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Factors Affecting Supply Chain Best Practices on Performance of Preference Groups in Turkana County, Kenya

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Abstract: This research project was to explore the factors affecting supply chain best practices on performance of preference groups in Kenya. The specific objective for this study was outsourcing, green supply chain, collaborative strategic sourcing and Information and communication technology .This study was anchored on different theories relevant to the variables under this study. This study was a descriptive survey research design. Sample and sampling techniques for this study was Purposive random sampling, since the respondents have the same experience, culture, age and .Data was collected using questionnaires. This was both structured and semi structured questionnaires. Pilot testing of 10% was applied to the responsible respondents so as to reliability and validity of the research instruments and where possible correction was made to improve the research instrument.
Keywords: outsourcing, green supply chain, collaborative strategic sourcing and Information and communication technology and performance of preference groups
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2.1Agency Theory

Agency Theory is thought to relevant in understanding the effect of outsourcing on performance of preference groups in Kenya, hence it gives a theoretical background for this study. The focus of the agency theory originally was on the relationship between managers and stakeholders Delbufalo (1956), but had spread over the time on explaining the relationship between two inter-firm subjects. In that context we associate the agency theory to understanding the relationship between outsourcer and vendor. Sources of the agency problem, moral hazards and adverse selection are should be resolved by monitoring and bonding. Consequently, the application of the theory in the outsourcing process research was in the Preparation Phase (when screening for vendors and defining its own attitude towards the type of the relationship. Naturally, the Managing relationship phase has been also explored, and to a very small extent the Reconsideration phase. The knowledge-based view provides insight in understanding how individuals co-operate to produce goods and services. The knowledge-based view distinguishes two ways how knowledge is shared among partners. They are knowledge generation and knowledge application (Eisenhardt, 1989).

The knowledge-based view has been used in utilized in the outsourcing research to prove that knowledge sharing in the Managing relationship phase is positively related to the success of an outsourcing arrangement. A natural extension is to allow firms to differ in this dimension. We have done some preliminary analysis of what happens when some firms are union and others nonunion and can show that if nonunion firms ever specialize, they do the labor-intensive task. We could use the structure to look at how changes in the extent of unionism impact the degree of outsourcing and also how outsourcing feeds back and impacts the incentive to organize unions (Goldsmith & Yamane, 1968). As another application, we can put this structure in an international context, and study how exposure to international trade impacts the incentive for domestic outsourcing. We expect interesting effects to emerge here because wages impact the incentive for domestic outsourcing (Delbufalo, 1956)

2.2 Innovation Diffusion Theory

Innovation diffusion theory is considered to be relevant in understanding the effect of Purchasing strategy on performance of preference groups in Kenya and hence giving a theoretical background for this for this study. According to Delbufalo (1956, Diffusion of Innovation (DOI) Theory, developed by Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system.The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (purchase or use a new product, acquire and perform a new behavior). The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible. Adoption of a new idea, behavior, or product does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later (Eisenhardt, 1989).

This theory provides a framework with which we can make predictions for the time period that is necessary for a technology to be accepted. Constructs are the characteristics of the new technology, the communication

networks and the characteristics of the adopters. Innovation diffusion can be viewed as a set of four basic elements: the innovation, the time, the communication process and the social system. The concept of a new idea is passed from one member of a social system to another. Delbufalo (1956) redefined a number of constructs for use to examine individual technology acceptance such as relative advantage, ease of use, image, compatibility and results demonstrability. The advantage of the improved system is that it has allowed for better communication between firms since they have to communicate to ensure that less time is taken to realize value of integration (Yen, 2002). The assimilation of e-tendering initiative can be an issue of technology diffusion and adoption of innovation. Obviously, innovation diffusion theory can be used to understand e-Procurement assimilation as the theory has also been extensively used recently as a fundamental theoretical base of innovation adoption research in the field of information systems. As indicated in the innovation diffusion theory the relative advantage, ease of use and compatibility of e-tendering significantly influence lead time, customer satisfaction and reduces cost of procurement (Eisenhardt, 1989).

