

An Empirical Analysis of the Benefits of Cashless Economy on Nigeria's Economic Development

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Abstract:

The Central Bank of Nigeria (CBN) cashless economy policy is of no doubt an essential to the development of Nigeria's economy. The purpose of this study is to expose the merits of the cashless economy to Nigeria populace, and as well the pains of a cash-based economy. The accidental sampling method was used in the selection of a sample size of 520 persons, out of which 468 persons representing 90 percent of the sampled persons completed and returned the questionnaires administered to them. Collected data were analyzed using the simple percentages method and the hypotheses were tested with the Chi-square and Analysis of variance (ANOVA) tests. The Chi-square test on the first hypothesis reveals a positive and significant relationship between cashless economy and transparency, accountability and reduction cash-related fraud with F-ratio of 70.175 > F-critical of 9.488 at 0.05 level of significance with a 4 degree of freedom, while the ANOVA test on the second hypothesis finds that cashless economy has a positive impact on economy development with F-ratio of 51.37 > F-critical of 5.32 at 0.05 level of significance with 1 to 8 degree of freedom. The study recommends adherence to minimum security standards and deployment of more ATMs for smooth implementation of the cashless policy in Nigeria.

Keywords: Cash-based economy, Cashless economy, Economic development, E-payment.

1. Background to the Study:

The 21st Century has witnessed tremendous technological advancement in almost all spheres of human endeavor. The most pronounced is the system of information and communication technology which has mystified computer and took the world on a fast strip turning it into a global village where people of different nationalities, races, and social background can effectively interact (Adeya, 2001, Dahawy, et al, 2005).

Akhalume and Ohiokha, (2012) opined that cashless economy does not refer to an outright absence of cash transactions in the economic setting but one in which the amount of cash-based transactions are kept to the barest minimum. It is an economy where transactions can be done without necessarily carrying physical cash as a means of payment or exchange of transaction but rather with the use of credit or debit cards for payment of goods and services (Omotunde, et al, 2013). It is a system whereby payment for goods and services is offered through the internet or any type of electronic fund transfer.

The Central Bank of Nigeria (CBN) in recent times stipulates policy of daily cumulative limit of N150,000 and N1,000,000 on free cash withdrawals and lodgement by individual and corporate customers respectively in Lagos State with effect from March 30, 2012. The aim is to make both the Nigerian financial system formidable and enhancing the overall economic performance of Nigeria to ensure that it is rightly placed in tune with global trend (Omotunde, et al, 2013 ; Akhalume and Ohiokha, 2012).

Yaqub, et al, (2013) reveals that the direct cost of cash on the CBN is estimated to reach a staggering sum of one hundred and ninety – two billion naira in 2012, and other challenges resulting from the high cash usage among others include: robberies and cash- related crime, revenue leakage arising from too much of cash handing, inefficient treasury management due to the nature of cash processing, high subsidy, high informal sector etc. it is against this backdrop that the CBN introduced the cashless policy in April, 2011 with the objective of promoting the use of electronic payment channels instead of cash.

According to Agba, (2010) electronic payment is a method of effecting payment from one end to another through the medium of the computer without manual intervention beyond inputting the payment data. This system promotes transparency, accountability and reduces the rate of fraudulent financial practices since only inputted payment data are of manual intervention. This view was supported by Ogedebe and Jacob (2012) when they opined that e-payment minimized interaction of government officials and contractors to eliminate opportunities for corruption tendencies.

The Central Bank of Nigeria (CBN) often emphasize with certainty that the cashless policy is expected to reduce cost incurred in maintaining cash-based economy by 90 percent upon its full implementation in Nigeria, however, there are unacceptable delays in the payment of government contractors in Nigeria, and a high level of corruption still exist in the public sector due to interactions between government contractors and officials (Ogedebe & Jacob, 2012).

Another fear according to Akhalumeh & Ohiokha, (2012) is the State of Nigeria's infrastructural decay as only

when Nigeria's institutions are on a functional basis like those of developed nations that the objective of cashless system will be fully achieved. This study is directed at exposing the impact of corruption which is strongly geared by the cash-based system on economic development with the objective of making open the countless benefits of the cashless economy to Nigerians.

In this study, attempt will be made to answer two research questions which are (a) How can the cashless economy reduce corruption in Nigeria? (b) To what extent will the cashless economy be of benefit to Nigeria? The hypotheses of this study are: H01: There is no significant relationship between the cashless economy and transparency, accountability and the reduction of cash-related fraud. H02: The cashless economy has no significant impact on economic development.

This study will concentrate on review of literature and theoretical framework on which the work is premised, this will then be followed by research methodology which discusses the various methods in the operational execution of this study, then the discussion of the result, Summary of the research findings and finally the conclusion and recommendations of the study.

