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# *The Effect of Electronic Banking Technologies on Employee's job security in case of CBE Hwassa City Branches, Ethiopia*

**Chekole Wubneh Negassi**

askalbeyene23@gmail.com

Raya university https://orcid.org/0009-0006-8837-9001

**Research Article**

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## Abstract

The purpose of this study was to investigate the effect of electronic banking on employee's job security.The components of electronic banking that were part of the study were ATM, mobile banking, internet banking and Agent banking. Four research hypotheses were developed to go in the right track of the study and to test them. In order to pursue this study self designedlikert item questionnaires were developed and distributed to employees of Commercial Bank of Ethiopia Hawassa city branches through stratified sampling technique. Before distributing the questionnaires a pilot study was conducted to cheek the internal consistency of the developed likert items and the cronbach alpha(R) was 0.824that was a good and reliable measurement.The survey data was analyzed and summarized through both descriptive and inferential statistics. Percentage, frequency, median and mode were employed to analyze the descriptive statistics. To estimate the effect of independent variable on the dependent variable generalized ordinal logistic model was employed. The researcher reached in a conclusion ATM machine, mobile banking and agent banking have a negative decreasing effect on employee's job security. In other word, these variables affect employees through making banking jobs unsecured. Internet banking has a positive effect on employee's job security. Finally, it was recommended to Commercial Bank of Ethiopia to adopt employee friendly technology to protect the job lessens and job insecurity of its employees. Lastly, important suggestions were forwarded for future researchers.


## Introduction

Technology is among the external forces that determine the fortunes of different business across the world. This force affects either positively or negatively to business system. Concerning to this Saverio Lovergine and Alberto Pellero(2018) argues that the very dynamic and highly increasing technological change is pressing its effect to changing the business eco-system as well as the living standard of the globs community.In addition to this, the authors, Babsaheb, Slave and Mulan (2013) have pointed that, the world is changing at increasing rate and technology is considered to be the key driver for these changes around us. Umeobi, Gozi, and Uchehara (2019) have explained technology as an important means for producing quality and quantity products. It is indisputable, that the technology is making easy the life of people and working condition. Banking industry is one among business sectors currently exploiting the products of technology simply called electronic banking. As per Daniel (1999) definition, electronic banks a modern technological innovation product that helps customers to access their accounts in 24 hours.

It is plain truth; electronic banking is playing a vital role in the performance of financial organizations. Priscah and Eddie (2019) have pointed out electronic banking is a facilitator in healthy financial productivity improvements in banking sector. Electronic banking is important Simon and Milton (2014) in improving banks operational efficiency. Similarly, electronic banking Margaret, Julius, and Job (2016) reduces the banks operating cost, enlarges the banks income and the manual activities and the materials needed to do in manuals. Mirriam, Wycliffe, Misuko and Nyaribo (2015) founded in their investigation electronic banking improving customer satisfaction.

On the other hand, there are expertise arguments concerning the effect of electronic banking on employee's job security. To make things clear, I used the term job security as Heydy and Toni (2017) defined, that is the

likelihood of losing job. Electronic banking have a negative effect on employees job security (Atiku et al.,2011; Abdullah & Ahmad 2015; Shahryar, Maryam &Mohammad 2017). Electronic banking does not have a negative effect on employee's job security (Adelani, 2019; Babatunde, Sunday, 2017,Taiwo, 2019). As we jotted down above, there are two opposite research work findings concerning the effect of electronic banking on employee's job security. Therefore, We motivated to examine the issue in the context of Ethiopia Hawassa City branches, mainly to fill theoretical gap and geographical gap. Having the objective of assessing the effect of electronic banking on employees job security.

To know the pathways of the research and for putting an estimated solutions for the problem, the researcher developed the following research hypothesizes.

$Ho_1$: ATM has no significant effect on employee's job security.

$Ho_2$: Mobile banking has no significant effect on employee's job security

$Ho_3$: Internet banking has no significant effect on employee's job security.

$Ho_4$: Agent banking has no significant effect on employee's job security.

Literature Review

## Definition ofE-banking

E-banking is viewed as the provision of information or services by a bank to its customers based on a computer, television, telephone, or mobile phone (Daniel, 1999).Pikkarainenet al (2004) also discloses electronic banking as an "internet portal", customers become usable starting miscellaneous expenses and large investments.

# Benefits of E-Banking

Electronic banking is changed commercial aspects, Khan&Karim (2010) by interconnecting geographical, industrial and regulatory gaps, consequently the way of life becomes easier.

According to Jen and Michael (2006) electronic-banking has made common open doors for banks and businesses around the world, and that is clear in the way they sort out financial transaction. Electronic banking is becoming a Quresh & Khan (2008) crucial part of modern day banking services.The approach and adoption of the internet by businesses has uprooted the constraint of time, distance and communication making the globe really a little village (Rikya, 2007;Han, 2008). Teju,&Mushtaq (2015) revealed that electronic banking gives enormous benefits to customer in terms of ease, simplicity and cost of transactions.

It is argued that one of the greatest benefits of e-banking is that e-banking products/services are inexpensive or may even be free and that customers save even more money as well as time because they do not have to travel to or from a bank branch (Pham, 2010). Confirming to (Phalm,2010), Robinson (2000)

stated that costs for conducting a banking transaction online are much lower than at a brick and mortar branch.

## Underlying factor of E-banking

# Automated Teller Machine (ATM)

**ATMs** are electronic terminals that let you bank almost virtually any time. (ftc.gov August, 2012). Oluwagbemi, Abah &Achimugu (2011)defined “ATMs as a computer-controlled device that dispenses cash, and may provide other services to customers who identify themselves with a Personal Identification Number.

