ROLE OF E-PROCUREMENT STRATEGY IN ENHANCING PROCUREMENT PERFORMANCE OF SAVING AND CREDIT COOPERATIVES IN KENYA: CASE OF KITUI TEACHERS SACCO LIMITED

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ABSTRACT

The benefits of e-Procurement have been verified by many leading companies worldwide, and e-Procurement is a significant tactic in most companies' e-Business strategies. The consensus is that e-Procurement benefits organizations with respect to procurement cost and process efficiency associated with procurement activities. This is due to web-based e-Procurement solutions can support four major B2B tasks in organizations: search, processing, monitoring and control, and coordination. Since the internet arrived on the scene as a supply management tool in the mid-2009 enterprises have tried to gain the benefit e-procurement can deliver: cost reduction, process streamlining, improved contract compliance, increased spend under management, and more. However many challenges stood in the way and only in the recent years have leading enterprises taken full advantage of the value of e-procurement systems. The overall objective of this study was to examine the role of e-procurement strategy in enhancing   procurement performance of Saccos in Kenya. A descriptive research design was used in this study. The study targets the entire 1000 staff working for Kitui teachers Sacco Limited. A descriptive research design was used in this study aided by Statistical Package for Social Sciences (SPSS). It established that majority of the employees from procurement departments in Saccos in kenya possess adequate skills and competence to conduct e-procurement for innovations. The study concluded that SACCOS can employ effective customer service level on e-procurement for long term SACCO success and the ability to expand and maintain a large and loyal customer base by implementing the use of technological innovations and ICT. The study concluded that e-business, electronic data interchange transaction costs management, and good governance and internet control application affects the procurement of SACCOS in Kenya. The study showed that audits and compliance of SACCOS in Kenya affect their procurement performance.

Key Words: *e-Procurement, supply management, procurement performance, SACCOS*

Introduction

Today, organizations find themselves facing rapid series of market shifts, new technological innovations, and changes in government policies (Eisenhardt and Brown, 2009). The mirror image of such phenomena is an increasingly turbulent environment that firms have to deal with (Haeckel and Nolan, 2008; Bradley and Nolan, 2008). As a consequence, successful organizations are those that have learnt how to be innovative and creative without renouncing to the level of discipline that is instrumental in effectively executing plans. In doing so, they have to modify their organizational designs, taking advantage of Information and Communication Technologies (ICTs). ICT is a critical enabler of the redefinition of the organization. It permits the distribution of power, function, and control to wherever they are most effective; given the mission and objectives of the organization and the culture it enjoys (Morton, 2010).

For an organization to be truly effective, every single part of it, each department, each activity and each person and each level must work properly together, because every person and every activity affects and in turn is affected by others (Murambi, 2008). Central to this is the notion of the internal customer "every part of an organization contributes to external customer satisfaction by satisfying its own internal customers" (Heijden et al, 2013). From emanating perspective this internal customer notion is also well accepted (Panayiotou et al, 2013) has led to the concept of internal marketing (Beamon, 2008). However, the application of notion of the internal customer service level to e-procurement is relatively new. The impact of e-procurement on an organization process and routines has concentrated primarily on the internal alignment characteristics of systems and practices within IT/IS strategy (Venkatraman, 2011).

The benefits of e-Procurement have been verified by many leading companies worldwide, and e-Procurement is a significant tactic in most companies' e-Business strategies (Deloitte Consulting, 2011). The consensus is that e-Procurement benefits organizations with respect to procurement cost and process efficiency associated with procurement activities (Chaudhury & Hartzel, 2008). This is due to web-based e-Procurement solutions can support four major B2B tasks in organizations: search, processing, monitoring and control, and coordination (Subramaniam and Shaw, 2012).

E-business has the potential to generate huge new wealth and to transform the way business is conducted in unprecedented ways (Amit & Zott, 2010). The use of new technology in procurement seems to promise substantial benefits (Neef, 2010). There is a need for some kind of guidance for assessing the new e-procurement tools and under what circumstances to use them (Gattiker, 2010), since they are considered to be of extreme interest for the development of the procurement function during the coming decade (Carter, Kaufmann, Beall, Carter, Hendrick & Petersen, 2010). Procurement strategies should be consistent with corporate competitive strategy (Watts, 2008).

