Factors Affecting the E-Banking User Acceptance in Jomhouria Banks in Libya

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Abstract-The paper focused on investigating the impact of factors that are believed to have a great effect on e-banking user acceptance in Jumhouria Bank, one of the biggest banks in Libya. The research will try to find out the reasons behind the reluctance of e-banking usage among customers in ten branches of Jumhouria banks in different four cities. The previous studies made in studying the factors affecting e-banking user acceptance in Libyan banks in general are considered low, the researcher focused on results of these few studied made on Libyan banks in addition of other studies made in other countries to try to identify and extract the important factors affecting banking in general. The findings of study will be used in the future to benefit both the bank and the customers. These findings shows that there is a significant relationship between the study independent variables which are: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Information Technology Beliefs (PITB), Task Technology Fit (TTF), Website Features (WF) and Website Security (WS) on the dependent variable E-Banking User Acceptance (EUA) by using Intention to Use the technology (IU) as a Mediator variable. These findings shows that five hypotheses were supported and variables achieved P- value between 0.000 to 0.005 and one hypothesis was not supported.

Keywords—E-banking user acceptance, Perceived ease of use, perceived usefulness, website features, website security and Perceived Information Technology Beliefs.

INTRODUCTION

Electronic banking provides its customers a fast and hassle-free services in order conduct many banking transactions anytime and anywhere. Customers nowadays can save time for travel and line in queues to pay their bills or to get bank statement or any other many banking services [1]. Unfortunately, despite of the numerous benefits from internet banking, the acceptance of electronic banking in Libya is relatively low compared to other countries. New technological developments and the corresponding increase in ICT demands in the banking sector have enhanced the banking services quality all over the globe, and Libya is no different. It has thus become a must to adopt suitable steps to urge the engagement of Libyan banks in the global economy to achieve an equal footing with international banks via reformulation strategies and policies, assisted by sophisticated and extensive adoption of e-banking. This is expected to improve the service and competitiveness level of Libyan banks both at home and abroad [2].

PROBLEM STATEMENT

Jumhouria bank has recently considered the benefits of E-banking technology in improving productivity and efficiency. And since then, the bank has succeeded to involve many latest technology e-banking services among its existed services, but the issue is that the number of customers who use these great e-banking services still very low compared to the total number of the bank customers.

Accordingly, there is a big need for Jumhouria Bank to find a way to enhance and improve the customers trust and satisfactions in the online banking services provided by knowing the real factors causing the low number of customers using these E-banking services. Accordingly, the result will be huge for both bank and customers, because the bank will be more profitable since involving a better and efficient e-banking system among the existing banking services will attract a greater number of customers and be more confident to adapt these electronic services which in return will save the time, cost and efforts for customers than using the old-fashioned bank services [3].

RESEARCH OBJECTIVE

The main objective of this paper is to investigate the effect of the factors: Perceived Usefulness (PU),

Perceived Ease of Use (PEOU), Perceived Information Technology Beliefs (PITB), Task Technology Fit (TTF), Website Features (WF) and Website Security (WS) on the dependent variable E-Banking User Acceptance (EUA) by using Intention to Use the technology (IU) as a Mediator variable.

LITERATURE REVIEW

Banks around the world play a key role in supporting the country's economic development through the provision of efficient financial services – in short, trade and industry need banks. Generally speaking, a bank refers to a financial institution that facilitates deposits, advances, loans, payments and other financial services [4]. A bank is an institution that receives money for savers in deposit form and lends money to borrowers [5]. Specifically, e-banking consists of systems that allow the financial institutions, individuals and businesses to access their accounts, do business transactions or acquire information concerning financial products and services using public/private electronic network, like the Internet [6]. E-banking services is an over-arching term that covers electronic funds transfers, automated teller machines (ATMs), point of sale machines (POS) in shops, as well as mobile banking and mobile money. Additionally, such services cover e-mails and e-statements and alerts from banks forwarded through secure channels, texts, phone calls [7].

