Influence of Outbound Logistics Strategies on the Competitive Advantage of Automotive Companies in Kenya

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Abstract

Automotive companies need to improve the efficiency of their supply chains to maintain a competitive advantage. Ensuring efficient logistics management processes can contribute to sustainable competitive advantage. This study sought to determine the influence of outbound logistics strategies on the competitive advantage of Kenya's automotive companies. The study used an explanatory research design. The target population was 400 members of the top management team, including CEOs, functional managers, and senior managers drawn from 63 companies in the automotive industry in Kenya. The study utilized a census to include all 400 top management team members in the 63 automotive companies. Questionnaires were used in data collection. The hypothesis was tested using multiple linear regression analyses. Findings showed that outbound logistics strategies explain 38.3% of the variance in the competitive advantage of automotive companies in Kenya (R squared = 0.383). The findings further indicate that outbound logistics strategies had a statistically significant and positive influence on the competitive advantage of automotive companies in Kenya ($\beta = 0.619$, $t = 14.682$, $p < 0.05$). The study concluded that outbound logistic strategies such as timely order processing, efficient transportation systems, tracking delivery lead times, and logistics partner relationships were instrumental towards the competitive advantage of automotive companies in Kenya.

Key Words: Outbound Logistics, Competitive Advantage, Automotive Companies, Supply Chain Strategies, Kenya.

Introduction

Automotive companies need to improve the efficiency of their supply chains to maintain a competitive advantage (Ambe & Badenhorst-Weiss, 2011). Ensuring efficient logistics management processes can contribute to sustainable competitive advantage. Competitive advantage exists when the firm owns and develops a combination of specific characteristics that allow it to overtake its competitors, and be more competitive (Yuleva, 2019). A firm has a competitive advantage once it applies adding and creating value strategies that are unable to be implemented by its competitors (Isfianadewi & Aninditiyo, 2022). Hamid (2018) alludes that competitive advantage is a property that a business can have over its competitors that can be gained by offering clients better and greater value. Efficient and timely delivery of vehicles can have a major impact on the improvement of the competitive advantage of the firm.

According to Niekerk and Bean (2019), the logistics function can be the key facilitator in the cross-functional effort for supply chain integration to meet future needs, which are now assumed to be of strategic importance. Outbound logistics is a crucial field of logistics management (Moonsri, Sethanan & Worasan, 2022). Outbound logistics, a subset of supply chain management, is defined as "every process involved in the shipping and holding of products after they are completed until they are received by the customer" (Niekerk & Bean, 2019). Outbound logistics distributes finished goods to the end consumer of products. Efficient distribution of such goods can provide a competitive advantage within the supply chain. The distribution of finished goods requires extreme damage prevention measures and enhanced cargo visibility across the entire chain (Chandra, Ghosh & Srivastava, 2016). The success of an outbound logistics network of a supply chain depends on how fast it is, how flexible it is, and how efficient it is in delivering quality products to its customers (Hiremath, Sahu & Tiwari, 2013).

From an automotive industry perspective, outbound logistics accounts for a significant portion of the total order-to-delivery lead time in the automotive supply chain (Chandra, Ghosh & Srivastava, 2016). Rajahonka and Bask (2016) indicate that the main function of outbound logistics in the automotive supply chain is to deliver vehicles from the factory to customers. Different manufacturers and assemblers of automobiles leverage different ways to get the finished products to the end-consumers. According to Rajahonka and Bask (2016), manufacturers often outsource deliveries to logistics service providers under different outsourcing policies, since the service providers can provide a wider range of outbound logistics services than just transportation, including the ability to undertake some tasks related to the re-marketing of vehicles, such as preparing them for re-sale. In the current study, the researcher examined the relationship between timely order processing, tracking delivery lead times, efficient transportation systems, as logistics partner's relationships, as sub-variables of outbound logistics with the competitive advantage of the automotive companies in Kenya.

