

An Analysis of Causes of Underutilization of ATM Use and Suggested Remedies in Calabar, Nigeria

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Nigeria is a cash based economy, however, with the introduction of cashless policy by the Central Bank of Nigeria, it is expected that day-to-day transactions would be done using e-payment channels such as the Automated Teller Machine (ATM). Notwithstanding the immense services provided by the ATMs, it is grossly underutilized for cashless transactions. The purposes of this study are to identify causes of underutilization of ATM use and to suggest possible measures to improve the utilization of ATM. The study administered 480 copies of questionnaire to ATM users across six purposively selected banks in Calabar Metropolis. The regression analysis generated three predictive models. The first and second models, but the third (full) model was most significant ($p < 0.01$) because it explained 64.4% in the variability of ATM use for payment ($R^2 = 0.644$) with education, age and monthly income identified as the most significant predictor variables. The study showed that people were fully aware that ATM is used for fund transfer, but did not like using it because of intermittent network failure, problem of usage and fear of being duped. Withdrawals and phone recharge were identified as the principal services of use. The study suggested inter alia, the provision of effective internet services and stable power supply in order to increase the confidence of Nigerians in ATM use for payment.

1. Introduction

Cashless policy is a measure introduced by the Central Bank of Nigeria (CBN) to reduce the use of cash in day to day transactions. The policy is also aimed at reducing the amount of physical cash (coins and notes) circulating in the economy and encouraging more electronic based transactions such as automated teller machines (ATMs), point of sale (POS), mobile banking and internet banking. In addition, the cashless policy is aimed at curbing some of the negative consequences associated with the high usage of physical cash in the economy, such as: high cost of cash, high risk of using cash, high subsidy, informal economy and inefficiency and corruption (CBN, Website, 2011). The pilot phase of the cashless policy commenced in Lagos on April 1st, 2012 and was extended to Ogun state, Rivers state, Kano state, Abia state, Anambra state and the Federal Capital Territory (FCT) on July 1st, 2013 (Olanipekun et al., 2013).

The three key stated objectives of the policy are to drive the development and modernization of the payment system in line with Vision 2020; to reduce the cost of

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banking services and drive financial inclusion by providing more efficient transaction options and greater reach and to improve the effectiveness of monetary policy in managing inflation and driving economic growth (BFA, 2013). The bottom line of the policy was the decision to place customer's daily maximum withdrawal or deposits to N100, 000 per individual customer and N1 million for corporate clients. Though, this decision resulted in public outcry across the country, it is still in operation. Nevertheless, the cashless policy only prohibits withdrawals or deposits above the stipulated amount over the ATMs, POS and other e-banking outlets, but that any over-the-counter cash transactions will be subjected to cash handling charges (Olanipekun et al., 2013).

Customers' behaviours and attitudes toward cashless policy is an issue of great concern; because irrespective of the importance of the policy and the improvement in banking services such as ATMs, POS and mobile banking, not many customers make use of these devices in transferring money or to make deposits. Most importantly, ATM which is one of the widely acceptable and used banking payment system, is only used by majority for withdrawals with few making other transactions such as deposits and voucher recharge for cell phones. The advent of Automated Teller Machines (ATMs) has helped to ease customers' problem of money withdrawals, fund transfer and voucher recharge for cell phones among others (Ogundele et al., 2012). The use of ATMs enables customers from different banks to withdraw money and make other transactions at any time and place. Isa and Yusuf (2011) opined that ATMs can enable depositors from whichever bank to withdraw cash and make deposits at more convenient times and places than during banking hours thereby reducing the costs of servicing some depositors' demands.

Despite, the immense services provided by the ATMs, it is grossly underutilized for cashless services as very few people make use of the machines for fund transfer. This, to some extent has undermined the intention of the cashless policy, as people still make use of physical cash in daily transactions. This calls for immediate concern and the need to know why customers do not make use of the ATM for this purpose. Obviously, customers prefer using the banking hall or counter to make withdrawals and depositing same to another account to the ATM which would have made it easier and faster. Several factors could be attributed to this apathy behaviour on the use of ATMs. The technology acceptance model (TAM) provides some evidence for this ill-behaviour. The TAM was developed by Davis (1989) and it has emerged as a powerful and parsimonious model of behavioural change (Yousafzai et al., 2007). The TAM adapts the framework of the TRA (theory of reasoned action) and hypothesizes that a person's acceptance of a technology is determined by his or her voluntary intention to use that technology (Yousafzai et al., 2010).

