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2

Facilitating the Intention to Expand E-business Payment Systems Use in Nigerian Small Firms: An Empirical Analysis

Princely Ifinedo
Cape Breton University, Sydney, Nova Scotia, Canada

1. Introduction

Electronic business (e-business) refers to the utilization of information and communication technologies (ICT) to support of all aspects of business (Turban et al., 2010). The term was first used by IBM's marketing and Internet teams in 1996 (Amor, 1999). E-business payment systems or solutions refer to the various innovative applications and approaches including the use of credit cards, magnetic ink character recognition (MICR) checks, automated teller machines (ATMs), electronic cash (E-cash), electronic funds transfer (EFT), amongst others that are used to facilitate the customer's decision to pay for a product or services (Vassiliou, 2004). Gholami et al. (2010, 53) while citing Andam (2003, 22) describe e-payment systems as "the use of pre-loaded, debit and credit cards on the Internet or other electronic devices to perform daily transactions which include paying for goods and services, transfers and bill payments at any time of the day." These researchers added that e-payments are part of a larger electronic payment systems (EPS), which includes a system of financial exchange between buyers and sellers in the online environment through the use of such digital financial instruments as credit cards, electronic checks, and digital cash.

With e-business payment systems, individuals and organizations have the opportunity to pay for goods and services over the counter or online without using cash (Gholami et al., 2010). The role of e-payment systems is paramount to the growth of e-business itself (Vassiliou, 2004) and the emergence of such methods of payment has had a significant impact of global e-business (Leadpile, 2006; EIU, 2011). A recent report by Leadpile (2006) predicted that e-business around the world will likely surpass the $1 trillion mark by 2012. The level of commercial activities and transactions generated through e-business in a country does have a positive correlation with the nation's overall economic growth and well-being (EIU, 2010; WEF, 2011). By the same token, parts of the world especially those in developing societies where the expansion of e-business has been slow to develop, run the risk of being marginalized in the emerging digital or network economy (Ifinedo, 2005a; EIU, 2011; WEF, 2011). While previous research efforts in the relevant literature have discussed factors impacting the adoption and diffusion of e-business and e-payments systems in the developed world (Vassiliou, 2004; Zhu et al., 2003; Ifinedo, 2011a, b; Laukkanen & Pasanen, 2008; Lee, 2009), focus on issues in the developing world has not been adequately researched (Mbarika et al., 2005; Ayo, 2006; Ayo et al., 2011).

It is vitally important to examine the antecedents of e-business payment systems use in developing countries such as Nigeria. It is worth pointing out that Nigeria is largely a cash-based country in which a high percentage of its economic transactions are conducted with cash (Gholami et al., 2010; Ayo et al., 2011). This is partly due to the country's socio-cultural imperatives (Ifinedo, 2005b) and the embryonic development of e-business payment systems acceptance among businesses and the population. The Central Bank of Nigeria (CBN) realizing the need to improve the economic transactions climate in the country is clamoring for a paradigm change from a cash-based economy to a cashless one. According to Gholami et al. (2010, p.52), "for instance, a national payment system has been set in force [in Nigeria] to encourage e-payment adoption. The banks and electronic switching companies have also rolled out infrastructure to facilitate the use of e-payments." In spite of such various efforts and commitments, banking reports and academic studies indicated that the adoption of e-business payment systems in Nigeria continue to be low and unimpressive (Babalakin & Co; 2002, Agbada, 2008; Akpan, 2008; Gholami et al., 2010; Ayo et al., 2011). The question then arises: *what can be done to facilitate the intention to expand e-business payment systems use in Nigerian small firms and outfits*?

Some prior work has been done in the area. For example, Ayo (2006) investigated the prospects of e-business growth in Nigeria using the ability, motivation and opportunities (AMO) model; he found that a good number of Nigerian companies have some sorts of online presence, which is encouraging as the country aims to fully integrated into the network economy (Ifinedo, 2005a). Ayo (2006) asserted that the motivation and opportunities for e-business was low mainly due to lack of e-payment infrastructure and access to ICT facilities. Likewise, Gholami et al.'s (2010) findings showed that perceived benefits, effort expectancy, social influence, trust, awareness, and demographic variables affected individuals' intention to adopt e-payment systems in Nigeria. Recently, Ayo et al. (2011) using an extended technology acceptance model (TAM) found that perceived ease of use and perceived usefulness were not only antecedents of e-business payment and banking acceptance in Nigeria, these factors also mattered in promoting continued usage of such innovations among businesses and the Nigerian populace. Additionally, foregoing researchers revealed that organizational reputation, perceived risk, and trust are major influences in the continued usage of such systems.

This chapter aims at contributing to the emerging body of work in this area of interest. I intend to build upon the insight suggesting that it is worthwhile to focus attention on the issues at the micro level or at the boundary of the firm. I concur with Molla and Licker (2005) who argue that issues such as government support for firms to adopt needed technologies, information systems (IS) vendor support, top management support, and organizational readiness are worthwhile when discussing factors that may encourage or discourage the adoption of ICT-enabled initiatives such as e-business payment systems in the developing world. Specifically, this chapter will draw from relevant constructs from the TAM (Davis, 1989), which will be fused into the technology-organization-environment (TOE) framework (Tornatzky & Fleischer, 1990) to enhance knowledge.

Nigeria was selected because of its paramount socio-economic, technological, and political standing in the sub-Saharan Africa (SSA) region (WEF, 2011; ITU, 2011; Internetworldstats, 2011). It is not claimed herein that Nigeria is a perfect representative of all the countries in SSA; however, its business environment vis-à-vis e-business payment technologies usage

may mirror those in comparable countries in the region. I intend to focus attention on small firms in Nigeria as the adoption of e-payment systems in larger firms is more likely to be at advanced stages. Moreover, small firms – usually with fewer than 500 employees – play crucial role in the national economic development of most countries around the world, including Nigeria (Ifinedo, 2005b, Ifinedo, 2011a)

This research is important for the literature as it seeks to add to the discourse of e-business payment systems adoption with information from a region of the world, that is, SSA that has not been adequately researched (Mbarika et al., 2005). In fact, others (Farhoomand et al., 2000; Tan et al., 2007) have suggested that the diffusion of e-business and related innovations in organizations in developing and developed countries differs significantly. Thus, by focusing on e-business payment systems use intentions among Nigerian firms, our knowledge of pertinent factors in the context of developing countries will be enhanced. In particular, the intention to expand e-payment use in this study refers to an ideal situation in which a firm indicates that it uses all the possible e-payment solutions for its business transactions.

2. Background information on Nigeria

Nigeria is the most populous country both in SSA and Africa with a population of about 155 million people in 2010 (CIA WorldFact, 2011). Its Gross Domestic Product (GDP) purchasing power parity and GDP per capita in 2010 were US$369.8 billion and $2400, respectively. Although businesses and individuals in Nigeria have been adopting modern ICTs (Anandarajan et al., 2002) for some time now, the overall ICT adoption and usage levels in the country has been slow compared to those of advanced Western countries (Ifinedo, 2005a; WEF, 2011; ITU, 2011). Recently, the Nigerian IT Development Agency (NITDA) was mandated to improve the nation's capability to use ICT for development purposes. One of its objectives is to "promote electronic trade, business and commerce in the country". In spite of efforts to encourage the spread of e-business in Nigeria, evidence suggests that the growth and use of e-payment systems is still very slow to consolidate in the country (Ayo et. al., 2008; Eze, 2008).