## Mobile Banking

Mobile banking has helped in enhancing ubiquity, reach-ability, personalization and convenience to the customers” (Mutuku&Nyaribo 2015). The other name for mobile banking is telephone banking.Telephone Banking (Telebanking) can be considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices (Balachandheret al, 2001).

## Internet Banking

Internet supplies have to encrypt all transactions between them and the client online to make decoding it complex to guess, unless authorized Agoola (as cited inUmeobi N. Gozi C &Uchehara Felicia, 2019)

# Agent Banking

According to National Bank (NBE) of Ethiopia regulation of mobile and agent banking service directives No.FIS/01/2012, agent banking is composed of two words agent and banking.” Agent” means a person engaged in commercial or business activity and has been contracted by a financial institution to provide the service of the financial institution on its behalf in a manner specified in these directives. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices and many more”(Kumar et al, 2006).

## Job security

Job insecurity occurs only in the case of loss of employment without consent. Job insecurity exists when an employee’s perceived his future career will become unstable and at risks (Noraishah, B.T.Daud, *2017).*In the organizational life job security is one of the issues Shahryar et al., (2017) that engaged employees in organizations and helped them consume and concentrate a part of mental, physical and psychological energy of organization.

It is in the interest of employers to be aware of the relationship between job security and job satisfaction (Benjamin Artz&Ilker Kaya, 2015). Security is believed to be a traditional form of security for workers and a notion that has dominated employment relations until recently. Employment security, on the contrary, is presented as a new notion: one that needs to be further developed (Zekic, N. 2016). Matthias & Rosalie (2017) it is very unlikely that employment in occupations highly susceptible to automation (35 percent of Canada's employment) will be completely replaced by smart machines over the next few years. As Francesco &Enzo (2018) that robots could perform per 10,000 workers which known as robots density. In addition to this, they find that robots turn out to have a statistically significant negative impact on worldwide employment.According to World Bank group (2015) report, there are clear opportunities from digital jobs and the wider use of digital tools Zifeng&Zhonghua (2019) had conducted a study on banking technology.

Simon & Thomas, (2016) found out as internet banking, convenience of mobile banking, user friendly ATMs, mobile banking point of sale system affects customer satisfaction to a great extent. Mirriam & Wycliffe (2015) they found that there is a positive as well as statistically significant influence on employee productivity of the banks. Abdullah Attia &Ahmad (2015) have found electronic banking has a negative impact on employee's job security. Atiku et al., (2011) had also confirmed as electronic banking technology has a potential damage on employees job security. Shahryar et al., (2017) had outlined using electronic money transferring services, using telephone bank and using banking electronic services causes decreasing job stability and decreases job security.Taiwo(2019) concludes adoption of electronic banking does not directly lead to loss job in banking sector.

## Conceptual framework

Independent Variable Dependent variable

## Methods and material

The study employed descriptive and explanatory design. Since it tried to examine the effect of Electronic Banking (ATM, mobile banking, internet banking and Agent banking) on Employee's job security in case of CBE Hawassa City Branches. The data were collected from both primary and secondary. Primary data were collected using questionnaires from 243 employees of CBE by applying stratified sampling technique.

Table 3.1
CBEHawassa city branch respondents sample size.

| No. | Name of branches | Numberof employees | Sample size |
|---|---|---|---|
| 1 | Adarie Branch | 36 | 14 = (36/618*100) |
| 2 | Alamura Branch | 22 | 9 = (22/618*100) |
| 3 | ArebSefer Branch | 22 | 9 = (22/618*100) |
| 4 | Atotie Branch | 18 | 7 = (18/618*100) |
| 5 | Daka Branch | 25 | 10 = (25/618*100) |
| 6 | Dato Branch | 23 | 9 = (23/618*100) |
| 7 | Dubie Branch | 29 | 11 =(29/618*100) |
| 8 | Fura Branch | 31 | 12 = (31/618*100) |
| 9 | Gefima Branch | 25 | 10 = ( 25/618*100) |
| 10 | GebrielSefer Branch | 28 | 11 = (28/618*100) |
| 11 | GuduMellie Branch | 29 | 11 = (29/618*100) |
| 12 | AddisuGebeya Branch | 13 | 5 = (13/618*100) |
| 13 | AdissuMeneharia Branch | 20 | 8 = (20/618*100) |
| 14 | Bahladerash Branch | 14 | 5 = (14/618*100) |
| 15 | Hawassa Branch | 66 | 26 = (66/618*100) |
| 16 | Godguada Branch | 16 | 6 = (16/618*100) |
| 17 | Industrial Park Branch | 28 | 11 = (28/618*100) |
| 18 | HawassaReferal Branch | 15 | 6 = (15/618*100) |
| 19 | Mountain Tabor Branch | 13 | 5 = (13/618*100) |
| 20 | Rama Branch | 12 | 5 = (12/618*100) |
| 21 | Sidama Buna Branch | 13 | 5 = (13/618*100) |
| 22 | Smuda Branch | 17 | 7 = (17/618*100) |
| 23 | Tabor Branch | 43 | 17 = (43/618*100) |
| 24 | Teso Branch | 22 | 9 = (22/618*100) |
| 25 | Tula Branch | 15 | 6 = (15/618*100) |
| 26 | Weldeamanuel Branch | 23 | 9 = (23/618*100) |
| Total | | 618 | 243 |
| Source: CBE Hawassa city branches own survey from Hawassa district, 2021 | | | |

# Review of Documents and Reports

To obtain the desired secondary data, the researcher reviewed reports of Hawassa CBE district, magazines, Human resource management reports and reports of the different CBE branches of the City.

