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Credit and Debit Card Usage and Cash Flow Management Control by Customers: Evidences from Commercial Banks Customers in Kisumu City, Kenya

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Abstract

In the recent past, the banking sector in Kenya has witnessed a rapid growth, issuing thousands of credit cards and millions of debit cards to their customers. The frequency in which customers use these cards for various transactions raised concerns of whether customers had lost control over their finances. Previous studies on this area have provided very little understanding on the impact of use of debit and credit cards on customers'

cash flow management control. This study sought to determine the extent of use of debit and credit cards in cash deposits, withdrawals and purchase transactions at retail outlets and to determine its effects on cardholder's cash flow management. Data was collected through a structured questionnaire administered to a sample of 35 debit and credit cardholders each, drawn from customers of 7 main commercial banks in Kisumu city, Kenya. The study revealed that both debit and credit cards usage increases cash outflows compared to cash inflows and that use of these cards has increased consumption levels as opposed to investments. As a premier study in Kenya, this study will greatly help in the understanding of the impact debit and credit cards in developing countries which are yet to advance in technology.

Key words: Debit cards, credit cards, commercial banks, Kenya.

Introduction

The development of credit card is probably the most significant phenomenon in the banking industry. Since the first credit card was issued in 1730, there has been tremendous improvement in the banking sector (Hanson, 1985). Whereas many world economies have revolutionalized their transactions towards paperless economy, it was not until early 1990's that local banks in Kenya started embracing the use of debit and credit cards (Ogony, 2005).

In the recent past, the usage of credit cards in Kenya has increased a great deal. By 2005, over 80,000 credit cards and 618,000 debit cards had been issued by Kenyan banks (Ogony, 2005). Stakeholders on the banking sector have realized the need to embrace information technology in their industry. As a result, banks have come up with technology that facilitated issuance of modern products like debit and credit cards. This has in turn led to increased usage of debit and credit cards by its customers. The consumption and investment patterns of customers have since changed (Katz, 2005). There are concerns that the frequent use of these cards may have a negative influence on the customer's cash flow management. This study therefore sought to investigate the effects of debit/credit card usage by cardholders on their cash flow management control.

The results of this study will greatly help the general public on the wise usage of debit and credit cards. The results would also help the management of the banks in setting withdrawal and credit limits for their customers. As a premier study in developing countries, this study will provide useful

literature for upcoming researchers in the field banking in the era information technology.

Literature review

A debit allows a customer to pay for goods and services at various retail outlets by directly debiting their bank accounts. On the other hand, credit cards enable the holders to obtain credit and withdraw cash up to a pre-arranged ceiling (Pallister and Isaacs (2002). Several studies indicates that the use of debit/credit cards have been on the increase over the recent past world over. This rise can be attributed to the improvement in the information technology (Chorofas 1987; Livy, 1981).

A study by Bjoklund (2007) in the US revealed that the use of debit cards in the United States of America is on the increase. This finding was consistent with those of an early study by Ron et al. (2008) who found out that the use of debit card at point of sale has grown dramatically and that the use of debit cards in the United States, growing at 20% per year since 1996. The study also indicated that the use of debit cards exceeded the use of credit cards. Their study attributed the expectations of future financial positions as a major influence on the use of debit/credit cards. However, this finding seem to contradict with the findings of Ogony (1999) who found out that influencing consumer choice of using debit/credit cards was lack of awareness. Besides this controversy, both studies do not reveal that debit/credit cards affect cash flow management.

Many studies indicate that the use of debit and credit cards in the modern society has greatly increased the amount of cash transactions. The advent of paperless transactions has further been aggravated by the mobile commerce (MC). For instance according to Saji (2008), m-Payment is expected to become a successful mobile service for the reason that in addition to the necessity support services, the growth of MC relies vitally on effective payment solutions provided by m-Payment services and vice versa. While working on a study on modeling the adoption of mobile payment solutions in India in 2008, Saji (2008) postulates that at present there is an uncertainty as to whether the adoption and use of m-Payment technologies will prevail as expected. In all the markets, there is an uncertainty caused primarily by the lack of standards and the immaturity of the market. However, financial institutions and mobile service providers are trying to overcome these issues by launching isolated initiatives for responding to the ever changing market needs (Lee and Benbasat, 2004). One of the possible consequences of this

phenomenon is that collaboration between banks and mobile service providers would become limited as both want to control most of the assets in the value chain. Besides the model suggested by the study on adoption of m-payment, the effect of paperless transactions created in the process on the customer buying behavior and ultimately their cash flow management comes at stake.