It is assumed that the procurement function can contribute to the success of the corporation: "By developing a procurement strategy that focuses on the character of its competitive strength, a firm can enhance its market position" (Rajagopal & Bernard, 2008). Narasimhan and Carter (2008) argue "that purchasing practices should fundamentally stem from and be linked to those firm priorities if purchasing is to become strategic".

A number of public sector agencies worldwide have identified electronic procurement (e-procurement) as a priority e-government agenda and have implemented or are in the process of implementing buy-side e-procurement systems. What is e-procurement? Confusion exists in defining the term e-procurement (Vaidya, Yu, Soar & Turner, 2008). While many firms adopt e-procurement in an attempt to achieve the proposed benefits of lower costs and improved efficiency, it should be noted that the use of e-procurement does guarantee positive outcomes for buyers or suppliers. Emiliani & Stec's (2008) study of reverse auction use in the wood pallet industry found that suppliers realized few, if any benefits from participation, suppliers engaged in retaliatory pricing when the opportunity presented itself, buyers encountered unanticipated costs, and less-than-optimal buyer-supplier relationships resulted.

The high costs of satellite connections, slow speeds and low band width capacity have delayed the adoption of e-procurement through some companies through their massive financial capacity were able to gain a competitive advantage in terms of getting connected early enough. However, this could be a thing of the past. Many companies embraced the technology thanks to the landing of the high speed and high capacity fiber optic cable in the country. The cable is expected to boost the efficiency of internet making e-procurement a reality (Ogutu, 2010). The government through the ministry of finance has initiated an e-procurement project that aims at having an e-procurement system running in a few selected ministries before full implementation in all government departments (Njuguna, 2010). Previous studies on the other hand have adopted exploratory approach as their underlying methodology. The current studies will adopt descriptive approach while exploring into the role of e-procurement. Studies suggest that organizations are being strategic in their e-procurement implementation. However, such studies are fragmented across both developed and developing countries. The benefits achievable from e-procurement render it an important consideration for any business and in addition a wide range of challenges continue to deter e-procurement implementation. The depth of the research prevents the validation of these points, in the context of Saccos in Kenya.

Statement of the Problem

The advent of web-based electronic procurement has been heralded as a revolution for the purchasing process (Neef, 2011), delivering significant transactional economies (Croom, 2000; Essig & Arnold, 2001; de Boer et al, 2012, Wyld 2012) and acting as a catalyst for a shift in the role and influence of the purchasing function within the organization (Croom, 2010; Osmonbekov et al, 2012).

Internationally the global economy recorded a growth of 5.1% in 2009 compared to 4.5% (IMF 2008). In Kenya saccos is key to economic development by providing credit and saving and accounted for 10% of the country's Gross Domestic Product (GDP), provided employment opportunities to about 100,000 people in the formal sector and 3.7 million persons in the informal sectors of the economy (GOK 2013).

An area of Sacco's dominance that cries out for reforms is the procurement and other support and service provision functions. Public investment committee reports of out of 130 examined by the Central bank of Kenya, only 12 Saccos managed a clean bill of health (GOK, 2012). The general story is one of loss, fraud, theft and gross mismanagement which are hampering improved and sustained performance and service delivery. Productivity of Saccos has also been quite low compared to banks while at the same time they continue to absorb excessive portion of the contributions by members, becoming a principal cause of long term procurement problems (Hawamdeh 2008). Procurement burdens .About 31% of Saccos rely on old records in selecting their suppliers creating inefficiency, while 69% search through internet catalogue in selecting suppliers Comick (2009). A study by Chan and Lee (2012) found that organizations which adopted e-procurement strategies have enhanced procurement performance by reduced costs through transactional and process efficiencies and thereby promoting their procurement performance.

Literature Review

Recent e-service for customer service level research has been primarily concerned with the provisions and development of service between organizations and its external customers, Warner (2010) for example developed ten key steps in the development of an e-service strategy to help create outstanding web-based services (Yu et al, 2008) investigated issues or customer participation in the delivery of services, (Wu et al, 2011) while concerned with quality of the customer experience considered the issues for service design. (Venkatraman, 2011) investigated the value-added features e-service need to provide to gain market share and profits, (Premkumar and Ramamurthy, 2005) developed a model linking customer perceived quality with e-service to the SERQUAL dimensions. Walker et al (2012) investigated the reasons why consumers accept or reject technology.

