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EVOLUTION OF E-FUNDS TRANSFER AND ITS IMPACT ON CUSTOMER SATISFACTION

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ABSTRACT

We trace the evolution of e-funds transfer and establish its impact on customer satisfaction in a developing or emergent economy. We chose Uganda. In 1998it established the National Payment System Secretariat (NPSS), mainly to reduce barriers to the use of electronic payments. We select Satanic Bank Uganda Limited for our study. It is one of the early adopters of E-Funds Transfer. Our analysis indicates that there is a moderate positive relationship between e-fund transfer and customer satisfaction. We prove it statistically ($r=0.323$ $p=0.003$ $n=82$), significant at 95 %confidence level since p-value (Sig.) is less than 0.050 (=0.000).

KEYWORDS: E-Funds Transfer, Customer Satisfaction, Bank, Technology, Payment system

INTRODUCTION

As a means of enhancing competitive edge, banks have had to spend more on digital information and communication technology than other companies in the financial industry. It is for this reasons that Fintech, the innovative financial services using new technology tools, such as big data, cloud computing, and mobile technology has assumed a lead position in the sector (Zhongqing(2019)). One of the most notable developments in the financial services sector is the electronic funds transfer (EFT) technology. There are numerous definitions of what electronic funds transfer (EFT) is. For example, it has been defined as a transfer of funds initiated through an electronic terminal, telephone, computer (including on-line banking) or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit a consumer's account (Electronic Fund Transfer Act (EFTA). For the avoidance of doubt, it has been emphasized that EFTs include, but are not limited to point-of-sale (POS) transfers; automated teller machine (ATM) transfers; direct deposits or withdrawals of funds; transfers initiated by telephone; and transfers resulting from debit card transactions, whether or not initiated through an electronic terminal.EFT has also been defined as the electronic transfer of money from one bank account to another, either within a single financial institution or across multiple institutions, through computer-based systems and without the direct intervention of bank staff (National Payment Systems Act, 2020)

A. Sub-Saharan Africa adoption of mobile money technology

Mobile money has remained a leading payment platform processing a billion United States dollars daily in the developing world. It is greatly contributing to the achievement of thirteen out of the seventeen Sustainable Development Goals. It has enabled the lowly endowed and underserved, especially rural and underprivileged communities in emergent and developing countries access service like microfinance, health and education and empowered women and youths with ability to create and finance businesses, and in the absence of or failure to access conventional financial institutions it has enabled them pay or receive payment with relative ease and security.

The evolution and success of the mobile money platform has required commitment and heavy investment on the part of providers, to marry operator scale with fintech innovations. An example of such efforts is the GSMA Ecosystem Accelerator Program (GSMA (2017)). Supported by the UK Department for International Development (DFID) and the Australian Government, the program provides selected start-ups in Africa and Asia Pacific with grant funding, technical assistance, and the opportunity to partner with mobile operators in their markets to help scale their products and services into sustainable businesses. The GSMA Innovation Fund for mobile internet adoption and digital inclusion. The Fund aims to support innovations that promote mobile internet adoption and usage in jurisdictions that are underserved by providing financial assistance to start-ups or SMEs willing and able to work with mobile operators on projects which advance the United Nations Sustainable Development Goals (SDGs). Most specifically the fund aims at supporting solutions that seek to eliminate or reduce barriers to mobile internet adoption, easing or improving accessibility and usability of handsets and mobile internet services, ensuring that these are affordable, improving basic digital skills and confidence of users of the handsets and the internet as well as ensuring safety and security of those who want to use mobile internet. Sub-Saharan Africa has benefited from these and similar other efforts and increase in uptake for mobile handsets and the internet services has positively impacted on the increase in financial inclusion.

