

## ***The Effect of Internet Banking on Financial Inclusion: The Case of Commercial Banks in Jimma Zone, Ethiopia***

*Zewude Tariku Bikila*<sup>1\*</sup>  
*Yohannis Fikadu Sisay*<sup>2</sup>

*Recive 2023,04,17*

*Accept 2023,06,02*

---

### ***Abstract***

Internet banking is a financial technology product through which customer executes their transaction. This study investigated the effect of internet banking on financial inclusion based on primary data collected from internet banking user customer in Jimma zone, Ethiopia. Cross sectional study designs such as quantitative and qualitative approaches were used. A simple random sampling method was used to select internet banking users of nine commercial banks. Data was collected from 1,076 customers through five-point Likert scale questionnaires and analyzed using an explanatory research and linear regression model. The result of the study show that ease of internet banking use creates simplicity and understandability so that users are more attracted to internet banking which has a remarkable result for financial inclusion. An increase to accessibility to internet banking also increases the rate of financial inclusion. Additionally, the findings demonstrated that information security and privacy and behavioral intention of using internet banking have significant and positive influence on financial inclusion. Thus, the collaboration of banks and telecommunication should be enhanced to expand the coverage of internet so that anyone can access to internet banking.

***Keywords:*** Internet banking, financial innovation, financial inclusion, and commercial ban

---

<sup>1</sup> Lecturer of Accounting and finance, Jimma University, Email: ztariku212@gmail.com (**Corresponding Author**)\*

<sup>2</sup> Lecturer of Accounting and finance, Jimma University, Email: yoha4mek@gmail.com.

## Introduction

Financial inclusion pertains to the ability of individuals and businesses to have access to valuable and reasonably priced financial products and services that cater to their requirements. These include transactions, payments, savings, credit and insurance that are both responsibly and sustainably delivered (Demirgüç-Kunt et al., 2020). It has been proven that financial inclusion influences macroeconomic results such as long-term growth, improved income equality, and poverty reduction (Barajas et al., 2020). Regardless of its importance, Sharma, Khan and Thoudam (2019) have posited that the majority of impoverished individuals in underdeveloped and developing nations lack access to financial services that fully address their financial requirements. Nonetheless, there is a significant onus on the banking sector to adopt strategic measures to augment financial inclusion.

World Bank (2020) reports show that Ethiopia's financial inclusion rate continues to lag behind other Sub-Saharan African nations. The proportion of Ethiopian adults with a bank account rose from 22% in 2014 to 35% in 2017, and hit 46% by 2022. However, this growth in account ownership still falls short when compared to neighboring countries such as Kenya, where 84% of adults have a bank account. Even though financial accessibility in Ethiopia has consistently improved over the years, it remains a largely cash-dependent society, with minimal use of digital payments. As of 2022, the proportion of adults making or receiving digital payments was just 20%, below the Sub-Saharan African average.

Internet banking facilitates the account transfers, balance inquiries, bill payments, account information and stopped payment request (Gupta & Bansal, 2012). The argument has been that most of the product and services offered by the internet banking technology does not meet customers' need and quality. Additionally, such services are skewed to only some selected affluent customers to the neglect of majority of the customers who do not have access to internet, computers and even electricity. Others posited that the cost of acquiring the internet facility, computers and even the security of internet banking transactions are very high or expensive for the average customer hence internet banking does not really satisfy the customer in any way. Most of the internet banking services provided by the banks is usually unreliable with most customers unaware of the content of the internet banking services offered by their bank (Bebli, 2012). According to Wanjiku, (2020) internet banking open ways for more financial inclusion. Further, Nwude et al., (2020) indicated electronic banking tools have played prominent role in achieving financial inclusion for economic growth and sustainable development.

Therefore, this study investigated how internet banking affects financial inclusion. Through the study, an attempt was made to know the effect of ease of service use, information security and accessibility of internet banking on financial inclusion.