E-procurement can be used to describe various forms of communication technology at different stages of the procurement (Pavlou, 2013). This may include identification, specification, search, sourcing, negotiation, order placement, receipt registration, payment and post-supply evaluation. Purchasing literature has emphasized the potential contribution of e-procurement in lowering transaction costs and prices paid for goods and services (Croom, 2010).However, many organizations report dis-appointing results from e-procurement implementation, largely as a result of non- compliance by end-users (Aberdeen Group, 2011). Arbin (2013) argues that if the

potential be achieved, user adoption is crucial. This view receives support from a number of studies reporting compliance and the financial benefits of e-procurement (Pavlou, 2013).

The concept of e-procurement non-compliance builds on the broader notion of maverick buying. E-procurement system compliance can help to reduce transaction costs, by enabling a higher level of accuracy in requisition, invoicing, and payment through electronic documentation and process automation (Xu et al, 2008). By comparison orders placed outside of an e-procurement system are unable to transmit errors and require additional resources during invoice and payment (Croom, 2010). Users can avoid using a system and place them orders in a variety of ways, including the use of petty, paper based orders or making direct contact with suppliers by telephone. Collections made from suppliers and the retrospectively ordered and receipted through e-procurement system also represent system non-compliance. Increased attention has been paid to how implementation of e-procurement systems can help to increase control over the procurement process with organizations (Wu et al, 2011). In some studies, e-procurement has been credited with increased transparency across functions, which may subsequently improve the extent to which individuals use the system and comply with contracts (Subramaniam and Shaw, 2012) suggest that the migration from traditional procurement processes to e-procurement is one of the most effective ways to improve compliance amongst users. However, other studies postulate that simply implementing e-procurement does not, itself guarantee increased compliance. Specifically, it is argued that user perceptions of e-procurement provision may influence levels system and contract compliance, and deserves further exploration (Turban et al 2009). For example (Siemsen et al, 2008) argue that even when use is mandated, individuals may find ways to circumvent official purchase processes if they are dissatisfied with e-procurement provisions. Contracting and procurement practices have control weaknesses, with moderate risk exposures that require management attention related to contracting and government procurement planning, monitoring mechanisms and clarity on procedural requirements and expectations (Maleyeff, 2013).

By implementing e-procurement system, several benefits could be gained. Several studies have explored the benefits of implementing e-procurement system; one of them was by Gunasekaran, McGaughey, Ngai, and Rai (2009) which focused on the status of e-procurement in Small and Medium Enterprises (SMEs) in the South Coast of Massachusetts. This research showed that e-procurement was poorly understood by SMEs and they were not reaping the benefits of e-procurement.

Panayiotou, Gayialis, and Tatsiopoulos (2011) conducted a case study that focused on analyzing the Greek government procurement processes carried out by the General Secretariat of Procurement. This study identified tangible (quantifiable) and intangible (difficult to quantify) benefits. Tangible benefits included cost of supply reduction, tender costs reduction and lead time savings. Intangible benefits included process improvement and organizational benefits. Another study was conducted by Croom and Brandon-Jones (2009). This study exploited issues

related to implementation and impact of e-procurement in nine public sectors in the United Kingdom (UK). Five impacts were identified in this study, namely: change in total cost of acquisitions, changes in organizational characteristics, changes in governance structure, management and implementation.

Yen and Ng (2013) also conducted study on the impacts of e-procurement in the procurement process on the supply chain by analyzing the project of Hong Kong Textile. They used SWOT analysis to describe impacts in each stage of procurement process. Strengths and weaknesses were used as internal performance measurement in the procurement process, for example, efficiency, and effectiveness. Opportunities and threats were identified as the electronic environments that support e-procurement.

Neilson et al. (2010) state that instead of bureaucratic, hierarchical structure, organizations should form more flexible, decentralized team and alliance based networks that allow employees to react to market shifts. This research that assumes that e-procurement involves a network of actors that operate both inter and intra-organization processes.