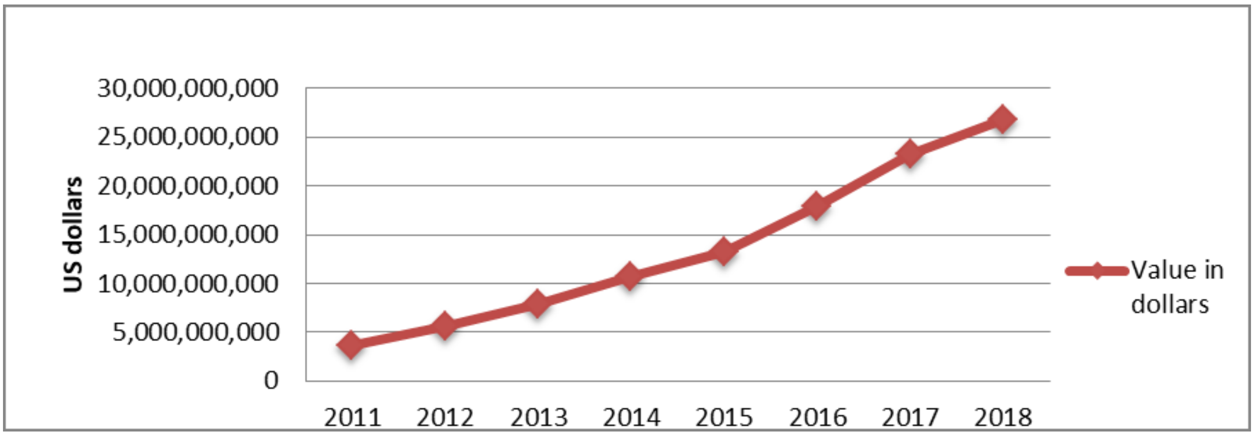

Figure 1: Annual values of mobile money transactions in Sub- Saharan Africa

Source: (Alhassan&Koaudio (2019)).

From table 1 over, over eight years from 2011 to 2018 annual values of mobile money transactions in Sub- Saharan Africa increased at an average rate of four billion dollars per annum. This is plausible given the relatively small economies of the continent.

B. Progress of Electronic Funds Transfer use in Uganda

In 1998 the Bank of Uganda, in its efforts to reduce transactions on cash basis in the country, established the National Payment System Secretariat (NPSS), with the major goal of reducing barriers to the use of electronic and noncash based payments. Subsequently, payment systems and platforms such as electronic cheque clearance, electronic funds transfer and real time gross settlement were introduced. A key result of these initiatives were agreements between commercial banks and some of the key utility providers (water and electricity) enabling the payment of user charges at banks and platforms for payment of taxes to the Uganda Revenue Authority (URA). Fast tracking of e-transfer of funds benefited from two technological developments. First was the introduction of GSM mobile phone networks in 1993, which revolutionized the way that people communicated and conducted business. Second was the widespread of internet connectivity, including mobile broadband and 3G networks. The combined results included reduced costs of access, variety of new platforms and systems for revenue collection, billing, payments and relatively reliable data connections (Development Innovations Group, 2012, Ndiwalana&Popov (2008)).

In August 2003, as a means of facilitating the provision of a variety of adequate payment instruments to the growing corporations and the corresponding increase in their transactions, Bank of Uganda implemented the Electronic Funds Transfer (EFT) method for both credit transfers and direct debits, and it praises the system of transferring funds electronically for providing fast, convenient, reliable and secure domestic payment and collection of funds. In its Strategic Plan2017-2022, it has as an objective, the reduction of the use of paper money and cheques. By end of 2018, between 75 per cent and 85 per cent of retail transactions in Uganda were being effected using cash. It has been observed in study of payment systems in Africa that although cash in circulation has risen in most countries in absolute values, the GDP's of half of the studied countries has risen faster, resulting in a diminished share of cash in circulation in the country's economies. Most notably, the value of ATM withdrawals, the most direct measure of the use of cash in day-to-day transactions, has significantly risen throughout the continent (World Cash Report (2018).Direct debits are being used, especially with customers authorizing a bank to pay, from their account, as settlement of an obligation due to an utility services provider (for example the National Water and Sewerage Corporation or UMEME for electricity). Some customers have embraced similar arrangements with providers of telephone and insurance services, among others.

