Supply Chain Agility And Performance Of Commercial State Corporation In Nairobi City County, Kenya

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DOI: 10.29322/IJSRP.14.05.2024.p14933
10.29322/IJSRP.14.05.2023.p14933

Paper Received Date: 20th April 2024
Paper Acceptance Date: 23rd May 2024
Paper Publication Date: 31st May 2024

Drive- This study focused at supply chain agility and performance of commercial State Corporation in Nairobi City County, Kenya. The general objective of this study sought to determine the relationship between procurement tendering practices and performance of commercial State Corporation in Nairobi City County, Kenya. The general objective of this study sought to determine the relationship between supply chain agility and performance of commercial State Corporations. The specific objectives of this study were; virtual integration, process alignment share responsibility, and market sensitivity on performance of commercial state corporations in the Nairobi City County, Kenya. The study adopted descriptive qualitative and quantitative research design as there were variables which could not be quantified but could only be described. Descriptive research design was employed since there was quantitative data.

Index Terms- Virtual Integration, Process Alignment Share Responsibility, Market Sensitivity and Performance of Commercial State Corporations

I. INTRODUCTION

The concept of “supply chain” is well established in the literature and is generally referred to as the alignment of firms that bring products or services to market. The supply chain includes manufacturer, suppliers, transporters, warehouses, wholesalers, retailers, other intermediaries and even customers themselves (Ateke & Kalu, 2016). Any product traded on the consumer goods market, in its evolution from raw material to finished products, undergoes a series of successive transactions on the business to business market. For example, when a final consumer purchases a bottle of Coca Cola, he/she does not buy directly from Coca Cola, but from an intermediary for example the hypermarket or neighborhood store and the product goes through several transactions on the business to business market on the circuit Coca-Cola wholesaler retailer final consumer. This is a supply chain believes that “a supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request (Blos, Hoeflich, Dias & Wee, 2016).

These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service” (Cooper, Updegrove & Bouffard, 2019). Stated that a typical supply chain is a network of materials, information, and services processing links with the characteristics of supply, transformation and demand: An illustration of a company’s supply chain Source: There are three traditional stages in the supply chain: procurement, production and distribution. Each one of these stages may be composed of several facilities in different locations around the world. For example, in automotive industry assembly plants are located in others countries than suppliers of different components and distribution is worldwide (Khayyam & Herrou, 2017).

1.1.1 Virtual Integration Theory

Virtual Integration Theory of Improved Supply-Chain Performance Vertical integration has been proposed as a useful governance structure for countering environmental uncertainty through reduced price uncertainty and lower transaction costs, but it also can result in low flexibility and incur additional administrative and production costs associated with required adaptability (Chorn, 981). In contrast, market transactions and outsourcing have also been recognized as an alternative for firms to achieve manufacturing flexibility by leveraging production capacity, shortening the learning curve, reducing risks, and expanding the firm’s resource base through collaboration with qualified suppliers. Although interfirm collaboration seems to satisfy a firm’s adaptation needs in a dynamic environment, it may actually be more costly than vertical integration. We propose virtual integration as an alternative governance mechanism, which can achieve both manufacturing flexibility and cost advantage by increasing internal and external control (Senderm, 987).

Virtual integration is similar to vertical quasi-integration in lean supply, which offers the benefits that it was assumed vertical integration should provide. Senderm (987) argue that the combination of reduction of coordination cost and transaction risk will lead to partnership outsourcing, and thus the emergence of electronic hierarchies, rather than market outsourcing; the same results are also suggested by the theoretic work. Outsourcing may reduce the influences of environmental uncertainty facing firms, but it can also generate a new demand for ensuring flexible, smooth, and well-coordinated operations with suppliers.
Consequently, the management of external suppliers becomes an important source of firm competitiveness, and IT-enabled integration probably is the most effective and efficient mechanism (Rosenberg, 984).

