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Abstract

***Purpose*:** The purpose of this study was to determine relationship between risk identification management strategy and supply chain performance among manufacturing companies in Kenya

***Methodology*:**The study adopted a cross-section survey of descriptive nature .The target population comprised of the 412 manufacturing companies within Nairobi County that were registered members of KAM. The fisher *et al* formula for calculating the sample size was used to yield a sample size of199. Data was collected using questionnaires and analyzed using statistical package of social sciences (SPSS) version 21 as a tool of analysis.

Results: The study findings revealed that the constructs of risk identification management strategy combined together influenced supply chain performance as supported by a p value of 0.000.)

***Policy recommendation*:**the study recommended that manufacturing companies should put in place a risk analysis and evaluation management strategy to enhance supply chain performance. In particular, companies should consider conducting whole life costing of suppliers and also internal quality of suppliers.

Keywords: *risk identification management strategy, performance, manufacturing companies*

1.1 Introduction

Today's market place is characterized by turbulence and uncertainty. Market turbulence has tended to increase in recent years for several reasons the supply chain. Demand in almost every industry sector seems to be more volatile. Product and technology life-cycles have shortened significantly and competitive product introduction make life cycle demand difficult to predict (WB, 2012). Considerable 'chaos' exists in supply chains through the effect of such actions as sales promotion, quarterly sales incentives or decision rules such as

quantities which results into continuous disruptions along the supply chain (Singhal& Hendricks, 2005).

Today, vulnerability of Supply chains to disturbances or disruptions has increased and has received considerable attention by practitioners as well as academics (Skipper & Hanna, 2009). It's not only the effect of external events such as natural disasters but also the impacts of changes in business strategy, the impact of one entity in the supply chain failing can as well lead to a number of entities closing down and in some instances the whole supply chain shuts down. The risk implications of the entwined global marketplace that characterize today's supply chains have also been evidenced vividly in the recent global financial crisis. Many companies have experienced a change in their supply chain risk profile as a result of changes in their supply chain profile and changes in their business models. The adoption of 'lean' practices, the move to outsourcing and a general tendency to reduce the size of the supplier base potentially increase supply chain vulnerability (Richard, 2008).

The level of decision making along supply chain in manufacturing companies, quality of service and the type of relationship with other organizations generally influences the level of outputs expected from the functional and tertiary groups (Cooper &Ellram, 2003). The diversity and complexity of organizations, growth, strategic conceptualization & pursuit of adaptive mechanisms coupled with adverse changes in technology, and the global competitiveness of different markets, is beyond the efforts of an organization alone but between the supply chains (Cox & Watson, 2001). Most literature reveal that supply chain performance in manufacturing companies is more appropriate as units of analysis than the entire organization management with the realization of the fact that those involved in the chain are in a position to lead in a number of possible directions (Miller & Ross, 2003).

Today's marketplace is shifting from individual company performance to supply chain performance: the entire chain's ability to meet end-customer needs through product availability and responsive, on-time delivery (Chen &Labadi, 2005). Supply chain performance crosses both functional lines and company boundaries. Functional groups (engineering/R&D, manufacturing, and sales/marketing) are all instrumental in designing, building, and selling products most efficiently for the supply chain, and traditional company boundaries are changing as companies discover new ways of working together to achieve the ultimate supply chain goal: the ability to fill customer orders faster and more efficiently than the competition (Abdullah & Abdel, 2004).The process of choosing appropriate supply chain performance measures is difficult due to the complexity of these systems in manufacturing companies. The performance of a supply chain in manufacturing companies is characterized by its ability to remain market-sensitive without losing the integration through the chain. One of the difficulties in designing and analyzing a supply chain in these companies is that its processes are governed by the strategic attributes of the supply chain (Lysons, 2006). In today's world, supply chain management (SCM) is a key strategic factor for increasing organizational effectiveness and for better realization of organizational goals such as enhanced competitiveness, better customer care and increased profitability (Bosman, 2006). The globalization of markets and outsourcing has made many manufacturing companies select supply chain and logistics to manage their operations. Most of these companies realize

that, in order to evolve an efficient and effective supply chain, SCM needs to be assessed for its performance to reduce risk of disruptions (Van &Beulens, 2002). Supply chain management (SCM) has been a major component of competitive strategy to enhance organizational productivity and profitability as well as metric measure, however performance pertaining to Supply chain and risks pertaining to disruptions among manufacturing companies has not received adequate attention from researchers or practitioners today (Wegner & Bode, 2006).

