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INVENTORY MANAGEMENT PRACTICES AND PERFORMANCE OF CLEANING COMPANIES IN NAIROBI CITY, KENYA

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ABSTRACT

Proper inventory management technique plays an important function on firm performance and there is a positive relationship between the processes of managing inventories include and company performance. Inventory Management is an important corporate function as it's essential to the successful operation in the organizations. The general objective of this study was to examine the effect of inventory management practices on performance of commercial cleaning companies in Nairobi County, Kenya. The specific objectives were to; examine effect of lead time, and supplier relationship on performance of commercial cleaning companies in Nairobi County, Kenya. The study was guided by theories namely inventory control theory, and social exchange theory. The research employed a descriptive research design. The target population was hence 348 respondents. The study sampling frame was 348 management staff of the cleaning companies in Nairobi County. The sample size was determined using Taro Yamane's 1967 sampling formula. The sample size was 186 respondents. Data was collected using questionnaires. A pilot test was conducted with 10% of the sample size hence 16 respondents. In this study, construct and content validity were used. The reliability coefficient of the research instruments was checked using Cronbach's Alpha.. Results were tabulated. Data was analyzed using SPSS Version 28. The study used descriptive statistics which included frequency, percentage, and mean. The inferential statistics included correlation and regression. Findings show that; a strong significant relationship between lead time and firm performance ($r=0.723$, $p=0.000$), and a moderate significant relationship between supplier relationship and firm performance ($r=0.418$, $p=0.000$). The recommendations are; firms should ensure that there is stand-by staff who are called upon when there is high demand, should develop a structural mechanism to ensure cordial buyer-supplier relationships, and should a create a policy framework to make the best inventory management strategies, such as JIT (Just in Time) and MRP (Material requirements planning) easier to adopt.

Key Words: Inventory Management Practices, Lead Time, Supplier Relationship, Performance, Commercial Cleaning Companies, Nairobi County

Background of the Study

Inventory management is the policies and procedures which systematically determine and regulate which items to order, when to order, what should be kept in stock and what quantities of them are stocked (Stevenson, 2009). Lysons (2016) define inventory management as controlling of stock inventory levels with the physical distribution function to balance the need of minimizing stock holding and maximizing handling costs. Ali et al., (2012) revealed that inventory management system enable organization to detect special orders, sell on occasion and available products in a limited quantity to keep inventory costs down and to develop a positive reputation for quickly filling special orders. A good inventory system implies that organizations have an accurate information on inventory count at all times, giving good customer service, giving accurate information to customer and improving image of the organizations

Inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials(working-in-progress) and finished good so that adequate supplies are available and the costs of over or understocks are low. Inventory management is primarily about specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods (Vessils, 2020).

Ikekwem (2020) noted that proper inventory management technique plays an important function on firm performance and there is a positive relationship between the processes of managing inventories include and company performance. Inventory Management is an important corporate function as it's essential to the successful operation in the organizations. This is majorly due to the fact that the amount of money invested in inventory is significant and also that inventories do have a great impact on daily operations of an organization. A viable inventory management system seeks to meet anticipated demand, smoothen production requirements, hedge against price increases, or to take advantage of quantity discounts, decouple components of the production, protect against stock outs, take advantage of order cycles and permit operations (Wanjira, & Njagiru, 2018).

Statement of the Problem

The cleaning sector is an important segment of the service industry that helps companies to have a conducive environment for achieving their objectives. Cleaning remains a basic necessity for businesses to operate. Cleaning services promote the idea of a conducive work environment and also create an ambiance at the office. Trends in the cleaning industry change over time as the needs and desires of modern businesses evolve. It's essential that cleaning companies stay up-to-date with these industry trends and adapt source for products that meets the unique demands of their market. Despite its crucial role in a working environment, very small fragmented operators who lack the ability to maximize the potential of the industry dominate the cleaning industry. The companies end up closing their doors and in the past five years, more than 20% of the cleaning firms in Nairobi have closed down. There is also high staff turnover in the companies are the staff try to look for other companies with better working equipment and a higher salary (Morrow, 2018). A professional cleaning company uses specialized equipment and detergents to clean. In most cleaning companies, there is diminishing performance of cleaning companies in Nairobi city, Kenya which has resulted in inadequate timely service delivery, poor cost effectiveness, and poor customer satisfaction. Therefore, they need to implement suitable inventory management practices to ensure that desired quality service is offered to the Client (Gitau, 2017).