## **1. LITERATURE REVIEW**

### **1.1 Theoretical foundations of tax revenue analysis**

#### **Diffusion of innovation Theory**

This concept was established by E.M Rogers in the year 1962 and it defends the position that organizations take part in the dissemination of innovation so as to acquire competitive benefit, minimize charges and safeguard their tactical spots. The philosophy as suggested by Rogers expounds on in what manner a novelty is dissolved amongst consumers over a specific period (Liu & Li, 2009). This theory holds that organizations take part in the adoption of innovation so as to achieve comparative advantage, minimize costs and defend their positions strategically (Hannig & Jansen, 2010). This theory is relevant to the current study in that by embracing the old-fashioned technology taking theories, models and structures to the embracing of revolutionary monetary invention, this research attempts to take the debate to the conventional modernization of technology in literature. This concept is utilized to research how banking advancement in technology influences financial inclusion by commercial banks in Ethiopia.

#### **Ease of service use of internet banking:**

- in this study ease of service use is defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989). This shows a system perceived to be easier to use than another is more likely to be accepted by users. The perceived ease of use factor is the users’ perspectives and their evaluations of the internet banking

usage difficulty, that would affect their intention to use such services, so as far as these services are easy to use and do not cause any confusion, it could encourage customer to adopt these type of services (Chuttur, M. Y., 2009). Furthermore, it is considered that users would value the beneficial outcomes from using the internet banking if it is easy to handle and does not require much effort to use it (Chuttur, M. Y., 2009). Based on this the following hypothesis is developed.

H<sub>1</sub>: The ease of use of internet banking is positively associated with the financial inclusion

#### **Information security and privacy of internet banking:**

- This variable is derived from perceived risk variable. The perceived risk refers to the uncertainty degree that relates to the unfavorable consequences of using the internet banking, the most concerned issues that could negatively influence the customers’ decisions to use internet banking services are; the security and privacy issues and the potential financial losses and the ability to correct the occurring mistakes (Kesharwani, A., & Singh Bisht, S., 2012). Despite the enormous advantage and opportunities offered by internet banking, it presents various security risks. Banks take extensive steps to protect the information transmitted processed when banking using internet (online). This protection includes ensuring that confidential data sent over the internet cannot be accessed or modified by unauthorized third parties. However, banks normally do not have influence over the system used by their customers for banking. For instance, the system such

as PC connected to the internet will usually be used for a number of other applications as well. Information security is well in place and customers were confident with use of the service hence drawing more to bank which leads to financial inclusion. From this the hypothesis is developed as the following.

*H<sub>2</sub>: The Information security of internet banking is positively associated with the financial inclusion.*

**Accessibility of internet banking:** - This will use the definition of accessibility in terms bank customers access to internet connection and service delivered by internet banking. Thus, accessibility is the ability of users to access information and services from the web which depends on many factors which include the content format; the user's hardware, software and settings; internet connections; the environmental conditions and the user's abilities and disabilities (Godwin-Jones 2001; Hackett and Parmanto, 2009). The accessibility of electronic banking outlets had facilitated increase of customer's hence financial inclusion as indicated by the overall mean. According to Wanjiku, et al. (2020) the electronic banking outlets were positively associated with financial inclusion. Based on this the following hypothesis is developed.

*H<sub>3</sub>: The accessibility of internet banking is positively associated with the financial inclusion.*

**Behavioral intention:**

Behavioral intention is the degree to which a person has formulated conscious plans to perform or not to perform some specified future behavior (Warshaw and

Davis, 1995). This study also defined behavioral intention to the individuals (banks customers) intention to use internet banking as means of financial inclusion. The evidence indicated behavioral intention has positive effect on financial inclusion (Goswami, et al., 2022). Such arguments can generate the following hypothesis:

*H<sub>4</sub>: Behavioral intention to use internet banking has a positive effect on financial inclusion.*

**Perceived Risk:** This variable indicates customers' perceived risk of internet banking as a means of financial inclusion. It is defined as "customer's considered the potential uncertain negative consequences of purchasing the product or service" (Kim et al., 2008, P. 546), this in turn affects the customers trusting the system. The evidence from Zhang, and Shim (2010 & Gülseçen and Bayrakdar (2011) found that perceived risk have a negative and significant influence on individuals' behavior toward using internet banking which impairs financial inclusion. Based on this the following hypothesis was developed.