# Model Specification and Model assumption

In order to deal with the inferential statistical analysis generalized ordinary logistic regression model was employed.

The logistic model, as a non-linear regression model, is a special case of generalized linear model (McCullagh and Nelder, 1989) where the assumptions of normality and constant variance of residuals are not satisfied. This is not the only case to use logit model, whereas when the dependent variable is categorical logit and other categorical or qualitative statistical models are recommended to use in order to reach in a good statistical estimate and prediction. According to Gujarati (2003) if the dependent variable is qualitative our objective is finding the probability of happening and the model is known as probability model than using quantitative model like linear regression model.Therefore, in case of my study, the dependent variable is job security, that is qualitative and categorical in its nature, consequently using nonlinear regressions are better to estimate and predict the effect of the independent variable on dependent variable.

# Ordinal logistic regression model

When we express the study variables in ordinary logistic equation it gives the following form.

$$\ln\left(\mathrm{Yj}'\right) = \alpha j(\beta 1x1 - \beta 2x2 - \beta 3x3 + \beta 4x4$$

Where yj is the predicted value

$\alpha j$ = refers the probability of being above and below level of estimation.

X1 = indicates the first predictor variable (ATM)

X2 = implies the predictor variable of (MB)

X3 = indicates the predictor variable of (IB)

X4 = implies the predictor variable of (AB)

$\beta 1$ = refers the coefficient of ATM

$\beta 2$ = implies the coefficient of MB

$\beta 3$ = refers the coefficient of IB

$\beta 4$ = indicates the coefficient of AB

# Reliability Test

A measurement is said reliable, if it results in consistent results. Samples of 25 questionnaires from respondents were asked to fill the questionnaires from three branches of CBE in Hawassa city(i.e., Hawassa branch, Tabor branch, Addisu menharia branch and Gebrielsefer branch) randomly and they were excluded from filling the tested questionnaires. The testedCronbach's alpha SPSS result is given in the below table.

Table 3.2
Reliability Statistics

| No | Variable | R | N of items |
|---|---|---|---|
| 1 | ATM | 0.705 | 9 |
| 2 | MB | 0.73 | 9 |
| 3 | IB | 0.706 | 9 |
| 4 | AB | 0.709 | 9 |
| 5 | EJS | 0.753 | 10 |
| 6 | All questions | 0.824 | 46 |

**Source: Pilot survey SPSS result, 2021**

According to George &Mallery (2003), the value of alpha should be greater than 0.7 so as to accept the instrument. And the closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. The alpha result were 0.705 for ATM, 0.73 for MB, 0.706 for IB, 0.709 for AB, 0.759 for EJS and 0.824 for all instrument. Therefore, since all the values of all items Cronbach alphas (R) are 0.7 and the cronbach of all the items is 0.824, we can conclude that there is an internal consistency with in the instruments.

## Result and discussion

Assumption of Ordinal Logistic Regression

Out of these all assumptions of logistic regression are functional to this model.

- The dependent variable is measured on an ordinal level.
- One or more of the independent variables are continuous, categorical or ordinal.
- No Multi-collinearity - i.e. when two or more independent variables are highly correlated with each other.
- Proportional Odds - i.e. that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable.

The first assumption was confirmed since the data is ordinal in nature. As I explained at the beginning of descriptive analysis the likert values shows only greater than and less than but the correct distance is impeded.

The second assumption was also accepted, since the independent variables could be quantitative. But the measurement used for the independent variables were ordinal data like for the dependent variable.The third assumption states multi-collinarity test. To detect the existence of multicollinarity test a pair wise correlation was employed. As rule of thumb, if the pair wise correlation coefficients between the regressor variables are in excess of 0.8 Gujirati (2004), then multicollinarity is a series problem. Multi-collinarity occurs when the relationship among the independent variables are strong that is above 0.8 As Table 4.8 below indicates, the relation between ATM and MB is 0.117 which is very far from 0.8 or one, consequently, this indicates there is low correlation or less multi-collinarity between ATM and MB. The correlation between ATM and IB is 0.049, similarly shows no-collinarity is there between the two variables. The correlation of ATM with AB is 0.049; similarly no multi-collinarity is there between ATM and AB. The correlation between MB and IB is 0.018; this also indicates absence of multi-collinarity. The correlation between MB and AB was 0.099 again this also indicates absence of multi-collinarity. The correlation between AB with AB is 0.014, which implies absence of multi-collinarity. To sum up, all pair wise correlation results are below 0.8 and above implying absence of any collinarity. Hence, the independent variables gave better estimate and prediction.

Table 4.1
Correlations within the independent variables

| | | | ATM | MB | IB | AB |
|---|---|---|---|---|---|---|
| Spearman's rho | ATM | Correlation Coefficient | 1.000 | .117 | .049 | .049 |
| | | Sig. (2-tailed) | . | .077 | .460 | .463 |
| | | N | 229 | 229 | 229 | 229 |
| | MB | Correlation Coefficient | .117 | 1.000 | .018 | .099 |
| | | Sig. (2-tailed) | .077 | . | .781 | .133 |
| | | N | 229 | 229 | 229 | 229 |
| | IB | Correlation Coefficient | .049 | .018 | 1.000 | .162* |
| | | Sig. (2-tailed) | .460 | .781 | . | .014 |
| | | N | 229 | 229 | 229 | 229 |
| | AB | Correlation Coefficient | .049 | .099 | .162* | 1.000 |
| | | Sig. (2-tailed) | .463 | .133 | .014 | . |
| | | N | 229 | 229 | 229 | 229 |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | |

To check the assumption of proportional odd, the following step by step procedures were needed. The first step determining which link function to use. The link function to use for this data was determined according the following table.

