Full Length Research Paper

ELECTRONIC PAYMENT SYSTEM IN NIGERIA: IMPLEMENTATION, CONSTRAINTS AND SOLUTIONS

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The study investigates the Federal Government of Nigeria electronic payment system implementation and the constraints confronting it with a view to providing solutions to the constraints so identified. The study is motivated by the apparent low level of satisfaction with the level of e-payment system in Nigeria. In carrying out the study, government agencies, contractors and the banks formed the population with a total of 200 respondents sampled through convenient sampling method and the analysis is based principally on the primary data collected from the respondents. The study identified constraints that are bedeviling the system and also suggested recommendations for effective implementation of the system.

Key words: e-payment, government agencies, fund

INTRODUCTION

Since the overcoming of barter in the history of mankind, trade usually involve the exchange of goods and services and an equivalent abstract value such as money. (Sadeghi & Schneider, 2001). Ever since money was invented as an abstract way of representing value, system for making payments have been in place. In the course of time, new and increasingly abstract representations of value were introduced. A corresponding progression of value transfer systems, starting from barter, through bank notes, payment orders, cheques and later credit cards, has finally culminated in electronic payment systems. As the transition to electronic payment systems take place, the stock of currency held outside the banking system which constitutes a potential source of unproductive economic resources because they are not available for credit expansion is integrated into it thereby expanding the deposit base of the monetary system.

Nigeria payment system has been predominantly cash-based for both positive and negative reasons: positive because of its instant convertibility to other forms of value without intermediation of any financial institution and negative because of its anonymity and un-traceability in unethical transactions. Electronic payment was introduced because government was inundated with allegations of corruption in the Federal Civil Service. The Federal Government through its treasury circular reference No TRY/A8 & B8/2008 of 22nd October, 2008 directed that payments from all funds from it be made electronically as from 1st January, 2009. The policy has been condemned by all and sundry for lack of planning, inefficiencies and delay in the payment for goods and services, hence this article extends and contributes to the body of knowledge to assess the implementation and constraints of the system with a view to proffering solutions to them.

Statement of the Problem

With the rapid growth of Information and Communication Technology (ICT), electronic commerce is now acting as a means of carrying out business transactions through electronic means such as internet connections (Anik and Pathan, 2002). E-commerce is the most recent step in the evolution of business transactions as it replaces or augments the swapping of money or goods with the exchange of
information from computer to computer (Slater, 2000). Though, e-commerce sounds like a great opportunity, it greatly needs new payment systems that will support its further development (Abrazhevich, 2002).

A critical challenge for many economies is drawing more people and their capital into the banking system. The question for policy maker is: how do we get people into the big economic tent?. According to the research conducted by Global Insight Inc., and VISA in 2003, e-payment reduces the amount of currency outside the banking system for the advent of a more effective monetary policy management that will bring about stability in prices and interest rates. The research further stated that e-payment products can act as gateways into the banking system for the unbanked segments which makes up as much as seventy percent of the world’s population, this undoubtly creates a potentially powerful engine for growth – drawing cash into bank accounts where it can provide low-cost funds for lending and investment (VISA, 2003).

The introduction of e-payment in Nigeria was done initially to eliminate the un-acceptable delay in the payment of government contractors by minimizing interaction between contractors and government officials who have role to play in the payment system but was later extended to cover all payments from any government fund effective 1st January, 2009. Concerns have been raised on the payment system implementation and concerns. The paper will therefore identify the constraints in the payment system and proffer solutions to same.

Objectives of the Study
The study specifically identified the following objectives:

(i) Assess the effectiveness of the implementation of e-payment system in Nigeria
(ii) Identify the constraints in the implementation of the system
(iii) Proffer solutions to the identified constraints in the implementation of the system

Research Problems
The research questions are as follows:

(i) How effective is the implementation of e-payment system in Nigeria?
(ii) What are the constraints bedeviling the implementation of the system in Nigeria?
(iii) What are the solutions to the constraints so identified?

THEORETICAL FRAMEWORK
Electronic payment (E-payment) is a subset of an e-commerce transaction to include electronic payment for buying and selling goods or services offered through the Internet. There are many forms of e-payment ranging from cards, Internet, mobile payment, financial service kiosks, biometric payments, electronic payments networks etc and as technology develops, the range of devices and processes to transact electronically continues to increases while the percentage of cash and cheque transactions continue to decrease.