*H<sub>5</sub>: Perceived risk to use internet banking has a positive effect on financial inclusion*

**Perceived benevolence:** this portrays person understanding of attendant 'scaring and motivating consumers to do an action interestingly (same resource). It is about using internet banking in the future, having a plan in the future to use internet banking, belief to this issue that using internet banking is valuable as a means of financial inclusion. This study also assumed the following hypothesis.

*H<sub>6</sub>: Perceived benevolence to use internet banking has a positive effect on financial inclusion*

## **1.2 Overview of previous empirical studies**

In most countries, especially low income countries, the proportion of financial inclusion rate is low. The concept of financial inclusion attracted many scholars, and researchers have conducted studies on different countries by using various methods.

Sionfou (2015) studied on the impact of ICT on financial inclusion in West African Economic and Monetary Union (WAEMU) states using Auto Regressive Distributed Lag (ARDL). The study outcomes revealed that there is a statistically significant and positive relationship between internet banking and financial inclusion.

In the study of trust of e-banking services in Greece, Efremidou & Mihiotis (2014) analyzed the factors that drive customers to use e-banking services through a survey of 150 Greek bank customers. The result of the study results indicated that the factors affecting the Greek client of a bank to utilize e-banking facilities is the safety of the deal and the satisfaction of the user. They also found that trust is a very important factor and has an important effect on clients' choices concerning the utilization of e-banking facilities.

Nwafor (2018) conduct study on the Nexus between internet penetration and financial inclusion in Nigeria by using descriptive statistics. The study highlighted the importance of internet in achieving a greater financial inclusion in Nigeria which calls for the adoption of

highly internet based transactional policies that will ensure that the financially excluded is reached easily. Thus, internet penetration has significant impact on financial inclusion in Nigeria.

Qamruzzaman & Wei (2019) conducted study on the financial innovation and financial inclusion nexus in South Asian Countries using symmetric and asymmetric panel investigation in the case of six South Asian countries—Bangladesh, India, Pakistan, Nepal, Bhutan, and Srilanka. The main question answered was “do financial innovations promote the speed of financial inclusion in the financial system or in another way, do financial inclusion demands innovative financial instruments and services?”. The panel autoregressive distributed lagged model under a linear and nonlinear framework using monthly data over the period 1990–2018 was employed. The result of the study indicated a positive association between financial innovation and financial inclusion both in the long run and short run. Furthermore, for ensuring financial efficiency or ensuring financial services easy access to the society and the pull unbanked population into the formal financial system in both cases, the eventual effects can be observed in financial inclusion and financial innovation. Hence, it can be assumed that a bidirectional relationship prevails between them.

## **1. Research Method**

**Research Design:** Explanatory studies are characterized by research hypotheses that specify the nature and direction of the relationships between or among variables being studied. Therefore, in this study the

researchers were employed an explanatory method in order to investigate the effect internet banking on financial inclusion in case study of commercial banks in Jimma zone.

The objectives of quantitative research are to answer the anticipated pre-determined research questions and to produce general results about a given population in a given academic research area. For this study, quantitative research approach was used to meet the overall objective of the study.

**Population and sampling techniques:**

the target population of the study were the customers using internet banking from nine commercial banks in Jimma zone. Nine commercial banks were considered for the study based on the adoption of the internet banking. Thus, the total target from each bank is 34,800 internet banking users.

The sample size is determined using Yamane formula based on nine commercial banks total internet banking users.