### 1.1.2 Integration Theory

The basic divide in integration theory has been that between supranational a list and inter-government a list theories (Rosenberg, 984). Both families of theories differ most fundamentally on the question whether or not integration is a self-reinforcing and transformative process. Inter-government a lists deny this. For them, integration remains under the control of member state governments, which collectively determine the speed and substance of any further steps of integration. Supranational a lists, however, assert that the institutions created by member state governments trigger a self-reinforcing process which begets further integration and escapes member state control. It transforms not only the organization of the EU but also the member states and societies (Chorn, 981). There are two general sources of development and change in theories of European integration. On the one hand, change can be inspired by theoretical developments in the larger discipline of Political Science and, above all, International Relations (Elser, 1989). General theoretical innovations and refinements tend to be tried out in, and adapted to, the study of European integration sooner or later as well. On the other hand, theoretical change may reflect political developments in European integration itself. Dynamic growth in specific areas of European integration is likely to trigger increased scholarly interest for these areas and a focus on the driving forces of integration, whereas periods of stagnation and crisis favour reflection on the obstacles to integration (Rosenberg, 984).

### 1.1.3 Alignment Theory

The “Alignment” Theory: Creating Strategic Fit", A wide range of views exists on the actual definition organization performance. Profitability, market share, good value for money products, and stable employers are examples of the measures used by the various stakeholders of organizations (Rosenberg, 984). Despite the lack of a common measure, research reveals that the question of what drives organizational performance and effectiveness is more easily answered. Initially, researchers focused on attempting to identify those competitive situations, strategies and styles which seemed capable of consistently producing good performance. Results have been mixed, and it seems that we should abandon the search for universally appropriate strategies or management styles. The “Alignment” Theory: Creating Strategic Fit", Instead, it seems more sensible to recognize that any strategy is only appropriate in a given set of competitive conditions. Similarly, specific organization cultures and/or leadership styles are only appropriate in given strategic situations. While this principle is easily understood, and, indeed, makes good common sense, the difficulty comes in trying too operationalize and use it (Jensen & Meckling, 1976). Alignment, generally, brings into harmony things that differ or could differ by making them consistent or in agreement with each other. Jensen and Meckling (1976) refers to it as strategic alignment, defining it as “the link between an organization’s overall goals and the goals of each of the units that contribute to the success of those overall goals”. Indeed, alignment theory has become a thread of strategic management thinking; for example, Rosenberg, (984) “highlight the importance of organizational alignment or fit between internal and external organizational factors as a common theme and distinctive focus in the management literature.”

### 1.1.3 Inventory Theory

“Sorry, we’re out of that item.” How often have you heard that during shopping trips? In many of these cases, what you have encountered are stores that aren’t doing a very good job of managing their inventories stocks of goods being held for future use or sale. They aren’t placing orders to replenish inventories soon enough to avoid shortages (Rosenberg, 984). These stores could benefit from the kinds of techniques of scientific inventory management that are described in this chapter. It isn’t just retail stores that must manage inventories. In fact, inventories pervade the business world. Maintaining inventories is necessary for any company dealing with physical products, including manufacturers, wholesalers, and retailers. For example, manufacturers need inventories of the materials required to make their products. They also need inventories of the finished products awaiting shipment. Similarly, both wholesalers and retailers need to maintain inventories of goods to be available for purchase by customers (Jensen & Meckling, 1976).

### 2.1 Virtual Integration

The platform integration is typically part of a larger design process with different phases. For safety-critical system design it is crucial that, starting with the initial design, all steps ensure that the final implementation indeed satisfies all given requirements (Rajab, 2018). Contract-based design provides a formal foundation allowing us to reason about the validity of a design in all phases (Nsanzimana & Mulyungi, 2020). Based on well defined semantics and operations, all design steps can be checked to verify the result still satisfies the overall system requirements. Formal verification, such as with contracts, is however not an easy task, and requires carefully selected approaches in order to tackle computational complexity. We focus on the integration phase, where real-time components are allocated to the hardware platform. We present a compositional analysis framework using real-time interfaces based on ω-regular languages. Following the idea of interface based design, components are described by interfaces and can be composed if their corresponding interfaces are compatible. The contribution of this work allows us to formally capture the resource demand of an interface, which we call segregation property. Compatibility of interfaces then can be reduced to compatibility of their segregation properties (Salome, 2018).

In this research, we address the question – given that the gains from virtual integration facilitated by digitalization can help to manage the dynamic environment, how is virtual integration made manifest in SMEs’ ability to respond to the dynamic environment? The impetus to address the research question is rooted in calls from numerous studies in recent IS (information systems) literature. Onyango (2017) show how digitalization can help firms capture new business opportunities. Similarly, other studies, have indicated that digitalization can improve a firm’s ability to respond to environmental changes, but they highlight the “limited understanding of how specific digital technologies support firm capabilities.” Consistent with this point of view, the
The model of “shared responsibility” seeks to address the underlying causes of the most serious and entrenched human rights risks and abuses – weak governance and unsustainable upstream business practices (Nsanzimana & Mulyungi, 2020). It requires the collective action, influence and resources of all major stakeholders in global supply chains, including global companies, national-level suppliers, developed and developing governments, international financial and labour organizations, workers and trade unions, civil society, private philanthropy, and development agencies that are often central to public-private partnerships.

