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THE INFLUENCE OF PURCHASING RISK MANAGEMENT ON SUPPLY CHAIN PERFORMANCE OF MANUFACTURING FIRMS IN NAKURU COUNTY, KENYA

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Abstract

Many manufacturing firms look to continuous improvement as a tool to enhance their core competitiveness using Supply Chain Management (SCM). Heightened competition among firms posed by globalization, firms can drive value through effective SCM. Researchers notes that firms should look at whole SC performance as opposed to improving particular functions like logistics while neglecting upstream and downstream effects. A study argued that environmentally proactive companies are increasingly managing their suppliers' environmental performance to ensure that purchased materials are environmentally friendly and have been produced by environmentally conscious processes. Green purchasing revolves around evaluation of suppliers 'environmental performance and providing advice to suppliers to improve their performance. This study however did not investigate into the price cost analysis concepts as proactive purchasing practices that enhances supply chain performance a gap this still sought to fill. However, this is not yet the case in Kenyan manufacturing firms' supply chain at present. This study sought to examine the influence of purchasing risk management on supply chain performance of manufacturing firms in Nakuru County, Kenya. The correlation results showed that a positive significant relationship existed (r = 0.528; p < 0.05). The study recommended that ,there needs to ensures there is supply assurance from the suppliers to mitigate purchasing risk to enhance supply chain performance and also firm should consider the possibility of improper supplier selection to ensure supply chain performance.

Keywords: Purchasing Risk Management

I.INTRODUCTION

Many manufacturing firms look to continuous improvement as a tool to enhance their core competitiveness using Supply Chain Management (SCM). Heightened competition among firms posed by globalization, firms can drive value through effective SCM. (Esinah, 2014), notes that firms should look at whole SC performance as opposed to improving particular functions like logistics while neglecting upstream and downstream effects. According to (Samuel, 2012) he argued that environmentally proactive companies are increasingly managing their suppliers' environmental performance to ensure that purchased materials are environmentally friendly and have been produced by environmentally conscious processes. Green purchasing revolves around evaluation of suppliers 'environmental performance and providing advice to suppliers to improve their performance. This study however did not investigate into the price cost analysis concepts as proactive purchasing practices that enhances supply chain performance a gap this still sought to fill. However, this is not yet the case in Kenyan manufacturing firms' supply chain at present. Several studies have been carried out in the past in the area of supply chain performance measurement. Some of them include: (Oketch, 2014) who states that even though remarkable progress has been made over the recent years in the design and performance measurement frameworks and systems, many companies are still primarily relying on traditional financial performance measures. Studies reveal that some of the best practices proposed as mechanisms for improving overall SC performance and overall firm performance may not have the degree of impact often presented in the studies Edwin,(2017). It shows that some best practices help to improve SC performance only in specific areas.

II.RESEARCH OBJECTIVE

To determine the influence of purchasing risk management on supply chain performance of manufacturing firms in Nakuru County, Kenya

III.RESEARCH QUESTION

What is the influence of purchasing risk management on supply chain performance of manufacturing firms in Nakuru County, Kenya?

IV. LITERATURE REVIEW

According to Kipkemboi, (2015) prioritizing the risk management processes too highly could keep an organization from ever completing a project or even getting started. This is especially true if other work is suspended until the risk management process is considered complete. It is also important to keep in mind the distinction between risk and uncertainty. Risk can be measured by impacts multiplied by probability. If risks are improperly assessed and prioritized, time can be wasted in dealing with risk of losses that are not likely to occur. Spending too much time assessing and managing unlikely risks can divert resources that could be used more profitably. Unlikely events do occur but if the risk is unlikely enough to occur it may be better to simply retain the risk and deal with the result if the loss does in fact occur. Qualitative risk assessment is subjective and lacks consistency. The primary justification for a formal risk assessment process is legal and bureaucratic.

According to Nottingham,(2012) Supply chain risks can be typed according to different classifications in literature distinguishes between endogenous risks emerging in a supply chain and exogenous risks whose origin is located in the environment of the focal network However, this taxonomy mainly concentrates on company's internal risks. (Brewer & Arnette, 2016)introduces a common classification where supply chain risks are categorized into five sources. These five sources can be summarized in three groups: company internal risks, supply chain internal risks, and environmental risks.

Two risk sources, process and control risks, are located within the company considered. These sources cover all risks emerging out of production and logistics processes as well as managerial risks, which fulfill the definition of supply chain risks. The second group consists of two other risk sources, supply and demand risks. These sources contain all risks emitted by supply chain partners, thus all indirect supply chain risks. The last group is formed by the environmental risks. These risks represent all potential damage caused by socio-political, macroeconomic or natural disasters (Brewer & Arnette, 2016)

V.RESEARCH METHODOLOGY

The study used descriptive survey research design. The study targeted 34 manufacturing firms in Nakuru County (See appendix 2). From these, the accessible population comprised of the supply chain managers, assistant supply chain managers and procurement officers. This could bring the entire population accessible to the study to 130 persons. Since the target population of this study is sufficiently large to warrant to use of random sampling methods, the overall sample size was first calculated using the formula proposed by Yamane (1967) since no population parameters are available;

$$n = {}^{N}/_{1 + N(e^2)}$$

$$n = \frac{130}{1 + 130(0.05)^2}$$

$$= 98$$

Where N is the population and e = 0.05 is the level of precision. Therefore, the sample size at 95% confidence level was 98 respondents.

The sample size was then allocated into various according to their relative sizes in the target population as shown the sampling frame as shown in Table 1.