Statement of the Problem

The automotive companies in Kenya face various challenges that continuously affect their competitive advantage and that of the sector. The Kenya Association of Manufacturers (KAM) automotive sector profile (2020) details various challenges facing the sector. Homologation is a national process that determines the types of motor vehicles to be manufactured locally, to promote economies of scale and guarantee volumes for assemblers, component manufacturers and aftermarket operations (KAM, 2020). According to the profile, the absence of homologation of vehicles has affected local parts manufacturing in terms of perceived quality and market positioning. Distribution of locally assembled or manufactured products in Kenya is an issue due to the lack of homologation processes. According to Ongwae (2020), the motor industry stakeholders have, over the last decade, been urging the government to encourage local assembly; the assemblers have repeatedly asked the government to fully support their industry or continue exporting jobs; and have been arguing that if the government does not adopt appropriate policies, vehicle assembly in the country will cease, leading to loss of jobs. To this end, this study sought to determine the influence of outbound logistics strategies on the competitive advantage of Kenya's automotive companies.

Literature Review

In France, Ma, Thomassey and Zeng (2018) conducted a real case-based simulation study on developing a central order processing system for optimizing demand-driven textile supply chains. The study focuses on a case study of a French garment company. According to the authors, issues such as long lead time and low efficiency can affect even a well-structured demand-driven supply chain strategy, hence in the study the authors propose a new collaborative model with Central Order Processing System (COPS) to optimize current demand-driven garment supply chain and improve multiple supply chain performances and competitive advantage. The issue of supplier collaboration is discussed as a catalyst to the efficiency of the order processing. From a methodological perspective, the study used collaborative model citing the reason being the complexity and stochastic nature of the supply chain studied in the case whereby the traditional analytical method and mathematical modelling were not feasible for the study. The model proposed by the authors can be very relevant to the automotive supply chain as well, whereby manufacturers can use Central Order Processing Systems (COPS) to manage vehicle orders from the retailers to elevate the efficiency of the automotive supply chain. However, lack of applicability of the findings in other contexts, especially from an African context, was noted as a weakness of the study.

In China, Hu et al. (2020) conducted a study on optimal channel decision of retailers in the dual-channel supply chain considering consumer preference for delivery lead time. Various channels of product distribution exist in the market, online and offline based, whereby this study reveals that many retailers are forced to make sales channels strategic decisions in line with consumer preferences especially when it comes to the product delivery lead times after placing the orders. Literature reviewed in this study is recent and relevant to the study. The study reveals the choice of the right logistics provider can have a major impact on the efficiency of the delivery system and fulfilment of the delivery times agreed upon by the consumer. The study findings indicate that pricing as well as optimal profit to the retailer or manufacturer are positively related to the consumer preference for delivery lead time. However, unlike the current study, the study by Hu et al. (2020) lacks a connection of the delivery lead times and competitive advantage of the companies being studied, hence a gap that the current study has attempted to fill. The study recommends future studies on pricing and channel choice of the retailer in the dual-channel supply chain especially on uncertain consumer preferences for delivery lead time of perishable goods.

In South Africa, Blom and Niemann (2022), did a study on managing reputational risk during supply chain disruption recovery: A triadic logistics outsourcing perspective. The study objective was exploring reputational risk management, between a logistics triad consisting of third-party logistics providers (3PLs), their upstream suppliers and downstream customers within a South African context. The relationship and partnership with the third part providers can be crucial in achieving the outsource objectives and sustain a competitive advantage (Blom & Niemann, 2022). The authors indicate that the relationship between the logistics companies and the partners is critical for the success of the outsource engagements as well as to the competitive advantage within the industry. Thematic data analysis was used to analyze the data collected in this study which, from a critical analysis perspective, is quite relevant for the study. Thematic analysis is a powerful yet flexible method for analyzing qualitative data that can be used within a variety of paradigmatic or epistemological orientations (Kiger & Varpio, 2020). Collaboration is determined in the study as very crucial to enhance efficiency within the supply chain. The findings of the study indicate reputational risk being low when there is constant engagement and collaboration between the logistic companies and other stake holders.