impact of service quality on customer satisfaction, research by Smith and Johnson (2021) found that 25% of customers surveyed reported dissatisfaction with service quality, citing issues such as

long wait times and unresponsive customer support. Similarly, a study conducted by Shang, W. & Lin, Y. (2019) identified poor service quality as a leading cause of dissatisfaction among customers in the cleaning companies, with 35% of respondents expressing dissatisfaction with their service experiences. As an extremely labor-intensive industry, 70%- 80% of costs incurred by contract-cleaning companies come from labor. The companies relies so much upon the human resources and how management empowers them to succeed through provision of equipment and right tools for the job. In addition, the operation costs account or more than 50% of the company's income (Nyaliita & Thogori, 2023). According to Consumers Federation of Kenya, (COFEK, 2022), only one third (33.3%) of companies and organizations renew contracts of cleaning companies after a year of service. This is an indication of dissatisfaction with the services provided by the cleaning services providers

Local scholars have researched on the area of inventory management practices; Ngugi (2019) examined the effect of inventory management systems on the performance of manufacturing companies in Eldoret Town. Findings revealed that inventory management systems are beneficial to the firm. Onchoke and Wanyoike (2016) study on inventory management practices and the performance of agrichemical firms in Nakuru County revealed that computerized inventory control influenced firm performance. Kairu (2015) examined the role of strategic inventory management on the performance of manufacturing firms in Kenya and revealed that inventory control had a significant effect on the performance of manufacturing firms in Kenya. However, there is a study limitation regarding inventory management practices in cleaning companies in Nairobi County, Kenya. This study sought to fill the research gap by examining the effect of inventory management practices on the performance of cleaning companies in Nairobi City, Kenya.

Specific Objectives of the Study

i. To examine effect of lead time the on performance of cleaning companies in Nairobi City, Kenya.
ii. To determine the effect of supplier relationship on performance of cleaning companies in Nairobi city, Kenya.

LITERATURE REVIEW

Theoretical Review

Inventory Control Theory

Inventory control theory was developed by Starr and Miller in 1962. Inventory control involves the actual control of inventory; this can mean inventory of raw materials, works-in-progress or finished goods. Regardless of the type of inventory in question, inventory requires storage, and there is always a cost associated with that storage. Therefore, inventory control theory is concerned with all actions related to the storing of items and the consequences, both positive and negative, thereof. One of the most common applications of inventory control theory is in the determination of the optimal quantity of inventory to be held. There are several mathematical models in use that can act as a useful tool in inventory control. These models strive to balance storage costs with order costs; the cost of shortages is also considered. While inventory control theory tends to be a bit shortsighted regarding the non-monetary costs of storage, and it makes assumptions regarding future demand and delivery that could not be known, inventory control theory is still a cost-saving tool, and is considered part of good business practice in manufacturing environments (O'Farrell 2010). Inventory control theory is applicable to lead time which ensures that the stock levels are well maintained to meet market demands.

Social Exchange Theory

The social exchange theory was developed by George Homans in 1958. A steady continuous and strong exchange relationship ensures reliable supply. The central objective of supplier relationship is attaining the status of a preferred buyer, instead of simply being a regular buyer or even an exit

buyer. This leads to better treatment and guaranteed supply while reducing risks that may be involved in the supply chain (Lopez-Navarro et al., 2013). Within the Social Exchange Theory, transactions are bidirectional, meaning that there is mutual exchange of material things, where something has to be given in exchange of something else in a given environment (Cropanzano & Mitchell, 2005). Additionally, the Social Exchange Theory assumes that individuals take part in an exchange only when they expect their rewards from it to justify the cost of participation. It means buyer supplier relationship is mutual and there is equitable sharing of resources and benefits.

Conceptual Framework

According to Villai (2015), a conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas which capture something real and do this in a way that is easy to remember and apply.