With regard to the use of ICT products for development (i.e. e-readiness index), Nigeria has not fared well on this index. It ranked 61st out of 70 countries on a ranking of e-readiness produced by the Economist Intelligence Unit (EIU, 2011). Similarly, Nigeria ranked 99th out of 133 countries on the networked readiness index for 2009–2010 that was produced by World Economic Forum (WEF, 2011). The Economist Intelligence Unit's (EIU, 2007) study of government e-payment adoption globally indicated that Nigeria ranked 42nd among the 43 countries that were investigated in that study. These indicators and indices clearly show that Nigeria is not fully prepared for the digital or network economy. Nonetheless, some notable changes and progress have surfaced in Nigeria since 2001. The Nigeria's telecommunication sector, which was perennially underdeveloped and unreliable has been deregulated and liberalized (Ifinedo, 2005b; 2008; ITU, 2011). Four GSM networks were licensed by 2002. Also, more than 400 ISPs and a number of data carriers, Internet exchange and gateway operators have been licensed in the country (Internetworldstats, 2011). These apparent developments make Nigeria one of the fastest growing ICT markets in SSA after South Africa (Internetworldstats, 2011).

In 2001, there were only 200,000 Internet users in Nigeria (0.1% of the population); this has jumped to 43,982,200 (28.9% of the population) in 2010 (Internetworldstats, 2011). Nigeria

has introduced lower tariffs for ICT imports and a number of local personal computers (PC) manufactures have started producing PCs in the country (Ifinedo, 2008). With such marked improvements in the technological infrastructure of the country, it comes as no surprise that e-business is beginning to take hold among business organizations in Nigeria (Ifinedo, 2008; Ayo et. al., 2008; Chiemeke et al., 2006; Eze, 2008).

3. E-business payment solutions in Nigeria

The Central Bank of Nigeria (CBN) is concerned about the risks involved in issuing, storing, processing, distributing, and transporting cash in the country (Babalakin & Co, 2002; Gholami et al., 2010). The CBN laments the slow pace of e-business payment systems adoption in the country and is actively promoting the use of such systems in the country (Akpan, 2008; Emordi, 2007). A report indicated that the value of electronic payment and commerce in the country in 2006 stood at 360 billion naira (about US$2.81 billion) (Ayo et. al., 2008). In contrast, e-commerce trend in developed countries such as Canada, in the same year was valued at US$49.9 billion (Grau, 2008). Despite the slow progress of e-business payment systems adoption in the country, recent studies have shown that Nigerian businesses and the population are familiar with the benefits of such payments systems and may be interested in continuing the use of such solutions if the right facilitating conditions are provided (Chiemeke et al., 2006; Akpan, 2008; Adesina et al., 2008). Some of the noted benefits include convenience, efficiency, and the ease of use associated with such payment platforms (Akpan, 2008; Gholami et al., 2010).

The development of e-payment solutions in Nigeria has been progressing with time (Akpan, 2008). The introduction of MICR checks revolutionized e-payment systems solutions in the country (Adesina et al. 2008). This was followed by the introduction of the ATMs for dispensing cash, checking of account balance, and for paying utility bills in the early 1990s. By 1993, smart cards payment system was introduced by the CBN to deal with financial transactions (Agbada, 2008; Akpan, 2008). Debit cards (VISA, MasterCards, Euro cards, American Express, Valucard, EasyCash, and Smart pay) were later introduced in the country. The first credit card in Nigeria was introduced in 2004 by Master Card in conjunction with Cards Technology Limited and Ecobank (one of the country's local banks). This allowed card holders to make purchases or withdraw cash up to certain limits. By the end of 2007, the number of cards issued in Nigeria increased by 200% (i.e. from four million to twelve million cards) (Emordi, 2007). The impact of the foregoing e-payments had positive effects in moving Nigeria toward a cashless society. Table 1 shows the Economic Report of the CBN for the first half of 2008 with a summary of the value and volume of e-payment systems as a percentage of total transactions in Nigeria (Emordi, 2007).

Channel of transaction	Volume in Percentage (%)	Value in Percentage (%)
ATM	87	90.8
Mobile	7.3	0.10
Web (Internet)	3.2	4.8
POS (Point of sales systems)	2.5	4.3

Table 1. Percentage value and volume of e-payment in Nigeria

Notwithstanding the reported growth in the acceptance of e-payment solutions in Nigeria, researchers (Ezeoha, 2005; Chiemeke et al, 2006; Agbada, 2008; Adesina et al, 2008; Gholami et al., 2010; Ayo et al., 2011) have shown that there are still problems with respect to the behavioral intentions of small business in using and accepting e-business payment solutions in Nigeria. Examples of inhibiting factors noted in such prior studies include insecurity, fraud, lack of standardization of channels, illiteracy, age differences, and inadequate operational facilities such as telecommunication and electricity supply. As already indicated above, this current research seeks to add to the discourse of factors affecting the intention to use e-business payment systems in Nigeria with an examination of the influences of perceived usefulness, perceived ease of use, management support, organizational readiness, IS vendor support, government support, and financial resources support. I hope the study's insight will provide new useful insights to both the practitioners' and researchers' communities.

4. Theoretical underpinnings

The technology acceptance model (TAM) is regarded as the most widely used theoretical framework for assessing the acceptance of technologies in the literature (Legris et al., 2003). The TAM was developed by Davis (1989); it posits that users' acceptance or adoption of technological innovations can be predicted by the users' views of the perceptions related to ease of use and usefulness of the system (Davis, 1989).

The perceived ease of use describes "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, 320). Perceived usefulness describes the user's perceptions of the expected benefits derived from using a particular IS system (Davis, 1989). In this research, the dependent variable is intention to expand use. The constructs from the TAM, which were essentially technology-related factors, were integrated into the technology-organization-environment (TOE) framework. The TOE framework posits that the adoption of innovations depends on organizational, environmental as well as technological factors (Tornatzky & Fleischer, 1990). In general, the TOE model is an integrative schema that incorporates the characteristics of the technology, contingent organizational factors, and other elements from the macro-environment. Prior studies (e.g. Ifinedo, 2011a, b) that used the TOE framework to examine the antecedents of factors on e-business usage and acceptance in small firms elsewhere included such variables as top management support, organizational readiness, IS vendor support, government support, and financial resources availability.

5. Hypotheses formulation

This study' research framework highlighting factors identified as being pertinent to the intention to expand the use of e-business payment solutions among Nigerian small firms are presented in Figure 1. Previous studies (e.g. Al-Ghait et al., 2010; Gholami et al., 2010) indicated that the adoption and usage of online services and e-payment systems can be impacted by such factors as gender, age, education, organizational size, and revenues. To that end, these variables were incorporated into the research model to increase insight.