Methodology

The study used explanatory research design. The target population was 400 members of top management team, including CEOs, functional managers, and senior managers drawn from 63 companies in the automotive industry in Kenya. The study utilized a census to include all the 400 members of top management team in the 63 automotive companies. Questionnaires were used in data collection. Data analysis was done using Statistical Package for Social Sciences (SPSS) version 26.0, whereby both descriptive (means, percentages, and standard deviations) and inferential statistical analyses (correlations and regression analysis) were used. The hypothesis was tested using multiple linear regression analyses.

Findings

Demographic Characteristics

The study findings demonstrate that 37.5% of the study participants indicated that their companies had been in operation for a period between 11 and 20 years while. Besides, 9.5% of the study participants indicated that their automotive companies had been in operation for a period of over 40 years. The findings demonstrated that 33% of the respondents posited that their automotive companies made revenues of less than KES 500 million in the preceding financial years while 2.3% indicated that their firms made revenues of over KES 10 billion. The study results indicate that most of the automotive companies (53%) had five branches or less while 2.3% had 16 branches or more. The results presented in Table 4.5 indicate that 53.6% of the study participants indicated that their firms had 100 or less employees while 10% had more than 500 employees. The study findings show that 44.4% of the firms were local, 21.5% were regional with 33.2% being global.

Table 1. Demographic Characteristics

Variable	Indicator	Frequency	Percent
Years	Below 10 years	90	25.8
	11 – 20 years	131	37.5
	21 – 30 years	61	17.5
	31 – 40 years	34	9.7
	Above 40 years	33	9.5
	Total	**349**	**100.0**
Sales Revenue in KES	Less than KES 500 million	115	33.0
	KES 501 million – below KES 1 billion	108	30.9
	KES 1 billion – below KES 2 billion	66	18.9
	KES 2 billion – Below KES 5 billion	40	11.5
	KES 5 billion - Below KES 10 billion	9	2.6
	KES 10 billion and above	8	2.3
	Not indicated	3	.9
	Total	**349**	**100.0**
Number of Branches	5 branches or below	185	53.0
	6 – 10 branches	119	34.1
	11 – 15 branches	32	9.2
	16 branches and above	8	2.3
	Not indicated	5	1.4
	Total	**349**	**100.0**
Number of Employees	100 or below	187	53.6
	101 – 200	50	14.3
	201 – 300	63	18.1
	301 – 400	11	3.2
	401 – 500	3	.9
	Above 500	35	10.0
	Total	**349**	**100.0**
Scope of Operations	Locally (only within Kenya)	155	44.4
	Regional (Within East Africa)	75	21.5
	Globally (Africa and beyond)	116	33.2
	Not indicated	3	.9
	Total	**349**	**100.0**

Descriptive Analysis

Outbound Logistics Strategies

The study results presented in Table 2 indicate that the study participants either strongly agreed or agreed with all the statements on outbound logistics strategies provided. Respondents strongly agreed that their companies communicate frequently and effectively to customers as their orders are being filled (M = 4.39, SD = 0.623) and that their companies

work together with their logistics partners to plan and execute outbound logistics activities (M = 4.39, SD = 0.663). Besides, respondents strongly agreed that their companies foster interdepartmental communication to ensure efficiency in outbound transportation systems (M = 4.39, SD = 0.709) and that their companies have a system that tracks customer orders from ordering to delivery (M = 4.35, SD = 0.718). Further, study participants agreed that their companies have collaborations with outbound logistics partners that are based on trust (M = 4.35, SD = 0.629 and that their organizations accurately calculate precise lead times for their outbound deliveries (M = 4.34, SD = 0.665). Study participants also strongly agreed to other statements in Table 2 which have means between 4.21 and 5.00.

The study findings presented in Table 2 also indicated that the respondents agreed that their organizations work with logistics partners to mitigate any risks that emanates from the relationships (M = 4.15, SD = 0.729) and also agreed that their organizations focus on their core business and outsources other non-core logistics activities to third party companies (M = 4.15, SD = 0.742). Respondents further agreed that their organizations have invested in new technology such as GPS tracking to keep the efficiency of the transportation system high (M = 3.92, SD = 1.035). This statement however, had a standard deviation greater than 1 indicating that the responses were dispersed highly away from the mean.