In 2007, the Bank of Uganda introduced EFT system of fees payment in educational institutions, drawing samples from selected secondary schools. The Direct Debit Agreements (DDAs) with the commercial banks have been appreciated by some parents for the benefits of flexibility and convenience. Commercial Banks are expected to credit a beneficiary's account within 24 hours upon receipt of a credit transfer instruction, and to debit the payer's account within 48 hours on receipt of a direct debit instruction confirmed against a mandate (Henley (2016)).

In Uganda, with long ques experienced at the beginning of terms and semesters, School fees payment has been one of the biggest challenges. Therefore, it was assumed that online payments could be adopted to solve the problem (Bank of Uganda (2017)). However, since its inception in 2007 by Bank of Uganda in collaboration with the commercial banks, the EFT system of paying fees in educational institutions has experienced low levels of acceptance and it has indeed faced some resistances in some instances. At the extreme some students have been removed from schools that used this system. A study carried out with regard to this matter indicated that a large proportion of parents expressed their preference towards use of old systems like bank slips, cash and some who have tried to modify use drafts (Ssempijja (2016)).

CONCEPTUAL FRAMEWORK

A conceptual framework is an interconnected set of ideas (theories) about how a particular phenomenon functions or is related to its parts and it serves as the basis for understanding the causal or correlational patterns of interconnections across events, ideas, observations, concepts, knowledge, interpretations and other components of experience (Rahmath et al (2013)).The conceptual framework offers many benefits to a research. For instance, it assists the researcher in identifying and constructing his/her worldview on the phenomenon to be investigated (Marilla (2010)).

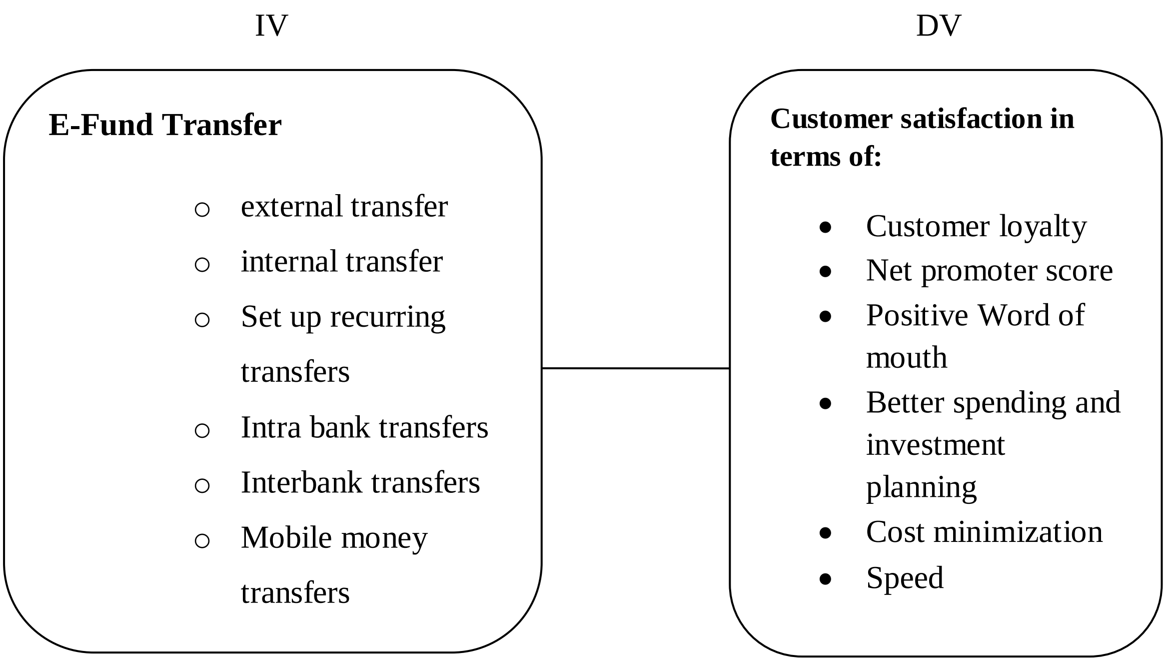

Fig 1: Source: Adapted and Modified from Shields et al, (2013)