Intention, in turn, is determined by the person's attitude toward the use of that technology and his or her perception concerning its usefulness. Attitudes are formed from the belief a person holds about the use of the technology. The first belief, perceived usefulness (PU), is the user's "subjective probability that using the ATM for transaction will increase his or her job performance" (Niehaves and Plattfaut, 2013). The second belief, perceived ease of use (PEU), is "the degree to which the user expects the target system to be free of efforts". PU is influenced by PEU. The model therefore, tries to identify peoples' acceptance of a technology and the use of the technology (e.g. ATM), is usually determined by two basic factors: perceived usefulness and ease of use. Since the inception of the CBN cashless policy, several studies have been carried

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out, but majority of these studies focused on the benefits, challenges and policy implications of the policy on the Nigerian economy (Mieseigha and Ogbodo, 2013; Akhalumeh & Ohiokha, 2012; Siyanbola, 2013; Odior and Banuso, 2013; Olanipekun et al. 2013), while others assessed peoples' behaviours and attitudes towards the policy (Oghojafor et al., 2013). However, studies on the underutilization of ATMs in relation to the CBN cashless policy have not been adequately documented in the literature. It is on this background that this study makes attempts to empirically evaluate the causes of underutilization of ATM use in relation to the Central Bank of Nigeria's cashless policy among ATM users in Calabar, Nigeria and suggests possible measures to improve the utilization of ATM.

To achieve the above objectives, part two of this study reviews literatures of different authors as it relates to the subject matter. Part three explains the methodology used in this study; while part four presents the necessary data with results of findings. Finally, chapter five draws conclusion and useful recommendations.

2. Literature Review

The Cashless policy has been in operation in Nigeria for about three years, but, the level of awareness and utilization of available e-banking devices such as the ATM to actualize the objectives of the CBN on cashless policy in Nigeria has remained underutilized. Babarox (2007) and Laidler (2005) viewed a cashless economy as one where monetary assets play no essential roles in the order of things. Costa & Grauwe (2001) defined a cashless society as one in which there are no notes and coins issued by the Central Bank and where money used is provided by private financial institutions. Even when the central bank operates like other banks and produces its own currencies, such would just be one of the currencies available, but, the unit of account (Naira, Dollar, etc) remains a national affair, provided by the state. Electronic banking is the application of computer technology to banking, especially the payment (deposit and transfer) aspects of banking. It is a system of banking with an electronic communication network which permits on-line processing of the same day credit and debit transfers of funds between member institutions of a clearing system (Siyanbola, 2013).

Electronic banking is also a system by which transactions are settled electronically with the use of electronic gadgets such as: ATMs, POS terminals, GSM phones, V-cards, etc., handled by e-holders, bank customers and other stakeholders (Edit, 2008). E-banking through the use of ATM and other electronic banking methods impacts positively on the Nigerian economy. The method allows for prompt settlement of transactions. E-banking speeds up settlement of transactions both locally and internationally, where the bank stands as paying bank to the customers for settlement of transactions or as collecting bank for collection of payment on transactions. Another benefit is the reduction in the frequency of visit to the banks. Unlike before, customers can now transact their banking businesses in branches nearer to them and they can also withdraw money from any ATM including the ones located outside the bank where they have account (Siyanbola, 2013). They can also transact banking business at home with the aid of telephone.

E-banking also stimulates Cashless policy which has paved way for cashless society as the introduction of electronic machine has reduced the use of raw cash thereby transiting the country into a cashless society, hence the position of Anyanwaokoro (1997) that the settlement of financial obligations are now done by the use of electronic gadgets such as computer, facsimile

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and telex, instead of currency notes and coins. He also opined that individuals can pay their bills by using credit cards or even pressing some buttons that transfer money from one account to another. The perfection of this system is what he described as a move into cashless society. Olanipekun et al., (2013) observed that electronic based transactions are a major tool used to discourage high circulation of cash in any economy. It is a sine qua non to the implementation of cashless policy as it is desirous to make it succeed. Electronic cash is a system that allows individuals purchase goods or services in today's society without the exchange of anything tangible for payment.

