

Research and Development in E–Business through Service–Oriented Solutions

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Chapter 11

E–Business Adoption Framework in the Hospitality Industry: The Case of Kenyan Coast

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ABSTRACT

While the hospitality industry in the Kenyan Coast has adopted Information and Communication Technology (ICT), application of the same is limited to internal operations and control. The industry's e-business adoption lags behind similar industries such as tours and travel. Earlier research in e-business adoption does not suggest intervention for improvement of Small and Medium Enterprises' (SMEs) status and lacks focus on any specific industries. The aim of this chapter is to address this gap by analyzing the Kenya Association of Hotelkeepers & Caterers' (KAHC) e-business readiness using a three-interrelated-level framework; namely, firm level, market and industry, and institutional and regulatory levels. This chapter presents results of an ongoing project that we are currently working on, related to one of the authors' graduate degree research program that began in 2008. In this research, we adopt a survey approach that is supplemented by case studies of other countries' implementations from literature. Findings show that the hospitality industry at the Kenyan coast is not ready for e-business adoption and we develop a framework to help facilitate readiness. The findings imply that as a competitive strategy, establishments which have been competitors need to become collaborators; and KAHC and its membership need to adopt e-business to not only remain competitive, but also to survive. The findings are beneficial to KAHC and the Kenyan government in evaluating the status of e-business readiness as well as adoption in similar industries. Other developing countries can also adopt the framework.

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INTRODUCTION

The internet and, subsequently, e-business has redefined modern business competition, changing the way companies and consumers relate to each other. It has facilitated information flow between a number of players, making it possible for customers to decide on what, where, when, and how to shop. A service industry such as hospitality needs to know what services are required, how they should be supplied, and when to supply. A number of hitherto competitors have, of necessity, found themselves collaborating with each other for mutual gain, if not survival. Such collaboration can be found in the vehicle manufacturing industry and air transport aimed at attaining economies of scale and flight optimization respectively (Chaffy, 2002).

Although most hotels and restaurants have adopted ICT for internal operations and control, the concept of strategic collaboration/integration with each other, their suppliers and customers, is new in Kenya. This is in contrast to other sectors in the hospitality industry such as travel that have integrated strategically to share knowledge, cut down costs and generally achieve economies of scale.

Internet has removed barriers of distance and time between communicating parties, among others. The efficient communication and applications available have facilitated new business models such as integration both vertically and horizontally. Through collaboration, SMEs can attain economies of scale, enhance value for customers and position themselves strategically in a competitive environment. In e-business, a firm is considered part of a supply chain whose efficiency will affect the fortunes of all businesses involved in the chain. A number of governments, including Kenya (Ministry of Information and Communication, 2006) have recognized the importance of e-business and are in the process of facilitating it or have put in place plans for the same.

E-business, practiced by large hotel chains, facilitates choice of a package, booking and payment by the customer while s/he is still at home. Given the resource limitations of small hotels, collaboration offers the best competitive opportunity, given that it is global, knowledge based and networked (Damaskopoulos & Evgeniou, 2003). Advantages associated with e-business include: improvement on return-on-investment, better utilization of assets, inventory optimization, goods reaching the market faster, wider market reach through multiple channels and faster collection of revenue. In addition, customers will be happy through enhanced customer experience and order fulfillment, among others (Lightfoot & Harris, 2003).

The research goal is to investigate the feasibility of the hospitality industry adopting e-business at the Kenyan Coast and develop a framework for the same.

The objectives of the research are to:

- Research and evaluate current and emerging e-business technologies and approaches related to the hospitality area.
- Evaluate current operations of Kenya Association of Hotelkeepers & Caterers (KAHC) coast branch and establish its strategic business needs for attaining and maintaining competitive capacity in an environment driven by electronic commerce.
- Produce an e-business adoption framework for KAHC.

The researchers adopted a survey approach, which is supplemented by case studies of other countries' implementations from literature. Interviews and e-mail questionnaires were used to collect data from hospitality establishments along the Coast of Kenya covering a distance of approximately 400 kilometers. After analysis, the results were used to inform development of an e-business adoption framework for the hospitality industry at the Kenyan Coast.

The rest of this chapter is structured as follows: Section 2 presents background information, Section 3 presents the research methodology, and Section 4 presents results and discussion. Finally, Sections 5 and 6 present future research directions and conclusion respectively.

BACKGROUND

Hospitality industry at the Kenyan Coast

The establishments in the hospitality industry in Kenya fall in the category of Small and Medium Enterprises (SMEs) and are regulated either directly by government or through its agencies. The establishments are classified by the Kenya Tourist Board, a government agency, for quality control and standardization. A number of bodies that bring together the players in the tourism industry such as KAHC are recognized by government.

The KAHC's vision is to make Kenyan hospitality globally competitive and viable for the stakeholders. This is to be achieved through enhanced professionalism, good business ethics, and upholding of highest standards in the hospitality industry (Kenya Association of Hotelkeepers and Carters, 2007). Its objectives include provision of information for visitors to equip themselves with the characteristics of Kenya before departure from home, assist members in achieving continuous learning on sustainable and modern business standards and collaboration with other East African states in pursuit of the common good in the region's potential.