The fast technological developments of e-banking in banks around the world and the corresponding increase in ICT demands in the banking sector have enhanced the banking transactions quality tremendously all over the globe. It has thus become a must for the biggest Libyan bank in Libya which is Jumhouria bank to adopt suitable steps to urge the engagement with the global economy to achieve an equal footing with international banks via reformulation strategies and policies, assisted by enhancing a better way of customers' acceptance and adoption of e-banking [2].

Libya is still a developing country and its banks still lagging behind striving to develop its ICT services and convincing the hesitated customers of adopting its new born e-banking services. Libyan banks still struggling to adopt and integrate ICT and e-banking within its existing banking system [8]. This is mostly due to bank customers resistance and fear to adopt new technologies. However, banks in Libya have recently considered the benefits of e-banking technology in improving productivity and efficiency. Accordingly, there is a big need for Jumhouria Bank to find a way to enhance and improve the customers trust and satisfactions in the online banking services provided by Jumhouria bank, this can be solved by involving a good and efficient e-banking system in the banking services.

According to the World Bank report (2020), The potential for Jumhouria bank to make more customers adapt its e-banking services users is very significant because mobile and smart phone penetration is high, especially among the younger population. It is notable that Internet services, has been used among Libyan banks with their clients since 1999, with the services limited to consultations and bill payments. At the same time, the number of Internet users in the country has increased from 2000 users to 2.4 million users in 2015, in a span of a decade and a half, the latter of which constitutes 37.4% of the country's total population [9]. But despite all that, according to the World Bank (2020), The total number of Libyans using e-banking is considered low. As of 2017, only 8 percent of bank customer had used e-banking services [9].

E-banking rate has yet to increase with majority of commercial banks attempting to offer more services to potential customers (e.g., fund transfers, account management and online shopping, etc.) but due to the presence of barriers, like client's acceptance and trust in e-banking have been negatively affected [10]. Libya is facing fast growth in e-banking systems investment [11], but for these new e-banking services to succeed it will be crucial to understand the factors behind successful customers adoption and services acceptance [12].

METHODOLOGY

This study will follow quantitative descriptive research method approach to analyze the impact of information and communication technology factors on E-banking user acceptance in Jumhouria banks. a simple random sampling technique is used to distribute survey questionnaires to sample size of 377 respondents who were randomly selected from ten Jumhouria branches customers from four main cities in Libya. The collected dada in this study will be analyzed by using spss program version 24. This

analyze contains descriptive analysis, reliability test and normality test. This study also highlights on the correlation analysis, reliability test.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

1. Distribution of Study

The percentage of valid questionnaire is 87.7 %, and the percentage of incomplete and invalid questionnaire is 12.3%. Consequently, the total of contributors is 377 users from 10 banks. The researcher is using the random sample technique, this way allows to choose a group of subjects for a large population of the study. The contributors in sample of study were selected as bank users from ten Jumhouria banks from four cities.

Items	Total	Percentage/notes
Population of Study	19753	(10 branches)
Distribution	430	100%
Invalid questionnaire Valid questionnaire	54 377	12.3% 87.7%
Questionnaire distribution in	10 Branches	
Types of contributors		Bank users

2. Summary of Respondents Demographic Profile

Category	Frequency	Percentage (%)
Gender		
Male	199	52.8
Female	178	47.2
Age		
20-30	26	6.9
31-40	129	34.2
41-50	164	43.5
Over 50	58	15.4
Education Level		
Non	20	5.3
Bachelor degree	329	87.3
Master	27	7.2
PHD	1	0.3
Occupation		
Non	49	13.0
Students	90	23.9
Freelancer	32	8.5
Social Work	61	16.2
Government work	54	14.3
Others	23	11.9
ICT Experience		
Non	4	1.1
Between 1-5 years	27	7.2
Between 5-10 years	63	16.7
Over 10 years	283	75