MATERIALS AND METHODS

1. Research Design

This investigation was based on a case study of Stanbic Bank Uganda Limited Uganda Limited Head office in Kampala Capital City. The reasons of using a case study were that, it was a good source of ideas about behavior, it was a good method to study rare phenomena and it was a good method to challenge theoretical assumptions. Within this design, a cross-sectional approach was adopted. This involved collecting data at once, from employees of Stanbic Bank Uganda Limited head office in Kampala Capital City and customers.

2. Study Population

The target population of this study comprised of employees in Uganda's commercial banking sector. However, the accessible population comprised of employees of Stanbic Bank Uganda Limited head office and some customers that visited the branch in the same location. According to the Head of Human Resources, Head office on crested towers was the biggest branch of Stanbic Bank Uganda Limited with over 110 employees. It will be noted that the bank has both external and internal customers, the latter being staff of the bank. Internal customer satisfaction is therefore part of the study.

3. Determination of Sample size

Using the table of appropriate sample size for a given population size, a sample of 91 participants was arrived at (Krejcie& Morgan's (1970)).

Table (ii): Showing the sample size of the respondents

	Target population	Sample size
Managers	5	5
Middle Level staff	10	10
E-banking operative staff	5	5
Customer relationship officers	8	8
Customers of Stanbic Bank Uganda Limited.	75	63
Total	103	91

Source: Authors

Table (ii) above indicates a target population of 5 managers, 10 Middle Level staff involved in E-banking operations, 5 Head office (Stanbic) E-banking operative staff, 8 Customer relationship officers attending walk-in-customers and 75 Customers of Stanbic Bank Uganda Limited, totalling 103 out of 110 employees. The sample size is 91, which is quite representative of the target population

4. Data Collection Methods and instruments

Questionnaire and field guides were used. Questionnaire survey involved collecting quantitative data from selected employees and customers of Stanbic Bank Uganda Limited. The researcher obtained written permission from the bank's administration to interview respondents. The researcher then employed a combination of data collection methods including questionnaire survey, key informant interviews, and documentary review.

5. Procedure of Data collection

Employees were given questionnaires and requested to fill them within a specified time period, and were collected from the respondents upon completion. Key informant interviews involved collecting qualitative data through in-depth face-to-face engagements with selected heads of department of Stanbic Bank Uganda Limited departments in the bank to compliment data obtained through questionnaire surveys.

6. Result and Discussion

A combination of quantitative and qualitative data analysis techniques was employed in this study. Quantitative data analysis techniques involved the use of descriptive statistics such as frequencies and percentages to summarize responses. Pearson's correlation coefficient was used to establish the relationship between dimensions of E-banking and customer satisfaction as specified in the study objectives.

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

This section presents data collected using the questionnaire, and interviews and the corresponding interpretations according to the study objectives. The findings were arrived at by analyzing and interpreting the available data using SPSS and Microsoft Excel software.

1. Response Rate

The total number of respondents who constituted the sample used in this dissertation are summarized below.

Table (iii): Showing the Response Rate

Sample	Frequency	Percentage
Bank Employees and customer		
Response	87	96%
Non-response	4	4%
Total	**91**	**100**

Source: Primary Data

In table (iii), the total of respondents was ninety-one (91) where eighty-seven (87) questionnaires were returned and all interviews were conducted. The response rate was therefore 96% which is highly reasonable response rate.

2. The Relationship between E-fund Transfer and Customer Satisfaction;

We wanted to statistically establish whether e-fund transfer positively influence customer satisfaction. This was guided by the hypothesis: e-fund transfer positively influences customer satisfaction.

