

Factors Influencing Adoption of Sustainable Procurement Practices in Manufacturing Sector in Kenya: A Case Study of Popular Nutri Foods Kenya Limited (PNFKL)

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Abstract: The aim of the study was to find out the factors influencing adoption of sustainable procurement practices in manufacturing sector in Kenya. Manufacturing sector in Kenya is expected to play a key role in the growth of the Kenyan economy with the overall aim of increasing its contribution to Gross Domestic Product (GDP) by at least 10 per cent. The specific objectives of the study were to examine the effects of Perceived Cost; Staff Involvement; Top Management support and Organizational Culture, on the role they play in the adoption of sustainable procurement practices. A conceptual framework was developed to guide the study. The study used descriptive survey design and sampled 45 employees. Questionnaires were used to collect data which was analyzed according to the research objectives. The study found out that Perceived Cost, Staff Involvement, Top Management support and Organizational Culture plays an important role in the adoption of Sustainable Procurement Practices in the manufacturing sector. The study recommends that while sustainable procurement practices costs more, the sector should focus on lifecycle costs, that the government and other stakeholders should ensure that there are structural and organizational changes to support green procurement practices, that staff involvement plays a big role in promoting adoption of sustainable practices and that organizations should enhance organizational culture that promotes adoption of sustainable practices and that those policies already in place should be reviewed periodically so to remain relevant and up-to-date.

Keywords: Cost leadership strategy, Stakeholder and Sustainable procurement.

1. INTRODUCTION

With the change of the social economic development level and market environment, enterprise competitive means have developed gradually from the quality competition, the service competition, the brand competition to the green competition. The export of products is threatened by "international green trade barriers" which directly affect business competitiveness in the global market. In addition, customers increasingly incline to the environmentally friendly products due to a large number of unethical business practices in the consumer goods industry that have been exposed. Facing to a variety of competitive pressure from the external environment, country's enterprises must start the green transformation and management to the whole supply chain from purchasing raw materials to delivering the products to enhance its competitiveness by reducing the number of raw materials and waste, recovering, collecting, reusing, recycling and reprocessing the scrap and old product and packing. The company green purchasing which is the source of green transformation process is the key factors to carry out the green transformation (Min & Galle, 1997).

Statement of the problem:

Business organizations should be the back bone of the society in saving our environment by spearheading the green practices due to the size and visibility of these companies (EITayeb et al. 2009). However, food manufacturing companies are actually deteriorating the environment and ecology severely with irreversible impacts in consideration of the enormous amount of un-recyclable resources consumed. Lee and Chen (2010) have identified 70% of pollutants on Earth are discharged by food manufacturing industry which might cause severe destruction towards environment such as global

warming, ozone depletion and air pollutions. According to an estimate as stated in Green Purchasing Network Kenya(2013), in the 1990s, the average solid waste disposal by Kenya was 0.7 kg per day and today the solid waste disposal of Kenya has risen to about 2.2 kg per day. Most of this solid waste disposal is believed to be from the food manufacturing industry. If this trend continues, there will be severe destruction towards environment issues. Experts do believe that, a landfill can last 10 years longer if Kenyans recycled 50% of their solid waste (Green Purchasing Network Kenya, 2013). Therefore, it is extremely important for the food manufacturing industry, especially to adopt green purchasing practices to save both the environment and the society, as food manufacturing firms are recognized as the major contributor towards the GDP of the country (Green Purchasing Network Malaysia, 2003).

Kenyan fully owned food manufacturing firms have the lowest level of participation in the green initiatives compared to foreign based companies (ElTayeb et al. 2009). One of the reasons that Kenyan owned firm having the lowest participation in GP is because it is still a very new concept in Kenya (Green Purchasing Network Kenya, 2013). Lee (2008) added that food manufacturing firms usually lack information resources or expertise to deal with the environmental issues. Therefore, food manufacturing firms are recognized as the main source of environmental risk and bottleneck in pursuing the goal of green supply chain management (Goh & Zailani, 2010). According to Goh & Zailani (2010), with the increasing trend of global environment protection awareness, food manufacturing firms in Kenya will be out of the competition if green initiatives are not adopted in their business strategy. The empirical studies on green purchasing are considered low as the drivers for green purchasing adoption is not given importance in the previous studies (Chien & Shih, 2007; ElTayeb et al. 2009; Hsu & Hu, 2008; Srivastara, 2007

