# Key Issues in e-Business Development among SMEs: Opportunities and Challenges

***Chinonye Okafor**

**Ph.D.**

****Edwin O. Agbaike**

*Phone no +2348035393240, email:emmanueloutreach @yahoo.com
Department of Business Studies,
College of Development Studies
ovenant University, Ota, gun State, Nigeria

**phone no+23480233381900, Email edwinagbaike@yahoo.com
Chris-ED Ventures, Yaba, Lagos

**Abstract**

The rapid advancement of Information and Communication Technology (ICT) in the world economy has enhanced e-business development. The continued exponential growth of the Internet, coupled with its growing ubiquity, especially globally, has provided different companies with a means to finally realize the economic benefits of electronic business in terms of reduced transaction costs, increased geographical scope and enhanced customer support (Fife and Pereira, 2002). The demonstrated benefits of internet applications that transfer many of a company's internal business functions from paper-based to electronic-based transactions, enjoyed by companies such as eTransact, Zinox, Alpha Computers and others, have encouraged small and medium enterprises to adopt these applications. A broad perspective with regard to electronic business is taken in this study, is that electronic business will be viewed within the context of small and medium enterprises in terms of performing any business process electronically using a wide range of technologies such as electronic data interchange (EDI), e- mail, the Internet, the World Wide Web, (www) Intranets and Extranets. This study therefore focused on the evaluation of the challenges and opportunities involved in e-business development in SMEs.

**Key Words:** e-business, Development, SMEs, Opportunity and Challenges.

**Introduction**

In view of the opportunities presented by globalization and information technological development, the role of SMEs Seems more likely to continue to increase than to diminish (Wilson, 2000). Most developed and developing countries' economies depend on the performance of SMEs

which contribute immensely through job provision, revenue generation, poverty alleviation and wealth creation to the GDP of these countries (Campbell and MacDonald, 1999). Reporting on this, Steel and Webster (1991); Pratt (1999); Scargill (2000); Abrahams (2000); Chellam (2001); Fife and Pereira (2002) Udechukwu (2004) opined that SMEs comprise 74% of all businesses in USA; 95% in United Kingdom; 99% in Scotland; 99% in European, 62% in Singapore, 94% in Nigeria, and 92% in Ghana. The peculiarity of the characteristics of SMEs such as personal ownership and control, limited number of employees, lean management and others made this more possible. To cope with these characteristics means that the owner-managers should be referred as being multi-skilled and frequently, singling handedly, managing a range of disciplines as diverse as marketing, accounting and manufacturing (Wilson, 2000). SMEs have recently witnessed an influx of many people because they deem it easier to start and grow their businesses in this sub-sector.

However, despite the growth in SMEs and their contributions to economic development, they are often severely constrained by environmental regulations, foreign and local competition, and lack of access to finance, information, skilled labour, technology, time and other resources to devote to some functional areas in their organization. As a result, small businesses have not been matched by a similar rush to provide training support to its operators in terms of e-business development and information technology (IT) training. This has resulted in positive response of many SMEs to e-business. For many years, small businesses have played an important role in the developing countries economies, particularly since the decline of large industries such as steel, textiles, financial institutions, and insurance companies. Within the context of smaller companies, with electronic business, size and location can become irrelevant in which small companies can, in theory, have access to the same global market places as large companies. However, for smaller companies, electronic business provides particular challenges if they are to survive and flourish in the face of competition from larger companies who have more resources, technical expertise and capital (Stansfield and Grant, 2003).

## Literature Review/Conceptual Framework

### SMEs: Definitional Problem

The concept of SMEs is dynamic and relative (Ogunleye, 2004). Several

institutions and agencies defined SMEs differently with parameters such as employee's size, asset base, turnover, financial strength, working capital and size of the business ( Olorunshola, 2004). Against expectation from most literatures on the lack of a comprehensive definition on structure of industries particularly small scale industries, Otokiti (1987) presented a differential definition between cottage and tiny, small industry and high small industries by comparing the position of South Korea, Hong Kong, Taiwan, some Arab countries on small business concept. He also x-ray OECD and UNCTAD concept of SMEs to develop a more acceptable definition for developing economics. He defined SMEs as organizations whose work force is a minimum of ten persons and N1million as investment in capital expenditure excluding cost of land. Another definition of SMEs that worth adopting is that of National Council on Industry (NCI) which defines SMEs as enterprises with a labour size of 10-300 workers or a total cost of not more than N200 million, including working capital but excluding cost of land.