1.2 Statement of the Problem

In the current global downturn, businesses are being hit by falling demand and unpredictable global supply costs which will expose these and other built in supply chain vulnerabilities. The key questions are, do business leaders understand these vulnerabilities and does their supply chain team have the capability to identify them and present the plans to mitigate them? In most cases the answer is no. In tough times businesses need to focus absolutely on profit, cash flow and eliminating unpredictable events from a declining demand profile (WB, 2012).Businesses processes today are endangered due to increased vulnerabilities as a result of risks along the process of enhancing performance in the organization (Suhong, Bhanu, Ragu & Rao, 2006). Several studies reveal that Supply chains collapses at an alarming rate due to continuous risk disruptions in developing nations in the world (Singhal& Hendricks, 2005). Past studies showed that most supply chains fail within first three years of business operations (Bosman, 2006). According to World Bank report (2013),companies with poor supply chain performance experienced 33-40%, lower stock of returns and approximately 70% to 80% of these companies' supply chains fail within 1-3 years (WB, 2013). It's also evident that share price volatility in the year after the supply chain performance drop goes to 13.5% higher compared with volatility in the year before the disruption (Hendricks &Singhal, 2005).

Poor Supply chain performance reduces company's revenue, cut into market share, inflate company's cost, increase budget and threaten production up to 60%, damage a company's credibility with investors and other stakeholders, thereby driving up its cost of capital; such firms experienced 7% lower sales, 11% higher costs and 14% increase in inventories (Ruud &Bosman, 2006).

According to a study by Sean and Kilcarr, (2013) on Third-Party Logistics, economic losses due to poor supply chain performance among manufacturing companies increased by 465% over the last three years climbing from $62 billion in 2009 to well over $350 billion in 2011.

A study by the Public Procurement Authority (PPOA) (2013) revealed that most of the tendered products/services are being brought with a mark-up of 60% on the market price hindering the supply chain performance due to high costs (Kirungu, 2012). This means that supply chains performance in Kenya is at a high risk of inadequate risk interference and influence. Further Howarth and Fredericks (2012) identifies that Small and Medium Enterprises (SMEs) manufacturers contributed to 70% of the Kenyan Gross Domestic Product (GDP) in 2011 whose operations are entirely depended on the performance of their supply chains, however increased non-performance of their supply chains due to risk interference, have resulted to a major stagnation in their profit margin reducing the GDP at

an alarming rate.Statistics from Economic Survey (2014) show that Supply chain performance in manufacturing companies is a component of Kenya's overall GDP. In the last 31 years, it has been greatly fluctuating. In 1980, industry and manufacturing accounted for 21 percent of Kenya's overall GDP. In 1990, it decreased to 19 percent, and in 2000, the value added to GDP decreased again to 17 %. In 2011, there was a slight rise to 19% of Kenya's overall GDP (WB, 2013). This sudden change in GDP calls for immediate solution to the manufacturing companies' supply chains risk disruptions since Kenya's economy is market-based, and maintains a liberalized external trade system, hence the need for this study.

2.0 LITERATURE REVIEW

2.1 Theoretical review

2.1.1 Dynamic Risk Management Theory

The theory develops a continuous time, infinite horizon model of a firm which endogenously and dynamically adjusts its risk management contract which is a function of the firm's exogenous product price (frank, 2003). The model can be described by the following timeline: At time zero, the levered firm decides whether to initiate a risk management contract (guaranteeing a set of forward prices for a certain fraction of the firm's output), and chooses its maturity (Carter, 2004). At each subsequent time period, the firm produces one unit of product at a fixed cost and realizes cash flows that are determined by the current spot price and the price guaranteed by the risk management contract (if any) and whether or not the firm is in financial distress. The firm can default, in which case the debt holders recover part of the firm's value and the Equity-holders get nothing and are obligated to terminate (pay out or cash out) any outstanding risk management contracts, or, if not in default, the firm meets its periodic debt payments and pays production costs, and then makes a decision with respect to its risk management strategy; the firm can enter a risk management contract and choose its maturity; if the firm currently operates with a risk management contract in place, it can choose to terminate the contract early and to cash out (or to pay out) its current position at a fair market value. Both the initiation and the termination of the risk management contract generate transaction costs (Klapper, 2001).