Review of Literatures

The Cashless Economy: A Benefit perspective

Ejiofor & Rasaki, (2012) sees the cashless system as one with the ability to store money in an electronic purse or a card which is then used to purchase product at vending machine, or at any point of sales terminal located within the business premises. Cashless economy is one in which there are assumed to be no transaction frictions that can be reduced through the use of money balances, and that accordingly provide a reason for holding such balances even when they earn rate of return (Woodford, 2003 cited in Omotunde, et al, 2013).

The cashless economy is a system in which transactions are not done predominantly in exchange for actual cash (Akhalmeh & Ohiokha, 2012), It is essentially a mobile money payment system which allows users to make payment through G S M phones with internet facilities. This system increases convenience, create more service options, reduces risk of cash-related crimes and provide cheaper access to banking services and access to credit (Yaqub, et al, 2013).

Cobb, (2005) asserts that efficient, safe and convenient electronic payments carry with them significant range of macroeconomic benefits, the impact of electronic payment is a kin to kick the economy into higher gear. As cited in Omotunde, et al (2013) the CBN data shows that 51% of withdrawals done in Nigeria were through the Automated Teller Machine (ATM), while 33.6% were through the counter cash withdrawals and 13.6% were with cheques. The conclusion was that the introduction of ATM in Nigeria cash withdrawal system reduces over the counter withdrawal, it implies that the cashless policy supported by the application of information technology will reduce further the over dependent on cash payment in Nigeria.

Akhalmeh & Ohiokha, (2012) argues that the cashless system reduces transfer/ processing fees, increase processing/ transaction time, offers multiple payment option and gives immediate notification on all transactions on customers account. It increases tax collections, greater financial inclusion and economic development (Yaqub, et al, 2013).

In a study conducted by Echeokoba & Ezu, (2012) it was observed that 68.2% of the respondents were not satisfied with long queues in banks, 28.9 % complained of tellers attitude while 2.89% were not pleased with the proximity from their home to banks. This further confirmed the benefits of cashless system to individuals and the economy at large. Cashless economy brings with it transparency in business transactions and this of no doubt leads to an increase in tax revenue and by implication an increased infrastructural development which is vital for economic development (Jaiyeola, 2011). According to the CBN, the cashless economy aid the tracking of corruption and money laundering, it is a more effective tool for achieving stability goal and economic development. It create faster access to capital, reduces revenue leakages and cash handling costs (Yaqub, et al 2013).

Laoye, (2011) has the following as benefits of the cashless system:

Faster Transactions: Queuing at point of sales terminals and vending machines is greatly reduced as transactions can be paid for directly even at the comfort of ones home electronically, thus, improving the speed of services and reducing staff level at off peak times.

Increased Sales: The introduction of the cashless economy evidently demonstrated an increase of as much as 20%. This makes the value on the card available 24 hours a day, and 7 days in a week, thus, increasing the time available for commercial activities and all these add to more sales and better relationships.

Cash Collection – made simple: Time spent collecting, counting and sorting cash cost money. The cashless system offers a choice of top-up options including payroll deduction, credit and debit card, coin and notes. All money is safely locked in an alarmed cash box that is fully auditable.

Simple Solution: The cashless system provides a wide range of benefits which ensure a smooth running operation for business both big and small.

Reduces Cash in Circulation: The cashless system prevent too much of cash in circulation, thereby curb armed robbery cases and cash related crimes.

Job creation: The licensing and establishment of payment agencies will create jobs and new business opportunities.

Table 2.1: Benefits of Cashless Economy in Nigeria

Benefits of Cashless Economy	Percentage (%)
Increase employment	11.1
Reduces cash related robbery	22.2
Reduces cash related corruption	33.3
Attract more foreign investment	33.3
Total	100

Source: Omotunde, et al (2013)

2.2 Cash Based Economy: A problem perspective

The cash – based economy is an economy in which payment for goods and services are majorly done with cash as a medium of exchange. In this kind of economy, the dominance of cash transactions cuts across formal and informal institutions and markets, it is one in which more than 50 percent of the economic transactions in all sectors are conducted in cash, and majority of the population are unbankable (Humphrey, 2012). According to Alm, (1985) in developed economies, cash transactions are usually associated with the informal sector and the key motive for informality is assumed to be tax evasion and an aversion to higher costs of doing business in terms of increased tax burden, greater government regulation, and wide spread distrust of government. However, Humphrey, (2012) asserts that many developing countries, especially in Africa, corruption has become systemic to the extent that it has infiltrated and gained footholds in most institutional framework. This is geared as a result of cash being the major medium of payment transactions, thus, creating rooms for unhealthy and fraudulent negotiations that could adversely affect an economy.

