

Factors Affecting the Use of ICT Services in Commercial Bank of Ethiopia: The Case Study of Southern Regional State in Hossana Town Branches

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Case Study

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ABSTRACT

ICT has brought unprecedented changes and transformation to banks such as online banking, mobile banking, branch networking, automated teller machine (ATM) and Point of sale services. In Ethiopia, in particular to the government-owned Commercial Bank the lack of assistance of employee to its customers on ICT enabled-services and resistance within them hamper its slow adoption. Thus, the purpose of the study is to identify factor affecting customers and employees usage of ICT services in selected branches of commercial banks in Hossana town branches. The study employs descriptive research design and both qualitative and quantitative methods were used. Using structured questionnaires, observations and personal interview, the data were collected from 192 samples which were selected by employing availability, convenient and purposive sampling techniques. In order to achieve the research objective descriptive and econometrics (ANOVA, pears correlation and multiple regression models) were employed for data

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analysis. The result of multiple regression model revealed that gender and marital status had no influence on the use of ICT services; there was a positive relationship between the age, education level, occupation, security concern, system quality and experiences of the respondents with the use of ICT services. The study confirmed that lack of computer literate professionals, high cost of internet, power interruption, security risk, system quality risk, poor internet connectivity, lack of ICT skilled employees and customers are a major factors that affect Information and Communication Technology services in the banks. Thus, it has been recommended that Commercial Bank of Ethiopia should give additional emphasis to reliability, responsive and transaction efficiency to increase the awareness of customers and employees to use ICT services.

Keywords: ICT adoption; technology use; communication; effectiveness of employees and customers of Ethiopia commercial banks.

1. INTRODUCTION

1.1 Background of the Study

Generally in today's world, ICT has taken a wide lead in the operation of businesses and made the world one global village. ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer network hardware and software, satellite systems as well as the various services and applications associated with them, such as videoconferencing and distance learning Tavares [1].

Studies have showed that most banks in developed and some in developing parts of the country are now offering e-banking services with various levels of sophistication Garau [2]. Thus given almost complete adoption of e-banking in developed countries, but the reason for the lack of such adoption in developing countries like Ethiopia there is no success of e-banking.

Mesay [3] in Ethiopia banking sector, customers perceive very little difference in banking products offered by banks dealing in services as any new offering is quickly matched by competitors. There is customer's dissatisfaction over the service offered and the available services don't match the expectation of the customer. Every bank customers and Employees are highly dissatisfied by the disappointing status of Ethiopian commercial bank branches. Hence, there has been a need to conduct the study in order to assess the impact of ICT services used in Ethiopian Bank and the challenges with its implementation.

1.2 Objectives of the Study

The study is conducted with the following objectives.

- To identify factor affecting customers and employees usage of ICT services in

selected branches of commercial banks in Hossana town branches.

- To investigate the effective use of ICT services in the perspective of bank employee and customers.
- To examine the attitude of users towards ICT banking.

2. RELATED STUDIES

2.1 Adoption of ICT in Commercial Bank of Ethiopia

Commercial Banks provide all the banking services/facilities including ATM, Internet Banking, Telephone Banking, SMS banking or Mobile Banking and others beside the traditional banking activities. Electronic banking in Ethiopia is facing lot of challenges due to lack of software, awareness, fear of risk and lack of trained persons in the key organizations Grad chew Worku [4]. The sole provider of ICT service of the country, Ethiopian Telecommunication Corporation, newly called Ethio-telecom, has received a monopoly license from the regulator, the Ethiopian Telecommunication Agency (ETA) for efficiency and quality service requirement and infrastructure expansion targets Adam [5].

2.2 Attitudes of Users towards ICTs Services

According to Spacey et al. [6] positive attitudes are fundamental in the acceptance, implementation and success of the new technology. Tibenderana [7] argues that one's attitude influences behavioral intention to use, and subsequently actual use, and can affect the way in which one uses the facilities. In other words, if ICTs are easy to use and also perceived to be useful in helping individuals to get their needs met, those individuals' perceptions and attitudes towards ICTs are most likely to be positive Prisca [8].