3. Descriptive Analysis

Variables	Total mean	Std. Deviation
Perceived Usefulness (PU)	4.06	0.474
Perceived Ease of Use (PEOU)	3.76	0.620
Perceived Information Technology Beliefs (PITB)	4.16	0.496
Website Features (WF)	4.04	0.511
Website Security (WS)	4.20	0.506
Intention To Use (IU)	4.10	0.461
E-Banking User Acceptance (EUA)	3.99	0.546

According to the Lickert scale the total mean is significant if the variable achieves 3 and above. The result shows that the total mean of the variables is up to 3. It means that all variable of the study allows to interpret the items in each variable. Moreover, the result shows the low of total mean is Perceived Ease of Use (PEOU). It recorded 3.76. However, the high total mean is the variable of Website Security (WS) which recorded 4.20. Consequently, all variables are excellent to describe the items in each variable. In addition, the results also shows that both Website Security (WS) and Perceived Information Technology Beliefs (PITB) have the highest mean.

4. Reliability Test

Variables	Cronbach's Alpha
Perceived Usefulness (PU)	0.946
Perceived Ease of Use (PEOU)	0.947
Perceived Information Technology Beliefs (PITB)	0.946
Website Features (WF)	0.946
Website Security (WS)	0.947
Intention To Use (IU)	0.946
E-Banking User Acceptance (EUA)	0.945
Cronbach's Alpha for all variables	0.947

Reliability usually means the stability and repeatability of data, and if the association in reliability analysis is high, the scale yields consistent results and is therefore reliable [13]. The results shows that Cronbach's alpha coefficient is 0.947. The findings of the reliability test show the extend of reliability of variables of the study are very strong because Cronbach's Alpha coefficient are significant if it is up to 0.7. Moreover, the results shows that Cronbach's Alpha coefficient between (0.945-0.947). Thus, the data is highly reliable to run the statistical analysis.

5. Collinearity Test

Multicollinearity can be checked in two ways, correlation coefficients and variance inflation factor (VIF) values [14]. To check it using correlation coefficients, simply throw all predictor variables into a correlation matrix and look for coefficients with magnitudes of .80 or higher, and if its predictors are multicollinear, they will be strongly correlated. However, an easier way to check multicollinearity is using VIF values, [15]. VIF values should be below

10.00, and best case would be if these values were below 5.00. Consequently, the values of collinearity test below reveals that the data not do not have problem with Multicollinearity because all VIF are less than 10.

Variables	Collinearity Statistics	
	Tolerance	VIF
Perceived Usefulness (PU)	.482	2.077
Perceived Ease of Use (PEOU)	.752	1.334
Perceived Information Technology Beliefs (PITB)	.354	2.826
Website Features (WF)	.345	2.894
Website Security (WS)	.356	2.810
Task Technology Fit (TTF)	.401	2.496
Intention To Use (IU)	.493	2.027
E-Banking User Acceptance (EUA)	.482	2.077

6. Correlation Analysis

A correlation in the range ±0.00 to ±0.30 indicates little correlation, and a correlation between ±0.30 to ±0.50 is considered low, ±0.50 to ±0.70 is moderate correlation, ±0.70 to ±0.90 is high and ±0.90 to ±1.00 is very high correlation [16].

Correlation analysis show the correlation is significant in the 0.01 level. It can be clearly shows that the relationship between Perceived Usefulness (PU) variable and other variables are more than the significant level, it means that the degree of correlation between Perceived Usefulness (PU) and other variables are strong significant. In addition, the results shows that the relationship between the mediator variable Intention To Use (IU) and other variables are more than the level of significant. Moreover, the variable of Perceived Information Technology Beliefs (PITB) reveals high correlation with other variables, it shows high significant correlation. Further, Website Features (WF)variable with the significant correlation with other variables. The results also shows that Website Security (WS) variable achieved a high correlation with others due to correlation of Task Technology Fit (TTF) variable is much higher than the level of significant 0.01. The Pearson coefficient of the Perceived Ease of Use (PEOU) variable shows highly correlation with other related variables. Lastly, E-Banking User Acceptance (EAU) variable shows significant correlation with other variables too.

