



Emerging Electronic Platforms Underpins Innovations and Competitiveness in Firms

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ABSTRACT

In the current knowledge-based era, the role of electronic platforms in boosting productivity and economic growth cannot be over-emphasized. Over the years, the operations of the Nigerian business sector were manual in nature. The advent of technology explosion however, had made the services faster and efficient. This paper therefore examines the roles of electronic platforms on service delivery in firms in Nigeria. This is with a view to making suggestions that can improve the productivity of the business sector in Nigeria. Electronic platforms have made impacts on the productivity of the bank. However, factors such as affordability of the Information Communications Technology (ICT) equipment, high installation and maintenance cost, cultural factors, capability factors, inadequate skilled manpower, network connectivity, cybercrime and response to ICT dynamism among others pose challenges to the applications of electronic platforms in firms. Electronic platforms are widely used by organizations to enhance enterprise competitiveness. This study provides an overview of the current state of affairs of the ICT adoption in private and public organizations in Nigeria. This study examines the factors that influence innovation and competitiveness in Nigeria's firms. This is done with a view to making appropriate strategic recommendations to enhance firm-level innovativeness so as to increase competitiveness in firms. This study examined the factors that influence innovation and competitiveness in the indigenous Nigeria's oil and gas servicing firms. This was done with a view to making appropriate strategic recommendations to enhance firm-level innovativeness so as to increase indigenous participation in the sub-sector. The findings of this research will provide a foundation for future research and will help policy makers in designing policies to further enhance usage and ICT adoption in firms in Nigeria. This is expected to improve productivity and competitiveness. This article discusses how electronic platforms affect innovation.

KEYWORDS :

Introduction

The service sector is fast becoming the greatest determinant of economic growth and development in developing countries. The sector today is the fastest growing sector globally increasing from 61 to 69% of global GDP between 1990 and 2005. The impact of the sector is felt more among low income countries, growing faster than the GDP within the same period (Bhattacharya, 2008). The sector accounts for two thirds of global output, 30% of global employment and 20% of global trade (Kumar, 2005). In developing economies, the sector has witnessed rapid growth in the last two decades while the contribution of manufacturing and agriculture is declining (OECD, 2008; GSS, 2013; Nazish et al., 2013). This is attributed to high income elasticity in demand, auxiliary output to manufacturing and high level of substitution of capital for labour (WTO, 1997). Globally, the sector is rapidly closing in on agriculture as the highest employer of labour (World Bank, 2010a) as more countries have identified knowledge-intensive services rather than manufacturing as the key engine of economic growth (ILO, 2005). In sub-Saharan Africa, the sector's contribution to GDP has now overtaken agriculture (Figure 2). In developing economies, the sector is increasingly becoming the highest employment of labour (OECD, 2005a), rising to about 70% of total employment (ILO, 2006). However, the impact on employment generation has been majorly under-estimated in national accounting system in developing countries, especially sub-Saharan Africa, since most of the activities occur in the service sectors are largely informal (Chanda, 2008). The rising significance of services to economic growth in developing countries is driven by the liberalization policies of government in key economic sectors with potential for growth, employment and foreign direct investment (FDI). These have been the case in India, Nigeria, Pakistan, Bangladesh, Sri Lanka, South Africa etc. While growth in India has been fuelled by knowledge-intensive and high-end sectors, UAE has been fuelled by tourism. This has resulted in reduced dependence on oil in earnings and has seen the contribution of the tourism sector increased to 14% in 2012 well above the global trend of 9% (WTTC, 2012; Government of India, 2013).

With continued globalization of the world's economy, the convergence of consumer tastes, and world-wide dispersal of industrial technology, the business sector has never been as competitive as it is today. Firms succeed when they are competitive. Nigeria's businesses must be driven by long run competitiveness. Firms thrive locally, when they can compete globally. Firms need a competitive business environment to prosper.

cepted as one of the main driving forces behind organizational competitiveness in the present day business environment. Presently, ICT has a dramatic influence on almost all areas of human activities. The adoption and utilization of Information and Communication Technology (ICT) is fundamental to the growth and sustainability of businesses. It is a requirement for local and global competitiveness. As a result of globalization, the deployment of ICT in firms has increasingly become an essential factor for business development and a platform for gaining competitive advantage, especially considering the highly competitive nature of businesses today. This therefore, makes it imperative for firms to invest in electronic platforms to meet to deal with modern challenges.