2.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT theory helps in getting the insight on use of Information Technology and its influence in ICT projects performance in preference groups. Modern projects require ICT in dissemination of information, increase effectiveness and efficiency and delivery of service. ICT enhances networking, timeliness and reduction of errors through use of modern tools like project management software. Delbufalo (1956) developed the unified model through reviewing eight models which explain ICT usage, namely Theory of Reasoned Actions (TRA), Technology Acceptance Model (TAM), the motivational model, Theory of Planned Behavior (TPB), a model combining TAM and TPB, the model of PC utilization, Diffusion of Innovations (DOI), and the social cognitive theory. The purpose of UTAUT is to explain a user's intentions to use ICT and the subsequent user behavior (Yen, 2002). The model considers four constructs as direct determinants of user acceptance and usage behavior, namely performance expectancy, effort expectancy, social influence, and facilitating conditions. There are four key moderating variables: gender, age, experience, and voluntariness of use. The authors stated that UTAUT provides a tool for managers to assess the likelihood of success of ICT projects and to understand the drivers of acceptance in order to design interventions, which include; training or marketing. UTAUT focuses on users who may be less washing to adopt and use new systems. This theory is applicable in organization due to the fact that not every member of an organization was embrace new ICT systems (Eisenhardt, 1989).

2.3.1 Outsourcing

Outsourcing has been in business literature for many years and it has been observed that firms are outsourcing to leverage production to achieve economy of scale and lower the cost, for instance 30-40% of Nokia mobile production has been outsourced. However, the current wave of outsourcing is subject to Information Technology revolution which enabled the process. This is a review paper regarding outsourcing in which wide range of information on outsourcing is being provided. All relevant key issues, emerging trends, future direction and finally conclusion is being discussed. This research is worth doing to understand and evaluate the importance of business done in International dynamic environment and working with cross cultural teams as a result of offshore outsourcing arrangements (Vries & Yehoue, 2012). The literature review has been conducted in order to bring the valuable information into analysis and discussion. The focus in this section is on the importance of the outsourcing both in service and manufacturing industry. Three views have been discussed which have been cited extensively in outsourcing literature. These are Transaction Cost View, Competence Based View, and Relational View. The second main part of the project is analysis and discussion of the outsourcing trends, who gains and who loses and the rationality of outsourcing decision, and long term strategic implications for the firm (Mutai & Osoro, 2021). Finally conclusion is a logical flow of the whole project into a comprehensive and a meaningful final part which enables readers to gain an insight of the outsourcing industry, its importance and some issues. A company that handles network security services such as intrusion detection and prevention, spam blocking and firewall capabilities for its clients can outsource security for its information from well-established security service providers. Industrial premises also need security and to enable the organization to concentrate in its core mandate, they must outsource this service (Veger & Novelli, 2012).

Outsourcing makes the organization to get value for is money realized from best service providers selected competitively from the market. A market is defined as the sum total of all the buyers and sellers in the area or region under consideration. The area may be the earth, or countries, regions, states, or cities. The value, cost and price of items traded are as per forces of supply and demand in a market. The market may be a physical entity, or may be virtual. It may be local or global, perfect and imperfect. In economics, the product market is the marketplace in which final goods or services are offered for purchase by businesses and the public sector. Outsourcing has been defined as the process of engaging a third party provider to perform services for the host organization that were previously performed in-house. In this definition, third party provider (3PL) refers to any entity outside the traditional supplier-carrier-consumer relationship.

2.3.2 Green Purchasing

According to Veger and Novelli (2012), green procurement is the practice of purchasing environmentally preferable products and services, which are products or services that have a lesser or reduced effect on human health and the when compared with competing products or services that serve the same purpose. Such products or services may include, but are not limited to, those which contain recycled content, minimize waste, conserve energy or water, and reduce the amount of toxins disposed of or consumed. Organizations recognize that there are a large number of consumers with a broad spectrum of goods and services. Every purchase has an environmental impact resulting from the combined effect of a product's manufacture, delivery, use, and disposition. Leading companies that decided to go along with green procurement activities are experiencing tangible benefits. Strategic sourcing can create value through increased overall cost efficiency, enhanced reputation and market share, and reduced environmental risks and liabilities. These companies get economic benefits by reducing supplier-generated wastes and surpluses, companies decrease handling expenses and risks associated with waste disposal. In addition, a supplier's savings from improved efficiencies may be passed along to buyers in the form of reduced prices. Competitive advantage is also acquired through innovation. Efficient production may be enhanced through suppliers' use of cleaner technologies, process innovation, and waste reduction (Mutai (Osoro, 2021).

