

Adaptation, Implementation and Utilisation ICT in the Hospitality Industry: Trends and Perspectives from a Developing Country

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Abstract

ADAPTATION, IMPLEMENTATION AND UTILISATION ICT IN THE HOSPITALITY INDUSTRY: TRENDS AND PERSPECTIVES FROM A DEVELOPING COUNTRY

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Abstract:

There is limited industry specific research activity on information and communication technology (ICT) regarding the hospitality industry (HI) in developing countries (DCs). This research paper is part of on-going research designed to explore ICT trends in hotel foodservice management from a user perspective. Grounded theory and participatory research methodologies were used to conduct this case study which involved 15 hotels and 45 managers in Kenya. The wholesale importation of software packages coupled with limited capacity to adapt and implement them to suit local challenges is a growing and worrying trend. Consequently, hotels have acquired complex ICT systems which are underutilised. Multifaceted strategies are needed to enhance the capacity of the hotels to objectively assess their own ICT implementation programmes and develop appropriate local initiatives to address this growing problem.

Key words

ICT trends, adaptation, implementation and utilisation

Introduction

The linkage between technological development and economic development has been well documented (Grossbauer 2004; Moyo1996). Research indicates that countries that compete effectively on the global market place generally enjoy a technological advantage and these tend to be developed countries. The digital revolution sweeping across Europe, America and some Asian countries has altered the economic landscape and the business environment. Progressive business organisations in these countries have not only embraced electronic management (e-management) of information systems and technical business operations but demonstrated the ability and capacity to adapt implement and utilize ICT systems for best business practice carving niches for themselves on the global market place as their levels of productivity improve. Generally business organisations in DCs continue to struggle technologically finding it increasingly difficult to make their mark on the same marketplace. While the north south digital divide diversifies, global competition is gathering momentum leaving developing countries more vulnerable economically. Although this digital divide remains a topical issue on local and international platforms (Grout, Oram and Pickling 2006), little is known regarding its nature, scope and impact on specific industries. This paper is based on a current, broad-based research initiative designed to make a positive contribution towards bridging this knowledge gap. This initiative attempts to unpack ICT challenges facing Kenya as a DC from an industry specific perspective and provokes the much needed debate required to stimulate, catalyse and accelerate development in this respect. The paper, therefore, examines technological developmental (TD) trends with specific reference to the adaptation, implementation and utilization of ICT in the foodservice management aspects of (HI) from a user perspective.

Economic Development and Technological Advancement

Attempts to get to grips with the relationship existing between technological advancement and economic

development tend to suggest an interesting economic equation summarised as follows:

Technological Availability and Accessibility + Efficient Utilisation = Operational Efficiency Enhanced Productivity+ Profit Margins

(The greater the availability and accessibility of technological resources plus the more efficient and effective the utilisation of those resources; the greater the operational efficiency and effectiveness; the higher the quality and quantity of productivity levels and the more rewarding the profit margins; Moyo 1996; World Bank 2005; Grossbauer 2004 and Reinhardt 2001). General consensus acknowledges the power of enhanced productivity among other factors, and its strong influence on accessing the global market. How much of this power do DCs in Africa wield? While this question continues to inspire high levels of debate on many international platforms, organisations interested in best business practices are ceasing every opportunity to carve their own niches on the global marketplace. It is not surprising that effective ICT systems are at the core of their tactical and strategic plans.

Most organisations in DCs appreciate the fierce global competition associated with trends in the advancement of ICT and yet find themselves struggling to keep pace with this development. Under pressure to perform and survive in an often hostile economic global environment, these organisations find themselves importing technologies from developed countries. There is a growing concern over the wholesale importation of technologies by DCs (Odedra, Lawrie, Bennet and Goodman 1996 and Lall and Pietrobello 2003) raising questions on the suitability of such technologies to service the specific needs and interests of organisations in the DCs.

Although technological critics like Wilson 1996, advance a persuasive argument linking the numerous technological failures in many African countries today synonymously with the inappropriate importation of technologies particularly computer technology applications (CTA), there is very little empirical evidence to authenticate their critique. While it has been established that TD is a significant indicator of economic development research on DCs does not seem to treat this issue with the urgency it deserves. Research initiatives regarding ICT tend to be skewed in favour of developed countries (Moyo 1996). This implies little is known about the dynamics of industry specific ICT and its impact on economic development in DCs and even more so in the area of foodservice management.