Tourists visiting the Kenyan Coast account for about 60% of the total arrivals in the country (Kenya National Bureau of Statistics, 2003). However, due to uncoordinated closures for maintenance during the low season, the bed nights available can drop by as much as 11.2%, as was the case in 2001 (Kenya National Bureau of Statistics, 2007). A central coordinating and scheduling system will

save the country loss of revenue from the sector which accounted for 3.4% of the GDP in 2007.

Some of the issues and challenges identified by Republic of Kenya (2008) in the implementation of e-business include lack of a comprehensive e-business policy, legal and regulatory framework to facilitate diffusion into the larger economy, lack of standardization, limited awareness, and access disparities between rural and urban populations, resource constraints and limited nationwide availability of credit cards, among others. These need to be addressed as a prerequisite for e-business implementation (Rodgers, Yen, & Chou, 2002). The Ministry of Information and Communication (2006), has put in place strategies and plans to address the challenges in the broad categories of human resource development, awareness and legal framework, security and e-signature development.

Meanwhile, the Ministry of Trade and Industry (2007) proposes the setting up of a venture capital fund to support e-commerce development. It also supports competition in the telecoms sector and promotion of Public Private Partnerships (PPP) for better service and lower costs for customers. The international bandwidth is to be upgraded to 1 Gbps by year 2015 and with improved access, these may help improve on Kenya's Internet penetration that in the year 2007 stood at 3.2% of the population in comparison to the rest of the world average at 17.6% (Ministry of Trade and Industry, 2007).

Collaboration and Alliances in E-Business

According to Porter (cited in Barnes, Hinton, & Mieczkowska, 2004, p. 608), "effective e-business strategies should be based on sound strategic principles either pursuing the lowest possible cost or seeking differentiation from competitors." The prospect of sampling the variety of experiences in a cooperative destination is a powerful incentive and a definite competitive strategy, a differentiation factor with competitors. In such a scenario,

customers book online with a choice of particular hotel in an area, stay for time in one hotel and transfer to another during their stay. From the same website, travel bookings and arrangements can be done and all paid for online, in one transaction.

Braun (2002) argues that, when grouped together, small tourism firms can have considerable influence on the economy, particularly within the tourism and hospitality industry. In a seamless e-business collaboration environment, the individual firms form part of a large virtual single entity removing barriers of movement for customers and giving the “large organization” economies of scale and competitive advantages. E-Business presents a business the opportunities to remodel itself in order to address Porters’ four forces (Porter, 1980). Chaffey (2002) argues that innovate business models can be used to gain competitive advantage over existing competitors while at the same time gaining an edge over new entrants.

Among the challenges in e-business is lack of buyer confidence. Indeed, Hoover (cited in Lightfoot & Harris, 2003, p. 83) observes that “besides setting specific privacy policies, e-marketplaces must also make business feel comfortable about doing business with strangers.”. This underpins the necessity for governance or coordination in the implementation of e-business (Yang, Flynn, & Anderson, 2004).

Online transactions have very low switching barriers and potential customers may try out a number of sites, while comparing them before deciding to transact. It is, therefore, imperative that website design is attractive and gives its visitors good experience. The quality of delivery is crucial; hence, booking must be confirmed in the shortest time possible.

Barriers to ICT adoption are mostly related to costs and skills rather than problems with the technology per-se (Harindranath, Dyerson, & Barnes, 2008). This is a challenge to the hospitality industry at the Kenyan Coast, which, like any other SMEs, lacks human and financial capital to

support IT implementation as compared to larger organizations (Hillam & Edwards, 2001).

Any business is part of a supply chain such that any changes upstream or downstream are likely to affect it sooner or later. Likewise, change of strategy by the competition elsewhere, is likely to be felt in Kenya sooner than later. Knowledge of market trends, future season hotel bookings, most profitable market segment, or repeat customers and what they prefer can be the deciding factor in profitability. It is therefore imperative that the hospitality industry embraces a knowledge economy in the future (Koh & Maguire, 2004).

According to Lightfoot and Harris (2003), regional e-business implementation needs strong coordinating mechanism. Lack of support and even regulation of regional implementations can lead to under-achievement because of the high up-front costs or burn rate, expertise needed plus infrastructural issues.

Successful technology adaptation is prerequisite to e-commerce and finally e-business, though one does not always follow the other given the complexity involved (Chaffey, 2002, p. 173). Adopting technology is not a business solution in itself. The strategy, implementation, and management of the technology are what provide the cutting edge. Lack of information among the hospitality organizations can lead to incentives that are non-strategic and unplanned, resulting in competition in technology adoption just because others are doing it (Wang & Qualls, 2007; Damaskopoulos & Evgeniou, 2003).

Experience of Hospitality Industry in Internet Technologies

Challenges regarding new technology adoption include lack of technology standards, limited skills, proprietary solutions, closed IT architecture and inadequate investment analysis. The SMEs in the sector have other additional challenges such as inadequate education and training, poor resource base, lack of economies of scale and infrastructure,

among others (Wang & Qualls, 2007). On the other hand, to succeed, e-business must satisfy consumers' needs better than traditional approaches and provide consumers with at least one advantage from among either lower price, wider selection, better choices, superior services or convenience (Yang et al., 2004).

