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INFLUENCE OF STRATEGIC SUPPLY CHAIN MANAGEMENT PRACTICES ON PERFORMANCE OF CEREAL BUSINESSES IN DAGAHALEY CAMP MARKET, KENYA

Komu Priscillah Muthoni and Dr. David Kiarie Mburu

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Influence of Strategic Supply Chain Management Practices on Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

Komu Priscillah Muthoni
Mt. Kenya University, Kenya

Dr. David Kiarie Mburu
Dedan Kimathi University of Technology, Kenya

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Abstract

Purpose: The cereal supply chain within the wholesale and retail trade has been recognized to be below the market demand expectations. The cereals supply chain in Kenya has been dealing with serious issues of poor supplier management for a long time, with instances of malpractice reported, owing to distrust and commitment in the relationship, which has influenced the performance of cereal businesses. With this in focus, this research study was conducted to analyze the Influence of Strategic supply chain management Practices on Performance of Cereal businesses in Dagahaley camp market, Kenya.

Methodology: A descriptive research design was adopted to assist achieve the study's objectives. The study sample size was 111 registered traders engaged in Distribution, retail and wholesale cereals trade from the Dagahaley market. A self-administered questionnaire was used to collect primary data. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20. Textual analysis was used to analyze qualitative data, while quantitative data was analyzed using descriptive statistics. Cronbach alpha test with a coefficient of 0.7 was used to ascertain and test the reliability of the data collection instrument.

Results: The results indicated that Supply chain structure, Inventory control policy, and environment uncertainty had a positive and statistically significant effect on performance of cereals supply chain in Dagahaley market, directly affecting the performance of the cereals Businesses in Dagahaley market.

Unique Contribution to Theory, Practice and Policy: The study therefore recommends that cereal businesses should continually implement the inventory control policies established in Dagahaley Market in order to cushion against excess/stock outs.

Keywords: *Performance, Supply Chain, Inventory, Environment, Uncertainty*

INTRODUCTION

Cereal supply networks have received a lot of scrutiny from academics and practitioners in recent years. If cereal supply chains run smoothly, the overall resources need to give this industry a high level of customer service will be reduced. Customer service has improved because of increased product availability, faster order cycle time as well as information exchange techniques such as forecasting, inventory management, and delivery (Mesic, Molnar & Cerjak, 2018). The just-in-time technology, outsourcing, and vendor-managed inventory strengthen links with downstream cereal supply chain partners, giving end customers more value. This effectively resulted in the maximization of benefits and the minimization of costs amid the cereal supply chain. The nature of cereal supply chain performance becomes apparent to participating enterprises. Threats abound due to effective implementation in the constantly changing global business environment, and they substantially impact corporate management decision-making processes.

Customers' needs must be addressed while revenues are being maximized, necessitating collaboration between chain members and their business partners. On the other hand, managing various partnerships in cereal supply chains, on the other hand, is challenging due to a large number of businesses engaged, since each has its own set of resources and objectives. The strategic shift in focus towards mass customization will not be possible without more detailed coordination in grain supply chains. This will result in a quick response, making high-quality service impossible to deliver (Mutonyi, Beukel & Hjortso, 2018). Mbithe and Lambaino, (2021) observed that strong competition for market share remained a significant challenge throughout cereal supply chains. Lack of buyer-supplier collaboration and trust, supplier competency, and interpersonal ties were highlighted as important obstacles to cereal supply chain performance.

Cereal Supply Chains

The number of convenience cereal supply chains has expanded at an unparalleled rate in recent years across the world. Their presence was first limited to developed countries in North America and Europe, but they have now expanded their convenience cereal supply chain across the Asia Pacific. Furthermore, E-commerce is proving to be a valuable tool for cereal supply chains on a global scale. E-commerce produces significant revenue from developed economies in North America and Europe due to the extensive internet and mobile phones usage. Improved access to cereal supply chains, branded commodities, and a better purchasing experience worldwide are all possible thanks to online platforms. E-commerce exposes purchasers worldwide to a more profitable and customized cereal supply chain (Sacchi, *et al.*, 2018).

In dealing with the cereal supply chain, the NAFTA, which North American trade organizations have succeeded in making a reality, is one of "deep integration": so, entwined those local regulations and practices as vital as, if not more important than, national borders (Deppermann, et al. 2018). The push on cereal supply chain vendors to unify standards and procedures comes from the transmission of economic pressures across borders through essentially unified markets, a symptom of deep integration. If they don't respond, the cereal supply chain will have to devise a different solution.

Deppermann, et al. (2018) performed a study and argued that information sharing is a significant concern among most supply chain operators, culminating in the EU's bullwhip effect. The bullwhip effect describes demand swings in cereal supply chains that result in inefficient inventory management. Risk management remains a concern in the performance of cereal supply chains; Udmale, et al. (2020) due to the possibility of interruptions caused by internal and external environmental variables.

