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CHAPTER SIXTEEN

ICTs AND THE DIGITISATION OF THE BANKING INDUSTRY IN NIGERIA: A SOCIOLOGICAL APPRAISAL

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Chapter Summary

ICTs have become the creator of a fast-forward modernising post-utopian society with the promise of totalitarian transformation that has affected many sectors and areas of human interests. Fast-paced technological and economic changes have accelerated human experiences in a triumphalist fashion, providing convenience, ease, time- and cost-saving advantages. The Nigerian banking industry has not been left behind. Rather, the industry has grown from a manually driven to a digitally dependent industry with ICT-enabled services and product innovations to improve the lives of bank consumers in the country. Silhouetted against the modernisation paradigm, the industry and country need to brace up to tap into the opportunities and possibilities created by ICTs. Since ICT is the face of the future, the challenges facing ICT-enabled banking services must be removed so that the Nigerian banking industry can deepen its application of ICTs in the industry and provide citizens with greater product options and innovations which are needed for these banks and citizens to ably function in the new global techno-market order.

Introduction

As Blommestein (2006) noted in his very cerebral contribution on the subject of banking in a fast-forward modernising post-utopian society, a revolution is already upon the world driven by a global techno-market order that has brought gargantuan transformation to the world of finance, business, politics, media, and, indeed, in all areas of human endeavour. He pontificates, and rightly so, that this new techno-market system is shaped and characterised by a belief in the increasing importance of knowledge, new ideas, innovations and new technologies, and a higher pace of what the economist Joseph Schumpeter famously called "creative destruction". Just a few decades ago, people spoke of the end of history, meaning the ultimate triumph of a liberal economic and political orthodoxy. However, nowadays, many scoff at that notion as too simplistic because society stands at both the end and beginning of something remarkable, which is catalysed by fast-paced technological and economic changes

which accelerate the boundaries of human existence and are being shifted more rapidly than in the past (Blommestein, 2006). Therefore, this chapter shares in the triumphalist outlook of the death of traditional, mainly utopian, ideologies and the emergence of a new techno-market order which is redefining the way and manner human experiences and institutions are forged. Perhaps, more robust and unrivalled is the impending transformation looming large on the horizon when eventually such fresh waves of revolutionary technological forces such as bio-technology, nanotechnology, and robotics maturate. In his clairvoyance, Blommestein (2006) contends that each has its own industrial revolution, and will profoundly alter human life and thinking.

The banking industry globally and in Nigeria has leaned strongly on the use of ICTs as they have evolved. The application of ICTs to banking services has become a subject of fundamental importance and concerns to banks within the country and indeed the gold standard for local and global competitiveness. As Agboola (2007) notes, ICTs directly affect managers' decisions, strategic plans and product and service development within banks. Thus, ICTs have continued to change and shape the way banks and their corporate relationships are forged worldwide and the variety of innovative devices available to enhance the speed and quality of service delivery. Lukas & Frank (2012) share this view as they assert that ICTs, beyond use in banks, have become one of the recent touchstones for rating a modern business enterprise. They further argue that banks, in particular, adopt ICTs to improve the efficiency and effectiveness of services they provide to customers, upgrade business processes, as well as enhance managerial decisions and workgroup collaborations. This helps strengthen banks' competitive positions in rapidly changing/emerging economies like Nigeria. Thus the use of ICTs has increased banks' interface with their customers by providing multi-channel platforms and enhancing the integration among their branches, financial advisors, the internet, telephone banking, mobile banking and automated teller machines. The advent of open network architectures and a sharp reduction in ICT costs have eased the increasing computerised transactions between banks and their clients (Castelli, 2004; OECD, 2001).

In this chapter, an attempt is made to appraise the contribution of ICTs to the digitisation of the banking industry in Nigeria from a sociological weltanschauung.