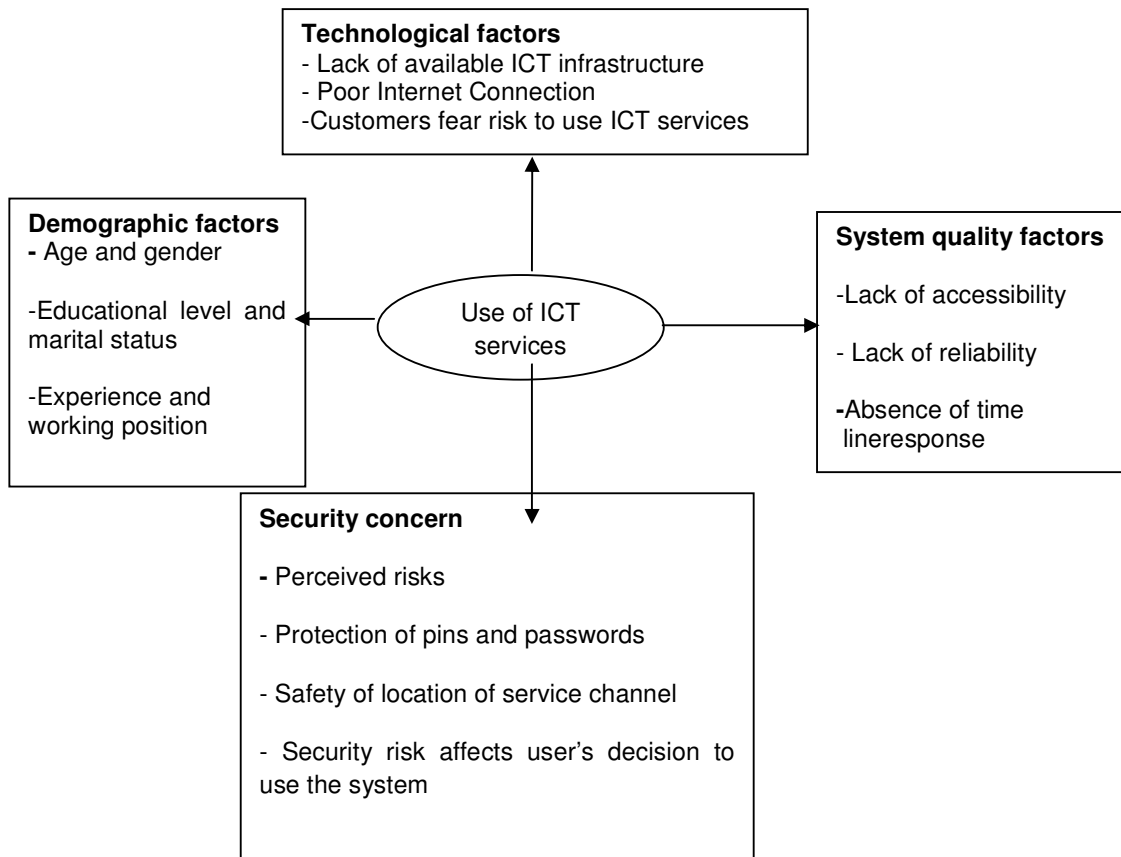


Fig. 1. Conceptual framework of the study

Donat et al. [9] found that the same variables above, such as gender, age and education proved to be major determinants of attitudes patterns among users of commercial banks ICTs facilities. The study found that young people were more likely to have positive attitudes towards ICTs than adults who were prone to change and learning new things. The author also found that educated people were most likely to have positive attitudes towards ICTs than those with less or without formal education.

2.3 Conceptual Framework of the Study

Fig. 1 Show that the study considered the dependent variable to be ICT use by bank customers and employees which was influenced by independent variables which are; demographic factors, technological factors, system quality and Security Concern factors. It was expected that the above mentioned variables will greatly affect ICT use or lack of ICT use in the banking industry. The conceptual framework depicts the relationship between the independent and dependent variables.

3. METHODOLOGY

3.1 Research Design and Methodology

The research design used for this study is a mixed method research approach. A mixed methods research design is a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative methods in a single study or a series of studies to understand a research problem. According to Creswell [10], mixed method research is based on pragmatic world view or knowledge claim, i.e., it is consequence-oriented, problem-centered, and pluralistic.

3.2 Data Sources and Sampling Techniques

Both Primary and secondary data were used. The primary data were gathered through questionnaires, Observations & interview. While secondary data were gathered and retrieved from previous empirical studies based on articles, journals and bank annual report. The

Populations of the study were the employees and customers of selected Commercial bank of Ethiopia in hosanna town branches.192 respondents sample out of the total 203 respondents were selected by using availability, purposive and convenient sampling techniques.