With regard to IS acceptance, Davis (1989) demonstrated that perceived ease of use and perceive usefulness have positive effects on use or adoption of an IS. Evidence from the

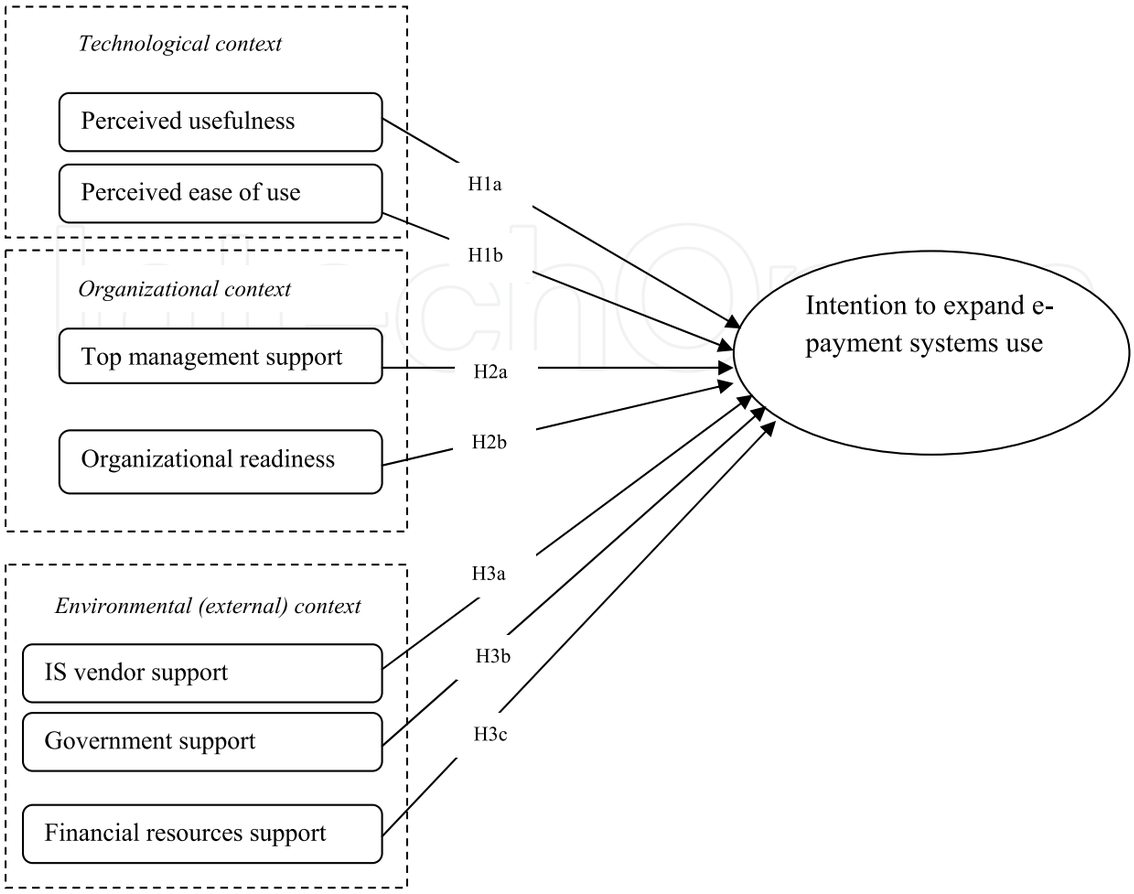


Fig. 1. The research model

extant literature has supported the importance of the TAM's constructs in determining IS use (Legris et al., 2003). Lee (2009) showed that perceived usefulness and perceived ease of use have positive impacts on the adoption of internet banking with the variable of attitude toward use serving as a mediator. Others including Reid and Levy (2008) and Ayo et al. (2011) found that perceived usefulness and perceived ease of use influence customers' acceptance of e-banking, which is a larger concept that includes EPS. Ramaya et al. (2005) found both perceived usefulness and perceived ease of use to be significant determinants of intention to use an online bill payment system for graduate students. Ozkan's (2010) study of the factors facilitating the adoption of e-payment systems indicated that perceived advantage (perceived usefulness, in this instance) was a significant variable in the relationship. Thus, it is predicted that:

H1a: Perceived usefulness positively influences the intention to expand e-business payment systems use in Nigerian small firms

H1b: Perceived ease of use positively influences the intention to expand e-business payment systems use in Nigerian small firms

Thong et al. (1996, p253) describe top management support as the "active engagement of top management with IS implementation." Prior research has shown that top management

support and commitment generally boded well for the acceptance of technological innovations in small businesses (Iacovou et al., 1995; Premkumar & Roberts, 1999; Al-Qirim, 2007). This is because top managers act as change agents in the adoption process of technological innovations (Igbaria et al., 1997). When top managers understand the importance of technological innovations such as e-payment systems in their organizations, they tend to play a crucial role in influencing other organizational members to accept the use of such innovations. Chatterjee et al. (2002) found lack of top management support to be a hindrance to e-business adoption in organizations. In the context of SSA, Eze (2007) and Cloete et al. (2002) found support for the relevance of this factor in the successful adoption of e-business in the region. Thus, it is predicted that:

H2a: Top management support positively influences the intention to expand e-business payment systems use in Nigerian small firms

Organizational readiness is defined by Iacovou et al. (1995, 467) as "the availability of the needed organizational resources for adoption." Organizational readiness of businesses is critically important for IS adoption and it encompasses not only physical assets, but also human knowledge of IS (Mehrtens et al., 2001; Zhu et al., 2003). Chircu and Kauffman (2000) revealed that lack of computer literacy among owners of small businesses and a lack of knowledge of the benefits of IS use is an inhibitor to IS adoption in small firms. In SSA, Saffu et al. (2007) indicated that e-business thrives better where operators of business have an understanding of e-business concepts in their setups. Thus, it is predicted that:

H2b: Organizational readiness positively influences the intention to expand e-business payment systems use in Nigerian small firms

In this study, IS vendor support refers to the support for implementing and using technological innovations that a business obtains from external sources of technical expertise (Attewell, 1992; Thong et al., 1996; Premkumar & Roberts, 1999). According to Attewell (1992), business organizations tend to postpone technology adoption due to lack of expertise and knowledge. Importantly, the availability of external IS support can help businesses to bridge knowledge gaps related to IS innovation acquisition. I argue that small firms in Nigeria that have access to needed external sources of expertise related to the use of e-payment systems will be better served in their quests to expand their use of such innovations compared to counterparts lacking such assistance. It is worth noting that low levels of ICT skills is among the major barriers of e-business expansion in SSA (Ifinedo, 2005a, b; 2008); thus, the availability of IS vendor support can mitigate this shortcoming. Researchers elsewhere have found this factor to be an important factor in the adoption and usage of e-business and related technologies (Doolin et al., 2003; Scupola, 2003). Thus, it is predicted that:

H3a: IS vendor support positively influences the intention to expand e-business payment systems use in Nigerian small firms

Here, government support refers to the assistance provided by the authority to encourage the spread of IS innovations such as e-business payment systems in its context. Some studies suggested that government support is required for the spread of technological innovations such as e-business within a country (Teo et al., 1997; Chau & Jim, 2002) while others (e.g. Ifinedo, 2011a) did not find support such a relationship. The government in Nigeria through the CBN has realized the pertinence of e-payment solutions in the country's economic

growth. To that end, when concerted efforts are directed toward promoting such innovations among small firms in the country, it is to be expected that the use of such systems will be positively encouraged in the country. Thus, it is predicted that:

H3b: Government support positively influences the intention to expand e-business payment systems use in Nigerian small firms

The apparent lack or financial resources in small firms and their resistance to invest in complex IS have been reported as major barriers in some studies (Tuunainen, 1998; Chapman et al., 2000; Love et al., 2001). Research has also shown that small firms do encounter difficulties with respect to obtaining finance, and this unfavorable situation often set back their efforts to adopt needed IS innovations (Tuunainen, 1998; Chapman et al., 2000; Love et al., 2001). Tan and Wu (2003) and Pearson and Grandon (2004) showed that financial matters are vitally important to owners and managers and such issues often influence the adoption of IS in small businesses. However, others (e.g. Dongen et al., 2002; Simpson & Doherty, 2004) found that a lack of financial resources was not a sufficient factor to set back e-business adoption in small firms. Perhaps due to economic reality, Nigerian small firms lack required financial resources to enable them procure and adopt useful and relevant business tools (Ifinedo, 2005b; 2008). To that end, where such resources exist, it is to be expected that the intention to expand the use of e-payment solution will be relatively higher. Thus, it is predicted that:

H3c. Financial resources support positively influences the intention to expand e-business payment systems use in Nigerian small firms

6. Research methodology

Data collection

This work is a part of a major research conducted by the researcher and his associates in Nigeria. This study's data was collected in Lagos and environs; the city is the largest commercial city in Nigeria (and in SSA) (Eze, 2007). I believe that the search of small firms with knowledge of e-business payments will be easier in such a place. The targeted population comes from the list of business contacts held by a local university in the city. This approach is akin to judgmental sampling (Iacobucci & Churchill, 2009) because the researcher selects respondents based on his/her knowledge of the suitability of the participants. Other prior studies in Nigeria have used a similar method for data collection (Anandarajan et al., 2002; Ayo et al., 2008, Ifinedo, 2008). The identified participants, who were mainly middle-level managers, came from a wide range of industries. As the unit of analysis of this study was at the level of the organization, the inclusion of such organizational informants would ensure that useful insights are provided.