Hence, it is crucial to investigate factors which influence food manufacturing firms to adopt green purchasing practices. Therefore, this study aimed to fill the gap in the literatures by investigating factors influencing effective adoption of sustainable procurement practices in food manufacturing firms. Hence, it is believed that the results from this study would serve as a useful model for food manufacturing firms in Kenya in getting better understanding on influencing factors influencing effective adoption of sustainable procurement practices in food manufacturing firms and its significant relationship towards Green Purchasing (GP) adoption

Objectives:

1. To find out the extent to which Perceived Cost influence the adoption of sustainable procurement practices in manufacturing sector in Kenya.
2. To establish how Staff Involvement influence the adoption of sustainable procurement practices in manufacturing sector in Kenya
3. To assess the effects of top management on adoption of sustainable procurement practices in manufacturing sector in Kenya
4. To establish how Organizational Culture influence the adoption of sustainable procurement practices in manufacturing sector in Kenya

2. THEORETICAL REVIEW

Porter's Theory of Competitive Advantage:

According to Porter's Theory of Competitive Advantage, cost leadership strategy is one of the options available to organizations for gaining competitive advantage which in this study can be achieved through promoting sustainable procurement. Porter (1985) purports only one firm in an industry can be the cost leader and if this is the only difference between a firm and competitors, the best strategic choice is the low cost leadership role (Malburg, 2000). This strategy focuses on gaining competitive advantage by having the lowest cost in the industry (Porter, 1996). In order to achieve a low-cost advantage, an organization must have a low-cost leadership strategy, low-cost manufacturing, and a workforce committed to the low-cost strategy (Malburg, 2000). The organization must be willing to discontinue any activities in which they do not have a cost advantage and should consider outsourcing activities to other organizations with a cost advantage (Malburg, 2000). Lower costs and cost advantages result from process innovations, learning curve benefits, and economics of scale, product designs reducing manufacturing time and costs, and reengineering activities.

Agency Theory:

Adoption of green procurement as espoused in the Public Procurement Policy of 2009 .According to Jensen and Meckling (2003), an agency relationship is "a contract under which one or more persons (principals) engage another person (the

agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent.” In this relationship, the agent must act in an honest way since the chosen actions have consequences for both parties. Consistent with the tenets of agency theory, it is assumed that agents i.e. purchasing officials are rational, self-interested people. This concept assumes that the principal and agent do not share the same levels of information, and as such, the agent can exploit a situation, sometimes to the disadvantage of the principal. Agency theory is most relevant in public contracting. Situations arise where there is a substantial conflict of interest between principals and agents and sufficient outcome uncertainty to trigger the risk implications of the theory (Eisenhardt, 1989). This is particularly relevant to public procurement functions as staff may have conflicting interests contrary to laid down procedures thus affecting the organizations processes.

Stakeholder Theory:

A stakeholder is “any group or individual who can affect or is affected by the achievement of an organization’s objectives” (Freeman, 2004). It is well known that companies produce externalities that affect different stakeholders. These externalities often cause stakeholders to increase pressures on companies to reduce negative impacts and increase positive ones. The theory suggests that a firm should pursue strategies that consider the parties affected by decisions while trying to minimize damage or maximize benefits to the representative groups (Freeman 2004). Staffs of the manufacturing firms are one of their key stakeholders. This calls for companies to think beyond financial performance but have obligations towards their staffs or employees in other words, (Jones, 2003). In this interplay businesses’ obligations go beyond the traditional fiduciary duties to shareholder and extend to the employees of the company. (Jones, 2003). Public sector in particular has to meet the different needs of stakeholders, particularly when environmental issues are introduced so as to avoid any attempt of resistance from them (de Brito et al., 2008).

Institutional theory:

Institutional Theory provides a theoretical lens through which researchers can identify and examine influences that promote survival and legitimacy of organizational practices, including factors such as culture, social environment, regulation (including the legal environment), tradition and history, as well as economic incentives, whilst acknowledging that resources are also important (Baumol et al., 2009, Brunton et al., 2010, Lai et al., 2006). Institutional Theory is traditionally concerned with how groups and organizations better secure their positions and legitimacy by conforming to the rules (such as regulatory structures, governmental agencies, laws, courts, professions, and scripts and other societal and cultural practices that exert conformance pressures) and norms of the institutional environment (Scott, 2007). According to Institutional Theory external social, political, and economic pressures influence firms’ strategies and organizational decision-making as firms seek to adopt legitimate practices or legitimize their practices in the view of other stakeholders.