Based on the formula of Yamane (1967) the sample size were:

$$n = \frac{N}{1+N(e^2)} = \frac{34,800}{1+34,800(0.03^2)} = 1,076 \text{ Internet banking users}$$

To meet objective of this theme, out of the 34,800 internet banking user customers the researcher was selected 1,076 customers randomly. The respondents will be drawn from the study population using stratified random sampling. This is due to the fact that the nine commercial banks in Jimma zone have different number of customers, and this sampling method ensured proportionate participation of internet banking users from all the

commercial banks. After sample size is calculated, the researchers apply the following simple Proportional allocation formulae for determining specific number of representative samples received from each Stratum of banks.

$$n_i = \frac{n_j}{N_j} * n$$

**n<sub>j</sub>**: is predetermined sample size from target population.

**n**: is population size of each Stratum of commercial banks in Jimma zone

**N<sub>j</sub>**: total population of users of internet banking commercial banks in Jimma zone.

**n<sub>i</sub>**: sample size determined from each stratum

**Table 1 Sample size from commercial banks Jimma zone internet banking users**

S. N	COMMERCIAL BANKS IN JIMMA ZONE	User of internet banking per bank	Sample size
1	Commercial bank of Ethiopia	15,000	464
2	Awash Bank	4,189	129
3	Dashen Bank S.C	4,011	124
4	Bank of Abyssinia S.C	2,306	71
5	Wegagen Bank S.C	1,794	55
6	Cooperative Bank of Oromia S.C	3,388	104
7	Oromia International Bank S.C	2912	90
8	Bunna International Bank S.C	889	27
9	Abay Bank SC.	311	9
	<b>Total</b>	<b>34,800</b>	<b>1,076</b>

Source: Banks Information center report (Sep, 2021)

**Data Collection:** The primary data were collected from commercial banks customers are selected from the sample banks of the study area. Self-administered structured questionnaire were used to

collect the data from internet banking users. The design of the questionnaire was consider the need for close-ended questions

**Tools of Analysis**

In carrying out the analysis, the multiple linear regression equation is employed:

$$AFI = \beta_0 + \beta_1 ESU + \beta_2 ISP + \beta_3 AC + \beta_4 BHI + \beta_5 PR + \beta_6 PB + \epsilon$$

Where AFI= Financial inclusion

$\beta_0$  = Constant

$\beta_1, \beta_2,$  and  $\beta_3$  are Coefficients of effects of internet banking on the financial inclusion

ESU= Ease of service use of internet banking

IS= Information security of internet banking

AC= Accessibility of internet banking

BHI= Behavioral intention

PR= Perceived risk

PB= Perceived benevolence

$\epsilon$  = error term

**1. Result and Discussion**

In the study were the majority (61%) proportion of internet banking user are male, while the remaining 39% were female. This implies the existence of variation among gender in internet banking usage. Concerning the educational status of respondents, 35.05% have high school certificate. On the contrary, 15.67% of respondents were the holder of the first degree and above. From this result, the educational statuses of the majority of the respondents were high school certificate educational level. Therefore, it is possible to say that the awareness to internet banking is low.

Duration shows internet banking user experience with using internet banking. Regarding the duration (usage experience) of respondents, about 48.8%

of the respondents responded to 2 to 5 while 11.84% of respondents were above 11 years. This implies the internet banking users have on average 2 to 5 years of usage experience. This enables them to be included financially.

**Table 1: Demographic characteristics of internet banking user customer Jimma zone, Ethiopia 2021.**

Characteristics		frequency	Percent
Gender	Male	510	61
	Female	326	39
Age	18-25	163	19.5
	26-30	289	34.6
	31-35	135	16.15
	36-40	100	11.96
	41 & Above	149	17.82
Education	Primary education and less	228	27.27
	High school certificate	293	35.05
	Diploma	184	22.01
	First Degree and above	131	15.67
Duration	Below 1 year	142	16.99
	2 to 5 years	408	48.8
	6 to 10	187	22.37
	11 and above	99	11.84

Source: Own survey, 2022

**Pearson Correlation Analysis**

The correlation between ease of service use, information security and privacy, behavioral intention to use, perceived risk and perceived benevolence was positive and significant as indicated in the table 2. On the other hand the correlation between accessibility and ease of service use; behavioral intension, perceived risk, perceived benevolence and accessibility was negative and significant.