There are many of the link function which is a transformation of the cumulative probabilities that allows estimation of the model. Five link functions are summarized in Table 4.8 Staus 2008(as cited in Elsayed ELAMIR &Hassan SADEQ, 2010).

Table 4.2
Link function and its typical application

| Function | Form | Typical application |
|---|---|---|
| Logit | Log $(1-x)$ | Evenly distributed categories |
| Complementary log-log | $\log(-\log(1-x))$ | Higher categories more likely |
| Negative log-log | $-\log(-\log(x))$ | Lower categories more likely |
| Probit | $f^{-1(x)}$ | Variable is normally distributed |
| Cauchit (inverse Cauchy) | $\tan(\pi(x-0.5))$ | Variable has many extreme values |

# Source: ElsayedElamir&HassanSadeq, 2020)

In order to determine the link function is appropriate for the data, we used a bar graph to know the distribution of the frequency of dependent variable responses. As we observe from the following bar graphs, the responses mostly crowded in to the lower values (i.e., strongly disagree, and disagree). Therefore, as the above Table 4.2 shows, when variables are more likely to the lower values, the recommended log function is negative log-log. For more information and understanding we can observe the following bar graph.

Table 4.5: Test of Parallel Lines

Table 4.4
Pseudo R-Square

| | |
|---|---|
| **Cox and Snell** | **.474** |
| Nagelkerke | .475 |
| McFadden | .103 |
| Source: SPSS result, 2020<br>Link function: Negative Log-log. | |

Table 4.3
Model Fitting Information

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|---|---|---|---|---|
| Intercept Only | 1428.777 | | | |
| Final | 1395.165 | 33.612 | 4 | .000 |

Below Table 4.4 the middle itemNagelkerke refers 0.473(47.3%) the proportion of

variation were the only explained by the given independent variables. The remaining (53.7%) proportion of variations for the given independent variable is other unidentified variables or variable those are not included in this study.

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|---|---|---|---|---|
| Null Hypothesis | 1395.165 | | | |
| General | 1206.333[b] | 188.832[c] | 104 | .000 |
| Source: SPSS result, 2021 | | | | |

As per the above table 4.5 indicates the proportional odd is violated at p = 0.000, which is significant at p ($p < 0.05$). The chi-square statistic is the log-likelihood difference between the two models. If the lines or planes are parallel, the observed significance level for the change should be large ($p > 0.05$) since the general model doesn't improve the fit very much and the parallel model is inadequate. Therefore, the assumption of proportional odd is violated. The alternative was using the generalized ordered logit instead as stated in the methodology part.

# Generalized ordered logistic regression result

Since the assumption of proportional odd is violated, it is advisable to use general ordered logit than the ordinal logit.Liu, Xing and Koirala, Hari2012 states that proportional odd model or test parallel line assumed to be the same across the categories of the ordinal dependent variable. This means that for each predictor, the effect on the odds of being at or below any category remains the same within the model. This restriction is referred to as the proportional odds or the parallel lines, assumption.It is misleading and invalid tointerpret results if this assumption is not tenable.The generalized ordinal logit modeldeveloped by Fu (1998) and William (2006) (as cited inLiu, Xing and Koirala, Hari2012) relaxes the PO assumption by allowing the effectof each explanatory variable to vary acrossdifferent cut points of the ordinal outcomevariable without data restructuring. Hence, to reach in a better prediction generalized ordinal logit model was employed in the study. Therefore, generalized ordered logit was employed and the output with itsinterpretation is given below.

As appendix IV indicates, a total of 229 cases were entered in to SPSS version 20 and all cases are processes and included to give meaningful information and knowledge.

As appendixV shows the total model information. The dependent variable was employee's job security (EJS), and the data was normally distributed. The link function was identity.

# Test of Model fitness

To test the model fitness the omnibus test (Table 4.12) and good of fit (table 4.13) were employed and according the result implication the models are fitted well.

Table 4.6

Omnibus Test[s]

| Likelihood Ratio Chi-Square | Df | Sig. |
|---|---|---|
| 27.586 | 4 | .000 |
| Dependent Variable: EJS<br>Model: (Intercept), ATM, MB, IB, AB<br>a. Compares the fitted model against the intercept-only model. | | |
| **Source**: SPSS result, 2021 | | |

Before analyzing the effects of each explanatory variable in the model, determiningwhether the model improves the ability to predict the outcome is the first task in ordinary regression model. This is done by comparing a model without any explanatory variables (the baseline or „Intercept Only model) against the model with all the explanatory variables. This compared with the final model against the baseline to see whether it has significantly improved the fit to the data. The Model fitting Information (Omnibus test)Table 4.6 gives the, the likelihood ratio chi square. The significant likelihood ratio chi-square statistic (*p<.0005*) indicates that the Final model gives a significant improvement over the baseline intercept-only model. This ensures that the model gives better predictions than if you just guessed based on the marginal probabilities for the outcome categories.