3. Correlation Analysis

Correlation analysis is a statistical method or process used to evaluate the strength of relationship between two quantitative variables. The higher the correlation between variables the stronger the relationship, with available statistical data. The study question of whether e-transfers have an impact on customer satisfaction at a 95% level of significance (two-tailed) was tested using Pearson's product-moment correlation coefficient. Charles Spearman's or rank correlation is a non-parametric technique for determining the degree of correlation between two variables in case of ordinal data in cases where ranks are given to the different values of variables. The results of the test are presented in table (iv) below.

Table (iv): Correlation Matrix for e-fund Transfer and Customer Satisfaction;

Correlations

		E-fund transfer	Customer satisfaction
E-fund transfer	Pearson Correlation	1	.323**
	Sig. (2-tailed)		.003
	N	82	82
Customer satisfaction	Pearson Correlation	.323**	1
	Sig. (2-tailed)	.003	
	N	82	82

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

Table (iv) above shows that there is a moderate positive relationship between e-fund transfer and customer satisfaction; (r=0.323 p=0.003 n=82). The relationship is statistically significant at 95 %confidence level since p-value (Sig.) is less than 0.050 (=0.000). This implies that improvements in e-fund transfer shall be related to improvements in customer satisfaction. Similarly decline in e-fund transfer shall be related to decline in customer satisfaction.

4. Regression Analysis

Regression analysis is a statistical approach for modeling the association between a dependent variable, called response, and one or more explanatory or independent variable (s). The analysis enables the researcher to formulate a mathematical model depicting the relationship amongst variables (if it exists) which can be used for purposes of predicting the values of dependent variables, for given values of independent variables. In this study regression analysis was used to establish the extent to which e-fund transfer affects customer satisfaction. It will be noted that the regression analysis mathematical model derived highly depends on correlation analysis, in this case, the results indicated in table 4 above. The coefficient of determination (R Square) was used and the results are presented in the table below.

Table (v): Model Summary

Model 1	R	R square	Adjusted R square	Std. Error of the Estimate	R Square Change	F Change	df1	Df2	Sig f change
	.323	.105	.093	. .58439	.105	9.33	1	80	.003

a. Predictors: (Constant), E-fund transfer

Table (v) above shows that the coefficient of determination (Adjusted R Square) is 0.093. This implies that E-funds transfer accounts for 9.3% of the variance in customer satisfaction. There are therefore other factors outside E-fund transfer that contribute to the greater percentage of customer satisfaction. The standard error of estimate, e, measures the degree of accuracy of predictions given by the regression model. It is the square root of the average squared deviation. A small value of a standard error of estimate implies the estimate based on the equation of the line is closer to the actual, and in the extreme, a standard error is zero implies that there is no variation corresponding to the computed line and the correlation will be perfect. The standard error of estimate derived from the study statistics is 0.58439, which is quite modest and an affirmation of the reasonable degree of reliability of the model. This is corroborated by Sig F of 0.003 and square change of 0.105 in the table

5. Employee views on e-funds transfer

Employees are internal customers of the organization employing them. Stanbic Bank Uganda Limited views on e-transfer of funds were sought using 7 items scored on five-point Likert scale of 1=strongly disagree, 2= Disagree, 3=Neutral, 4=Agree, 5= strongly agree.

Table (vi) Employee views on e-funds transfer

	N	SDA	DA	NS	A	SA	Mean	Std. Deviation
There is ease in external fund transfer	32		5	9	7	11	3.75	1.107
There is easein internal fund transfer	32		1	2	11	18	4.44	.759
There is reduction fraud cases	32		1	2	12	17	4.41	.756
Ease of transfer of peer to peer funds	32		1	2	11	18	4.44	.759
Less paper work in banking halls	32		0	1	11	20	4.59	.560
Less man hours are applied to customers	32		0	4	12	16	4.38	.707
Resources are skewed to other bank activities	32		1	3	15	13	4.25	.762

Source: Field Primary Data

Key: SD= strongly disagree, D=Disagree, NS = Not sure, A= Agree, SA=strongly agree