**Table 2: Pearson Correlation Analysis**

	ESUM5	ACq1	IS	BHI	PR	PB
ESUM5	1					
ACq1	-0.333*	1				
IS	0.028***	0.082*	1			
BHI	0.275*	-0.289*	0.203	1		
PR	0.091*	-0.014*	0.074*	0.271*	1	
PB	0.235*	-0.175*	-0.066	0.372	-0.107*	1

\*, \*\*, \*\*\*. Correlation is significant at 0.01, 0.05 and 0.1 respectively

Source: Own survey, 2022

**Diagnosis Tests**

Before applying regression analysis, some tests were conducted in order to ensure the appropriateness of data in regression analysis.

**Normality test**

Skewness Kurtosis test for normality was used to check whether the residuals are normally distributed or not. The result shows the skewness, chi(2) 12.4 with degree of freedom 6 p-0.1426. This means that the p-value given at the bottom of the normality test screen should be greater than 0.05 to not reject the null hypothesis of normality at the 5% level. As a result, we conclude that the error terms of the specified model in this study is found to be normally distributed.

**Test for Heteroskedasticity**

To make sure standard errors are not distorted and any inferences made could not be misleading and for the efficiency of the model, the problem of heteroskedasticity has been detected. The white test result shows chi-square 38.68 with 27 degree of freedom at the chi-square p-value 0.0677. Thus, shows that the chi-square p-value is more than 5%, this implies the null hypothesis that the residuals are homoskedastic at 1%, and 5% significance level is failed to reject.

Therefore, there is no problem of heteroskedasticity with the residuals of the model.

**Multicollinearity**

When two or more independent variables are highly correlated with each other it can be said multicollinearity exists. The variance inflation factor (VIF) was used to detect the existence of multicollinearity among six independent variables. The mean value of VIF is 2.28 which is less than 10. This shows the absence of multicollinearity problems

**Table 4: Multicollinearity diagnostics**

Variable	VIF	1/VIF
<b>BHI</b>	1.52	0.659175
<b>PB</b>	1.29	0.775686
<b>AC</b>	1.21	0.823146
<b>ESUM</b>	1.20	0.833475
<b>PR</b>	1.15	0.868191
<b>IS</b>	1.09	0.915076
<b>Mean VIF</b>	1.24	

Source: Own survey, 2022

**Result of the regression model**

Table 5 reports the results of econometrics analysis conducted to effect of internet banking on financial inclusion. The results obtained shows that, adjusted R-squared is 0.759. This means that 75.9% change in the dependent variable can be explained by the change in independent variables which show, that there is a linear relationship between financial inclusion and explanatory variable included in the model. However, 24.1% can be explained by other variables. This means the dependent variable is strongly explained by independent variables.

The F-ratio tests whether the overall regression model is a good fit for the data.



The output shows that the independent variables statistically significantly predict the dependent variable,  $F(6, 829) = 440.39$ ,  $p < .0005$ , thus the regression model is a good fit of the data.

**Table 5 regression analysis with OLS model**

fill	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ESUM5	.0301305	.0181477	1.66	0.097	-.0054903	.0657513
Acq1	.0538805	.0169888	3.17	0.002	.0205343	.0872267
IS	.0336445	.0194479	1.73	0.084	-.0045283	.0718174
PR	-.0265218	.0179859	-1.47	0.141	-.0618251	.0087815
BHI	.8928724	.0210702	42.38	0.000	.8515153	.9342295
PB	-.02178	.0235786	-0.92	0.356	-.0680607	.0245008
_cons	.2465128	.1438401	1.71	0.087	-.0358208	.5288464

Source: Own survey, 2022

The study revealed that internet banking has a positive effect on financial inclusion. The effect of internet banking was indicated by ease of use, accessibility to internet, information security and privacy, behavioral intension, perceived risk and perceived benevolence. Except for perceived risk and perceived benevolence the other four variables were found to affect financial inclusion positively.

**Variables with Statistical Significance**

As indicated in table 5 ease of use (ESUM5) has a positive coefficient, which represents a positive effect of ease of use of service of internet banking on financial inclusion. The coefficient of ease of use is 0.03, with a 10% significance level, indicating that taking all other independent variables at zero, a unit increase in the ease of use will lead to a 0.03 unit increase in the financial inclusion. In the internet banking, perceived ease of use indicates the

capacity of the internet bank website to be used simply including high web-site navigability, well-organized and understandable contents.