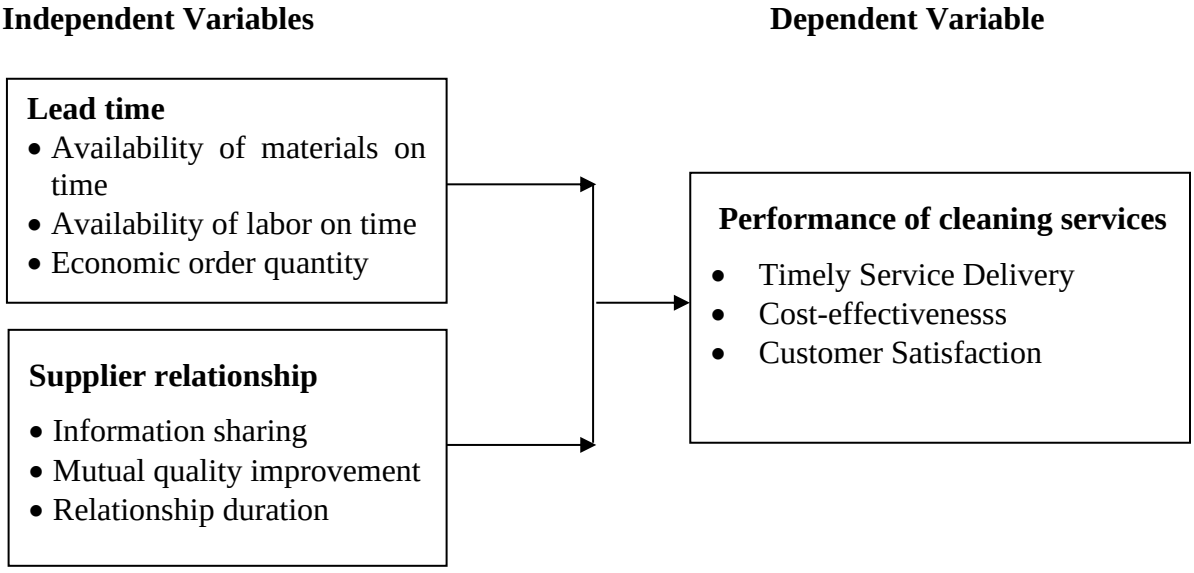

Figure 2.1: Conceptual Framework

Lead Time

Managers have instinctively appreciated their role in contributing to corporate success and have strived to cut supply chain operations expenses in the past. According to Stank et al. (2019), supply chain operations managers are now gaining a better knowledge of this relationship, realizing that supply chains and reduced lead times may be utilized to increase a firm's market share and improve profit margins. Harland et al. (2019) defines lead time as the time spent preparing bids, securing an offer, and placing a purchase order, as well as the period between payment processing and actual payment. Extended lead times result in increased costs due to greater buffer inventories and safety stocks, as well as unmet delivery time guarantees. Shorter lead times benefit both the client and the supplier, since demand grows with shorter delivery periods and lower pricing. As a result, Munster and Vestin (2012) argues that lead times are inversely connected to market dominance.

According to Magenda (2017), there are four categories of lead time: fixed lead time, pre-processing lead time, processing lead time, and post-processing lead time. Fixed lead time or quote lead time is the duration it takes to obtain all of the information requested by a customer and react to them. The administrative or procurement lead time is pre-processing lead time. This is the amount of time it takes to complete a request until a local purchase order or agreement is issued.

Processing lead time is defined as the amount of time required to complete an order, such as constructing a car. In addition, knowing the processing lead time allows a business to respond more quickly to customer demands and so avoiding delaying the launch of production. As a result, situations of overproduction can be categorized based on the utilization of a lower share. The time necessary to handle final items, such as transportation and distribution to consumers or end users, is referred to as post processing lead time.

Supplier Relationship

Many forward-thinking businesses have discovered that working cooperatively with their suppliers to serve the end consumers is more productive. Crotts et al. (2000) coined terminologies such as alliances, partnerships, collaborative connections, and boundary less organizations to define these new buyer-supplier interactions. Supplier Relationship is the technique and method of dealing with suppliers. Cavinato (2012) views supplier relationship as an organized way to determining what supply chain specialists need and desire from a supplier, as well as developing and maintaining the company-to-company relationship to meet these goals. According to Harland (2019), buyer-supplier relationship management is critical to the success of managing supply chains in businesses. According to Kamau (2013), strategic relationships with essential suppliers, in particular, must be recognized in order to enhance value generation in the supply chain.