Table 4.7
Goodness of Fit

| Deviance | Value | Df | Value/df |
|---|---|---|---|
| | **75.800** | **224** | **.338** |
| Scaled Deviance | 229.000 | 224 | |
| Pearson Chi-Square | 75.800 | 224 | .338 |
| Scaled Pearson Chi-Square | 229.000 | 224 | |
| Log Likelihood[b] | -198.343 | | |
| Akaike's Information Criterion (AIC) | 408.686 | | |
| Finite Sample Corrected AIC (AICC) | 409.065 | | |
| Bayesian Information Criterion (BIC) | 429.289 | | |
| Consistent AIC (CAIC) | 435.289 | | |
| Dependent Variable: EJS<br>Model: (Intercept), ATM, MB, IB, AB | | | |
| a. Information criteria are in small-is-better form. | | | |
| b. The full log likelihood function is displayed and used in computing information criteria. | | | |
| Sourece: SPSS result, 2021 | | | |

As the above Table 4.7 good of fit indicates, Akaike's and Bayesian information criterion refers the amount of information lost in predicting the predicted variable. Practically, they are used in model selection, when someone needs to select one model from two or more than two model alternatives. The small in AIC and BIC are selected in case of more than one models. Guajarati (2004) AIC and BIC with less values are good measures of model fit.The deviance, scaled deviance, Pearson chi-square and scaled Pearson chi-square are measures of model fitness. If their value is closer to their degree of freedom, it is said to be better fitted model. The value of scaled deviance and scaled Pearson chi- square are closed to their degree of freedom (229& 224). Therefore, the model fits in a better way.

# Parameter Estimation

The objective of using regression, either linear or non-leaner is to estimate the effect of independent variables (X variables) over the dependent variable (Y variable). Likewise, the during the study generalized ordinal logistic regression was employed to estimate dependent variable by the effect of independent variable.

Table 4.8
Parameter Estimates

| Parameter | B | Std. Error | 95% Wald Confidence Interval | | Hypothesis Test | | | Exp(B) | 95% Wald Confidence Interval for Exp(B) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Lower | Upper | Wald Chi-Square | Df | Sig. | | Lower | Upper |
| (Intercept) | 4.298 | .5037 | 3.311 | 5.285 | 72.806 | 1 | .000 | 73.553 | 27.405 | 197.405 |
| ATM | − .172 | .0905 | − .349 | .005 | 3.613 | 1 | .047 | .842 | .705 | .995 |
| MB | − .392 | .0962 | − .581 | − .204 | 16.617 | 1 | .000 | .676 | .560 | .816 |
| IB | .212 | .0883 | .038 | .385 | 5.738 | 1 | .017 | 1.236 | 1.039 | 1.469 |
| AB | − .082 | .1008 | − .279 | .116 | .654 | 1 | .419 | .922 | .756 | 1.123 |
| (Scale) | .331[a] | .0309 | .276 | .398 | | | | | | |
| Dependent Variable: EJS<br>Model: (Intercept), ATM, MB, IB, AB | | | | | | | | | | |
| a. Maximum likelihood estimate. | | | | | | | | | | |

Source: SPSS result, 2021

The above Table 4.8 indicates the parameter estimates of the independent variable to the independent variable. Parameters, standard error, beta values, 95% Wald confidence interval, hypothesis test, exponent and 95% Wald confidence interval for exponent are listed under the table. The B (beta values indicates the effect of each independent variable on the dependent variable.

When we put it mathematically, it yields this type form.

Employees job security (EJS) =-172ATM − .392MB+.212IB − 0.082AB

The implication of this form is as follows:

A one unit increase in ATM will probably lead to decrease employee's job security by 0.172 holding other variables remain constant. A one unit increase in MB will probably cause 0.392 decreases in employee's job security holding other variable remain constant. A one unit increase in IB will probably cause 0.212 increases in employee's job security holding other variables remain constant. A one unit increase in AB will probably cause 0.082 decreases in employee's job security holding other variables remain constant. As per the above table, the odd ratio (exponent) indicates the predicted change in odds for a unit increase in a predictor. Therefore, a one unit increase in ATM corresponds to decrease the predicted change of odds of employee's job security by 0.842. A one unit increase in MB corresponds to decrease the predicted change of odds of employee's job security by 0.676, a one unit increase in IB leads to increase to the predicted odds of employee's job security by 1.236 and a one unit increase in AB corresponds to decrease the predicted

odds of employee's job security by 0.922. We can express the change of the odds (exponents) in percentage, by subtracting one and multiplying by 100. The percentage change of decrease in the odds of predicted variable EJS is 15.8% (1-0.842)*100 as one unit of ATM increases. A one unit increase in MB corresponds to decrease the change of the odds ratio of EJS by 32.4% (1-0.676)*100. A one unit increase in IB corresponds to increase the change of the odds of EJS by 23.6%( 1-1.236)*100 and a one unit increase in AB corresponds to decrease the change of the odds ratio of EJS by 7.8%( 1-0.922)*100. As the odds ratio indicates MB has a great predicting power by decreasing the change of the odds ratio of EJS by 32.4% and IB has a great predicting power by increasing the change of the odds by 23.6% and AB has a less predicting power by decreasing the change of the odds ratio of the predicted variable (EJS) by 7.8% only. In addition to this odd ratio greater than one indicates the predicting power is increasing. Hence, except IB, where its odd ratio is greater than one (1.236), the remaining independent variables (i.e. ATM, MB and AB) have a decreasing effect on the change of odds ratio of the predicted variable.