Over the years, the Nigerian business sector has undergone remarkable operational changes; from the use of manual technology to cutting-edge technologies such as computers, internet banking, point of sales (POS) among others. In the past, much time was required to consummate business transactions successfully like cheque clearing, local and international money transfers among others. This inefficiency was due to the manual approach to initiating and completing business transactions. Given the challenges associated with the use of manual approach to business transactions and other business activities, and the dynamic nature of the environment that the industry operates in the country necessitated the adoption of modern technologies, especially electronic platforms by firms. This was aimed at improving service delivery and internal operations. Consequently, the adoption of ICT by the Nigerian business sector significantly increased the efficiency of the firms and external customers' business transactions. It generated a platform where customers can transact and carry out business dealings across borders without physical interface with the firms. ICT application in form of electronic banking in the sector has also caused an unprecedented growth and transformed conventional practices in the industry. Despite the various challenges associated with the deployment and utilization of ICT in businesses, its usage has resulted in remarkable transformations of the industry. This paper therefore examines the roles of ICT on service delivery in a Nigerian firm. This is with a view to making suggestions that can improve the productivity of the business sector in Nigeria.

Innovation and Competitiveness

The term "competitiveness" is usually equated with macroeconomic issues (such as changes in exchange rates or wages) or microeconomic issues (such as an absence of entrepreneurship and excessive bureaucratic regulations on business). In popular discussions, solutions such as "depreciate the exchange rate" or "cut red tape" are often

Information and Communication Technology (ICT) has now been ac-

suggested as a panacea to augment business competitiveness. These clearly influence business competitiveness but they are insufficient to deal with the challenges of a global economy.

One of the characteristics of productive models in the most dynamic economies is, specifically, that they take innovations on board –including those of an organizational nature– concerned with production processes and distribution of goods and services that are considered traditional. This affords new competitive advantages to innovative firms in a context of the weakness of their respective sectors on the global level. It is reasonable therefore to state that competitiveness and innovation are closely related, and the configuration of a robust and efficient innovation system is a key to economic growth and improved living standards of a society.

However, for an innovation system to have the desired impact on business competitiveness it is not enough to increase the size of its most common components –scientific, technological, financing and production–, or to improve the connections between them through existing interface mechanisms (García Reche, 2010). A favourable macroeconomic and institutional environment is also required: a public education system that provides training tailored to the needs of businesses; markets for goods and services that work efficiently and encourage entrepreneurial competence; and, a labour market that facilitates quick adaptation of companies to changes in their economic environment and changes in demand. In fact, some of these elements are, in themselves, a basic premise for the development of a successful innovation system. In following this line of argument, it is important to distinguish between internationally competing commercial sectors, in which competitive analysis requires a broad understanding of the global context in which they operate, and domestic or non-commercial sectors, whose performance is closely tied to local policies that set the ground rules for competition in the markets. Among these are many of the service activities in developed countries, which account for three quarters of production and employment.

The results in terms of employment and productivity in many service sectors are largely the reflection of the initiative a company takes when faced with regulations. Regulations do not hamper the entry of new companies into the market nor facilitate the exercise of activity to those already established, they tend to increase competition and productivity and thus economic progress. Similarly, greater domestic labour flexibility, less rigid working hours or part-time job agreements are associated with higher employment and more rapid adjustments to changes in the economic situation.

Globalization has sharpened competition. The main challenge facing firms is how to take advantage of new resources and markets while dealing with intense and growing global competition. The challenge facing governments is how to design and implement supportive policies and strategies. Business and government both need to intensify their partnership to build and strengthen competitiveness. Powerful factors are driving globalization: falling trade barriers; fast-paced technological advances; declining communications and transport costs; international migration; and highly mobile investment. The changes are striking. For instance, the average tariff on manufactured imports is about 2.1% today, down from around 47% in 1947. The price of computer processing power has fallen by an average of 30% per year in real terms over the last 20 years. Since the mid-1980s, world flows of foreign direct investment have been growing at nearly 14% a year - almost twice the growth rate of world exports. The eventual outcome is an international market that appears increasingly indifferent to national borders and regulation. Globalization is irreversible and has profound implications for business and its relationship with governments in developing countries.