In low and middle-income countries like Sub-Saharan Africa, lack of infrastructure and high transaction costs is a well-known concern in performance of cereal supply chains. Baines, Manning & Soon (2017) contend that market reforms alone are insufficient in Africa's cereal supply chains since high transaction costs leave the country semi-open. However, transportation markets are still underdeveloped and pose a significant barrier to performance of cereal supply chains trade in Sub-Saharan despite years of development and liberalization efforts.

Aside from the intrinsic limitations of agriculture, Sub-Saharan countries' supply chains for cereals are riddled with difficulties. Scattered supply chains, lack economies of scale, low processing/value addition, and inadequate marketing infrastructure all advance to poor performance of cereal supply chain systems dominated by small/marginal farmers. In most circumstances, the value-creating actions of cereal supply chain suppliers, producers, and marketers are coordinated and synergized, resulting in greater cereal supply chain creation than they would otherwise be able to achieve on their own (Mrema, Kienzle & Mpagalile, 2018).

Part of the solution to the cereal industry's challenges could be adopting and applying more contemporary and effective corporate best practices (Baines, Manning & Soon, 2017). Cereal supply chain management is an example of a business method that has evolved into a significant component of corporate performance across a wide range of industries. Demmler, (2020), indicated significant challenges to cereal supply chain performance as a lack of buyer-supplier coordination, supplier expertise, and trust. In a recent study, Gromko and Abdurasulova (2019) recognized the issues facing the cereal supply chain: insufficient cereal supply chain management skills and procurement, qualifications, malpractices, and insufficient cereal supply chain integration. Furthermore, they identified inadequate supply chain linkages and industry structure as problems influencing Kenyan cereal supply networks. The cereal problems should be considered in context, with current patterns serving as the foundation for decision-making and problem-solving (Silali, 2019). This motivates an investigation of the performance of Kenya's cereal supply chain difficulties, where current events may confirm or contradict patterns in other countries. Therefore, this study seeks to address this knowledge gap by examining the elements that affect the performance of the cereal supply chain in Dadaab Refugee camp in Kenya.

Statement of the Problem

In today's Global cereal market, competition is primarily between cereal supply chains rather than between enterprises. Cereal supply networks that are most efficient may be able to last for a long time. Cereal supply networks can function better, and cereal supply chain members can thrive with a high level of collaboration amongst themselves. When members of cereal supply networks are

coordinated, the overall performance of the network improves. Supplier capacity, consumer demand, inventory policies, and other members' inventory levels are all discussed to accomplish member cooperation (Mutonyi, Beukel & Hjortso, 2018).

In Kenya, the cereals distribution supply-chain network business is made up of trucks that go through multiple counties. Cereals are transported from farmers to storage facilities and ultimately to market clients across the country via this network (Kaaria, 2020). Supply chain disruptions, in most cases, result in substantial problems. Customer happiness is affected by quality, profitability and operational efficiency issues. Also, the issues of uncertainty in cereal supply chains due to demand fluctuations, market volatility, poor roads infrastructure and the political context all accentuate the negative outcomes of the performance of cereal supply chains. Similarly, cereal supply chains suffer from a lack of coordination among members, which might be solved by high levels of collaboration. The entire cereal supply chain suffers when members are not collaborating from the same page. Equally important, any weaknesses in the cereal supply chain can severely affect cereal distributions and delivery of cereal to consumers. This will lead to negative impacts on the profitability of the cereal traders in Dagahaley market.

The opinion of Mbithe and Lambaino, (2021) is that cereal supply chain within the wholesale and retail traders are way below the market demand expectations. Cereal supply chain in Kenya has for prolonged periods dealt with grave issues of poor supplier management where cases of malpractice have been expressed, owing to a distrust and commitment in the relationship that exists, which has had an impact on the level of the cereal supply chain (Oteki, 2021). Thus, there are continuous challenges still facing the performance of cereal supply chain industries in Kenya more so in Dadaab refugee camp. Therefore, this analysis aims to fill this research gap by looking into analyzing the Influence of Strategic supply chain management Practices on Performance of Cereal businesses in Dagahaley camp market, Kenya.

Specific Objectives of the Study

i. To examine the influence of supply chain structure on the Performance of Cereal businesses in Dagahaley camp market, Kenya
ii. To find out how inventory control policy influence Performance of Cereal businesses in Dagahaley camp market, Kenya
iii. To assess the influence of value-added process on Performance of Cereal businesses in Dagahaley camp market, Kenya
iv. To determine the influence of environment uncertainty on Performance of Cereal businesses in Dagahaley camp market, Kenya.