When we interpret the exponent (odds ratio) with 95% confidence interval, it gives such type of meaning. A unit change in ATM has a decreasing effect in the change of odds ratio of employee's job security with 95% confidence interval within the range of (0.705–0.995). In relation to MB, a unit change in ATM has a decreasing effect in the change of the odds ratio of employee's job security with 95% confidence interval within the range of (0.560–0.816). Regarding IB, a one unit increase in IB has an increasing effect in the change of the odds ratio of employee's job security within the range of (1.039–1.469), and a one unit increase in AB, has an increasing effect in the change of the odds ratio of employees job security certainly sure with a confidence interval in the range of (0.756–1.123). If the odds ratio has a decreasing effect, it cannot be greater than one, unless the odd ratio is insignificant. Hence since the confidence interval of the odd ratio of AB is in the range of (0.756–1.123), the odd ratio of AB is insignificant.

Wild chi-square with its significance level indicates the probability of the null hypothesis that is the coefficient of the independent variables is zero. According Argesti (2010), if the Wald chi-square is significant at the critical level (0.05), we reject the null hypothesis (i.e., the coefficient of predictors are zero). When we see the significance of the predictors, ATM has a Wald chi-square of 3.613, significant at $p = 0.047$ at ($p < 0.05$). MB has a Wald chi-square of 16.617 and significant at $p = 0.000$ ($p < 0.005$). IB has a Wald chi-square of 5.738 and significant at $p = 0.017$($p < 0.05$), and AB has a Wald chi-square of 0.654 and insignificant at p = 0.4l9 ($p < 0.05$). To conclude since ATM, MB and IB are significant the null hypothesis that states the coefficient of estimators is zero (omnibus test) is rejected. But in the case of AB, the null hypothesis is accepted since it is insignificant at the critical value (0.05)

As table 4.14 shows, standard error measures the variation from the estimator and the level of precision. An estimator with less standard error shows high precision. The estimators have ATM, MB, IB and AB have a standard error of 0.0905, 0.0962, 0.0883, 0.1008 respectivly. Relatively, AB is the insignificant estimator has a less precision. The Wald 95% confidence interval of the above table shows, the boundary or the range at which the Wald lies at 95% confidence interval or at 5% error. Consequently, the Wald of ATM lies in the range of -0.349 up to 0.05, MB lies in the range of -581 up to -0.204. IB lies within the range of 0.38–0.385 and AB lies in the range of -0.279 up to 0.116.

# Hypothesis Testing

Four hypotheses were developed and the hypothesized statements were tested based on the level of significance result of the ordinal regression parameter estimate output model.

**$Ho_1$**

ATM has no significant effect on employee's job security.

The first hypothesis stated that ATM has no significant effect on employee's job security. But the regression model result shows ATM is significant at p = 0.047(P < 0.05). Therefore, based on this the first null hypotheses was rejected and the alternative hypothesis is accepted.

**$Ho_2$**

Mobile banking has no significant effect on employee's job security.

The second null hypothesis hypothesizes that mobile banking does not have significant on employee's job security. Then to either accept or reject, looking its p value is enough. The p value (significance level) for mobile banking was 0.000. Hence, mobile banking is significant at p = 0.000(p < 0.001 and 0.05) consequently the null hypothesis is rejected and the alternative hypothesis is rejected.

**$Ho_3$**

Internet banking has no significant effect employee's job security.

Regarding the third hypothesis the hypothesized null statement states internet banking has no significant effect on employee's job security, whereas internet banking is significant at p = 0.017(p < 0.05). Therefore, the null hypothesis is rejected, contrarily, the alternative hypothesis is accepted.

**$Ho_4$**

Agent banking has no significant effect on employee's job security.

The fourth null hypothesis hypothesizes that agent banking has no significant effect on employees job security. Hence, similarly, it is better to observe the significance level of the variable. The level of significance for this variable was 0.419. Hence, the variable is insignificant at p = 0.419(p > 0.05&0.1). Hence, the null hypothesis is accepted and the alternative hypothesis is rejected

Table 4.9
**Summary of Hypothesis Test**

| No | Hypothesized effect(HO) | Actual value | Selection Criteria at critical alpha(0.05) | Decision |
|---|---|---|---|---|
| 1 | ATM = 0 | 0.047 | Sig at p(< 0.05) | Accepted |
| 2 | MB = 0 | 0.000 | Sig at P(< 0.05) | Accepted |
| 3 | IB = 0 | 0.017 | Sig at P(< 0.05) | Accepted |
| 4 | AB = 0 | 0.419 | Insig at P(< 0.05) | Rejected |

## Discussion

Notwithstanding, there are insufficient literature, regarding the research title, the researcher tried to discuss in comparison to the findings of previous available research journals and articles as much as possible. The finding of the study partly confirms the study of Abdullah and Ahmad (2015), who concluded that ATM machine and internet banking affects negatively employee's job security, whereas telephone banking does not have empirical evidence. Contradicting to their finding, in this study internet banking positively affects employee's job security. But mobile banking (telephone banking negatively affects the employee's job security as per my finding.

The study also confirms the finding of Atiku et al., (2011) and Shahryar et al., (2017), who concluded that using electronic banking leads to loss of job and early retirement. The result of these study complements withTeju, &Mushtaq (2015) states that supervisors will need to pay close attention to the impact of e-banks on the traditional banks, for example by surveillance of strategy, customer levels, earnings and costs, advertising spending, margins, funding costs ,merger opportunities and threats. The finding of the corroborates the finding of Pham (2010) electronic banking will continue mushrooming and this trend may impact the future traditional bank. The finding of my study has not consistent with the study of (2019) adoption of electronic banking could not lead to job loss and job insecurity.

