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Effect of Payment Technology on Service Delivery in the Nigerian Microfinance Banks

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Abstract: The rate at which banks are adopting Payment Technology (PT) calls for investigation into benefit and efficient customer service Patronage. This study is therefore carried out to examine the effectiveness of Payment Technology on Service Delivery of Micro finance bank (MFBs) in Nigeria. The study was carried out in Lagos State with Two hundred and Fifty (250) Questionnaires administered and distributed to staff of the selected MFBs, ten (10) staff each was picked from the Twenty-Five (25) selected all the fifty-seven (20+37Lcda) local government in Lagos (www.lagosstate.gov.ng/news). Two hundred (200) Questionnaires were found useful for the purpose of the study representing 80% of the total questionnaire distributed. Both Primary and Secondary data was used. The data collected were analyzed using descriptive and inferential statistical tools. The descriptive statistics used included percentages and tables while ANOVA was used to analyze the study hypothesis. Finding reveal that Payment Technology (PT) has a positive influence on service delivery by MFBs and the result of tested hypothesis buttress the significance relationship between PT and MFBs. To this end, It is recommended that Government should provide adequate power supply to reduce operating cost of efficient use of Payment Technology (PT), regulatory authorities like CBN should set standards for these MFBs to practice, awareness about availability of PT product and services should be made available for MFBs and finally, Government should endeavor to empower Micro finance banks (MFBs) financially in order to easy for MFBs to embrace the use of Payment Technology (PT).

Keywords: Payment Technology, Service Delivery, Information Technology Customers Service Satisfaction, Nigerian Microfinance Banks

1. Introduction

The level of technological advancement in any country can sometimes be measured in terms of the socio-economic development which is a result of science and technology. However, no country can be self sufficient. Confirming this view, Oladejo and Yinus (2014) observed that the basic indicator of modern day development in any society is the level of technological advancement and how it has contributed to the growth and development of that society. Hence, from this assertion, one is able to identify how important Payment Technology (PT) is in reengineering and restructuring the business environment of a community which invariably improves the standard of living of the inhabitant of that society.

Essentially, Payment Technology (PT) is described by Chang et al (2010) as a generic term referring to technologies used for collecting, storing, editing and passing of information in various forms. Lai and Li (2005) went further to describe PT as a manipulation of data by electronic means to collect, organize, record, process, distribute and store information for decision making purpose

Corporate bodies and organizations like banks and other financial institutions among which the Micro Finance Banks (MFBs) are found have been essentially established to perform some services to the society with the sole aim of making profit. This organizational goal of making profit requires some services to be performed to the customers and for effective actualization of this goal, a wide range of information is needed in order to arrive at the best alternative choice of

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decision which invariably implies that for any bank to survive such a competitive business environment, the importance of Payment Technology cannot be over emphasized knowing that banking operations are based on information management which comprises of storing, retrieving and processing information. Hence it is not surprising that the banking industry has always been one of the largest users of information technology. According to (Adewoye, 2007; Oladejo & Adereti 2010; Akande&Yinus, 2013; Yinus &Oladejo, 2014).

Payment Technology (PT) has moderated the constraints of time, space, and information access in world trade and commerce as a whole. Emerging trends in socio-economic growth shows a high premium being placed on Payment Technology (PT) by homes, organization, and nations. The business of banking is basically about efficient service delivery. Consequently, the introduction of facilities that enhance the delivery of banking services such as mobile banking, internet, ATM and POS in an effective manner is always a welcome development. Payment Technology PT in Modern Banking system has become an important issue, not only to retain customers but also gaining a competitive advantage while maintain and growing overall effectiveness. In the present banking system, excellence in customer service is the most important tool for sustainable business growth. Customer complaints are part of the business life of any corporate entity, this is more so for banks because they are service organizations. As a service organization, customer service and satisfaction should be the prime concern of any bank. The bank believes that providing prompt and efficient service is essential not only to attract new customers, but also to retain existing ones. However, banks minimize instances of customer complaints and grievances through proper service delivery and review mechanism and to ensure prompt redress of customer complaints and grievances.

Service delivery has been described to be one of key performance indicators of a banking organisation. The extent to which customer are satisfied with the service rendered has great impact on the overall performance and must be taken seriously players in the industry. However, despite the enormous and unparallel advantages of Payment Technology PT in integrating the advancement of Micro Finance Banks, it is necessary to identify the challenges encounter in adopting Payment Technology (PT) usage in micro Finance bank as well as to establish the relationship between Payment Technology (PT) and Service Delivery.