Researches shows that successful management of these connections leads to corporate performance (Tan et al., 1999). Trust and commitment have been demonstrated to play a vital role in elevated strategic relationships when particular investments are substantial and contractual control alone is insufficient. If such partnerships are to continue and be regarded successful, it is critical that both sides think that they are obtaining benefit from the relationship. Most parts of organizational behavior are based on communication procedures, which are crucial to organizational success.

According to Kamau (2013), three components of communication behavior are critical to healthy relationships: communication quality, the degree of information exchange, and engagement in goal and plan setting. The correctness, timeliness, appropriateness, and reliability of the information communicated are all aspects of communication quality. The level to which partners collaborate on planning and goal setting is referred to as participation. When a party's activities have an impact on the capacity of the other to compete successfully, the necessity for participation in defining roles, obligations, and demands grows. Kearney (2013) also supports that having accurate information on suppliers and their quality becomes critical since suppliers are a significant and fundamental aspect of supply chain management, and supplier management is a central factor of service delivery in any organization.

Empirical Review

Lead Time on Performance of Cleaning Firms

Tiedemann et al. (2021) conducted research the significance of lead time for financial success. The study's objective was to investigate the effects of strategic lead times on return on investment for Swedish manufacturing firms. Five manufacturing enterprises with 200-3,000 employees were included in the sample. The researchers employed a multiple case study approach with 5 comprehensive single instances. Interviews and focus groups were used to acquire empirical data. According to the findings, the duration and unpredictability of strategic lead times have financial effects for firms. These consequences vary in strength and might be direct or indirect.

Shang and Lin (2019) investigated the influence of lead time on resilience performance across several strata in a supply chain that included a manufacturer, a distributor, and a retailer. The findings reveal that the key disruption effects, such as impact dispersion, decrease as lead-time increases. Furthermore, the findings demonstrate that restricting an order rate from the demand

side is useful only when the lead time is increased, but it is detrimental to business endurance when the lead time is limited. Furthermore, a backup supply decreases interruption consequences from the supplier side.

Ezeoke et al. (2019) investigated approaches to improve lead time management in Nigerian fast moving consumer goods manufacturing businesses' supply chain operations. The study employed a quantitative technique that included a cross-sectional survey and the distribution of structured questionnaires to employees in Lagos and Ogun State, Nigeria. The findings revealed the underlying aspects of lead times and customer service response levels, with the overarching goal of meeting customers' demands. Also, the results demonstrated that appropriate stock levels and shorter lead times led to the timely delivery of quality items to clients.

Cherotich and Karanja (2019) researched on how inventory management practices affected the performance of fast-moving consumer goods producers in Nairobi County, Kenya. A descriptive research approach was used in this research, with a target population of 51 companies in Nairobi County. The study focused on the logistics managers and IT executives of Nairobi's 51 FMCG enterprises. As a result, 102 individuals were sampled. Primary data was gathered by administering self-administered questionnaires to the participants. Based on the findings, the study proposed that the variables that create lead time inconsistency be addressed in order to manage the unpredictability as it affects the performance of the first moving consumer products manufacturers. Additionally, producers should look for ways to reduce lead time volatility so that lead time may be regulated.

Murwa-Igosangwa (2014) investigated the factors influencing procurement lead time and operational performance in Kenyan state-owned financial companies. The study used a descriptive research approach and collected data using a self-administered questionnaire issued to 55 senior and middle-level managers. According to the findings, a lack of appropriate policing of the ethical framework of interaction by personnel and other players in the supply chain prolonged tender processing and final delivery of the goods or services. Also, Mogere et al. (2013) sought to investigate how inventory management systems influence the performance of Gianchore Tea Factory in Nyamira County, Kenya. The researchers discovered that inventory management systems aid in stock control, optimize lead time management, and enhance customer-supplier relationships, thereby enhancing market edge.