Internet technologies help firms to communicate worldwide cheaply and almost instantly. Other benefits include expanding the scope of marketing and reaching new ones, operational cost cutting, collaboration and partnerships (Drew, 2003; Shih, 2004). The main components of the internet are the World Wide Web (WWW) and the e-mail. The WWW offers unlimited virtual repository of information and services with unlimited reach. However, access, availability and reliability of internet remains a challenge even in some developed countries such as the UK, implying that this will be a major handicap for e-business in a less developed country such as Kenya (Martin, 2004).

Collaboration support systems also known as Destination Management Systems (DMS) are a class of software applications that enable tourism entities to network with each other as well as provide the customer with relatively comprehensive information of those in the network, hence are closely associated with e-commerce and e-business (Ndou & Petti, 2007).

Intelligent agent-based applications are used for monitoring the activities of a customer while online whereby his/her profile is built and kept in a database. Such an application can help hoteliers identify niche customers in line with what they offer or even help them re-engineer their products to serve a particular need in the market. Communication between firms and customers using legacy and heterogeneous systems is possible using Web services such that the fear of their abandonment as expressed by Rodgers et al. (2002) is really not necessary.

Portals organize and present information in a manner that is comprehensive, easy to navigate through, and in an integrated form. Phillips (cited in Tatnall, Burgess, & Singh, 2004, p. 305), de-

finer a portal as "a special Website designed to act as a gateway to give access to other related sites." Portals are likely first port of call for Web users searching for information given that they aggregate enormous amounts of information. SMEs participating in a portal attain benefits such as secure investment environment in which they do not have to bear capital and integration headaches, search and directory services where web users will be directed to the small business by search engines and opportunities to acquire new partners and customers, and improved customer management in which traffic is linked from one portal to another hence the possibility of acquiring more customers (Tatnall et al., 2004).

Case Studies

Australia and the United Kingdom (UK) are among the leading countries in e-business development and support in their economies. The paragraphs next discuss e-business development in Australia-Victoria, UK and some countries in Africa.

The Australian regional policies encourage alliances among enterprises and formation of regional economic communities among Small and Medium Tourism Enterprises (SMTEs) Research by Love, Irani, Standing, Lin, & Burn (2005) involving 130 Australian SMEs identified a number of inhibitors that include hardware costs, security, lack of trust and opportunistic behaviour among members in the industry. Other weaknesses include lack of product differentiation hence no niche markets resulting in a scramble for any available customers, operator's level of IT knowledge and skill together with lack of skills in tourism and hospitality. While implementing *visitvictoria.com*, training had to be undertaken in four different categories on realizing that "One size does not fit all" (Tourism Training Victoria, 2002). Each enterprise adopts a different approach to e-business depending on aspects such as suppliers, customers, competitors and Current e-commerce activities (Ndou & Petti, 2007, p. 13; Martin, 2004).

Research done by Harindranath et al. (2008) found that 83% of SMEs in the UK adopted ICT so as to increase operational efficiency while Strategic and Customer service were all below 45% (refer Appendix, Table 1). Other significant findings on barriers to e-business adoption include lack of skills, strategic intent, costs, perception that ICT benefits are mainly operational and reliance on unofficial sources of information due to bureaucracy in government. In some cases, SMEs are forced to adopt by government regulation as in the logistics industry in the UK. Quayle (2002) also blames lack of strategic approach for low gains in cost and time saving for those who have adopted e-business. Research by Martin (2004) that captured and stored customer profiles in a database was able to realize a number of gains such as the development of new and longer lasting relationships with customers, new visitors tapped from overseas and more return visits. Other gains include development of new products, knowledge sharing and reinvention among the firms leading to effective exploitation of the new technology and available skills.

The leading digital economies in Africa according to the economist intelligence unit (2010) are South Africa, Egypt, and Nigeria respectively. In South Africa, a study of ICT adoption found websites, fixed line and mobile phone networks to be the most common technologies adopted by SMEs. The study also found finance and owner-manager skills and support to be crucial to ICT adoption. Though indirect, government is important in setting up national ICT policy; infrastructure; information dissemination; public private partnerships; capacity building and power supply (Mpofu, Milne & Watkins-Mathys, 2009). In another South African study, Warden & Motjoloane (2007) found that governments across Africa such as Egypt, Morocco, Nigeria and South Africa itself to be in the process of promoting e-commerce through telecommunication liberalization and support in other areas. Ghana, a neighbor of Nigeria is reported to be

e-commerce ready at the firm level, the remaining challenge being how to take advantage of the available government support so as to attain greater benefits (Boateng, Molla, Heeks, & Hinson, 2011). These findings are in line with Kapurubandara (2009)'s findings are that developing countries fall behind their more developed counterparts in e-commerce adoption. It can be argued that leading economies in Africa are at the e-commerce level: a precursor to attaining e-business readiness.

METHODOLOGY

In this study, we used the survey approach to investigate e-business readiness based on Damaskopoulos & Evgeniou's (2003) framework which focuses on the three levels of firm, market and industry, and institutional and regulatory. We chose the framework over other candidate frameworks such as Durbhakula & Kim (2009), which has not been empirically validated and is too general, and Kapurubandara (2009), which is equally general and targets e-commerce growth in SMEs as opposed to e-business. This research is focused on e-business in the hospitality industry and a replication of Damaskopoulos & Evgeniou (2003) is ideal, given that the Eastern European countries are not as developed as in Western Europe, making the framework more relevant to developing countries.