In the Nigerian context, e-payment is effecting payments from one end to another end through the medium of the computer without manual intervention beyond inputting the payment data, it is the ability to pay the suppliers, vendors and staff salaries electronically at the touch of a computer button.

The Federal Government of Nigeria through its treasury circular ref. No TRY/A8 & B8 of 22nd October, 2008 directed that payments from all funds of the Federal Government of Nigeria be made electronically as from 1st January, 2009 in order to eliminate the un-acceptable delay in the payment of government contractors who have been certified to have either partly or totally completed contracts awarded to them and are due for payment; minimize interaction between contractors and government officials who have roles to play in the payment of contractors; check corruption because transaction of government can easily be traced from one source to another, introduce and institutionalize financial probity in the activities of government.

For the purpose of implementing the new system, the following procedures shall apply:

(i) Commencing from 1st January 2009, all forms of payment from all government funds shall be through the banks.

(ii) All organs of government, ministries, departments and agencies (MDAs) shall stop using cheques to make payments to contractors.

(iii) All banks accounts in respect of all government funds shall become non-chequing accounts.

(iv) Contractors of government must indicate their current accounts particulars with commercial banks on the invoice submitted for payment under their corporate seals.

(v) Mandates containing details of payment shall be issued to banks authorizing them to pay into the contractor’s designated bank accounts, the proceeds of executed contracts.

(vi) All employees of the Federal Government of Nigeria must each open an account with a commercial bank into which all payments due to him must be paid.

(vii) On no account should Central Pay Officers (CPO) collect cash from the
bank for the purpose of disbursement to any government official.

The detailed implementation guidelines for the e-payment as set out in the memo of the Accountant-General of the Federation to all ministries, departments and agencies are as follows:

1. **Transactions covered by the e-payment:** The e-payment regime covers all payment from any Government Fund.

2. **Format of Instructions to the CBN and Commercial banks:** There will be a mandate with such details as well as particulars of the beneficiaries such as unique number, date, account name and number, bank and branch, amount and purpose of payment.

3. **Medium:** the medium of sending instructions to the CBN and commercial Banks will be electronic, i.e. soft copy in form of non-rewritable CD with a hard copy conveying the approval.

4. **Data Integrity:** The integrity of the system is assured by the combined use of electronic copy of the mandate as well as the hard copy which acts as a confirmation, since it will contain the authorized signatures of officers in the ministries, departments and agencies. In addition, each MDA should appoint authorized Bank Relationship Officers and forward their identification particulars (signature and passport photograph) to the banks. Bank should only accept mandates from the relationship Officers that have been introduced to them.

5. **Bank statements:** Monthly bank statements must be ready for collection by the MDAs on or before the end of the first week of the following month. MDAs are encouraged to subscribe to on-line banking facilities offered by banks to enable them access their statements on-line.

6. **Elimination of Delays:** For the purpose of avoiding delays in the payment processes, the mandates to effect payments must reach the paying banks within twenty-four (24) hours after approval for payment by the Accounting officer.

7. **Correct account number of beneficiaries:** MDAs must insist that the account numbers of the contractors must be clearly stated on the invoices submitted.

8. **Other issues:** For the purpose of smooth operation of the e-payment, individual employee’s account (referred to in the circular) to be designated “Operations Account” should be opened in the same bank where the MDAs maintain the relevant government accounts.

The bankers’ committee is to be notified that the operations account of the individual employee is to be regarded as subsidiary of the MDA’s account and should be ‘non-commission on transactions’ account. Mandate issued in respect of capital account in favour of government employees in respect of recurrent components of capital vote should be made payable in the employee’s operations account.

**METHODOLOGY**

The study consisted of a survey that was administered to gather information on the implementation of the Federal Government e-payment system and its constraints with a view to providing solutions to the constraints so identified. The survey participants were drawn from the MDAs, contractors and the banks through random sampling. The sample size was 200 using convenient sampling with 100 respondents from the MDAs and 50 each from both banks & contractors from the southwestern region of Nigeria.