2. STATEMENT OF PROBLEMS

The advent of information technology in the operations of Financial Institution in Nigeria among other sector has brought several noticeable developments but on the other hand, it has not come without bringing along its antecedent problems. One of the major challenges in today's business world is that quite a number of organizations has no tangible statistical analysis as to how Payment Technology (PT) has benefited Business organization.

Despite the function of Payment Technology (PT) and its impact on organizational development, there are still slow Adoption of Payment Technology (PT) in Nigerian Micro Finance Banks. The extent to which micro finance bank can be benefited from Payment Technology (PT) is worthy of exploration. The impact of PT on Micro finance bank operation has not been greatly explored in Nigeria. Few studies in Nigeria focus on Payment Technology (PT) Usage in Cooperative Society (Oladejo& Yinus, 2014) and more on Information Technology (IT) adoption Usage in Commercial banks.

However, whether Adoption of Payment Technology (PT) actually bring real benefits to the organizations is still a matter of debate in the academy arena. This study aims to investigate the impact of Payment Technology (PT) on service delivery in the Nigeria microfinance Bank. Specifically, the study will answer the following research questions:

- i. Is there any relationship between PT and service delivery of Micro Finance Banks?
- ii. What are the Factors Influencing PT Investment by micro finance bank?
- iii. Does PT positively influence service delivery of Micro Finance Banks (MFBs)

3. RESEARCH HYPOTHESIS

The hypothesis for this study were stated in null form

Ho₂: Payment Technology (PT) positively has no significant influence on service delivery of Micro Finance Banks (MFBs).

4. LITERATURE REVIEW AND CONCEPTUAL EXPLANATION

4.1. An Overview of Information Technology (IT)

Conventionally, Information Technology is the combination of computer, electronics and telecommunication equipment to generate information (Oladejo 2008). Agboola (2001) observed that some payments are now being automated and absolute volume of cash transactions have declined under the impact of electronic Payment Technology brought about by the adoption of IT to the payment system in the banking Industry, especially in the developed countries. Emmanuel and Sife (2008) observed that positive effects of IT have continually been noted in business, production, education, politics, governance, culture and other aspect of human life, owing to the fact that installing a functional Payment Technology(PT) into the management information system (MIS) of an organization requires a huge sum and the usage of Payment Technology comes with several other challenges like low technological literacy of workers, low internet connectivity, maintenance and most importantly unstable power supply especially in a developing society like Nigeria. Also, empirical investigations have found evidence that Information Technology (IT) is associated with improvements in service delivery performance, in intermediate measures and in economic growth. (Oladejo and Yinus 2013).

5. SERVICE QUALITY AND CUSTOMER SATISFACTION

Service providers have embraced the relationship marketing, to cultivate a long term relationship so that, their customers can move along the 'ladder of customer relationship' Parasuraman, A,.Zeithlaml, v. & berry, L (2002). To attain customer loyalty, long-term viability and profitability and consequent success, institutions are placing increasing emphasis on the customer satisfaction. Excellent service is a profit strategy and the ultimate aim of the company is to be continually productive and profitable.

In the off-line environments, it is common knowledge that the quality of services and products is a key determinant of customer satisfaction and customer loyalty (Parasuraman et al, 1988). Recent empirical evidence shows that quality of services delivered by an Organisation become a more significant success factor than low prices or being the first mover in the market space (Reibstein, 2002).

6. EVOLUTION OF PAYMENT TECHNOLOGY

Oladejo (2010) defined Information Technology as the processing of data via computer: the use of technologies from computing, electronics and telecommunications to process and distribute information technology is now becoming common and often being used in place of Payment Technology (PT).

It is not surprising that nowadays Technology has far reaching effect on almost every aspect of human life. The effect of technology is far reaching on individuals, homes, schools, supermarket, hospitals, fuel stations, offices, banks, factories as far as conglomerate organizations. Highlighting the impact of IT in recent years, Rao, Metts and Mong (2003) observed that the 1990s witness the proliferation and hyper growth of internet and internet technologies, which together are creating a global and cost-effective platform for business to communicate and conduct commerce.