To ensure content validity, six (6) knowledgeable individuals, including business managers and IS faculty members participated in a pilot test with an initial draft of the questionnaire. The comments and suggestions received from these individuals helped to improve the quality of the final questionnaire. The research effort identified 300 possible respondents from the contacts list and each received a copy of the questionnaire in person. Each package contained a cover letter explaining the purpose of the study. Participation in the study was voluntary. Respondents were assured that their individual responses would be treated as

confidential. The participants were also motivated with a promise of receiving a summary of the results.

The majority of the measures used in the study were taken from previously validated sources (Davis, 1989; Iacovou et al., 1995; Igbaria et al. 1997; Thong et al., 1996; Premkumar & Roberts, 1999; Ifinedo, 20011a, b). Please see the Appendix for a list of the measures used in the study. The measurement items were anchored on a 7-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7) in which participants were asked to indicate an appropriate response. Table 1 highlights the construct's sources and their descriptive statistics. The composite reliability scores for each factor exceeded the recommended 0.7 threshold to indicate a reasonably high reliability of the research measures and constructs (Nunnally, 1978).

Construct	Items	Mean	SD	Factor loading	Composite reliability	Sources
Perceived usefulness						Davis (1989)
	PUSS1	4.60	1.39	0.771		
	PUSS2	4.30	1.69	0.837		
	PUSS3	4.11	1.76	0.771	0.874	
	PUSS4	4.30	1.67	0.840		
	PUSS5	2.95	2.37	0.579		
Perceived ease of use						Davis (1989)
	PEOU1	4.35	1.45	0.776		
	PEOU1	4.44	1.28	0.771		
	PEOU1	4.46	1.23	0.836	0.884	
	PEOU1	4.42	1.39	0.861		
Top management support						Thong et al. (1996) ; Igbaria et al. (1997)
	MGT1	4.63	1.43	0.867		
	MGT2	4.61	1.46	0.826	0.903	
	MGT3	4.52	1.47	0.884		
	MGT4	4.30	1.60	0.767		
Organizational readiness	ORG1	4.80	1.18	0.807		Iacovou et al. (1995)
	ORG2	4.82	1.21	0.815		

	ORG3	4.46	1.53	0.743	0.870	
	ORG4	4.55	1.52	0.694		
Government support						Ifinedo (2011a)
	GOVT1	3.57	1.91	0.676		
	GOVT2	3.34	1.92	0.796		
	GOVT3	3.34	1.72	0.910	0.892	
	GOVT4	3.42	1.89	0.770		
IS vendor support	ISV1	3.94	1.66	0.865		Premkumar & Roberts (1999)
	ISV2	3.47	1.71	0.856	0.918	
	ISV3	4.02	1.38	0.942		
Financial resources support						Ifinedo (2011a)
	FINS1	3.57	1.79	0.837	0.839	
	FINS2	3.66	1.81	0.863		
Intention to use e-payment						Davis (1989)
	INT1	5.60	2.25	0.958		
	INT2	5.56	2.24	0.935	0.974	
	INT3	5.61	2.26	0.951		
	INT4	5.81	1.93	0.956		

SD = Standard deviations

Table 1. The constructs' descriptive statistics and their reliability values

7. Survey results

One hundred and fifty six (156) responses were received from the administered 300 questionnaires, which gives an effective response rate of 52% for this study. However, 22 responses were not considered valid for this research; these included responses from the public sector, those with a high percentage of missing entries, and those indicating non-adoption of any e-payment solutions in their business operations. The data showed that 64%, 75%, 43%, and 40% of the respondents indicated using credit cards, automated teller

machines (ATMs), electronic cash (E-cash), and electronic funds transfer (EFT), respectively in their organizational business transactions.

Table 2 summarizes the profile of respondents. The participants' average work experience was 3.94 years (s.d. = 1.22). The respondents included 64% middle-level managers and 26% top managers. Seventy-two percent (74%) of the sample had at least a university degree. The average age of the respondents was 32.3 years. The employees in the sampled firms ranged from 1 to 500 employees with a median of 6 employees. The other profiles of the responding businesses are highlighted in Table 3.

Profile	Frequency	Percentage (%)
Gender		
Male	94	70.1
Female	40	29.9
Age		
Less than 20 years	2	1.5
21-30	37	27.6
31-40	67	50.0
41-50	23	17.2
51-60	5	3.7
Education		
Primary education	1	0.7
Secondary education	4	3.0
College/Bachelor's education	74	55.2
Post-graduate degree	53	39.6
Other	2	1.5
Job title		
CEO	9	6.7
Director (e.g. Operations, Sales)	11	8.2
Manager (Admin, IT, Project, etc.)	74	55.2
Engineer	8	6
Assistant/Office Executive	18	13.4
Other (e.g. Surveyor, Lab	12	9
Technician)	2	1.5
Missing		

Table 2. The profile of the respondents

The problem of common method bias exists for studies that used single informants such as this one. I followed the procedural remedies for controlling common method biases. First, to increase the study's validity, I used clear and concise questions in the questionnaire. Second, to reduce apprehension, I assured the respondents that their data will be treated with anonymity. Third, I used a statistical procedure i.e. the Harmon one-factor test (Podsakoff et al., 2003) to assess if such biases were a problem in the collected data. The test results showed that several factors with eigenvalues greater than one are present in the collected data. Accordingly, the most covariance explained by one factor in the data is 26.5% to indicate that common method variance is not a problem for the data.

Profile	Frequency	Percentage (%)
Business type		
Adverting, Marketing, Sales	10	7.5
Manufacturing	18	13.4
Retail, Wholesale	19	14.2
Financial services	35	26.1
Pharmaceutical/Chemical	6	4.5
Information Technology (IT) and Telecoms	23	17.2
Oil and Gas Services	8	6.0
Hospitality	6	4.5
Other (e.g. Aviation, Surveying)	7	5.2
Missing data	2	1.5
Annual sales revenues		
Less 500,000 naira	3	2.2
500,001 - 1.0 million naira	9	6.7
1.1 - 5.0 million naira	7	5.2
5.1 - 10.0 million naira	8	6.0
10.1 - 20.0 million naira	15	11.2
20.1 - 50.0 million naira	81	60.4
Missing data	11	8.2
Workforce		
1-25 employees	27	20.1
26-50 employees	12	9.0
51 - 75employees	6	4.5
76 -100 employees	8	6.0
Above 100 employees	78	58.2
Missing data	3	2.2

Note: The exchange rate of the naira per US dollar is 150.48 in year 2009.
Table3. Profile of the participating businesses

In testing for nonresponse bias, I divided the collected data into two parts i.e. early and late respondents. The mean values of selected items for early and late respondents in a survey were then compared (Iacobucci & Churchill, 2009). Chi-square ($\chi 2$) test was used to compare the sampled firm size, annual revenue, and industry type. The results of the Chi-square tests (significant at $p < 0.05$) showed there were no significant differences in the chosen characteristics.

