

Impact of Electronic Banking on Customer Services in Lagos, Nigeria

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KEY WORDS Information technology; commercial;
globalisation; service and delivery
system

ABSTRACT This study examined the impact of Electronic Banking on customer services in Lagos. Ninety questionnaires were administered to the customers of six commercial banks to elicit information on their satisfaction or lack of satisfaction on the services rendered by their banks. Administration of the questionnaires was based on grab sampling. Five major areas were focused on to determine the effects of Electronic Banking on customer services. They include accuracy of records, convenient business hour; prompt and fair attention; faster services; and possibility for Home and Office Banking. It was discovered that the induced effect of computer electronics on banking as perceived by the customers led to accurate records, convenient business hour, prompt and fair attention, faster services, and possibility for Home and Office Banking. About 98% of customers agreed that computer facilitates accurate records. The mean score of 4.41 on the likert scale also supports this view. The study revealed that a lot of changes were brought to the technique of delivering banking services and the range of products through automated devices. Thus, electronic products have been increasing in variety and popularity in Lagos in the 21st century. The most difficult problem of electronic banking as perceived by the customers was frequent system breakdown. Others included black out and power failure; posting errors and manipulation of figures; and lack of cordial interaction with staff.

INTRODUCTION

The breakthrough in information technology occasioned by the advent of the computer began to witness an unprecedented explosion when deliberate efforts were made to apply it to commercial transactions especially in the banking industry. Its application continues to change the way banks and their corporate relationships are organised worldwide. The pressure of globalisation, consolidation, deregulation and rapidly changing technology has made it necessary for banks who want to survive in the new millennium to re-examine their service and delivery systems in order to properly position them within the framework of the dictates of the dynamism of information technology (Woherem, 2000).

With the advent of computer, and its attendant revolution of information processing, electronic banking has become the order of the day. The resultant effect is the emergence of various automated devices. Electronic banking enhances the speed and quality of service delivery and has radically changed how banking is done worldwide. The volume and speed of banking transactions have tremendously improved, especially in the developed countries. Its various innovations have brought about reduction in costs, a wider range of banking services, and greater convenience for customers.

In Nigeria, retail electronic banking is at the infancy stage as many transactions are still being carried out manually. A great deal of efforts and investments are required to make the country relevant to the present dispensation in the industry. The waiting time for customers is still relatively long and the quality of service is not satisfactory to most customers. A lot of problems still exist in funds transfer, tracing of accounts transaction history, ordering of bank statements, and retrieval of account balances. Since banking sector has become dependent on information technology, performance enhancement of the Nigerian banks will be best achieved through its optimal utilization. This matter of absolute necessity is the subject of this study.

Lagos Metropolis

Lagos has been chosen as a case study to examine the impact of Computer Automation on the banking industry. The choice is a deliberate one based on the level of urbanisation, commercial and industrial activities with all their attendant risks and contradictions.

Lagos State lies in the south-western part of the federal Republic of Nigeria. It is one of the 36 states (excluding Abuja, the Federal Territory) making up the federation. Out of the country's total population of 88,992,220 million by 1991

census (The World Bank now uses an estimated figure of 105 million for the country), Lagos alone accounts for 5,725,116 million (Adewale, 1999)

Lagos metropolis covers 37% of the Lagos state's land area and accounts for 89.4% of its total population. As the seat of the federal government between 1914 and 1991, Lagos has risen to a position of dominance politically, economically, and demographically in the whole nation. The 1973 Industrial Survey conducted by the Federal Office of Statistics, showed that Lagos had 28.5% of all the country's large scale establishments, 47.6% of its industrial employment, 59.5% of the value added by industry, and 72.7% of net capital expenditure in industry in the whole country (Olowu, 1990). A substantial number of payees in the federal establishments were also concentrated in Lagos. Olowu, (1990) claimed that 40% of the total federal civil servants were in Lagos in 1980. This made it possible for the state to rely on internally generated revenues raised from personal income tax.