LITERATURE REVIEW

Supply Chain Structure and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

When it comes to supply chain complexity, there are some factors that come into play. It's possible to have dyadic, serial, or convergent structures as well as conjoined or network structures. In the

dyadic structure, two corporate entities are paired together. A serial supply chain structure is formed when many dyadic supplies chain structures are stacked on top of each other. Retailers, distributors, wholesalers, and manufacturers make up the bulk of the industry. Each node in the chain has only one successor and unlimited number of predecessors in a converging structure (Leng, et al. 2018). There is only one predecessor for each node in a divergence but there are infinitely many successors. A supply chain with a diverging structure occurs when a single supplier sends material to multiple downstream enterprises. It is possible to structure a cereal distribution company in different ways. Supply chain topologies in web-based retailing are both convergent and divergent. If a supply chain structure doesn't fit into one of the above categories, it's referred to as a network or broad type of structure.

The cereal retail and wholesale traders buy their goods from Distributors, establishing a basic supply chain in the food industry. As a result, the cereal industry's leading Distributors, retailers and wholesalers form partnerships with each company, and the retailers and wholesalers oversee the process of issuing and executing demand purchase orders. Cereal suppliers, components and services that are required by cereal Distributors, retailer or wholesaler to move their products to intermediary or ultimate clients are included in a supply chain structure definition (Xu, et al. 2019).

The degree to which a business relationship or cooperation exists between the distribution, retail and wholesale cereal trades that are a component of a corporation's supply chain can influence the organizational structure of that enterprise (Gualandris, Luzzini & Pagell, 2021). Typical instances of these systems are simple informal ties between the distribution, retail and wholesale cereal trades, in which the retail and wholesale cereal trades make sporadic purchases made from a selected group of distributors. Additionally, they can be used to strong working relationships within integrated supply chains, which need preeminent collaboration and loyalty of all partners. Even though the cereal distributors, retail and wholesale trades have access to suppliers, they may face issues due to lack of supply capacity, a lack of delivery reliability, or a lack of consistent quality. The bullwhip increased in direct proportion to the supply chain's complexity. According to Nakano & Matsuyama, (2021) the number of steps in the supply chain will greatly expand in the future, raising both the overall inventory cost and the bullwhip impact.

Inventory Control Policy and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

To avoid stockouts, shrinkage and inaccurate accounting, inventory control ensures that the cereal traders have the essential supplies on hand. The costs invested and the costs saved by stockpiling the item must be economically matched. Two critical decisions must be made for each item retained in inventory. These picks are made based on the frequency with which the item is ordered as well as the quantity of orders. As a result, inventory control systems incorporate judgments about "when" and "how much" to order (Maihami & Ghalehkhondabi, 2019).

Review on a periodic basis and review on a continuous basis are the distinct sets of demand inventory systems. Inventory situation is reviewed on a regular basis such as during periodic review and a suitable quantity is ordered. As a result, periodic inventory inspections, which include

counting and documenting goods at predetermined intervals, are essential. For example, if a periodic review policy is followed, a retail and wholesale cereal merchant may take end month or two weeks count of business stockpiles. Regular inventory assessments allow a business owner or management to focus on other parts of the business rather than counting inventory (Ekren, & Arslan, 2020).

However, it is possible that enterprises who sell cereals in large quantities, both retail and wholesale, will not be able to provide accurate inventory counts due to technical limitations. In the interim between inventory review periods, the owner or management must establish inventory count assumptions. Consequently, determining when an item requires reordering becomes a more complex order (Maihami & Ghalehkhondabi, 2019). Additionally, it is possible for errors to occur in accounting department. When a continuous review system evaluates a transaction, it checks the inventory situation and purchases a specific quantity to replenish stock. It is a program that maintains track of each item in an inventory and updates the inventory counts whenever an item is picked out of the current stock. When retail and wholesale cereal trader have continuous inventory reviews, they can see inventory counts in real time, which in turn assists to decide whether to put other order and restock their business. Also important for precise accounting, this inventory analysis provides real-time cost projections for items sold through the inventory system (Scholten, 2020).

Order placement policies that consider inventory position while making order decisions or determining order size are referred to as inventory position-based policies. Those policies, on the other hand, that are not determined by the Cereal retail and wholesale traders' inventory status are referred to as non-inventory position-based policies (Ekren, & Arslan, 2020). The inventory position of a Cereal retailer or wholesaler is defined as the total of current inventory plus future orders minus backorders. Products that are instantly accessible to satisfy demand are known as on-hand inventory; goods that have been requested and not yet received are known as on-order, and an order placed but is not yet available is known as backordered inventory (Scholten, 2020).

Value-Added Process and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

When Porter in 1985 defined "value," he meant the amount of money that buyers were willing to pay for a product or service (Pandit, Nadathur & Jose, 2019). Another notion established by Porter is the "value chain" as a grouping of nine generic value-added activities that work together to create value for customers. Porter built a value system by integrating multiple companies' value chains. It is described as a succession of interdependent actions that generate value, as well as the demand and financial transfers that follow these activities. They are largely focused on consumer benefits, interdependent actions that generate value and demand/funds transfers that emerge from those activities (Meiling, 2021).