ICT adaptation and implementation and utilisation practices in DCs have yet to be fully explored. Current debates on ICT and issues emerging from such debates should of necessity raise a number of questions. What ICT systems are appropriate for developing countries? Investment in ICT is designed to improve organisational efficiency and effectiveness with the hope of gaining a competitive edge on the global market place. To what extent have organisations in DCs translated such hopes into reality? How has the technology been utilised? Are these organisations getting the best returns out of their technological investment? These questions have yet to be fully answered. The Kenya case study attempts to address some of these key issues.

Methodology

This Kenya case study sought to examine technological issues as perceived and experienced by the people at the heart of hotel operations. The complex nature of the research problem demanded an integrated interrogation of issues based on emancipatory participatory research practice. Research in DCs has often been driven by external motives with very limited local initiative which has often led to the misconception of issues and prescription of solutions resulting in numerous technological failures especially in Africa. This study was designed to deliberately engage local people at grassroots level and empower them towards understanding their own situation to facilitate the development of relevant and effective home-grown solutions to their problems. More than 15 hotels participated in the study which targeted hotel managers from cooperate level to technical operational level. Approximately 45 managers were involved in this study which took place in three major phases. The first phase was exploratory designed to create a basic understanding of the HI in Kenya and confirm the existence of ICT problems as a critical issues. The second phase was participatory in nature and involved some field work in Kenya. The third phase was more action oriented and hinged around a workshop which was conducted to pursue the critical issues that emerged during the first and the second phases

Results: Technological Development Trends in Hotels

Trends on the adaptation, implementation and utilisation of ICT in the hotels explain the pace of TD. The pace of TD tended to evolve around the availability and accessibility of technologies and the technical process of operationalizing ICT.

Availability and Accessibility of ICT

An analysis of hotel profiles indicates overwhelming availability and accessibility of technological hardware and software. Every hotel has impressive hardware systems with matching peripherals. The presence of cutting edge technology in the form of digitalised flat screen computer display monitors, high speed processing units and mass storage devices, television sets and numerous other video and audio devices including mobile and wireless technologies shows amazing levels of technological availability and accessibility. Interestingly, CTA systems in every participating hotel are industry specific with integrated programmes.

Contrary to concerns regarding alarming levels of ignorance on TD matters among managers expressed by Kirk (1995), Al Drub (2000), Bharati and Berg (2003), Mashiri and Mudigh (2003), Sigala and Connolly (2006) results indicate encouraging levels of technological awareness and activity in the hotel industry. This seems to confirm the general global belief that hotels no longer consider the decision to computerize operations an option but a necessity (Moon 2004 and Grossbauer 2004). The impressive levels of availability and accessibility of technological hardware and software suggest increased affordability by hotels and possibly the availability of foreign currency to facilitate the access to these technologies. This could probably illustrate that the positive ripple effects of low cost technology experienced in developed countries is now spreading to DCs like Kenya.

However, a closer analysis of findings has revealed that although technology is available, some of it is obsolete or not necessarily functional. Hotels possessed various outdated versions of software packages which did not seem to serve them well. Further scrutiny of the situation exposes subtle limitations in terms of the actual CTA possibilities at the disposal of the hotels. Hotels are generally using one particular type of imported software package with one exception showing limited diversity of CTA possibilities at the disposal of hotels. This finding seems to contradict assertions by Grossbauer (2004), and Moon, (2004) suggesting that a wide range of CTA possibilities were accessible to the hotels reflecting the complex nature of TD issues in DCs. This aspect begins to present a realistic picture, projecting intricate dimensions of the digital divide between developed and DCs. emphasizing that the availability of technology on its own does not mean much until the operationalization processes and their impact have been examined.

The Importation of CTA

There is an alarming level of importation of CTA indicating that the wholesale importation of CTA is real while confirming the general concerns raised by Wilson (1996), and Okunoye and Karsten (2003) regarding TD in DCs. Every participating hotel was using imported software in its original state. It was evident hotel needs and interests were being compromised as a result of this wholesale importation and that local hotels were consequently not in control of their own situation technologically. Although the managers were aware of the irrelevance of imported CTA systems, not much was being done to address the problem. The absence of local software engineering initiatives was glaring.

While hotels were dependent on external software development industries to service their ICT needs and interests, efforts to develop effective appropriate interactive communication networks to address the issues arising from this wholesale importation were inconspicuous. This could illustrate the complexity of remote controlled communicating systems far removed from practical hotel operations. The findings show a worrying technological dependence syndrome which underscores the vulnerability of the HI in this regard.

