

EFFECT OF E-PROCUREMENT ON PERFORMANCE OF SMALL AND MEDIUM SIZE ENTERPRISES: A CASE OFBUNGOMA COUNTY

Vol. 6, Iss. 2, pp 188 - 201, April 8, 2019. www.strategicjournals.com, @Strategic Journals

EFFECT OF E-PROCUREMENT ON PERFORMANCE OF SMALL AND MEDIUM SIZE ENTERPRISES: A CASE OF BUNGOMA COUNTY

Khaoya, E. M.,1* & Muchelule, Y.2

^{1*}Msc. Scholar, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya ²Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

Accepted: April 8, 2019

ABSTRACT

This study examined the effects of E-procurement on Performance of Small and Medium Enterprises (SMEs) in Bungoma County. The descriptive research design was used, and the questionnaire was the data collection instrument. The targeted population comprised of 324 respondents representing five Constituencies according to the study objectives; that is, online customer service, organizational cultural barriers, environmental barriers and technology integration to e-procurement on performance of SMEs. Both quantitative and qualitative data were collected. Analysis of data was done using SPSS version 23. Correlation and regression analysis were used to obtain the relationship between the variables. The analyzed results were presented using tables. It was established that most of the electronic procurement indicators have positive impact on performance of the firm small and medium enterprises in Bungoma County. The study findings showed that the four variables had a significant influence on performance of the SMEs. The study recommended that a similar research should be conducted with an aim at investigating the effects of electronic procurement on performance of SMEs with other variables or of other firms in other sectors, including the service industry in the Kenyan market.

Key Word; E-Procurement, Online Customer Service, organizational culture, environmental barriers, Technological Integration and Performance of Small and Medium Size Enterprises

CITATION: Khaoya, E. M., & Muchelule, Y. (2019). Effect of e-procurement on performance of small and medium size enterprises: a case of Bungoma County. *The Strategic Journal of Business & Change Management*, 6 (2), 188 – 201.

INTRODUCTION

In a competitive and globalized business environment, corporate sectors and business houses need to be at breast with new technological developments as well as manage reduction of operational costs while meeting the organizational goals and objectives (Shaw &Subramaniam, 2012). The coming of innovative intrusion into the commercial center, have made e-showcases in each business segment. This cleared route for a quicker network somewhere in the range of business to business (B2B) trades. The advantages of web based obtaining not just show instances of the expenses of funds yet in addition enhance the manner in which organizations work (ibid). It encourages them to manage a picked couple of providers with better purchasing vital and in addition cut down the organization costs. The present mechanical business world has swung to an electronic obtainment framework (Pushmann 2005). E-Procurement has conveyed to unmistakable quality as of late by the advancement and commercialization of web.

Notwithstanding the client situated procurement of the web, e-procurement is honed through electronic markets and electronic interchange (EDI). Croom& Brandon-Jones, (2004) define E-procurement as alludes to the utilization of web based data and correspondence advances (ICTs) to do individual or all phases of the sourcing, acquisition procedure including arrangement, requesting, receipt, and post purchase audit. While there are different types of e-procurement that focus on one or numerous phases of the procurement procedure, for example, e-tendering, e-commercial center, eauction/reverse and e-catalogue/purchasing, eprocurement can be viewed broadly as a the end arrangement that incorporates and streamlines numerous acquisition forms all through the organization/institution. This incorporates the

results of Davenport (2008) who concluded that e-procurement implementation involves a mixture of different models. E-procurement system basically revolves around intranets and extranets which consist of both the hardware and software that can be self-developed or acquired through third party software providers of e-sourcing suite (Handfield& Robert 2011).

The e-procurement systems are designed to allow the procurement manager to oversee the sourcing cycle, track spend, and apply authority over contract administration in a safe domain. It requires a venture by the purchasing association and requirement for intermittent refreshing and also preparing of clients. The e-tools are basically the Electronic Data Interchange EDI, Internet and Extranet. The web-based EDI commonly used by SMEs is basically designed to allow electronic communication between the buyer and supplier which include request for quotation, processing online payments and tracking product related information. It also involves real time monitoring of inventory and automatic order placement by the buyer's computer, online catalogues, emails and e-auctioning (Clara 2009).