The brunt of the competitiveness challenge falls on the business sector. To respond effectively to the demanding global environment, firms need to develop a range of export capabilities in the areas of technology, marketing, management, human resources and finance, and continuously upgrade them over time. However, building business competitiveness - particularly for export markets - also has to involve both governments and trade support institutions in a major way. They need to support competitiveness with a coherent strategy. Translating this strategy into success depends on a close and active

partnership between business and government.

Competitive Strategies

Gaining competitive advantage is critical for organizations. Baltzan and Phillips (2010, p. 16) define competitive advantage as 'a product or service that an organization's customers value more highly than similar offerings from its competitors' (in other words, you have something useful (i.e. products, services, capabilities) that your competitors do not have). Competitive advantages are typically temporary as competitors often seek ways to duplicate the competitive advantage (Baltzan & Phillips 2010, p. 16). In order to stay ahead of competition, organizations have to continually develop new competitive advantages. Michael Porter's Five Forces Model is a useful tool to assist in assessing the competition in an industry and determining the relative attractiveness of that industry. Porter states that in order to do an industry analysis a firm must analyze five competitive forces (Baltzan & Phillips 2010, p. 17):

- Rivalry of competitors within its industry
- Threat of new entrants into an industry and its markets
- Threat posed by substitute products which might capture market share
- Bargaining power of customers
- Bargaining power of suppliers.

To survive and succeed, a business must develop and implement strategies to effectively counter the above five competitive forces. O'Brien and Marakas (2011, p. 49) suggest that organizations can follow one of five basic competitive strategies, which are based on Porter's three generic strategies of broad cost leadership, broad differentiation, and focused strategy. The five competitive strategies are: cost leadership, differentiation, innovation, growth, and alliance. Meanwhile, electronic platforms could be a critical enabler of these five competitive strategies.

Defining E-services And Electronic Platforms

E-services are Internet-based applications that fulfill service needs by seamlessly bringing together distributed, specialized resources to enable complex, (often real-time) transactions. Examples of e-services include supply chain management, customer relationship management (CRM), accounting, order processing, resource management, and other services that are electronically delivered through the Internet.

E-services typically involve a series of parallel-executed transactions performed by e-service providers as they locate, negotiate, and handle requests from each other. As such, these services are self contained and modular in ways that facilitate their brokering and auctioning. Further, some of these services can be unbundled and partly farmed out, thereby permitting real-time switching by clients (owing to lower switching and negligible sunk costs) to optimize efficiencies on the fly.

The Reasons for Electronic Platforms

Whatever a firm's e-business strategy is, the need for software tools and technologies as well as services to support core business processes such as supply chain, coordination, inventory management, purchasing, call centre management, distribution, work flow management, and order fulfillment functions is clear. E-services attempt to offer these capabilities with flexibility, adaptability, and cost-effectiveness. They also support linkages across multitudinous stakeholders (suppliers, vendors, retailers) within the firm's business web without the traditional lock-ins that are associated with large investments in specialized, custom developed information systems.

The non-monolithic and modular nature of services facilitates alliance formation, transactional switching, and delivery of adaptable, flexible, and scalable, end-to-end technology architectures for client businesses. Such services will fuel the rise of new types of brokers and mediators who will serve as anchors for locating, aggregating, and mediating various types of transactions. Such aggregation could be around specific industries (insurance, banking, IS, travel), specific customer types (medical specialists, attorneys, writers, contractors, purchasing managers), specific issues (order taking), specific processes (procurement, stock brokering), or specific transaction chains (new product development, end-to-end marketing, supply chain management).