Selection and Implementation of CTA Systems

Imported CTA systems, though industry specific, present unique implementation and utilization problems. Systems are far too complex for hotel needs, levels of competence and operations. Consequently, systems are not fully operational. One manager summed up the situation as follows: 'we are only using 20% (of our CTA system)... we have yet to activate most of the programmes' In reality the systems have the capacity to

do a lot more but hotels are struggling to understand them and what they can offer as illustrated in the following statement: 'We don't know much about these applications and what they are capable of doing for us'. Information Technology (IT) departments are still grappling with configuration issues and hence some critical aspects of the systems are yet to be activated particularly in the Food and Beverage (F and B) departments including Conferencing and Banqueting departments. These findings are indicative of serious weaknesses in the decision-making process prompting the question: What criteria are used to determine the suitability of the CTA? The results could reflect that this issue is inadequately addressed before the CTA systems are acquired exposing serious managerial flaws and general lack of technical support from the experts in the process of TD.

Further questions regarding the capacity of the hotels to manage TD could be raised in this case. If managers do not understand what systems can do for them, then who is supposed to bring about the much needed understanding at organizational level? This could explain the existence of major ICT implementation problems in every hotel. It was clear IT departments have major implementation problems resulting in some departments being left out of the whole TD process altogether.

Limited Needs Analysis

It was disturbing to note the absence of systematic mechanisms or criteria for determining ICT requirements explaining why hotels 'just bought what was offered... and what other hotels were using'. This lack of critical analysis at policy-making level translated into implementation problems at operational level. Odedra, Lawrie, Bennet and Goodman (1997), consider such highly valued managerial skills as critical determinants of success in technological implementation processes. Results underscore the scarcity of such crucial managerial skills and competencies. The piecemeal importation of ICT units without an idea as to what they offer and what they would do for hotel operations could demonstrate problematic decision-making which in this case may not do much for ICT development as shown in this statement: 'We have yet to understand what these programmes can do for us...' The scarcity of technological expertise at the highest levels of hotel management could be associated with limited policy and strategic managerial frameworks. This is indicative of limited technological direction and guidance prompting the question who and what was driving TD in the hotels? The need to determine which hotel operations to be computerized and how this was going to be effected is a fundamental principle of effective TD (Buick 2003). Results are at odds with this fundamental principle. There is general concern over the relevance of ICT in the absence of a comprehensive needs analysis.

Proliferation of Insignificant ICT Systems

Managers' limited levels of empowerment are associated with the proliferation of insignificant ICT systems which are not necessarily compatible with the needs of the hotels. It is evident that most hotels are still figuring out how to use different interfaces which is reflective of distributed systems that are not coordinated and therefore not able to communicate. ICT systems are not integrated because the imported units especially the software products are not compatible with the already existing systems. While hotels are trying to unpack the process of effectively implementing CTA systems, they are not able to operate ICT systems on the same network and hence the systems are not linked and networked. It is not surprising that managers are worried and frustrated concerning this situation. This is not surprising given the fact that most hotels were not clear regarding what their specific needs and interests are. The situation describes trends that are consistent with problematic implementation and utilisation practices identified by Gamble long back in 1991 and confirmed by Grossbauer 2004 and Moon in 2004. This raises the question: are the current distributed systems the best option for these hotels?

Adaptation of CTA

There is a strong relationship between ICT implementation problems and limited adaptation of imported CTA systems for local situations. Hotels have limited capacity to adapt the systems to suit their needs and interests for legal reasons demonstrating the inappropriateness and irrelevance of the existing CTA systems. This is illustrated through the hotels' limited capacity to articulate the rich cultural heritage of Kenya as seen in hotel products. It is difficult to e-process local ingredients because of language problems for instance. This is discouraging hotels from innovative design and construction of items that could culturally enrich the hotel menu. Failure to adapt CTA systems is creating programme configuration or activation problems which could explain why a good chunk of hotel operations are still manual. Hotels find

ICT systems difficult to coordinate, network and integrate.

There is no doubt hotels are bound by legal conditionalities imposed by the external software developers. While it is acceptable professional practice to safeguard the software developers' intellectual property rights it is not clear to what extent the rights of hotels as users of the software have been identified and are being upheld. There is little evidence to suggest dialogue between the external software development industry and the local HI in formulating the legal contracts that dictate the use and application of the software. However there is growing evidence to suggest that hotels seldom read and understood the small print before they make decisions to acquire the imported software packages. The impact of legal implications is fully understood after the purchase of technological products as implementation problems begin to unfold.

Findings seem to explain that the failure to adapt systems to suit the needs and interests of the local hotels may be partly responsible for the lack of integration and coordination of ICT systems. The results are also reflective of limited expertise, confidence and innovative capabilities in the design and development of ICT systems at base.