3.3 Data Collection Methods and Analysis

The researcher used interviews, observations and questionnaires for data collection. In the study descriptive and inferential method of data analysis (Multiple Regression) were employed depending on the nature of the variables to be investigated.

4. RESULTS AND DISCUSSION

Demographic characteristics of respondents was identified using frequencies and percentages to determine which respondents are male or female, which age group between 20 or below, between 21-31, between 32-42and 43 or above, which educational level, certificate, diploma, degree, masters, PhD and others , was identified as demographic characteristics.

The data was analyzed using Statistical Package for the Social Sciences (SPSS) version 20 and presented through frequency tables, percentage and charts. The hypothesis test was presented using inferential statistical procedure and method through multi-collinearity test, pears correlation, ANOVA, and multiple linear regression model.

4.1 Limitations to Customers' Usage of Their Banks ICT Facilities

From Fig. 2, 40% of respondents think that low internet connectivity is the worst problem, 23.08% of respondents said high cost of internet, 13.85% of respondents said scarcity of E-work force, and 10% said that low tele-density and while, 13.08% of the respondents was considered Security as the worst limiting factors to utilize ICT facilities.

4.2 Bank Employees' Data Analysis

As reflected in Fig. 3, 56.4% of employee said that branch networking is most important for their banks to give good service, 17.74% of respondents said that ATM, 12.90% of respondents said that POS, 8.065% mobile banking and 4.8% of respondents said that internet banking is least important for their bank to give good service. The result indicates that most of the customers in the commercial bank branch use branch networking to access their deposits from the bank. Also the least one is mobile banking to give success service.

4.3 Limitations to Banks Employees' ICT Usage

From the table, 50% of respondents said that low internet connectivity is worst affecting factor of ICT service, 14.5% of respondents said low tele density and 16.1% said lack of financial

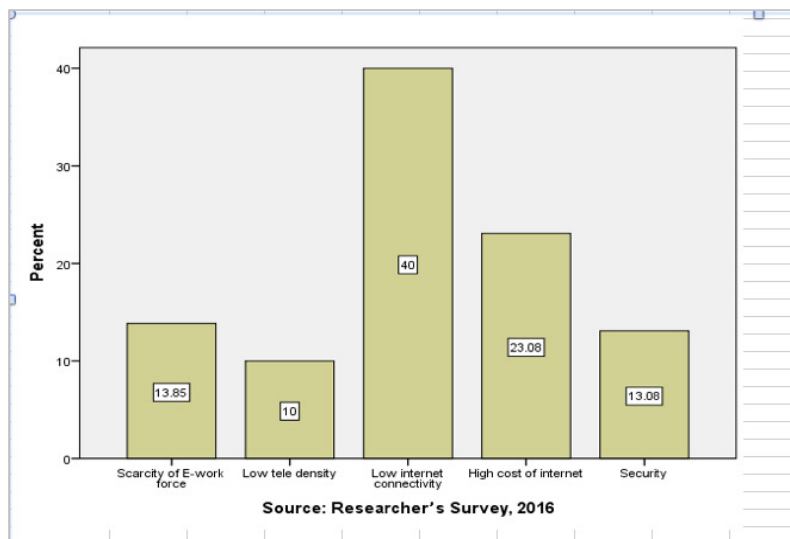


Fig. 2. Factors that affecting capability of users to use ATM, branch networking, online banking, mobile banking and point of sale/POS