Irrespective of the immense roles played by e-banking in actualizing the CBN cashless policy, mostly for consumers, which includes increased convenience; more service options; reduced risk of cash-related crimes; cheaper access to (out-of-branch) banking services and access to credit, not all customers make use of these electronic devices (ATM, POS, mobile and internet banking) for payment for any transaction. Different factors have been identified to influence customers' lack of use of these electronic devices for payment. For example, Oghojafor et al., (2013) alleged that even though there was a general feeling that the cashless policy was a positive step, there were several fears and challenges envisaged about it. There were also fears about the high level of cash-centered operations, lack of trust, poor banking penetration and culture, defective infrastructure including electricity and payment systems, peoples poor experiences with the ATMs and the nonchalant attitude of banks, unwillingness of the banks to share any expected gains with customers and the issues of security, fraud and identity theft.

Other challenges of cashless policy implementation in Nigeria (Siyanbola, 2013; Olanipekun et al., 2013) include lack of a unique national identity system which makes it difficult to implement the policy efficiently and effectively. The effect of this is increase in ATM thief, thus, one can dupe a bank today and reappear in another area under another name. Also, inadequate infrastructure which ranges from network failure, inadequate ATM and POS machines and epileptic power supply which is critical to efficient electronic payment system are noted to militate against the success of cashless policy. For example, some ATM and POS machines do not work when the consumers need them because it is out of service or unable to dispense cash. Another challenge on the use of e-banking in achieving the CBN cashless policy is literacy level. Literacy rate in the country is very low in some part of the country, especially in the North. Businessmen in this region prefer to keep their money in their private vault rather than patronizing the banks.

Studies on the benefits and challenges of cashless policy on Nigeria's economy have been undertaken by scholars. Olanipekun et al. (2013) examined the challenges and prospects of cashless economic policy in Nigeria. The study examined the benefits and advantages of the policy, factors hindering the successful achievement of the policy's objectives and made recommendations that will make the policy succeed. Odior and Banuso (2013) examined the implications of cashless banking, with a view to exposing the possible challenges and prospects it poses to the Nigerian economy. He evaluated the policies of the Central Bank of Nigeria as well as proffer valuable recommendations on the execution of cashless banking in Nigeria. It further noted that the shift towards a cashless Nigeria seems to be beneficial, though it comes with high level of concerns over security and management of cost savings resulting from its implementation.

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Oghojafor et al., (2013) assessed peoples' behaviours and attitudes towards cashless policy in Lagos. The study found that while 92% of the sample is aware of the cashless policy, only 58% actually understands it; that most of the respondents use ATMs and that they do so because of convenience and safety. While, those who avoid the cashless channels do so because of fraud and operational lapses. Also the study showed that 72% of the respondents believe that the cashless policy is necessary, while 40% believe that the CBN approach to its implementation is the best but only 36% believe that the policy will succeed. The study further showed that 64% of the customers who believe that the policy would fail justify their assertion on the power supply situation, poor implementation and non-availability of cashless channels in the rural areas.

In Europe, Gresvik and Owre (2002) studied how much it costs Norwegian banks to process various payment instruments. The study found that payment cards used for cash withdrawals at ATMs cost considerably more since the transactions involve cash replenishment, maintenance and security costs. In addition, the cost of using cheques for cash withdrawals was found to be three times more expensive than cash withdrawals at ATMs. Cross country studies such as those of Humphrey et al., (1996) analyzed patterns in the use of cash and other e-payment instruments in 14 developed countries, including the US. Whilst treating payment instruments as if they were traditional goods, the authors construct measures of the cost (analogous to prices) of various payment methods in order to study whether differences in cashless instrument usage across countries can be explained by differences in the relative prices of such instruments. The result showed that such price differences failed to determine the usage of e-banking instruments. A cursory look at these studies indicates that studies on the underutilization of ATMs in relation to the CBN cashless policy are poorly documented in the literature. This indeed, justifies the need for the present study.