Due to the simplicity and understandability of interaction with internet banking users are more attracted to internet banking which has a remarkable result for financial inclusion. In line with Yoon (2010) and Rawashdeh (2015) perceived ease of use of internet banking has its importance important influence on the extent of financial inclusion.

Ease of using internet banking has some characteristics. It includes easy recovering the error encountered while using the internet banking services, internet banking facilitating, banking activities quickly, doing banking transactions much easier, managing personal and business finance efficiently and helping in increase customer’s productivity. These factors positively affect financial inclusion. This result is consistent Goswami, et al. (2022) & Hassan & Awan (2017) ease of using internet banking increase financial inclusion rate.

Accessibility (Acq1) to internet banking has a positive and significant ( $p < 0.01$ ) effect on financial inclusion. The regression coefficient of accessibility in the regression model is 0.0538, with a 1% significance level, which shows that when taking all other independent variables at zero, a unit increase in the accessibility to internet banking will lead to a 0.054 unit increase in the financial inclusion. Accessibility to internet banking indicates users can easily transact, pay bills and access their bank accounts at anytime and anywhere. The result shows the

accessibility of internet banking enabled users to obtain a financial product or service at any given time, easily transact, pay bills and access their account any time and check balances and access financial statements. Further, with accessibility of internet banking a number of individual are financially included.

Information Security and privacy (IS) has a positive and significant ( $p < 0.01$ ) effect on financial inclusion. The results indicated that taking all other independent variables at zero, a unit increase in the information Security and privacy of internet banking will lead to a 0.054 increase in the financial inclusion. In line with Hassan & Awan (2017) protected information security and privacy increases both individuals and business internet banking usage which increase financial inclusion.

Internet banking is one of the financial tools that transforming the world of finance, thereby creating opportunities for widespread financial inclusion, particularly among neglected groups. It should consider the information security and privacy as a critical requirement any time money is involved. Internet banking offer financial services for consumers with greater security in borrowing, saving, or transacting in cash. Security and privacy should be among the most important considerations when building such digital finance systems. Thus, the way individual trust the transaction through internet banking depends on security and privacy and their satisfaction with the security system. These findings are consistent with the findings of Hassan & Awan (2017) & Traynor, (2018) who established that there information security

and privacy has positive impact on financial inclusion.

Behavioral intention (BHI) has a positive regression coefficient, which represents the positive effect of internet banking on financial inclusion. The result of the study indicates that behavioral intension has a positive and significant ( $p < 0.01$ ) effect on financial inclusion. Further, the results indicated that taking all other independent variables at zero, a unit increase in the behavioral intension to internet banking will lead to a 0.89 increase in the financial inclusion.

Behavioral intention of using internet banking as means of financial inclusion is the prospects that an individual or a business has a motivation to get financial products through internet banking. Behavioral intention affects users to be part of financial inclusion with the use of internet banking services for their transactions. It is an attitude as the negative and positive feelings of an individual about executing a selected behavior. The positive intention to use enhances the rate of financial inclusion. As most studies by Goswami, et al. (2022); Chouhan, et al. (2021); Fang, et al. (2014) & Senyo & Osabutey (2020) indicated behavioral intention influence people to use financial technology (including internet banking) as a means of their financial inclusion.

### **Variables with Statistical Significance**

Perceived risk and perceived benevolence were found to have insignificant effect on financial inclusion. This finding is consistent with Hassan & Awan,( 2017) indicated perceived benevolence and competence of banks' internet service by

customers has a negative relationship with customers’ attitude of internet banking and financial inclusion.