Firms are making significant investments in their e-business strategies and IT; yet some managers remain unclear about how to adapt their organization to new strategies and processes. Advancements in procurement technology create the opportunities for new forms of arranging work, such as collapsing boundaries between suppliers and customers make it imperative for management to identify the key attributes and processes required for competitive advantage. Handfield and Nichols (2012) assert that access to memory is vital because a chain lacks many of the formal and informal mechanisms that guide decisions in established firms, such as hierarchy (formal) and strong vales, traditions and beliefs (informal).

According to the literature in the field, security (Croom, 2010) and authentication (Varney, 2011) are two other major challenges present in e-procurement. The impacts of technological errors, system constraints and technological failures, which are seldom discussed or acknowledged, are also a major concern for e-procurement (Coulthard & Castleman, 2011; Mota & Filho, 2011; Sun et al., 2012). While tools such as e-signature, e-notice or e-bids do significantly reduce processing time – these constructs might raise security issues, cause costly errors and authenticating bidders problematic. In this sense, much of the responsibility of ethical behavior is placed on the vendors which, given their motives, may place additional pressure on procurement to validate the integrity of the process; again driving up implementation costs. The public agency is limited in its ability to insure that the internal structures of suppliers fits within the broader context of the rigorous ethical expectations of the public sector.

Grodeland & Aseland (2011) have suggested that in post-communist state countries there is a large use of informal practices because citizens do not trust that their problems can be solved formally. This attitude is also applicable to Albania as a post-communist country which is still under political transition. Albania is one of the most corrupted countries in Europe and

transparency challenges still need to be addressed. There are direct factors and peripheral elements that can enforce and promote transparency. According to Smith (2010) lack of meritocracy in the public administration and strong political connections are sources of law evasion and consequently corruption. Abbink (2011) suggests that these issues can be solved through staff rotation in the public administration. On the other hand, this practice can have negative consequences on the civil servants image and expertise.

While Sitkin's (2012) theory of intelligent failure attempts to provide the answer, the model has recently been adapted as describing how to "learn from failure" (Scott &Vessey, 2010). Though there have been very little studies from e-Procurement perspective, some studies relating organisational learning to failures can be found in the IS literature. Scott &Vessey (2010) view organizational learning as a series of processes interspersed with "small" successes or failures. According to the authors, organizations will sometimes fail, giving them opportunity to learn from their failures. They further reason that the experience of failure produces learning readiness and if the cause of the failure is determined, organizational learning takes place.

According to Argyris (2012), organizations find it difficult to learn lessons from problems and seldom question the underlying basis of their own problems. Soete and Weehuizen (2013) further support this notion that public sector organizations often lack innovation and are resistant to change – they tend to emphasize conformity and defend status quo instead of focusing on creativity, improvement and change. This is especially evident when implementing innovative information technologies such as e-Procurement systems. As the implementation of e-Procurement initiatives in the public sector demands exchange of information within and among users (specialist-users) and suppliers (large suppliers and local/regional SMEs), the procurement organization must have capacity to exercise organizational learning and share the lessons learnt. However, despite many examples of public sector e-Procurement failures in the popular business press (Vaidya et al., 2013), organizations do not document and share the lessons learnt pertaining to the failed e-Government implementations because organizations are interested to publicize only successes (Subramanian & Sachdeva, 2013) and are apparently silent on failures, making it difficult to researchers to obtain data (Sauer, 2009).

Critique of Existing Literature

Although extensive research has generally been documented, few studies have been undertaken in Kenya on the role of e-procurement strategy in enhancing procurement performance. (Njuguna, 2011) looked at the factors that have driven the adoption of e-procurement in telecommunication sector with a special focus on Safaricom Kenya ltd. The study found out that despite the potential demonstrated by various researchers in the area, e-procurement implementation and its general adoption got off to a slow start. The use of new technology for procurement has generated great excitement because of its potential to reduce procurement costs and improve its strategic sourcing De-Boar (2012). However, little attention has been given to

the role of e-procurement strategy on procurement performance. In addition, the role of e-procurement attributes to such things as cost reduction, improved buyer/buyer collaboration, promotes compliance with respect to audits by all the drivers in supply chain management in spite of the disadvantages that its adoption and implementation would confer to the organizations and their supplies (Weele, 2012).