**Process Involved in e-business Development in SMEs**

The e-business development in SMEs involves the process of transfer of customers' specifications from traditionally business channels and manually controlled files in the office to paperless electronic design. This may include receiving preliminary designs or specifications from customers and drawing up the blueprints for the machine by the firm's IT engineers based on the received specifications. The blue-print is then transferred electronically to the fabrication section where the individual components are designed and before being transferred to the firm's e-tool. Depending on the sophistication of the electronic machine involved, the process of setting up e-business in SMEs usually involves different phases. Using the e-business model developed by Toral (2006), the phases include the following steps; planning, implementation and execution phases. The planning phase involves three stages; awareness creation, development of the e-business plan and planning for the project implementation. The awareness creation stage involves passing information across to all the stakeholders through (conducting of ) meetings, workshops and seminars to make them understand the need for the adoption of e-business . E-business development plan stage may involve these steps; defining of the strategy to be used: developing of the e-business plan and initiating the project. The implementation of the project may

involve activities such as refine e-business plan; identification of the tasks involved and estimation of the resources required. The execution of the implementation stage also includes five steps. These steps are: procurement of materials; installation of the electronic design; development of the e-business website; monitoring of the performance of the new electronic tools and techniques then finalization of the project if the performance of the tools and techniques is accepted by owner manager. The operation involves the following activities: promotion of e-business; content management; maintenance of service and customer relationship management. Once the machine installed, it requires monitoring, maintenance and up-grading to meet up with competition in the industry.

**Importance of e-business Development to SMEs**

SMEs play a vital role in the economy of both developed and developing countries such as Scotland, UK, USA, Canada, Japan, China, Malaysia, France, New Zealand, Columbia, India, Korea, Nigeria, Ghana to mention but few. As a result of the wide usage of internet by businesses in the international market, SMEs operators' ability to successfully adopt and utilize internet and electronic device is of prime importance in ensuring their stability and future survival (Stansfield and Grant, 2003). There was universal agreement that the primary use of the Web-site was to communicate information to and from suppliers and potential customers. The result of Wilson (2000) study supported this.

The report shows that 98% of the respondents agreed that opening of web site for their business has helped in enhancing their communication with their suppliers and customers. E-business also has the tendency of promoting the efficiencies and image of small businesses. Wilson's (2000) report also showed that 91% of the respondents was of the opinion that having a web site would raise their business profile. This is also in line with Adam and Deans' (1999) report whose respondents expected an elevated profile as a result of their Web-site. Some of the respondents were excited that even simply registering their site with one or more search engines would help in boosting their morale. When asked to indicate how important they believed e-business would be to the future of their organization, almost 80% of them affirmed that Web-site was of highly importance to their business.

**Key Issues Influencing the Adoption of Internet in SMEs.**

Considering the key issues that influence the use of internet by SMEs, a number of authors such as Chau (2001); Mehrtens et al. *(*2001) identified three major factors, namely perceived benefits, organizational readiness and external pressure as the key issues that influence the use of internet by SMEs operators. In relation to perceived benefits, the factors include: increased sales, improved communications with customers; vendors and employees; faster responses to customers' inquiries and easier order tracking (Baldwin *et al.,* 2000). Ivis (2001) suggested four basic factors; information and education; costs and benefits; e-business resources and security as key issues that can influence the adoption of internet in SMEs. Information and education will help the owner manager to ensure that proper awareness is created among the internet users in the firms as regards to the reason(s) for the need of it in the organization. Commitment of the management to the e-business adoption is to enhance effective utilization of resources to the system. Considering the costs and benefits issue, Stansfield and Grant (2003) opined that there is need to evaluate the return on investment (ROI), total expenditure involved and how to access the funds before taking the decision of adopting e-business. E-business must be proven as essential to the competitiveness of the firm involved before its adoption. Another important issue to consider is the resources required for the operation of the e-business in terms of availability of skilled workers, training requirement for technological development and implementation of the new system. The issue of the security of the system (legal and regulatory matters) should also be considered. The issue of infrastructure is another fundamental enabler to SME e-business adoption. Access to quality and high-speed infrastructure is a key issue to driving the use and further development of e-business products and services in the organization (Ivis, 2001).

**Opportunities of e-business to SMEs**

To change organizational processes from traditional to electronic approach SMEs need to explore the opportunities offered by electronic business (Baldwin et al., 2000). Involvement with ICT is a great opportunity to SMEs as it will help the operators as regards to strategy business development. Developing a clear, explicit, and careful planning strategy is regarded as being an important step towards managers fully appreciating the potential of Internet and maximizing the benefits that it may provide (Lymer, 1999). Internet serves as a tool of convenience and an opportunity to grow or market products / services in SMEs. In support of this, Stansfield and Grant (2003) opined that "at