Competitive Strategies & Roles of Electronic Platforms

Cost Leadership: Organizations can use information systems to fundamentally shift the cost of doing business (Booth, Roberts & Sikes 2011) or reduce the costs of business processes or/and to lower the costs of customers or suppliers, i.e., using online business to consumer & business to business models, e-procurement systems to reduce operating costs.

Differentiation: Organizations can use information systems to develop differentiated features or/and to reduce competitors' differentiation advantages, i.e., using online live chatting systems and social networks to better understand and serve customers; using technology to create intermediaries to offer value-added service and improve customers' stickiness to your web site/business (Booth, Roberts, and Sikes 2011); applying advanced and established measures for online operations to offline practices (i.e., more accurate and systematic ways of measuring efficiency and effectiveness of advertising) (Manyika 2009)

Innovation: Organizations can use information systems to identify and create (or assist in creating) new products and services or/and to develop new/niche markets or/and to radically change business processes via automation (i.e., using digital modeling and simulation of product design to reduce the time and cost to the market (Chui & Fleming 2011). They also can work on new initiatives of establishing pure online businesses/operations. At the same time, the Internet and telecommunications networks provide better capabilities and opportunities for innovation. "Combinational innovation" and Open innovation are two good examples. There are a large number of component parts on the networks that are very expensive or extremely different before the establishment of the networks, and organizations could combine or recombine components/parts on the networks to create new innovations (Manyika 2009). Meanwhile everyone is connected via personal computers, laptops and other mobile devices through cabled Internet or wireless networks or mobile networks, there are plenty of opportunities to co-create with customers, external partners and internal people.

Growth (including mergers and acquisitions): Organizations can use information systems to expand domestic and international operations or/and to diversify and integrate into other products and services, i.e., establishing global intranet and global operation platform; establishing omni-channel strategy to gain growth (omni-channel strategy looks at leveraging advantages of both online (or digital) and offline (or non-digital) channels) (Rigby 2011).

Strategic Alliance: Organizations can use information systems to create and enhance relations with partners via applications, such as developing virtual organizations and inter-organizational information systems.

Apart from these five basic strategies, companies can also adopt other competitive strategies facilitated by information systems to shape their competitive advantage. Some examples include (O'Brien & Marakas 2011, p. 50–52; Chui & Fleming 2011; The Authors' Own Knowledge) are:

- Locking in customers or suppliers by enhancing relations and building valuable new relationships via customer/partner relationship management systems/ applications (i.e., providing a bank's customers with multiple touch points via telephones, Internet, fax machines, videos, mobile devices, ATMs, branches, the bank's agents).
- Building switching costs via extranets and proprietary software applications (i.e., Jumia's user-friendly and useful B2C website and cheki.com, a B2B platform) so that a firm's customers or suppliers are reluctant to pay the costs in time, money, effort, and bear the inconvenience of switching to a company's competitors.
- Raising barriers to entry through improving operations or/and optimizing/flattening organizational structure by increasing the amount or the complexity of the technology required (i.e., Google's search engine and P & G's digitization strategy/efforts-P & G is working on digitizing almost every aspect of its operation to make it the world's most technologically enabled firm).

Value Chain

Another important concept and tool that can help a business identify competitive advantage and opportunities for strategic use of information systems is Porter's value chain model. The value chain approach views an organization as a chain, or series, of processes, and it classifies an organization's activities into two categories: primary activities (i.e., inbound logistics, operations, sales & marketing, customer service, outbound logistics) and secondary/support activities (i.e., administration, human resources, technology, procurement) (O'Brien & Marakas 2011, p. 56; Laudon & Laudon 2012, p. 135). The value chain helps an organization determine the 'value' of its business processes for its customers.