Conceptual and Theoretical Paradigm

ICTs cover internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centres, commercial information providers, network-based information services, and other related information and communication activities (Garai, 2006). According to Chowdhury (2000) and Imhonopi & Urim (2011a, 2011b), ICTs also encompass technologies that can process different kinds of information (voice, video, audio, text and data) and facilitate different forms of communications among human agents, among humans and information systems, and among information systems. Imhonopi, Urim & Igbadumhe (2013) add that ICTs are modern technologies that facilitate information gathering, processing, transmission and storage and comprise hardware and software components that can be put to heterogeneous use through digitisation, connecting individuals and institutions over wide swathes of a geopolitical area. As Obasan (2011) noted, the fusion of computer and telecommunication after about four decades of applying computers to routine data processing, mainly in information storage and retrieval, has created a new development where information has become the engine of growth around the world. Ovia (2005) sees this development as having created catch-up opportunities for developing countries such as Nigeria and tremendously transformed most business (including banking) landscapes. Irechukwu (2000) itemised some bank services that have been revolutionised through the use of ICT as including account opening, customer account mandate, and transaction processing and recording. ICT has also provided self-service facilities (automated customer service machines) from where prospective customers can complete their account opening documents directly online. It assists customers to validate their account numbers and receive instruction on when and how to receive their cheque books, credit and debit cards. ICT products in use in the banking industry include Automated Teller Machine, Smart Cards, Telephone Banking, Electronic Funds Transfer, Electronic Data Interchange, Electronic Home and Office Banking. For Imhonopi (2009) and Luka & Frank (2012), ICTs affect all the processes associated with modern-day banking including daily routines of preparing payroll and order entry to payment and delivery systems, strategic activities, among others. Thus, Imhonopi (2009) submits that there is a general endorsement of the positive role ICTs have played and are playing in shaping (or reshaping) the nature, content and deliverables of banking services in the country and in stimulating the widespread technologisation and connection of bank branches and operations. Consequently, real-time banking solutions and convenience, as experienced by consumers of banking services, have become some of the numerous benefits made possible by internet banking in Nigeria today.

The Modernisation Theory

The Modernisation theory was espoused chiefly by the works of W. W. Rostow (Rostow, 1960). Generally, modernisation theorists pontificate that for a country to be seen as modern, it has to undergo an evolutionary process in science and technology which in turn would lead to an increased standard of living for its constituents. Modernisation theorists claim that the causes of the lack of development or progress towards modernisation in some countries are as a result of internal factors such as poverty and inadequate culture. The historical context that silhouetted the modernisation theory was the post-World War Two's deepening poverty in some countries, the ideological competition from communism, increasing unrest in some countries and the threat to capitalism (Imhonopi & Urim, 2010). This led to the development of the theory mainly by US economists and policy makers. The theory is reducible to the following (a) explain why poorer countries failed to evolve into modern societies and (b) shrink the spread of communism by presenting liberal economic orthodoxies as the solution to poverty. Modernisation theory has become increasingly influential, especially after the collapse of the USSR. Rostow's evolutionary pecking order of development (economic factors) is hinged on five processes:

1. Traditional society is typified by poverty, primary production and traditional values;
2. Pre-conditions for take-off requires assistance from the West through aid and industrial investment;
3. The Take-off stage is characterised by high economic growth and investment in infrastructure;
4. The drive to maturity involve changes in economic and cultural factors which lead to increasing prosperity for all; and
5. The age of high Mass consumption, which is the end point of modernisation idealism.

Modernisation theory pits modern values against traditional values as the former argues that traditional values (such as extended family relations, ascription, collectivism and others) block a country from developing, while modern values such as achievement orientation, universalism and individualism aid development. One of the central arguments of the Modernisation theory is the inevitable role of "Big Brother" the West has to play in developing countries. Examples of this role is manifested through Foreign Direct Investments in the factories, expertise and technology development of developing countries; Western funding to introduce meritocratic education (values of universalism, individualism and competition; mass media to disseminate