Credit card based research has shown that when a credit card based payment is used, the volume, value and type of products purchased increase. Whether this is due to the credit element, or to the 'cashless' element of the transaction is not known. The notion that the tangibility of cash influences perceptions is not novel, but it is untested. The literature reviewed in this paper suggests that under conditions of cash, there is awareness (conscious/unconscious) that a possession of value transferred and this perception may well have a direct impact on purchase behaviour.

A study done in Vienna by Stix (2004) attempted to shed light on issues relating to debit card usage. Their study analyzed how EFT-POS and electronic purse payments as well as ATM withdrawals affect cash demand. Survey data about Austrian individuals was used to estimate a purse cash demand equation which takes account of sample selection effects. The results of the study revealed that cash demand was significantly affected by debit card usage and that there are significant differences in cash demand for individuals with different debit card usage frequencies. For example, individuals who pay frequently with their debit card hold 20% less cash than all others while frequent ATM usage is associated with 18% less cash demand. In contrast, electronic purse payments, mainly small in amount, do not significantly affect the average amount held in purses. Due to the relative small share of frequent users among total population, Stix (2004) concluded that aggregate cash demand is little affected by EFT-POS payments (6% reduction). However, if usage behavior shifts towards higher usage frequencies, then the findings of this study suggest that cash demand will decrease substantially. Despite the great contribution of this study, there remains need to assess whether the cash demand sparked by debit card usage affects cash flow management by individual cardholders.

Methodology

This study was carried out in Kisumu city which is the third largest city in Kenya after Nairobi and Mombasa. The town hosts a Central Bank of Kenya branch and 20 major commercial banks operating in Kenya. The target

population of the study consisted of debit/credit cardholders of the first seven largest commercial banks in Kenya. These were Kenya commercial bank, Barclays bank of Kenya, equity bank, Co-operative bank of Kenya, National bank of Kenya, standard chartered bank and family finance bank. The basis of selection of the seven banks is their countrywide network coverage, which was aimed at providing representative findings. A convenient sample of 35 debit holders and 35 credit holders was selected (five debit and five credit holders from each selected commercial bank).

Data was collected by means of self administered questionnaires issued to the selected cardholders. Further questionnaires, were prepared and send to branch managers of each of the selected banks so as to provide additional evidence.

Results and discussions

The first objective of the study was to find out the frequency of debit and credit card utilization by the cardholders in purchasing of goods and services, depositing and withdrawing cash. Table 1.1 presents the summary of findings from 35 debit card holders and credit card holders that participated in the study. The table shows that 11% of the respondents use their debit cards to purchase goods and services very often, while the majority (40%) of the respondents never uses their cards for purchase purposes. Twenty-six (26%) said they used their debit cards sometimes, 17% used their cards often while a meager 6% said they rarely use their debit cards for purchase purposes.

Responses on the use of debit cards for withdrawal purposes indicated the 40% used their cards very often, 43% used their cards often, 11% used it sometimes while 6% rarely used it for withdrawal purposes. This result indicates on average, the majority of respondents used their debit cards for withdrawal purposes.

When asked how often they used their debit cards for cash deposit purposes, the majority of the respondents reported that they rarely or never use it for that purpose. 43% of the respondents said they never used their debit cards to deposit cash while 20% rarely use it for that purpose. 20% of the respondents use their debit cards for depositing cash sometimes while only 17% of the respondents use it often or very often.

The results collected from credit card holders revealed that none of the credit holders used their cards for depositing cash. The study further indicated that the majority of the respondents use their credit cards for ATM withdrawals.