2.3.3 Collaborative Strategic Sourcing

From a theoretical perspective, most studies of collaboration are limited to "the process of collaboration, its stages, or its success components. Few studies discuss the actual plan or outcomes..." detailed six types of outcomes which have been written about in the collaboration literature: plan-centric, process centric, partner-centric, outside-stakeholder centric, person-centric, and environmental centric (meaning context related (Mutai & Osoro, 2021). Of these, this study is interested in the outcomes related to the achievement of goals articulated in the collaborative strategic plan referred to here as "plan outcomes". Progress towards the achievement of collaborative strategic plan goals is typically documented in reports, such as "state of the environment reports". By documenting results over a number of years, progress towards the goals can be monitored. Plan-centric outcomes can be contrasted with process-centric outcomes, which are "outcomes that lead to alterations, adaptations, and changes to the collaboration formation, design, and implementation process, along with actions as part of the implementation process" Typically, a cross-sector social partnership also monitors process outcomes (e.g., the number of organizations engaging in implementation efforts). This study is interested in the structural features, including process features, which enable the achievement of plan outcomes. Structure is made up of the partners, form(s), and processes. There is a wide variety of structural arrangements that may emerge during the implementation phase. The question is which structural features are critical for achieving plan outcomes (Minner, 2018).

2.3.4 Information and Communication Technology

Refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums (Mutai & Osoro, 2021). For an organization to be ICT compliant, the number of computers available for use by supply chain stakeholders is looked at and made available for the players of supply chain to access supply chain data using computers, these way, its deemed that the data is accessed as required. The users of these computers should be adequately trained to make them utilize these computers with an aim of aiding the organization to achieve desired output of supply chain. Intergrating system of supply chain stakeholders to allow procuring entity supply chain staff to prepare bid documents and sending them to the preference groups and in return the preference groups responds to the bids. The supply chain staff opens and evaluate the bids with an aim of selecting the winner and communicating results to the successful and unsuccessful in the same integrated system (Ongeri & Osoro, 2021). Supply Chain Management has emerged quickly throughout the early part of 21st Century due to improvement in technology. Technology is increasingly affordable and available to help organizations to take advantage of supply chain strategies. Because of the competitive pressures facing business it is critical for them to use supply chain strategies to create synergies with supply chain partners in order to succeed in the global competitive environment. High level best practice for SCM, technology can apply to any business, even though the operation may be specific to an organization implementing a specific SCM System, for example, could be a waste of money if the overall operation is a problem. Automating a broken process does not fix the process.

2.3.5 Performance of Preference Groups

The effect of overriding socio-economic requirements of the country, the Public Procurement and Disposal (Preference and Reservations) Regulations 2111 was gazette in the legal notice number 58. These regulations provide a framework for the implementation of preferential procurements in Kenya's public procurement (Mutai & Osoro, 2021). The preference regulations allow government entities conducting procurement processes to allocate procurement opportunities to special groups i.e. youth, women and persons with disability. The public entities are supposed to institutionalize procurement plans which should have a total reservation of at least 30% of the procurement budget to the special groups. The regulations also give guidance to government entities on how to advertise and evaluate the bids submitted by the special groups. Public entities was also be required to submit quarterly reports to the Public Procurement Oversight Authority (PPOA) for compliance audits. To participate in

the new preferred and reserved public procurement scheme, the youth, women, and persons with disability are required to register their enterprises with the relevant government body. The public entities was also be required to authenticate tender awards and purchase orders and enter into agreements with relevant financing institutions with an undertaking that the contracted enterprise was paid through the account opened with the financier (Mwakubo & Ikiara, 2007).