In most of the cash-dominated economies, there is hardly any enforcement of regulations regarding how much cash one may physically carry or use; cash- dominated economies are thus more prone to money laundering as the dominance of cash transactions, coupled with the narrowness of the financial sector makes it easier for the proceeds of crime to be integrated into the rest of economy without the involvement of the financial system in the initial stage (Munyero, 2006; Humphrey, 2012, and Koker, 2003.)

Omotunde, et al (2013) in their study on the impact of cashless economy in Nigeria found by inference that cash-based economy increase unemployment, cash related robberies, corruption and reduces foreign investment. It also increase the rate of inflation and these all by implication stand to affect the paste of economic growth in Nigeria.

2.3 Essential of Cashless Economy

For any economy to fully enjoy the numerous benefits that comes with the cashless economy, key essentials need to be addressed.

The fact that Nigeria is cash – based implies that people are accustomed to using cash for most transactions and in fact some banks in Nigeria are very conservation, they use only a very few innovative product and marketing techniques, and the issue of security is one major challenge in the development of a cashless system as well as the poorly developed telecommunication and internet penetration which grossly impede smooth development and improvement in e-payment (Yaqub, et l 2013).

For the cashless economy to work effectively, illiteracy which is a serious impediment for the adoption of e-payment need to be reduced to the bearest minimum and also the cost of internet which must be supported with uninterrupted power supply along with the acceptance of new technology among customer’s and staff. Ifeakandu, (2011) agrees with this submission when he pointed that problems associated with the operation of cashless economy are communication issues like power, ICT and uptime payment platform and the interoperability of networks. The issue of infrastructure must be concertedly addressed (Alchalumeh & Ohiokha, 2012).

The Central Bank of Nigeria and other regulatory agencies in the financial sector must ensure that service providers adhere to minimum security standards on their web-based platform, as security issue is a major challenge in the development of the cashless system (Azeez, 2011, and Yaqub, et al, 2013).

Akhalumeh & Ohiokha (2011) in a related study, finds that limited POS/ATM constitute a problem of the cashless system, this was why they opined in their recent study in 2012 that provision of adequate terminals and Automated Teller Machines (ATMs) are essentials of a cashless economy, this submission was supported by the CBN in their recent directive to banks and independent service providers to deploy more ATMs and ensure their efficiency for a smooth implementation of the cashless policy (Ejiofor & Rasaki 2012).

3. Research Methodology

The accidental sampling method was used in the selection of a sample size of 520 persons out of an infinite national population of educated Nigerians. Well structured questionnaires were administered to the selected 520 educated Nigerians for the purpose of reaching a dependable conclusion, however, only 468 copies representing 90 percent of sampled persons completed and returned the questionnaires.

The study utilized two sources of data collection, the primary and secondary sources, data collected were statistically analysed using the simple percentages, while chi-square and Analysis of Variance (ANOVA) tests were use in testing hypotheses 1 & II respectively.

4. Analysis of Data

Table 4.1 below is responses to the questions on the questionnaire and therefore the basis for the following analysis on the perception of respondents on the benefits of the cashless economy with respect to transparency, accountability and reduction of cash related fraud.

Table 4.1: Benefits of cashless policy with respect to transparency, accountability and cash-related fraud reduction.

Source: Field Survey 2013.

S/N	QUESTIONS	RESPONSES		
		Yes	No	Total
1	Do you agree that the cashless economy will reduce cash related fraud?	287 (61.34%)	181 (38.66%)	465 (100%)
2	Do you think that E-payment system will stimulate an increase in transparency?	244 (52.14%)	224 (47.86%)	468 (100%)
3	The cashless system will help in reducing fraudulent financial reporting and promote accountability	228 (48.72%)	240 (51.28%)	468 (100%)
4	Money laundering and other top management crime will reduce as cashless system is implemented.	336 (71.79%)	132 (28.21%)	468 (100%)
5	The full implementation of the cashless policy in Nigeria will stimulate an increase in tax collection in Nigeria.	238 (50.85%)	230 (49.15%)	468 (100%)

Table 4.1 above shows that cashless economy will reduce cash RELATED fraud, 61.34% of the respondents believes that cash related fraud will reduce in a cashless economy, 52.14% of the respondents are of the opinion that e-payment will stimulate an increase in the level of transparency.

The respondents however, shows a degree of doubt that the cashless system will reduce the level of fraudulent financial reporting and encourage accountability with 51.28% of the respondent saying no to the question, 71.79% of the respondents are of the view that money laundering and other top management crimes will be reduced in a cashless economy and finally 50.85% of the respondents are of the opinion that full implementation of the cashless system will result to an increase in tax revenue, thus putting more money in the hands of Government for infrastructural development which is very essential for economic development.