Value chains that are profitable, according to Schulz and Schonheit, (2021) create money. Value chains can be expounded in diversified ways, depending on the perspective you take. In trading relationships, customers buy things and business owners want to make money, value is important.

The achievement or failure of the retail and wholesale cereal trade is determined by the activities and functions that make up the value chain, which includes all activities and functions.

Keeping the value chain running smoothly provides a continuous flow of information defining consumers' requirements as well as the delivery of requested services in the appropriate quantity and quality to customers at the appropriate time and location.

The obligation to give the best customer experience possible is growing and the cereal retail as well as wholesale industries must continue to look for new ways to increase consumer satisfaction and retention. According to various retailers and wholesale cereal distributors, value-added logistics services assist businesses to gain a competitive edge in their supply chain.

Value-added services augment what third-party retailers and the wholesale grain business already provide. These supplementary services may assist customers in adapting to their specific and changing retail and wholesale cereal trade requirements. Regardless of their classification, they all share a common objective: to boost efficiency and capacity while also supporting firms in keeping competition in their marketplaces. As a result, the first step in gaining control over processes is mapping them in a way that accurately reflects what must be done and the associated volumes. It's like setting up a warehouse in that you're weighing on the number of employees staffing requirements and whether automation is justified.

Environmental Uncertainty and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

Uncertainty in the environment is unavoidable. Enterprises are more than ever before confronted with complicated tasks and uncertain competitive conditions. To keep their performance up, cereal traders need to understand optimal alignment types like business supply chain strategy, information system strategy and organizational structure to keep things going well. These things have a big impact on how well your organization does. In general, supply chain uncertainty encompasses three dimensions: supplier uncertainty, demand uncertainty, and production uncertainty (Arieftiara, Utama & Wardhani, 2017). Supplier insecurity is worrying since the supplier may be unable to offer the product to the consumer. Another source of concern is that the product will not be delivered on time or will have quality issues. The unpredictability of client demand for a product is known as demand uncertainty. Customer needs and product variations are examples of implied demand uncertainty. Customers will be influenced if they expect demand that differs from the inferred demand uncertainty.

If enterprises' orders are urgent and placed quickly, they will confront a high level of implied demand uncertainty (Kafetzopoulos, Psomas & Skalkos, D2019). The stated demand uncertainty is reduced to an emergency if the wholesalers/retailers order lead time is long, on the other hand; it is also possible that, by integrating supply uncertainty into the context of those two types of uncertainty, a company may be able to increase its productivity and competitiveness. According to Inman and Green, (2021) customer integration with demand uncertainty is analogous to a bridge; it connects enterprises with one another to assist them adapt to consumer requirements more rapidly and effectively. More specifically, product demand forecasting may be incorporated

through communication with large customers, inventory accumulation could be merged through computerization of large customer ordering to improve efficiency. Product diversity is an important component that a business can include with consumer feedback or criteria to eliminate uncertainty (Kafetzopoulos, Psomas & Skalkos, 2019).

Furthermore, successful organizational integration on this level may aid in the development of customer relationships. Supplier integration is complicated by supplier insecurity. If the procurement complexity of the provider is high and technology for crucial materials that could be combined with the main supplier is also high, then it would be prudent to link stakeholders with information exchange suppliers. For example, through information networks and then publish their manufacturing plan for use/let suppliers deliver on time (Inman & Green, 2021).

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Conceptual Framework

This explains the type of relationship between the different variables of the study.