Supplier Relationship on Performance of Cleaning Firms

Narayanan et al. (2015) conducted a study to assess the relationship between cooperation, trust, and agility performance in a buyer-supplier relationship. This report's survey-based analysis was backed by qualitative case-based field research. The fieldwork and a review of the existing literature generated the initial set of measures, which were adjusted to meet the report's context. The total number of respondents was 177. The findings revealed that trust mediates the influence of collaborations on agility performance. Also, the indirect effect of engagement on agility performance via trust is substantial only when a certain degree of cooperation has been reached.

Woo, et al. (2016) researched on supplier communication capabilities and innovation and environmental integration in the Korean construction sector for green and financial performance. The study used structural equation modeling and gathered data from 103 construction suppliers. According to the findings, suppliers that shared more information were able to enhance their environmental collaboration, reduce green costs, and gain a competitive advantage. Also, according to the research, buyer-supplier interactions are favorably correlated with favorable financial success. Ntayi and Ngoma (2013) investigated the relationship between supplier development and export performance of Ugandan oil-seed agro-processing enterprises. The researchers combined a cross-sectional quantitative survey with a field work of 50 Ugandan

businesses. The research was based on quantitative research analysis. According to the findings, there is a considerable and positive association between supplier development and export performance. The researchers argued that supplier appraisal and feedback, process-oriented counsel, opportunism, and active sharing of information were critical to export profitability.

Gizaw (2016) investigated the impact of supply chain integration performance on the profitability of Ethiopian commercial firms. The study used an explanatory research methodology sampling 108 participants. The study also relied on questionnaires to obtain data. According to the study's findings, integrations within the firms, customers, information, and suppliers are important determinants of company performance. According to the research, increased supply chain integration will result in commercial enterprises' efficient operational performance.

Walumbe (2016) investigated the relationship between supplier relationship management and the company performance of Kenyan media enterprises. The research population included 128 management personnel from 4 Kenyan media groups. The sample size of 38 was determined using stratified research sampling. The study relied on primary data gathered via self-administered questionnaires. According to the findings, supplier quality advancement enabled firms to provide technical support to vendors in effort to improve the performance of their services and incorporate and improve activities. Media companies were able to maintain strong ties, exchange information with suppliers, and assure timely product delivery due to trust-based connections with suppliers. Njagi and Shalle (2016) investigated the impact of supplier relationship management on procurement performance in Kenya's manufacturing sector. The research included a case study survey with 450 employees from East African breweries. Structured questionnaires were used to collect data. The study's findings revealed a positive association between supplier relationship management and procurement performance. According to the research, supplier and technology integrations had the least impact on procurement performance.

Chepng'etich et al. (2020) investigated the impact of strategic supplier relationships on the functioning of Kenya's devolved government structure. The study used a cross-sectional survey design that combined quantitative and qualitative methods. The target population included all personnel in finance and procurement units in ten counties. The study selected 186 respondents from these departments using stratified random selection. Data was collected through questionnaires. The research discovered a positive and significant connection between strategic supplier relationships and the functioning of devolved governmental institutions.

RESEARCH METHODOLOGY

The study adopted a descriptive research design. The target population was the cleaning companies in Nairobi County, Kenya. According to KEPSA (2022), there are 58 registered cleaning companies in Nairobi County. The study targeted procurement, finance, and human resources managers and their assistants since they are conversant with the procurement process and firm profitability. The target population was 348 respondents (3 managers and assistants in every company). The managers and their assistants were the study unit of observation. The sample size was determined using Taro Yamane 1967 sampling formula. The sample size was 186 respondents. The study adopted stratified random sampling. This ensures that all respondents have equal chances of representation in the study. The researcher stratified respondents according to their designation. In every stratum (job rank), the researcher randomly picked 93 respondents until a sample of 186 was obtained. The researcher obtained primary data through the administration of questionnaires. This study adopted quantitative analysis. The data collected was analyzed by the use of SPSS to generate inferential statistics such as regression and correlation analysis. The findings were presented using descriptive statistics methods. Descriptive statistics use graphical and numerical summaries to give a picture of a data set. Thus, tables were used for presentations.