Table 1: Spreading the sample across the study area

Category	Population Size	Sample Size
Supply Chain Managers	70	53
Assistant Supply Chain Managers	45	34
Procurement Officers	15	11
Total	130	98

Descriptive analysis was done using means and standard deviations to describe the basic characteristics of the population. Inferential statistics involved the use of Pearson's Product Moment correlation and multiple regression models to determine the nature of the relationship between the variables.

VI.RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Analysis

This section is in line with the first study objective which sought to determine the influence of purchasing risk management on supply chain performance of manufacturing firms in Nakuru County, Kenya. Table 2 shows the statistical results in details.

Table 2: Descriptive Statistics for Purchasing Risk Management

Statements	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Std. Dev
The firm ensures there is Supply assurance from the suppliers to mitigate purchasing risk to enhance supply chain performance	43.0	32.9	16.5	7.6	0.0	4.11	.947
The firm considers the possibility of improper supplier selection to ensure supply chain performance	40.5	46.8	8.9	3.8	0.0	4.24	.772
The firm considers the company liability in contract agreement to enhance supply chain performance	36.7	25.3	24.1	11.4	2.5	3.82	1.130
Supply chain risks emanate from both internal and external environs	35.4	32.9	21.5	10.1	0.0	3.94	.992
Timely Data for Consumption, inventory levels in supply chain and stock outs can affect performance	24.1	34.2	24.1	16.5	1.3	3.63	1.064
Internal risks are within a business control since they emanate from the organization's operations.	38.0	34.5	14.5	10.6	2.4	3.32	.823
The firm identifies which risks are likely to be faced by the supply chain	37.5	49.8	9.9	2.8	0.0	3.74	.768

The firm assesses the risk that is likely to be faced by the supply chain department	27.0	31.1	26.0	13.4	2.5	3.45	.853
The firm controls the risks likely to affect the operations of the firm	39.4	30.9	21.5	3.5	4.7	3.40	.956
The firm monitors the emergence of new risks that would affect the supply chain performance.	46.2	26.3	18.1	7.5	1.9	3.74	1.044

From table 2, the findings of the study established that the participants strongly agreed (mean = 4.11; Std. dev = .947) that the firm ensures there is supply assurance from the suppliers to mitigate purchasing risk to enhance supply chain performance and also concurred (mean = 4.24; Std. dev = .772) that the firm considers the possibility of improper supplier selection to ensure supply chain performance. However, with regards to the firm's consideration of the company liability in contract agreement to enhance supply chain performance the respondents were in agreement with (mean = 3.82; Std. dev = 1.130) that Supply chain risks emanate from both internal and external environs (mean = 3.94; Std. dev = .992). Besides, the study revealed that while a significant majority of the respondents agreed (mean = 3.63; Std. dev = 1.064) that the timely data for consumption, inventory levels in supply chain and stock outs can affect performance.The findings also indicate thatinternal risks are within a business control since they emanate from the organization's operations (mean = 3.32; Std. dev = .823). The findings, however, suggest that the firm identifies which risks are likely to be faced by the supply chain (mean = 3.74; Std. dev = .768).The findings also indicate that the firm assesses the risk that is likely to be faced by the supply chain department (mean = 3.45; Std. dev = .853). The firm controls the risks likely to affect the operations of the firm (mean = 3.40; Std. dev = .956). The firm monitors the emergence of new risks that would affect the supply chain performance (mean = 3.74; Std. dev = 1.044).These findings particularly the one on where the firm assesses the risk that is likely to be faced by the supply chain department is consistent with the findings of (Brewer & Arnette, 2016) who distinguishes between endogenous risks emerging in a supply chain and exogenous risks whose origin is located in the environment of the focal network However, this taxonomy mainly concentrates on company's internal risks.

Correlational Analysis

This section outlines the results of correlation analysis between Purchasing Risk Management and Supply Chain Performance of Manufacturing firms (Table 3). The findings were interpreted and discussed accordingly.

Table 3: Correlation between Purchasing Risk Management and Supply Chain Performance of Manufacturing Firms

		Supply Chain Performance
Purchasing Risk Management	Pearson Correlation	.528**
	Sig. (2-tailed)	.000
	N	72

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation results showed that a positive significant relationship existed ($r = 0.528$; $p < 0.05$). This led to the rejection of the null hypothesis and subsequently concluding that the imposition of purchasing risk management practices by manufacturing firms was instrumental in ensuring effective supply chain performance.

VII.CONCLUSION OF THE STUDY

Based on the results of the study, it can be concluded that, first, supply chain risks emanate from both internal and external environs. Also, a significant majority of the respondents agreed that the timely data for consumption, inventory levels in supply chain and stock outs can affect performance.It was evident that internal risks are within a business control since they emanate from the organization's operations. The firms identifies which risks are likely to be faced by the supply chain,Second, the manufacturing firms considers the supplier's environmental management practices.

VIII.RECOMMENDATIONS OF THE STUDY

The following recommendations are drawn with regard to the study findings.There needs to ensures there is supply assurance from the suppliers to mitigate purchasing risk to enhance supply chain performance and also firm should consider the possibility of improper supplier selection to ensure supply chain performance. Firms should consider liability in contract agreement to enhance supply chain performance. In addition the firms should mitigate risks emanating from internal and external environment and keep a risk register. There should be proper data kept on consumption patterns and inventory levels in supply chain. The firms should identify all the internal risks which are within the business control since they emanate from the organization's operations.

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