3. Methodology

3.1 Research Design

The study employed the descriptive cross sectional research design to investigate the causes of underutilization of ATMs in relation to the Central Bank of Nigeria's cashless policy among ATM users in Calabar from different socioeconomic backgrounds.

3.2 Types and Sources of Data

Both primary and secondary data types were used to obtain necessary information for the study. The primary data types used were:

- Data on the use of ATM;
- Data on cash transaction (amount) and frequency of transaction;
- Data on the services ATM is used for; and
- Data on the knowledge of the use of ATM for transfer of money.

The sets of primary data outlined above were obtained (sourced) through the administration of copies of structured questionnaire to ATM users in Calabar Metropolis. In addition, secondary data used were:

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- Use of e-money for products purchase from 2008 -2011
- Number of adults with debit cards and proportion using them for e-payment.

Also, the sets of secondary data mentioned above were obtained from CBN (2011) Annual Report and Bankable Frontier Associates (2013) data respectively.

3.3 Sample and Sampling Procedure

The study employed the purposive and accidental sampling techniques during data collection. The purposive sampling technique was used for six banks in Calabar Metropolis that have functional ATMs. The selected banks were First Bank, Ecobank, Zenith Bank, GTB, Access Bank and First City Monument Bank. These banks were selected as a result of their geographic spread across the Metropolis as well as the efficient services rendered to the people. In each of the selected banks and ATM points, 80 ATM users were sampled using accidental sampling technique. The accidental sampling technique was used for questionnaire administration since it was not possible to meet every ATM user at the payment points and due to the unavailability of information on active ATM users. As such, only people met at the time of the survey were administered copies of the structured questionnaire. In all, a total of 480 copies of a structured questionnaire were successfully administered.

3.4 Instrument

The instrument (questionnaire) was divided into two sections. Section A measured respondents' socio-demographic characteristics, while Section B contained a set of questions on varied aspects of ATM use, such as: use of ATM, services the ATM is used for, customers' knowledge on the use of ATM to make payments and possible reason (s) why ATM is not used to make payments.

3.5 Procedure of Data Collection

The instrument was self-administered to the participants (ATM users) by the researcher with the assistance of five trained field assistants. The questionnaire was explicit with both closed and open ended questions; and respondents were requested to react to the items in the questionnaire by ticking options that best described their feelings/perceptions. The questionnaires were collected on the spot.

3.6 Method of Data Analysis

The data obtained was analyzed using a combination of descriptive and inferential statistics. Tables, percentages and charts were used to represent the data, while inferential statistics, notably multiple regression analysis using the step-wise method was used to identify main socio-economic characteristics of ATM users that influenced the utilization of ATM for payments other than withdrawals. However, before this analysis was carried out, items in the questionnaire coded for descriptive analysis were transformed or recoded into dummy variables (Winarti, 2010). For instance, questions like the educational background with five (5) options was transformed or recoded into two dummy variables of no education as 0, primary and secondary education as 1,

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and post-secondary education as 2. Statistical analysis was done with the aid of SPSS 22.0 for Windows.

4. Findings

4.1 Socioeconomic Characteristics of Respondents

Information on the socioeconomic characteristics showed that majority (50.6%) of the respondents ranged from the ages of 18 - 35yrs, this was closely followed by those in the ages of >35yrs. This implies that young people dominated the sample and the age range constitutes young people who are more inclined to experimenting new technology than the older people. Similar finding was reported by Okafor & Ezeani (2012). The marital status indicated that majority (61%) of the respondents were single. Information on educational status revealed that majority (78.8%) were classified under post-secondary education such as NCE, Diploma, LLB, B.Sc. /B.A and B.Ed. amongst other qualifications. The high level literacy level of ATM users recorded in this study is expected as its use requires some level of literacy for its operation (Okafor & Ezeani, 2012). The occupation of respondents showed that majority were civil servants (41.5%), followed by students (31%). Information on the monthly income showed that 82.5% earned N31, 000 and above. The occupation of respondents further indicated that only 31% of the total sample were non-workers (students), while 69% were workers (civil servants, public servants and professionals including technicians and artisans). The dominance of the workforce is also expected as steady income is required before transaction on the ATM can be made.