The model highlights specific activities in the business where competitive strategies can be best applied and where information systems are most likely to have a strategic impact. By creating/adding value and thus creating competitive advantages, information systems could contribute to each part of an organization's value chain and extended value chain (including interactions/ties with external partners and strategic alliances). By leveraging on the Internet technologies, organizations could also create a value web (Laudon & Laudon 2012, p. 137) or a hub structure, both of them look at improving the efficiency and the effectiveness of value chain and supply chain by digitally connecting customers, suppliers, partners; by reducing the information gaps/errors along the chain (especially demand and supply); and by bettering communication, cooperation and collaboration. 2012, p. 137)

Business Eco-systems Competition & Cooperation

In today's digital era, firms need to have a more dynamic view of the boundaries among firms, customers, and suppliers, with both competition and cooperation occurring with members of the industry set (more than one industry) (Laudon & Laudon 2012, p. 140). For example, car, plane, bus and train are in the same industry set of transportation. Another example is the way that traditional universities are now competing with online learning and other training and development firms. Business eco-systems refer to "loosely coupled but independent network of suppliers, distributors, partners and strategic alliances (Laudon & Laudon 2012, p. 139). An excellent example of business eco-systems is the mobile Internet platform; industries such as mobile device manufacturers, software vendors, online services firms, Internet services providers are working together. Meanwhile in order to stay ahead of the competition, organizations need to actively establish their business ecosystems. For example, looking at the competition between Apple and Samsung, it can be said that Samsung is still very much a hardware player while Apple has been developing its ecosystem and venturing into areas of hardware, software, service, content and customer support in recent years (Wagstaff 2012)

In order to succeed in today's highly competitive market, firms also should practice cooperation and competition, since not all strategic alliances are formed with suppliers or customers. The combination of cooperation and competition is a strategy whereby companies cooperate and compete at the same time with their competitors, complementors (i.e. hardware and software businesses), customers, suppliers (Pearlson & Saunders 2004, p. 52). The best possible outcome for a business can be achieved by optimally combining competition and cooperation. A good example is cheki.com which is the auto industry's e-marketplace and is backed up by competitors of Toyota, Hyundai and others. Benefits of cheki.com include speed in decision-making, reduced supply chain costs and greater responsiveness in serving customers.

Innovation Strategy

Open innovation strategy

Open innovation emphasizes an organization's efforts of engaging and collaborating with external sources and its partners in its innovation process (Lichtenthaler, Hoegl & Muethel 2011). The telecommunications networks and Internet technologies have made the open innovation more appealing to organizations. Open innovation strategy has been adopted by many most innovative companies in the world. One of the biggest barriers to promote open innovation in the organization is to do with employees' attitudes of not-invented here and not-sold-here, some strategies to deal with such attitudinal tendencies include (Lichtenthaler, Hoegl & Muethel 2011):

- Clearly communicating open innovation strategy across the organization, especially the benefits of opening up the innovation process to outside expertise.
- Demonstrated top management support: senior executives have to be champions and role models of open innovation strategy and simply providing lip services is not going to work.
- Establishing incentive/reward systems: need to reduce the traditional emphasis on internal-only innovation process and develop both monetary and non-monetary reward mechanism (i.e., granting open innovation award, providing opportunities to work in the partner organization for some time (especially in a different location/country) for open innovation practice.
- Fostering pro-open innovation environment by working on organizational culture and structure.

One of the excellent/prominent examples or leaders of successfully implementing open innovation strategy is Mozilla Corporation, which has developed an open-source and free web browser: Firefox (currently at its 14.0.1 version and accounts for more than 24% of web browsers market) (Wikipedia 2012). It has extensively relied on external people (a broader group of volunteers) outside the firm for creative ideas, development of products, and decision making (in fact the number of outside contributors is much larger than that of internal people).

In addition, managing risks of open innovation is another critical issue. One typical risk is intellectual property (IP). Organizations need to clearly understand potential IP risks and the investments/costs associated with identified risks, and could take measures such as establishing IP sharing agreement or/and rewards/risks sharing arrangement to deal with IP issues (Alexy & Reitzig 2012; Bughin, Chui & Johnson 2008). Updating & maintaining open source code and providing technical support to users are also needed to be looked at (Pearlson & Saunders 2010, p. 340).

