EFFECT OF ICT DEPLOYMENT ON THE OPERATIONAL PERFORMANCE OF KENYA REVENUE AUTHORITY

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Abstract

Purpose: The purpose of the study was to determine the effect of ICT deployment on the operational performance of Kenya Revenue Authority

Methodology: The research design used for this study was descriptive survey design. The population of this study was top management, middle management and supervisory employees of Kenya Revenue Authority and who have been with the institution for a minimum period of one year. Data was collected by use questionnaires. The questionnaire consisted of structured closed ended statements. Data was analyzed mainly by use of descriptive and inferential statistics. Descriptive statistics included mode, mean, median, standard deviation. Inferential statistical techniques like correlation coefficients were used to draw a causal relationship between the strategic response and performance. Data was presented by use of graphs, pie charts and tables.

Results: Based on the findings, the study concluded that ICT development in KRA management information system is compatible with other systems and flexible enough to support the growth of the firm crucial in assisting employees to enhance their performance. However it is not a significant factor in determining performance of KRA. Adoption of ICT development practices by KRA has increased the access to useful information about best practices of operation. ICT development is important as it enables time saving of operations and increase public access of information. Through ICT KRA has been able to increase their level of transparency.

Unique contribution to theory, practice and policy: Based on the findings, the study recommends that KRA and other public institution have to emphasize on the need to develop their technology and customer relationship management. ICT development is of core importance to many organizations in need of growing successfully and improves efficiency in operations and in serving clients.

Keywords: ICT deployment, operational performance, Kenya Revenue Authority
1.0 INTRODUCTION

1.1 Background of the Study

To succeed in an industry, an organization must select a mode of strategic behavior which matches the levels of environmental turbulence, and develop a resource capability which complements the chosen mode (Acur and Englyst, 2006). Manimala (2011) and Aboagye-Debrah (2007) identify three distinct modes of strategic behavior. The first group of strategic behavior consists of organizations that are reactive and driven by their environment. A second group is pre-emptive and seeks to anticipate future events and prepare for them while the third group exhibits the most aggressive stance; not only do they seek to identify future scenarios, they actually work to bring these about. The classification of strategic behavior is supported by several theories which include the resource dependence theory, the institutional theory and a continuum of theories that border between resource dependency and institutional theories. In line with these theories, one can identify the context and content in which certain strategic responses and behaviors are appropriate.

Firstly, the activity-position view argues that the firm’s superior performance mostly results from its strategic choice that provides the firm a better positioning in the industry structure (Porter, 1980; 1985; 1991; 1996; Ghemawat & Rivkin, 2001). Porter (1980) argues that the strategic choice is determined by a range of competitive forces: the bargaining power of customers, the bargaining power of suppliers, and the intensity of rivalry amongst firms in the industry, the threat of substitute products, and the threat of new entrants into the industry. Thus, in this view, competitive advantage is achieved by fitting the role that can meet the industry-specific position. In particular, Porter (1996) emphasizes that competitive advantage resides in business activities and activity systems, rather than firm resources.

Secondly, the resource-based view holds that dissimilar resource endowments result in distinctive competitive advantage and different performances between firms (e.g., Barney, 1991; Wernerfelt, 1984; Peteraf & Barney, 2003). According to this view, the primary resources regarding a firm’s competitive advantage include its physical assets, financial capital, human resources, organizational systems, technology and knowledge, and intangible assets (e.g., trademark, patent, copyright, and goodwill). In particular, Barney (1991) indicates that a firm’s sustained competitive advantage results from its strategic resources that are valuable, rare, imperfectly imitable, and non-substitutable. This view focuses on a firm’s internal attributes, especially its strategic resources (Peteraf & Barney, 2003).

Strategy is the management’s game plan for strengthening the performance of the enterprise. It is the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfill stakeholder expectations (business growth, financial performance and market leadership). It is a framework that guides those choices that determine the nature and direction of an organization (Hooley, Pericry, & Nikolaud, 2008). Without a strategy, the management has got no roadmap to guide them.

Kim and Mcintosh (2002) assert that rapid technological change, easier entry by foreign competitors, and the accelerating breakdown of traditional industry boundaries subject firms to new, unpredictable competitive forces. Contemporary firms, operating in dynamic market contexts, often deal with these contingencies by implementing strategies that permit quick reconfiguration and redeployment of assets to deal with environmental change. Manimala (2011) asserted that strategic responses to environmental changes were mainly around
improving quality and productivity, reducing costs, restructuring and culture-building, rather than finding partnerships and assistance from across the newly opened boundaries. The findings suggest that competition does have an impact on self-improvements and that the primary impetus for strategy making is from one’s own internal strengths than from the environment.