The government has further refined the procurement laws to ensure the special groups, i.e. persons with disabilities, women and youth meet the threshold required so as to utilize the 30% of the government tenders as read in the 2113/2114 budget. In the year 2113/14, the GOK is expected to spend about 70% of the 1.6 Trillion Shillings budget on procurement of goods and services. 30% of all government procurement amounting to approximately 336 Billion Shillings was reserved for women, youth, persons living with disabilities and small and medium enterprises in a bid to even the playing field and provide equal opportunities to these groups. Categories of goods and services that was procured on preferential basis to persons who have been previously discriminated or disadvantaged by unfair competition was required to be put in the procurement plans of the public institutions (Mwakubo & Ikiara, 2007).

3.1 Research Gap

The empirical indicates, it is evident that research in the area of preference groups performance has been done but not in a comprehensive approach. The research by Standish group mainly concentrated on western countries and due to technological and industrial innovations difference between African and Western countries, these findings can't be used to generalize the situation in Kenya. Additionally the argument by Mutai and Osoro (2021 on the failure of supply chain best practices and preference groups is also not adequate to represent public sector in Kenya especially in Turkana County. Similarly, supply chain best practices attacked by other scholars as reported by international journals does not give an answer to the specific factors that affects performance of preference groups in Kenya, neither does it give clear link of the attack to any factors under study in this study and therefore can't be used to determine the effects of outsourcing, green purchasing, Purchasing strategy and information and communication technology on performance of preference groups (Nyoike, 2012). This study therefore seeks to bridge the research gap by determining the factors affecting outsourcing, green purchasing, Purchasing strategy and information and communication technology on performance of preference groups in Kenya. Hence the study intends to bridge the existing research gap by the new knowledge which has resulted from research findings.

A research design is a comprehensive outline of carrying out an investigation (Kothari, 2011). It includes the procedure used in data collection, the instrument, how the instruments are used, and the analysis of data. The research design suitable for this study was descriptive research design. A descriptive research defines a predetermined characteristic of a phenomenon or population under study. The study design used a descriptive research design .Both qualitative and quantitative data was collected. Employees from Turkana County government departments such as ; ministry of trade gender and youth affairs, health and sanitation, water and natural resources, education and sports, finance and economic planning, public service,administration and disaster management,tourism and culture Pastral economy and agriculture, lands Physical planning and urban areas management and office of the governor was interviewed.An Analysis of Variance was used to measure statistically the significance in predicting how independent variables; Outsourcing, Green Purchasing, Collaborative Strategic Sourcing, Information and Communication Technology on Performance of Preference Groups. The test of significance was correlation coefficient, the R square as a measure of significance. The coefficient is a standard measure of an assumed linear relationship between variables. A coefficient of value between (+ve) 0.5 and (-ve) 0.5 or higher indicates a strong relationship and by extension a significant variable in influencing the trend of the dependent variable.

Respondents were asked to give their opinion on the variable out sourcing. From table 4.6, the respondents were in agreement that out sourcing ensured performance of preference groups and periodic review on Turkana County viable (M=3.834, SD=1.0726); Through supplier quality assessment the county has been able to make rational decisions on priority and non-priority projects (M=3.814, SD=.9004); out sourcing assessment has contribution to the quality and innovation of the planning team (M=4.001, SD=.9564); In order to avoid over expenditure in out sourcing it is important to put in place and maintain procurement record/ register (M=4.169, SD=.8005); The management of Turkana County implements performance of preference groups to prevent fraud in supplier evaluation (M=3.963, SD=1.238); and out sourcing enhances performance of preference groups at Turkana County (M=3.001, SD=.8135). These findings were in line with the findings of Ongeri and Osoro (2021) who observed that clear description of out sourcing, can enhance effective performance of preference groups process.

Table 1: Out sourcing

Statement	Mean	Std. Dev.