E-marketplace or commonly known as E-shop is another e-procurement platform mostly utilized by small and medium size organizations and individuals. It operates on three major models of SMEs which are the sell-side system which contains products or services of one or more suppliers e.g. Jumia Kenya and Olx. Product information is placed on the site and buyers can access the information with ease and at a low cost. Secondly is the buy-side system which unlike the sell-side systems they are controlled by the buyers and are tied to intranet and extranets. The third model is the third-party marketplaces which consist of independent firms that neither buy nor sell goods but seek to facilitate the electronic purchasing process through value enhancement

e.g. Alibaba.com and walmart.com (Memba et-al 2012).

In Ireland a research by the Global Entrepreneurship monitor (2005), discovered that people beginning/starting and planning new organizations expanded to 9.8 percent up from 7.7 percent in 2004 which is equal to very quarter of a million people in 2005. The report further proposed that there is an expansion in the extent of the populace in the 25-44 ages bunches thinking about enterprenual activities.

Regionally, the adoption of E-procurement of SMEs is viewed as a viable approach to sustainable development because it suits the resources in Africa. MSEs are the main source of employment in developing countries and comprise of over 70% of African business operations. They contribute to over 50% of African employment and GDP. In Nigeria, MSEs contributed an estimated 37 per cent of the GDP (SMEDAN, 2011).In developing nations, for example, Kenya, it needs extensive innovation movement and benchmarks to realize acquisition. The business networks too don't have the activity in changing practices to grasp e-procurement. This has enormously influenced the SMEs.

Statement of the Problem

Adoption of e-procurement is thought to be a way to empower organizations to contend on a worldwide scale, with enhanced effectiveness, and nearer client and provider connections. It is hence pleasant that SMEs should consider Information and Communication Technology (ICT) as an important approach in business to grasp high ground from the overall markets. Also, ICT is an advantage of SME's which may help them to get to information remembering the true objective to update its power. Today's business world has been significantly affected by (ICT) and the determination of ICT among business far reaching. Appropriation of ICT especially in

procurement, organization is rapidly changing overall era, work, business procedures and trade and use plans in and among undertakings and buyers (Memba, Gakure & Karanja, 2012).

The recent trend of growth of SMEs in Kenya, has led to increased competition among the business to business. This has seen SMEs expanding rapidly to cater for increased demand. The expansion is accompanied by massive movement of online services in procurement. This requires efficiency in the procurement process through which can be achieved through implementation of E-procurement.

SMEs have to contend numerous challenges such as lack of capital and stiff competition from more established firms which hinder them from being profitable, growing and staying in business (McIntire, 2012). With increased E-procurement activities SMEs shall be able to address these challenges, these activities are expensive and require specialized knowledge that these SMEs do not have. This inability to market their goods and services has led to numerous negative impacts on SMEs especially on their sales volumes, customer service, market awareness, branding and product and service promotion. These effects can also be felt on a macro level by the employees that work in these companies and the economies that they operate in due to loss of employment and taxes.

Objectives of the Study

The general objective of this study was to investigate the effect of e-procurement on performance of Small and Medium size enterprises in Bungoma County. Specific objective were:

 To establish the effect of online customer service on performance of small and medium size enterprises in Bungoma County

- To establish the effect of organizational culture on performance of small and medium size enterprises in Bungoma County
- To determine the effect of environmental barriers on performance of small and medium size enterprises in Bungoma County
- To assess the effect of technological integration on performance of small and medium size enterprises in Bungoma County

LITERATURE REVIEW

The Innovation Diffusion Theory

Innovation diffusion theory displays that, advancement is a procedure expected to enhance financial improvement, this was proposed by Rogers et al (1998). It is characterized as a thought apparent as new by people. OECD (1997) cited by Andreanne and Swaminathan (2007) defined innovation as All the logical, mechanical, authoritative, budgetary, and business exercises important to make, actualize, and advertise new or enhanced items or procedures Innovation theory brings on board four important elements. The first element is innovation that puts attention on the ability to come up with more efficient and better ways of doing things.