Implementation of CTA

The significance of technological expertise and innovative ability to manage the implementation process of ICT was underscored by Hughes (2000). In a study which sought to determine the appropriateness of managerial frameworks for TD an examination of policy development issues was pursued and it was concluded that the presence of cohesive management framework was as a critical determinant of TD in the hotels.

ICT Strategy

A critical examination of policy and strategic issues has yielded interesting managerial trends and practices in the hotels. Generally hotels are articulate regarding general organizational policy. However, results show limited specificity around ICT. Indeed most hotel managers struggled to explain technological values, goals and standards giving the impression that they could do better with greater vision and guidance. There is little evidence to support the existence of comprehensive ICT development strategies highlighting the difficulty experienced in creating the right recipe for cohesive and effective management structures conducive to technological innovation. Most sectional managers at technical operational levels do not adequately participate in the process of ICT planning suggesting they are not actively engaged in the process of developing organizational policy. It was disturbing to listen to a group of managers in one hotel say, '... we are just users (of ICT) ... we are not involved at all.' If managers are not actively engaged in the design and development of ICT policy how then are they expected to effectively implement the policy? These findings seem to underline concerns raised by Sigala and Connolly (2006) and Kirk (1995) regarding the need for the proper assessment of managerial capabilities. There is evidence to believe some serious capacity building in this respect is long overdue.

Limited ICT management strategy is a perturbing trend not peculiar to hotels in Kenya. Sigauw, Enz. Scheneman, Namasiyayam (2000); Law and Lau (2000) confirm the issue is a global concern. These findings seem to question the very core of managerial practice in hotels otherwise they could indicate that ICT might not necessarily be perceived as important in the current scheme of things in the hotels to warrant the development of specific and well focused managerial frameworks. Although incorporating strategic and policy issues into operational management is significant in the process of ICT findings do not seem to reflect the managerial integration implied. Sigala and Connolly (2006), Mc Cole, Morrow, Ponsonby and Kelly (2001) demonstrate that failure to provide vision and guidance in the form of integrated TD policy and operational strategy are major factors in many reported technological failures.

Local Software Design and Development Initiative

Comprehensive ICT strategies are critical as a basis for informed needs assessment. The process of software design needs to be informed by this assessment. In the absence of specific policies, basic guidelines and expertise to make the necessary needs assessment, the process of design and development becomes very difficult.

The process of the design and development of software is so difficult for hoteliers and therefore remains the prerogative of ICT management experts. Results support this development. Every hotel has an IT department but surprisingly none of the IT specialist has specific training in hospitality management or related fields of study and yet their involvement in ICT matters was more significant compared to other managers. The IT manager's limited knowledge, values skills and attitudes in specialized hotel management operations puts them at risk of being irrelevant. Asking the IT departments to get involved in the development of industry specific CTA for their local hotels is unimaginable. In the absence of solid technical support the same specialists are having problems simply configuring and activating systems in specialized areas of operations such as F and B including Conferencing and Banqueting management. Expecting them to engage in a more demanding and creative processes of software development would need a lot of commitment and further capacity building beyond the current scope of the hotels. Leaving TD of specialized ICT operations at the hands of IT specialists is therefore a major risk.

Results link lack of active involvement in the process of software design and development by hoteliers with failure to develop needs specific and user friendly software. Software available in the hotels is definitely not user friendly as reflected in the fact that IT managers are experiencing implementation problems and other managers find very little inspiration and incentive to get involved in implementing and using the CTA systems.

Although hotels are vocal regarding the fact that imported CTAs are not user friendly there is little evidence to suggest enthusiasm to get actively and meaningfully involved in the process of software design and development. There are no mechanisms set to establish meaningful interaction within software development process. The results do not give reason to believe that the significant critique of the imported applications expressed by the managers in this case is destined for the right ears. There seems to be limited formal horizontal or vertical interactive articulation of feedback in this regard. This could represent a major technological implementation gap which could explain why hotels are experiencing problems. Feedback should be perceived as a critical input into the technological transformation process if the needs and interest of the local hotels are to be addressed. Failure to establish useful feedback mechanisms reflects minimal commitment on the part of the hotels to effectively address ICT implementation problems. This could also raise questions regarding the software development process and commitment by the software developers to impact positively on these hotels. Given the lack of local initiative to get involved in the design and development of appropriate software for the hotel industry, this could mean very limited TD at hotel level probably widening the digital gap between hotels in developed countries and hotels in Kenya. Given the lack of enthusiasm to influence the process of software development or effectively address the implementation problems, current problems are likely take root and further degenerate into greater and more complex issues with far reaching consequences in terms of improving operational efficiency and the quality and diversity of products and services.

