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INFLUENCE OF PROCESS INTEGRATION ON THE COMPETITIVE ADVANTAGE OF LISTED FIRMS AT THE NAIROBI SECURITIES EXCHANGE IN KENYA

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ABSTRACT

The main goals of supply chain strategy are cost reduction, higher customer satisfaction, and obtaining an edge over rival supply chains and businesses. Given the underwhelming performance of Kenyan manufacturing companies, it was necessary to identify their supply chain tactics and determine if they affected their ability to compete. Establishing the impact of process integration strategy on the competitive advantage of listed companies in Kenya's Nairobi Securities Exchange was a larger goal of the research. The supply chain operations reference (SCOR), served as the study's pillar. The study used a descriptive methodology and focused on ten NSE-listed companies. The research used a closed-ended, five-point Likert scale questionnaire to gather data from the sample respondents. Both descriptive and inferential statistics were employed in the analysis of the data using the Statistical Package for Social Sciences (SPSS) tool. Frequency distributions, means, and standard deviations were included in descriptive statistics, while regression analysis were used for inferential statistics. The study findings were presented in the form of tables and figures. The results revealed that there was a strong positive correlation between process integration and competitive advantage as shown by r = 0.813, statistically, significant p = 0.001<0.01. The study, therefore, concludes that if appropriate process integration strategies are embraced the competitive advantage of the firms will improve a great deal. The study suggests that similar studies could be conducted in other sectors including the unlisted manufacturing firms in Nairobi City County for holistic view of the study phenomena.

Keywords: *Process Integration, Competitive Advantage, Nairobi Securities Exchange*

INTRODUCTION

Growing concerns about the quality of products and services, personalized services, inventory reduction, the timeliness of information, and the most crucial factor—the final customer's satisfaction—have been raised as a result of globalization. The logistics and supply chain management processes have become harder and harder as a result of growing complexity while demand is at an all-time high. Organizations should successfully integrate and implement SCM systems in their workplace in order to achieve sustained competitive advantage (Kim, 2017).

Globally the world of business, the emphasis on supply chain management recently increased due to the fact that the practitioners and academics appreciated its role as a key factor important to contend, yet additionally to remain in the commercial center. Firms see flexibly chain the board as an essential way to accomplishment in the exceptionally mind boggling and serious business climate as it empowers them to give their item or administration contributions to the commercial center in a productive and viable way (Kim, 2017).

Rainbird (2004) presents a cycle combination model for request and flexibly measure mix. He separates eight gracefully measures, going from request receipt/passage to conveyance alternatives, just as seven interest measures, for example full scale market definition and client relationship the executives (CRM).

Rain bird contends that the "combination" or linkage between these cycles can be accomplished through one or the other administration, explicit hierarchical capacities or innovation. Expanding on this work, Juttner et al. (2007) recommend a three-layered cycle reconciliation model, in which connections request and flexibly cycles to the client's purchasing life cycle. By embracing the all-encompassing flexibly chain viewpoint and connecting promoting and gracefully anchor cycles to client esteem creation, the cycle point of view catches a more extensive scope of the interface range among advertising and SCM than the between useful point of view.

The Nairobi Securities Exchange (NSE) is a vital market for posting of organizations in Kenya. The market is partitioned into thirteen unmistakable fragments speaking to various enterprises in which the organizations work. These portions include: horticultural, autos and decorations, banking, business and organizations, improvement and brought together, energy and oil, security, adventure, hypothesis organizations, Collecting and collaborated, media transmission and advancement, land speculation trust and trade exchanged asset (NSE, 2017).

Statement of the Problem

Ideally the implementation of supply chain strategy leads to competitive advantage over other organizations, this is because supply chain management strategies have been found to enhance organizational effectiveness. A company is competitive, in accordance with Buckley et al. (1988), if it can create goods and services that are better than those of its local and foreign rivals while also being more affordable. A company's capacity to pay its workers well and to provide better returns to its shareholders are all indicators of how competitive they are over the long term. Therefore, a firm's competitiveness may be assessed based on its pricing in relation to rivals, market share, and level of profitability over a relevant time period.

Limited's supply chain strategy on competitive advantage, revealed that effective data stream management enhances the organization's internal and external cycles. According to a study conducted by Apiyo and Mburu (2016), there is a significant increase in the pressure on businesses to figure out new ways to reward customers for improving their graceful chain performance. According to Muchira (2017), unethical supply chain activities have a negative impact on more than 70% of Kenya's major government contracts.