modern ideas such as nuclear families; and encouragement of urbanisation and de-villagisation of developing countries, inter alia). Provided with Western crutches, poor countries are expected to develop through the embracement of liberal economic and political ideologies, the creation of a capitalist entrepreneurial middle class to develop business opportunities and through high mass consumption which would create employment and increase income through an urban population, among others. However, the modernisation theory has been criticised for its ethnocentrism because it devalues traditional values and social institutions such as the extended family system, ignores increasing inequality within and between countries and is not a neutral theory as it promotes liberal economic and political orthodoxies (Imhonopi & Urim, 2010). Regardless of the various criticisms levelled against the modernisation theory, it holds forth the truism that no country can stay isolated in the present global configuration. Therefore, the need for integration and cooperation between and among countries to achieve development cannot be ignored. Thus, ICTs, which are part of the forces that drive a borderless and distance-less world, must be embraced and even contextualised by Africa, nay Nigeria, if the latter is to optimise existing ICT gains. Consequently, ICTs, which are products from Western scientists and technologists, have become instrumental in redefining and reshaping banking operations, services and evolution. Today, holding a bank account opened in Kano, a businessman can travel down to Uyo to buy goods by just using his ATM card at any branch of his bank. He could wire money electronically to his business partners in Lagos to settle outstanding obligations without leaving his living room. Thus, discarding ICTs as western totems will be injurious to the Nigerian society, much more the banking sector where speed, privacy, customer service, public confidence and security are values that are demanded and that can be made possible through ICT tools.

ICTs and the Nigerian Banking Industry

ICTs have been applied to the banking system in Nigeria, which has led to the growth and development of commercial banking activities in the country. For Agboola (2006), payment systems in the banks have passed through a lot of stages and ages starting from when barter was the only medium of exchange to some time before 700 BC when cowries were introduced in Asia Minor. With the introduction of coins and notes, the era of cash as payment system emerged. In AD 1000, the first bank notes appeared in China. This was later followed by the use of cheque as written instructions to transfer precious metal coins from one holder to another. Other written instructions such as credit transfers, postal orders, money orders, and travellers' cheques have also been used. The next great age of payment system that followed

paper instructions is electronic payments. Some payments are now being automated and absolute volumes of cash transactions have declined under the impact of electronic (cashless) transactions brought about by the adoption of ICT to the payment system, especially in the developed countries and now developing climes, even Nigeria.

Chiemeke, Evwiekpaefe and Chete (2006) have traced the history of the banking system in Nigeria to 1892 when Nigeria's First Bank was established. According to these scholars, banking legislation did not exist until 1952 when conventional banking system started with the industry witnessing a lot of regulatory and institutional advances. The industry was being controlled by at most five out of the 89 banks in existence before the banking recapitalisation exercise that reduced the number of banks to 25, later 23 and now 22 banks in the country. In its survey on the extent of e-banking adoption by Nigerian banks, the Central Bank of Nigeria (CBN), in September 2002, found out that of the 89 licensed banks in the country then, only 17 were offering Internet Banking, 24 were offering basic telephone banking, 7 had ATM (Automated Teller Machines) services while 13 of the banks were offering other forms of e-banking (Ezeoha, 2005). This implies that as of then, 19.1 percent of the banks were offering internet banking, signifying that Internet banking was yet to take centre-stage despite its widely acclaimed benefits against the traditional branch banking practice. Today, the financial services industry in Nigeria boasts of other players such as 906 microfinance institutions, 5 discount houses, 5 development finance institutions, 731 bureau de change firms, 102 primary mortgage institutions, 82 finance companies and over a 100 insurance companies (Luka & Frank, 2012).

In the bid to catch up with global developments and improve the quality of their service delivery, Nigerian banks have invested much in ICTs, widely adopted electronic and telecommunication networks for delivering a wide range of value-added products and services (Chiemeke *et al*., 2006) and, in the last few years, transformed from manual to digital systems. The numerous advances in ICTs have made considerable impact in the business landscape and have in particular brought about a mindshift in banking operations. This has necessitated the adoption of internet banking and a plethora of other ICT-enabled services by banks. With the application of the internet to banking, for instance, banks are able to work effectively and make high profits. As Imhonopi (2009) noted, the chief driving forces of internet banking among customers include better access to banking services, competitive prices and higher privacy and security of customer information. Through electronic banking, customers transact banking operations at the comfort of their homes and offices anywhere and anytime. As Ovia (2001)

posited, the adoption of e-commerce, e-banking and e-everything has become the gold standard and is rapidly being embraced by Nigerian banks whose vanguardist efforts in narrowing the digital divide has become conventional. Thus this chapter adumbrates that the ability of Nigerian banks to satisfy and retain their customers in the present post-consolidation era will no doubt depend largely on the development and management of their ICT infrastructure. Ovia (2001) has long appreciated the role of ICT in the banking industry when he identified three areas this impact could be felt such as: (1) *Informational:* this is where a bank's products and services are being displayed on its websites. The risk here is relatively low. (2) *Communicative*: this is where a bank's system allows interaction between the system and the customer. This interaction is limited to electronic, account opening enquiry, loan application and static file updates. Because these servers have a path to the bank's internal network, the risk is higher compared to informational, and (3), *Transactional*: this is where the level of internet banking allows banks to transact business with their customers. It presents the highest risk architecture and must have the highest security and controls.