Conceptual Framework

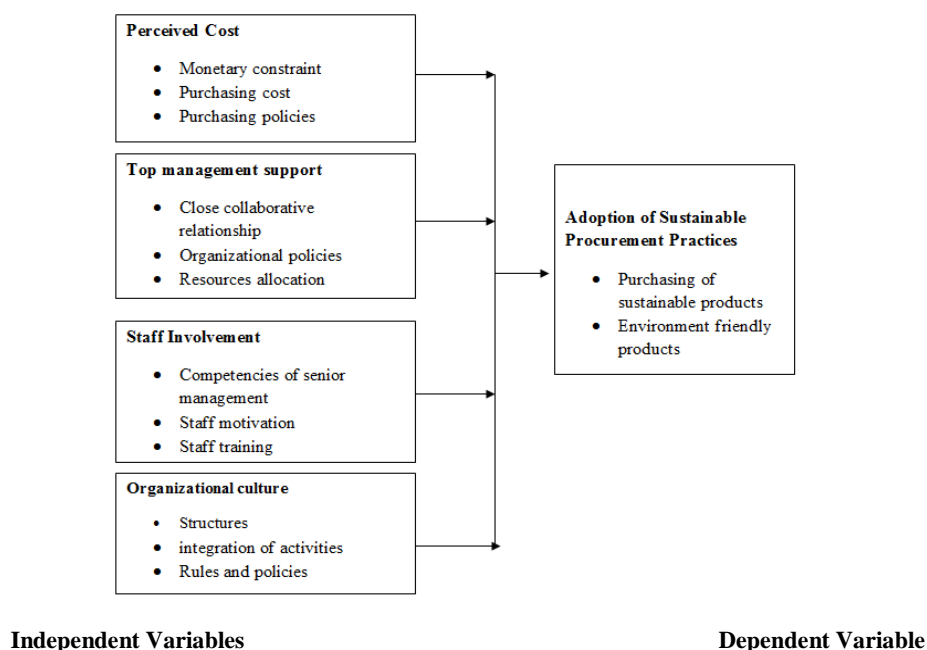


Figure 2.1: Conceptual Framework

Critique of the Existing Literature:

According to Sustainable Procurement Task Force (2006) a key criticism is that sustainable/green procurement products cost more. But one has to look at the lifecycle costs, a sustainable product may cost more initially, but a longer lifespan and lower maintenance cost means the total cost of ownership is lower than that of a non-sustainable product. Recycled materials and products have long been recognized as making an important contribution to sustainability by reducing landfill (and therefore methane emissions) and conserving non-renewable resources show that over their full life cycle they also have an important part to play in reducing carbon dioxide emissions. And while greener products might be more expensive initially, government procurement can drive economics of scale demand increased and industry invested in facilities, which will bring down prices.

Research gaps:

When it comes to the study of sustainable procurement practices in the public sector specifically limited research exists that addresses issues that challenge or acts as barriers to their implementation. For example, researcher (Chien & Shih, 2007; Ninlawan et al., 2010; Kumar et al., 2012) works on the implementation of green procurement practices in electronics industry, and on how sustainability can be encouraged when the public sector buys from suppliers in specific industries (Hall and Purchase, 2006; Matthews and Axelrod, 2004; Sonnino, 2009). Others have conducted in private sector manufacturing contexts (Hall and Purchase, 2006; Matthews and Axelrod, 2004; Sonnino, 2009; Gatari, 2014). This study therefore will seek to study the factors that influence adoption of green procurement practices in manufacturing sector.

3. RESEARCH METHODOLOGY

The research design used in this study was descriptive research design. The target population was comprised of 150 staff members of Popular Nutri Foods Kenya Limited (PNFKL). The sample obtained from the population was a representative of the same population. This was accomplished by using simple random sampling approach. The researcher used questionnaires as research instruments to collect data. The statistical Package for Social Sciences (SPSS) was used for data analysis purpose.