4.2 ATM Utilization for Money Transfer

Since all the respondents indicated that they were aware of ATM, the researcher went further to find out the use of the ATM for money transfer other than withdrawals. From the survey, majority (94%) of the respondents did not make use of the ATM for money or fund transfer, only a negligible number happened to utilize the ATM for fund transfer (Table 1). This implies that majority of the ATM users prefer to transfer money through the counter. In a related study, Adeloje (2008) and Adeoti (2011) identified security as well as power outage as major challenges facing ATM utilization for various purposes in Nigeria. This undermines the objectives of the CBN cashless policy, as customers are still seen carrying large amount of money into the bulk rooms of banks.

Table 1: Utilization of ATM for fund transfer

Options	Frequency	Percent
Yes	29	6.0
No	451	94.0
Total	480	100.0

4.3 Possible Reasons Why ATM is not Utilized for Fund Transfer

Irrespective of the introduction of cashless policy into the Nigerian banking system, not many Nigerians have taken part in the objectives or need for the policy. Several factors could be responsible for Nigerians attitude toward the policy in their day-to-day banking transactions. The

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information in Table 2 gives some of the factors prohibiting the full utilization of the ATM to achieve the CBN cashless policy. The result in Table 2 identified network failure, problem of usage and the fear of being duped as the main reasons which people do not make use of the ATM for money or fund transfer. Network failure has created fear and suspicion in the use of ATM for money transfer, as network failure during transaction could result in undue debit. The process involved in reverting the debited account as a result of network or system failure makes customers not to be interested in its use. Another obvious factor is problem of usage (poor experience); majority of the ATM users do not have first-hand information on how money could be transferred from their accounts to others' accounts. They may be aware, but do not have information on the processes involved because they have not tried or used it for fund transfer. The fear of being duped by the receiving account is another reason for the low use of ATM for fund transfer. These three factors undermine the CBN policy of cashless policy, as people still carry physical cash for transactions over the banking hall or counter irrespective of the inherent charges. The findings of this study corroborates those of Oghojafor et al., (2013) and Olanipekun et al., (2013) when they alleged that lack of trust, peoples poor experiences with the ATMs, inadequate infrastructure which ranges from network failure, inadequate ATM and POS machines and epileptic power supply to seriously militate against the use of e-payment channels cum the success of cashless policy. Apart from corroborating with the above, this study also discovered that the fear of being duped, is another reason why people have apathy for the use of ATM for money transfer.

Table 2: Reasons for not using the ATM for fund transfer

Options	Frequency	Percent
Long queue	29	6.04
Problem of usage	149	31.04
Don't like using it	50	10.42
Fear of being duped	58	12.08
Network failure	194	40.42
Total	480	100.0

4.4 Amount of e-payment for Products (in Billions)

The information depicted in Table 3 showed the value of electronic card (e-card) transactions made by Nigerians from 2008 to 2011. It indicated that ATMs remained the most patronized e-payment channel used for online product payment/ transaction, followed by internet banking payments, point-of-sale (POS) terminals, and mobile payment. The information in Table 3 indicated 290.7% increase in ATM used for 4 years. The increase in the use of e-payment channels according to Olanipekun et al., (2013) was attributed to enhanced public confidence in electronic card payments. The result provided in the Table provides the situation of e-payment channels at the national level where several actors are involved; this perhaps may not be the case at the local and regional levels where e-payment channels are not adequately provided and used. For example, not all the supermarkets in Calabar has POS channel, as majority of the transactions are cash based.

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Table 3: Amount of e-payment for products (in billions)