From table (vi) above, the respondents were asked in order to find out whether, there is ease in external fund transfer; respondents were asked to state the extent to which they agreed with the above. There are two major results as reflected by way of standard deviations and means. First was the issue of whether there is ease in external fund transfer using e-means. The standard deviation was 1.107, accompanied by a mean of 3.75. Of the thirty two respondents, eleven (34%) strongly agreed, while seven (22%) agreed. Nine (28 %) were neutral, while five (sixteen percent) disagreed and nobody strongly disagreed. This implies that the 56%of the respondents were in approval, 16%disagreed. The other major result was on the issue of whether there was lesser working paper, the standard deviation was 0.560 accompanied by the highest mean of 4.59.Of the thirty two respondents, twenty (63 %) strongly agreed, while eleven (34%) agreed, one (three percent) were neutral, while zero %disagreed and similarly zero %strongly disagreed. This implies that the majority, 97 %of the respondents were in approval, with a mean of 4.59 and SD of 0.560. From the findings above this shows that to deliver on the e-banking through e-funds transfer customer satisfaction should be keenly addressed.

Regarding ease of transfer of peer to peer funds, the study revealed that; of the thirty two respondents, eighteen (56%) strongly agreed, while eleven (35%) agreed, two (6%) were neutral, while one (3%) disagreed and zero %strongly disagreed. This implies that 90%of the respondents were in approval while 3 % disagreed and 6 %had a neutral opinion with a mean of 4.44 and SD of 0.759. From the findings above this show that ease of transfer between peers is a key attribute which should be well managed by the bank. From the findings of the study the respondents were asked whether less man hours are applied to customers when e-funds transfer was used. Of the thirty two respondents, sixteen (50%) strongly agreed, while twelve (38%) agreed, four (13%) were neutral, while zero %disagreed or strongly disagreed. This implies that 88%of the respondents were in approval, none disagreed and13 %had a neutral opinion with a mean of 4.38 and SD of 0.707. This shows that man hours are a key attribute which should be addressed by the bank stakeholders.

From the findings of the study the respondents were asked about resources being skewed to other bank activities. Of the total respondents, thirteen (40%) strongly agreed, fifteen (48%) agreed, three (9%) were neutral, while one(3%) disagreed and zero %strongly disagreed. This implies that 88%of the respondents were in approval, 9%were neutral, 3% disagreed while zero % strongly disagreed. with a mean of 4.25 and SD of 0.762. This shows that resources being skewed to other bank activities are a key attribute which should be addressed by the bank stakeholders.

CONCLUSIONS

We have, through this study proved that there is moderate positive relationship between e-fund transfer and customer satisfaction. In an increasingly interconnected world with a lot of pressures on users of the financial systems, availability, efficiency and effectiveness of means to settle payments is not a luxury. There is thus the need for both policy makers and financial services providers to be continuously innovative and sensitive to the needs of users of payment systems. In recognition of the intrinsic benefits as well as positive externalities of facilitating ease of non-cash settlements, both the financial services providers and government have sought out ways to create an enabling environment by way of technological innovation and legislation, respectively. One of the several features of the evolving payment system is e-funds transfer. The government of Uganda has, over a span of about twenty years, ensured the systematic evolution of the national payment system to cater for among the several modes, e-fund transfer.

We have further proved through the study that improvements in e-fund transfer shall be related to improvements in customer satisfaction. Similarly decline in e-fund transfer shall be related to decline in customer satisfaction.

We have furthermore established from the study that with less work hours required through e-transfers to serve customers, the bank can reallocate resources to planning, policy implementation and other value enhancing bank activities, with resultant better service delivery to the customers in particular and the economy in general. Satisfied customers are an asset to the economy as they go about their activities with confidence and minimal or no psychological pressures arising from or regarding their financial transactions.

RECOMMENDATIONS

The study recommends that a similar research incorporating in other aspects like, leadership and working conditions, working and organization culture and practices among others. Future researchers can focus on looking at the other factors other than those mentioned and studied. This clearly shows a critical look at the above areas derives a holistic picture of ways and avenues affecting understanding electronic-banking and customer satisfaction.

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Conflict of interest
The authors declare that they have no conflict of interest.

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