My county ensures conformance of out sourcing	3.834	1.0726
Through supplier reliability my county has been able to make rational decisions on priority and non-priority projects.	3.805	.9004
Responsiveness of supplier has contribution to performance of preference groups in Turkana County	4.001	.9564
In order to avoid over expenditure in procurement it is important to put in place and maintain a out sourcing	4.169	.8005
The management of my county implements out sourcing	3.963	1.238
Out sourcing enhances performance of preference groups at Turkana County	3.001	.8135

3.2 Pearson Correlation Analysis

The study further conducted inferential statistics entailing both Pearson and regression analysis with a view to determine both the nature and respective strengths of associations between the conceptualized predictors such as out sourcing, green purchasing, strategic sourcing and information and communication technology and performance of preference groups of Turkana County in Kenya.

3.3 Regression Analysis

To establish the degree of the effect of supply chain for a regression analysis was conducted, with the assumption that: variables are normally distributed to avoid distortion of associations and significance tests, which was achieved as outliers were not identified; a linear relationship between the independent variables and dependent variable for accuracy of estimation, which was achieved as the standardized coefficients were used in interpretation. The multiple regression model was as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X3 + \beta_4 X_4 + \varepsilon$

Performance of preference groups of Turkana= $\alpha + \beta_1$ (out sourcing) $+ \beta_2$ (green purchasing) $+ \beta_3$ (strategic sourcing) $+ \beta_4$ (information and communication technology) + error term. Regression analysis produced the coefficient of determination and analysis of variance (ANOVA). Analysis of variance was done to show whether there is a significant mean difference between dependent and independent variables. The ANOVA was conducted at 95% confidence level.

3.4 Model Goodness of Fit

Regression analysis was used to establish the strengths of relationship between the performance of preference groups of Turkana (dependent variable) and the predicting variables; out sourcing, green purchasing, strategic sourcing and information and communication technology (Independent variables). The results showed a correlation value (R) of 0.763 which depicts that there is a good linear dependence between the independent and dependent variables. This finding is in line with the findings of Ongeri and Osoro (2021). They observed that this also to depict the significance of the regression analysis done at 95% confidence level. This implies that the regression model is significant and can thus be used to evaluate the association between the dependent and independent variables. This finding is in line with the findings of Ittmann (2018), who observed that analysis of variance statistics examines the differences between group means and their associated procedures.

Table 2. Model Goodness of Fit

R	R^2	Adjusted R	Std. Error of the Estimate
0.762	0.763	0.736	0.058

a. Predictors: (Constants); out sourcing, green purchasing, strategic sourcing and information and communication technology

b. Dependent Variable: performance of preference groups of Turkana

With an R-squared of 0.763, the model shows that out sourcing, green purchasing, strategic sourcing and information and communication technology can contribute up to 76.3% on performance of preference groups of Turkana County, while 23.7% this variation is explained by other indicators which are not inclusive in this study or model. A measure of goodness of fit synopses the discrepancy between observed values and the values anticipated under the model in question. This finding is in line with the findings of Ongeri and Osoro (2021).

Conclusion

Therefore, from the foregoing, this study concludes that out sourcing had broad impact on performance of preference groups of Turkana County in Kenya. The findings conclude that any county should drive to embrace the best performance of preference groups after improving other supply chain management in Kenya. When public-private partnerships is embraced through green purchasing, strategic sourcing, and information and communication

technology then the implementation of performance of preference groups of Turkana County in Kenya. The study concludes that there is a positive relationship between out sourcing and Performance of preference groups. A well-integrated internal supply chain should provide excellence in green purchasing on performance of preference groups of Turkana County in Kenya. The study established that competence reviews, supplier performance, Supplier skills, supplier knowledge, supplier training, Turkana is able to identify problems and find solutions in a timely manner to ensure collaborative strategic sourcing of the goods and services delivered by preference groups. There is a positive relationship between information and communication technology and performance of preference groups. The study further concludes that by adopting alternative coordination and partnership mechanisms as it was observed at Turkana, the level of performance of preference groups would tremendously increase. Therefore, the study concludes that Turkana would improve preference group performance significantly in service delivery through embracing proper coordination in the supply chain management practices.

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