the lowest levels of adoption, small businesses can use the internet to surf and carry out basic market research". According to them, market research related activities remain among the most popular uses of the internet and majority of SMEs are supplying product information and using the medium as a communication device (particularly e- mail) to build up business connections. This seems to be in line with Wilson (2000) which reported that 90% to 95% of all Internet capable organizations use the technology to make contact with their customers. Efficiency in communication and connectivity is the sole of business and this can only be possible through effective operation of information technology in an organization. Other market related activities that internet can be of important use to SMEs are searching for on-line suppliers; buying goods or services on-line; selling of goods and services on-line; bidding for contracts on the Internet; having a separate on- line subsidiary; trading online; advertising; cataloguing etc. Apart from marketing of products and service activities, information communication technology act as sales development tool for transacting online businesses and enhancing customer relationship. With the help of Internet, SMEs numerous customers' files can be instantaneously transferred for easy management and control of specifications. Aside from these, e-business (internet, web-site, e-mail, etc.) can help SMEs to reduce transaction costs, increased geographical scope and enhanced customer support and relationship.

**Challenges of e-business to SMEs**

Electronic business provides particular challenges to SMEs. The main barriers to developing an e-business strategy include;

(i) Lack of Time on the part of SMEs Operators: Due to the uncertainty of the returns of e-business, most SMEs operators are very unwilling to commit staff, money, time and other resources to technological development (Wilson, 2000).

(ii) Lack of Knowledge on how to get started on the e-business Path: According to the result of Stansfield and Grant (2003), the strongest factor to emerge in terms of barriers to e-business take-up in SMEs appears to be a lack of knowledge about the Internet and electronic business. Other factors that could be linked to this are; lack of advice and support, lack of staff with IT skills, the fear of losing staff after spending much money in training them in IT for somewhere else.

(iii) Security of Information Transferred: Information management is vital in ensuring efficiency in data management. Certain information that relate to important aspect of an organization need to be secured so as to

avoid exposing the firm to stiff competition. This might require extra cost on the part of the firm (Mehrtens et al., 2001).

(iv) The Wrong Attitude of the Owner Managers towards ICT: Many owner managers lack trust on the electronics system. Some SMEs operators lack adequate knowledge of internet and web-site even when they are web connected do not take the application of the system serious. As Levy and Powell, (2002); Chong, (2001) rightly assert the more successful companies that embrace IT and Internet technologies are; the more the ones where the owners play the role of the innovation champion of the IT adoption as less important.

(v) Lack of Trust on ICT System. Some owner managers do not feel that Internet technologies provide a significant improvement in service, compared with traditional methods (Marshall et al., 2000; European Best Practice Guidelines (EBPG), 2002). This was the case of some of the respondents in Wilson's (2000) survey. According to the report, most of the respondents are approaching the Web-site with the thought of "We'll put it up there and see what it catches".

(vi) Insufficient Fund for the Adoption of e-business: In terms of financial resources, Mehrtens et al. (2001) were of the opinion that availability of fund has a major influence on the SMEs decision to adopt Internet technologies. EBPG (2002) also emphasized that due to limited resources (financial, time, management personnel); SMEs cannot afford to experiment with these important technologies. Compliance with the re-engineering and adoption of e-business involves acquisition of both computer hardware and software which usually increase the annual expenditure of firms (EBPG, 2002). This is problematic for SMEs that do not have the resources or IT staff to restructure their business processes.

(vii) High Cost of Investment in Training and Development of Labour Force: Installation of e-business system requires a lot of fund for the training and development of the worker force that will be in charge of the re-engineering process. As Fife and Pereira (2002) rightly observed, firms invest heavily in the training and development of its workforce which consists of a unique combination of electrical, mechanical and computer science engineers who work with technicians and apprentices. Many SMEs operators may not be able to afford this.

**Future Research Direction**

Evidence has shown that SMEs especially in developed countries have benefited from the adoption of the application of e-business with some challenges. However, looking at the cost-benefits analysis of the

adoption of e-business, it is clear that the competitive capability of SMEs would be enhanced if they would be able to maximize several opportunities (handling of customers, suppliers, general business transactions, and foreign market) available to them through the application of e-business. Certain areas in the adoption and application of e-business remain beyond the scope of this chapter. These may include the management and upgrading of installed electronic system required for effective operation of e-business. Further studies in this area will help to find out the implications of management and maintenance of such system. Also certain conditions may lead to SMEs change of its ownership and control to either micro or large enterprise. Consequently, certain issues may need to be reconsidered for restructuring and reorganization of the business operations of SMEs. This may involve the upgrading or restructuring of the existing e-business system. This requires further research to find out the implications of such transaction to the business. The size of the firm and the age of the key personnel in the firm are also important variables to consider while adopting e-business in SMEs. This may also need further research to find out its implications to SMEs.