23% of the respondents use it for ATM withdrawals very frequently, 29% used it often, 17% use it sometimes while 31% use it rarely for ATM withdrawal. On the usage of credit cards for purchase of goods and services, 28% of the respondents use their credit cards often or very often, while 43% only use it sometimes. 20% and 9% use their credit cards for purchases rarely or never, respectively.

Table 1: Frequency of use of debit cards and credit cards

PURPOSE OF USAGE	CARD TYPE	FREQUENCY OF USAGE									
		Very often		Often		Sometimes		Rarely		Never	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Purchase of goods/services	Debit	4	11	6	17	9	26	2	6	14	20
	Credit	4	14	5	14	15	43	7	20	3	9
ATM withdrawal	Debit	14	40	15	43	4	11	2	6	0	0
	Credit	8	23	10	29	6	17	11	31	0	0
Cash deposit	Debit	2	6	4	11	7	20	7	20	15	43
	Credit	0	0	0	0	0	0	0	0	0	0

Source: Research data (2007).

The usage of debit cards for ATM withdrawal showed 83% of card holders using their cards at very often and often rates compared to 52% of credit card holders who use their cards for withdrawal over ATM at similar rates

Whereas only 9% of credit cards holders admit never to have used their cards for buying goods and services, 40% of debit card holders do not use their cards for making payments at retail outlets. The finding further revealed that 100% of debit card holders at least use their cards for cash withdrawal while only 57% of debit card holders at least use their cards for cash deposit.

Table 2: Debit cards and credit cards usage among various classes of card holders

Types of card	Category of card holders						Total	
	Employed		unemployed		Self employed		respondents	
	no	%	no	%	no	%	no	%
Credit cards	30	86	0	0	5	14	35	100
Debit cards	30	86	4	11	1	3	35	100

Source: research data, 2007

The finding in Table 2 above showed that 86% of both debit and credit cardholder respectively were employed, 11% and 0% of debit cardholders and credit card holders respectively were unemployed and 3% and 14% of debit cardholders and credit card holders respectively were self employment.

Table 3: Customers knowledge on use of debit cards and credit cards

	of	EXCELLEN		V.GOOD		GOOD		FAIR		POOR		TOTAL	
		D	C	D	C	D	C	D	C	D	C	D	D
No.		0	0	2	1	3	2	2	3	0	1	7	7
Respondents													
Percentage (%)		0	0	29	14	43	29	29	43	0	14	100	100

**D: Debit cards C: Credit cards*

Source: Authors (2007)

In analyzing the management and use of debit cards and credit cards, the above Table 3 shows the response given by the seven bank managers about the knowledge of the card holders on the use of their cards. The response revealed that 62% of the debit cardholders had at least good knowledge of the use of their cards while only 43% of credit card holders appeared under similar rating.

Table 4: Frequency distribution of age on debit card and credit card usage

Age (Years)	No. of respondents credit cards(f)	No. of respondents Debit cards (f)
18 – 30	15	14
31 – 45	17	13
46 – 60	3	6
61 – 75	0	2
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	35	35

Source: Research data (2007)

The research findings revealed that the highest age for credit card users within Kisumu town is between 46 and 60 years and that for debit card is between 61 and 75 years. The mean age for debit card users was 36.7 years while the mean age for credit card users was 33.3 years.

The effect of debit cards and credit cards on card holders cash flows

A study of 35 debit card holders and 35 credit card holders revealed different degrees of change in the 7 aspects of card holders' cash flows as a result of the usage of their cards. These aspects include bank balance, cash balance in hand, cash deposit, cash withdrawal, amount of savings, amount of consumption and levels of indebtedness. The study also analyzed the average withdrawals and average deposits over the ATM through use of debit cards. Analysis of average withdrawals using credit cards was also done.