Shared responsibility includes four critical components: Adopting industry-wide, systemic approaches that involve key public and private stakeholders; Gaining visibility of the full scope and complexity of human rights challenges in each industry’s entire supply chain, and delinking visibility from financial responsibility; Assessing the real costs and commitments requires addressing the most serious risks and problems, recognizing that neither companies nor governments alone can underwrite all of these costs (Ongeri & Osoro, 2021).

Generating cooperative approaches based on an equitable sharing of responsibility for action among the key stakeholders (Nsanzimana & Mulyungi, 2020). The model also operates under a number of key principles: Not all industries and supply chains require a shared responsibility model of action. It is a model aimed at tackling the most serious and entrenched human rights challenges, where governance gaps are the widest and most persistent; Industry-specific rather than company-specific approaches are necessary for addressing the most serious human rights risks. These risks are often common among particular products or commodities and to specific geographical areas where governance is weakest; Achieving visibility over entire industry supply chains is critical for managing human rights issues. However, visibility does not equal responsibility; companies cannot and should not be held solely responsible for addressing challenges in their supply chain and Shared responsibility includes both financial costs and regulatory commitments (Ongeri & Osoro, 2021). Dividing costs and commitments among stakeholders requires stakeholders to shape a fair and transparent method of allocation (Nsanzimana & Mulyungi, 2020). To guide shared responsibility approaches, we have identified a number of existing models and key considerations for implementation of this model. The Apparel Industry Partnership from the mid-90s, the Soccer Ball Project in Sialkot, and Pakistan and Detroit’s Blight Removal Task Force each relied successfully on aspects of the shared responsibility model.

2.1.3 Market Sensibility

The crux of marketing is that sensing and serving customer requirements is the key to competitiveness in the business-scape. Marketer’s therefore strive to gain a fair grasp of customers’ preferences on an ongoing basis, given that consumers are innately fickle (Ateke & Nadube, 2017). The nature of competition in the business-scape has also given further impetus to the need for companies to be customer-centric. The need to gain better understanding of customers’ present and future value requirements has therefore continued to dictate the marketing programmes of firms (Ateke, Asiegbu, & Akekue-Alex, 2016). The core of business is marketing. Hence, any firm in which marketing is absent or occurs by chance cannot be termed a...
business (Ongeri & Osoro, 2021). Marketing and innovation are therefore basic functions of a business; while the primary responsibility of the marketing function is to create satisfied customer ship.

Also, Nsanzimana and Mulyungi (2020) identifies customer creation and retention as the primary purpose of business. Furthermore, Ongeri and Osoro (2021) express the view that sensing, serving and satisfying the customer is the essential of organizational success. Hence, a firm that is not creating satisfied customers by sensing and serving needs is not in business. It is at best in transit in the business-scrape (Ateke & Didia, 2017). Fulfilling customers’ manifest and latent needs is an imperative for survival and prosperity. Firms therefore seek better ways to correctly determine the changing needs of customers. Being sensitive to customers’ needs and adapting the organization to delivering the sensed needs has thus become a strategic option. This is especially due to the fluidity of the business-scrape, decreasing product life cycle, globalization of world economies, and advances in technology which underscores the need to find exclusiveness that ensures competitiveness (Wolf1 & De Groot, 2020). The need for firms to be market sensitive is made even more important by the turbulence of the business cape induced by the pressures continually mounted by competing firms; all of which aspire for a greater share of consumers’ minds and wallets (Wolf1 & De Groot, 2020).

2.1.4 Performance of Commercial State Corporations

Third, the proposed elements of CCP through the digitalization–virtual integration–DSP performance represent important facets of the modern competitive landscape for SMEs. The depth of coordination-related knowledge resulting from virtual integration with lower coordination and communication costs forms the basis of virtual and physical elements driving fluid partnering, business continuity planning, and market acuity (Wolf1 & De Groot, 2020). Without these elements, fluid partnering and business continuity planning may not flow efficaciously with the changing environment, and market acuity would not be sharp and adaptive. The antecedents to DSP embedded in virtual integration in SMEs improve the “adequacy, accuracy, accessibility, and timeliness” of market sensing and coordination actions. The relational view explored in this work through the CCP framework facilitates complementary knowledge structures and exchanges. The remainder of the paper is as follows. First, we provide a literature review followed by theoretical background and hypotheses. Next, we provide details of the methodology followed by the results. Finally, we provide a discussion of the results, delineate the study’s limitations, and identify a number of avenues for future research (Nyakundi, 2018).