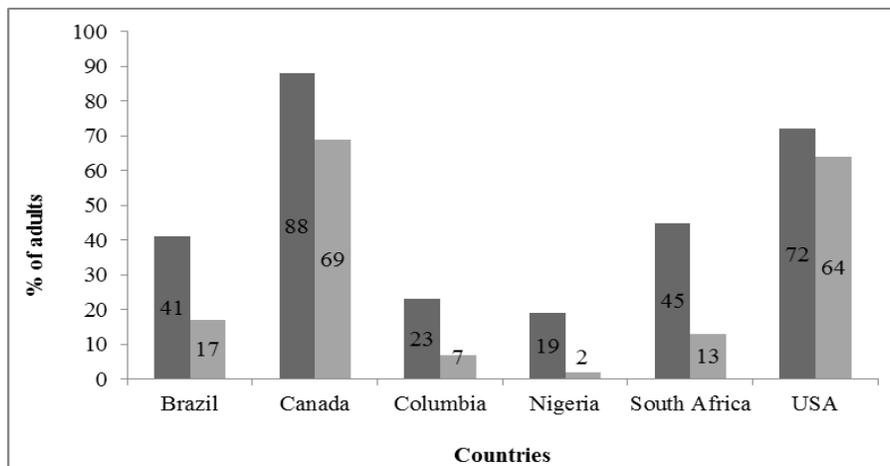
Years	Value of e-payment for products (in billions)			
	ATM	Internet banking	POS	Mobile banking
2008	399.7	25.1	16.1	0.7
2009	548.6	84.2	11.0	1.3
2010	954.0	99.5	12.7	6.7
2011	1561.8	58.0	31.0	20.5

source: olanipekun et al., 2013: 2

4.5 Proportion of Adults using Debit Cards for Payment

The information in Figure 1 shows the percentage of adults with debit cards and the proportion that made use of their debit cards for payment for different transactions. It shows that among the countries shown in the Table, Nigeria is the least country where payment for product and services as well as fund transfer is transacted via the ATM (debit cards). This simply implies that e-payment channels are still at its lowest ebbs in Nigeria. South Africa is six times the percentage of Nigerians using debit cards; this indicates high utilization of ATM and POS for payments in South Africa. The major reason for the high percentage of adults using debit cards for payment of all sorts is attributed to better effective e-payment channels (good network and relatively stable power) compared to what is obtainable in Nigeria. This perhaps enhanced confidence in electronic card payment.

Figure 1: Proportion of adults using debit cards for payment
Source: BFA, 2012: 3



4.6 Socioeconomic Factors and ATM use for Payment

The result of step-wise multiple regression analysis of the joint contribution (R^2) of predictor variables on the ATM utilization for money transfer is shown in Table 4. The result shows that out of the 5 predictor variables (age, income, education, marital status, and occupation) simultaneously entered into the model, only 3 (education, age and monthly income) were significant in influencing ATM utilization for payment. As such, three models explaining ATM utilization for payment were established. In the first model, education (Edu) was retained and

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significantly ($p < 0.01$) contributed 57.9% to ATM utilization for payment (Table 4). This is obvious as education of respondents has significant effect on ATM utilization for various services. The second model shows that education and age were retained and they significantly ($p < 0.01$) contributed 61.1% to the utilization of ATM for payment (Table 4). Age of respondents influences the ATM for money transfer. The result indicated that age of respondents was negatively associated with the use of ATM for money transfer. This is apparent, as the elderly are less likely to make use of the ATM for variety of payments. This is because, ATM use decreases with age; as the aged finds it extremely difficult to adapt or change to new banking services. In our banking system, this group of people are mostly seen with physical cash waiting for deposit over the counter. In the third model, with the introduction of monthly income (MI), ATM utilization for payment significantly increased to 64.4%. Indeed, the inclusion of monthly income in the model improved the accuracy of predicting ATM utilization for payment in the first and second models by 6.5% and 3.3% respectively. Monthly income of respondents influences the propensity to money transfer. People who earn high income are more likely to make use of the ATM for payment due to the ease in payment and for security purpose. Thus, the variability of ATM utilization for payment was explained by education, age and Monthly income (Table 4). The step-wise regression results therefore indicates that the third model was most significant in predicting ATM utilization for payment, because it explained 80% variability in ATM utilization for payment ($R^2 = 0.644$). This means that the presence of these socioeconomic variables will go a long way in improving ATM utilization for payment.