The residual cash flow after debt payments and production costs is paid to the equity-holders as dividends. The firm is assumed to default on its debt optimally; when the market value of the firm's equity becomes zero. The firm's decisions with respect to the risk management strategy are made from the perspective of the shareholders who maximize the value of their equity stake. Both equity and debt are priced fairly taking into account the risk management strategy of the equity-holders. Because of a need to limit the dimensionality of the model, we are forced to make several modeling compromises. First, the model does not allow the firm to change the structure of its debt over time. Second, it assumes that the firm holds no cash, which implies that it pays all its residual cash flows as dividends (Stulz, 2002). The understanding of corporate risk management is based on static models that describe how various capital market imperfections give firms an incentive to reduce risk. While existing models provide rich intuition as to why firms should manage risk, they provide fewer predictions about how firms translate the incentives to manage risk into actual decisions on

the choice of risk management instruments and how these strategies evolve over time (Zsidisin, 2004). Dynamic model of corporate risk management present and tests a continuous-time and infinite-horizon framework. It analyzes issues, which are difficult to address in static models, including the optimal timing to initiate risk management contracts and frequency of adjustment (Brown, 2001).

Many static models assume that firms make one-period decisions to hedge and that these decisions are irreversible and costless. Therefore one-period models also often implicitly assume that the employed risk management instruments have the same duration as the lifetime of the firm. Treating risk management choices as irreversible limits the ability of the static models to recognize the value of dynamic risk management in adapting to changes in market conditions and firm characteristics. The fact that most risk management instruments have shorter maturities than the duration of the firm's operations has important implications for the timing and sequence of risk management decisions and it provides an intuition for the limited effect of risk management on firm exposure (Brown &Klapper, 2001). This theory explicitly explains the application and relevance of hedging against risk management strategy in this research.

3.0 METHODOLOGY

The study adopted a cross-section survey of descriptive nature .The target population comprised of the 412 manufacturing companies within Nairobi County that were registered members of KAM. The fisher *et al* formula for calculating the sample size was used to yield a sample size of199. Data was collected using questionnaires and analyzed using statistical package of social sciences (SPSS) version 21 as a tool of analysis.

4.0 RESULTS FINDINGS

4.1Risk Identification Management Strategy

4.1.1 Pre-screening of Suppliers Capacity

The respondents were asked whether their company conducted pre-screening of suppliers' capacity. Result in Figure 1 show that a majority of the respondents (80.63%) indicated that their company conducted pre-screening of suppliers.