It is good to note that a sound procurement system requires the involvement of competent professional workforce. However, the process of creating a procurement workforce with the right skills and capabilities can be a challenge, owing to the various activities such as changes to procurement processes, the review on alternative contracting approaches, and increased reliance on services as provided by the private sector (Wolf1 & De Groot, 2020). The procurement workforce “permeates virtually every effort within an agency, including successfully acquiring goods and services and executing and monitoring contracts” Lack of flexibility and customer satisfaction can be linked to lack of a high degree of quality of personnel in public procurement, and this eventually impedes compliance. Improved performance will lead to increased productivity, increased profits for the organization and therefore good results of investing in training. The constructs that will be used to measure performance include cost reduction, timing and customer satisfaction (Nyakundi, 2018).

3.1 Research Methodology

The study used descriptive cross-sectional research design. Descriptive cross-sectional survey research design was proposed for this study because it involves measuring different variables in the population of interest at a single point in time (Kothari, 2014). Descriptive cross-sectional survey research was a method of collecting information by interviewing and administering questionnaires to a sample of individuals at a point in time (Mugenda & Mugenda, 2008).

3.1.1 Market Sensitivity

From table 1.1, respondents, respondents agreed that market sensitivity ensure performance of commercial state corporation Nairobi City County in Kenya; the respondent gave a Mean of 4.039 and Standard Deviation of .7307; security’s price change on performance of commercial state corporation Nairobi City County in Kenya , they gave strongly disagree with a Mean of 4.004 and Standard Deviation of .7307; prices of goods can have effect on performance of commercial state corporation Nairobi City County in Kenya; the gave strongly agree with a Mean of 4.207, Standard Deviation of .9807; In cases of price of goods to embrace a better performance of commercial state corporation in Nairobi City County in Kenya they gave a Mean of 4.010 and Standard Deviation of .8073; Alternative prices of services to performance of commercial state corporation in Nairobi City County in Kenya ;most of the respondents were neutral with a Mean of 3.926 and Standard Deviation of .7306; and to enhance market share results, our county has in recent time conducted modern sensitivity resolution towards performance of commercial state corporation in Nairobi City County in Kenya; they gave a Mean of 4.105 and Standard Deviation of .7055.
Table 1.1: Market sensitivity

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>My county embraces market sensitivity on performance of Nairobi City County in Kenya</td>
<td>4.035</td>
<td>.7307</td>
</tr>
<tr>
<td>My county embrace fair security price change on performance of Nairobi City County in Kenya</td>
<td>4.004</td>
<td>.7307</td>
</tr>
<tr>
<td>My county embrace price of goods on performance of Nairobi City County in Kenya</td>
<td>4.010</td>
<td>.9873</td>
</tr>
<tr>
<td>In cases of price of services on performance of commercial state corporation in Nairobi City County in Kenya</td>
<td>3.926</td>
<td>.8306</td>
</tr>
<tr>
<td>Alternative market sensitivity for money process on performance of commercial state corporation Nairobi City County in Kenya</td>
<td>4.105</td>
<td>.8055</td>
</tr>
<tr>
<td>To enhance market sensitivity processes on performance of Nairobi City County in Kenya</td>
<td>4.054</td>
<td>.7105</td>
</tr>
</tbody>
</table>