Lagos still remains the chief port of Nigeria. Apapa port and Tin Can Island are the nation's largest ports and handle 80% of Nigeria's imports (Olowu, 1990). The existence of Murtala Mohammed International Airport makes it easy for foreigners to transact business in the Metropolis. Besides, there are lots of tourist's centres such as the national Museum, National Arts Theatre, Tafawa Balewa Square, Bar beach, Alpha beach, Lekki beach, and Badagry beach that attract people to the Lagos metropolis.

The above profile of Lagos as the Leading metropolis in Nigeria has implication on its growth rate, which was put at 11.4% between 1952 and 1953. The high population density of Lagos, coupled with its role as the nation's leading industrial and commercial centre attracted a lot of banks there. Out of 69 commercial banks in the country, 55 of them have their headquarters in Lagos. Influx of people into Lagos for commercial and social activity keeps on increasing the number of customers handled by each bank. This often results in long queues with increased length of waiting time either on the line or in the system. Attempts to resolve these problems have led some banks to embark on Computer Automation.

Automation

Automation is the use of machines instead

of people to do a job or industrial process. With respect to banking, it involves the use of automatic machines (computer-based devices) to carry out banking activities in a way to increase speed, accuracy and capacity. Banks make use of information technology devices and facilities available, bringing them together into integrated system. It is a service facilitator, which helps to eliminate the drudgery associated with manual methods. Included among these devices are: Magnetic Ink Character Reader(MICR); Automated Teller Machine(ATM); Electronic Fund Transfer(ETF); Plastic Cards; and various Electronic Delivery Channels.

Magnetic Ink Character Reader

One of the earliest developments in the use of computers in banking was based on the handling of cheques. It was borne out of the desperate need to overcome the problem of handling the growing volumes of cheque (David, 1982). In the early 1980s, Nigeria began to experience a tremendous growth in the volume of cheque usage due to rapid strides in economic development. The existing processing techniques could not efficiently handle the volume. This caused serious delay in clearance processes and motivated the need to explore better options for more effective and efficient service to the customers. Komplex Nigeria Limited was then commissioned (Firm of Data Processing Consultants) to make recommendations on how to automate document processing for Banking Industry in Nigeria. It recommended MICR (Magnetic Ink Character Reader). MICR is a system that provides for encoding of cheques and documents with characters in magnetic ink so that they can be electronically read. It is written on a single horizontal line called code line

Automated Teller Machine

ATM is a cash dispenser that is designed to enable customers to enjoy banking services without coming into contact with bank cashiers and other staff. Societe Generale Bank was the first to introduce ATM in Nigeria in November 1990 at its Broad Street office under the trade name of Cash Point 24. In December 1991, First Bank also introduced it using First Cash as trade name.

Electronic Fund Transfer at the Point of Sale (EFTPOS)

Electronic fund transfer is an electronic oriented payment mechanism. It allows customers accounts to be credited electronically (Bender, 1975). EFTPOS is a second-generation remote service unit that is capable of electronically placing a third party into the customer-financial institution communication link. It consists of the accumulation of electronic payment messages by the retailer, which are subsequently passed on to appropriate institution for processing. It is not a single system requiring a special card, but a range of technologies for replacing paper transfers (Patrick, 1985).

Plastic Cards

Plastic cards are used to identify customers and pass same to machines to initiate a paper or electric payment. It is a mechanism by which personal customers could interface with electronic banking industry. The first set of cards, Shoppers Plates were issued by hotels and departmental stores in the United States of America in 1915 (Steve, 1996).

Card based electronic payment has made its debut in Nigerian banks. The country has been quoted as the fourth country in the world to introduce smart card scheme (Madubuko et al., 1997). Various banks in Nigeria have introduced cards with peculiar brand names such as the "Express Card" of the New World Merchant Bank, and "First Cash" of the First Bank Plc., Electronic Smart Card Accounts (ESCA) of Allstates Trust Bank Limited (ATBL) (Madubuko et al., 1997). According to Madubuko et al. (1997) the objective of the scheme was to offer banking services of international standard due to the globalisation and internalisation of the banking industry, which Nigerian banks cannot shy away from if they must remain viable in the next millennium.