8. Data analysis

I used the Partial Least Squares (PLS) technique for data analysis. The PLS approach is suitable for validating predictive models (Chin, 1998), and the approach permits information about the measurement and structural models to be presented. The specific tool used in this study was SmartPLS 2.0 that was developed by Ringle et al. (2005).

9. The measurement model

The measurement model assesses the reliability, convergent, and discriminant validities of the data. The internal consistency of the data measures is assured when the reliability of each measure in a scale is above 0.7 (Nunnally, 1978). Composite reality scores of 0.7 and above is also considered adequate to assure reliability (Nunnally, 1978; Hair et al., 1998). The convergent validity of the data is assured when each item has an item loading that is greater than 0.5 on its associated construct. Fornell and Larcker (1981) recommend that the following conditions be met for adequate discriminant validity to be assured: a) the square root of the average variance extracted (AVE) of all constructs should be larger than all other cross-correlations; b) the value of the AVE should be of the threshold value 0.50. Table 4 shows that the AVE ranged from 0.59 to 0.90, and in no case was any correlation between the constructs greater than the squared root of AVE (the principal diagonal element). Thus, the measurement items used for this study demonstrate good psychometric properties.

	AVE	1	2	3	4	5	6	7	8
1:Perceived usefulness	0.59	**0.768**							
2:Perceived ease of use	0.66	0.514	**0.812**						
3:Top management support	0.70	0.656	0.513	**0.837**					
4:Organizational readiness	0.63	0.567	0.392	0.598	**0.793**				
5:Government support	0.67	0.521	0.454	0.353	0.367	**0.819**			
6: IS vendor support	0.79	0.356	0.650	0.346	0.416	0.514	**0.889**		
7:Financial resources support	0.72	0.289	0.486	0.377	0.352	0.521	0.650	**0.849**	
8:Intention to expand e-payment system use	0.90	0.288	0.173	0.317	0.298	0.200	0.292	0.197	**0.949**

Note: a) The bold fonts in the leading diagonals are the square root of AVEs, b) off-diagonal elements are correlations among constructs
Table 4. Inter-construct correlations, AVE, and the square root of AVE

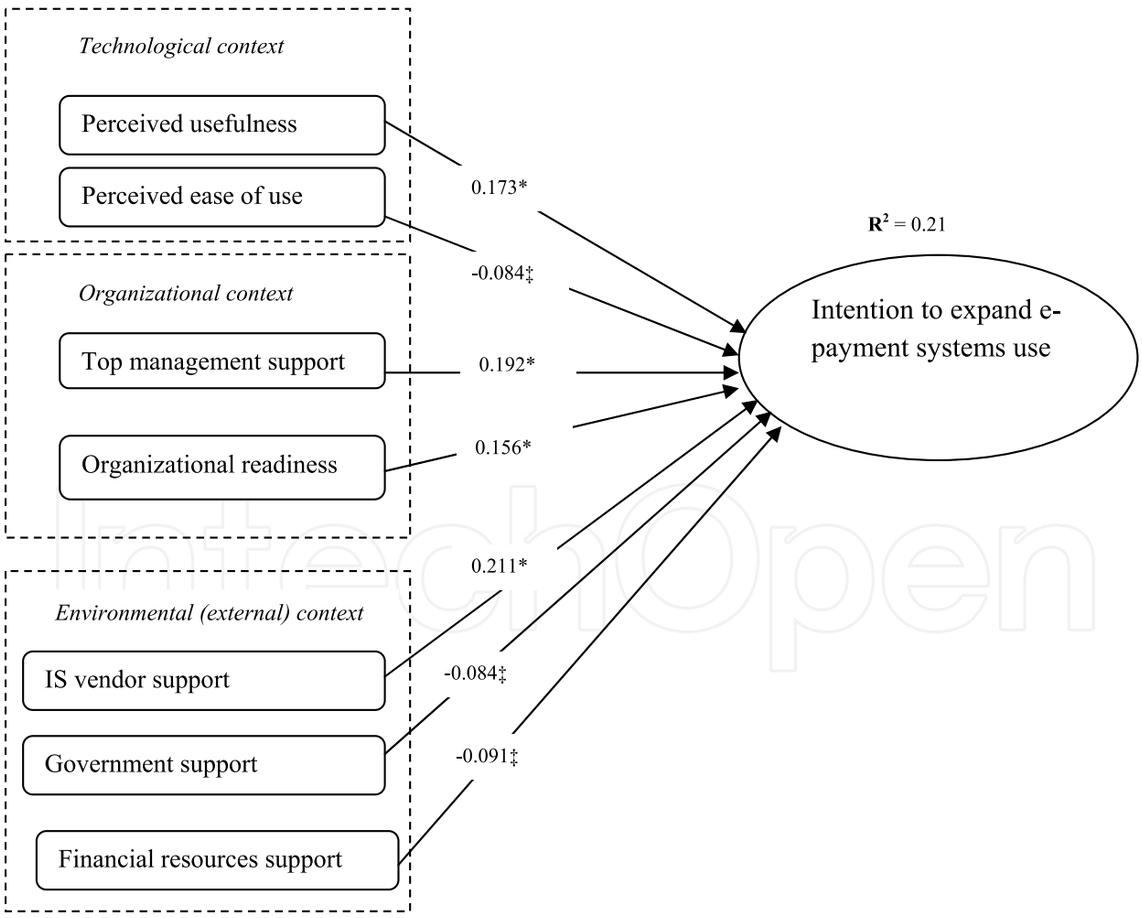
10. The structural model

The structural model in PLS presents information related to the path coefficients (β) and the squared R (R^2). The strength of the relationship is indicated by the β and the R^2 shows the percentage of variance in the model to give an indication of its predictive power. The path significance levels (t-values) are estimated by the bootstrapping method. The SmartPLS 2.0 results for the βs and the R^2 are shown in Figure 2.

Four out of the seven hypotheses were supported; hypothesis (H1a) was confirmed to show that perceived usefulness of e-business payment systems positively influences the intention

to expand e-business payment systems use in Nigerian small firms. Hypothesis (H1b) was unsupported by the data. Hypothesis (H2a) was supported to affirm the view that top management support is crucially important in facilitating the intention to expand the use of e-business payment systems in Nigerian small firms. The data did not provide support for hypothesis (H2b). The result also demonstrated significant, statistical support for hypothesis (H3a) which predicted that IS vendor support would positively influence the intention to expand e-business payment systems use in Nigerian small firms.

Contrary to the hypotheses formulated in H3b and H3c, government support and financial resources support did not positively influence the intention to expand e-business payment systems use in Nigerian small firms. It is worth noting that the nature of the relationships appeared to be negative. None of the control variables used in this study had any significant impact of the dependent variable to assure me that such factors had little impact in my research conceptualization. Together, all the variables explained 21% of the variance in the dependent construct. The foregoing information suggests that the proposed research conceptualization possess adequate predictive power to permit an understanding with regard to the intention to expand e-business payment systems use in Nigerian small firms. Further discussion on the results is presented in the next section.