According to innovation theory, rate of adoption of innovative strategies can be looked at in terms of; relative advantage given to the organization, compatibility, complexity, trial-ability of the new strategies and observability to the stakeholders within the social system. The second factor is communication that lays information and creating and sharing information relating to innovative initiatives in the organization. The third element is time that considers the duration involved in the innovation-decision process. The last element is the social context of the new systems (Rogers et al, 1998). Diffusion of innovation strategies requires evolution and reinvention of products and people so that they

are able to perform better (Les Robinson, 2009). The concepts in this theory are very relevant to this study. They help build on the study and enable the researcher understand the expected relationship between the variables.

E-Technology Perspective Theory

E-procurement lacks an overarching definition and encompasses a wide range of business activities. For example, (Choi and Rungtusanatham, 2009),) state that eprocurement remains a first generation concept aimed at buyers, which should progress into esourcing and ultimately into e-collaboration. Ecollaboration allows customers and suppliers to increase coordination through the internet in terms of inventory management, demand management and production planning (Lee, 2010). This facilitates the so-called frictionless procurement paradigm (Brousseau, 2008). This research recognizes the extensive nature of eprocurement and uses the definition provided by (Min and Galle 2005,) where e-procurement is a business-to-business (B2B) purchasing practice that utilizes electronic procurement to identify potential sources of supply, to purchase goods and service, to transfer payment, and to interact with suppliers. The authors believe that this definition provides the scope to investigate the basic level of e-procurement in the Irish ICT manufacturing sector.

The internet has been widely adopted by companies with the aim of improving performances both in internal processes and in processes going beyond their boundaries (Barratt and Rosdahl, 2012). Despite the fact that business-to-business (B2B) trade has enjoyed a quieter existence online than business-to-consumer (B2C) (Barratt &Rosdahl, 2012) the benefits of e-procurement in a B2B setting are significant (Min and Galle, 2009),). Indeed it has been claimed that e-procurement has become

the catalyst that allows companies to finally integrate their supply chains from end-to-end, from supplier to the end user, with shared pricing, availability and performance data that allows buyers and suppliers to work to optimum and mutually beneficial prices and schedules (Morris et al, 2000).

Resource-based theory

The quest for Information Technology has long been a central tenet of the field of procurement and supply chain management (Pressutti, 2003)). Within this field, resource-based theory (RBT) has emerged as a promising new framework for analyzing the sources and sustainability of Information Technology (Baily, 2008)). According to RBT, Information Technology- measured as economic rent (Caridi et al, 2004) - derives from strategic resources. Such Information Technology is sustainable to the extent that the resources on which it is based are valuable, rare, inimitable, and non-substitutable (Bales and Fearon, 2006). The imperfect mobility of resources (including inimitability and non-substitutability) is due to a variety of isolation mechanisms (Roth, 2001) which include co-specialization of assets (Teo and Benbasat, 2003) unique historical conditions (Berger & Calabrese, 2005), causal ambiguity (Liao et al, 2007), social complexity (Barnes et al, 2002), and tacit knowledge and skills (Puschmann and Alt, 2005),). Given that organizational learning and resource-based theory both seek the objective of creating and sustaining competitive advantage as far as information technology is concerned, it seems logical for organizational learning to be identified as a strategic resource within the resource-based view.

Transaction cost theory

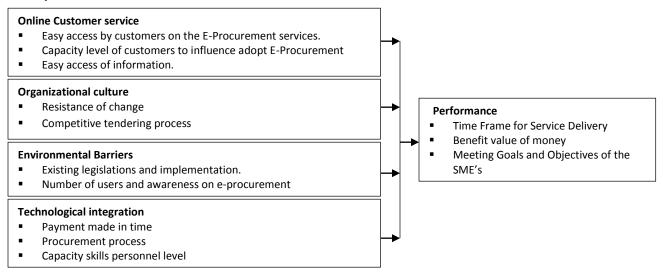
The use of information technology (IT) has facilitated the reduction of coordination costs,

which has been extensively documented in the literature (Bakker et al, 2008). For example, electronic market places, facilitated through IT, reduce the cost of searching for obtaining information about product offerings and prices (Bakker et al, 2008). Also, collaboration facilitated by information sharing can lower transaction costs (in particular coordination costs) as companies can thereby reduce supply chain uncertainty and thus the cost of contracting (Arrowsmith, 2006).