Delivery Channels

In spite of the growing popularity in the use of cards, banks are unrelenting in their efforts to improve on their services to the customers in

line with the dictate of ever challenging information technology. The focus of most banks is based on Tele-banking which means telecommunications-based banking. It is an authorised banking service that lets the customers access, instruct, and receive information at convenient locations, using telecommunication as the prime link (Stan, 1997). Prominent among its devices are interactive television, telephone banking, and banking via the Internet. The key feature of all is the use of telecommunication network.

Interactive Television

Interactive television is now being developed as a means of entering customer's households to sell product and services (financial products inclusive). It requires an intelligent decoder, which acts as a computer attached to the cable of television network. It is also possible to combine satellite TV with the telephone network to enable interaction outside the cable network. This helps to provide sales and loan information on the screen (Stan, 1997).

Telephone Banking

This is the most familiar of the tele-banking devices and it allows customers to transact banking business over the phone. It can be used as an alternative to the traditional branch banking or in conjunction with it (Stan, 1997).

Internet Banking

This is the main vehicle for Public Access Computing (PAC). Internet offers an excellent environment for banks to experiment with the delivery of home banking (Gandy, 1996). It uses visa's remote banking subsidiary, visa interactive, to link banks with customers and provide secure technology for the safety of account data transferred. The level of participation on the web varies among banks. Many banks do not go beyond putting up a sign on the web. That is, they have a site on the web consisting of their company logo and contact telephone number. Some banks go a little further by offering information about them and their products. This second level of

participation has been described as 'shop window'. Only very few banks have been able to supplement the basic shop window set-up with a range of extra elements. Some offer general financial advice with a level of interactivity. Some banks have gone as far as selling financial products on the Internet (Lunt, 1995).

The use of Internet by banks to handle customer's accounts has been marred with poor security (Burgdman, 1999). He then suggested authentication, authorisation, data integrity, and non-repudiation as four key security devices necessary for most Internet-based commercial transactions. It is necessary for suppliers of services on the Internet to encrypt their messages. Gandy, (1996), contended that encryption should be made complex and expensive to decode. The scope of payment through the Internet will however continue to expand because it is very cheap and fast, some only cost the electricity that they use (Burgdman, 1999).

Many major banks offer different types of delivery channels to different customers. The objective is to optimise profit from each customer. Telephone services can be used for high valued customers while ATMS and centralised low-cost telephone services can be used for low value customers (Stan, 1997). He claims that it is also possible to integrate person-to-person and AVR where the customers have the option of a fully automated enquiry or a personal contact. There is an in-built ability that allows the system to switch from one device to the other.

Electronic Home and Office Banking (EHOB)

Burgdman, (1999), defines Home Banking as a subset of the business to consumer segment of electronic commerce. This device enables customers to carry out transactions with their banks through connection between the customer's terminals in their homes and/or offices and the bank's computer system. With EHOB, customers can do their banking not only when but also from the convenience, comfort, privacy and security of their homes. EHOB has not been firmly rooted in Nigeria due to the inability of many households to afford terminals and all accessories required for effective connection; high capital investment required for its operation in banks; low level of economic development; ineffectiveness of NITEL; and epileptic supply of power.

Impact of Electronic Banking on customer services

Several authors have conducted investigation on Electronic Banking in Nigeria in one form or the other. Madubuko, et al (1997) studied the card based electronic payment system in Nigeria and noted the country as the fourth in the world to introduce smart cards. Iyabi, (1997) conducted an investigation on the Electronic Smart Card Account (ESCA) of the Allstates Trust Bank. Ugwu et al (2000) studied the impact of IT on selected banks in three metropolitan cities of Lagos, Ibadan and Osogbo. These studies have not discussed in general, what constitute Electronic Banking and have not really shown its impacts on customer services.

The aim of this study is therefore to identify what constitutes Electronic Banking and its impact on customer services.

METHODOLOGY

Target Population and Method of Sampling

Six banks were chosen for this study. The choice of the selected banks stemmed from the fact that they have operated for a long time and have consequently built up a wealth of experience in the banking industry. We were also attracted by their rapid rate of growth, high level of technological sophistication that is reflected in their banking facilities.