Other studies have been done to establish the influence of supply chain strategy on competitive advantage (Bala, 2014), but very little has targeted the listed firms at the NSE, Despite the important role of supply chain management strategies in the performance of listed firms at the NSE. At the international level, only a few studies covered the relationship between supply chain strategy and competitive advantage in the manufacturing firms. However, very little has been done in the Kenyan context to find influence of supply chain strategy on competitive advantage. This study therefore, sought to determine the influence of process integration on the competitive advantage of listed firms at Nairobi Securities Exchange in Kenya.

Objective

To determine the influence of process integration on the competitive advantage of listed firms at the Nairobi Securities Exchange in Kenya.

THEORETICAL LITERATURE

Supply Chain Operations Reference (SCOR)

The Supply Chain Council adopted the Supply Chain Operations Reference (SCOR) in 1996 as a diagnostic tool for performance monitoring and streamlining supply chain management procedures. The integration of supply chain operations, i.e. collaboration, information flow, and organization throughout the supply chain, will be crucial to SCM's success. By connecting different supply chain management techniques, a regular transaction will be formed, enabling the timely and cost-effective acquisition of high-quality commodities.

This SCOR model compact chart is all there is to it. It has a lot more subtleties and layers that may be broken down inside a connection. Visit the Supply Chain Council website at www.supply-chain.org for additional information. This page has a relationship with the SCOR model. Similar to this, a PowerPoint presentation that shows the whole SCOR cycle may be obtained.

This theory supports the partner's network, under study because it provides a complexity reduction matrix whose dimensions are the four elements of the SCOR process (plan, source, manufacture, delivery). The argument is that the complexity of the supply chain can be managed through effective planning or the outsourcing of services to other actors.

Conceptual Framework

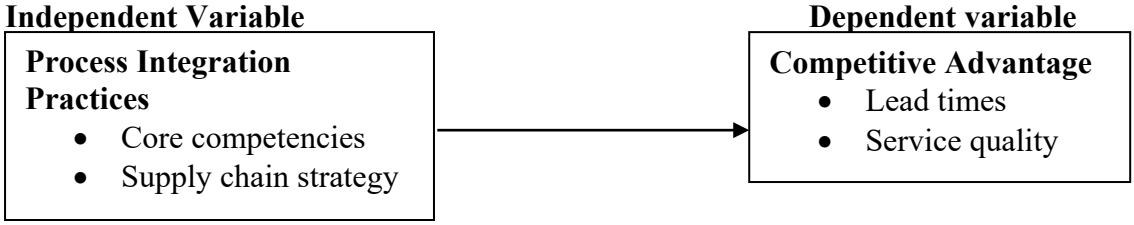

Figure 1: Conceptual Framework

Source: Researcher (2022)

METHODOLOGY

This research employed a descriptive survey research design. The choice of this research design was because of the need to describe the present situation regarding supply chain complexity management strategies and competitive advantage of listed firms at the NSE.

The population of the study consisted of all the managers of 70 firms listed at the NSE as at March 2021. A census survey of all the managers for the 70 companies listed on the Nairobi Securities Exchange was conducted since the target population of 70 managers was quite small. The unit of observation for the research was the manager or director in charge of planning or strategy in each organization. They were in the greatest position to give data for this research since they are the subject matter experts inside the company and are thought to be in charge of the competitive intelligence efforts carried out within their company.

Primary quantitative research data were utilized. A questionnaire served as the main tool for the study's data collecting. This is so that the responses may be more in-depth since surveys provide respondents the freedom to freely convey their facts about the topic. Through the use of structured questions and a 5-point Likert scale, the research gathered primary data.

Prior to analysis, the collected data was cleaned by checking for coherent consistency and any superfluous data eliminated. Coding was done to change reactions over to numbers. The data gathered at that point was analyzed utilizing quantitative techniques. Recurrence tables, diagrams and pie graphs were utilized to introduce the data for simple examination. Further, regression analysis was done to determine the connection between factors.

The following simple regressions were used:

$Y = \alpha + \beta\ 1X1 + e$

Where:

Y = Competitive advantage

X1 = Process Integration Practices

e= Error term and

α= constant

β= coefficient of independent variables

RESULTS

Response Rate

The research sought 70 respondents, and 65 of them completed and returned the questionnaire, yielding a 92.9% response rate. For analysis and reporting, a response rate of 50% is sufficient; a rate of 60% is acceptable; and a rate of 70% or above is great (Mugenda & Mugenda, 2012). Thus, it was determined that the response rate in this instance was outstanding.

Table 1: Response Rate

Response	Frequency	Percent
Returned	65	93
Unreturned	5	7
Total	**70**	**100**

Source: Field Data (2022)

Descriptive Statistics

The respondents were asked to indicate their level of agreement on the statements about the effects of process integration process on competitive advantage in the Scale; 1 –Strongly disagree, 2- disagree, 3-moderate, 4- agree, 5- Strongly agree.