A company has competitive advantage whenever it has an edge over its rivals in securing customers and defending against competitive forces (Thompson & Strickland, 2002). Sustainable competitive advantage is born out of core competencies that yield long-term benefit to the company. Prahalad and Hamel (1990) define a core competence as an area of specialized expertise that is the result of harmonizing complex streams of technology and work activity. They further explain that a core competence has three characteristics: first, it provides access to a wide variety of markets; secondly, it increases perceived customer benefits; and lastly, it is hard for competitors to imitate. Sources of competitive advantage include high quality products, superior customer service, and achieving lower costs than its rivals. The strategy of an organization involves matching its corporate objectives and its available resources. In this development of strategy, managers are concerned with reconciling the business the organization is in with the allocation of resources. This allocation process is concerned with the general purposes of an organization, whether it is part of the grand plan, the overall objectives, or a strategy designed to keep the organization in business (Tim and Hannagan, 2005).

Kenya Revenue Authority (KRA) was formed in 1995 as a semi-autonomous government agency with the overall objective to provide operational autonomy in revenue administration. The Commissioner General is the Chief Executive, and reports to an independent Board of Directors. However, the Minister for Finance is responsible for policy direction, since KRA is an agent of the Government of Kenya. During its formation KRA brought together the then Departments of Income Tax, Value Added Tax, Customs and Excise which were departments from the Ministry of Finance as well as the Road Transport Department which was from the Ministry of Transport.

During its earlier years of its inception KRA faced daunting challenges in terms of poor operating procedures and undocumented internal business processes. It also faced poor and inadequate use of ICT in its operations. There were also challenges of a negative corporate culture, lack of integration and collaboration among the revenue collecting departments, poor work ethic from its workforce leading to poor levels of integrity among staff and a poor public image from external publics. The non-integration of departments lead to lack of a common corporate culture, lack of synergy in operations, and duplication of efforts and structures due to poor organization structure based on tax heads rather than on functional lines. A June 2002 report by Transparency International – Kenya ranked KRA 14th out of a sample of 50 public institutions on corruption, this meant that the organization was facing serious staff integrity challenges.

1.2 Problem Statement

To succeed in an industry, an organization must select a mode of strategic behavior which matches the levels of environmental turbulence, and develop a resource capability which complements the chosen mode (Acur and Englyst, 2006). A company has competitive advantage whenever it has an edge over its rivals in securing customers and defending against
competitive forces (Thompson & Strickland, 2002). Sustainable competitive advantage is born out of core competencies that yield long-term benefit to the company.

Several studies on strategic responses of organizations have been conducted. These studies include, Oliver (1991) who offered a typology of strategic responses that vary in active organizations: from resistance, passive, conformity to proactive manipulation. However, the study did not address the strategic responses that are adopted by KRA in Kenya and the impact of such strategies on the performance. Munir, Baird and Perera (2011) conducted a study on the strategic responses adopted by the banking sector but failed to address the strategic responses adopted by KRA in Kenya and the impact of such strategies on the performance of the organization.

Local studies such as Mutua (2010) dwelt on strategic responses by the deposit protection fund (DPF) board to changes in the external environment. The study had gaps since it did not link strategic responses to the performance of KRA in Kenya. Njihia (2009) investigated the strategic responses of Kenya Commercial Bank limited to changes in the Kenyan banking industry but ignored the strategic responses adopted by KRA in Kenya and the impact of such strategies on the performance of the firm. Other studies that addressed strategic responses are Marete (2007), Mudanya (2007), Odongo (2008), Wairimu (2008), Ombok (2009). Nonetheless, the papers failed to address strategic responses of KRA and the impact of such strategies on the performance of Kenya revenue authority.

Although the above reviewed studies made important contributions on various aspects on organizations, they suffer from conceptual and contextual gaps since they did not address the adoption of strategic responses by Kenya revenue authority and the impact of such strategies on the performance. This is the research gap that this study wishes to address. The study sought to establish the effect of customer relations management on the operational performance of Kenya Revenue Authority.