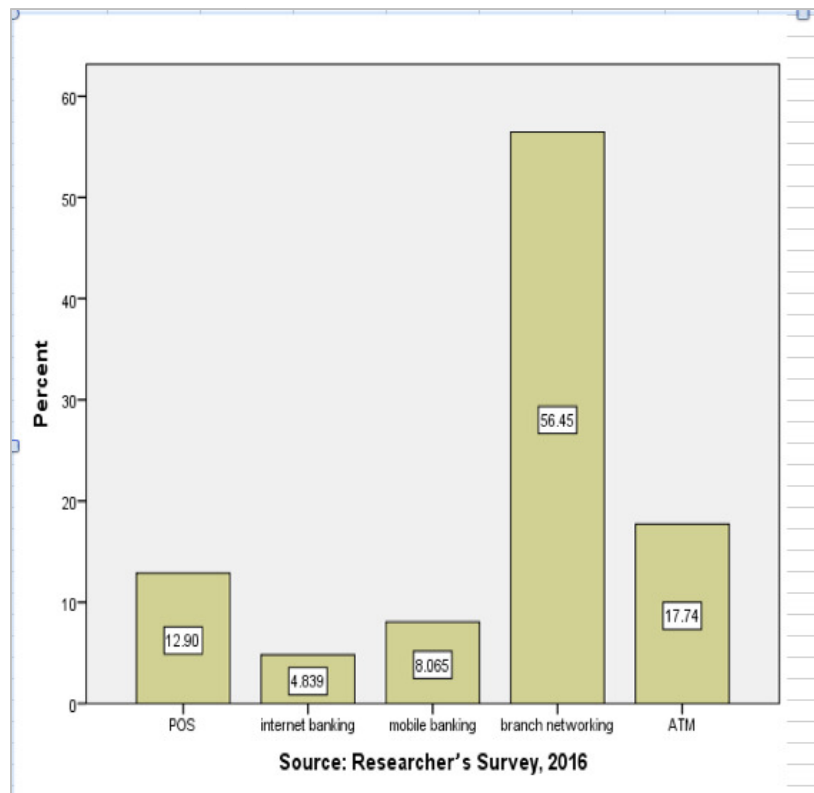


Fig. 3. The most important ICT facilities for the effectiveness of employees and customers

Table 1. Factors affecting the use of ICT in rendering quality services to its customers

Factors	Frequency	Percent
Lack of financial networks that links different banks	10	16.10%
Low tele-density	9	14.50%
Low internet connectivity	31	50%
High illiteracy rate	8	12.90%
Security	4	6.50%
Total	62	100%

networks that links different banks, 12.9% of respondents said high illiteracy rate, and while, 6.5% of the respondents was considered Security as the least affecting factor.

4.4 Attitude of Users towards ICT Banking

- Using ICT reduces cost than traditional service delivery
- Attitude of users is based on gender, age,

education, and occupation.

- Young people have more positive attitudes towards ICTs than adults who change and learning new things.
- Educated people mostly have positively attitudes towards ICTs than those without formal education.
- Employees are more positively attitude towards ICT than unemployed.

4.5 Multiple Regressions Analysis

The assumptions for multiple linear regressions are largely the same as those for simple linear regression models. Regression is an analysis (estimation of parameters of a model and statistical test of their significance) of the adequacy of a particular functional relationship.

The disperse plot of residuals shows no large difference in the spread of the residuals as you look from left to right on Fig. 4. This result suggests the relationship we are trying to predict is linear. Also if fulfills homoscedasticity because the scatter plots are equally in vertical slices and its shape of scatter plots should be like a tube.

From the Fig. 5 the result of the histogram shows that the mean is $-1.04E-16$ with standard deviation of 0.980 of 130 participants from total of 192 respondents. From the histogram frequency distribution of the standardized residuals compared to a normal distribution. Some residuals are around zero and some are away from the curve, few of the residuals are fairly close. The histogram like bell shaped which shows residual are normally distributed. Thus, no breaking of the assumption normally distributed error term. From the above multiple linear regressions model both customers awareness and employee's effectiveness to use ICT services full fills the same assumption of the models.

From the Table 2. Coefficient analysis shows the relationship between dependent variable and independent variables. According to Sig. value of age is 1% significance, educational level is 5% significance, occupation is 10%, security concern is 5%, system quality is 5% significance level in agreement with the hypothesis. Which means; independent variables have great contribution to improve customers awareness to use technology in the banks. Once again the beta coefficient which is -0.141 indicates the existence of negative relationship b/n variables. Whereas the sig. value of gender, and marital status,) values is greater than 0.05 and conclude that the variable has no significant impact on customers and employees awareness to use ICT.