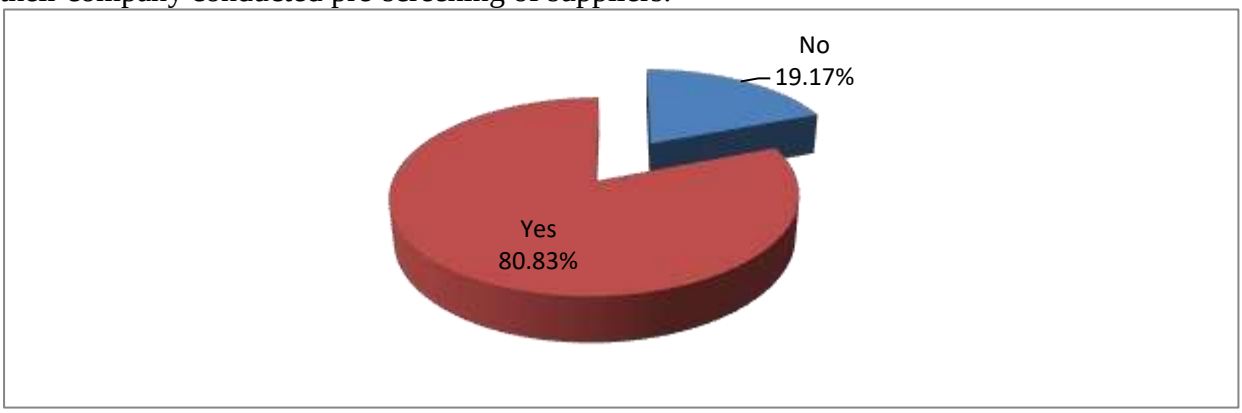

Figure 1: Pre-screening of Suppliers Capacity

Results in Table 1 show that majority of the respondents (51%) indicated that pre-screening of suppliers 'capacity has decreased lead time by a range of 6-10% while 49% of the respondents indicated that pre-screening of suppliers capacity has decreased lead time by more than 10%. Results in Table 1 also shows that majority of the respondents (58.2%) indicated that prescreening of suppliers capacity has improved quality by a range of 6-10% while 41.8% of the respondents indicated that pre-screening of suppliers capacity has improved quality by more than 10%. Further, Results in Table 1 also shows that majority of the respondents (52%) indicated that pre-screening of suppliers capacity has reduced cost by more than 10%while 48% of the respondents indicated that pre-screening of suppliers capacity has reduced cost by a range of 6-10%.

Table 1: Pre-screening of Suppliers Capacity (YES)

Statement	Indicator	Percentage
Pre-screening of supplier's capacity and supply chain performance ?	Decreased lead time by 0-5%	0.00%
	Decreased lead time by 6-10%	51.00%
	Decreased lead time by more than 10%	49.00%
	Total	**100.00%**
Pre-screening of suppliers capacity and quality of supply chain performance ?	Improved quality by 05%	0.00%
	Improved quality by 610%	58.20%
	Improved quality by more than 10%	41.80%
	Total	**100.00%**
Pre-screening of suppliers capacity and cost of supply chain performance ?	Reduced cost by 0-5%	0.00%
	Reduced cost 6-10%	48.00%
	Reduced cost by more than 10%	52.00%
	Total	**100.00%**

Results in Table 2 show that 45.5% of the respondents indicated that pre-screening of suppliers' capacity has increased lead time by a range of 6-10% while a majority of the respondents
(54.5%) indicated that pre-screening of suppliers 'capacity has increased lead time by more than 10%. Results in Table 2 also shows that 40.9% of the respondents indicated that prescreening of suppliers capacity has decreased quality by a range of 6-10% while majority of the respondents (59.1%) indicated that pre-screening of suppliers capacity has decreased

quality by more than 10%. Further, Results in Table 2 also shows that majority of the respondents (72.7%) indicated that pre-screening of suppliers capacity has increased cost by more than 10% while 27.3% of the respondents indicated that pre-screening of suppliers capacity has increased cost by a range of 6-10%.

Table 2: Pre-screening of Suppliers Capacity (NO)

Statement	Indicator	Percentage
Pre-screening of suppliers capacity and lead time of supply chain performance	Increased lead time 0% - 5%	0.00% by
	Increased lead time 6- 10%	45.50% by
	Increased lead time Over 10%	54.50% by
	Total	**100.00%**
Pre-screening of suppliers' capacity and the quality of supply chain performance.	Decreased quality by 0% - 5%	0.00%
	Decreased quality by 6- 10%	40.90%
	Decreased quality by Over 10%	59.10%
	Total	**100.00%**
Pre-screening of supplier's capacity and the cost of supply chain performance.	Increased cost by 0% - 5%	0.00%
	Increased cost by 6-10%	72.70%
	Increased cost by Over 10%	27.30%
	Total	**100.00%**

4.1.2Periodic Procurement Audits

The respondents were asked whether their company conducted periodic procurement audits. Result in Figure 2 show that a majority of the respondents (71.67%) indicated that their company conducted periodic procurement audits.