RESEARCH FINDINGS AND DISCUSSIONS

The researcher distributed 168 questionnaires to the respondents and 148 were successfully filled and returned. Thus the response rate of was 88.1%. According to Kothari (2012), an adequate response rate is one that is greater than 50%, while an exceptional response rate is typically one that is greater than 70%. This suggests that the response rate in this study is enough for drawing both conclusions and giving advice.

Descriptive Statistics

Lead Time

The first objective aimed at examining effect of lead time the on performance of cleaning companies in Nairobi City, Kenya. Managers were asked to tick on the extent to which they agree/disagree with statements related to lead time. Findings are shown in Table 1.

Table 1: Lead Time

Key: SD=Strongly disagree, D=Disagree, NS=Not Sure, A=Agree, SA= Strongly agree, M=Mean.

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
The firm avails resources on demand in order to manage wastage	4	2.7	4	2.7	13	8.8	56	37.8	71	48.0	4.26
The firm has a daily schedule commitment to ensure faster production on time	5	3.4	5	3.4	7	4.7	49	33.1	82	55.4	4.34
The firm orders raw materials from the suppliers only when there is demand for production from customers	62	41.9	62	41.9	12	8.1	3	2.0	9	6.1	2.16
The firm avails labor on demand in order to manage labor costs.	24	16.2	114	77.0	1	0.7	6	4.1	3	2.0	2.22
The firm adopts efficient customer response to prevent inventory build up.	5	3.4	8	5.4	6	4.1	56	37.8	73	49.3	4.24
The firm produces on demand in order to manage inventory costs	6	4.1	3	2.0	2	1.4	50	33.8	87	58.8	4.41
The firm has simplified production design to ensure timely production	5	3.4	16	10.8	2	1.4	40	27.0	85	57.4	4.24
The firm has multiple skill workers to ensure faster production on time	73	49.3	28	18.9	27	18.2	19	12.8	1	0.7	1.97

N=148

Findings show that majority of the respondents strongly agreed that; the firm produces on demand in order to manage inventory costs (m=4.41), has a daily schedule commitment to ensure faster production on time (m=4.34), avails resources on demand in order to manage wastage (m=4.26), adopts efficient customer response to prevent inventory buildup (m=4.24), and has simplified production design to ensure timely production (m=4.24). Findings further show that the manages disagreed that; the firm avails labor on demand in order to manage labor costs (m=2.22), orders raw materials from the suppliers only when there is demand for production from customers

(m=2.16), and has multiple skill workers to ensure faster production on time (m=1.97). Findings imply that the firms avail resources while on demand to reduce lead times. There is also a schedule that guides the staff on what to work on which may reduce role duplication and conflicts among the staff. The firms also respond to customers promptly which improves on customer satisfaction. The managers also try to simplify the design of the products ordered to make it easier for the supplier to produce. The firms always order from the suppliers in case of stocks out irrespective of whether there is demand. This helps to reduce panic ordering and also ensures smooth flow of operations. Findings are in support of Ezeoke et al. (2019) that appropriate stock levels and shorter lead times led to the timely delivery of quality items to clients.

Supplier Relationship

The second objective sought to determine the effect of supplier relationship on performance of cleaning companies in Nairobi city, Kenya. The managers were asked to tick on the extent to which they agree/disagree with statements related to supplier relationship. Findings are shown in Table 2.

Table 2: Supplier Relationship

Key: SD=Strongly disagree, D=Disagree, NS=Not Sure, A=Agree, SA= Strongly agree, M=Mean.

Statements	**SD**		**D**		**N**		**A**		**SA**		**M**
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	
Suppliers are educated on the requirement of the firm	13	8.8	11	7.4	4	2.7	34	23.0	86	58.1	4.16
The firm collaborates with both the middle, upstream and downstream suppliers to access information	10	6.8	13	8.8	2	1.4	90	60.8	33	22.3	3.83
The firm improves its overall performance by creating collaborations with its key suppliers	8	5.4	9	6.1	2	1.4	83	56.1	46	31.1	4.01
Our suppliers are involved in the product development and design process	7	4.7	11	7.4	4	2.7	87	58.8	39	26.4	3.95
The firm maintains supplier responsiveness when it comes to product delivery	8	5.4	12	8.1	1	0.7	37	25.0	90	60.8	4.28
There is information sharing between the firm and suppliers within the supply chain	7	4.7	11	7.4	0	0	77	52.0	53	35.8	4.07
Relationships with trusted and reliable supplier facilitate quality supply of materials in our organization.	5	3.4	12	8.1	0	0	50	33.8	81	54.7	4.28