Therefore, ICTs have forged strong ties with the present banking institutions in Nigeria and has in fact dictated and moderated the major changes that have reflected in banking operations in the country, bringing about the use of internet-banking, ATM Networks, Electronic transfer of funds and quick dissemination of information, among other services.

ICT Systems and Services in the Nigerian Banking Industry

Shokan (2005) in his very perspicuous work has listed the following as important internet banking products and systems enabled by ICTs. They are electronic fund transfer, electronic fund transfer at point of sale, electronic cheque, electronic letter of credit, electronic cards, debit cards, electronic cash, electronic billing and automated teller machines. Others are credit cards, mobile banking, internet banking, mobile wallet, and many others. In triumphalist tones, Agboola and Salawu (2008) eulogise the contributions of ICT devices, products and services in the Nigerian banking industry whose conflation has resulted in more speed, high product/service quality and brought about the adoption of global best practices. Nigerian banks now wear a glocal look and outlook which have suddenly transformed these institutions into global players with local Nigerian totems. In further identifying the ICTs systems and services adopted for the effectiveness and efficiency of banking operations in Nigeria, Agboola and Salawu (2008) have done a brilliant work worth considering. According to them, ICT products relevant to banks in Nigeria can be subsumed into three groups:

I. Bankers Automated Clearing Services: These involve the use of Magnetic Ink Character Reader (MICR) for cheque processing. MICR is a system that provides for encoding of cheques and documents with characters in magnetic ink so that they can be electronically read. MICR is capable of encoding, reading and sorting cheques for timely clearing.

II. Automated Payment Systems: These include products such as Automatic Teller Machines (ATMs), Plastic Cards and Electronic Funds Transfer. ATM is a remote cash dispenser that assists customers to have access to withdrawal outside the banking hall. Electronic cards are microchips that store electronic cash to use for online and off line micro payments. They include credit cards, debt cards, and store value cards. Electronic fund transfer (EFT) is an electronic oriented payment mechanism. Simplified, it is an electronic tool that is used to effectively transfer the value of exchange process for goods and services, ideas or information from one bank account to another account in another bank whether within or outside the country. Electronic Letter of Credit, Electronic Cheque and Electronic Cash fall under automated payment system.

III. Automated Delivery Channels: These include interactive television and the internet. They offer an excellent environment for banks to experiment with the delivery of Electronic Home and Office Banking. This technology provides for exchange of data between computer applications supporting the process of business partners by using agreed-to, standardised, data format. 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. VSAT (Very Small Aperture Terminal) is a satellite communications system that serves home and business users. Customers with such terminals are able to contact the bank for any form of information required. Information on bank balances, deposits into and withdrawals from accounts may be got through this medium.

Other modern ICT systems and tools/services in use in Nigerian banks are as follows:

- **Internet Infrastructure.** All banks in Nigeria now have internet infrastructure which gives them internet access which is a prerequisite for e-Business and the main channel for e-banking operations. The general availability of the internet allows for the analysis of overall ICT-readiness in the banking industry.