Model:

The study employed time series multiple regression method. In this study the following was the regression equations that were used to test the significance of the study hypotheses:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where

Y = the dependent variable Sustainable Procurement Practices

β_0 = Constant Term

$\beta_1, \beta_2, \beta_3$ and β_4 = Beta coefficients

X1 = Perceived Cost

X2 = Staff Involvement

X3 = Top Management

X4 = Organizational Culture

ε = Error term

4. RESULTS AND DISCUSSION**Regression Results:**

Table 1: Regression coefficients of the relationship between adoption of sustainable procurement policies in the manufacturing industry and the four predictive variables

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig
1	(Constant)	1.054	0.217		4.85	0.000255
	Perceived Cost	0.789	0.149	0.613	4.58	0.000215
	Staff Involvement	0.715	0.181	0.149	3.87	0.000145
	Top management	0.764	0.196	0.234	3.06	0.00025
	Organizational Culture	0.706	0.091	0.138	8.39	0.000191

$$Y = 1.054 + 0.789X_1 + 0.715X_2 + 0.764X_3 + 0.706X_4$$

Where Y is the dependent variable sustainable procurement practices in manufacturing sector

X1 - Perceived Cost

X2 - Staff Involvement

X3 - Top management

X4 - Organizational Culture

The regression equation above has established that taking all factors into account (perceived cost, staff involvement, top management and organizational culture) constant at zero sustainable procurement practices in manufacturing sector was 1.054. The findings presented also show that taking all other independent variables at zero, a unit increase in the perceived cost would lead to a 0.789 increase in the scores of sustainable procurement practices and a unit increase in the scores of staff involvement would lead to a 0.715 increase in the scores of sustainable procurement practices in manufacturing sector. Further, the findings show that a unit increases in the scores of top management would lead to a 0.764 increase in the scores of Organizational Culture. The study also found that a unit increase in the scores of organizational culture would lead to a 0.706 increase in the scores of sustainable procurement practices in manufacturing sector. Overall, perceived cost, had the greatest effect on the sustainable procurement practices in manufacturing sector, followed by top management, then staff involvement while organizational culture had the least effect to the sustainable procurement practices in manufacturing sector.

5. CONCLUSIONS

The study sought to establish the extent to which Perceived Cost, top management support, Staff Involvement and Organizational Culture on adoption of sustainable procurement practices in manufacturing sector. From the study findings, this study concludes that perceived cost enhances Purchasing of sustainable products, Environment friendly products and Policies implementation on environmental degradation through monetary constraint and purchasing cost. The study concludes further that top management support purchasing of sustainable products, Environment friendly products and Policies implementation on environmental degradation through close collaborative relationship, organizational policies and resources allocation. Furthermore, the study made a conclusion that Staff Involvement enhances Purchasing of sustainable products, Environment friendly products and Policies implementation on environmental degradation through competencies of senior management, staff motivation and staff training. Finally, the study concluded that organizational culture enhances purchasing of sustainable products, environment friendly products and policies implementation on environmental degradation through staff training, structures and attitudes.

6. RECOMMENDATIONS

This study recommends that while sustainable procurement practices cost more, manufacturing sector should focus on the lifecycle costs, a sustainable product may cost more initially, but a longer lifespan and lower maintenance cost means the total cost of ownership is lower than that of a non-sustainable product.

This study recommends that the government and other stakeholders should ensure that there is structural and organizational change to support implementation of green procurement practices, organizations should also improve on relationships between management and stakeholders so as to ensure top level management support.

Since staff involvement plays a big a role in promoting adoption of green procurement practices, the study recommends that the organization should ensure that its staff has sufficient special techno-economic knowledge and openness to new, effective methods to ensure, internal expertise on green procurement practices topics when assessing tenders for green procurement practices implementation through training and communication.

The study recommends that the organization needs to enhance organizational culture that promote adoption of sustainable procurement practices and those that already have such in place need to be reviewed and revised to integrate sustainable procurement issues and other green procurement issues.

Areas for Further Research:

This research was intended to identify factors influencing adoption of sustainable procurement practices in manufacturing sector in Kenya but data was collected from only one manufacturing firm in Kenya, hence future research should focus on other manufacturing firms within the country as well as inclusion of other factors that could affect effective the adoption of sustainable procurement practices in manufacturing sector in Kenya. Also, more research is needed to analyze the effect of sustainable procurement practices on economic systems, if sustainable procurement practices is able to steer public institutions into promoting resource saving and sustainable innovation. In addition, the study suggests that detailed research could be done to ascertain the effect of each component of the sustainable procurement individually and not all of them in a package as were the case in this study. A study could also be conducted on individual players within each force such as the effect of perceived cost, staff involvement, top management and organization culture on sustainable procurement within and outside the industry should be conducted in the local setting as a way of gathering generalizable findings that could act as guidelines for policy recommendations in sustainable procurement.

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