Table 5: Effects of Debit Cards Usage on Card holders

EXTENT OF CHANGE IN THE THROUGH USAGE	ELEMENT CARD	ELEMENTS OF CASH MANAGEMENT								TOTAL RESPONDENTS
		BANK BAL	CASH IN HAND	CASH DEPOSIT IN BANKS	CASH WITHDRAL	AMOUNT OF SAVINGS	AMOUNT CONS UMPTION	OF	LEVEL OF INDEBTEDNESS	
	Card Type	No.	No.	No.	No.	No.	No.	No.	No.	
<i>Very much Increased</i>	<i>Debit</i>	5 (14.3%)	3 (8.6%)	3 (8.6%)	8 (22.8%)	4 (11.4%)	4 (11.4%)		N/A	35(100%)
	<i>Credit</i>	1(2.9)%	1(2.9)%	1(2.7)%	2(5.7)%	3(8.6)%	7 (20.0%)		5.7	35(100%)
<i>Moderately increasing</i>	<i>Debit</i>	9(25.7)%	6(17.2%)	7(20%)	14(40.0%)	6(17.2%)	16 (45.6%)		N/A	35(100%)
	<i>Credit</i>	6(17.1%)	5(14.3%)	4(11.4%)	16(45.7%)	8(22.9%)	13 (38.1%)		45.7	35(100%)
<i>Not Changed</i>	<i>Debit</i>	6(17.2%)	8(22.9%)	19(54.3%)	7(20%)	8(22.9%)	9(25.7%)		N/A	35(100%)
	<i>Credit</i>	8(22.9%)	6(17.1%)	12(34.3%)	5(14.3%)	7(20.0%)	5(14.3%)		28.6	35(100%)
<i>Moderately Decreased</i>	<i>Debit</i>	11(31.4%)	14(40.0%)	14(40.0%)	2(5.7%)	1(2.9%)	9(25.7%)		N/A	35(100%)
	<i>Credit</i>	12(34.2%)	17(48.6%)	13(37.1%)	9(25.7%)	6(17.1%)	7(20.0%)		14.3	35(100%)
<i>Very much Decreased</i>	<i>Debit</i>	4 (11.4%)	4 (11.4%)	4 (11.4%)	5(14.3%)	8(22.9%)	2(5.7%)		N/A	35(100%)
	<i>Credit</i>	8(22.9%)	6(17.1%)	5(14.3%)	3(8.6%)	11(31.4%)	3(8.6%)		5.7	35(100%)

Source: Research data, 2007

From Table 5 above, the usage of debit cards had a number of effects on the aspects of card holders' cash flows. The results shows that 28.6% (that is, 22.8% + 20%) of debit card holders had their cash deposits increased compared to 62.8% (that is, 22.8% +40%) who had an increased in cash withdrawals. The effect of the debit card on bank balance revealed a 42.8% decrease in the cash holdings in hand due to usage of credit cards while 57.1% of credit card holders indicated a decrease in bank balance.

The findings also indicated a 57.1% (that is, 11.4% + 45.7%) increase in consumption levels due to usage of debit cards, 48.6% acknowledged that their savings levels had decreased due to usage of debit cards while 28.6% acknowledged an increase in the savings level due to possession of debit cards.

51.4% of credit card holders indicate an increase in level of withdrawal while 62.8% of debit card holders indicated an increase in the level of withdrawal, 57.1% of both debit and credit card holders showed increase in their levels of consumption. 51.4% of credit card holders acknowledged to have increased their levels of indebtedness through use of credit cards. Finally, 51.4% acknowledged that their level of deposits had decreased as a result of possession of credit cards. Saving levels decreased by 48.5% through use of credit cards.

Table 6: Frequency distribution of the amount withdrawn and deposited using debit cards for 35 debit card holders

Amounts (Ksh)	No. of debit card holders Withdrawing(N)	No. of debit card holders Depositing (N)
0-30,000	20	27
30,000 - 60,000	7	6
60,000 - 90,000	6	6
90,000-120,000	2	1
TOTAL	35	35

Table 7: Frequency distribution of amounts withdrawn per month using cards.

Amounts withdrawn Kshs	No. of credit card holder
0-30,000	29
30,000-60,000	6
60,000-90,000	0
90,000-120,000	0

It can be observed from Tables 6 and 7, that the average monthly withdrawal using debit cards was ksh.36,429, while average monthly withdrawal through credit cards is ksh.20,143. Mean monthly deposit through debit cards was ksh.24, 429.