Table 2. Outbound Logistics Strategies

Statements on Outbound Logistics Strategies	Mean	Std. Deviation
Timely Order Processing		
Our company always delivers products to customers on time	4.29	.682
Our company analyses customer characteristics to determine demand and optimize delivery	4.29	.578
Our company leverages a wide range of order processing strategies to meet different customer requirements	4.25	.664
Our company communicates frequently and effectively to customers as their orders are being filled	4.39	.623
Our company has a system that tracks customer orders from ordering to delivery	4.35	.718
Tracking Delivery Lead-Times	4.34	
Our organization accurately calculates precise lead times for its outbound deliveries		.665
Our company has the best lead time compared to competitors in the automotive industry	4.31	.752
Our company has an automated system of tracking delivery lead times for optimization	4.21	.891
Our organization has utilized technological innovations to reduce delivery lead times for the benefit of both the company and its customers	4.24	.794
Our company effectively coordinates with outbound logistics partners to ensure that products are delivered to customers on time	4.22	.634
Efficient Transportation Systems	3.92	
Our organization has invested in new technology such as GPS tracking to keep the efficiency of the transportation system high		1.035
The employees involved in transportation in our company are effectively trained	4.31	.631
Our company fosters interdepartmental communication to ensure efficiency in outbound transportation systems	4.39	.709
Our company has outsourced critical transportation activities to renowned third-party logistics providers	4.29	.841
Our company tracks and addresses inefficiencies and delays in the outbound transport system	4.27	.701
Logistics Partners Relationships	4.15	
Our organization focuses on its core business and outsources other non- core logistics activities to third party companies		.742
Our company has strong long-term partnerships with its outbound logistics partners	4.23	.708
Our company has collaborations with outbound logistics partners that are based on trust	4.35	.629
Our company works together with its logistics partners to plan and execute outbound logistics activities	4.39	.663
Our company shares knowledge with its outbound logistics partners	4.29	.772
Our organization works with logistics partners to mitigate any risks that emanates from the relationships	4.15	.729

Competitive Advantage

The research findings summarized in Table 3 show that the study participants either strongly agreed or agreed with all the statements on competitive advantage. The study findings show that respondents strongly agreed that their products surpass customer expectations most of the time (M = 4.54, SD = 0.579) and also strongly agreed that their customers are very loyal to their products (M = 4.52, SD = 0.614). Besides, respondents strongly agreed that management in the automotive companies emphasize the importance of utilizing new knowledge (M = 4.52, SD = 0.632) and also strongly agreed that customers who buy their products mostly rate the products highly (M = 4.51, SD = 0.575). Besides, respondents strongly agreed that their customers regularly recommend their products to others (M = 4.50, SD = 0.545) and that the quality of their companies' products was higher that competitors' alternatives (M = 4.50, SD = 0.550). Respondents also strongly agreed to the other statements in Table 4.7 which have means of between 4.21 and 5.00. The findings in Table 3 also indicate that respondents agreed that in their companies, they have processes for acquiring information about other organizations / competitors (M = 4.20, SD = 0.922) and also agreed that their companies keep production costs low by outsourcing for improving its supply chain (M = 4.13, SD = 0.862). Study participants also agreed that their companies have a cost leadership strategy that enables them to keep prices for products lower than competitors (M = 4.02, SD = 0.969).