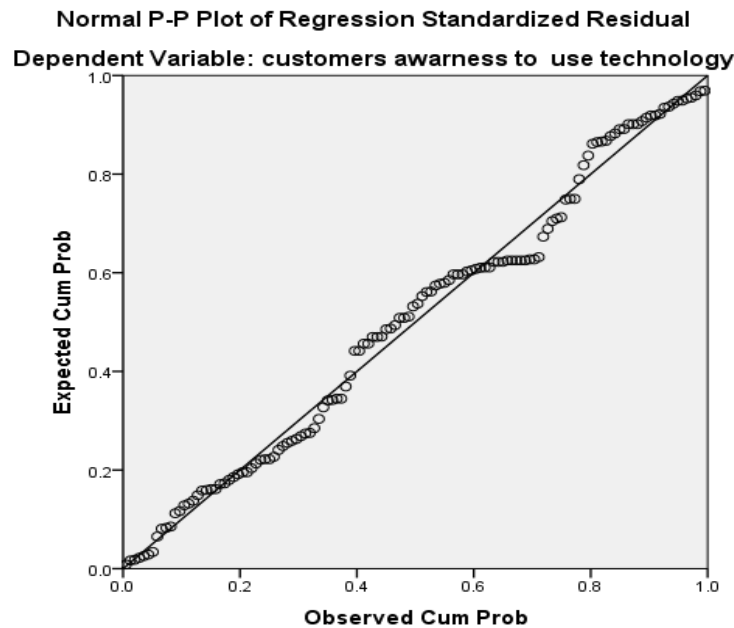


Fig. 4. Linearity and homoscedasticity normal point plot of standardized residual

Table 2. Regression coefficient analysis of the model based on Beta's

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Err	Beta		
(Constant)	1.87	0.403		4.6	0
Gender	0.116	0.172	0.061	0.67	0.504
Age	0.261	0.101	0.299	2.5	0.011
marital status	-0.2	0.169	-0.141	-1.2	0.217
Education level	0.39	0.042	0.083	0.94	0.034
Occupations	0.148	0.079	0.176	1.8	0.064
Security concern	0.221	0.163	0.145	2.04	0.02
System quality	0.132	0.162	.051	0.56	0.03

a. Dependent Variable: customers and employees awareness to use ICT services

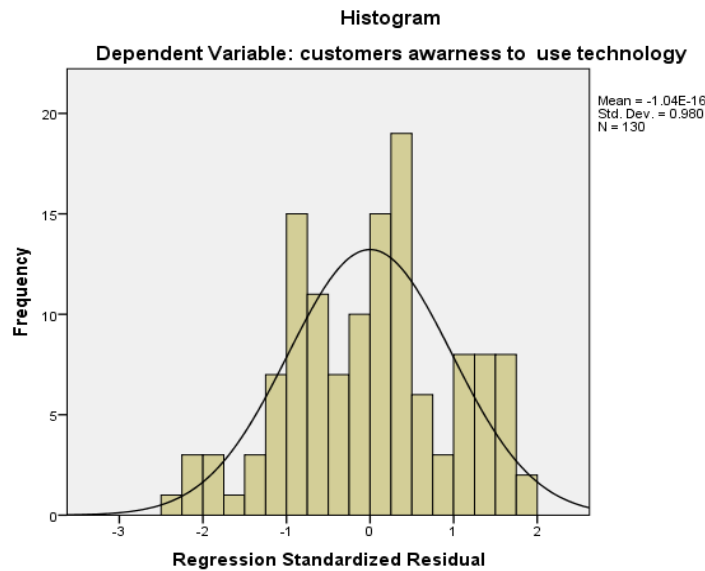


Fig. 5. Frequency of normally distributed standardized residual

5. CONCLUSION AND RECOMMENDATIONS

In the light of the above finding, it has been concluded that Lack of ICT knowledge and skills professionals, high cost of internet, power interruption, security risk, system quality risk and poor internet connectivity are a major factors that affect use of ICT. Moreover, the result of multiple regression revealed that gender and marital status of employees and customers affects the use of ICT services negatively. While education level, occupation, security concern and system quality affects the use of ICT service positively in commercial banks in Ethiopia. Thus, Gender and marital status of employees and customers negatively correlated with the use of ICT service while education level, occupation, working experince, security concern and syatem quality positively correlated with the use of ICT services. With this, the authors recommends that Commercial Bank of Ethiopia should give additional emphasis to reliability, responsive and transaction efficiency to increase the awareness of customers and employees to use ICT services. Thus, they should work with improved that communication linked between the internet service provider to resolve service interruptions and minimize the burden of the consequences of unreliable services.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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