Questionnaires and interviews were chosen for this research over other data collection instruments such as laboratory measurement, field observation, and archives/collection. Questionnaires are time and cost effective in addition to the ability to collect data from a large number of respondents in geographically diverse locations. Interviews are preferred where in-depth understanding of situations is sought; hence compliment the use of questionnaires (Singer, Sim, & Lethbridge, 2009). In this research, interviews are accorded a few respondents, who are easy to reach given the widely

dispersed population, while the questionnaire can be used in all cases. The use of the two methods ensures triangulation to ascertain consistency of findings across methods (Berg, 2004).

Questionnaires are inexpensive in reaching a large enough sample to allow statistical analysis of results. A well designed questionnaire that is used effectively can gather information on both the performance of the test systems as well as information on the specific components of the research. Other reasons for using questionnaires are that they are easier to design and complete, allow a high degree of objectivity, save time and reduce chances of distortion in the responses (Singer, Sim, & Lethbridge, 2008). On the other hand, interviews have advantages such as not restricting responses and giving the researcher a chance to observe non-verbal communication. Researchers can also clarify questions for respondents and probe unexpected responses (Singer et al., 2008). The main disadvantage in interviews is that they are time and cost inefficient, which was mitigated in this research by limiting the subjects to just a few that could easily be reached.

The research entailed a survey of the hotels targeting mainly the General Managers (GMs) and any other staff that make decisions touching on all aspects of the hotel.

Given the small number of KAHC member establishments at the Kenyan Coast, all of them were chosen as the survey sample. The Kenyan Coast has a total of 71 establishments according to Kenya Association of Hotelkeepers and Caterers (2008). In addition to the questionnaires, interviews were granted to a small randomly selected sample near Mombasa and the KAHC secretariat.

Due to the distances involved and the limited time and resources, it was decided to send the questionnaires by e-mail and accord face-to-face interviews for those establishments around Mombasa, and the KAHC staff. E-mail facilitates communication with large numbers conveniently and at practically no cost. Responding to the questions online is less involving and returning the filled questionnaire is equally cheap, requiring no

envelope or postage stamp (Denscombe, 2003). The GMs were enlisted as the contact persons in each hotel. Advance information was sent to the selected sample, well in advance with explanations of the intended purpose to avoid speculation and suspicion.

In the actual research, questionnaires were e-mailed to the GMs of the hotels and appointments made for the interviews in the nearby hotels, before the actual interview. Filled questionnaires were e-mailed back and forms filled for the interviews. The response rate was 49% of the survey population resulting in 38 filled questionnaires from the hotels.

The survey required the gathering of opinions of GMs and other relevant staff on the feasibility of e-business adoption and their views on the opportunities and issues identified from the literature review. The current preparedness for e-business in the industry needs to be established by answering research questions:

- RQ1:** What is the general state of hotel managerial perceptions?
- RQ2:** What is the state of technological readiness of hotels?
- RQ3:** What is the state and goals of e-business strategies in hotels?
- RQ4:** What is the state of availability of skills for e-business adoption in hotels?
- RQ5:** What is the state of technological infrastructure and internet penetration?
- RQ6:** What is the state of electronic payment systems, trust, and security?
- RQ7:** What are the social attitudes toward online commerce?
- RQ8:** What is the financial environment for investments?
- RQ9:** Is there legal support for e-business transactions and intellectual property?
- RQ10:** What is the state regulatory reform and liberalization of telecoms?
- RQ11:** Is there support of entrepreneurship and innovation?

The questionnaire was designed with a separate section for each research question. A structured approach was chosen using a combination of closed question formats such as multiple choice questions and ranking with a few open ended formats. The responses were mainly categorical or nominal with a few ordinal choices. This method of data collection ensures high response rates and allows easy elicitation (Kitchenham, & Pfleeger, 2008).

The questionnaire was pre-tested by three GMs of hotels around Mombasa to ascertain its validity and adjustments were made as appropriate.

RESULTS AND DISCUSSION

The responses were analyzed using both the quantitative and qualitative methods. Quantitative responses entailed measuring the count and frequency of each response and then depicting this as a number and a percentage of the range of responses available. The highest percentage revealed the majority view on each question. In some cases cross-tabulation was carried out on some responses to establish relationships between the responses such as collaboration within the industry and collaboration in the country's economy. A few problems were encountered in evaluating the results, as some of the questionnaires were not fully completed. Responses such as "don't know" are not very informative and present a gray area for error during analysis.

In order to evaluate the results, the data collected was coded and entered into a spreadsheet for processing. Functions provided on the spreadsheets, such as counts and totals, and pivot tables were used to generate the required tables. Some results are also shown in graphical form, such as pie charts, for easier interpretation. The results were evaluated to achieve the three level broad objectives of the survey.