Uncertainty in the context of supply chains and more specifically in manufacturing is caused by supply uncertainty, demand uncertainty, new product development uncertainty, technology uncertainty (Koufteros, 1999). Clearly, supply uncertainty can disrupt manufacturing and have an adverse effect on sales, where distributors and retailers down the chain are also affected. Demand uncertainty can be defined as unpredictable events that occur in downstream part of the supply chain (Koufteros, 1999). Demand uncertainty (or demand risk) can result from seasonality, volatility of fads, new product adoptions, or short product life cycles (PLCs) (Johnston, 2005).

Another uncertainty related to manufacturing concerns new product development. New product development uncertainty can stem from unpredictable events during the process of market research, product design, and product prototyping. Finally, technology uncertainty refers to the fuzziness in the selection of a suitable technology platform (Koufteros, 1999). Furthermore, uncertainty can also arise from political (e.g. fuel crisis), natural (e.g. fire, earthquake), and social uncertainties (e.g. strikes) (Johnston, 2005).

Conceptual Framework



Independent Variables

Figure 1: Conceptual Framework

Source: Author (2019)

Empirical Review

Achieng' (2016) studied how SMEs in Kenya are using online marketing to increase their competitive advantage with a special focus on Tembea Kenya Safaris a tours and Travels Company. The study intended to examine the factors that influenced the adoption of online marketing, the extent of its usage and the strategies put in place to guarantee its success. The study used a descriptive research design and data was gathered using questionnaires and it established that Tembea Kenya Safaris used online advertising to promote their travel packages to potential clients. The study also established that online marketing enables Tembea Kenya Safaris to increase their customer base and personalize the travel packages of their customers.

Kithinji (2014) studied the usage of internet marketing by SMEs in Nairobi County and its effect on their performance. The study was descriptive in nature and survey 90 SMEs using questionnaire, it established that the usage of **Dependent Variable**

online marketing was moderate and that the SMEs faced financial and technological challenges in the adoption of internet marketing. The study also revealed that Social media and websites were the most popular digital marketing strategies and their usage led to increased revenues, competitive advantage and growth; additionally, the loyalty of their customers increased and the SMEs were able to penetrate new markets.

Gefen et al (2012) 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, 2014). 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.

(Kamanda, 2010) 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.

METHODOLOGY

This study adopted a descriptive research design; it is a scientific method that involves observation

and description of behavior of subject without influencing it in any way. The target population consisted of SMEs employees within the county. The unit of observation was 324 SMEs employees in five constituencies within Bumgoma County. A sample size of 204 SMEs employees was deemed good representation of the populations since the sample size is greater than 10 percent of the target population. This study used probability sampling since the population and location of the constituencies is known. The study used stratified random sampling in order to account for the uneven distribution of employees in various counties. The study used questionnaires as the principle information gathering instrument that contained both open finished and close finished inquiries. The information gathered was coded and entered in the PC utilizing SPSS and Ms The exceed expectations. findings were presented pie diagram and tables.

FINDINGS

Effect of Online Customer service on the performance of small and medium sized enterprises Table 1: Online Customer Service

	Mean	Std. Deviation
Inadequacy or absence of IT infrastructure	4.5576	.72710
Insufficient assessment of systems prior to Installation	4.0061	1.04277
Lack of technical expertise and staff in competencies	2.6727	.82267
Fear of security threats and confidentiality of information	2.3030	1.02662

As per the findings, the respondents indicated that Inadequacy or absence of IT infrastructure Performance of small and medium enterprises in Bungoma County as shown by a mean of 4.5576 and that insufficient assessment of systems prior to Installation affected the performance of small and medium enterprises in Bungoma County as shown by a mean of 4.0061.Lack of technical expertise and staff in competencies affects the

performance of small and medium enterprises in Bungoma County to a moderate extent as shown by a mean of 2.6727. The respondents also indicated that Fear of security threats and confidentiality of information. These findings were same as those of Bray (2010), who reports the Inadequate support from system developers and vendors affect the overall growth and performance of small and medium enterprises.