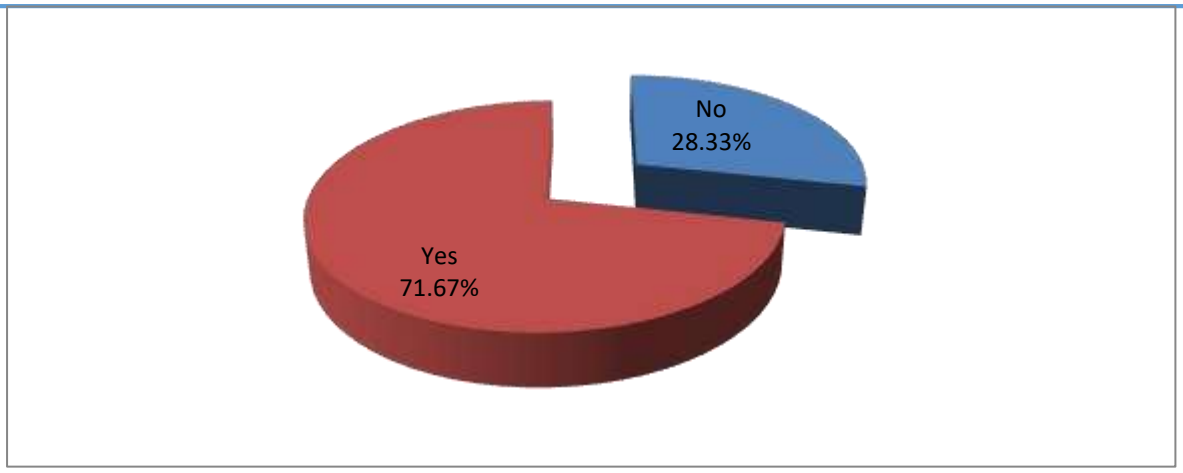

Figure 2: Periodic Pronouncement Audits

Results in Table 3 show that majority of the respondents (60.5%) indicated that periodic procurement audits has decreased lead time by a range of 6-10% while 39.5% of the respondents indicated that periodic procurement audits has decreased lead time by more than 10%. Results in Table 3 also shows that 50% of the respondents indicated that periodic procurement audits has improved quality by a range of 6-10% while 50% of the respondents indicated that periodic procurement audits has improved quality by more than 10%. Further, Results in Table 3 also shows that majority of the respondents (60.5%) indicated that periodic procurement audits has reduced cost by more than 10% while 39% of the respondents indicated that periodic procurement audits has reduced cost by a range of 6-10%.

Table 3: Periodic Procurements Audit (YES)

Statement	Indicator	Percentage
Periodic procurement audits andlead time supply chain performance.	Decreased lead time by 0-5%	0.00%
	Decreased lead time by 6-10%	60.50%
	Decreased lead time by more than 10%	39.50%
	Total	**100.00%**
Periodic procurement audits and quality of supply chain performance	Improved quality by 05%	0.00%
	Improved quality by 610%	50.00%
	Improved quality by more than 10%	50.00%
	Total	**100.00%**
Periodic procurement audits and cost of supply chain performance.	Reduced cost by 0-5%	0.00%
	Reduced cost 6-10%	39.50%
	Reduced cost by more than 10%	60.50%
	Total	**100.00%**

Results in Table 4 shows that a majority of the respondents (64.7%) indicated that periodic procurement audits has increased lead time by a range of 6-10% while 35.3% of the respondents indicated that periodic procurement audits has increased lead time by more than 10%. Results in Table 4 also shows that majority of the respondents (55.9%) indicated that periodic procurement audits has decreased quality by a range of 6-10% while 44.1% of the respondents indicated that periodic procurement audits has decreased quality by more than 10%. Further, Results in Table 4 also shows that majority of the respondents (61.8%) indicated that periodic procurement audits has increased cost by a range of 6-10% while 38.2% of the respondents indicated that periodic procurement audits has increased cost by more than 10%.

Table 4: Periodic Procurement Audit (NO)

Statement	Indicator	Percentage
Periodic procurement audits andlead timesupply chain performance.	Increased lead time by 0% - 5%	0.00%
	Increased lead time by 6- 10%	64.70%
	Increased lead time by Over 10%	35.30%
	Total	**100.00%**
Periodic procurement audits and quality of supply chain performance.	Decreased quality by 0% - 5%	0.00%
	Decreased quality by 6- 10%	55.90%
	Decreased quality by Over 10%	44.10%
	Total	**100.00%**
Periodic procurement audits and cost of supply chain performance.	Increased cost by 0% - 5%	0.00%
	Increased cost by 6-10%	61.80%
	Increased cost by Over 10%	38.20%
	Total	**100.00%**

4.1.3 Inventory Forecasting

The respondents were asked whether their company conducted inventory forecasting. Result in Figure 3 show that a majority of the respondents (80.83%) indicated that their company conducted inventory forecasting.