1. **Analysis of Findings**

This section of the study is devoted to presenting the results of the analysis performed on the data collected to test the propositions made in the study and answer the research questions. Analyses were carried out with the aid of the Statistical Package for Social Sciences (SPSS version 15).

Table 4.1 presents the respondents’ opinion on the comparison between e-payment system and the old system of cash and cheques, 89% of the respondents agreed that e-payment system was better while 5% disagreed with the view.

Table 4.2 presents the respondents’ responses on the mode of payment to contractors having accounts in banks different from that of government agencies. 72% claimed that the mode of payment is by way of bank draft while 20% claimed that e-payment platform is being used to effect payment to contractors.

Table 4.3 presents respondents’ responses to the cost effectiveness (or otherwise) of e-payment system. While 34% attested to the cost-effectiveness of the system, 46% claimed that the system is not cost-effective to both government agencies and contractors.

Table 4.4 presents the e-payment usage in terms of effort, special equipment and time. 30% of the respondents agreed that the system requires the least effort, special equipment and time to process transactions while 61.4% (i.e 58.7 & 2.7%) of the respondents disagreed with the view.

Table 4.5 presents the security of the e-payment platform while 29.1% of the respondents claimed that the system is secured to prevent and detect fraud, 27% disagreed.

Table 4.6 presents responses on whether the system has achieved its objectives, 32.5% agreed that the system has achieved its objectives while 60.5% believed it has not achieved its objectives.
Table 4.8 presents the respondents view on the constraints bedeviling the system with “lack of integration between e-payment platform and the accounting system of government” as the most critical.

Table 4.9 presents the regression analysis of the variables, while constraints, mode and portability show negative relationship with respect to the dependent variable “general assessment”. This implies that an increase in either of constraints, mode and portability will lead to a decrease in assessment. From the results, a unit increase in constraints, mode and portability will produce 4.6%, 6.6% and 9.6% decreases respectively in assessment. Other variables however reflect positive relationship with respect to assessment, for instance a unit increase in comparison, convenience and cost will increase assessment by 37%, 33% and 11% respectively. Security however has a profound effect on assessment as it depicts 84% increase in assessment occurring from a unit change in its value. The above analysis have been explained in each case with the assumption that other determining independent variables are held constant before a unit change in any of the independent variable is accounted for on the dependent variable, if all the variables were to be held constant, the constant term will produce an increase of 354% in assessment.

The t-statistic is used to test for the statistical significance of each of the independent variables. The estimated value is compared with the critical value of 2, if the estimated value is greater than the critical value, the variable is said to be statistically significant. From our results, comparison, convenience, portability, security and the constant terms are statistically significant as they depict estimated value greater than the critical value of 2. In a similar vein, the probability value helps to reinforce the significance of the variables. The decision is to compare the probability value with its value at 5%. If the probability value is less than or equal to 0.05, then the variable is said to be significant. From the foregoing, it can be observed that comparison, convenience, probability, security and the constant terms are statistically significant as their probability value are less than 0.05, however, constraints, cost and mode are not significant because their p-values are greater than 0.05.

The R-squared is used to evaluate the coefficient of determination. The result showed 0.918941 which suggested that 92% change in assessment was caused by all the variables simultaneously acting on assessment. This helps to emphasize that our regression model is a fairly good fit.

F-statistics is used to test for the overall significance of all the independent variables. From the regression result, the probability of F-statistic which is less than 0.05 suggesting that all the variables have profound effect on the value of assessment. Durbin-Watson statistics is used to test for the existence of serial autocorrelation among variables; the value is 1.058830 suggesting that there is positive serial autocorrelation among the variables.

CONCLUSION AND RECOMMENDATIONS

Based on the results of the analysis, the following conclusions are made:

(i) E-payment system is better than the old system of cash and cheques.
(ii) Payment by the government agencies is largely being done through bank draft.
(iii) The system is not cost effective to both contractors and government agencies.
(iv) The epayment system of government is not linked with the banks payment platform.
(v) The system has not achieved its stated objectives.