Effect of organizational culture on the performance of small and medium enterprises in Bungoma County

Table 2: Organizational culture

	Mean	Std. Deviation
Employee knowledge influence e-procurement adoption	4.5879	.69098
Size of organization size influence e-procurement adoption	4.4242	.59457
Organizational/business culture do not promote adoption of e-procurement	3.4303	1.47840
Lack of business relationship with suppliers providing e-procurement initiatives	3.4242	1.46567

As per the findings, the respondents indicated that Employee knowledge influence e-procurement adoption as shown by a mean of 4.5879 and had a very great effect on the performance of small and medium enterprises in Bungoma County. The respondents further indicated that Size of organization size influence e-procurement adoption by a mean of 4.4242 which had a great effect on the performance of small and medium enterprises. Further, the respondents indicated Organizational/business culture do not promote adoption of e-

procurement as illustrated by a mean of 3.4303 and Lack of business relationship with suppliers providing e-procurement initiatives affect the adoption of electronic procurement as shown by a mean of 3.4242. This had a moderate effect on the performance of small and medium enterprises in Bungoma County. These findings were supported by Don, (2014) who also asserts that Bureaucracy with poor organizational structures is crucial in the performance of small and medium enterprises.

Effect of Environmental barriers on the performance of small and medium enterprises in Bungoma County

Table 3: Environmental barriers

	Mean	Std. Deviation
The market sector and scope where business operates support procurement/industry pressure	e- 4.6909	.76904
The target audience does not embrace use of technology	4.3394	.64975
E-procurement adoption has no business benefits realized	3.6727	1.00100
Acquisition and implementation cost is high	1.9152	.93968

The respondents indicated that the market sector and scope where business operates support e-procurement/ industry pressure affects the performance of small and medium enterprises to a very great extent as shown by a mean of 4.6909 and that the target audience does not embrace use of technology affects the performance of small and medium enterprises to a great effect on strategy implementation as indicated by a mean of 4.3394. Moreover, the respondents also indicated that E-procurement adoption has no business benefits realized as it has a moderate

effect on the performance of small and medium enterprises in Bungoma County as shown by a mean of 3.6727. Finally, the respondents indicated that Acquisition and implementation cost was high as illustrated by a mean of 1.9152 and has a low effect on the performance of small and medium enterprises. These findings were consistent with those of Yussuf, (2016) who points out Absence of legal regulatory systems affects the performance and the subsequent growth of small and medium enterprises.

Effect of Technological integration on the performance of small and medium enterprises

Table 4: Technological Integration

	Mean	Std. Deviation
Decrease in costs through reduced staffing levels/improved revenues	4.5939	.67901
Quality – e-procurement has improved quality of service delivery	4.3515	.59363
Reduction in Time through improved internal workflow/contract completion	2.8242	.68922
Reduction in purchasing order fulfillment time - Contract Completion	2.2061	.97841

As per the findings, the respondents indicated that Decrease in costs through reduced staffing levels/improved revenues as shown by a mean of 4.5939 affects the performance of small and medium enterprises. Quality – e-procurement has improved quality of service delivery to a very great extent as shown by a mean of 4.3515 on the performance of small and medium enterprises. Further, the study indicated that the respondents agreed that reduction in time through improved internal workflow/contract completion affects the performance of small and medium enterprises as shown by a mean of 2.8242 and Reduction in purchasing order fulfillment time - Contract Completion affects the performance of small and medium enterprise in Bungoma county in a low extent as shown by a mean of 2.2061. These findings were consistent with those of Abdumlingo and Mugambi, (2014) who stated that the information technology

should be incorporated in the business to enhance the efficiency and effectiveness.