N=148

Findings show that the managers strongly agreed that; relationships with trusted and reliable supplier facilitate quality supply of materials in our organization (m=4.28), and the firm maintains supplier responsiveness when it comes to product delivery (m=4.28). The managers agreed that; suppliers are educated on the requirement of the firm (m=4.16), there is information sharing between the firm and suppliers within the supply chain (m=4.07), the firm improves its overall performance by creating collaborations with its key suppliers (m=4.01), the suppliers are involved in the product

development and design process (m=3.95), and the firm collaborates with both the middle, upstream and downstream suppliers in order to access information (m=3.83).

Findings imply that the firms have a good relationship with the suppliers. This is proved by the fact that the firms share information with the suppliers at all levels; middle, upstream, and downstream. This ensures that supplies are availed as and when needed. The suppliers are involved in the product design to ensure that they understand the specifics of the products needed by the cleaning firms especially those that need specific scents and labeling. Findings are in agreement with Walumbe (2016) that supplier quality advancement enable firms to provide technical support to vendors in effort to improve the performance of their services and incorporate and improve activities.

Firm Performance

This study sought to determine the performance of cleaning companies in Nairobi County. The managers were therefore asked to rate their agreement based on various performance indicators. Findings are shown in Table 3

Table 3: Firm Performance

Key: SD=Strongly disagree, D=Disagree, NS=Not Sure, A=Agree, SA= Strongly agree, M=Mean.

Statements	SD		D		N		A		SA		M
	F	%	F	%	F	%	F	%	F	%	
Timely service delivery to customers	4	2.7	7	4.7	6	4.0	56	37.8	75	50.7	4.66
Cost effective operations	94	63.5	20	13.5	12	8.1	20	13.5	2	1.4	2.36
Customers are highly satisfied	0	0	7	4.7	5	3.4	44	29.7	92	62.2	3.76
The profits of the organization have been increasing	103	69.6	32	21.6	7	4.7	6	4.1	0	0	1.51

N=148

Findings show that the managers strongly agreed that there is timely delivery to customers (m=4.66). They also agreed that customers are highly satisfied (m=3.76). In addition, the managers disagreed on cost effective operations (m=2.36) and increasing profits (m=1.51). Findings imply that the cleaning firms offer quality services which enhances customer satisfaction. The operations are however not cost effective which affects profit margins.

Inferential Statistics

The inferential statistics for this study were Pearson correlation and regressions. Inferential statistics sought to draw inferences between study variables.

Coefficient of Correlation

To assess the relationship between the study variables, the study used the Karl Pearson's coefficient of correlation (r). Correlation was significant at <0.005 and any value >0.005 was considered insignificant. Additionally, a correlation of <0.3 shows weak correlation, 0.31-0.49 moderate correlation while >0.5 shows a strong correlation. Correlation results are shown in Table 4

Table 4: Coefficient of Correlation

Variables		Performance	Lead time	Supplier relationship
Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Lead time	Pearson Correlation	.723**	1	
	Sig. (2-tailed)	.000		
Supplier relationship	Pearson Correlation	.418**	.210	1
	Sig. (2-tailed)	.000	.011	

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

According to findings in Table 4, there is a strong significant relationship between lead time and firm performance (r=0.723, p=0.000), a moderate significant relationship between supplier relationship and firm performance (r=0.418, p=0.000). Findings are in support of various scholars who also found a significant relationship between inventory management and firm performance; Ezeoke et al. (2019) that appropriate stock levels and shorter lead times led to the timely delivery of quality items to clients, and Chepng'etich et al. (2020) that there is a positive and significant connection between strategic supplier relationships and the functioning of institutions,

Regression Analysis

Change in dependent variable as a result of variation in independent variables was determined by computing model summary. The study analyzed the variations of the performance of cleaning firms due to the changes of lead time, and supplier relationship. Table 5 presents the Model Summary.