## Conclusions

ATM machine is one among the widely used banking technology. It has many advantages for customers and banks. Irrespective of its benefits it has the following effects on employee's job security. ATM has a negative effect on employee's job security. One unit of ATM increase leads to a probable decrease of employee's job security by 0.172. Mobile banking also has a negative effect on employee's job security. As the parameter estimate model indicates, a one unit increase in mobile banking will probably lead a decrease of 0.212 employee's job security. A one unit increase in internet banking technology service consequently has a probably increasing effect on employee's job security by 0.212. Agent banking has a positive effect. As agent banking increases by one unit, it probably decreases by 0.082 in employee's job security.

**Managerial Implication**- The finding of the study warns for managers of the banking industry as well as the government, who is responsible in balancing the labor market and employment condition of a state to design in advance strategies to reduce the social crisis that could emanate because of being joblessness. In addition to this, the finding of the study tells for managers of the banking industry to design best human resource management strategies such as early retirement and voluntary turnover of their employees to reduce the large effect that could result later as a result of electronic banking.

**Theoretical Implication**- Basically, since electronic banking is young in age there are not theories concerning the problem. Therefore, the role of the finding of the research in relation to theoretical contribution to giving new insights and findings regarding the effect of electronic banking on employee's job security that could lead to the development of new theory through digging in detail with coming other researchers.

**An idea for Future Research**- The research problem that is the effect of electronic banking technologies on employee job security is unobserved and untouched. Therefore, we strongly recommend for future researchers to see it again. And investigating the research problem through using time series method to estimate the future prospects of the research problem.

# Abbreviations

AIC
Akaike's Information Criterion
ATM
Automated Teller Machine
BIC
Bayesian Information Criterion
CBE
Commercial Bank of Ethiopia
DF
Degree of Freedom
E- Bank
Electronic Banking
E-business
Electronic Business
EBPP
Electronic Bill Presentment and Payment
EFT
Electronic Fund Transfer
EJS
Employees Job Security
EPRDF
Ethiopian People's Revolution Democratic Front
EU
European Union
FDIC
Federal Deposit Insurance Corporation
FTC
Federal Trade Commission
IBS
Internet Banking Transfer
ICT
Information Communication Technology
ISHOPA
Imperial Saving Home Ownership Public Association
IT

Information Technology
M-banking
Mobile Banking
MET
Money Electronic Transfer
MICR
Magnetic Ink Character Recognition
NBE
National Bank of Ethiopia
OR
Odd Ratio
PC
Personal Computer
PIN
Personal Identification Number
RBI
Run Batted In
ROI
Return on Investment
SIM
Subscriber Identity Module
SMS
Short Message Service
SNNPRS
Southern Nation’s Nationalities Peoples and Regional States
SPSS
Statistical Package for Social Science
TB
Tele Banking
WAP
Wireless Application Protocol
W.W.W
World Wide Web

## Declarations

Ethical Approval and Consent to Participate The researcher applies all ethical principles during data collection period. All participants were asked thier consent, the instrument was anonymaized, and respnse was used for research purpose only.