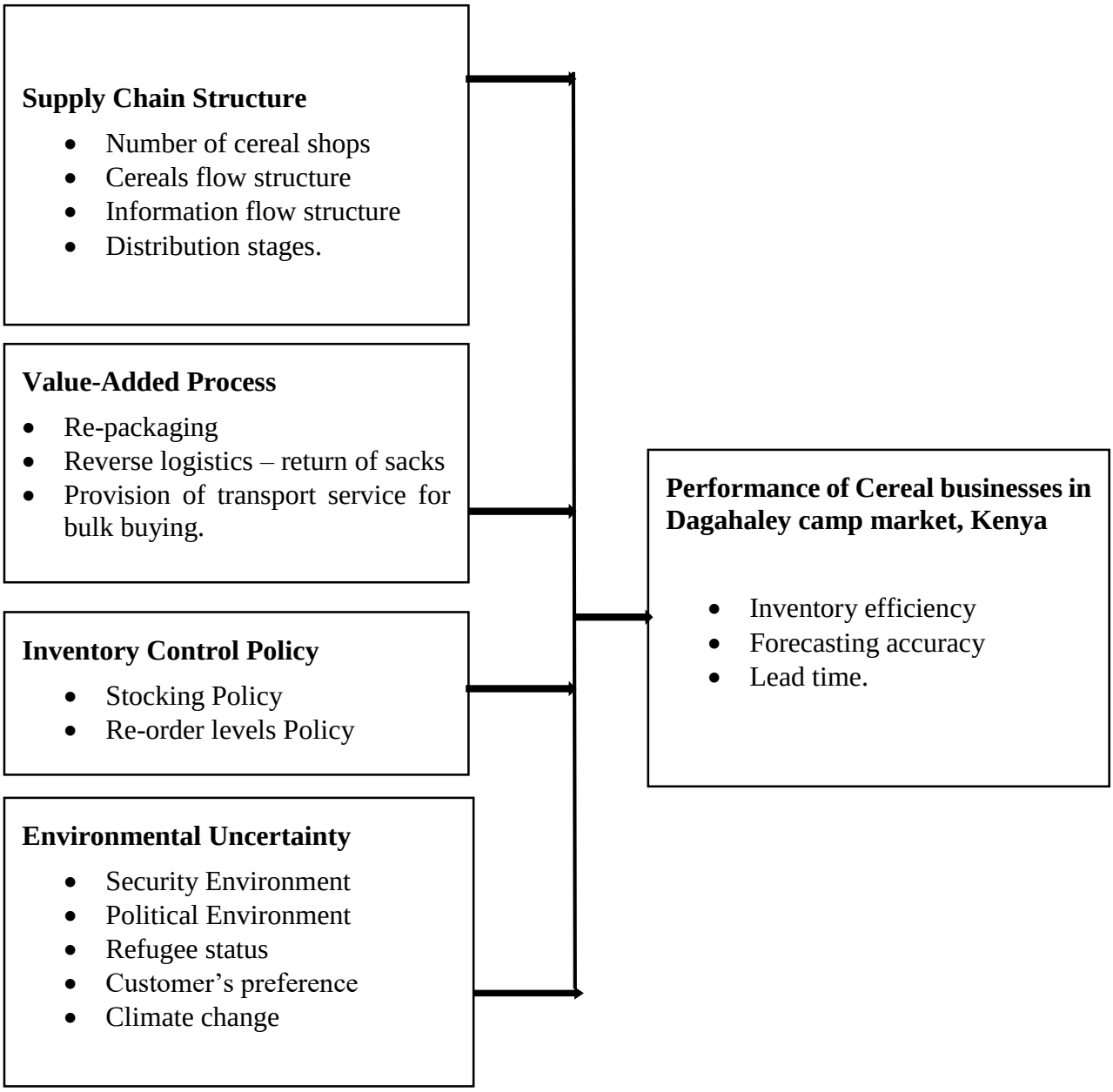

Figure 1: Conceptual Framework

The concept of organizational structure that is adaptable to the external environment will emerge in this context. According to Chege, (2017) the success of cereal supply chains is the consequence of the convergence of at least three critical streams of business knowledge. Muhalia, Ngugi, and Moronge, (2021) performed study in Kenya's maize business indicated that Maize business suffers supply chain obstacles, which includes a lack of strategic stocks, lower maize pricing when compared to other East African countries and lack of strategic inventories. They investigated the obstacles to creating solid supply chain management practices in Kenya's maize business, utilizing the National Cereal Board as a case study to analyze the issues.

According to various retailers and wholesale cereal distributors, value-added logistics services assist businesses to gain a competitive edge in their supply chain. The inventory position of a Cereal retailer or wholesaler is defined as the total of current inventory plus future orders minus backorders. Products that are instantly accessible to satisfy demand are known as on-hand inventory; goods that have been requested and not yet received known as on-order, and an order placed but is not yet available known as backordered inventory (Scholten, 2020).

Uncertainty in the environment is unavoidable. Enterprises are more than ever before confronted with complicated tasks and uncertain competitive conditions. To keep their performance up, cereal traders need to understand optimal alignment types like business supply chain strategy, information system strategy and organizational structure to keep things going well. These things have a big impact on how well your organization does (Arieftiara, Utama & Wardhani, 2017).

METHODOLOGY

The design embraced by the studywas the descriptive survey approach. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (authors, 2019). A research design dictates what, why, where, when, and how it will be done (Siedlecki, 2020). The design of this study was chosen because it would provide numerical descriptions of the population as well as descriptions of events as they are, were, or will be in the future.

The final cereal suppliers in the Dagahaley market were the study's units. In the Dadaab Refugee Camp, the research focused on cereal suppliers. According to Dagahaley camp database 2021; the market had 443 traders registered by County Government of Garissa who engaged as Distributors, retailers, and wholesalers of cereal trade.