Making Use of Electronic Platforms

The difficult processes involved in building business competitiveness in developing countries need special attention. Innovation in applying information and communications technologies (ICTs) to trade - is an undisputed driver of competitiveness. Developing countries, however, tend not to produce ICTs but to use imported technology, obtained from sources such as foreign direct investment and licensing, and from equipment and skilled manpower supplied by technical assistance programmes. Within developing countries, the business sector is the main actor in accumulating technological and other export capabilities, for example, in marketing, know-how, financial skills, human resources and managerial expertise. This occurs when firms invest consciously to convert "bought-in" technologies and knowledge into productive use. New technologies and innovative uses of them can only be built up through experience and investment in training, information search and research and development.

Systematically building business competitiveness is linked to export success in developing countries. The efficiency with which firms or sectors improve their export capabilities, including through the use of ICTs, can change the basis for comparative advantage of the whole country. The examples of Mauritian garment firms, Chilean wineries, Indian software companies, Chinese consumer goods firms and makers of electronics in the Republic of Korea demonstrate this. Some business models currently in use or being experimented with are listed below.

E-shop: This is Web marketing of a company or a shop. In first instance this is done to promote the company and its goods or services. Increasingly added is the possibility to order and possibly to pay, often combined with traditional marketing channels. Benefits sought for the company are increased demand, a low-cost route to global presence, and cost-reduction of promotion and sales. Benefits for the customers can be lower prices compared to the traditional offer, wider choice, better information, and convenience of selecting, buying and delivery, including 24-hour availability. Where repeat visits to the e-shop are done, one-to-one marketing can increase those benefits for both seller and buyer. Seller revenues are from reduced cost, increased sales, and possibly advertising. Most commercial Web sites are business-to-consumer electronic shops e.g. Jumia.com.

E-procurement: This is electronic tendering and procurement of goods and services. Large companies or public authorities implement some form of e-procurement on the Web (an example is Japan Airlines at www.jal.co.jp/). Benefits sought are to have a wider choice of suppliers which is expected to lead to lower cost, better quality, improved delivery, reduced cost of procurement (e.g. tendering specs are downloaded by suppliers rather than mailed by post). Electronic negotiation and contracting and possibly collaborative work in specification can further enhance time- and cost saving and convenience. For suppliers the benefits are in more tendering opportunities, possibly on a global scale, lower cost of submitting a tender, and possibly tendering in parts which may be better suited for smaller enterprises, or collaborative tendering (if the e-procurement site supports forms of collaboration). The main source of income is reduction of cost (automated tender processing, more cost-effective offers).

E-auction: Electronic auctions (on the Internet) offer an electronic implementation of the bidding mechanism also known from traditional auctions. This can be accompanied by multimedia presentation of the goods. Usually they are not restricted to this single function. They may also offer integration of the bidding process with contracting, payments and delivery. The sources of income for the auction provider are in selling the technology platform, in transaction fees, and in advertising. Benefits for suppliers and buyers are increased efficiency and time-savings, no need for physical transport until the deal has been established, global sourcing. Because of the lower cost it becomes feasible to also offer for sale small quantities of low value, e.g. surplus goods. Sources of income for suppliers are in reduced surplus stock, better utilization of production capacity, lower sales overheads. Sources of income for buyers are in reduced purchasing overhead cost and reduced cost of goods or services purchased. Examples of electronic auctions are the ESPRIT project Infomar (for ESPRIT and ACTS projects see www.ispo.cec.be/ecommerce/ecomproj.htm) and FastParts (www.fastparts.com).

E-mall: An electronic mall, in its basic form, consists of a collection of e-shops, usually enhanced by a common umbrella, for example of a well-known brand. It might be enriched by a common - guaranteed - payment method. An example is Electronic Mall Bodensee (www.emb.ch), giving entry to individual e-shops.