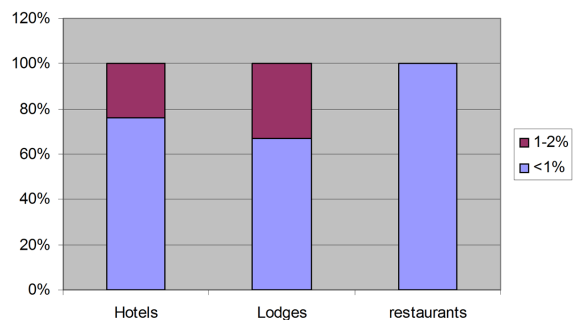
E-Business Feasibility at the Firm Level

RQ1: General State of Hotel Managerial Perceptions

Results depicted in Figure 1 show that majority of 89% of the respondents believe e-business is important for the future of the hospitality industry; a small number consisting of 11% did not know the implications which can be attributed to lack of knowledge. E-business is again viewed as presenting opportunities by a majority of 51% and as a threat by a significant number of 41% players while a small number of 8% could not make a decision on the same. These findings are in line with predictions in the literature review that e-business will play a significant role in the future of hospitality industry though lack of knowledge hinders decision makers from adopting it.

The allocations to ICT relative to the overall budget are less than 1% in 78% of the cases. The lodges have the highest representation of 67% for allocations in the range of 1-2% which could be attributed to their remote locations, requiring more investment to remain in contact with the rest of the world, but in general the smaller the establishment, the lower the allocation. The hospitality industry establishments in the survey are mostly SMEs, and according to the literature review, such

Figure 1. Budget allocations to ICT



establishments have limited resources, which they prefer to invest in other areas they consider more critical compared to ICT.

Only 14% of the establishments consider ICT department to be significant enough to fall directly under the GM. Indeed, ICT does not exist as an entity in a few establishments, while in some, comprising 43%, it forms part of other departments considered core, such as finance. The findings are in line with literature review arguments that lack of awareness on e-business benefits and risks among operators has contributed largely to the low uptake rates. The Kenya government intends to educate its public by, among others, incorporating ICT in the national curriculum and supporting the training of decision makers.

A good portion of 45% of management supports collaboration in the hospitality industry, but a higher number constituting 55% is either not sure or is negative towards the same. On the other hand, the same management overwhelmingly supports collaboration for the rest of the economy. This behaviour can be attributed to lack of trust among the industry players whereby they only see a competitor in each other. From the literature review Kenya intends to collaborate with the international community, which may not be that successful since internal collaboration is lacking. A culture change is necessary so as to support collaboration which is also supported in the literature review that proper cultural conditions among others must be in place for successful implementation of e-business; evidently this is lacking.

RQ2: State of Technological Readiness of Firms

The results in Figure 2 show that 71% of the respondents feel there is need for more training for GM. A GM who is not computer literate will have limited drive and capacity to spearhead e-business or ICT development in the organization. The findings point to a deficiency of IT skills

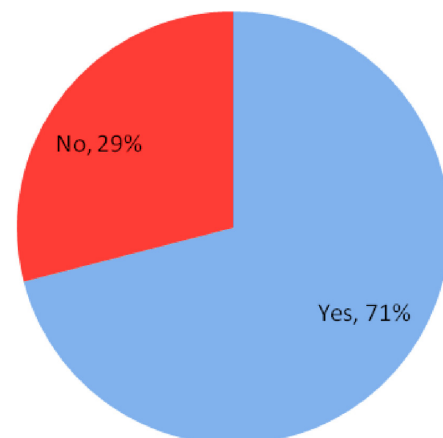
within the industry which is in keeping with the literature review. The main users consisting of 5% are those who by the nature of their work have to use the Internet and a few more that are IT savvy.

Internet availability among all establishments is a good sign for capacity building, while lack of intranets in 53% of the establishments implies that they need to develop other technological capacities before focusing on e-business. As explained in the literature review, e-business development involves a number of stages and skipping some or one of them is a risky undertaking. Internet availability in all the surveyed organizations indicates a different stage of technology readiness. Majority of 68% of the establishments have websites and repositories which can be digitized and availed online, again an indication of some degree of e-business readiness. However, there is no direct relationship between having intranet or Internet connectivity and having a website.

RQ3: State and Goals of E-Business Strategies in Firms

E-business strategy is lacking among 84% of the hospitality establishments at the Kenyan Coast. This was expected since from the literature review, SMEs do not strategically plan their information

Figure 2. GM ICT training requirements



systems. Lack of planning leads to ad hoc development that cannot give the firms any competitive advantage or cost saving. As indicated in Table 2 of the Appendix, most establishments (38%) invest in Websites as reaction to competition from their immediate competitors. Reach of new markets, which, according to the literature review, is one of the benefits of websites, is a secondary consideration amongst the establishments and is only considered as the main motivation in 31% of establishments. It is of significance to note that no firm set up a website for purposes of cost reduction and efficiency. The two findings are in line with the literature review which underscores lack of information leading to none-strategic incentives and unplanned investment such as technology adoption just because others are doing so.