Table 3. Competitive Advantage

Statements on competitive advantage	Mean	SD
Customer Value		
The quality of our company's products is higher that competitors' alternatives	4.50	.550
Most of our customers make repeat purchases of our products	4.47	.559
Our products surpass customer expectations most of the time	4.54	.579
Our customers are very loyal to our products	4.52	.614
Our customers regularly recommend our products to others	4.50	.545
Customers who buy our products mostly rate the products highly	4.51	.575
Competitive Strategies		
Our company has a cost leadership strategy that enables it to keep prices for products lower than competitors	4.02	.969
Our organization employs a product differentiation strategy to differentiate its products from its competitors	4.26	.750
Our company has internalized a customer relationship management strategy as well as a customer-centric culture enabling it to create positive relationships with its customers	4.48	.604
Our company keeps production costs low by outsourcing for improving its supply chain	4.13	.862
Our company leverages focused strategy to target niche markets with our unique products	4.43	.633
Knowledge Integration		
Our organization has developed necessary processes that allow employees to acquire and share knowledge	4.41	.670
Our company has necessary resources that allow employees to use new knowledge in their routine tasks	4.45	.644
In our company, we have processes for acquiring information about other organizations / competitors	4.20	.922
In our company, we make good use of technology to share information on processes and products	4.38	.691
In our company, knowledge acquired is regularly experimented and applied within the operations	4.41	.712
Management in our company emphasizes the importance of utilizing new knowledge	4.52	.632
Agile Management Decision Making		
Our organization readily reacts to changes by immediately updating its processes	4.45	.578
Our company has flexibility to change and align to the changes in the external environment of the automotive industry	4.45	.568
The management in our company collaborates with all key stakeholders before making key decisions	4.39	.706
In our company, we quickly implement our planned activities with regard to customer needs	4.45	.661
In implementing our strategy, management focusses more on responding to changes over following the plan	4.41	.728

Inferential Analsysis

The study sought to determine the influence of outbound logistics strategies on competitive advantage of the automotive companies in Kenya. Simple linear regression analysis was used to assess the influence of outbound logistics strategies on the competitive advantage. The linear regression analysis was also applied to test the third null hypothesis which was:

$H_0$1**:** Outbound logistics strategies do not influence competitive advantage of the automotive companies in Kenya.

The regression model to assess the influence of outbound logistics strategies on the competitive advantage among the automotive companies in Kenya was fitted. The results of the model summary are presented in Table 4 which provides the correlation coefficient (r) and the r squared.

The study findings provided Table 4 demonstrate that there is a moderate correlation between the outbound logistics strategies and the competitive advantage of automotive companies in Kenya (r = 0.619). The findings further indicate that outbound logistics strategies explain 38.3% of the variance in competitive advantage of automotive companies in Kenya (R squared = 0.383). These findings further imply that the error term and other variables not included in the model could explain 61.7% of the variability in competitive advantage of the automotive companies in Kenya.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.619	.383	.381	.26277

a. Predictors: (Constant), Outbound Logistics Strategies

The study results provided in Table 5 demonstrate that the f-value was statistically significant thus indicating that the model was significant (F = 215.566, p < 0.05). These findings indicate that the regression model fits the data well. Besides, the findings imply that outbound logistics strategies had a statistically significant influence on competitive advantage of automotive companies in Kenya.

Table 5. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.884	1	14.884	215.566	.000
Residual		23.959	347	.069		
Total		38.843	348			

a. Predictors: (Constant), Outbound Logistics Strategies

b. Dependent Variable: Competitive advantage

The study findings provided in Table 6 resulted to the following regression model:

Competitive advantage = 2.165 + 0.619(Outbound Logistics Strategies) + ε

The research results summarized in Table 6 and the regression model indicate outbound logistics strategies had a statistically significant and positive influence on competitive advantage of automotive companies in Kenya (β = 0.619, t = 14.682, p < 0.05). Therefore, the null hypothesis that outbound logistics strategies do not influence competitive advantage

of the automotive companies in Kenya was rejected. The findings imply that a change of one unit in outbound logistics strategies would lead to a change of 0.619 in competitive advantage. Additionally, the findings indicate that improvement in outbound logistics strategies would result to improvement in competitive advantage of automotive companies in Kenya and vice versa.

Table 6. Regression Coefficients

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.165	.153		14.141	.000
Outbound Logistics Strategies		.524	.036	.619	14.682	.000

a. Predictors: (Constant), Outbound Logistics Strategies

Dependent Variable: Competitive advantage

Discussion of Findings

Study findings indicate that outbound logistics strategies had a statistically significant influence on competitive advantage of automotive companies in Kenya ($\beta = 0.619$, $t = 14.682$, $p < 0.05$). These findings support the findings by Ambe and Badenhorst-Weiss (2011) that ensuring efficient logistics management processes can contribute to sustainable competitive advantage. Niekerk and Bean (2019) had similar findings that the efficient distribution of finished goods to the end consumer of products can be a source of competitive advantage within the supply chain. Besides, Rajahonka and Bask (2016) had similar findings that manufacturers often outsource deliveries to logistics service providers under different outsourcing policies, thereby enabling them to focus on their core activities for a competitive advantage in their industry.