- **Use of Internal and External Networks.** There is also a heavy presence of internal and external networks which are a vital part of an effective ICT-enabled banking system, which supports communication within and between banks and their numerous stakeholders, especially customers and suppliers. The presence of Local Area Networks (LAN) and Wide Area Networks (WAN) enables banks to conduct e-banking operations at a substantial level and manageable cost. Wire-based and wireless LANs and WANs are currently being used in the Nigerian banking industry to connect banking operations across wide geographical locations.
- **Use of SMS and email alerts.** Nigerian banks now use SMS and email alerts to send instant notification of transactions made on customers' accounts to their mobiles such as phones, other mobile addresses and email addresses. This practice ensures that customers are aware of transactions on their accounts at all times and makes the banking process an accountable and open relationship.
- **Digitisation of mails and correspondences.** Nigerian banks generally now have a penchant for digitisation of their formerly paper-based processes. Email is increasingly being applied for especially non-legal correspondences like account statements, marketing and sales. Even these days, banks are gradually moving these operations online. Banks now send e-bank statements to customers and even conduct their marketing and sale activities online and through many social media platforms.
- **ICT security infrastructure:** Security is an important issue in the banking industry as banking is based on customer trust. Through ICTs, the risk of hackers, cyber criminals, denial of service attacks, technological failures, breach of privacy of customer information, and opportunities for fraud created by the anonymity of the parties to electronic transactions are managed and reduced to the barest minimum. Depending upon its nature and scope, a breach in security can seriously damage public confidence in the stability of a financial institution or of a nation's entire banking system (European Commission, 2008), hence introducing appropriate security measures and putting security concerns at ease, Nigerian banks have been able to attract large segments among consumers who previously were not inclined to use e-banking services. Furthermore, it is also in the banks' own interest to improve security, as digital fraud can be costly both in financial losses, and in terms of the damage it does to the brand of the bank in question. Banks use from simple to sophisticated ICT-enabled security facilities and systems to nip security breaches in the bud. These include use of virus

checking and protection software, use of firewalls, use of secure servers, use of off-site data backups, and to effectively manage elements such as Access Controls, System Security, Storage, and Monitoring and Compliance (Tshinu, Botha & Herselman, 2008). Also, the spend of Nigerian banks on the acquisition of professional talents in network security, internet security, infrastructure technicians, business intelligence/knowledge management experts, call centre operators and customer relationship management (CRM) managers shows the commitment to providing adequate security for their ICT-enabled banking operations.

- **Authentication. Nigerian banks are also concerned** about the issues of authentication of users and data connections. The use of digital signatures is not as common as PIN codes or encryption, and reason is the fact that digital signature is relatively new technology. Nevertheless, Nigerian banks provide PIN Codes to their customers, who are also advised to change these codes frequently in order to minimise security breaches to customer's accounts and financial transactions.
- Other ICT-enabled services. Nigerian banks are wont to use ICT-enabled facilities such as their websites to carry out e-marketing and sales functions, offer e-banking services, interface with their customers through online business2customer (B2C) channels and business2government (B2G) interaction.

These show that Nigerian banks are not left behind in ensuring that they are technology compliant in driving their business processes and ensuring they are competitive within the glocal market space.

Benefits of ICT Use in the Banking Industry in Nigeria

According to Ovia (2001), the two prominent benefits of ICT-enabled banking are (1) On-line, real-time banking services which have become a birthright of the banking consumer as customers now demand the flexibility of operating an account in any branch of a bank irrespective of which branch the account was domiciled; (2) Convenience which is achieved when customers sit in the comfort of their homes and offices and with a PC log onto their banks' servers and transact banking activities. This also entails the provision of facilities that enable remote, reliable, secure and round-the-clock access to banking services.

Other benefits arising from the application of technological innovations to banking in Nigeria are as follows:

- Customer-centricity. ICT-enabled banking services are customer-focused and are designed to provide more value-added advantages that meet customers' rapidly evolving needs and preferences.
- Enhanced customer access and awareness. The banking public in Nigeria now have increased awareness about the various banking services on the display in each banking institution and access has also been liberalised. One of the banks in Nigeria, for instance, has introduced a social banking account that enables interested account holders to register for such accounts online without vis-a-vis interactions with the officials of the bank.
- Speedy/faster processing and transmission of information. There is speedy information processing and transmission as a result of the digitisation of bank operations which make it easy and speedy to make payments and withdrawals without much time wasting.
- Cost and time effectiveness due to centralised management. Most banks, if not all, have their branches connected with the head office and with one another. This enables seamless interactions between the banks and customers are rewarded with time- and cost-saving cost advantages.
- Reduction of fraud levels and improved risk management. For instance, debit and credit cards and other forms of electronic cards used in the banking industry in Nigeria are well secured that it is only when a third party finds out the PIN code on a card and lays hold of the card, can security of that account be breached.
- Global compliance. Nigerian banks have adopted trends that make for seamless and standardised services worldwide.
- Easier marketing of banking products and services. ICTs have made it possible for Nigerian banks to roll out multi-channel marketing platforms for the marketing and sales of banking products and services.
- Wider networking and regional/global links. ICTs have also helped Nigerian banks to connect with correspondent banks regionally and globally. This makes for better and easy business transactions for their customers who transact businesses with partners spread across the globe.