Performance of the small and medium firms

The research requested the respondents to indicate the extent to which they agree firms implemented the electronic procurement to enhance their performances in small and medium enterprises in Bungoma County. From the research findings, majority of the respondents neither agree that; the firms implementation of electronic procurement positively affects to the performance of small and medium enterprises in Bungoma County, As such all the variables have effects on the performance of the firm as an important element in its electronic procurement. The firms incorporated electronic procurement also has positive impact on the cost budget, quality and timely delivery as shown in the figure

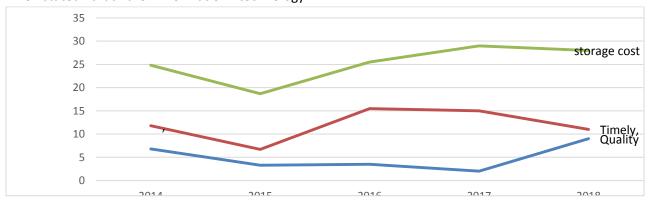


Figure 2: Performance of the firms

Table 5: Correlation matrix

			Online Customer service	Organizational culture	Environmental Barriers	Technological integration
Online	Customer	Pearson	1			
service		correlation				
Organizatio	onal	Sig Pearson	0.413	1		
culture		correlation	0.000			
Environme	ntal	Sig Pearson	0.372	0.460		
Barriers		correlation	0.000	0.000		
Technologi	cal	Sig Pearson	0.421	0.318	0.302	
integration	ı	correlation	0.000	0.001	0.001	
Performan	ce of	Sig Pearson	0.567	0.517	0.502	0.479
Small and	medium	correlation	0.003	0.013	0.021	0.026
enterprises	5.					
		N	193	193	193	

The finding indicated that the correlation between Online Customer services was 0.567 with a corresponding p value of 0.003. The correlation coefficient was therefore significant and positive implying that if Online Customer service elements increase the performance of small and medium enterprises. The findings concur with Chen (2011) findings who also revealed that effective online customer services enhance the performance of small and medium enterprises.

The results further revealed that the correlation between organization culture and the performance of small and medium enterprises was 0.517 with a corresponding p value of 0.013. The correlation coefficient was also significant and positive which implied that an increase in organizational culture increases the performance of small and medium enterprises. This finding conforms to those of Mugambi (2014) who found out that there is a need for adequate business culture for business growth.

The findings also indicate that the correlation between Environmental Barriers and the performance of small and medium enterprises in Bungoma County was 0.502 with a corresponding p value of 0.026. The correlation coefficient revealed a significant and positive association implying that if environmental factors indicators increase the performance of small and medium enterprises also increases. Wickham (2016) also emphasizes that the scope of environmental factors in enhancing the business sustainability.

The finding result indicates that the correlation between Technological integration and the performance of small and medium enterprises was 0.479 with a corresponding p value of 0.021. The correlation coefficient revealed a significant and positive association implying that increase in technological integration increases the performance of small and medium enterprises. According to Opano (2015), technological integration such capacity skills personnel are very essential in enhancing effective performance of small and medium enterprises.

Multiple Regression Analysis

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.892	0.796	0.791	1.073

The adjusted R² from the table found to be 0.791 implying that 79.1% of the variations in performance of small and medium enterprises are explained by changes in Online Customer service, Organizational culture, and Environmental Barriers and Technological

integration. These findings were supported by those of Hitt, Ireland and Hoskisson, (2012) who reported that it is noted that the effective performance in the small and medium enterprises depends on extensive factors in different spectrum.

Table 7: ANOVA Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	734.11	4	183.528	156.335	0.000
Residual	187.83	160	1.174		
Total	921.94	164			

The results show that the regression relationship was highly significant in predicting the effect of Online Customer service, Organizational culture, Environmental Barriers and Technological integration in the performance of small and medium enterprises as shown by p-value (0.000) <0.005 and F calculated at 5 percent level of

significance (156.335)>F critical (value = 2.428). These findings were in line with those of Opano et al, (2015) who stated that one of the larger aspects of developing business skills and abilities is the actual business focus which assist in the performance of business.

Table 8 Coefficients of Determination

Model	Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
	В	Std. Error	Beta		
(Constant)	1.319	0.352		3.747	0.000
Online Customer service	0.634	0.214	0.591	2.963	0.003
Organizational culture	0.793	0.317	0.648	2.502	0.013
Environmental Barriers	0.608	0.271	0.575	2.244	0.021
Technological integration	0.542	0.233	0.517	2.326	0.026

The established model for the study was:

 $Y = 1.319 + 0.634X_1 + 0.793 X_2 + 0.608X_3 + 0.542X_4$

As per regression equation, it was established that taking all the factors constant at zero performance of small and medium enterprises was 1.319.