Table 1: Target Population

Registered Traders	Traders
Distributors	64
Wholesalers	116
Retailers	263
Totals	**443**

Sources: Dagahaley Camp Database (2022)

The study used stratified sampling procedure where the population was grouped into stratus; distributors, wholesalers, and retailers from which 25 per cent of every stratum was picked as the sample size. The choice of 25 per cent was considered adequate because Siedlecki, (2020) argues that a representative is one that is at least 25% of the population of interest.

Table 2: Sample Size Data

Registered Traders	Population	Percentage (%)	Sample size
Distributors	64	**25**	16
Wholesalers	116	**25**	29
Retailers	263	**25**	66
	443	**25**	**111**

The study was based on raw data gathered through questionnaires.

In data analysis and processing, Statistical Package for Social Sciences (SPSS version 20.0) was used. The data was presented through percentages, means, standard deviation and frequencies. Multiple linear Regression model/analysis was run to ascertain the relationship between the dependent variable and independent variables. Statistical significance level was used to work out deductions from the study to the entire population.

The research work engaged a correlation matrix to determine whether one predictor variable could be predicted linearly from the others (non-multi-collinearity) as a prerequisite for using a multiple linear regression model to examine the facts.

Multiple linear regression model used was as follows;

$Y = \beta 0 + \beta 1X^1 + \beta 2X^2 + \beta 3X^3 + \beta 4X^4 + C.$

Where, Y is Dependent Variable, β1, β2, β3, β4 are all coefficients of independent variables.

Y = Performance of cereal supply chains,

X^1 = Supply chain structure,

X^2 = Inventory control policy,

X^3 = Value-added process and

X^4 = Environment uncertainty.

Through the collation of independent variables to the dependent variable, this model was utilized to examine the significance of independent variables in connection to dependent variable statistics.

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RESULTS

The study targeted 111 respondents who were traders established in Dagahaley market. Out of the 111 questionnaires issued, 103 were correctly filled and returned accounting for 92.8 percent response rate.

Supply Chain Structure and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

The first intent of the research work sought to examine influence of Supply Chain Structure on the Performance of Cereal Businesses in Dagahaley Camp market. Dagahaley market had a serial structure which consisted of distributors, wholesalers, and retailers.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.616	1	6.616	62.639	<.001[b]
	Residual	10.668	101	.106		
	Total	17.285	102			

a. Dependent Variable: Performance of cereal businesses in Dagahaley market

b. Predictors: (Constant), Supply Chain Structure

From table 3, the F – statistic was 62.639 with a p value of <0.001which is less than 0.05. This implies that the model was statistically significant at the 5% level of significance. The results show that considering the simple regression model fitted above Supply Chain Structure, it had a significant effect on Performance of cereal businesses in Dagahaley market.

Table 4: Coefficients of Regression

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.893	.323		5.855	<.001
	Supply Chain Structure	.624	.079	.619	7.914	<.001

a. Dependent Variable: Performance of cereal businesses in Dagahaley market

Tabulated result of coefficients to the model $\mathbf{Y=1.893+0.624X^1}$ indicates that Supply Chain Structure change is statistically significant at 0.05 level of significance with a p value of <0.001 as illustrated in table 4. The constant term showed that at zero consideration of supply chain structure, performance of cereal businesses in Dagahaley market would be at 1.893. An increase in supply chain structures would increase the performance of cereal supply chain by 0.624. The analyzed results from both descriptive and coefficient figures support earlier finding by

(Childhouse and Towill, (2021)), which indicated that organizations are realizing that to be competitive in global and local markets they need to develop efficient and effective supply chain management systems.

This confirms that Supply Chain Structure has an impact on performance of cereals supply chain. From the findings of this research work, substantial number of sampled traders agreed that above listed factors had significant impact on overall performance of cereal businesses in Dagahaley market.

Inventory Control Policy and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

The second objective investigated how inventory control policy affects performance of cereal businesses in Dagahaley market.

The findings of this study is apparent that Inventory Control Policy plays a major role and have a high impact in overall performance of cereals supply chain in Dagahaley market, with a mean above 3.9.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.582	1	7.582	78.927	<.001[b]
	Residual	9.703	101	.096		
	Total	17.285	102			

a. Dependent Variable: Performance of cereal businesses in Dagahaley market

b. Predictors: (Constant), Inventory Control Policy

From table 5 above, the F – statistics was 78.927 with a p value of <0.001 which is less than 0.05. This implies that the model was statistically significant at the 5% level of significance. The results show that considering the simple linear regression model fitted above, Inventory Control Policy had a significant effect on Performance of cereal businesses in Dagahaley market

Table 6: Regression Coefficients for Inventory Control Policy

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.579	.323		4.883	<.001
	IV	.797	.090	.662	8.884	<.001

a. Dependent Variable: Performance of cereal businesses in Dagahaley market

The results of coefficients to the model $Y=1.579 + 0.797X^2$ indicates that Inventory Control Policy change is statistically significant at the 0.05 level of significance with a p value of <0.001 as illustrated in table 6. The constant term showed that at zero consideration of Inventory Control Policy, performance of cereal businesses in Dagahaley market would be at 1.579. An increase in Inventory Control Policy would increase the performance of cereal supply chain by 0.797. According to Islam et. al., (2019), inventory control is the processes employed to maximize a business use of inventory. The goal of inventory control is to produce maximum profit from the least amount of inventory stocks without affecting customer satisfaction level. This can only be achieved by having enough inventory stocks in storage facilities to ensure that no stock outs are experienced. (Islam, (2019)) study has been proved in the Dagahaley market data analysis which was done under this research project.