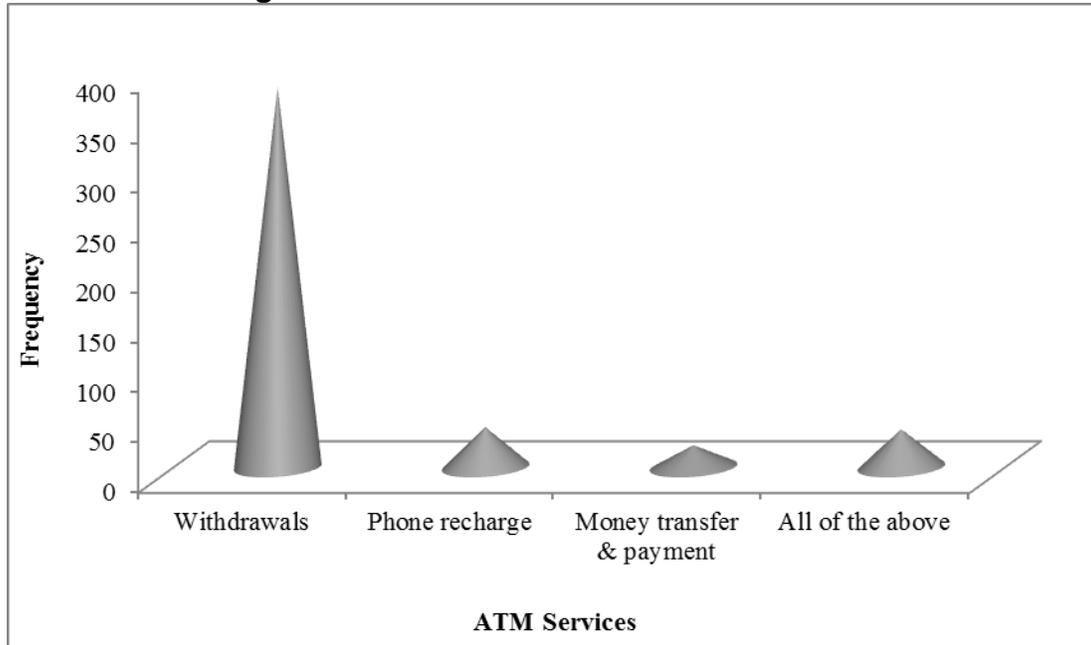
Table 4: Result of step-wise multiple regression

Predictor variables	R	R ²	F-values	Regression equations
Edu	0.761	0.579	658.289*	$Y = 1.079 + 0.316\text{Edu}$
Edu + Age	0.782	0.611	374.704*	$Y = 1.057 + 0.393\text{Edu} - 0.085\text{Age}$
Edu + Age + MI	0.803	0.644	287.479*	$Y = 0.870 + 0.508\text{Edu} - 0.307\text{Age} + 0.263\text{MI}$

*Significant at 5% alpha level

4.7 ATM and its Level of Utilization

Figure 2 gives vital information on the services for which ATM is often used for. The result identified withdrawals and phone recharge as the principal services utilized by ATM users, while money transfer was the least utilized ATM service. This is apparent as majority of the people that visited the ATM mainly use it for withdrawals from which some amount is deposited as well as used for phone recharge. It further showed that 7.9% used the ATM for withdrawals, phone recharge and payment. The very low proportion of people using all these services calls for immediate concern in order to benefit the objectives of the CBN cashless policy.

Figure 2: Services utilized at the ATM stand

5. Conclusion and Recommendations

The study shows ATM has been grossly underutilized in Calabar thereby, making the Central Bank of Nigeria's Cashless Policy a mere mirage. Large proportion of the masses are aware that ATM is used for fund transfer, but do not like using it because of intermittent network failure, problem of usage and fear of being duped. Withdrawals and phone recharge are identified as the principal services for which the ATM users often used ATM for. The study indicates that the utilization of ATM for payment is best explained by education, age and monthly income. These factors exert significant effect on the type of service carried out in the ATM. This study is limited to ATM users in Calabar metropolis as a result of time and financial constraints to survey the entire country, though the demographic characteristics of respondents bears similarity with other people across the country, hence, can be generalized to the population of the country. The findings of this study therefore supports the previous findings by other authors as buttressed in the literature review. Currently, the banks discourages the cash withdrawals within N100,000 (one hundred thousand naira) over the counter; thus encouraging account holders to use the ATM. Legislation should be enacted prohibiting deposits less than N100, 000 (one hundred thousand naira) over the counter into accounts other than depositor's own; this will increase the use of the ATM for money payment as well as increase Nigerians' confidence in the use of ATM for payment. Efforts should also be made to provide effective internet services and stable power supply if the CBN cashless policy must be achieved.

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