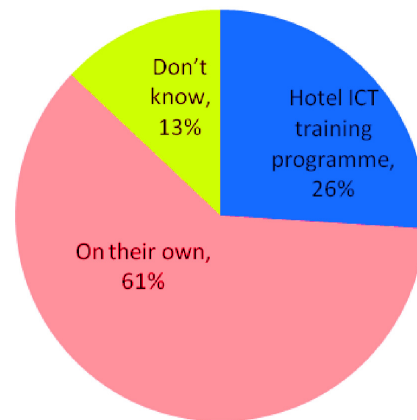
The majority of establishments accounting for 69% maintain brochure Websites, requiring use of e-mail to communicate with them. Potential customers would prefer an interactive website where all transactions can be carried out and confirmed efficiently.

RQ4: Availability of Skills for E-Business Adoption in Firms

The majority of the establishments consisting of 50% outsource Website maintenance. This is also closely related to the skills situation depicted in Figure 3, where the majority consisting of 67% cannot state the skill status in the establishments. These findings were expected and are in line with the literature that majority operators in the hospitality industry rely on outsourcing to create and manage web presence. Skills development support from within the establishments is minimal the majority-61%, acquiring their skills individually which raises the question of standards. Proper training is necessary for e-business implementation to succeed and involves other areas such as attitude change in addition to technology.

54% of the establishments find the cost of employing specialized e-business staff to be beyond their reach. This finding was expected since

Figure 3. IT skills acquisition



SMEs are resource poor and well trained staff are in short supply. However, the strategy of mainstreaming e-commerce in public learning institutions may narrow the shortfall in the near future.

E-Business Feasibility at the Markets and Industry Structure Level

RQ5: Technological Infrastructure and Internet Penetration

Internet infrastructure is generally poor in the country and this is applicable to the coast region where 68% of respondents rated it as such. Only those in urban areas have a slightly better connectivity compared to remote areas. Kenya is a developing country with a low Internet penetration of 3.2% compared with the world average of 17.6%. However, this is likely to improve if Kenya attains its infrastructural targets by 2015.

The cost of connectivity varies between average and high as depicted in Table 3 of the Appendix. To a large extent, the cost depends on a number of factors such as medium used, bandwidth and competition in the telecom sector. The most common connection medium is copper cable at 37%, which exploits an already existing infrastructure for voice communication. Very Small Aperture terminal (VSAT) has a significant presence of 13%, mainly because of some remote sites. Other

significant media in use are combinations such as Wireless and copper cable and VSAT with Wireless. The combinations are an arrangement to ensure continuous connectivity. The absence of fiber optic cable, so far the most efficient and economical medium implies that the costs may remain high for some time. The completion of the East African Submarine Cable System projects among others will most likely realize cheaper and more efficient internet services.

According to the majority of 45%, the ICT development in Kenya is fair compared to other African countries. However, this cannot be compared to developed countries where e-business has taken root. Kenya being a developing country, such result is expected, but as evident in the literature review, the government has put in place strategies to boost ICT development.

RQ6: State of Electronic Payment Systems, Trust, and Security

The majority of the establishments consisting of 68% accept credit card payment. This result was expected because credit cards have been in use in the country for some time now and since, for personal security, tourists who are the main guests in the establishments prefer credit cards to cash money. Credit cards are the main method of transacting business over the Internet and their acceptance is crucial to e-business implementation.

Trust and security in electronic transactions over the Internet is poorly rated by 60% of the respondents. These results are in contrast with those on credit card transactions but not surprising since the mistrust on giving personal data online is universal and according to the literature review, customers are cautious on giving personal information such as credit card numbers online for security reasons. The fear can only be reduced by giving some form of credible assurance.

Government or quasi government online transactions are trusted most by 37% of the respondents. These are followed by banks, chambers of commerce and insurance companies, industry

organizations and finally religious organizations. Clearly, the online customer is on the lookout for a solid stable institution to fall back to in case of problems with his transaction. Though not in place, the government is in the process of developing e-security in collaboration with relevant institutions.

RQ7: Social Attitudes toward Online Commerce

Credit card transactions are preferred to cash by 53% of the respondents as indicated in Table 4 in the Appendix. This could be attributed to the benefits of the credit cards such as ease of handling, security and portability. The significant number that does not prefer credit cards could be attributed to the unavailability of the services especially in the rural areas of Kenya. A majority of 66% of society is optimistic on the future of online transactions, which is possible once current fears are addressed and people get proper education on the same. The optimism is also supported in the literature review by predictions of knowledge-based economy in the near future which will of necessity rely on online transactions. However, 87% of the society has reservations on online trade currently, which could be attributed to reported cyber crimes and occurrences such as the dot.com bubble early in the decade.

RQ8: Financial Environment for Investments

Most of the financial investment in the establishments is internally generated constituting 55% of the invested funds. The hospitality industry, as in all SMEs, is resource poor. This explains the low budgetary allocation to ICT which was also encountered earlier. A substantial number of establishments at 34% have bank financing and even those that do not, have a very good chance of securing financing. This is locally referred to as asset financing, which in most cases only caters for the hardware and establishments need to raise collateral to secure a bank loan. E-business

requires more than just technology such that the bank financing remains inadequate. A more comprehensive package is required to fund all aspects of an e-business implementation given the associated high burn rate. From the literature review, the Ministry of Trade and Industry intends to establish a venture capital fund to support ICT development. Establishments can also surmount the resource barrier through collaboration.

