increase perceived system usefulness. Therefore banks, should adopt internet banking that is easy to use and more useful.
- The results of regression analysis indicated that perceived usefulness was found to be the most significantly related factor affecting intention. This confirms the importance of perceived usefulness in explaining adoption or use of a new technology.
- If Internet banking is to be accepted by the users, they should perceive it to be useful, ‘quicker and easier way of carrying

out internet banking service than traditional branch banking system.

- It was found that difficulty of use can discourage intention to adopt or use of a useful system but no amount of ease of use can compensate for a system that is not found useful by users. Therefore commercial banks of Ethiopia must not over stress ease of use at the expense of overlooking the usefulness of Internet banking.
- The study exhibited that, failed to support for impact of intention to use suggests that respondents viewed it as an insignificant factor that could motivate their actual usage of Internet banking. Therefore the issue of usage construct treated as less critical by respondents.
- The security issues viewed it as an insignificant. In Ethiopia could be that, respondents did not perceive security issues associated with Internet banking services since security violation crises have not been publicly reported till now.
- Another possible factor could be that the measures of security used for this research might not suitable for the Internet banking context, although they were adopted from prior studies conducted in other countries.
- Therefore, commercial banks in Ethiopia should not much consider security issues problem in users’ side in adopting internet banking, unlike other countries. In fact this opportunity will reduce setup cost of adoption of internet banking.
- In adoption of internet banking customer should be mostly taken into consideration for its better adoption and implementation.
- Better the services provided better expansion of whole banking system can be expected.
- State owned banks need to do more in this regard because study reveals that the users of internet banking are more with private commercial banks rather than state owned one.

VI. CONCLUSION

Banking is one of the significant factors of entire economy of the any country. Stronger the banking system stronger and stable is the economic system. Since most of the African region suffers from lack of infrastructure especially in electronic media



therefore there is an urgent need to develop and practice the internet banking on a war basis.

Similarly when the banking system is strong and equipped with all the modern techniques and infrastructure, it boosts the financial transactions from all over the world. And when money gets transfer from all the corners automatically economy will get boost because the nation will get connected to world's most financial sectors.

Internet banking will definitely encourage its existing customer and potential customers to adopt the same. This will encourage them to carry more banking transaction through internet.

Developed countries of the world are enjoying the benefits of innovation in information technology and they are implementing it to all the service sectors including banking which is one of the significant factors of the economy.

The present study revealed the various factors that influence the adoption of internet banking in Ethiopia. So precisely the concerned authority should take immediate steps to avoid difficulties in adoption of internet banking in this area so that the benefits of internet banking can be enjoyed and economy can be developed.

The banking sector of Ethiopia has to cover internet banking services by introducing the new software and technologies like electronic banking, mobile banking, international banking services and more ATM machines in all of its banks.

#### VIII. REFERENCES

- [1]. Pikkarainen, T., Pijjarainen, K., Karjaluoto, H and Pahlila, S. Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, Volume 14, No. 3, pp.224-235, 2004.
- [2]. Agarwal, R., & Prasad, J. The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Science*, Volume 28, No.3, pp.557-582, 1997.
- [3]. Biritu, Financial Sector Development in Ethiopia; Trends and risks, NBE, August, 2011
- [4]. Chen, L.-D. and Tan, J., 'Technology Adaptation in E-Commerce: Key Determinants of Virtual Stores Acceptance', *European Management Journal*, Volume 22, No. 1, pp. 74-86, 2004.
- [5]. Daniel, E. Provision of electronic banking in the UK and the Republic of Ireland. *International Journal of Bank Marketing*, Volume 17, No. 2, pp. 72-82, 1999.
- [6]. Davis, F.D. and Venkatesh, V., 'A Critical Assessment of Potential Measurement Biases in The Technology Acceptance Model: Three Experiments', *International Journal Human-Computer Studies*, Volume 45, No. 1, pp. 19-24, 1996.
- [7]. Henderson, R. and Divett, M.J., 'Perceived Usefulness, Ease of Use, and Electronic Supermarket Use', *International Journal Human-Computer Studies*, Volume 59, No. 3, pp. 383-395, 2003.
- [8]. Kolodinsky, J.M., Hogarth, J.M. and Hilgert, M.A. The Adoption of Electronic Banking Technologies by US Consumers; *International Journal of Bank Marketing*, Volume 22, No. 4, pp. 233 – 241, 2004.
- [9]. Mathieson, K., Peacock, E. and Chin, W. W., 'Extending the Technology Acceptance Model: The influence of perceived user resources'. *Database for Advances in Information Systems*, Volume 32, No.3, pp. 86-112, 2001.
- [10]. Mols, K., "The Behavior Consequences of PC Banking", *International Journal of Bank Marketing*, Volume 16, No.5, pp.195-201, 1998.
- [11]. M. Tan and T. S. H. Teo, "Factors influencing the adoption of Internet banking," *Journal of the Association for Information Systems*, Volume 1, No. 5, pp. 1-44, 2000.
- [12]. Nysveen, H, Pedersen, P. and Thorbjornesn , H. Intentions to Use Internet Banking Services: Antecedents and Cross-Service Comparisons. *Academy of Social Science Journal*; Summer 2005; p. 33, 2005.
- [13]. Nor, M. and Pearson, J. The Influence of Trust on Internet Banking Acceptance. *Journal of Internet Banking and Commerce*, Volume 12, No.2, pp. 1-10, 2008.
- [14]. Roberts, P. and Henderson, R., 'Information Technology Acceptance in A Sample of Government Employees: A Test of the Technology Acceptance Model', *Interacting with Computers*, Volume 12, No. 5, pp. 427-443, 2000.
- [15]. Sathye, M. 'Adoption of Internet banking by Australian consumers: an empirical investigation', *International Journal of Bank Marketing*, Volume 17, No. 7, pp. 324-334, 1999.
- [16]. Tan, M. and Teo, T. S. H. Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, Volume 1, No.5, pp. 1-42, 2000.
- [17]. Thulani, D, Tofara, C. and Langton, R. "Adoption and Use of Internet Banking in Zimbabwe: An Exploratory Study," *Journal of Internet Banking and Commerce*, Volume 14, no. 1, 2009.
- [18]. Venkatesh, V. and Davis, F. D., 'A Model of the Perceived Ease of Use: Development and Test'. *Decision Science*, Volume 27, No. 3, pp.451-481, 1996.
- [19]. Venkatesh, V. and Davis, F.D., 'A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies', *Management Science*, Volume 46, No. 2, pp. 186-204, 2000.



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