E-procurement includes negotiation with suppliers, and research and development co-ordination taking place on the internet and electronic market (Yen and Ng, 2013). Research conducted on B2C E- Commerce focus on factors which influence the purchasing decision of the customer in the online B2C world. Furthermore much academic research on the success and fail factors for the implementation of E- Procurements as well as the benefits of E- Procurement usage was found. While the importance of online B2C shopping as well as the importance of E- Procurement systems is recognized by many academic researchers and practitioners, limited research interest was given to the effects both research fields have on each other on consumer attractiveness. This gap in literature is important because the rapid growth of the online B2Cmarket and the large increase of website features offered by websites to consumers (Huang et al., 2006) could lead the E- Procurement user to purchase products outside the E- Procurement system. This is important because the success of E- Procurement solutions depends for a large part on the (internal) users (Angeles et al., 2011). This research aims at reducing this gap in literature by identifying the most promising functionalities found in the online B2C world and assesses a fit of these functionalities in a B2B E- Procurement solution.

Previous research reveals that further organizational characteristics need to be considered studying adoption of E-Procurement at the municipal level (Moon 2008). Apart from available resources, public managers need sufficient resources and mandate of the political leadership to successfully adopt E-Procurement. As argued by Henriksen and Mahnke (2008), the political structural context needs to be considered as much as the economic rationalities to better explain E-Procurement adoption. Politicians whose primary objective is to support local providers are unlikely to support public managers improving transparency and competition through E-Procurement. In contrast, when local politicians give fairness and cost-effectiveness goals priority over concerns for local providers, it is more likely that E-Procurement capabilities are further developed.

Research Methodology

The design for the study was descriptive research. For purpose of this study the target population was stratified through top management level, middle level managers and low level management. The target population was composed of 100 members of staff in different managerial levels currently working at the Sacco. From each stratum the study used simple random sampling to select the respondents; this was 10% of the entire population. The researcher used questionnaires to collect data through drop and pick method. Secondary data was collected to generate

additional information for the study from the documented data or available reports. Quantitative data collected was analyzed using SPSS and presented through percentages, means, standard deviations and frequencies.

Research Findings

Customer Service Level

According to the findings, respondents agree to a large extent that Customer service quality affect procurement performance as shown by a mean of 4.47; that respondents agree to a large extent that Changes in customer demand affect procurement performance as shown by a mean of 3.87; that respondents agree to a large extent that Customer Service management affect procurement performance as shown by a mean of 3.73; respondents agree to a large extent that Information accuracy affect procurement performance as shown by a mean of 4.27; that respondents agree to a large extent that Customer loyalty in buying goods/products and goods affect procurement performance as shown by a mean of 4.40.

Procurement Cost Reduction

The study found out that respondents agree to a very large extent that e-business affects the procurement of SACCOS in Kenya as shown by a mean of 4.67, that respondents agree to a large extent that electronic data interchange affects the procurement of SACCOS in Kenya as shown by a mean of 4.40 that respondents agreed to a large extent that transaction costs management affects the procurement of SACCOS in Kenya as shown by a mean of 4.33.

Further respondent indicated that the study also found out that respondents agreed to a large extent that Good governance affects procurement of SACCOS in Kenya as shown by a mean of 4.47, that the respondents agreed to a large extent that internet control application affects the procurement of SACCOS in Kenya as shown by a mean of 4.33.

Buyer/ Supplier Collaboration

The study found out that respondents agreed to a large extent that the Information sharing affects procurement performance as shown by a mean of 4.20. The study showed that the respondents agreed to a large extent that organization development affects procurement performance as shown by a mean of 4.07. The respondents agreed to a large extent that organization systems affects procurement performance as shown by a mean of 4.07. The respondents agreed to a large extent that Channel relationships affects procurement performance as shown by a mean of 4.13 and the respondents agreed to a large extent that Supplier relationship Competencies affects procurement performance as shown by a mean of 4.20.