Technical Support and Related Networks

The absence of local initiative to design and develop software has led to the proliferation of external vending of software packages. The external market is so organized that the local distribution networks have been established. The external exploitation of this market could be reflective of lucrative business opportunities. If that is the case, perhaps Kenya is missing a golden economic development opportunity.

Hotels have demonstrated limited capacity to develop effective technical support systems at base. When software packages arrive the local vendors can only deliver with minimal technical support to help set up the systems explaining why local IT departments often struggle to configure, activate and adapt the CTAs. In each and every hotel, the systems are not fully operational. In the smaller hotels, the technology is lying idle. In some of the hotels, large chunks of the ICT systems have been rendered dysfunctional because of interface problems.

When systems break down IT departments 'make telephone calls to the vending companies abroad to address the problem...' Sometimes they use the internet' for such technical support. The reliance on remote technical support networks is not serving the hotels well. Hotels agree the process is very expensive and yet ineffective. Remote support systems assume high levels of competence on the IT departments. Most hotels find the systems too complex and irrelevant for their needs and this problem can not be addressed by

remote control. The imported CTA is creating technical support issues at local hotel level which could explain why CTA systems are not fully operational suggesting utilization problems for the hotels.

Utilisation of CTA

Hotels are having problems utilising their imported CTAs as the following comments suggest: 'We are still not using it to the maximum.' 'There are still lots things users still have to explore in the system.' 'We can say that we are not utilising it 100%. There are a few areas that are still manual in the hotel' 'We have this big package and we have not been able to use it as yet'. These comments reveal major utilisation problems in the hotels suggesting CTA systems are underutilised. Can hotels afford underutilization of systems in a DC situation where resources are scarce and difficult to come by? It appears hotels have yet to maximize the benefits of their technological investments.

Limited E-management of Hotel Foodservice Management Operations

There is evidence to suggest limited e-management of technical foodservice operations in the hotels particularly in the F and B department. ICT systems are mostly used for general data base management and routine clerical tasks. Critical aspects of hotel operations which could benefit from e-management seem neglected. Grossbauer (2004) articulates these aspects very well. Foodservice management CTA applications according to these scholars range from inventory management, point of sale, food preparation and food service, recipe construction and analysis, diet and menu analysis, menu engineering, task scheduling to mention a few. While most hotels now have point of sale programmes, very little could be said of other applications demonstrating that hotels are still operating manual systems.

The potential of the internet facility as a research, development and marketing tool for instance cannot be down played. Although the internet facility is available in all the hotels, it has limited application in real practice. There is evidence to suggest use of the ICT has very little reference to creative application. Creative and imaginative use of ICT is a critical element of the research and development required to bring about the much needed localized solutions. Hotels do not seem to have a culture of research and development and this tends to impinge against local initiative. Results illustrate that hotels have yet to realize the power of ICT as an effective tool in this regard. The emphasis on manual management systems also means the managers spend a lot more time and effort doing basic managerial functions with little time left for imaginative thinking in terms of TD. The computer is underutilised as a management tool. There is scant evidence to suggest that hotels were creating enabling environments in which increased ICT activity is encouraged. The hotel environment appears less empowering and unable to motivate personnel towards meaningful ICT pursuits.

Conclusion

A major concern regarding the ICT trends established in the Kenya case study is that hotels have not accomplished much since Gamble 1991 whose concern then was the limited application of ICT in the hotel industry suggesting that most hotels had not progressed much from clerical levels of computing to more creative aspects. Hotels in Kenya are still struggling with the same implementation problems established in 1991 almost two decades later. This could mean that these hotels have more that two decades of technological backlog to catch up with in practical terms. The only difference is that they have managed to acquire more sophisticated ICT systems including the unsustainable maintenance costs. Unfortunately hotels continue to be eluded by the opportunity to develop the much needed formula for effective selection, adaptation, adoption, implementation and utilization of ICTs confirming that the north south digital divide continues to intensify (Grout, Oram and Pickling, 2006). Unfortunately hotels have yet to translate their investment into tangible economic returns while chunks of their sophisticated technologies lie idle.

Recommendations

The study has revealed disturbing complex ICT trends in the Kenya foodservice HI. This is a challenge demanding equally complex and original home grown solutions. Generating such solutions is a unique creative endeavour requiring the use of multifaceted, collaborative, emancipatory and development oriented strategies. The involvement of hotels, ICT related industries, universities, the government and relevant development agencies is critical in this respect.

Further issues in this on-going research include examining the factors associated with the established

trends, their scope, scale interaction and impact including the development of appropriate models of ICT development that relate to the situation as perceived and felt by the people in the heart of hotel operations in Kenya.

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