The findings presented shows that online customer service positively affects performance of small and medium enterprises as shown by r=0.634. This variable was significant since p=0.003 is less than 0.05. These findings were in line with those of Hsieh and Chen (2011) who stated that online promotion is paramount in enhancing growth of the business.

The study further revealed that organizational culture information positively affects performance of small and medium enterprisesas shown by r=0.793. This variable was significant since p=0.013 which is less than 0.05. These findings were consistent with those of Abdumlingo and Mugambi, (2014) who stated that organization culture is very effective in the growth of the business.

Moreover, the study showed that environmental barriers positively affects the performance of small and medium enterprisesas shown by r=0.608 on. This variable was significant since p=0.026 was less than 0.05. These findings were consistent with those of Yusuf, (2016) who points out that the environmental barriers have an impact on the performance of small and medium enterprises.

Finally, the study revealed that a technological integration positively affects the performance of small and medium enterprises as shown by r=0.542. This variable was significant since p-value=0.021 was less than 0.05. These findings were in line with those of Opano et al, (2015) who stated that in addition, the technological integration is key in determining the success of a business.

CONCLUSIONS

The study concluded that access to online customer service elements such as access to information, capacity level of customers and exorbitant hidden charges on the online procurement services positively affects the performance of small and medium enterprises in Bungoma County. The study further revealed that organizational culture elements such as resistance to change and competitive tendering process affect the performance of small and medium enterprises. Increase of information platform provided clear mechanism for access to

market opportunities for profits growth and social media views and encounters improved annual growth of profits positively affecting performance of small and medium enterprises in Bungoma County. Moreover, the study showed that technical integration elements such as payment made on time, procurement process, and capacity skills and personal level positively affects the performance of small and medium enterprises in Kenya, the study revealed that an environmental barrier positively affects the performance of small and medium enterprises.

RECOMMENDATIONS

In the light of the above findings, some pertinent recommendations can be made. These recommendations are geared towards enhancing the performance of small and medium enterprises in Bungoma County.

The study recommends that Adoption of digital technology provided wide range of possibilities for improving competitiveness and market to increase profit growth and thus facilitating the small and medium enterprises in Bungoma County. The study recommends the business utilizes available funds in more effective and efficient manner for business. The study recommends that the enterprises must have easy access to market information to access market for their products.

Suggestion for Further Studies

This study was only limited to Bungoma county. Therefore, the study recommends that the same study should be done in all other counties in Kenya to examine the effect of electronic procurement on the performance of small and medium enterprises. Further research is necessary as the findings were based on a relatively small sample that may have influenced the nature of results that were obtained.

REFERENCES

- Barney. (2007). Organizational economies: Towards a new paradigm for understanding and studying organizations. Carlifornia: Bass Inc.
- Brown, L., & Russell, J.,. (2007). Radio Frequency Identification Technology: Anexp; oratory study on adoption in the South African Retail Sector.. *International journal of information management,* vol. 27, No. 4, 250-65.
- Cai,D. (2009). Improving supply chain performance management:A systemematic approach to analyzing KPI.s accomplishment. In *Dedision Support System* (p. 46(2)).
- Cannon,A.R.,Reyes,P.M., Frazier,G.V.& Prater,E.L. (2008). RFID in the contemporary supply chain:Multiple perspectives on its benefits and risks. *International Journal of Operations and Production Management*, 28(5), 433-545.
- Choy,K.L. (2007). ..Improving logistics visibility in a supply chain:An integrated approach with radio frequency technology.. *International Journal of Integrated Supply Management*, vol. 3, No. 2, 135-55.
- Chwelos,P. (2008). Empirical test of an electronic data interchange adoption model. In *Information Systems Research*, *12*(3) (pp. 304-321).
- Dawson, A. (2006). Supply chain technology. In Work Study, 51(4) (pp. 191-196).
- Denson,C. (2008). Organizational culture and innovation. *Understand the link.* www.denisonculture.com.In Research notes, pp. 2-14.
- Kim,S.W. (2004). Organizational structures and the performance of supply chain management. *International Journal of Production Economics*, *106*, 323-345.
- Kuncoro,M. (2005). *Competitive advantage in information technology: Strategic Management.* Jakarta: Salaemba Empta Inc.
- Lancastre,A & Lages,L.F. (2006). The relationship between buyer and B2B e-marketplace: Cooperation determinants in an electronic market context. In *Industrial Marketing Management,35(6)* (pp. 774-789).
- Langer, N. (2007). .. Assessing the impact of RFID on return center logistics.. In *Interfaces, vol. 37.No. 6* (pp. 501-14).
- Laudon,K.C.,& Laudon,J.P. (2013). Management information systems: Mnaging the digital firm(10th ed.).