Audit and Compliance

The study found out that respondents agreed to a very large extent that the accountability affects procurement performance as shown by a mean of 4.87. The respondents agreed to a very large extent that internal audits affects procurement performance as shown by a mean of 4.53. The respondents agreed to a very large extent that External audits affects procurement performance as shown by a mean of 4.67. The respondents agreed to a large extent that regulations affects procurement performance as shown by a mean of 4.27 and the respondents agreed to a very large extent that governance affects procurement performance as shown by a mean of 4.6.

Regression Analysis

In addition, the researcher conducted a linear multiple regression analysis so as to test the relationship among variables (independent) on employee procurement performance. The researcher applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study

Coefficient of determination

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (procurement performance among SACCOs) that is explained by all the four independent variables (Customer service level, procurement cost reduction, buyer/ supplier collaboration, audit and compliance)

The independent variables that were studied, explain only 0.729 on the dependent variable (procurement performance among SACCOs) as represented by the R^2 which forms a 72.9%. This therefore means that other factors not studied in this research contribute 0.291 which is (1-R^2) Therefore, further research should be conducted to investigate the other factors (29.1%) that affect the procurement performance among SACCOs.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics
					Sig. F Change
1	.854(a)	.729	.348	.625	.018

Analysis of Variance (ANOVA)

In trying to test the significant of the model, the study used ANOVA. From table 2 the significance value is 0.018 which is less than 0.05 thus the model is statistically significance in predicting how Customer service level, procurement cost reduction, buyer/ supplier collaboration, audit and compliance on enhancing procurement performance of SACCOS in Kenya a case of Kitui teachers SACCO Ltd. The F critical at 5% level of significance was 2.758. Since F calculated (value =3.653) is greater than the F critical, this shows that the overall model was significant.

Table 2: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.705	4	1.426	3.653	.018
	Residual	9.762	60	.390		
	Total	15.467	64			

Conclusions

The study concluded that Customer service quality, Changes in customer demand, Customer Service management, Information accuracy and Customer loyalty in buying goods/products and goods affect procurement performance to a large extent. The study concluded that SSCCOS can employ effective customer service level on e-procurement for long term SACCO success and the ability to expand and maintain a large and loyal customer base by implementing the use of technological innovations and ICT.

The study concluded that respondents agree to a very large extent that e-business, electronic data interchange transaction costs management, and good governance and internet control application affects the procurement of SACCOS in Kenya. The study concluded that respondents agreed to a large extent that the Information sharing, organization development, organization systems, Channel relationships, Supplier relationship Competencies affects procurement performance. The study revealed that respondents agreed to a very large extent that the accountability affects procurement performance. The respondents agreed to a very large extent that internal audits affect procurement performance. The respondents agreed to a very large extent that External audits affect procurement performance. The respondents agreed to a large extent that regulations affects procurement performance and the respondents agreed to a very large extent that governance affects procurement performance.

Recommendations

The study recommends Customer service should be the source of customer information. It should also provide the customer with real-time information on promising dates and product availability through interfaces with the company's production and distribution operations.

The study recommends that procurement staff should possess sets of skills appropriate in procurement activities. SACCOs must ensure that suitable candidates are employed on the basis of merit and placed in their relevant qualifications, skills, and experience with their roles and responsibilities clearly defined to avoid role conflicts with other professions and departments. Strategies must also be put in place to retain them.   For an entity to derive the full benefit of the procurement reform, procurement function must be placed in strategic management level.

SACCOs in Kenya should review their procurement organization to establish the adequacy or otherwise of the resources including skill levels dedicated to the procurement activity. This work should identify both the base requirements essential to satisfy the issues in governance and separately that required to move the procurement operation towards improved performance, superior performance and Best Value.

The study recommended that e-procurement should be adopted as the standard within the SACCO. All new installations of procurement functional systems should be a part of e-Procurement system (ePS). In addition, given the criticality of this dependency to savings, the complexity and challenge of systems installation and the scarce and fragile nature of available skills, an e-Procurement system installation Task Force should be established under the leadership of the council's Executive's Procurement Directorate. This Task Force should be assigned as required to provide additional support and skills to the project teams at the individual organization level. The study recommends that SACCOs should invest on information sharing, organization development, organization systems, channel relationships and supplier relationship competencies to influence the procurement performance process.