Questionnaires were developed for the customers to elicit information on their satisfaction or lack of satisfaction on the services rendered by their banks. The questionnaires were adequately validated and administered through personal contact. Administration of questionnaires to customers was based on grab sampling and carried out between 8.00 am and 1.30 pm on working days.

Both descriptive and inferential statistics such as percentage, mean, and standard deviation were used in data analysis.

FINDINGS AND DISCUSSIONS

General Information on the Respondents

Ninety questionnaires were administered to the customers of six commercial banks. Out of this number, 67 (74.4%) were retrieved. Forty-

six of them indicated that their banks had computerized before they opened accounts while 21 claimed that computerization of the system came after they had opened their accounts. Majority of the customers, 51 (representing 76.1%) had spent less than 10 years with their banks. Out of the 67 respondents, 20 had conducted international transfer of fund with their banks. From table 1, it was discovered that majority of the respondents were current account holders. Out of 67 respondents, 43 representing 64.2% had only current accounts, while 15 representing 22.4% had only savings' accounts. Nine customers, representing 13.4% used both current and savings accounts.

Table 1: Distribution of customers by type of account

	<i>Frequency</i>	<i>Percentage</i>
Both Current&Savings	9	13.4
Savings alone	15	22.4
Current alone	43	64.2
Total	67	1.0

Source: Research Survey, 2000

From table 2, the most common electronic device observable in banks is computer machine. Sixty-seven customers, representing 100% of the sample size observed and confirmed the existence of computers in their banks. Direct observation by the researcher also confirmed the availability of computers even at the branch level. This shows a growing trend in the computerization of the banking industry in Nigeria.

Table 2: Responses by the customers on the major electronic devices observable in the banks

<i>Devices</i>	<i>Frequency</i>
Computer	67
Machines for Telephone Banking	9
Security Monitoring Devices	4
Fax, MICR, Note-counters	27

Source: Research Survey, 2000

The results of the responses served as measuring yardsticks for assessing the attitudes of respondents towards automation of banking services. Some factors identified to highlight the

effects of computer automation on customer services are shown in table 3. These factors include facilitation of accurate records, enhancement of convenient business hour, facilitation of prompt and fair attention, enhancement of faster services, and availability of home and office banking services. About 45% of customers strongly agreed and 53.2% agreed that computer facilitates accurate records. The mean score of 4.41 on the likert scale also supports this view. Similarly, the selected customers also believed that computer automation enhances convenient business hour; facilitates prompt and fair attention; enhances faster services, and makes home and office banking services available to customers.

From table 4, the problems identified by customers as a result of banking automation include black out and power failure; posting errors and manipulation of figures; lack of cordial interaction with staff; and frequent system breakdown. The most difficult problem of computer automation as identified by the customers is frequent system breakdown. An interview conducted with some customers indicated that computer system often breaks down thus making access to the customers' account difficult. In some terrible cases, customers may not be able to withdraw that day. At the very worst, break down of system can lead to loss of valuable data which can result in huge losses to the customers in need of urgent cash for business transaction.

Second in rank and related to the above is black out/power failure. This also makes access to accounts difficult if not impossible. It can also lead to huge losses. Black out also inconveniences the customers because fans and air conditioners will not work and this may lead to unbearable heat. The third and fourth problems are lack of cordial interaction with staff, posting errors and manipulation of figures.

SUMMARY OF FINDINGS

The research project has examined the effects of computer automation on banking services in Lagos. The study revealed that a lot of changes were brought to the technique of delivering