Challenges Facing ICT-enabled Banking Service Offerings in Nigeria

- Security. This is one of the Achilles heels facing ICT-enabled banking services in Nigeria. Majority of bank customers in the country shy away from ICT-related banking services because of security concerns.
- Human face. Customers still value personalised and responsive services from their bankers and feel that machines or digital processes, no matter how good they are, may not be able that human touch to their transactions.
- Ignorance. In Nigeria, the population of the unbanked is still estimated to be high. Besides, majority of bank customers do not even know whether their bank provides online services or not. So they fail to take advantage of such opportunities to use ICT-enabled banking services.
- Computer illiteracy among the banking population is still relatively high. Notably, too, many bank customers in the country are not computer literate hence their disinclination towards ICT-enabled bank services.
- Poor and lack of technological infrastructure in the rural and poor areas. Poor or non-existing technological infrastructure in some locations in Nigeria, especially in the rural areas also makes access to ICT-enabled banking services a twinge or anguish.

The Future Face and Phase of ICT-enabled Banking in Nigeria

The Nigerian banking industry is already experiencing a cashless transactional environment with some states like Lagos and others leading the pack. This is to downscale the cost of carrying cash around in the country and to mitigate the exposure of banks' bullion vans to armed robbers and other criminals. Again, mobile banking offers an opportunity to serve the "unbanked" as only 20 percent of African families have a bank account (Ondiege, 2010). Although this may be debated in Nigeria, the fact remains that factors such as high illiteracy, high gender disparity, poverty and the continued villagisation of the country's households make it difficult for the unbanked population to diminish. Therefore, mobile banking, based on the huge number of subscribers to mobile telecom services in the country, could provide the needed catalyst mainstream more Nigerians into the bank customer bracket. As Ondiege (2010) observes, mobile phones can serve as: a virtual bank card; a point of sale terminal; an ATM or an internet banking terminal to drive the mobile banking process. Mobile banking thus offers more opportunities for partnerships between banks, non-bank financial institutions while

mobile telephony enables financial institutions to increase access to finance, especially in rural areas for households and SMEs.

Conclusion

It is safe to conclude that the application of ICT to banking services has facilitated optimal performance in banking services and created a bouquet of interesting Internet-enabled banking solutions for today's bank customer in Nigeria. However, the challenges that remain have to be overcome if the gains already experienced are to be deepened. ICTs are expected to bring substantial benefits in the long term for bank users, businesses and public institutions in Nigeria. Hence, there is need for greater ICT investments in the country by banks. Bank customers stand to benefit through increased competition, improved integration and secure ICT-enabled bank instruments. Banks also need to increase the enlightenment of bank customers regarding ICT-enabled banking service offerings so that many more Nigerians can come on stream. Also, the government needs to create the right and favourable business climate to support business, including banking business, in the country. The need to revolutionise and stabilise the power sector so that constant power supply can be assured will go a long way to reducing the operating costs of banks. More physical security needs to be provided by the government so banks can operate without let, hindrance or fear. Where banks are easy targets for criminals, armed robbers, kidnappers and domestic terrorists, the banking reforms with regard to ICT penetration in the sector will be negatively affected. The government needs to also focus on improving the human development indices of citizens in the area of education, health, employment and others so that issues of illiteracy, unemployment and ill-health can be reduced to the barest minimum so that many more Nigerians can participate in the banking industry even as it continues to innovate its way for the good of its customers, businesses, government and other stakeholders.

References

Agboola, A. A. (2006). Electronic Payment Systems and Tele-banking Services in Nigeria in *Journal of Internet Banking and Commerce,* December, Vol. 11, no.3.