Further findings on management of debit cards and credit cards revealed that 91% of debit cards holders had withdraw limit of less than 40,000/= and 100,000/= per week. 23% of credit card holders had credit limit of less than 20,000/= .71% had credit limit of between 20,000/= and 40,000/= while 6% had credit limit of between 40,000 and 100,000. With regard to Credit period of between 30 and 60 days while 20% had credit period of less than 30 days. The implication is that majority of debit card holders only rely on withdrawal limit to control the usage of their cash. This may not be effective way of cash flow control because of the high accessibility to ATMS.

From the questionnaires to the seven bank manager of the seven larger commercial bank with highest branch net work in the country (see appendix 3), it was established that 100 % (that is, all the seven bank manager were optimistic that debit cards had a bright future while 29% were scared that the credit cards had a dismissal future. It was also found that all the 7 bank (that is, 100% response) registered an increase in their debit cards and card holders ,membership over the last five years. The implication of these finding is that more people are getting involved in transacting cash through debit cards and credit cards hence, increased cash flows through these cards.

Further it was also found out from debit cards holders and credit card holders, that all of them were willing to advice their friends to apply for the cards. Their main satisfactions for the usage of the cards were due to the convenience, security. Reduced paper work, lower service fee, prestige, reduced verification procedure, ease of access to cash at any time and tracking personal transaction through use of the cards. The fact that most card users find it convenient and flexible to access money through ATMs by use of debit cards and credit cards implies increased spending of the saving at once convenience without proper planning.

The finding also revealed that 63% of the debit and credit cards Holders learned about the existing cards through the banks, 31% got the information through existing card holders and 6% made their personal initiative to get the information about the cards. The bank cited out the use of withdraw limit, credit period and brochures as the main way through which they ensure their customers proper use of debit card and credit cards. These implied that bank are aggressively interested in tapping their customers savings, increase their lending base and lower queues in the banking halls hence, increasing the customers access to withdrawal and deposit points and providing little source of information on proper control of cash through credit and cash usage.

Finally 6 out of 7 banks (86%) agreed that the percentage of NPL as resulting from default of credit cardholders was insignificant. 14 % (that is, 1 bank) said it had zero NPLs arising from credit usage. This meant that banks carefully carried out their credit appraisals before giving credit cards to their customers. It also implied that there is insignificant effect of credit card on the customers default risk of repaying the borrowed money.

Discussions and findings

The above results reveal a number of effects of debt cards and credit cards on bank customers' cash flow management control. It was revealed that a high percentage of both debit card holders and credit card holders use their cards for payment of goods and services at merchant outlets. It was found that at least 60% of debit card holders' use their cards for payments while at least 91% of credit card holders' use their cards as means of payment. These implied that both cards had the effects of increasing cash outflows hence weakening the cardholders' control of cash outflows.

The results also indicate a lower percentage of cash deposit through debit cards compared to cash withdrawal through use of the same cards. At least 100% of debit card holders withdraw money using their cards compared to 57% who deposit money using their debit cards. The mean monthly withdrawal using debit cards (Ksh. 36,429) was higher than the mean monthly deposit (Ksh. 24,429) using debit cards. Credit cardholders on the other hand indicated zero deposit and a mean monthly withdrawal of Ksh. 20,143. These results imply that both cards are highly used for withdrawals compared to their use in deposit function. These have the effect of causing cash deficits to cardholders. It was further revealed that most users of debit cards and credit cards were employed people and below the ages of 45 years. This is a youthful population that is likely to increase its luxurious expenditures through credit cards and debit cards hence weakening their cash flow management control positions.

The findings relating to the knowledge of cardholders concerning the use of their cards indicated that still a significant percentage of the cardholders (38% and 57% of the debit and credit cardholders respectively) did not have sufficient knowledge for proper use of the cards. This exposes them to the risk of misuse of the cash through the use of their cards hence weakening their cash flow management control.

Both cardholders indicated above average increase in their consumption level (5.7%) meaning increase in expenditure and decrease in saving as result of the use of the cards. Both cards also lead to significant decrease in the cash and bank balance of the cardholders due to their high influence on consumption levels. These imply acceleration of cash outflow compared to cash inflow of the cardholders when they use their cards.