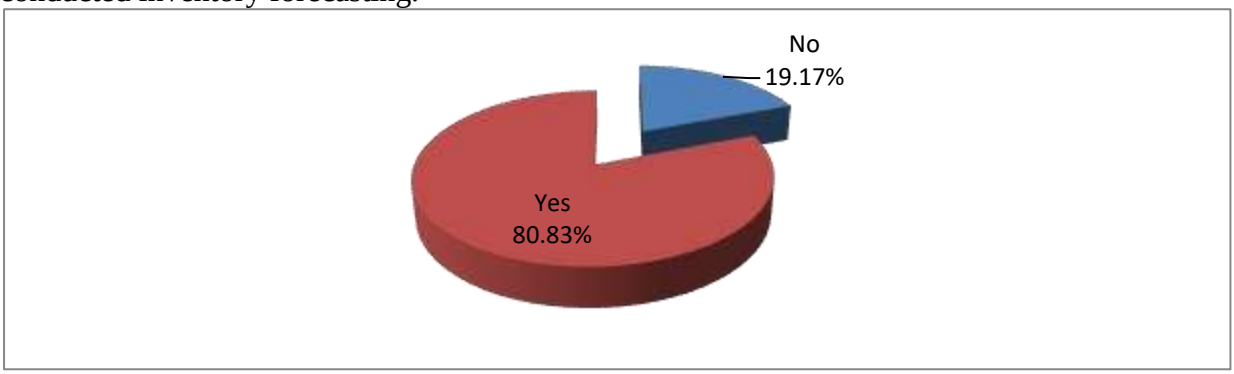

Figure 3: Inventory Forecasting

Results in Table 5 show that majority of the respondents (52.6%) indicated that inventory forecasting has decreased lead time by a range of 6-10% while 47.4% of the respondents

indicated that inventory forecasting has decreased lead time by more than 10%. Results in Table 5 also shows that majority of the respondents (60.8%) indicated that inventory forecasting has improved quality by more than 10% while 39.2% of the respondents indicated that inventory forecasting has improved quality by a range of 6-10%. Further, Results in Table 5 also shows that majority of the respondents (52.6%) indicated that inventory forecasting has reduced cost by more than 10% while 47.4% of the respondents indicated that inventory forecasting has reduced cost by a range of 6-10%.

Table 5: Inventory Forecasting (YES)

Statement	Indicator	Percentage
Inventory forecasting and lead time supply chain performance	Decreased lead time by 05%	0.00%
	Decreased lead time by 610%	52.60%
	Decreased lead time by more than 10%	47.40%
	Total	**100.00%**
Inventory forecasting and quality of supply chain performance	Improved quality by 0-5%	0.00%
	Improved quality by 610%	39.20%
	Improved quality by more than 10%	60.80%
	Total	**100.00%**
Inventory forecasting and cost of supply chain performance	Reduced cost by 0-5%	0.00%
	Reduced cost 6-10%	52.60%
	Reduced cost by more than 10%	47.40%
	Total	**100.00%**

Results in Table 6 show that majority of the respondents (64.7%) indicated that inventory forecasting has increased lead time by a range of 6-10% while 35.3% of the respondents indicated that inventory forecasting has increased lead time by more than 10%. Results in Table 6 also shows that majority of the respondents (55.9%) indicated that inventory forecasting has decreased quality by a range of 6-10% while 44.1% of the respondents indicated that inventory forecasting has decreased quality by more than 10%. Further, results in Table 6 also shows that majority of the respondents (61.8%) indicated that inventory forecasting has increased cost by a range of 6-10% while 38.2% of the respondents indicated that inventory forecasting has increased cost by more than 10%.