Value-Added Process and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

The third objective desired to find out how value-added process influence performance of cereal businesses in Dagahaley market

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.077	1	5.077	42.008	<.001[b]
	Residual	12.207	101	.121		
	Total	17.285	102			

a. Dependent Variable: Performance of Cereal Supply Chain

b. Predictors: (Constant), Value Added Processes

Table 7 shows that the F – statistic was 42.008 with a p value of <0.001which is less than 0.05. This implies that the model was statistically significant at the 5% level of significance. These results show that considering the simple linear regression model fitted above Value added Processes had a significant influence on Performance of cereal businesses in Dagahaley market.

Table 8: Regression Coefficients for Value Added Processes

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.283	.334		6.829	<.001
	VA	.506	.078	.542	6.481	<.001

a. Dependent Variable: Performance of Cereal Supply Chain

The results of the model **$Y=2.283 + 0.506X^3$** indicates that Value Added Processes change is statistically significant at the 0.05 level of significance with p value of <0.001 as illustrated in table 8. The constant term showed that at zero Value addition process, performance of cereal businesses in Dagahaley market would be at 2.283. A unit increase in Value Addition Process would increase the performance of cereal supply chain by 0.506. This means, Value Addition Process is a good predictor of Performance of cereal businesses in Dagahaley market. The descriptive and coefficient data analyzed in this study concur with (Juma, (2020)) who carried out study on the effects of value-added activities of key suppliers on the performance of manufacturing firms. The study found out that all value-added activities were found to have a statistically significant effect on the manufacturing firms in Jordan.

According to the findings, value added processes has an impact on overall performance of cereals supply in Dagahaley market, with five statements having a mean score above 4.0. The finding proves the empirical review note; the activities under value chain largely focused on consumer benefits, interdependent actions that generate value and demand/funds transfers that emerge from those activities (Meiling, 2021).

Environmental Uncertainty and Performance of Cereal Businesses in Dagahaley Camp Market, Kenya

The fourth objective investigated the influence of environment uncertainty on performance of cereal businesses in Dagahaley Camp market.

The findings show that environmental uncertainty poses negative effects on supply chain performance.

Table 9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.573	1	1.573	10.110	.002[b]
	Residual	15.712	101	.156		
	Total	17.285	102			

a. Dependent Variable: Performance of Cereal Supply Chain

b. Predictors: (Constant), Environmental Uncertainties

Table 9 above indicates, the F – statistic was 10.110 with a p value of 0.002 which is less than 0.05. This implies that the model was statistically significant at the 5% level of significance. In this study these results show that considering the simple regression model fitted above, Environmental Uncertainties had a significant effect on Performance of cereal businesses in Dagahaley market.

Table 10: Regression Coefficients for Environmental Uncertainties

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.520	.292		12.065	<.001
	Environmental uncertainties	.216	.068	.302	3.180	.002

a. Dependent Variable: Performance of Cereal Supply Chain

The results of the model $\mathbf{Y=3.52 + 0.216X^4}$ indicates that Environmental Uncertainties change is statistically significant at the 0.05 level of significance with a p value of 0.002 as illustrated in table 10. The constant term showed that at zero Environmental uncertainties, performance of cereal Businesses in Dagahaley market would be at 3.52. A unit increase in Environmental uncertainties would increase the performance of cereal businesses negatively by 0.216. That meant therefore, Environmental Uncertainty is a good predictor of Performance of Cereal businesses; also, it poses negative influence on cereals supply chain performance in Dagahaley Camp market. Descriptive and coefficient analyzed data findings concur with (Arieftiara, 2017) who indicated that supply chain uncertainty encompasses three dimensions: supplier uncertainty, demand uncertainty, and production uncertainty as proved by the concluded study.

Inferential Analysis

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755[a]	.570	.552	.27553

The model illustrates 0.570 of the variances and an adjusted R square of 0.552 in the Performance of Cereal businesses in Dagahaley Camp Market. This shows there could be other factors apart from the current four used in this model which could support in the analyses of performance of cereal businesses in the study of Dagahaley market. This being the case, the data is found to be a good fit for this model. According to Terrell (2021), an R square as low as ten percent is generally acceptable in social science academic research. This implies that 57 percent of the relationship is explained by the study identified factors namely, environmental uncertainties, inventory processes, value addition processes and structure of supply chain. Other factors that influence performance of Cereals businesses in Dagahaley market are explained by the remaining 43 percent which were not investigated in this research.