Test of Hypothesis One.

There is no significant relationship between cashless economy and transparency, accountability and the reduction of cash related fraud.

This hypothesis was statistically tested with the chi-square test using the information in table 4.1, at 0.05 level of significance.

Chi- Square Table

F_o	F_e	$F_o - F_e$	$(F_o - F_e)$	$\frac{F_o - F_e)^2}{f_e}$
287	266.6	20.4	416.16	1.561
244	266.6	- 22.6	510.76	1.916
228	266.6	- 38.6	1,489.96	5.589
336	266.6	69.4	4,816.36	18.066
238	266.6	- 28.6	817.96	3.068
181	201.4	- 20.4	416.16	2.006
224	201.4	22.6	510.76	2.536
240	201.4	38.6	1,489.96	7.398
132	201.4	- 69.4	4,816.36	23.914
230	201.4	28.6	817.96	4.061
				70.175

Decision Rule:

The calculated χ^2 value of 70.175 is greater than the critical χ^2 value 9.488 at 0.05 level of significance and 4 degree of freedom. We can therefore, conclude that there is a positive and significant relationship between cashless economy and transparency, accountability and reduction of cash related fraud.

The result, χ^2 calculated values of 70.175 greater than χ^2 critical values of 9.488 strongly confirm the fact that the cashless economy will lead to high level of transparency, accountability and reduction of cash related fraud. This finding is supported by Omotunde, et al (2013) who finds that cashless economy reduces cash related robberies, corruption and attracts foreign investment. Also, Humphrey, (2012) finds that cashless economy reduces cases of money laundering, smuggling and theft of bulk cash. This is equally evidence supporting our conclusion.

Table 4.2. Below presents the perceptions of the respondents on cashless economy and its impact on economic development.

Table 4.2: Impact of cashless economy on economic development.

Source: Field Survey 2013.

S/N	QUESTIONS	RESPONSES		
		Agree	Disagree	Total
1	Reduction of Cash related fraud will enhance economic development	298 (63.68%)	170 (36.32%)	468 (100%)
2	Economic Development is a product of transparency which is a benefit derivable from a cashless economy	274 (58.55%)	194 (41.45%)	468 (100%)
3	Accurate reporting and accountability are vital for economic growth and development	328 (70.09%)	140 (29.91%)	468 (100%)
4	The fight against money laundering and top management crime will stimulate economic growth	356 (76.07%)	112 (23.93%)	468 (100%)
5	Increase in government revenue stimulate infrastructural development which is essential for economic development	288 (61.54%)	180 (38.46%)	468 (100%)

Table 4.2, Shows that the reduction of cash related fraud will enhance economic development with 63.68% of the respondents in support, 58.55% of the respondents are of the opinion that transparency which is a benefit of the cashless system enhance economic development, 70.09% agreed that accurate financial reporting and accountability are vital tool for economic growth and development, 76.07% equally agreed that the fight against money laundering and top management crime is a drive to a developed economy and finally 61.54% of our respondents are of the opinion that increase of government revenue will lead to infrastructural development, an essential for developed economy.

5. TEST OF HYPOTHESIS TWO

Cashless Economy has no significant impact on economic development.

This hypothesis was tested with the Analysis of variance (ANOVA) using the information in table 4.2, at 0.05 level of significance.

ANOVA TABLE

SOURCE OF VARIATION	SUM OF SQUARE	DEGREE OF FREEDOM	MEAN SQUARE	F-RATIO	F-CRITICAL
Between Group Treatment	55,950.4	1	55,950.4	51.37	5.32
Within Group Treatment	8,713.6	8	1,089.2		
	64,664				

Critical value at 0.05 level of significance with 1 to 8 degree of freedom.

Decision Rule

Since the calculated value of 51.37 is greater than the critical value of 5.32, the alternative hypothesis is accepted and the null hypothesis is rejected. We can therefore, conclude that a significant and positive impact exist between the cashless economy and economic development.

Based on the ANOVA result above, it is clear that the cashless economy has significant impact on economic development. This findings is in line with that of Akhalumeh & Ohiokha, (2012) which reveals that cashless economy stimulate economic growth, and has prospect of helping to achieve effective and efficient government financial transactions, and also improvement of the quality of financial reporting (Ogedebe & Jacob, 2012).

6. CONCLUSION AND RECOMMENDATION

The deduction reached in this study is that the cashless economy is an essential tool for transparency, accountability, reduction of cash related fraud, and more importantly economic growth and development.

The CBN and other regulatory agencies in the financial sector must ensure that service providers adhere to minimum security standards, and also ensure compliance to their directives that independent service providers deploy more ATMs and ensure their efficiency for the smooth implementation of the cashless policy in Nigeria.

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