* Denotes significance at the $p < 0.05$ level, ‡ = Not significant

Fig. 2. The SmartPLS results for the research model

11. Discussions

The findings of this research confirmed a number of factors that positively influence the intention to expand e-business payment systems use in Nigerian small firms. The hypotheses formulated to determine the importance of perceived usefulness, top management support, organizational readiness, and IS vendor support in the research model were all confirmed, the other factors were not supported by the collected data. While perceived usefulness was found to be an important factor for the firms sampled in this study, perceived ease of use did not have any meaningful influence on small firm's intention to expand e-business payment systems use. The finding with respect to the variable of perceived usefulness is consistent with the results of other studies (e.g. Ramaya et al. 2005; Ozkan, 2010; Ayo et al., 2011). It is surprising to notice that perceived ease of use is not a significant factor in the research model. This result might be suggesting that small firms in Nigeria may be finding the use of such systems to be complex.

Consistent with past studies (e.g. Thong et al., 1996; Ozkan, 2010; Ifinedo, 2011a), both top management support and organizational readiness were found to have positive influences on the intention to expand e-business payment systems use in Nigerian small firms. These results indicated that small firms in Nigeria that have higher levels of top management support and the required organizational readiness in their setups are more inclined to expand their use intentions of e-business payment solutions. The results of this study confirmed that the availability of IS vendor support augured well for intention to expand the use of e-payment in Nigerian small firms; this positive relationship is consistent with the results of similar prior research (Thong et al., 1996; Premkumar & Roberts, 1999; Ifinedo, 2011a). The variables of government support and financial resource support did not positively influence the intention to expand e-business payment systems use in Nigerian small firms. Two plausible reasons are offered for the lack of support these foregoing hypotheses: a) the result might have been impacted by extraneous factors i.e. the respondents may believe that government agencies and financial organizations in Nigeria are not providing needed assistance to small firms wishing to adopt such innovations, b) it is also possible that measuring items used to operationalize these items may be limited in scope or lack adequate validity.

12. Implication for research and practice

This research has implications for future study. First, the use of the TOE framework in this current study has engendered deeper insight at the micro level regarding possible factors that positively influence the intention to expand e-business payment systems use in Nigerian small firms. This chapter expanded the body of knowledge in the area with its perspectives and insights; others may be enticed to continue research in the area. Second, the dependent variable, i.e. intention to expand e-business payment systems use that was used departs from prior research efforts that tend to operationalize such constructs with a single item of Use (Usage) or Intention to use. The utilization of such singular items may obfuscate reality and has, in fact, been criticized for limiting insight (Legris et al., 2003). Third, this research generally affirms findings and observations regarding the factors influencing the adoption of e-business in small organizations both in SSA and elsewhere. It also underscores factors or issues that may have little or no relevance to such discourse.

The attention being paid to issues in a developing part of the world i.e. Nigeria in the SSA could positively serve theory consolidation and development, which goes to enrich the literature. As well, policy makers, industry leaders, and business executives wishing to understand some of the reasons why the use of e-payment has been sluggish in Nigeria may benefit from the information provided in this study. Given that the respondents from small firms in Nigeria indicated that the perceived usefulness of e-payment, their organizational readiness, top management and IS vendor support can positively influence their intention to increase their use of e-business payment solutions, I recommends that such factors should be continually monitored when decision related to the continued use of such systems are being proposed in adopting firms. Similarly, more concerted efforts need to be undertaken to sensitize business owners and their employees or increase awareness of such innovations. The need for e-business payment systems coaching and training is deserving of attention (Simpson & Doherty, 2004).

In light of the fact that government support was not found to positively influence the intention to expand e-business payment systems use in Nigerian firms, it is reasonable to suggest that by increasing assistance in this area, many more small firms in the country may be encouraged to increase their use of such e-payment technologies. To that end, relevant government agencies and other local sources of expertise in Nigeria can be marshaled towards providing needed awareness and coaching programs aimed at encouraging positive outcomes in e-payment use in small firms in the country. With such sorts support on board, it is to be expected that more and more small firms in Nigeria will see they need to expand their use of such e-payment platforms. Small loans from local financial houses should be actively promoted to enable small firms needing such to procure needed e-payment infrastructure.

13. Limitations and avenues for future research

This exploratory research has its share of limitations. First, despite the fact that common method bias was not seen to pose a problem for this study's data, it is still possible that respondents may be subject to a halo effect. I accept that asking only one respondent to present a view on behalf of their organization may be problematic. Second, the results from this endeavor should not be generalized for the whole of Nigeria as only a small part of the country was included in this study. Data from other parts of the country may be different from what is reported and discussed herein. Third, the research included the views of both owners and employees in the sampled organizations. It is possible that the views of both cohorts may differ somewhat on certain issues presented in the questionnaire. I did not control for this possibility of such happening in this study.

Future research can build upon this current research's conceptualization. Whenever possible, some of the aforementioned limitations could be addressed in subsequent studies. The amount variance explained by the factors considered in this study, which is 21% implies that other relevant factors and issues can be incorporated into the research model to increase its predictive power. The effects of security, perceived trust, and perceived risks could be investigated. This research effort can be replicated in other SSA countries to reify or debunk claims presented in this study. The data used in this study is cross-sectional in nature; future efforts could consider using longitudinal data to facilitate more insight. Industry specific studies could also be commissioned to further enhance insight. Future research using meta-analytic approaches could examine the enablers and inhibitors of e-business payment

systems use intentions in the country (and region). Knowledge from such efforts stands to consolidate theories related to the acceptance of e-business payment systems use in SSA.

14. Conclusion

This chapter focused on the factors positively influencing the intention to expand the use e-business payment systems in Nigerian firms. A research model fusing the TAM into the TOE was used to guide the discourse. Factors including perceived usefulness, perceived ease of use, organizational readiness, top management support, IS vendor support, and government support were considered in this study. This current study's findings lend credence to results obtained elsewhere and it provides support for the relevance of the TAM and TOE as useful models for examining the use intentions of technological innovations. Perceived usefulness, organizational readiness, top management support, and IS vendor support were all found to positively influence the intention to expand the use of e-business payment systems in Nigerian firms. Accordingly, more progress can be sustained and assured when adequate attention is accorded the foregoing significant factors vis-à-vis facilitating an increase in the use behaviors of e-payment systems in Nigerian small firms. The relevant literature and practitioners stand to benefit from the information provided in this study, and it is hoped that future research will build upon the findings reported herein as efforts are made to understand technology diffusion in developing countries such as Nigeria.

15. Appendix: The measurement items and scales

Perceived Usefulness

- Using e-payment solutions would make work easier for our employees and managers
- Using e-payment solutions would increase employees' and managers' productivity
- Using e-payment solutions would increase the performance of our employees.
- Our employees and managers would find e-payment solutions useful in their jobs
- Using e-payment solutions would provide information for strategic decisions

Perceived ease of use

- The use of e-payment solutions would be clear and understandable for us
- Learning to use e-payment solutions would be easy for our employees
- Overall, e-payment solutions would be easy to use in our organization
- It would be easy to become skilful at using e-payment solutions in our firm

Top management support

- Management is interested in the use of e-payment solutions in our operations
- Management is supportive of the use of e-payment solutions in our operations
- Our business has a clear vision regarding the use of e-payment solutions
- Management clearly communicates the need for e-payment solutions usage in the firm

Organizational readiness

- Our firm knows how information technology (IT) can be used to support our operations
- Our firm has a good understanding of how e-payment solutions can be used in our business

- We have the necessary technical, managerial and other skills to implement e-payment solutions in our firm
- Our business values and norms would not prevent us from adopting e-payment solutions in our operations