7. BENEFIT OF PAYMENT TECHNOLOGY (PT)

Payment Technology (PT) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. Nigerian Government has now come to identify PT development as a national priority. In fact, the nation has started reaping the benefits in several ways. Thus, federal government has been able to fulfill some of its aspirations and economic reforms as embodied in the World Summits on Information Society (WSIS) this is a strategy for creating an enabling environment for business to thrive in the country and for basic services to be provided for good health, education, youth development and technology transfer (Agent, 2006)

8. HISTORY OF MICROFINANCE BANKS (MFBS) IN NIGERIA

The micro finance industry which began in 1976 with the establishment of Graeme Bank in Bangladesh of special banks, credit unions, cooperative, village credit societies, non-governmental organization (NGOs) and charities spanning both the richest and the poorest countries. Their major purpose is to extend the outreach of banking services, especially business credit to those who do not qualify for loans in microfinance banks replaced the ailing community banks. According to Anyawu (2004), micro finance banks as known today can be traced back to the establishment of community banks in Nigeria in 1977 under the financial liberalization policy of structural adjustment programme (SAP)

In 2005, the central bank of Nigeria with the instrumentality of the regulatory and supervisory guideline for microfinance bank in Nigeria ordered the transformation of microfinance banks. This implementation was aimed at standardizing financial institution in rural areas in order tom stimulate small scale enterprise (SMEs). Soludo disclosed that over 600 community banks has successfully been transmitted into a microfinance banks (MFBs) and granted approval in principles.(CBN Report 2004).

9. CHALLENGES AND PROBLEMS OF PAYMENT TECHNOLOGY ADOPTION BY MFBS

Payment Technologies fosters relationship as it provides for instantaneous exchange of information dialogue; this enabling faster and quicker transactions

Adewoye (2013) identified Nigeria's poor infrastructures as the first major challenge. Electricity supply is sporadic rather than adaptive and most importantly, Nigeria has low internet penetration do to certain factors:

• Security

Ovia (2005) highlighted security as one of the identifiable problem facing Nigerian banks in the effective implementation of information technology. The greatest fear of bank executives and customers is hackers gaining unauthorized access to bank servers. It is not to acquire sophisticated information equipment but explosive to information technology related failure should not be too high (Woherem 2000).

• High Cost of Installation and purchase of PT tools

The huge cost of investment and installation of Payment Technology (PT) systems has posed a major challenge in achieving stated organizational objectives. This is as a result of the fact that most PT systems are expensive when it comes to purchasing and installing them hence it creates a huge hole in the finances of these organizations. Confirming this view (woherem2000) observed the adoption of Payment Technology PT as at December 1997 accounted for an annual budget of 126million naira which consequently rose by 111% to 265million naira in 1998. These statistics suggests a view that business organizations should strive to improve on usage of Payment Technology (PT), therefore a gradual increment in Payment Technology (PT) Adoption year in year out should be seen as a natural phenomenon in as much as the organizational goals are achieved.

• High cost of training Payment Technology personnel

Also the level of skilled workers are few due to lack of awareness and in adequate facilities in business organization consequently, management have to invest in Payment Technology (PT) training for their staffs which are generally expensive in nature and hence see this as by far the greatest barrier in Payment Technology System.

10. METHODOLOGY

Presently, we have 188 microfinance banks in Lagos State registered with the Central Bank of Nigeria. All these banks will make up the population of this research. (CBN, 2013). This study focus on efficiency of Payment Technology on service delivery by the Nigeria MFBs. However Twenty-five (25) out of 188 registered MFBs in Lagos State was randomly sampled. Lagos state was chosen being a major commercial city known to be at the forefront of economic and due to their commercial buoyancy. Multi-stage sampling techniques were used in which Lagos state was

stratified into local government from which the sample of Registered MFBs was drawn through the simple random sampling procedure. Two hundred and Fifty (250) Questionnaires were administered and distributed to Staff of the selected MFBs. Ten (10) staff each was picked from the Twenty-five (25) selected MFBs spread across all the twenty (20) local government and thirty-seven (37) new LCDA created by the State government in 2003, to solicit the needed data.(www.Lagosstate.gov/ng,2014). Two hundred (200) Questionnaire were found useful for the purpose of the study representing 80% of the total questionnaire distributed. The major instrument used in the collection of data for this research work was questionnaire. The questionnaire consists of questions that are related to Microfinance bank Technology structure and Service delivery as identified in the literature. Likert five point scales ranging from 1-5(1=strongly agree &5=strongly disagree) were used as a basis of the questions. Data collected coded and analyzed using frequency table, percentage and mean score while non-parametric statistical test, Chi-Square was used to test the formulated hypothesis using STATA 10 data analysis package/software.