Table 6: Inventory Forecasting (NO)

Statement	Indicator	Percentage
Periodic procurement audits and lead time supply chain performance	Increased lead time by 0% - 5%	0.00%
	Increased lead time by 6- 10%	64.70%
	Increased lead time by Over 10%	35.30%
	Total	**100.00%**
Periodic procurement audits and quality of supply chain performance	Decreased quality by 0% - 5%	0.00%
	Decreased quality by 6- 10%	55.90%
	Decreased quality by Over 10%	44.10%
	Total	**100.00%**
Periodic procurement audits and the cost of supply chain performance	Increased cost by 0% - 5%	0.00%
	Increased cost by 6-10%	61.80%
	Increased cost by Over 10%	38.20%
	Total	**100.00%**

4.1.4 Relationship between Risk Identification Management Strategy and Supply Chain Performance

Results in Table 7 show the results of the odd ratio regression with regard to lead time. The results reveal that pre-screening of suppliers' capacity and periodic procurement audits had a positive and significant relationship with lead time. The odds of observing better lead time were 17.239 times higher for those practicing pre-screening of suppliers' capacity. This implies that the practice of conducting pre-screening of suppliers' capacity results to better lead time. The results also reveal that periodic procurement audits had a positive and significant relationship with lead time. The odds of observing better lead time were 13.71 times higher for those practicing periodic procurement audits. This implies that the practice of conducting periodic procurement audits result to better lead time.

Table 7: Odd Ratio Regression for Risk Identification (Lead Time)

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Pre-screening of suppliers' capacity	2.847	0.71	16.073	1	0.000	17.239
Periodic procurement audits	2.618	0.627	17.46	1	0.000	13.710
Inventory forecasting	-0.458	0.845	0.293	1	0.588	0.633
Constant	-2.517	0.808	9.693	1	0.002	0.081

4.1.5 Relationship between Risk Identification Management Strategy and Better Quality

Results in Table 8 show the results of the odd ratio regression with regard to quality. The result reveals that pre-screening of suppliers' capacity had a positive and significant relationship with the odds of better quality. The odds of observing better quality was 9.85 times higher for those practicing pre-screening of suppliers' capacity. This implies that the practice of conducting pre-screening of suppliers' capacity result to better quality.

The results also reveal that periodic procurement audits had a positive and significant relationship with the odds of better quality. The odds of observing better quality was 9.855 times higher for those practicing periodic procurement audits. This implies that the practice of conducting periodic procurement audits result to better quality.

Further, the results reveal that inventory forecasting had a positive and significant relationship with the odds of better quality. The odds of observing better quality was 7.666 times higher for those practicing inventory forecasting. This implies that the practice of conducting inventory forecasting result to better quality.

Table 8: Odd Ratio Regression for Risk Identification (Quality)

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Pre-screening of suppliers' capacity	2.287	0.747	9.376	1	0.002	9.85
Periodic procurement audits	2.288	0.607	14.211	1	0.000	9.855
Inventory forecasting	2.037	0.758	7.22	1	0.007	7.666
Constant	-3.853	1.043	13.635	1	0.000	0.021

4.1.6 Relationship between Risk Identification Management Strategy and Better Cost

Results in Table 9 show the results of the odd ratio regression with regard to cost. The result reveals that pre-screening of suppliers' capacity had a positive and significant relationship with the odds of better cost. The odds of observing better cost was 35.243 times higher for those practicing pre-screening of suppliers' capacity. This implies that the practice of conducting pre-screening of suppliers' capacity result to better cost. The results also reveal that periodic procurement audits had a positive and significant relationship with the odds of better cost. The odds of observing better cost was 43.542 times higher for those practicing periodic procurement audits. This implies that the practice of conducting periodic procurement audits result to better cost. Further, the results reveal that inventory forecasting had a positive and significant relationship with the odds of better cost. The odds of observing better quality was 0.016 times higher for those practicing inventory forecasting. This implies that the practice of conducting inventory forecasting result to better cost.

Table 9: Odd Ratio Regression for Risk Identification (Cost)

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Pre-screening of suppliers' capacity						
	3.562	0.884	16.223	1	0.000	35.243
Periodic procurement audits	3.774	0.774	23.786	1	0.000	43.542
Inventory forecasting	4.146	1.183	12.272	1	0.000	0.016
Constant	-0.729	0.574	1.613	1	0.204	0.482

The above results concurs with Juttner, (2005) who argues that whereas SCRM focuses on the identification and management of risks for the supply chain in order to reduce its vulnerability, SCRES aims at developing the adaptive capability to prepare for unexpected events and to respond to disruptions and recover from them through risk identifications and management of the same.

4.1.7 Hypothesis Testing

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho is not rejected but if it's less than 0.05, the Ho fails to be accepted.