Table 5: Model Summary

Model	R	r^2	Adjusted r^2	Std. Error of the Estimate
1	0.762	0.580	0.566	.616

Predicators: (constant) lead time, supplier relationship,

The results in table 5, show that adjusted R squared was 0.580 implying that there was 58.0% variation of performance of cleaning companies due to the changes in lead time, and supplier relationship. This means that other inventory management practices that this study did not focus on contribute to 42% of firm performance.

ANOVA was computed to determine whether the model was significant. Table 6 presents the ANOVA results.

Table 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	74.695	4	18.674	49.419	.000[b]
	Residual	54.035	143	.378		
	Total	128.730	147			

Predicators: (constant) lead time, supplier relationship,
Dependent variable: Firm Performance

The p-value obtained (0.000) was less than the selected level of significance (0.05) an indication that the model was fit for predicting firm performance. From table 10, the F calculated was greater than the F critical (49.419). This shows that lead time, and supplier relationship, were significant predictors of firm performance.

Multiple regression shows how a change in the independent variable would predict a unit change in the dependent variable. Table 7 presents the regression coefficients.

Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant/Y Intercept	1.840	.405		3.954	.042
Lead time	.674	.099	.396	6.789	.000
Supplier relationship	.383	.058	.394	6.558	.000

As per the SPSS generated in Table 7,

Firm performance = 1.840 + 0.674 (lead time) + 0.383 (supplier relationship)

Lead time is statistically significant to performance of cleaning firms ($\beta = 0.674$, $t=6.789$, $P = 0.000$). This shows that lead time had significant positive relationship with performance of cleaning firms. This implies that a unit increase in lead time will result to increase in performance of cleaning firms.

Supplier relationship is statistically significant to performance of cleaning firms ($\beta = 0.383$, $t=6.558$, $P = 0.000$). This shows that supplier relationship had significant positive relationship with performance of cleaning firms. This implies that a unit increase in supplier relationship will result to increase in performance of cleaning firms.

Conclusion

Lead time affects firm performance. In order to save the time spent in preparing bids, placing orders, and payment processing, the firms ensure that resources are always availed when the demand is high, adopts efficient customer response, produces on demand, and simply production design. This ensures that customers are attended to on time which improves customer satisfaction index. There is however an issue with staffing which may lead to fatigue of the work force hence affecting the quality of services delivered. Skilled human resources are also inadequate implying that the firms strain their available skilled human resources.

Supplier relationship affect firm performance. Collaboration with the suppliers creates a platform where the firms and suppliers agree on the specific designs and contents on the suppliers. A good relationship with the suppliers enhances information sharing whereby the supplier shares information on quality and innovative products available in the market which keeps the firm ahead of its competitors. Supplier relationship helps to create a strategic supplier partnership and the organization is able to make procurement plans on time since the supplier constantly updates them on the market trends particularly on the cost of products and quality. Communication with the suppliers could enhance timely product availability, reduce order cycle timelines, and reduce logistics expenses. Good supplier relationship creates a bond between the supplier and the buyer which is essential for order processing. It also enables both parties to learn more about the operations of each other.

Recommendations

The firms should find ways of reducing lead time variability so that lead time can be managed. They must be aware of all sources of lead time variation including the production lead time, shipping lead time, as well as receipt and inspection velocity. The firms should ensure that there is stand by staff who are called upon when there is high demand. This will ensure delivery of quality services since the staff are not overworked. The firms should also make efforts to outsource or hire professional staff to carry out technical tasks in the firms.

The firms should develop a structural mechanism to ensure cordial buyer-supplier relationships. This will ensure more structured communication, sharing of information and resolving conflicts so that benefits of collaborations are achieved. The firms should improve more on the relationship with the suppliers. They should adopt technology for effective communication with suppliers. They should also train the suppliers on their operations to fully understand their needs.

Areas for Further Study

A similar study on cleaning firms in other counties in Kenya

A study focusing on other inventory management practices which causes 42% variance in firm performance.

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