When they specialize on a certain market segment such malls become more of an industry marketplace, like IndustryNet (www.industry.net/), which can add value by virtual community features (FAQ, discussion forums, closed user groups) The e-mall operator may not have an interest in an individual business that is being hosted. Instead the operator may seek benefits in enhanced sales of the supporting technologies (e.g. IBM with World Avenue). Alternatively benefits are sought in services (e.g. Barclays with BarclaySquare), or in advertising space and/or brand reinforcement or in collective benefits for the e-shops that are hosted such as increased traffic, with the expectation that visiting one shop on the e-mall will lead to visits to 'neighbouring' shops. Benefits for the customer (real or hoped for) are the benefits for each individual e-shop with additional convenience of easy access to other e-shops and ease of use through a common user interface. When a brand name is used to host the e-mall, this should lead to more trust, and therefore increased readiness to buy. Benefits for the e-mall members (the e-shops) are lower cost and complexity to be on the Web, with sophisticated hosting facilities such as electronic payments, and additional traffic generated from other e-shops on the mall, or from the attraction of the hosting brand. Revenues are from membership fee (which can include a contribution to software/hardware and set-up cost as well as a service fee), advertising, and possibly a fee on transactions (if the mall provider processes payments). The commercial viability of the e-mall model has been questioned in its current implementation and in the current state-of-the-market. IBM World Avenue, for example, has folded. One of the reasons may be that the 'neighbour' concept does not translate into physical distance in cyberspace, where each location is only one click away. Therefore, not much additional convenience in finding shops is delivered. Furthermore, the sophisticated user (i.e. the majority of those on the Web today) is able to handle a variety of seller-buyer user interfaces and therefore may be less attached to a uniform user interface. On the other hand, there are also indications that an increasing number of companies wish to outsource their Web-operations, which may increase the opportunity for e-malls or 3rd party

marketplaces. Possibly this reflects the shift from early adopters to mass-market use of the Internet amongst businesses.

Third-Party Marketplace

This is an emerging model that is suitable in case companies wish to leave the Web marketing to a 3rd party (possibly as an add-on to their other channels). They all have in common that they offer at least a user interface to the suppliers' product catalogues. Several additional features like branding, payment; logistics, ordering, and ultimately the full scale of secure transactions are added to 3rd party marketplaces. An example for business-to-consumers is to provide a common marketing around a special one-off event profiled by well-known brand names, such as the recent e-Christmas experiment. ISPs may be interested in this model for business-to-business, using their Web builder expertise. However, it may equally appeal to banks or other value chain service providers. Revenues can be generated on the basis of one-off membership fee, service fees, transaction fee, or percentage on transaction value. Examples of 3rd party marketplace providers are Citius (as described by Jellasi and Lai 1996), TradeZone (<http://tradezone.onyx.net>), and to some extent FedEx VirtualOrder (www.fedex.com).

Virtual Communities

The ultimate value of virtual communities is coming from the members (customers or partners), who add their information onto a basic environment provided by the virtual community company. The membership fees as well as advertising generate revenues. A virtual community can also be an important add-on to other marketing operations in order to build customer loyalty and receive customer feedback, (see Hagel and Armstrong 1997). Virtual communities are already abundant within specific market sectors for example in books such as Amazon.com, apparel/garments (<http://apparelex.com/bbs/index.htm>), steel industry (www.indconnect.com/steelweb), and many others). Virtual communities are also becoming an additional function to enhance the attractiveness and opportunities for new services of several of the other business models listed here (e.g. e-mails, collaborative platforms, or 3rd party marketplaces)

Recommendations

Based on above findings, the following recommendations are discernible:

- Businesses should be innovative about their technology so that they can be competitive in the market.
- Companies should train their employee so that they can master new innovation, so they can be productive, which will lead to better performance
- There should be pragmatic strategic planning capability in order to bring about superior performance and ultimately sustained competitive advantage.
- The company should embrace marketing capability that can help in the effective and efficient management of marketing mix

It is quite evident from the foregoing that electronic platforms in the business sector is very critical for effective and efficient operations within the system in order to remain competitive and satisfy customers' needs. The ease with which transactions are processed is a significant success factor as against the manual method of transaction processing as discussed in the paper. On the part of the customers, the study revealed that various operational options which electronic platforms present increase their level of satisfaction since they can use ATM, internet, and debit card at their convenience. This has equally increased productivity in terms of turnover, profitability, staff efficiency among others.

The application of electronic platforms in the sector also presents its own challenges which ranges from insecurity, cybercrime and fraud which scares some customers away and on the part of the firms there is the need for them to make huge investment in term of ICT equipment procurement, installation, training and re-training of members of staff.

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