The study findings also demonstrate that outbound logistics strategies had a moderate and positive association with competitive advantage of automotive companies in Kenya ($r = 0.619$, $p < 0.05$). These findings agree with Maier et al. (2021) that outbound logistics such as timely order processing and delivery of finished products plays an important role in achievement of supply chain objectives and competitive advantage. This is because today's customers expect fast delivery of products that are affordable and tailored to their specific needs. Rajahonka and Bask (2016) also had similar findings to the findings in this study that timely order processing contributes to competitive advantage by identifying appropriate logistics services for different groups of customers, analyze customer characteristics by two methods and by analyzing their logistics service requirements.

The findings that outbound logistics strategies had a statistically significant and positive influence on competitive advantage of automotive companies in Kenya support the findings by Rossi et al. (2012) that aspects in the outbound logistics such as the efficiency and reliability of a transportation system have a significant influence on the competitiveness of a firm through the improved efficiency of its supply chain. The study findings support the findings by Marino et al. (2018) that outbound logistics such as tracking delivery time is a key factor when customers make purchasing decisions and therefore this information supports its reduction which offers companies a chance to increase their competitiveness. The findings also concur with Wan and Zhang (2021) who found that tracking delivery lead time using technology solutions can enable the firm to reduce delivery lead times for the benefit of both the company and its customers.

The current study determined that outbound logistics strategies positively influence competitive advantage. These findings support the study conducted in Italy by Calabro et al. (2020), which investigated the competitive advantage of efficient and timely inbound logistics activities. The study determined that inbound logistics include having efficient transportation systems to attain a competitive advantage. The findings also corroborate the findings in France by Ma et al. (2018), which determined that long lead time and low efficiency can affect even a well-structured demand-driven supply chain strategy, supply chain performances, and competitive advantage. Besides, the findings agree with the findings in China. Hu et al. (2020) conducted a study on the optimal channel decisions of retailers in the dual-channel supply chain, considering consumer preference for delivery lead time. The study revealed that the choice of the right outbound logistics provider could significantly impact the delivery system's efficiency and fulfilment of the delivery times agreed upon by the consumer.

Conclusions

The study concluded that automotive companies in Kenya had effective outbound logistics strategies that included effective transportation systems, logistics partner relationships, timely order processing and tracking delivery lead times. The study also concludes that outbound logistic strategies such as timely order processing, efficient transportation systems, tracking delivery lead times and logistics partner relationships were instrumental towards competitive advantage of automotive companies in Kenya.

Recommendations and Areas for further study

The study revealed that outbound logistics strategies such as timely order processing, efficient transportation systems, and logistics partner relationships significantly influenced competitive advantage of automotive companies in Kenya. The study hence recommends to management in automotive companies to employ diverse order processing techniques to fulfil varying customer demands. Besides, management should build and maintain a culture of regular and efficient communication with customers during the fulfilment of their orders. Additionally, automotive companies should adopt mechanisms that monitor the entire process of customer orders, starting from the placement of an order to its delivery. Moreover, automotive companies should have effective coordination with outbound logistics partners to ensure timely delivery of products to customers. Additionally, the organizations should make significant investments in new technologies, such as GPS tracking, to enhance the efficiency of the transportation system.

The automotive companies in Kenya served as the study's main source of data. Automotive companies must establish a foothold to improve their competitive advantage to enable them to cope with any foreseeable or unforeseeable environmental factors and explore other factors in the micro and macro environment that can influence their competitive advantage, despite the numerous challenges posed by competition from regional and international automotive firms. Future studies may also concentrate on other elements that might influence competitive advantage of a company, including corporate governance, knowledge management, strategic planning, and strategic communication. Such study would provide more in-depth understandings of how businesses may develop a competitive advantage to enable them to compete in a market that has grown more global, dynamic, disrupted, and complicated.

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