**Conclusion**

E-business involves re-engineering of core business processes and transfer of internal business functions from paper-based to electronic based transactions. A lot of benefits such as reduced transaction costs, improved customer relationship and enhanced competitive advantage in both local and foreign market result from e-business to SMEs. To harness these benefits (both for business and national economy); the government should encourage business practitioners and stakeholders to adopt e-business through re-engineering and re-structuring of their business core processes. This can be achieved by formulating polices and programmes that will help in subsidizing the costs involved in launching and maintaining e-business applications. SMEs owners should also endeveaour to invest money in training and development of their core workforce. This may involve a unique combination of electrical, mechanical, and computer engineers who work with technicians and apprentices so as to boost the competitive advantage of the business. Finally, to cope with the competitive nature of the international market, SMEs must ensure that the internal processes (including training and development issues) of the business are relatively efficient and cost effective.

**References**


Abrahams, G. (2000, Dec.14). Learning with Industry. *The Herald*, p.26.

Adam, S. and Deans, K.R. (1999), "WebQUAL: An E-Commerce Audit," Refereed paper, *AUSWEB99 Conference Proceedings*, Ballina, Southern Cross University, Australia, (17-20 April):pp.253-262, <http://ausweb.scu.edu.au/aw99/papers/adam>

Baldwin, A., Lymer, A. & Johnson, R. (2000). Business impacts of the Internet for small and medium-sized enterprises. In *E-commerce and V-Business: Business Models for Global Success* (Eds: B. Hunt and S. Barnes) Oxford: Butterworth-Heinemann. 103-120.

Chellam, R. (2001, May 10). Charting local E-commerce Progress. *Singapore Business Times*, p. 8.

EBPG (2002). e-Europe go Digital: Benchmarking National and Regional e-business Policies for SMEs. Final Report of the e-Business Policy Group. 28 June.

Fife E. and Pereira, F. (2002*). Small- and Medium-Size Enterprises and the E-economy: Challenges and Prospects.* Center for Telecommunications Management, DCC 217, Marshall School of Business, University of Southern California, University Park, Los Angeles, California

Ivis, M. (2001). Analysis of Barriers Impending e-business Adoption among Canadian SMEs. Paper Presented to a Sub-team of the Canadian e-business Opportunities Roundtable e-business Acceleration Team.

Lymer, A. (1999). UK Business and the Information Superhighway: The Impact of the Internet on SMEs. *ACCA Occasional Research,* Paper 23.

Levy, M. and Powell, P. (2002). SME Internet Adoption: Towards a Transporter Model, 15th Bled Electronic Commerce Conference, e-Reality: Constructing the e-Economy, Bled, Slovenia, June 17 – 19, 1-15.

Mehrtens, J., Cragg, P.B. & Mills, A.M. (2001). A model of Internet adoption by SMEs. *Information and Management*, 39(4). 165-176.

Ogunleye, G. A. (2004).Small and Medium Scale Enterprises as Foundation for Rapid Economic Development in Nigeria. In *Small and Medium Enterprises Development and SMIEIS, Effective Implementation Strategies* (Ed.), By Ojo A. T., Lagos, Maryland Finance Company and Consultancy Service Ltd.

Olorunshola, J. A. (2004). Problems and Prospects of Small and Medium- Scale Industries in Nigeria, In *CBN Seminar On Small and Medium Industries Equity Investments Scheme*, *http/www.CBN/Org./2004/Maritime.*

Otokiti, S. O. (1987). *High Technology in Small Scale Industries: A Comparative Study of Nigeria and Industrialized Countries.* Unpublished Doctoral Dissertation, University of Delhi, New Delhi, India.

Pratt, J. (1999). Home-based Businesses: The Hidden Economy. United States Small Business Administration, Washington, DC, Aug.

Scargill, P. (2000, Dec. 7). Help for SMEs must be A Priority. *Computer Weekly*, p. 32.

Scottish Enterprise Network. (2000). E-Business benchmarking 2000: An international benchmarking Study. http://www.scottish-enterprise.com/businessdev/e-comm

Stansfield, M. and Grant, K (2003). Barriers to the Take-up of Electronic Commerce among Small-Medium Sized Enterprises. *Informal Science,* June, 1-9.

Steel, W. F. and Webster, L. M. (1991). Small Enterprises in Ghana: Response to Adjustment Industry Series Paper, No. 33, The World Bank Industry and Energy Department, Washington.

Toral, T. (2006). Guidelines for Entrepreneurship and e-business Development for Rural

Women In Entrepreneurship and e-Business Development for Women United Nations publication Thailand, ST/ESCAP/2450

Udechukwu, I. (2004). Survey of Small and Medium Scale Industries and Their Potentials in Nigeria In *CBN Seminar On Small and Medium Industries Equity Investments Scheme*, *http/www.CBN/Org./2004/Maritime.*

Williams, V. (1999). E-commerce: Small Business Ventures Online. US Small Business Administration, Washington, DC, July, p. 18.

Wilson, M. (2000). E-business and SMEs in the Otago Region of New Zealand.
Dunedin, New Zealand.