Agboola, A. A. (2007). "Information and Communication Technology (ICT) in Banking Operations In Nigeria – An Evaluation Of Recent Experiences". In *African Journal of Public administration and Management*, Vol. 18, No. 1.

Agboola, A. A. and Salawu, R. O. (2008). Optimizing the Use of Information and Communication Technology (ICT) in Nigerian Banks in *Journal of Internet Banking and Commerce*, April, Vol. 13, no.1.

Alawode, A. J. & Kaka, E. U. (2008). *Information And Communication Technology (Ict) And Banking Industry***.** Proceedings of the 1st International Technology, Education and

Environment Conference, African Society for Scientific Research (ASSR) co-published by the Human Resource Management Academic Research Society, no. 673.

Blommestein, H. J. (2006). *Visions about the Future of Banking.* The European Money and Finance Forum, Vienna: SUERF.

Castelli, A. (2004). *ICT Practitioner Skills and Training: Banking and Financial Services.* Cedefop Panorama series, 95. Luxembourg: Office for Official Publications of the European Communities, 2004.

Chiemeke, S. C., Evwiekpaefe, A. E. and Chete, F. O. (2006). The Adoption of Internet Banking in Nigeria: An Empirical Investigation in *The Journal of Internet Banking and Commerce*, December, Vol. 11, no.3.

European Commission. (2008). *ICT and e-Business Impact in the Banking Industry.* A Sectoral e-Business Watch Study by Rambøll Management. Impact Study No. 06 Copenhagen/Brussels: European Commission, DG Enterprise & Industry

Imhonopi, D. & Urim, U. M. (2010). Impact of Globalisation on the Nigerian Educational System. This paper was presented at the 10th Annual Conference of the Nigerian Sociological Society (NSS), Delta State University, Abraka, 26th – 28th October.

Imhonopi, D. & Urim, U. M. (2011a). "Maximising ICT for Quality Research and Teaching in Tertiary Institutions in Nigeria." *Journal of Society and Development,* Vol. 1, No. 3, pp. 44-58. Abraka, Nigeria: Interdisciplinary Journal of the Nigerian Sociological Society, Delta State University.

Imhonopi, D. & Urim, U. M. (2011b). "The Impact of Internet Services on the Research Output of Academic Staff of Selected State Universities in South-Western Nigeria." *International Journal of Information and Communication Technology,* Vol. 8, No. 1, pp. 9-20. Niger State, Nigeria: The Information Technologist, Federal University of Technology.

Imhonopi, D. (2009). *Influence of Utilisation of Internet Services on Teaching and Research Output among Academic Staff of Selected Universities in South-Western Nigeria*. An unpublished PhD Thesis submitted to the Department of Sociology, University of Ibadan, Ibadan.

Imhonopi, D., Urim, U. M. & Igbadumhe, F. A. (2013). "Information and Communication Technologies and Human Development in Nigeria: Forging the Nexus." International Journal of Information Communication Technologies and Human Development, Vol. 6, No. 1. Pennyslvania, USA: IGI Global.

Irechukwu, G. (2000). Enhancing the Performance of Banking Operations through Appropriate Information Technology. Ibadan: Spectrum Books, Ibadan.

Luka, M. K. & Frank, I. A. (2012). The Impacts of ICTs on Banks: A Case study of the Nigerian Banking Industry. In International Journal of Advanced Computer Science and Applications, Vol. 3, No. 9.

Obasan, K. A. (2011). "Information and Communication Technology and Banks Profitability in Nigeria". In Australian Journal of Business and Management Research, Vol.1 No.4 (102-107), July.

Ondiege, P. (2010). "Mobile Banking in Africa: Taking the Bank to the People." *AFDB-Africa Economic Brief*, Vol. 1, Issue 8, December.

Ovia, J. (2005). "Enhancing the Efficiency of the Payment System in Nigeria". In CBN Bullion, Vol. 29 (1), p.8-18.

Rostow, W. W. (1960). The Stages of Economic Development: A Non-Communist Manifesto, UK: Cambridge University Press.

Tshinu, S. M., Botha, G. & Herselman, M. (2008). "An Integrated ICT Management Framework for Commercial Banking Organisations in South Africa." In *Interdisciplinary Journal of Information, Knowledge, and Management*, Volume 3.