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## Figures

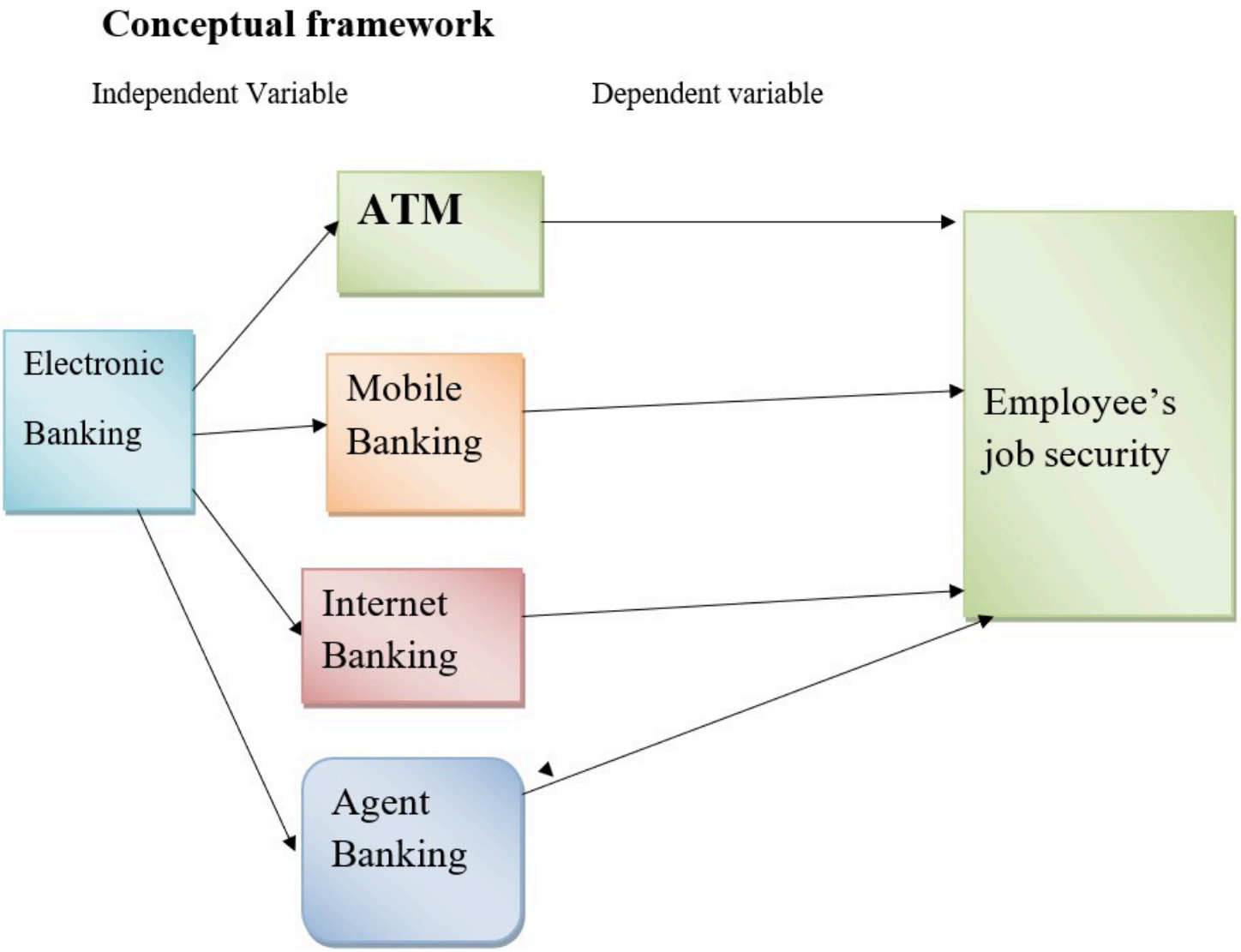



**Figure 1**

Figure 2.1:conceptualframeworks: Adopted from Abdullah and Ahmad (2015) with some modification by the researcher

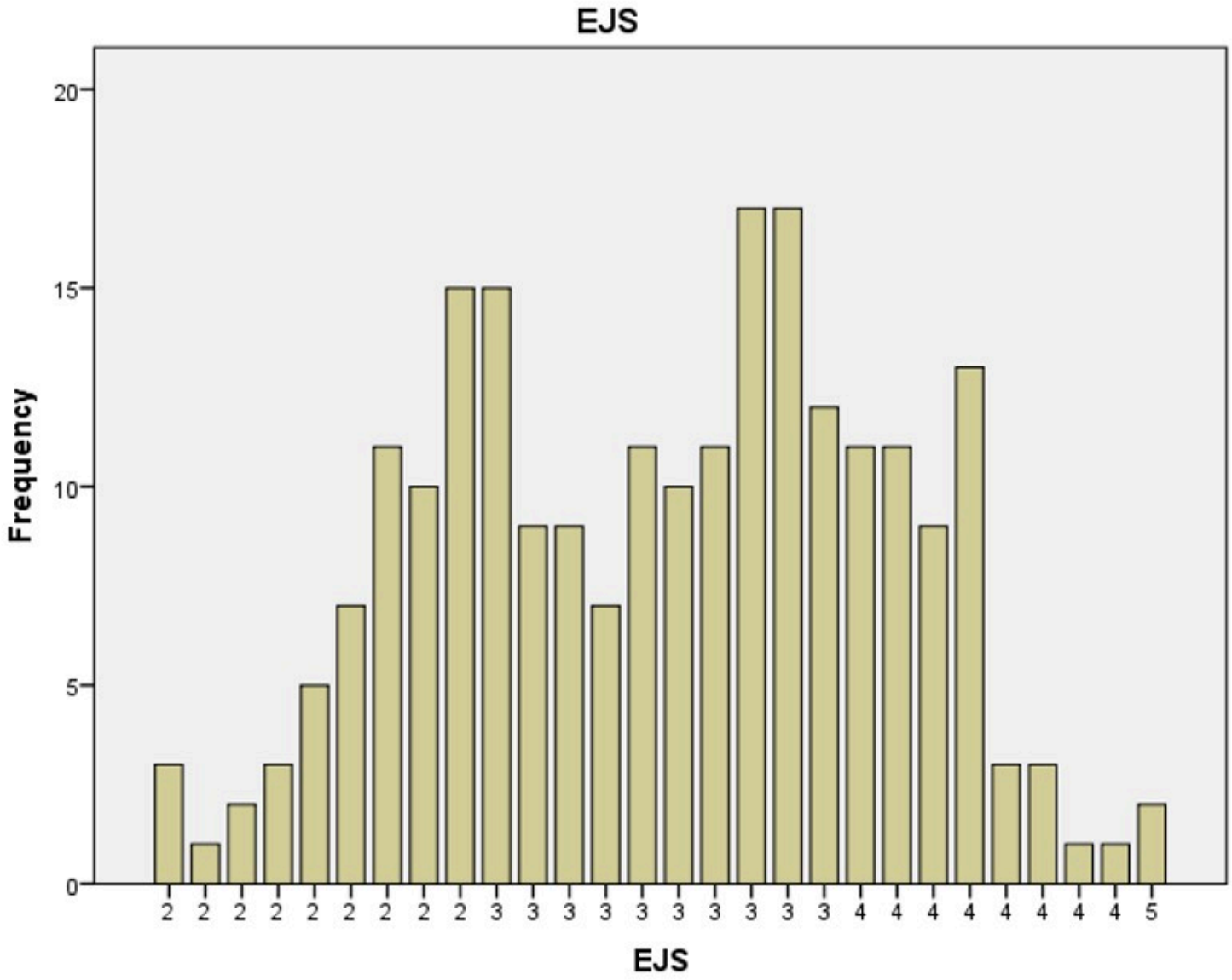



**Figure 2**

Figure 4.1:the distribution of EJS