1.3 Research Objectives
To establish the effect of customer relations management on the operational performance of Kenya Revenue Authority

2.0 LITERATURE REVIEW
2.1 Theoretical Review
2.1.1 Systems Theory
Systems theory springs from biology and its content free and applicable to many fields of study. Systems theory can be defined as a working hypothesis, the main function of which is to provide a theoretical model for explaining, predicting, and controlling phenomenon (Bertalanffy, 1962). One common element of all systems is described by Kuhn (1974) as knowing one part of a system enables us to know something about another part. The information content or a piece of information is proportional to the amount of information that can be inferred from the information (Kuhn, 1974). Systems can be either controlled (cybernetic) or uncontrolled. In controlled systems information is sensed, and changes are effected in response to the information. Kuhn (1974) refers to this as the detector, selector, and effect or on functions of the system.

The detector is concerned with the communication of information between systems. The selector is defined by the rules that the system uses to make decisions and the effect or is the
means by which transactions are made between systems. Communication and transaction are
the only intersystem interactions. Communication is the exchange of information, while
transaction involves the exchange of matter-energy. All organizational and social interactions
involve communication and/or transaction.

Kuhn's model stresses that the role of decision is to move a system towards equilibrium.
Communication and transaction provide the vehicle for a system to achieve equilibrium.
"Culture is communicated, learned patterns... and society is a collective of people having a
common body and process of culture". A subculture can be defined only relative to the
current focus of attention. When society is viewed as a system, culture is seen as a pattern in
the system. Social analysis is the study of communicated, learned patterns common to
relatively large groups (of people) (Kuhn, 1974).

2.2 Empirical Review

Information and Communication Technologies (ICTs) may be viewed in different ways. The
World Bank defines ICTs as “the set of activities which facilitate by electronic means the
processing, transmission the customer populace as one system, there is simulated division of
labour among bank branches with its associated positive impact on productivity among the
branches. Furthermore, as it curtails customer travel distance to bank branches it offers more
time for customers’ productive activities. Technological innovation such as the use of
computer automation and electronic banking influences speed of bank services delivery,
enhanced management decision making and saving time (Alu, 2002).

Information and Communication Technology has provided self-service facilities (automated
customer service machines) from where prospective bank customers can complete their
account opening documents direct online. It assists customers to validate their account
numbers and receive instruction on when and how to receive their cheque books, credit and
debit cards (Agboola, 2001). Thus, Technological Innovation deals with the Physical devices
and software that link various computer hardware components and transfer data from one
physical location to another (Laudon and Laudon; 2001 & 2010).

Over the years, technology in business has been changing rapidly as the global environment
becomes highly competitive and innovative. The use of Information Communication
Technology (ICT) has become very vital to all organizations that intend to remain
competitive in the market. In the words of Cravens (2000), the drivers of change in today’s
world include, deregulation, global excess capacity, global competition, changing customer
expectations, ICT, demographic shifts and changing work and lifestyles. These changes have
led organizations to embark on activities that will provide a source competitive advantage
and embrace the usage of ICT (Kevin, 2006).

ICT is clearly considered as a key growth area in this century, specifically, in a dynamic
business and highly competition environment which requires utilizing advanced ICT to
improve efficiency and cost effectiveness, and to present high quality products and services
to their customers (Allen and Morton, 2004). Recently, the term of ICT has expanded to
include the role of ICT tools not just inside the company but outside the company, for
example, UNDP report, 2001, claimed that ICT is considered as a tool of marketing and
contacting customers and looking for possible customers, as well as presenting ICT services
is distinguished as a potential service for customers (Werthner, and Klein, 2005).
According to Gholami et al. (2008) ICT is also considered as a key enabler for globalization, facilitating worldwide flows of information, capital, ideas, people and products. Some researchers such as (Christensen, 2000; Doganis, 2001; Werthner and Klein, 2005) have tried to combine the previous definition by considering ICT as a group of elements (hardware, software, and people) that should be working together in the process to present the benefits to the organization in the form of information, product or services and so on. Laudon and Laudon (2007) assert that ICT includes all the technology that facilitates the processing, transfer and exchange of information and communication services. It is considered as a subject of expertise that links information technology (computers and applications) and telecommunication networks (intranet and internet), that lets people and computers interrelate irrespective of physical location. Werthner and Klein (2005) conclude that the ICT term contains hardware, software, networks and people that should be integrated as a one unit by linking each one to the other in a clear process to generate the information that helps the decision makers, producing product and services presenting, promotion, controlling and for achieving the organization’s aims and goals.