Government support

- We believe the government is championing the cause of e-business in the country
- We believe the government is investing in the necessary infrastructure to support the emergence of e-business payment solutions.
- Government policies and guidelines towards e-business (e-payment solutions) are commendable
- We are of the view that the government adequately supports e-business and related concepts in the country

IS vendor support

- IS vendors in the region are actively promoting e-business systems and other technologies by providing incentives for adoption
- IS vendors are encouraging our business to adopt e-business systems by providing us with free training sessions
- We can easily obtain support from local IS vendors as we implement e-business systems

Financial resource support

- Supporting institutions in Nigeria e.g. banks provide financial assistance for small firms wishing to adopt e-business and e-payment solutions
- Our company could easily procure financial support from financial institutions to enable us implement e-payment/e-business solutions in our business

Intention to expand e-business e-payment systems

- My company will use e-payment solutions on a regular basis, in the future
- My company intends to expand its use of e-payment systems rather than discontinue their use
- My company's intensions are to use a lot more e-payment solutions in the future
- There is likelihood that my company will expand its use of e-payment options in the future rather than use alternative means

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17. References

Adesina, A.A., Ayo, C.K. & Ekong, U.O. (2008). An empirical investigation of the level of users' acceptance of e-banking in Nigeria: based on technology acceptance model. In *Proc. of 1st Int'l Conf. on Mobile e-Services.* LAUTECH, Ogbomosho, Nigeria.

Agbada, A.O. (2008). E-banking in Nigeria, problems and prospects from customer's perspective. *CBN Bullion Magazine,* 32(4), October-December 2008 edition.

Akpan, N., (2008). E-payment solutions: are banks getting it right?" Business day Newspaper, Wednesday February 27th 2008.

Al-Ghait, W., Sanzogni, and Sandh, K. (2010). Factors influencing the adoption and usage of online services in Saudi Arabia, The Electronic Journal on Information Systems in Developing Countries, 40(1), 1-32.

Al-Qirim, N. (2007). The adoption of ecommerce communications and applications technologies in small businesses in New Zealand. Electronic Commerce Research and Applications, 6(4), 462-473.

Amor, D. (1999). The e-business (r)evolution. Upper Saddle River, N.Y.: Prentice Hall.

Anandarajan, M., Igbaria, M., & Anakwe, U. (2002). IT acceptance in a less-developed country: a motivational factor perspective. International Journal of Information Management, 22(1), 47-65.

Andam, Z. R. (2003). E-commerce and e-business, e-primer for the information economy, Society and Polity Series, UNDP-APDIP and e-ASEAN Task Force.

Attewell, P. (1992). Technology diffusion and organizational learning: The case of business computing. *Organization Science, 3(1*), 1-19.

Ayo, C. K. (2006). The Prospects of E-commerce in Nigeria. Journal of Internet Banking and Commerce, 11(3), 20–35.

Ayo, C.K., Adebiyi, A., Fatudimu, I.T., & Ekong, U.O. (2008). A framework for e-commerce implementation: Nigeria a case study. *Journal of Internet Banking and Commerce*, *13(2),* 1-12.

Ayo, C. K., Adewoye, J. O, & Oni, A. A. (2011). The state of e-banking implementation in Nigeria: A post-consolidation review, Journal of Emerging Trends in Economics and Management Sciences, 1(1), 37-45.

Babalakin & Co. (2002). Cybernetic banking (changing the banking landscape in Nigeria) Central Bank of Nigeria Website. Retrieved from http://www. cenbank.org/Paymentsystem/evolution.asp.

Chapman, P., James-Moore, J., Szczygiel, M., & Thompson, D. (2000). Building Internet Capabilities in SME's. *Logistics Information Management*, 13(6), 353-361.

Chau, Y. K., & Jim, C.F. (2002). Adoption of electronic data interchange in small and medium enterprises. *Journal of Global Information Management*, 10(4), 61-85.

Chatterjee, D., Grewal, R., & Sambamurthy, V. (2002). Shaping up for e-commerce: Institutional enablers of the organizational assimilation of web technologies. *MIS Quarterly*, 26(2), 65-89.

Chiemeke, S.C., Evwiekpaefe, O., & Chete ,F. (2006). The Adoption of Internet Banking in Nigeria: An Empirical Investigation, *Journal of Internet Banking and Commerce*, 11(3), [Online] Available: http://www.arraydev.com/commerce/jibc/.

Chin, W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), vii-xvi.

Chircu, A.M., & Kauffman, R.J. (2000). Limits to value in electronic commerce-related IT investments. Journal of Management Information Systems, 17(2), 59–80.

Cloete, E., Courtney, S. & Fintz, J. (2002). Small business acceptance and adoption of e-commerce in the Western-Cape province of South-Africa, Electronic Journal of Information Systems in Developing Countries 10(4), 1–13.

CIA WorldFact (2011). Nigeria reports. Retrieved April 3, 2011, from https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13(3),* 318-339.

Doolin, D., Mcleod, L., McQueen, B., & Watton, M. (2003). Internet strategies for establishing retailers: four New Zealand case studies. *Journal of Information Technology Cases and Applications*, 5(4), 3–19.

Dongen, J., Maitland, C., & Sadowski, B. (2002). Strategic use of the Internet by small- and medium-sized companies: An exploratory study. *Information Economics and Policy*, 14(1), 75-93.

Economist Intelligence Unit. (2007). Government E-Payments Adoption Ranking: A briefing paper from the Economist Intelligence Unit. Retrieved December 16, 2008 from http://corporate.visa.com/md/dl/documents/downloads/GEAR_Paper.pdf

Emordi, C.N.O., (2007). Recent development in Nigeria's Payment System, *CBN Briefs*, Series No. 2006-2007/03, pp. 23-30.

EIU (Economic Intelligence Unit) (2011). Global intelligence and analysis. Retrieved March 27, 2011, from http://www.eiu.com/public/.

Eze, U.C. (2008). E-business deployment in Nigerian financial firms: An empirical analysis of key factors. *International Journal of E-Business Research*, *4(2),* 29-47.

Ezeoha A. E. (2005). Regulating internet banking in Nigeria: problems and challenges – Part 1." Retrieved October 13, 2010 from http://www.arraydev.com/commerce/jibc/.

Farhoomand, A.F., Tuunainen, V.K., & Yee, L.W. (2000). Barriers to global electronic commerce: A cross-country study of Hong Kong and Finland, Journal of Organizational Computing and Electronic Commerce, 10(1), 23-48.

Fornell, C., & Larcker, D.F. (1981). Evaluating structural equations models with unobservable variables and measurement error. *Journal of Marketing Research*, 8(1), 39-50.

Gholami R., Ogun A., Koh E., & Lim J. (2010). Factors affecting e-payment adoption in Nigeria. *Journal of Electronic Commerce in Organizations*, *8(4),* 51-67.

Grau. J. (2008). *Canada B2C e-Commerce: A work in progress*. Availabel at < http://www.emarketer.com/Reports/All/Emarketer_2000547.aspx >. Accessed 20 July 2010.

Hair, J.F. Jr., Anderson, R.E., Thatham, R.L., & Black, W.C. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice-Hall International, Inc.

Iacobucci, D., & Churchill, G.A. (2009). *Marketing research: Methodological foundations (with Qualtrics Card)* (10th. ed). Cincinnati, OH: South-Western College Publishing.

Iacovou, C.L., Benbasat, I., & Dexter, A.S. (1995). Electronic data interchange and small organizations: adoption and impact of technology. *MIS Quarterly*, 19(4), 465–485.

Ifinedo, P. (2005a). Measuring Africa's e-readiness in the global networked economy: a nine-country data analysis. *The International Journal of Education and Development using Information and Communication Technology, 1(1)*, 53-71.