References

Andersen, P.H. and Christensen, P.R. (2008), "Bridges over troubled water: suppliers as connective nodes in global supply networks", *Journal of Business Research, Vol. 58, pp. 1261-85*.

Baldrige, V.J. and Burnham, R.A. (2012), "Organizational innovation: individual, organizational and environmental impacts", *Administrative Sciences Quarterly, Vol. 20,* pp. 165-76.

Chau, P.Y.K. and Tam, K.Y. (2011), "Factors affecting the adoption of open systems: an exploratory study", MIS Quarterly, Vol. 21, pp. 1-24.

Crook, C.W. and Kumar, R.L. (2008), "Electronic data interchange: a multi-industry investigation using grounded theory", Information & Management, Vol. 34, pp. 75-89.

Davila, A., Gupta, M. and Palmer, R. (2008), "Moving procurement systems to the internet: the adoption and use of e-procurement technology models", *European Management Journal,* Vol. 21, pp. 11-23.

Handfield, R.B. (2013), "A resource dependence perspective of just-in-time purchasing", *Journal of Operations Management, Vol.* 11, pp. 28-311.

Harrington, H.J. (2011), Business Process Improvement: The Breakthrough Strategy Total Quality, Productivity and Competitiveness, McGraw Hill, New York, NY.

Hart, P. and Saunders, C.S. (2011), "Power and trust: critical factors in the adoption and use of electronic data interchange", Organizational Science, Vol. 8, pp. 23-42.

Holland, J.H. (2008), Hidden Order: How Adaptation Builds Complexity, Helix Books, Reading, MA.

Hong, W. and Zhu, K. (2009), "Migrating to internet-based e-commerce: factors affecting e-commerce adoption and migration at the firm level", Information &Management, Vol. 43, pp. 204-21.

International Data Corporation (IDC) (2011a).*e-Procurement Applications Market Forecast and Analysis 2010-2003.* IDC Corporation, December 2011.

Jacobs, F.R. and Whybark, D.C. (2010), Why ERP?A Primer on SAP Implementation, Irwin/McGraw-Hill, Burr Ridge, IL.

Kumar, S. and Maher, M. (2008), "Are the temptations of online reverse auctions appropriate for your business?", Supply Chain Management: An International Journal, Vol. 13, pp. 304-16.

Mabert, V.A., Soni, A.K. and Venkataramanan, M.A. (2010), "Enterprise resource planning survey of US manufacturing firms", Production and Inventory Management Journal, Vol. 41 No. 2, pp. 52-8.

Mabert, V.A., Soni, A.K. and Venkataramanan, M.A. (2010), "Enterprise resource planning survey of US manufacturing firms", Production and Inventory Management Journal, Vol. 41 No. 2, pp. 52-8.

Mabert, V.A., Soni, A.K. and Venkataramanan, M.A. (2011), "Enterprise resource planning: measuring value", Production and Inventory Management Journal, pp. 46-51.

Mabert, V.A., Soni, A.K. and Venkataramanan, M.A. (2011), "Enterprise resource planning: measuring value", Production and Inventory Management Journal, pp. 46-51.

Macinnis, D.J. and Jaworski, B.J. (2009), "Information processing from advertisements: toward an integrative framework", Journal of Marketing, Vol. 53, pp. 1-22.

Mandrish, E.M. and Schaffer, R.H. (2008), "Results-driven change: a new look at re-engineering", Human Resources Professional, Vol. 8 No. 5, pp. 7-11.

Mandrish, E.M. and Schaffer, R.H. (2008), "Results-driven change: a new look at re-engineering", Human Resources Professional, Vol. 8 No. 5, pp. 7-11.

Osmonbekov, T., Bello, D.C. and Gilliland, D.I. (2012), "Adoption of electronic commerce tools in business procurement: enhanced buying center structure and processes", The Journal of Business & Industrial Marketing, Vol. 17, p. 151.

Parasuraman, A. (2010), "Technology readiness index (TRI): a multiple-item scale to measure readiness to embrace new technologies", Journal of Service Research, Vol. 2, p. 307.

Rigby, D.K. (2008), "What's today's special at the consultants' cafe?", Fortune, Vol. 138, September 5, pp. 162-3.