Information technology generates fundamental changes in the nature and application of technology in business (Gholami et al., 2008). Information Communication Technologies (ICT) can provide powerful strategic and tactical tools for organisations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness. The proliferation of the Internet, as a main stream communication media and as an infrastructure for business transactions has generated a wide range of strategic implications for businesses in general as well as for the travel and airline industries in particular (Li-Hua and Khalil, 2006). Internet technology and web based commerce have dramatically transformed the airline industry in the decade (Werthner and Klein, 2005). Information and Communication Technologies (ICT) have always played a predominant role in the airline sector (Poon, 2003) but with the advent of the Internet and open source technology their impact is becoming increasingly more crucial and evident (Buhalis, 2004; Jacobsen et al., 2008). Web distribution combined with cheaper and more flexible technologies allows new players on the market to implement effective low-cost direct distribution strategies and intensify competition in the sector (Dennis 2007; Buhalis and Law, 2008).

Adesosun et al. (2009) state that the use of ICT enables strategic management, communication, collaboration, information access, decision making, data management and knowledge management in organizations. ICT causes fundamental changes in the nature and application of technology in businesses. ICT can provide powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness (Buhalis, 2004). Hengst and Sol (2001), state that ICT enables organizations to decrease costs and increase capabilities and thus assist to shape inter organizational coordination. The use of ICT can assist to lower coordination cost and increase outsourcing in organizations. ICT is used to exchange information and it provides a medium for learning. Ramsey et al. (2003) note that organizations generally stand to gain from ICT in areas such as reduced transaction costs, information gathering and dissemination, inventory control, and quality control.

2.3 Conceptual Framework

<table>
<thead>
<tr>
<th>Independent Variables</th>
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<tbody>
<tr>
<td>KRA Operational Performance</td>
</tr>
<tr>
<td>- Revenue</td>
</tr>
<tr>
<td>- No. of employees</td>
</tr>
<tr>
<td>- Assets growth</td>
</tr>
</tbody>
</table>
3.0 RESEARCH METHODOLOGY

This study adopted a descriptive survey design. The population of this study was the top management, middle management and supervisory employees of Kenya Revenue Authority and who have been working for a minimum period of one year. There were about 725 employees in these three strata. The target sample size for this study was 108 employees. This study used both stratified sampling and simple random sampling. This study used primary data which was collected through use of a questionnaire. After data has been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS was used to produce frequencies, descriptive and inferential statistics which were used to derived conclusions and generalizations regarding the population.

4.0 RESULTS AND DISCUSSIONS

4.1 Response Rate

Initially the target population was 108 managerial employees in Kenya Revenue Authority; however, the duly completed and returned questionnaires were 55 which convert to 51% response rate. According to Mugenda and Mugenda (2003) 50% response rate is adequate for analysis in descriptive study.

4.2 Characteristics of Respondents

This section consists of information that describes basic characteristics such as years of work experience, education level of the respondents and their position in KRA.

4.2.1 Respondents Working Experience

Results in Figure 2 indicated that 40% of respondents had worked in KRA for 2 to 5 years. Results further revealed that 33% had worked in KRA for 6 to years. Twenty percent (20%) of respondents had worked in KRA for over 10 years while 7% had worked in KRA for less than 1 year. The findings imply that majority of respondents had more than 2 years’ experience and this may have a further implication on their ability to understand strategic issues.
4.2.2 Level of Education

Results in Figure 3 indicated that 53% of respondents have university degrees while those with postgraduate degrees constituted 25% of the respondents. Results further revealed that 22% have attained college level certification. The findings imply that there is high level of competency in KRA given the high qualification of the majority of the respondents.

4.2.3 Position in KRA

Results presented in Figure 4 show the position of the respondents in KRA. Majority are from the middle level management who constituted of 49% of the sample. Further, 33% held supervisory positions with another 18% as top managers. Therefore majority responses were received from the supervisory and middle management officials of KRA.
4.3 Descriptive Results

Results on the effect of ICT in KRA’s performance indicate that the organization has invested in a management information system which is easy to use and has enabled the minimization of administrative costs as represented by 92% and 93% respectively. Eighty nine percent agreed responses from the respondents indicate that the organizations management information system is compatible with other systems. The management information system is flexible enough to support the growth of the firm and that it has been crucial in delivering innovative customer services as indicated by 91% and 86% respectively. Results further indicate that the management information system of KRA has been crucial in assisting employees to enhance their performance and productivity as supported by 95% agreement level. The mean of the responses indicated from the results was 3.90 which means that the respondents were agreeing on most of the statements while the standard deviation was 0.73 which indicates that the answers received were closer to the mean. The results of these study further support the findings of Adeosun et al. (2009) who state that the use of ICT enables strategic management, communication, collaboration, information access, decision making, data management and knowledge management in organizations which is just the overall performance.
Table 1: ICT and Performance

