A TOE Perspective of E-Business Deployment in Financial Firms

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INTRODUCTION

The increasing globalization, enabled by advancement in information system (IS), has accelerated national and regional markets integration, international production, distribution, marketing, and consumption. Internet World statistics (2014) indicate that the number of active (those who spend at least one hour per week online) users rose to about 3 billion in 2014. Similarly, the eMarketer report reveals Business-to-Consumer forecasts of total world e-commerce sales will hit about 1.5 trillion in 2014 (Nielson, 2014). International Data Corporation (IDC) projects e-commerce ICT spending to grow 3.8% in 2015 to 3.8 trillion. (IDC, 2014). The report also indicates that business-to-business (B2B) and business-to-consumer (B2C) segments of the online market will drive e-commerce growth. According to United State Census Bureau 2014, total e-commerce sales for United States for 2012 were estimated at $1.8 trillion, up from a revised $1.7 trillion in 2011. Total retail sales in 2012 were $227 billion, an increase of 14.7% from $198 billion in 2011. Based on the foregoing, this paper examines electronic business use in Nigerian financial firms using the technology-organizational-environmental framework (TOE).

Electronic business (e-business) is often regarded as generally focused on e-commerce, however, the true definition is much broader. The Aberdeen Consulting Group defines e-business as the automation of the entire spectrum of interactions between enterprises and their distributed employees, trading partners, suppliers and customers. E-business encompasses the application of electronic systems to transform functional processes (Xu, Rohatgi, & Yangxing, 2007). Both definitions include a broad range of business processes such as multi-entity product design collaboration, electronic product marketing and information sharing, e-commerce sales of product to consumers or between firms or governments, internal business process re-engineering, multi-entity supply chain collaboration and customer relationship management. The operational definition of e-business in this chapter includes all business transactions firms conduct using open standard (e.g., the Internet) and/or closed standard networks (e.g., Electronic Data Interchange - EDI).

Revenue generated from e-business support and related services grow at a rapid rate in Nigeria, despite the insecurity in online economic transactions. With the liberalization of the telecommunication sector and the introduction of GSM services, experts predict a boom for e-business activities across Nigeria including Lagos. Lagos is the commercial and economic hub of Nigeria attracting key investments in financial activities and information and communication technology (ICT). As the fastest growing industry in Nigeria, the ICT industry is projected to be the next foreign direct investment driver in the next decades. E-business value was $58.1billion in 2013 up 22.9% from USD44.8billion in 2012. (Okoro, 2013). The financial services industry (FSI) is a significant source of development and growth in Lagos. The Lagos corporate sector, especially the financial and oil industries are all expected to experience increased growth in their future EB activities.

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Despite increasing corporate interest and many success stories on e-business, there are few contextual studies on factors that determine its deployment in Africa. In addition, prior studies on e-business focused primarily on the statistics and growth patterns of e-business in terms of usage across industries and countries located in the European Union, United States of America and Asia (Eze & Gilbert, 2004; Shi, 2013). Similarly, Nigeria, like most African countries, provides little empirical studies that explain the dynamics of e-business deployment in firms (Eze & Gilbert, 2008). The goal of this chapter is to contribute empirical material to the scanty literature on e-business development in Africa by examining factors that determine e-business use among Nigerian financial firms. This chapter will also examine the dynamics of outsourced and in-house e-business applications among Nigerian financial firms. These may provide some bases for additional future researches that might address specific issues in e-business developments among firms from a comparative perspective.

THE CONTEXT FOR E-BUSINESS AND THE FINANCIAL INDUSTRY

Nigeria is located at the south-western coast of West Africa, consists of 36 states, and covers an area of about 923,768 sq km. Nigeria shares borders with Benin, Cameroon, Chad and Niger. Its population, estimated at 175 million (comprising about 250 recognized groups, many divided into subgroups of considerable social, economic and political significance), is sparsely and densely distributed in rural areas and cities (*land*: 910,768 sq. km, *water*: 13,000 sq km). Nigeria is slightly more than twice the size of California which makes it extremely difficult to provide universal communications access to its entire population. E-business activities between government agencies and private entities have not taken strong roots except in the case of government agencies such as the Central Bank of Nigeria and the private banks including oil companies. There is the potential for growth in this area and evidence suggests that more sectors of the economy are following the examples set by the banking and other financial services firms in deploying e-business innovation.

As noted earlier, Lagos, the specific location for this study is the industrial and commercial capital of Nigeria, regionally known as the growth pole and center for local/international financial institutions and IT headquarters (Okoro, 2012). Lagos has a population of 18 million and is the most important city in Nigeria because of its strategic position. E-business development in Lagos is driven mainly by the private sector. Firms, particularly banks, oil, and telecommunication players are very active in e-business operations supported by quasi-governmental agencies such as the National Communication Commission and the Nigeria Internet Group. The government of Nigeria is gradually developing a solid e-business infrastructure to enhance operational activities among business partners. Over 85% of manufacturing and trading firms in Lagos use Electronic Data Interchange (EDI) as their key operating platform. With the rapid diffusion of the Internet, greater numbers of firms in Nigeria are moving their operations from the proprietary networks to the World Wide Web.

The nature of IS in Nigerian FSI is complex and diverse. On the front end, firms use IS to execute and record customer transactions, whether they are handled in person, by phone, through electronic funds transfer, or on the Internet. On the back end, funds are transferred among firms and individuals via electronic transfer system, such as Swift and giro, which handle hundreds of trillions of dollars in transactions yearly. The growing application of internet in major financial transactions has made funds transfer over the internet possible, thereby enabling more effective e-business applications.

The FSI already has benefited from network-enhanced connectivity and interactivity for more efficient information exchange (Fan et al., 2000) and has experienced improvement in operating efficiencies