Ifinedo, P. (2005b). E-government initiative in a developing country: strategies and implementation in Nigeria, *In Proceedings of 6th. World Congress on Electronic Business*, Hamilton, Ontario, Canada, pp. 1-11.

Ifinedo, P. (2008). Internet commerce and SMEs in Sub-Saharan Africa: Perspectives from Nigeria, *Conference on Information Technology and Economic Development (CITED2008),* Calabar, Nigeria, July 25 - 27, 2008, pp. 1- 8.

Ifinedo, P. (2011a). An empirical analysis of factors influencing Internet/e-business technologies adoption by SMEs in Canada, International Journal of Information Technology & Decision Making, 10(4), 731–766.

Ifinedo, P. (2011b). Internet/e-business technologies acceptance in Canada's SMEs: An exploratory investigation, Internet Research, 21(3), 255-281.

Igbaria, M., Zinatelli, N., Cragg, P., & Cavaye, A.L.M., 1997. Personal computing acceptance factors in small firms: A structural equation model. MIS Quarterly, 21(3), 279-305.

Internetworldstats (2011). Country reports. Retrieved April 3, 2011, from http://www.internetworldstats.com/

ITU International Telecommunication Union (2011). Weekly Update. Retrieved April 13, 2011, from http://www.itu.int/en/pages/default.aspx.

Laukkanen, T. & Pasanen, M. (2008). Mobile banking innovators and early adopters: How they differ from other online users? Journal of Financial Services Marketing, 13(2), 86-94.

Lee, M. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. Electronic Commerce Research and Applications, 8(3), 130-141.

Legris, P. Ingham, J., & Collerette, P. (2003). Why do people use information technology?: A critical review of the technology acceptance model. *Information and Management*, 40(3), 191-204, 2003

Leadpile (2010) 2006, United States E-commerce Sales to Top 120 Billion, says Leadpile. Available at < http://www.leadpile.com/press/2006-10-24_press1.html >. Access 27 July, 2010.

Love, P.E.D., & Irani, Z. (2004). An exploratory study of information technology evaluation and benefits management practices of SMEs in the construction industry. *Information & Management*, 42, 227–242.

Mbarika, V.W., Okoli, C., Byrd, T.A., & Datta, P. (2005). The neglected continent of IS research: a research agenda for Sub-Saharan Africa. *Journal of the Association for Information Systems*, *6(5),* 130-170.

Mehrtens, J., Cragg, P.B., & Mills, A.M. (2001). A Model of Internet adoption by SMEs. *Information and Management*, 39(3), 165-176.

Molla, A., & Licker, P.S. (2005). ecommerce adoption in developing countries: a model and instrument. *Information &* Management, 42, 877–899.

Nunnaly, J.C. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.

Ramayah, T., Ling, C-Y, Suki, N. M., and Ibrahim, A. (2005).Determinants of intention to use an online bill payment system among MBA Students, E-Business, 9, 80-91.

Reid, M. & Levy, Y. 2008. Integrating trust and computer self-efficacy with TAM: An empirical assessment of customers' acceptance of banking information systems (BIS) in Jamaica, Journal of Internet Banking and Commerce, 12 (3), 1-8.

Ozkan S. (2010). Facilitating the adoption of e-payment systems: theoretical constructs and empirical analysis, Journal of enterprise information management, 23(3), 305-325.Pearson, M. & Grandon, E. (2004). E-commerce adoption: perceptions of

managers/owners of small and medium sized firms in Chile. *Communications of the Association for Information Systems*, 13, 81-102.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88(5), 879-903.

Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small businesses. Omega: International Journal of Management Science, 27(4), 467–484.

Ringle, C.M., Wende, S., & Will, A. (2005). SmartPLS 2.0 (M3) beta, Hamburg: http://www.smartpls.de.

Saffu, K., J.H. Walker, & Hinson R. (2007). An empirical study of perceived strategic value and adoption constructs: the Ghanaian case, Management Decision, 45(7), 1083 – 1101.

Scupola, A. (2003). The adoption of Internet commerce by SMEs in the South of Italy: An environmental, technological and organizational perspective. Journal of Global Information Technology Management, 6(1), 52-71.

Simpson, M., & Doherty, A. J. (2004). E-commerce adoption support and advice for UK SMEs. Journal of Small Business and Enterprise Development, 11(3), 315-328

Tan, J., Tyler, K., & Manica, A. (2007). Business-to-business adoption of ecommerce in China. *Information and Management*, *44,* 332-351.

Tan, Z., & Wu, Q. (2003). Globalization and e-commerce I: Factors affecting e-commerce diffusion in China. *Communications of the Association for Information Systems*, 10(2), 25-35.

Teo, H.H., Tan, B.C.Y., & Wei, K.K. (1997). Organizational transformation using electronic data interchange: the case of TradeNet in Singapore. *Journal of Management Information Systems*, *13(4),* 139-166.

Thong, J.Y.L., Yap, C.S., & Raman, K.S. (1996). Top management support, external expertise and information systems implementation in small business. Information Systems Research, 7(2), 248-267.

Tornatzky, L.G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington, MA: Lexington Books.

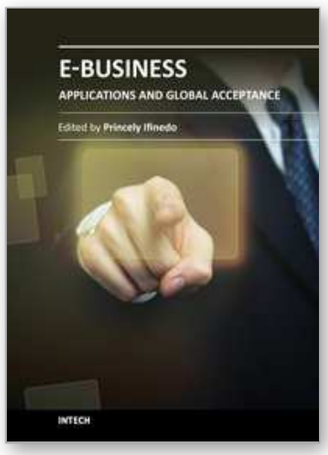
Turban, E., King, D., & Lang, J. (2010). *Introduction to electronic commerce.* New York, NY: Prentice Hall, NY.

Tuunainen, V.K. (1998). Opportunities of effective integration of EDI for small businesses in the automotive industry. *Information & Management*, 34, 361-375.

Vassiliou, C. (2004). Electronic payment systems and marketing: A literature review. Available at: http://mis.uoa.gr/Portals/57ad7180-c5e7-49f5-b282-c6475cdb7ee7/Temp/e-Payment%20Systems_Full%20Review.pdf

WEF (World Economic Forum) (2011). Global competitiveness 2009-2010. Retrieved April 2, 2011 from http://www.weforum.org/reports.

Zhu, K., Kraemer, K., & Xu, S. (2003). Electronic business adoption by European firms: A cross-country assessment of the facilitators and inhibitors. European Journal of Information Systems, 12(4), 251-268.



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E-Business - Applications and Global Acceptance is a collection of well-written papers that employ empirical and theoretical/conceptual approaches to highlight insights on the global acceptance of electronic business (e-business) and other useful applications and conceptualizations in the area. As our knowledge of the e-business phenomenon continues to mature and evolve, it is pertinent that new insights and information be made available. This edited book is published against such a backdrop. In essence, this book seeks to provide value to both e-business researchers and practitioners, with information sourced from differing regions of the world. The diversity in the sources of insights is welcome and this edited book covers a wide range of interesting, topical, and timely issues dealing with the acceptance of e-business applications or systems, business processes integration and management, the extension of e-business concepts to not-for-profit (nonprofit) organizations, and the construction of a service innovation model. Without a doubt, this book will be a comprehensive reference point for knowledge seekers who want to understand emerging conceptualizations, processes, and behaviors in the e-business domain.

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中国上海市延安西路65号上海国际贵都大饭店办公楼405单元
Phone: +86-21-62489820
Fax: +86-21-62489821

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