The result also reveals that card holders use their cards for consumption rather than for investment purpose as indicated in the reduced levels of saving and increased level of consumption through usage of the cards. This has an effect of leading to cash deficits on the side of cardholders.

The results also indicate an insignificant default rate by credit card holders on repayment of the loan advanced to them through credit card usage. However credit cardholders were still indebted at an above average rate. This meant that although most credit cardholder does not default in meeting their obligation under credit cards arrangement, they still relied on debts for survival. Credit cards thus have an effect of creating a negative cash position for the cardholders.

It was also found that more people were applying for debit cards or credit cards. Most respondent were satisfied with the use of these cards and cited out flexibility, convenience and proper tracking of their transaction as their main reason for their continuous use of the cards. Even though the cards offered them records of their transaction, when used, most cardholders bare likely to fall into traps of impulse expenditure due to the flexibility and convenience enjoyed from the usage of their cards if reasonable care was not taken.

Conclusion, recommendation and suggestion for further study

The problem of this study was to access the impact of debit card and credit cards on commercial bank customer's cash flow management control in Kisumu town. The study intended to establish the use and management of credit cards on various cash transaction and determine the effect of credit cards and debit cards on card holder's cash flow. The study aimed at assisting the cardholders in ensuring proper use of their cards, help commercial bank to educate their customers on proper use of the cards, benefit the community through economic growth resulting from proper use of the cards. A summary of the finding of this research study are as explained below.

Both debit cards and credit cards had the effect of increasing cash withdrawals and consumption level. There was a reduced saving and investment level as a result of the use of credit cards and de bit cards. Both cards were used to lower extent in depositing than withdrawing money through ATMs. The rate of usage of both cards at merchant outlets was on an increasing trend. Both cards had the effects of reducing bank balances and cash balance to significant level. Both cards were highly used by youthful and employed population that risked engaging into impulse purchases due to the flexibility offered by the two cards when accessing the money. Credit cards had the effect of increasing the level of indebtedness to the cardholders hence, keeping them in cash deficit positions. Both cards can assist the cardholder in tracking his/her transactions but cannot put a control on how one uses his/her money. A significant fraction of both cardholders ran the risk of misuse of their cards by withdrawing money without proper planning due to insufficient knowledge on the use of the cards. In conclusion, credit cards and debit cards has an impact of weakening the cash flow management control of the commercial bank customers in Kisumu town. These cards accelerate cash outflows but cannot increase cash inflows at the same rate.

Implication for future research

From the research findings it was noted that debit cards and credit cards have the effect of increasing the commercial bank customers' cash outflows and reducing their cash inflows. It was also found out that many card holders still like using their cards without knowing the effect of these cards on their cash flows. Due to these and other findings the researcher recommends the following measures to be taken, to improve the cash flow management control of the card holders.

The findings of this study points out the need of banks to go extra miles to educate the potential cardholders on how they should manage their cash when in possession of either a debit card or a credit card. Banks may offer incentives to those customers who deposit in more money through debit cards to curb the increased withdrawals by the same cards. Banks should also properly evaluate their customers so as to give them appropriate withdrawal limits that will reduce excess withdrawal. Customers should be given flexibility to change their withdrawal limits if the existing limits became uncomfortable.

Cardholders should use some portion of the money withdrawn through use of debit cards or credit cards, every month, to put in some investment projects. The banks may put in place higher rates of interest for withdrawals beyond certain limits where the customer only withdrawal without depositing some money to the account. Taking ATM deposits free may also encourage more debit cardholders to deposit money through ATMs.

Due to in adequate time and funds, the researcher only covered Kisumu town in the study of the impact of credit cards and debit cards on commercial bank customers' cash flow management control. The study also concentrated on individual household customers only. This left out fertile grounds for further study in the related areas. Consequently, the researcher suggests the following arrears for further study. First, there is need to study the impact of debit cards and credit cards on bank customers' cash flow management control in Kenya and other developing economies, secondly, future studies should include business customers in the study of the effect of credit cards and debit cards on bank customer cash flow management controls. Finally there is need for studies focusing on the role of debit and credit cards usage on liquidity of banks, inflation in economy and money laundering.

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