11. RESULTS AND DISCUSSIONS

Perception of bankers on Payment Technology (PT) Influence on selected MFBs.

The table I below shows different forms of information technology in use by the respondents. 99 respondents make use of computer which represents 49.5% of the sampled micro finance banks, 96 respondents make use of internet with the percentage 48% while 2.5 respondents make use of mobile. This implies that the respondents make use of at least one form of payment technology in their enterprise.

Table I: Distribution of the respondents on forms of Payment Technology in used by the selected MFBs

Responses	Frequency	Percent
Commutes	99	40.5
Computer		49.5
Internet	96	48
Point of Sales	0	0
Mobile	5	2.5
Total	200	100.0

Source: Field survey 2014

12. INFLUENCE OF PAYMENT TECHNOLOGY ON MFBS OPERATIONAL EFFICIENCY

From Table II below, it can be deduced that information technology helps to increase operational efficiency because it makes the operations of Micro finance Bank easier to be carried out. Also, through the use of information technology, business transactions are speed up because they tend to attend to more customers within short period of time and access to records is made easy thereby reducing time spent on checking out for records. Also that information technology creates new competitors and services. The table also reveals that information technology helps to reduce the likely errors that would have been made in reporting business transactions, while recording transactions manually or reporting results, mistakes are bound to occur but with the use of IT, mistakes had been reduced. It can also be deduced from the table that information technology provides up to date information to its users. Also information technology helps the manager to monitor the work of their subordinate without them knowing.

From the table, it shows that information technology plays important role on Micro finance Bank operational activities in Nigeria.

Table II: *Influence of PT on MFBs Operational Efficiency (Q1-Q3)*

Questions	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Information										
technology is to	110	55	87	43.5	3	1.5	Nil	Nil	Nil	Nil

help increase										
operational										
efficiency.										
Information										
technology is to	55	27.5	124	62	19	9.5	2	1.0	Nil	Nil
speed up the										
business										
transactions and										
creates new										
competitors and										
services										
Information										
technology	94	47	100	50	6	3.0	Nil	Nil	Nil	Nil
provides up to date										
information.										

From the Table III below, it can be deduced that the primary impact of Payment technology on MFBs is to increase competitive advantage i.e. to have competitive advantage over its competitors MFBs that make use of information technology have competitive advantage over other MFBs. It also shows that the use of information technology minimizes inconvenience, recording of transactions and payment for ordering of goods and other things have been made convenient for MFBs because transactions can now be recorded through the use of computers, payments can now be made through the use of automated machine card at supermarket, and ordering for goods online. It can also be deduced that information technology facilitates quick responses to transactions and customers. Customers are now promptly and fairly attended to through the use of information technology. And also that information technology minimizes cost of transaction in small and medium scale enterprises. From the also, it can be derived that the benefits MFBs enterprises derived from the use of information technology outweigh the costs. The table also shows that the use of information technology saves time. IT saves times because more customers are attended to within a short period of time. It also shows that the use of information technology helps to reduce error rate in small and medium scale enterprises transactions and also that the use of information technology helps to speed up MFBs transactions. Table V below show Payment technology is user friendly and easy to use. Furthermore the table reveal that some factor such as Cost of IT, professionals in the field of IT, complexity of IT affect the adoption of payment technology. Finally, the table reveal that is that Payment technology has impact on the managerial practice of MFBs and there are various barriers towards the adoption of Payment technology by MFBs..

Table III : Impact of Payment Technology on the Managerial Practice and Barriers towards PT Adoption by MFBs . (Q4-Q12)

Questions	Strong Agree	ly	Agree		Uncertain		ncertain Disagree		Strongly Disagree	
	Freq.	%	Freq	%	Freq.	%	Freq	%	Freq.	%
The use of information technology minimizes inconvenience.	54	27.0	119	59.5	17	8.5	8	4.0	2	1. 0
Information technology minimizes cost of transaction.	57	28.5	105	52.5	19	9.5	17	8.5	2	1. 0
The benefits derived from information technology in business enterprises outweigh the cost	73	36.5	103	51.5	19	9.5	5	2.5	Nil	Ni 1

Effect of Payment Technology on Service Delivery in the Nigerian Microfinance Banks