		PU	PEOU	PITB	WF	WS	TIF	IU	EUA
PU	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	377							
PEOU	Pearson Correlation	.387**	1						
	Sig. (2-tailed)	.000							
	N	377	377						
PITB	Pearson Correlation	.646**	.386**	1					
	Sig. (2-tailed)	.000	.000		.				
	N	377	377	377					
WF	Pearson Correlation	.647**	.419**	.716**	1				
	Sig. (2-tailed)	.000	.000	.000					
	N	377	377	377	377				
WS	Pearson Correlation	.625**	.436**	.714**	.714**	1			
	Sig. (2-tailed)	.000	.000	.000	.000				
	N	377	377	377	377	377			
TTF	Pearson Correlation	.590**	.427**	.669**	.695**	.679**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000			
	N	377	377	377	377	377	377		
IU	Pearson Correlation	.536**	.421**	.623**	.608**	.622**	.618**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		
	N	377	377	377	377	377	377	377	
EUA	Pearson Correlation	.629**	.358**	.667**	.669**	.632**	.639**	.584**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	377	377	377	377	377	377	377	377

**. Correlation is significant at the 0.01 level (2-tailed).

7.Regression Analysis

According to Gujarati & Porter (2009), R square value is used to determine the variation on dependent variable towards all other independent variables. However, Multiple R value, (R) is to measure the degree of relationship with dependent variable and the other variables.

variable	R Square	R Square Adjusted	The Degree of Effect
EUA	0.681	0.663	High
IU	0.484	.0459	Moderate

The coefficient of determination (denoted by R2) is a key output of regression analysis. It is interpreted as the proportion of the variance in the dependent variable [17]. Although the acceptable level of R2 value depends on the research context, [18], proposed an R-squared value of 0.10 as a minimum acceptable level. [19], suggested that the values of R2 that above 0.67 considered high, while values ranging from 0.33 to 0.67 are moderate, whereas values between 0.19 to 0.33 are weak and any R2 values less than 0.19 are unacceptable. The study results show R Square and R Square Adjusted of the e-banking user acceptance and intention to use variables. The results show moderate effects, However, the effects of R square is 0.681 is considered high. Moreover, R Square Adjusted is also 0.663 high. However, R Square 0.484 of the intention to use is moderate. In addition, R Square Adjusted of the intention to use is moderate at 0.459.

8.Hipothesis Testing & Conclusion:

Hypothesis		Std. Beta	Sample Mean (M)	Std. Error	T-value	P-value	Decision
H1	Perceived Usefulness (PU) On E-Banking User Acceptance	0.180	0.182	0.047	3.806	0.000	Positive
H2	Perceived Ease of Use (PEOU) On E-Banking User Acceptance	-0.024	-0.024	0.036	0.680	0.497	Negative
H3	Perceived Information Technology Beliefs (PITB) On E-Banking User Acceptance	0.149	0.146	0.048	3.084	0.002	Positive
H4	Website Features (WF) On E-Banking User Acceptance	0.141	0.143	0.050	2.805	0.005	Positive
H5	Website Security (WS) On E-Banking User Acceptance	0.256	0.260	0.051	5.017	0.000	Positive
H6	Task Technology Fit (TTF) On E-Banking User Acceptance	0.238	0.233	0.059	4.015	0.000	Positive

The results provide five hypothesis that were supported and one was not supported Hypothesis testing by using Intention to use (IU) as a mediator variable. It reveals that the relationship between Perceived Ease of Use (PEOU) and E-Banking User Acceptance (EUA) is not supported because P-value has been achieved higher than the level of significant. Moreover, all other hypothesis is supported. In result, there is a good impact and significant relationship between Perceived Usefulness (PU), Perceived Information Technology Beliefs (PITB), Task Technology Fit (TTF), Website Features (WF) and Website Security (WS) on the dependent variable E-Banking User Acceptance (EUA) by using Intention to Use the technology (IU) as a Mediator variable since they all achieved P- value between 0.000 to 0.005.

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