Table 3: Attitude of customers to banking automated services

	x	f	fx	$\bar{x}$	s^2	%
<i>Computer Facilitates Accurate Records</i>				4.41	0.34	
Strongly Agree	5	28	140			45.2
Agree	4	33	132			53.2
Hardly Agree	3	-	0			-
Disagree	2	1	2			1.6
Strongly Disagree	1	-	0			-
<i>Computer Enhances Convenient Business Hour</i>				4.20	0.50	
Strongly Agree	5	22	110			34.9
Agree	4	34	136			54.0
Hardly Agree	3	5	15			7.9
Disagree	2	2	4			3.2
Strongly Disagree	1	-	0			-
<i>Computer Facilitates Prompt and Fair Attention</i>				4.20	0.42	
Strongly Agree	5	20	100			33.2
Agree	4	38	152			59.4
Hardly Agree	3	5	15			7.8
Disagree	2	1	2			1.6
Strongly Disagree	1	-	0			-
<i>Computerisation Enhances Faster Services</i>				4.33	0.5	
Strongly Agree	5	30	150			45.5
Agree	4	29	116			43.9
Hardly Agree	3	6	18			9.1
Disagree	2	1	2			1.5
Strongly Disagree	1	-	0			-
<i>Computerisation Enhances Home and Office Banking</i>				3	0.98	
Strongly Agree	5	2	10			3.8
Agree	4	17	68			32.1
Hardly Agree	3	16	48			30.2
Disagree	2	15	30			28.3
Strongly Disagree	1	3	3			5.7

Source: Research Survey, 2000

Table 4: Effects of problems associated with banking automation on customers

Problem	Frequency	Percentage
Frequent System break-down	17	46.0
Black-out/Power failure	11	29.7
Lack of cordial interaction with staff	6	8.1
Posting errors & manipulation of figures	3	16.2
Total	37	100.0

Source: Research Survey, 2000

banking services and the range of products through automated devices. Thus, electronic products have been increasing in variety and popularity in Lagos in the 21st century.

Five major areas were focused on to determine the effects of automation on the customer services. They include accuracy of records, convenient business hour; prompt and fair

attention; faster services; possibility for Home and Office Banking. It was discovered that the induced effect of computer automation on banking as perceived by the customers led to accurate records, convenient business hour, prompt and fair attention, faster services, and possibility for Home and Office Banking. Findings revealed that the need for faster services and general improvement of customer services ranked highest (76.20% and 73.81%, respectively) among all others that brought about ever increasing interest in banking automation in Lagos.

Bank executives have become aware that unless attempts were made to convince their customers of their ability to provide timely and efficient service, the newly emerging competitors will snatch them (customers) away. All the bank executives interviewed agreed that technological breakthrough in computer and its various applications to business have far reaching effects on banking activities that to ignore it might indicate economic suicide for any

business organization. This is in line with Barry (1992) who stated that twenty years ago, it would have been possible for any organization and its staff of business professional to ignore computers, but today, such attitude would be considered as organizational suicide. Harold (1995) also supported this assertion by contending that it has become axiomatic that to remain viable in the 1990's and decades that follow, financial service providers must modify their traditional operating practices.

CONCLUSION

Investment in information technology has become an important component in the overall strategy of banking operations to ensure competitive strength. It continues to change the way relationships between banks and customers are organized in Nigeria.

The study revealed that Banking Automation occasioned by the breakthrough in information technology has brought about various innovations that now dictate the pace for banking activities. This has far reaching effects on both the customer services and personnel requirements.

Banking Automation is not without its attendant problems. The most serious ones are the erratic power supply and NITEL inefficiency. Hardly can any part of Nigeria boast of an uninterrupted power supply. Thousands of Nigerians are not linked with telephone lines. The few available ones do not function well. The best you get from most lines is "all trucks are busy, please try later" Other problems include computer crimes such as theft, Trojan, hacking and viruses.

RECOMMENDATIONS

The following recommendations are made to ensure better utilisation of electronic banking in Nigeria:

1. Banks in Nigeria have not seriously explored the Internet. Internet requires telephone to operate successfully. Unfortunately many computer users in Nigeria are cut off from the use of Internet because of lack of telephone lines. The country should overhaul the NITEL system. If the entire nation becomes 'NITEL ready' business transactions will become easier.
2. Management of banks in Nigeria should create room for interaction and occasional meetings between the banks and their customers. This is essential so as to reduce the lonely effect and impersonal consequences of full automation.
3. There is also the need to improve NEPA services in Nigeria to facilitate proper operation of the automated devices. Electronic Home and Office Banking has not been fully rooted in Nigeria because of problems associated with NITEL and NEPA.
4. Application of computer in banks may have some attendant risks and problems. There is need to make contingent plans to counter or cushion the effects of computer crimes. Such plans may include adequate security in and around computer room, the use of password and other forms of encryptions.

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