Table 2: Process Integration Practices and Supply Chain Performance

Statements	1	2	3	4	5	Mean	Std. Dev
Our firm focuses on managing its core competencies	5	8	13	16	23	2.855	0.862
Listed firms at the NSE outsources its non-core activities	2	5	15	19	24	4.036	0.807
We develop our supply chain strategy jointly with our partners	4	5	12	20	25	3.955	0.734
We jointly manage our processes with our partners	6	4	14	21	20	3.918	0.667
We openly share information with our partners	3	7	14	16	20	4.027	0.769
We have been able to leverage shared information with our partners	5	4	11	12	17	3.891	0.743
We do joint product development with our partners	6	6	14	15	24	3.864	0.653

Source: Field Data (2022)

According to the findings, the respondents agreed that their firms outsource their non-core activities as shown by a mean of 4.036, the firm openly share information with our partners as shown by a mean of 4.027, the firm jointly manage their processes with their partners as indicated by a mean of 3.918, the organization has been able to leverage shared information with our partners as shown by a mean of 3.891, the organization undertakes joint product development with their partners as shown by a mean of 3.864 and the firm focuses on managing its core competencies as shown by a mean of 2.855.

The results support those of Kumar et, al (2011), who suggested that integrating supply chain activities might be profitable. In reality, by constructing more responsive and flexible supply networks and avoiding stock-outs, underutilized plant capacity, and waste, which all lower their supply chains' performance, supply chain partners may actually increase the performance of their supply chains.

Inferential Statistics

In this study, regression analysis were conducted to test the influence among predictor variables.

Regression Summary

The summary of the model is used to examine how the changes in the independent variable affect the variance of the dependent variable. The research examined the many forms of competitive advantage brought about by the use of process integration strategy.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	0.785	0.779	0.00613

Source: Field Data (2022)

The adjusted R squared value of 0.779 indicates that changes in process integration led to a 77.9% variance in competitive advantage. The other 22.1% suggest that there are more elements that contribute to competitive advantage but were not included in the research. The correlation coefficient, or R, illustrates how the research variables are related to one another. According to the research's results, there was a significant positive association between the study variables, as shown by a correlation coefficient of 0.886. The results support those of Nderitu and Patrick (2021), who found that the benefits of process integration strategy increased competitive advantage.

Analysis of Variance

The significance of the study's results was assessed using the analysis of variance (ANOVA). The results are shown in table 4.

Table 4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.063	1	9.063	97.759	.008[b]
	Residual	10.044	108	0.093		
	Total	**19.107**	**109**			

Source: Field Data (2022)

The processed data (population parameters) obtained a significance level of 0.008 according to the ANOVA statistics. Given that the p-value for significance is less than 5%, it can be shown that the data are excellent for drawing a judgment about the population's parameter. The computed F (97.759 > 3.92) was higher than the F crucial. This demonstrates how process integration has a big impact on competitive advantage. The results support those of Blome, Hollos, and Paulraj (2014), who found that process integration strategy implementation is crucial for achieving increased competitive advantage.

Beta Coefficients of the study Variables

The regression equation was

$Y = 1.269 + 0.514X + e$

The equation above revealed that Process Integration strategies would significantly influence competitive advantage by a constant of 1.269 as shown in Table 5.

Table 5: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

(Constant)	1.269	0.148		8.574	0.000
Process Integration	0.514	0.098	0.487	5.245	0.001

Source: Field Data (2022)

Process integration was statistically significant to competitive advantages shown by (β = 0.514, P = 0.001). This shows that Process integration had a significant positive relationship with competitive advantage. This shows that a unit increase in Process integration strategies would lead to an increase of 0.514 in competitive advantage. The findings concur with those of Kumar and Putman (2011) who found that there is a potential for profit from process integration by saving operational costs. However, the findings differ with Shumon, Zaman and Rahman (2010) who found that majority of organizations consider process integration to be troublesome and preventing them from achieving the benefits that come along with decoupling operations.

CONCLUSIONS

The study found a strong positive correlation between Process Integration strategies and competitive advantage of firms listed in the Nairobi Securities Exchange. It also indicated that Process Integration strategies significantly influence and competitive advantage of the firms. The study, therefore, concludes that if appropriate process Integration strategies are embraced the competitive advantage of the firms will improve a great deal.

RECOMMENDATIONS

The study recommends that firms listed in Nairobi Securities Exchange should fully embrace supply chain strategies notably; process integration, core competencies and supply chain strategy strategies. For the sake of Process Integration strategies can be done by concentrating on their core competencies and outsourcing non-primary activities. Further they should endeavor to, jointly develop and manage supply chain strategies as well as processes with their partners, jointly undertake product development with their partners and leverage on information technology for an integrated process system that if fully optimized will lead to desired competitive advantage.

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