The null hypothesis for this objective was: Risk identification management strategy has no significant effect on supply chain performance among manufacturing companies in Kenya. The alternative hypothesis for this objective was: Risk identification management strategy has significant effect on supply chain performance among manufacturing companies in Kenya.

Table 10: Risk identification management strategy model Analysis of Variance

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.946	1	9.946	116.744	.000
	Residual	10.053	118	0.085		
	Total	19.999	119			

a Dependent Variable: Supply Chain Performance

b Predictors: (Constant), Risk identification management strategy

Table 11: Risk identification management strategy model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705a	0.497	0.493	0.291882

a Predictors: (Constant),Risk identification management strategy

Table 12: Risk identification management strategy model coefficients

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.012	0.073		-0.165	0.869
	Risk identification management strategy	0.905	0.084	0.705	10.805	0.000

a Dependent Variable: Performance

The F statistic for the regression model was significant at 5% level of significance indicating that the model fit well. The relationship between risk identification and supply chain performance was significant at 5% level of significance. The regression model revealed that risk identification explains 49.7 percent of the changes in the supply chain performance of manufacturing firms in Kenya. The p-value of 0.00 indicated that the null hypothesis was not accepted hence risk identification management strategy has significant effect on supply chain performance among manufacturing companies in Kenya.

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1Summary of Finding

This objective of the study was to determine the effect of risk identification management strategy on supply chain performance among manufacturing companies in Kenya. Results revealed that majority of the companies conducted pre-screening of suppliers' capacity. Prescreening of suppliers' capacity resulted to decreased lead-time, improved quality and reduced cost. Results also revealed that majority of the companies conducted periodic procurement audits. Periodic procurement audits resulted to decreased lead time, improved quality and reduced cost. Further, the results also revealed that majority of the companies conducted inventory forecasting. Conducting inventory forecasting resulted to decreased lead time, improved quality and reduced cost.

The bivariate regression results indicated that the odds of improved lead time were higher for those companies practicing pre-screening of suppliers' capacity and periodic procurement audits. The results indicated that the odds of improved quality were higher for those companies practicing pre-screening of suppliers' capacity, periodic procurement audits and inventory forecasting. Further, the results indicated that the odds of improved cost were higher for those companies practicing pre-screening of suppliers' capacity, periodic procurement audits and inventory forecasting.

The multivariate regression results indicated that the odds of observing improved lead time were higher for those companies that had a risk identification management strategy in place. The results also indicated that the odds of observing improved quality were higher for those companies that had a risk identification management strategy in place. Further the odds of observing improved cost were higher for those companies that had a risk identification management strategy, risk analysis and evaluation management strategy and risk control and monitoring management strategy in place. The results indicated that the odds of better supply chain performance were higher for companies that had a risk identification management strategy in place.

5.2 Conclusion

Based on the study findings the study concluded that most of the companies had risk identification management strategy in place. This conclusion was arrived at by observing that the companies conducted pre-screening of suppliers' capacity, periodic procurement audits and inventory forecasting. The study concluded that the odds of observing better lead time, odds of improved quality and the odds of observing better cost were highest for risk identification management strategy. Further, the study concluded that risk identification management strategy influenced supply chain performance.

5.3 Recommendations of the Study

Following the study results, it was recommended that manufacturing companies should continue having risk identification management strategies in place since it improves the supply chain performance. In particular, the manufacturing companies should conduct pre-screening of suppliers' capacity, periodic procurement audits and inventory forecasting. The study recommended that these companies should make risk identification a priority before

getting into other aspects of risk management. Supply chain risk strategy development should be part of the business unit planning process.

5.4 Suggested Areas for Further Study

Further studies can be done on the effect of risk management strategies that influence the supply chain performance of service delivery companies. In addition further studies are recommended in the area of competitive strategies and strategic responses adopted by manufacturing companies in order to improve supply chain performance.

In addition, further studies may investigate the influence of demographic factors on the risk management strategies of manufacturing companies. For instance, are manufacturing companies with a high male gender composition more likely to put in place effective risk identification, risk analysis and evaluation, risk monitoring and control and hedging against risk management strategies? What is the potential effect of the type of company on risk management strategies? What is the potential effect of the age of company on risk management strategies? What is the impact of gender composition, experience, age of manufacturing companies' employees on supply chain performance? Studies may be carried out to find answers to these questions.

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