E-Business Feasibility at Institutional and Regulatory Environment Level

RQ9: Legal Support for E-Business Transactions and Intellectual Property

The findings on legal frameworks indicates that 85% of the respondents either find it unsatisfactory or wanting. This is not surprising because as evident from the literature review, the ICT bill is in the process of legislation. Currently, the ICT issues are considered under a number of different legislation and are inadequate. Also from the literature review, lack of support and regulation of regional implementations can lead to underachievement hence the best practice among the leaders such as Australia and UK is to actively regulate e-business implementation and at times force compliance as in the logistics industry in the UK.

Laws on Intellectual Property Rights are adequate as indicated by 60% of the respondents, though the public needs to be made aware and educated on the same. These are necessary to protect inventions by individuals and groups for maximum gain. Software for e-business can be registered under these laws.

RQ10: Regulatory Reform and Liberalization of Telecoms

An overwhelming majority of 92% are not aware of e-signature laws in Kenya. This is not surprising since from the literature review, the ICT bill

which also covers e-signatures is under legislation. This is necessary for e-business in terms of non-repudiations of transactions. The level of liberalization in the telecoms sector is considered good by 71% of surveyed. Liberalization is necessary to create competition that will check the price of services such as bandwidth, wider service availability and quality of service. The government through Communication Commission of Kenya (CCK) encourages competition which creates choices for customers.

RQ11: Support of Entrepreneurship and Innovation

Public Authorities are active in supporting e-business development as reported by 68% of the respondents. The Kenya ICT board was set-up in 2006 and is mandated to, among others, supporting the adoption of ICT in the economy. As in the literature review, basic infrastructure must be in place since the small hospitality firms have no capacity to build it from scratch. In addition, effective cooperation between the government or its agencies and the private sector is imperative. Indeed this is one of the strategies of Ministry of Information and Communication. However, government agencies trail the IT industry in the championship of e-business development, with the industry contributing 29% compared to government agencies at 26%. This result is not surprising, because of necessity the IT industry has a commercial interest in e-business development while the public represented by government agencies is a consumer. The financial institutions accounting for 6% have a commercial interest, while the universities/research institutions, contributing 13% have academic/knowledge accumulation interest.

The general findings are that e-business adoption is not yet feasible. The degree of readiness at the three levels cannot support full implementation of e-business which requires that conditions in the three levels be ready. At the firm level, there is a low degree of technological readiness. The

establishments have Internet connectivity, basic websites and data repositories. However, the management perceptions and IT skills are poor; requiring a lot of education and training. The establishments lack e-business or viable competitive strategies. At level 2, Internet infrastructure is poor, expensive and its penetration is very low. The financial support available is not sufficient targeting hardware acquisition only. However, the social perception of online trade is positive though with reservations on trust and security. Level 3 has the highest degree of readiness but for lack of a legal framework. The legal framework in place cannot support e-business. However, the government is working on an ICT bill that will address e-business issues. E-business development is supported by government agencies and the IT industry among others. The telecommunication sector is also sufficiently liberalized.

Solutions and Recommendations

The following framework could help the hospitality industry at the Kenyan Coast in adopting e-business by addressing the shortcomings identified in the research.

Levels 2 and 3 are beyond the control of an individual firm or even group of firms since they depend on national initiatives. The single act of parliament passing the ICT bill will make level 3 wholly ready and greatly improve on the state of electronic payment systems, trust, and security in level 2. The technological infrastructure, internet penetration and financial environment for investment depend on national economic priorities hence out of control by individual firms. Likewise, the general social attitude toward online commerce requires conscious effort at the national level in educating the masses. However, level 1 can be embarked on by either the individual firms or group of firms as under KAHC. As a result KAHC and its members at the Coast are only able to determine level 1 outcome.

The Proposed E-Business Adoption Framework

The survey findings as regards level 1 are that the general state of hotel managerial perceptions and the availability of skills for e-business adoption in hotels are very poor. The state of technological readiness and goals of e-business strategies in hotels are partially ready. The following paragraphs address the strategies to be used in making the four aspects ready.

The General State of Hotel Managerial Perceptions

Educating top management on e-business will, among others, remove the fear of technology; realize and appreciate its benefits as well as know the risks of adoption and of not adopting it. The management will be able to allocate more funds internally to ICT budget or solicit them from elsewhere by utilizing the knowledge gained. The GM being the top decision makers in the firms can then re-structure their organization and reengineer their processes to take advantage of e-business. The researchers also established that culture of collaboration does not exist. This is due to the fears of "customer stealing" from each other among the hotels. Trust can be built up slowly especially when they realize that the benefits outweigh the risks. A Bench marking tour to destinations where the e-business in the hospitality industry has been successfully adopted as stated in the literature review will help waylay the fears.

The State of Technological Readiness of Hotels

Generally, staffs at different levels need ICT skills training. The type of training as highlighted in the literature will depend on current status after a skills assessment undertaking. It may be cheaper if the KAHC coordinates the training exercise to ensure standardization and quality control. To cut

costs, a number of firms can conduct joint training for general staff in their premises even using own staff, while specialized training can be organized for some skills, drawing the participants from respective firms.