<table>
<thead>
<tr>
<th>Statement</th>
<th>Indicator</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organization has invested in a management information system which is easy to use</td>
<td>Frequency</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>47</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>3.60%</td>
<td>1.80%</td>
<td>85.50%</td>
<td>7.30%</td>
<td>3.93</td>
</tr>
<tr>
<td>The organization has invested in a management information system which has enabled the minimization of administrative costs</td>
<td>Frequency</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>46</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>5.50%</td>
<td>0.00%</td>
<td>83.60%</td>
<td>9.10%</td>
<td>3.93</td>
</tr>
<tr>
<td>The organization’s management information system is compatible with other systems</td>
<td>Frequency</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>45</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>9.10%</td>
<td>0.00%</td>
<td>81.80%</td>
<td>7.30%</td>
<td>3.84</td>
</tr>
<tr>
<td>The management information system is flexible enough to support the growth of the firm</td>
<td>Frequency</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>46</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>7.30%</td>
<td>0.00%</td>
<td>83.60%</td>
<td>7.30%</td>
<td>3.87</td>
</tr>
<tr>
<td>The management information system of the firm has been crucial in delivering innovative customer services</td>
<td>Frequency</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>43</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>12.70%</td>
<td>0.00%</td>
<td>78.20%</td>
<td>7.30%</td>
<td>3.76</td>
</tr>
<tr>
<td>The management information system of KRA has been crucial in assisting employees to enhance their performance and productivity</td>
<td>Frequency</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>40</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>1.80%</td>
<td>3.60%</td>
<td>0.00%</td>
<td>72.70%</td>
<td>21.80%</td>
<td>4.09</td>
</tr>
</tbody>
</table>

4.4 Inferential Statistics

4.4.1 Pearson’s Bivariate Correlation Analysis

The Pearson’s bivariate analysis sought to find whether there was any significant relationship between the independent variable (ICT development) with the dependent variable (strategic performance of KRA). The results of this relationship are presented in Table 2. Pearson’s Bivariate results shows that ICT development was significant in determining the performance
of KRA as its value was 0.000 a value lower than the conventional p value 0.05. The results further show that the ICT development had strong and positive correlation (0.632). This means that an increase in ICT development positively influences KRA’s performance.

Table 2: Bivariate Correlation Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation</th>
<th>Performance Mean</th>
<th>ICT Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Pearson Correlation</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT Development</td>
<td>Pearson Correlation</td>
<td>0.632</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion
The objective of the study was to assess the effect Information communication technology (ICT) development on the performance of KRA. Correlation results indicated that ICT is a key factor that affects performance positively. The findings were further supported by a majority of respondents who indicated that the organization has invested in a management information system which is easy to use, the organization has invested in a management information system which has enabled the minimization of administrative costs, the organizations management information system is compatible with other systems and flexible enough to support the growth of the firm, the management information system of KRA has been crucial in delivering innovative customer services and that it has been crucial in assisting employees to enhance their performance and productivity. However, regression and correlation results further show that ICT development is not a statistically significant variable in determining KRAs performance.

5.2 Conclusions
ICT development in KRA management information system is compatible with other systems and flexible enough to support the growth of the firm crucial in assisting employees to enhance their performance. However it is not a significant factor in determining performance of KRA. Adoption of ICT development practices by KRA has increased the access to useful information about best practices of operation. ICT development is important as it enables time saving of operations and increase public access of information. Through ICT KRA has been able to increase their level of transparency.

5.3 Recommendations
Based on the findings, the study recommends that KRA and other public institution have to emphasize on the need to develop their technology and customer relationship management. ICT development is of core importance to many organizations in need of growing successfully and improves efficiency in operations and in serving clients.

5.4 Areas for Further Research
A replica of the same study is suggested within the private sector in order to draw comparisons on the range of strategic responses that are available between state corporations like KRA and private limited companies. Kenya is a member of the East African community
and there is a target of achieving a customs union and these calls for establishing a similar study among the other revenue authorities of the East Africa regions. Such a study will bring out the various strategic responses of all revenue authorities and the findings will come in handy at the time of customs integration. Further studies could also consider other factors such as leadership, and organization culture in determining performance of companies.

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