The use of information technology saves time	101	50.5	92	46.0	5	2.5	2	1.0	Nil	Ni 1
The use of information technology helps to reduce error rate	55	27.5	117	58.5	25	12.5	2	1.0	1	0. 5
Payment technology is user friendly or easy to use.	84	42	105	52.5	8	4.0	3	1.5	Nil	Ni 1
Lack of professionals in the field of information technology affects the adoption of PT.	73	36.5	99	49.5	17	8.5	9	4.5	2	1. 0
Complexity of IT makes MFBs to avoid the use	70	35	86	43	28	14	16	8.0	Nil	Ni 1
Employees' knowledge about information technology affects MFBs investment on PT.	68	34	103	51.5	18	9.0	4.0	4.0	3	1. 5

Source: Field Survey 2014

13. TEST OF HYPOTHESIS

Ho₁; there is no relationship between Payment Technology Adoption and Service delivery by Micro Finance Banks (MFBs)

Decision: According to table IV below Since the chi-squares calculated (X2-cal) are greater than chi-square tabulated (X2-tab) which makes all the figures to be highly statistically significant with the probability of F = 0.000. Collectively; we reject null hypotheses stated earlier: there is no relationship between PT investment and Service delivery of Micro Finance Banks (MFBs) and PT has no positive influence on MFBs service delivery due to the result show in the table 4.12 above. Thus, we accept alternative hypothesis that: There is significant relationship between PT investment and Service delivery of Micro Finance Banks (MFBs) and PT positively influence service delivery of Nigeria Micro Finance Banks (MFBs).

TableV: Chi-square Analysis of Relationship between Payment Technology, Service Delivery (SD) and SD Effect on Service Delivery in Nigeria MFBs

S/N	Relationship	Pearson Chi-Square (Value)	Pr (Value)	Remark
1	Q1 VS Q2	121.3027	0.000	Significant
2	Q2 VS Q6	167.4675	0.000	Significant
3	Q3 VS Q4	100.2652	0.000	Significant
4	Q6 VS Q8	168.1818	0.000	Significant
5	Q3 VS Q9	161.1157	0.000	Significant
6	Q1 VS Q8	116.0760	0.000	Significant
7	Q1 VS Q9	180.6207	0.000	Significant
8	Q6VS Q11	107.3895	0.000	Significant
9	Q4 VS Q10	158.6806	0.000	Significant
10	Q2 VS Q5	174.9242	0.000	Significant
11	Q2 VS Q9	146.4915	0.000	Significant
12	Q5 VS Q8	117.5979	0.000	Significant
13	Q2 VS Q8	93.4343	0.000	Significant
14	Q2 VS Q9	232.3232	0.000	Significant
15	Q8 VS Q10	156.9562	0.000	Significant
16	Q7VS Q12	122.7891	0.000	Significant

17	Q4 VS Q8	109.6939	0.000	Significant
18	Q8 VS Q9	212.3352	0.000	Significant
19	Q4 VS Q5	211.8056	0.000	Significant
20	Q7 VS Q8	216.1198	0.000	Significant
21	Q8 VS Q10	156.9562	0.000	Significant

Source: Computations and Out-Put of STATA 10 based on Author's Field Survey \((2014).

14. CONCLUSION

In view of the findings of this study, it is concluded that the Adoption of Payment Technology to the operations of Nigerian Micro Finance Banks has made a great positive impact on service delivery, which consequently led to improved customer satisfaction. Also finding from the tested hypothesis buttress the Significance of Payment technology to service Delivery. Technology has impact on decision making in every field of human endeavor most especially with the increase in use and development of various information technology architectural components.

15. RECOMMENDATIONS

- In view of the findings from the research work, the following recommendations were made:
- The government should provide adequate power supply in order to reduce the operating cost expended on power supply for efficient use of Payment Technology; this will help in improving the service delivery of these banks and invariably stimulate the small scale industries Nigeria.
- Regulatory authorities like CBN (Central Bank of Nigeria) must stipulate standards for the banks to follow to avoid making Nigerian MFBs a dumping ground for the outdated technological infrastructures.
- MFBs Management should create awareness about the availability of Payment Technology products and services, how they operate and their benefits to Micro Finance Banks.
- There is also the need for government to financially empower the Micro Finance Bank in other to be able to embrace the required level of Payment Technology system so as to favorably compete with their contemporaries across international borders.

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