**Table 4: Summary of Hypothesis**

Hypothesis	Result
H1: The ease of use of internet banking is positively associated with the financial inclusion	Confirmed
H2: The Information security of internet banking is positively associated with the financial inclusion.	Confirmed
H3: The accessibility of internet banking is positively associated with the financial inclusion.	Confirmed
H4: Behavioral intention to use internet banking has a positive effect on financial inclusion.	Confirmed
H5: Perceived risk to use internet banking has a positive effect on financial inclusion	Rejected
H6: Perceived benevolence to use internet banking has a positive effect on financial inclusion	Rejected

**5. Conclusions**

Financial inclusion is widely recognised as essential for poverty reduction, balanced economic development, and economic stability. Various studies were conducted on the adoption of financial technologies, but only few studies considered the effect of financial technology on financial inclusion. Thus, this study was performed to investigate the relationship between financial technologies and financial inclusion. To achieve the objective primary data was collected from commercial banks customers through questionnaires guided on five points Likert scale. A multiple linear regression model was used for data analysis. The funding of the study indicated ease of use, accessibility to internet, information security and privacy and behavioural imitation have a significant and positive effect on financial inclusion. On the other hand, perceived risk and perceived benevolence were

found to have negative and insignificant effect on financial inclusion.

The major conclusions of the study are: Firstly, the ease of internet banking use creates simplicity and understandability, internet banking facilitating, banking activities quickly, doing banking transactions much easier, managing personal and business finance efficiently of interaction with internet banking users are more attracted to internet banking which has a remarkable result for financial inclusion. Thus, ease of internet use has a positive and significant effect on financial inclusion.

Secondly, the study also found accessibility to internet has positive and significant effect on financial inclusion. An increase to accessibility to internet banking also increases the rate of financial inclusion.

Thirdly, in today’s world transaction can be executed with a just few click on computer screen with the help of bank as intermediaries; however, information security and privacy play key role in attracting or pushing customers. Information security and privacy has positive and significant effect on financial inclusion. It adds comfort and confidence to users. The way individual trust the transaction through internet banking depends on security and privacy of the system. Security and privacy of internet banking boasts performing banking activity of users and this increases financial inclusion. Finally, Behavioral intention of using internet banking as means of financial inclusion is the prospects that an individual or a business has a motivation to get financial products through internet banking. The result of the

study indicates that behavioral intension has a positive and significant.

In nut shell, this study tried to investigate the effect of internet banking on financial inclusion. Therefore, Banks should adopt the most suitable and ease of use internet banking system and the collaboration of banks and telecommunication should be enhanced to expand the coverage of internet so that anyone can access to internet banking

## References

- Barajas, A., Beck, T., Belhaj, M., Naceur, S. Ben, Cerra, V., & Qureshi, M. S. (2020). Financial Inclusion: What Have We Learned So Far? What Do We Have to Learn? *IMF Working Papers*, 2020(157).
- Bebli, R. S. (2012). *The Impact of internet banking service quality on customer satisfaction in the banking sector of Ghana*.
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2020). The global Findex database 2017: measuring financial inclusion and opportunities to expand access to and use of financial services. *The World Bank Economic Review*, 34(Supplement\_1), S2–S8.
- Gupta, K. K., & Bansal, I. (2012). Development of an instrument to measure internet banking service quality in India. *Researchers World*, 3(2 Part 2), 11.
- Hannig, A., & Jansen, S. (2010). Financial inclusion and financial stability: Current policy issues.
- Liu, K. S., & Lee, K. S. (2009). Factors influencing the adoption behavior of mobile banking: a South Korean a South Korean perspective. *Journal of Internet Banking and Commerce*, 12(2), 78–94.
- NWAFOR, M. C. (2018). Nexus between internet penetration and financial inclusion in Nigeria. *International Journal of Research and Innovation in Social Science*, 2(10), 220–226.
- Nwude, E. C., Igweoji, N. D., & Udeh, S. N. (2020). The Role Of Electronic Banking As A Tool To Financial Inclusion In Nigeria. *Noble International Journal of Business and Management Research*, 4(1), 1–8.
- Sionfou, S. C. (2015). The impact of ICT on financial inclusion: evidence from WAEMU countries. Published MCS Thesis. University Félix HouphouëtBoigny, Abidjan, Côte d'Ivoire.
- Wanjiku, N. G. (2020). *Technological Banking Innovations And Financial Inclusion By Commercial Banks In Nairobi City County, Kenya*. Kenyatta University.