 Upper Saddle River, N.J: Pearson Education Inc.
- Lcavou, C.L. (2006). Electronic Data Interchange and Small Organization Adoption and
- Loppacher, M. (2010). Key factors in global headquarters-subsidiary contro; systems. *Journal of Manufacturing Technology Management*, 794-817.
- McGinnis.M.A. (2006). Purchasing and supplier involvement in process improvement: A source of competitive advantage. *Journal of Supply Chain Management*, 35(4), 42-50.
- McGinns, M.C & Kohn, M.D. (2002). Patterns of innovation in technology. In *Technology Review*, 80(7) (pp. 40-47).

- Morgan, D. L. (1997). Focus Groups as Qualitative Research (2nd ed.). London: A Sage University Paper.
- Wickham, P., & Wickham, L. (2008). *Management Consulting: Delivering an Effective Project.* Financial Times, Prentice Hall.
- Neely,K. (2005). Performance measurement system design. *International Journal of Operations and Production Management*, 80-116.
- Ngai, E., & Gunasegaram, R. (2006). .RFID research: an academic literature review (1995-2005) and future research directions.. *International Journal of Production Economics, vol.112.No.2*, 510-20.
- Polit, N. (2006). Research Methodology Techniques. London: Prentice Hall.
- Public Procurement Oversight Authority (2009). *E-GP Planning and change management:*Action Plan for E-GP implementation in Kenya. Nairobi, Kenya:
- Puschmann, T. and Alt, R. (2005). "Successful use of e-procurement in supply chains", Supply Chain Management: *An International Journal*, Vol. 10 No. 2, pp. 122-33.
- RFID Journal. (2004). .RFID speeds P&G plant throughput.. *RFID Journal, Feb.3, available at:* www.rfidjournal.com/article/articleprint/291/1/1 (accessed March 2, 2005).
- Rice, M., & Galvin, S. (2006). Stages of technology life cycle development: Emergence of technology. International Journal of Operations and Production Mnagement, 40-49.
- Roberts, C. (2006). Radio Frequency Identification (RFID).. In *Computer and Security Management*, 25(1) (pp. 18-26).
- Roger, K. (2006). Data collection instruments: Research Methodology. London: Prentice Hall.
- Sengupta, K., Heiser, D.R., & Cook, I.R. (2006). Manufacturing and Service Supply Chain Performance: A comparative analysis. *The Journal of Supply Chain Managenment*, 42(4), 5-16.
- Utterback. (2006). Mastering the dynamics of innovation. In *New Series in Science* (pp. 620-26). India: Prentice Hall.
- Wilson,A., Zeithaml,V.A.,Bitner,M.J.,& D.D. (2008). *Services Marketing:Integrating customer focus across the firm.* New York: McGraw-Hill Education.
- World Bank. (2013). RFID Technology and impacts on supply chain management systems. Performance Index Rating.
- Wu, N.C., Nystrom, M.A., Lin, T.R., & Yu, H.C. (2006). Challenges to global RFID adoption . In *Technovation*, 26(12) (pp. 1317-1323).
- Yugang,N. (2009). On the sub-optimality of full turnover-based storage. *ERIM Report series reference* No.2019-0561-45,(ONLINE),Available at: http://ssrn.com.abstract=1485947.(Accessed 14th April, 2014).
- Zhu. (2006). Electronic Business Adoption by European Firms: A cross country assessment of the facilitators and inhibitors. *European Journal of Information Sytems*, 12(4), 251-268.