3.1.2 Performance of Commercial State Corporation

From the findings in table 1.2 below, respondents were in agreement that performance of commercial state corporation in Nairobi City County in Kenya is being affect by supply chain agility, they gave 63.2%; when asked about market share and its effect on performance of commercial state corporation in Nairobi City County in Kenya they gave strongly agree of 70.7%; When the respondents were asked to show their level of agreement on how less complaints affects performance of commercial state corporation in Nairobi City County in Kenya they gave strongly disagreed of 9%; When also the respondents were asked to show their level of agreement on customer satisfaction of the in Kenya government on performance of commercial state corporation in Nairobi City County in Kenya they gave They gave agreed of 69.7%; Alternative dispute resolution process contributes to Shared chain responsibility on performance of commercial state corporation in Nairobi City County in Kenya they gave neutral of 42.5% and through supplier chain agility, performance of commercial is measured by quality, flexibility, Shared chain responsibility on performance of commercial state corporation in Nairobi City County in Kenya they gave disagreed of 74.2%. The outcome is in line with the findings of Mutai and Osoro (2021) they observed that some of the factors that contribute to inefficiency in public procurement as corruption, delayed payments, poor planning, statutory amendments, insufficient use supplier evaluation low public participation, and improper payment procedures negatively affects performance of commercial state corporation Nairobi City County in Kenya.

Table 1.2: Performance of Commercial State Corporation

<table>
<thead>
<tr>
<th>Statements</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction affects performance of commercial state corporation Nairobi City County in Kenya</td>
<td>62.2</td>
<td>37.5</td>
</tr>
<tr>
<td>No. of commercial state corporation can affects their performance Eastern in Kenya</td>
<td>70.6</td>
<td>26.4</td>
</tr>
<tr>
<td>Access to market share growth can affect performance of commercial state corporatio in Kenya</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>less customer satisfaction can affects performance of commercial state corporation Nairobi City County in Kenya</td>
<td>69.7</td>
<td>31.3</td>
</tr>
<tr>
<td>Complaints can affects performance of commercial state corporation Nairobi City County in Kenya</td>
<td>42.2</td>
<td>57.5</td>
</tr>
</tbody>
</table>

4.10 Pearson Correlation Analysis

The study further conducted inferential statistics entailing both Pearson and regression analysis with a view to determine both the nature and respective strengths of associations between the conceptualized predictors such as Virtual integration, process alignment, Shared chain responsibility and Market sensitivity and performance of commercial state corporation in Nairobi City County, Kenya.
From the findings, a positive correlation is seen between each variable and performance. The strongest correlation was established between Shared chain responsibility and performance of commercial state corporation in Nairobi City County in Kenya (r = 0.535) and the weaker relationship found between Market sensitivity and performance of commercial state corporation in Nairobi City County (r = 0.153). While process alignment and performance of commercial state corporation in Nairobi City County in Kenya were found to be strongly and positively correlating with performance of commercial state corporation in Nairobi City County in Kenya correlation coefficient of 0.307 and 0.413 respectively. This is tandem with the findings of Ongeri and Osoro (2021), who observed that all independent variables were found to have a statistically significant association with the dependent variable at over 0.05 level of confidence.

3.1.5 Model of Goodness Fit

Regression analysis was used to establish the strengths of relationship between the performance of commercial state corporation in Nairobi City County in Kenya (dependent variable) and the predicting variables; Virtual integration, process alignment, Shared chain responsibility and Market sensitivity (Independent variables). The results showed a correlation value (R) of 0.785 which depicts that there is a good linear dependence between the independent and dependent variables. This finding is in line with the findings of Ongeri and Osoro (2021). They observed that this also to depict the significance of the regression analysis done at 95% confidence level. This implies that the regression model is significant and can thus be used to evaluate the association between the dependent and independent variables. This finding is in line with the findings of Ittmann (2015), who observed that analysis of variance statistics examines the differences between group means and their associated procedures.

### Table 1.4: Model of Goodness Fit

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>Adjusted R</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.785</td>
<td>0.881</td>
<td>0.732</td>
<td>0.063</td>
</tr>
</tbody>
</table>

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10.29322/IJSRP.14.05.2023.p14933
With an R-squared of 0.881, the model shows that Virtual integration, process alignment, Shared chain responsibility and Market sensitivity contribute up to 88.1% on performance of commercial state corporation in Nairobi City County while 21.9% this variation is explained by other indicators which are not inclusive in this study or model. A measure of goodness of fit synopses the discrepancy between observed values and the values anticipated under the model in question.

Conclusion

Consequently, from the abovementioned, this study concludes that Virtual integration have broadly impacted on performance of commercial state corporation in Nairobi City County, Kenya. The findings conclude that any in Kenya should drive to embrace the best performance of commercial State Corporation in Nairobi City County after improving supplier evaluation in Kenya. When public-private partnerships is embraced through process alignment, Shared chain responsibility, and Market sensitivity then the implementation of performance of commercial state corporation in Nairobi City County, Kenya.

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