Table 12: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.845	4	2.461	32.420	<.001[b]
	Residual	7.440	98	.076		
	Total	17.285	102			

Table 12 shows the regression model predicts dependent variables extensively. ANOVA statistics expresses a p value of <0.001 which is less than 0.05. This implies that the model was statistically significant at the 5 percent level of significance. The ANOVA reveals that the multiple regression models, which is statistically significant, envisions that the study outcome variable is a good fit for the data. (Caleb Scheidel, 2020). The study applied F-Test in examining the significance of the dependent variable. From the F test statistics of α =0.05 with degree of freedom in the df=K-1 in the numerator, thus 102-1=101, and df=n-k in the denominator, thus 102-4=98, which is 2.46, since 32.42>2.46, the regression model is significant. Therefore, the model is relatively correct and can be used in the estimation of performance of cereal businesses in Dagahaley market.

Table 13: Regression Coefficients For Factors Affecting Performance of Cereal Businesses in Dagahaley Market

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.883	.325		2.720	.008
	Supply Chain structure (X^1)	.235	.099	.233	2.371	.020
	Inventory Control Policy (X^2)	.594	.111	.494	5.340	<.001
	Value Added Process (X^3)	.330	.090	.353	3.645	<.001
	Environment Uncertainty (X^4)	-.221	.066	-.308	-3.357	.001

a. Dependent Variable: Performance of cereal businesses in Dagahaley market

In this study, the performance of cereal businesses in Dagahaley market from independent variables; Supply chain structure, Inventory control policy, value added process and environment uncertainty as well as determining the identified variables contribute statistically significant to the model, this is shown using the Beta values as shown in table 13. The following is the overall model summary;

$$\mathbf{Y=0.883+0.235}X^1\mathbf{+0.594}X^2\mathbf{+0.33}X^3\mathbf{-0.221}X^4$$

β1=0.235 supply chain structure had a positive and significant relation hence influencing the analysis of cereals supply chain in the camp market, and at P value 0.02 which is statistically significant as a measure of performance of cereal businesses in Dagahaley market. β2=0.594 Inventory control policy has a positive significance hence, affecting the analysis of performance

of cereals supply chain in the camp market, and at P <0.001 which is statistically significant as a measure of cereal businesses in Dagahaley market. β3=0.330 value added process has a positive significance hence, it influenced the performance of cereal businesses in Dagahaley market, and at P value <0.001which is statistically significant as a measure of performance of cereal supply chain in Dagahaley market. β4= -0.221 environmental uncertainty indicates positive and statistically significant influence the performance of cereal businesses in Dagahaley market at P value 0.001 level of significance. Therefore, X^1, X^2, X^3 and X^4 are good predictors and can be used to analyze the influence of strategic supply chain management practices on the performance of cereal businesses in Dagahaley market. According to Caleb Scheidel (2020), the coefficients table data predicts the significance between the dependent and independent variables.

Conclusion

According to the study, businesses were indeed affected by different supply chain structures available in Dagahaley market however, Supply Chain structure had a positive and statistically significant impact on performance of businesses in Dagahaley camp market. This was because the number of registered traders were able to satisfy the cereals market demands, able to transfer cereals from farmers and depots to Dagahaley market consumers without market disruptions, businesses were able to get consumer needs information and pass the same to cereal suppliers on time to service their orders, major distributors and wholesalers in the market were able to distribute cereals to the entire market without any limitations and retail traders were able to give quality service to the consumers by them being the link between major distributors and consumers.

Most traders revealed that they hold more stock than what the market required, however they have enough space which acts as holding spaces, they held periodic stock counts and set cereals re-order levels, and this was done to cushion market against cereals stock outs. On the other hand, the traders strongly denied the statement that their business did not stock enough cereals to meet their customers demand in question five.

The study further revealed that business's location, return sacks policy, provision of and linkage of customers to transport services, servicing of orders in short periods, and bulk breaking had a positive impact (customer retention) in the market businesses as confirmed by the interviewed traders. Environment uncertainty negatively affected the performance of the cereals supply chain in the study. This relates to camp closure threats, insecurity around the camp and political instability in the region and the country which negatively affected the cereals businesses too. The results confirmed that a unit increase in Environmental uncertainties negatively affected the performance of cereal supply chains in the market.

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Estimation of efficiency and transportation cost as factors in cereal marketing in a typical rural Nigeria *M.R. Ja'afar-Furo1*, Y. Yohanna1, A. Sulaiman2, A. Abdullahi 2021.*

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