Some of the establishments need to set up intranets and integrate their applications in readiness for an e-business environment. This should be accompanied by converting the current repositories into interoperable databases such as SQL to facilitate access from the web. The Internet connectivity needs to be upgraded to carry more traffic as opposed to e-mail only in some cases, while the websites can also be upgraded to interactive level so as to support customer service, booking and low level online payment since they are already accepting credit cards. Full online transactions will depend on the ICT bill implementation among other factors.

The State and Goals of E-Business Strategies in Hotels

By carrying out a SWOT analysis based on Porter's four competitive forces, the establishments will be in a position to efficiently deploy their resources. As stated in the literature review, Web presence is necessary in an economy that is global and networked.

In the literature, SMEs in which category the hospitality industry establishments fall in the Kenyan Coast, are poor strategic information systems planners. This role can be carried out by the KAHC, which will then oversee the strategy implementation. The individual establishments can be at different phases of implementation, since this depends on capacity.

The Availability of Skills for E-Business Adoption in Hotels

To counter the problem of high cost of employing specialized e-business staff, the members can increase their contributions to KAHC which will

then employ such staff to support the members. Other than costs, this will also realize coherence in the development since coordination will be centralized. The staff can develop a portal that will link all the members as well.

At the firm level, the establishments can select and train a few staff on basics of web publishing and maintenance. Such staff can be trained at the KAHC by the specialized staff, again cost effectively.

Competition as we know it is being redefined such that a business forms part of a supply chain, while innovation and value addition become the differentiation factors between competitors. As a competitive strategy, hitherto competitors are becoming collaborators and forming alliances that span the globe. An e-business environment can achieve most of the strategic needs of KAHC and its members.

Challenges such as lack of awareness and necessary expertise in e-business could be addressed through KAHC by changing the organizations business model to allow it to serve as the anchor for e-business strategy development for the establishments, individually and collectively. The masses also need to be educated especially on aspects of security regarding posting of personal data online. Venture capital would go a long way in addressing financial concerns in the development of products in the area of e-business.

The ICT bill in the process of legislation will bring together a number of laws dealing with telecoms and IT in view of convergence of technologies in the two sectors.

FUTURE RESEARCH DIRECTIONS

This research has mainly dealt with the sell side B2C in the hospitality industry. Though the adoption factors may remain the same, further research needs to be carried out on the buy side C2B and B2B to cover all aspects of e-business in the hospitality industry.

CONCLUSION

At level 1, the firm level, is not ready for e-business. The industry at the Kenyan Coast has achieved a low degree of technological readiness in the form of internet connectivity, web presence and repositories that can be converted into databases. The establishments generally have no e-business strategy. At level 2, the Markets and Industry Structure degree of readiness has been achieved at the market and industry level, but more needs to be done. Internet infrastructure is generally poor with the cost of connectivity mainly varying between average and high. A culture of online payment is slowly taking root in the country despite security concerns. Financial support for e-business is also inadequate.

Finally at level 3, the Institutional and Regulatory Environment lacks in the legal support for e-business transactions. Regulatory reform and liberalization of telecoms has been achieved as well as support of entrepreneurship and innovation.

Kenya's e-business readiness is at its infancy, with low internet diffusion, low awareness and inadequate legal frameworks. However, the country has ambitious strategies that could see it realize e-business capability in the near future by utilizing the e-business adoption framework proposed in this chapter.

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KEY TERMS AND DEFINITIONS

Collaboration: Working together to achieve a goal.

Developing Countries: a nation with a low living standard, undeveloped industrial base, and low Human Development Index (HDI).

E-Business: Adoption Frameworks: A framework to guide in adoption of e-business.

E-Readiness Frameworks: A framework to facilitate leverage of digital channels for communication, commerce and government in order to further economic and social development.

Hospitality Industry: Hotels, lodging, restaurants, event planning, theme parks, transportation and other services also related to tourism.

ICT: Information Communication Technology.

SMEs: Small and Medium Enterprises.

APPENDIX

Table 1. Reasons for adopting ICT (Harindranath et al, 2008)

	Main Reasons For ICT Investments Made Recently	Percent
1	Increase operational efficiency	83
2	Improve communications with suppliers	25
3	Improve enhance customer service	45
4	Keep up with competitors	34
5	Enhance joint working in collaborative ventures	23
6	Increase staff satisfaction	33
7	Because customers demanded it	19

Table 2. Motivation for establishing a website

Motivation	Count	Percent
Competition from other hotels	10	38%
Parent company requirement	3	12%
Partners/Suppliers	4	15%
Reach new markets	8	31%
Cost reduction/increase efficiency	0	0%
Other factors	1	4%
Total	26	100%

Table 3. Cost of Internet access

Cost of internet Access	Count	Percent
Very Low	0	0%
Low	1	3%
Average	15	39%
High	15	39%
Very High	4	11%
Don't Know	3	8%
Total	38	100%

Table 4. Social attitudes towards online commerce

	Credit card better than cash		Bright future for online trade in Kenya		Reservations trading online	
	Count	%	Count	%	Count	%
Yes	20	53%	25	66%	33	87%
No	18	47%	13	34%	5	13%
Total	38	100%	38	100%	38	100%