Based on the above conclusions, the following recommendations are made for improvement in the implementation of e-payment system in Nigeria:

(1) Dual control for authorization of transactions
(2) Call – back procedures to verify transactions
(3) Strong internal and data processing controls on all date file associated with information of contractors to ensure privacy and security
(4) Seamless integration between Government e-payment system and accounting system
(5) Standardized format for remittance information
(6) Enlightenment campaign on the role of e-payment in the economic development of Nigeria
(7) Government should institute regulatory framework and policies that will further deepen the e-payment system through appropriate regulation.
REFERENCES


Accountant General of the Federation Treasury Circular (2008) TRY/A8 & B8


Appendices

Table 4.1 Comparison between e-payment and the old system of cash and cheques

<table>
<thead>
<tr>
<th></th>
<th>Valid</th>
<th>Strongly Agree</th>
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<th>Undecided</th>
<th>Disagree</th>
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| Source: Field Survey, 2011

Table 4.2 Mode of e-payment to contractors

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</table>
| Source: Field Survey, 2011

Table 4.3 Cost-effectiveness of E Payment

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</table>
| Source: Field Survey, 2011

Table 4.4 Linkages of e-payment system with other system and application

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| Source: Field Survey, 2011

Table 4.5 E-payment system Usage

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</table>
| Source: Field Survey, 2011

Table 4.6 Security of E-payment system

<table>
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<tr>
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<th>Agree</th>
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</table>
| Source: Field Survey, 2011
Table 4.7 E-payment constraints in order of criticality

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
<tbody>
<tr>
<td>Lack of integration between e-payment platform and accounting system of government</td>
<td>68</td>
<td>34.0</td>
<td>34.0</td>
<td>34.0</td>
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<tr>
<td>Weak internal controls of government agencies</td>
<td>1</td>
<td>0.5</td>
<td>0.5</td>
<td>34.5</td>
</tr>
<tr>
<td>Privacy and security issues</td>
<td>28</td>
<td>14.0</td>
<td>14.0</td>
<td>48.5</td>
</tr>
<tr>
<td>Ignorance of public awareness</td>
<td>7</td>
<td>3.5</td>
<td>3.5</td>
<td>52.0</td>
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<tr>
<td>Delays in application of funds to beneficiaries by the banks</td>
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<td>9.5</td>
<td>9.5</td>
<td>61.5</td>
</tr>
<tr>
<td>Wrong account details of beneficiaries</td>
<td>26</td>
<td>13.0</td>
<td>13.0</td>
<td>74.5</td>
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<td>Late/incorrect reporting from banks</td>
<td>5</td>
<td>2.5</td>
<td>2.5</td>
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<td>Un-existing legal and reporting requirement</td>
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<td>10.0</td>
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<td>87.0</td>
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<td>Absence of uniform e-payment platform and solutions</td>
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<td>1.0</td>
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<tr>
<td>Inadequate telecommunication infrastructure</td>
<td>3</td>
<td>1.5</td>
<td>1.5</td>
<td>89.5</td>
</tr>
<tr>
<td>Lack of standard format for remittance information</td>
<td>3</td>
<td>1.5</td>
<td>1.5</td>
<td>91.0</td>
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<tr>
<td>High charge by banks on contractors' accounts</td>
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<td>0.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
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Source: Field Survey, 2011

Table 4.8 Overall assessment of e-payment system

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<tr>
<th>Valid</th>
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<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
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<tr>
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Source: Field Survey, 2011

Table 4.9 Linear Regression Result

<table>
<thead>
<tr>
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<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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<td>C</td>
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</table>

R-squared: 0.918941  Mean dependent var: 3.693000  Prob(R-squared): 0.000000
Adjusted R-squared: 0.905431  S.D. dependent var: 1.038838  Prob(F-statistic): 0.000000
S.E. of regression: 0.314644
Sum squared resid: 4.264606
Log likelihood: -9.532666
Durbin-Watson stat: 1.058630

Source: Analysis of Data using Eviews 7

Assessment: overall assessment of e-payment system
Comparison: comparison between e-payment system and the old system of cash and cheques
Constraints: E-payment constraints
Convenience: E-payment system usage
Cost: Cost effectiveness (or otherwise) of e-payment
Portability: linkage of MDAs e-payment system with the banks’ payment system
Mode: Mode of e-payment to contractors
Security: Security of e-payment system