International Journal of Management and Business Research

IJMBR

Volume 6, Issue 1, pg. 890-905, 2024

ISSN 29769-91723

SUPPLY CHAIN AGILITY AND PERFORMANCE OF COMMERCIAL STATE CORPORATIONS IN NAIROBI CITY COUNTY, KENYA

[1] Wanyama Calistus, [2] Dr. Osoro Anthony (Ph.D),

[1] Master of Science in Procurement and Logistics, Jomo Kenyatta University of Agriculture and Technology

[2] Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

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 supply chain agility and performance of commercial State Corporations. The specific objectives of this study were; virtual integration 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. The target population of the study was 125 individuals particularly Sub-County Administrators, Preference Group Officials, Procurement Officers. The stratified and simple random sampling technique was used get three stratus respondents who are senior management drawn from following commercial state corporations procurement, sub county administrations and three group officials. Also, sample was collected from experienced senior management. Data was collected through administering of structured questionnaire to the respondents. The questionnaire was dropped and picked after two weeks but the respondents were given more days if they do not finish filling the questionnaire within the period. Pilot testing 10% of the target population was applied to the data instrument to ascertain the validity and reliability of the instruments. Data was analyzed with the help Statistical Package for Social Science version 28 and the findings is now presented in the form of charts, tables, and graphs for simple understanding of the findings. Construct validity was tested using factor loading of above 0.7 and expert prove reading with a rating above 0.5. Further, reliability of the instruments was tested using Cronbach's alpha in which all the variables recorded an alpha value of greater than 0.7 thus reliable. The study concludes that a unit change in virtual integration would thus lead to a .468 effect on performance of commercial state corporation in Nairobi City County in Kenya sector ceteris paribus; while a unit change in market sensitivity would lead to .260 change in on performance of commercial state corporation in Nairobi City County.

Key Words: Supply Chain Agility, Virtual Integration Market Sensitivity, Performance, Commercial State Corporations

Background of the Study

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).

According Li, Qun; Holsapple and Clyde (2015) describes a supply chain as "a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer". According to Broom Rychtář and Spears-Gill (2016), there is three degrees of supply chain complexity: a "direct supply chain," an "extended supply chain," and an "ultimate supply chain." The direct supply chain consists of a central organization, its suppliers and its customers. In addition, the extended supply chain includes suppliers of the immediate supplier and customers of the immediate customer. The ultimate supply chain includes all organizations that are involved in all flows of products, services, finance, and information from the ultimate suppliers to the ultimate customers. Also, the ultimate supply chain encompasses functional intermediaries such as market research firms, financial and logistics services providers.

Enhanced competitiveness requires that companies ceaselessly integrate within a network of organizations. Firms ignoring this challenge are destined to fall behind their rivals. This integration of companies within a network has led to put more emphasis on Supply Chain Management (SCM) (Cooper, Updegrove & Bouffard, 2019). "SCM is the management of upstream and downstream relationships in order to deliver superior customer value at less cost to the supply chain as a whole". The integral value of the SCM philosophy is that "total performance of the entire supply chain is enhanced when we simultaneously optimize all the links in the chain as compared to the resulting total performance when each individual link is separately optimized. In order to achieve this coordination/integration of all the links in the supply chain, information is critical. Recent technological developments in information systems and information technologies have the potential to facilitate this coordination, and this, in turn, allows the virtual integration of the entire supply chain (Changalima & Mdee, 2023).

The focus of this integration in the context of Internet-enabled activities is generally referred to as e-SCM. Merging these two fields (SCM and the Internet) is a key area of concern for contemporary

managers and researchers (Cooper, Updegrove & Bouffard, 2019). Managers have realized that the Internet can enhance SCM decision making by providing real-time information and enabling collaboration between trading partners. Many companies have implemented point-of-sales scanners, which read, on real time, what is being sold. These companies do not only collect information on real-time to make decisions about what to order or how to replenish the stores; they also send this information, through the Internet, to their suppliers in order to make them able to synchronise their production to actual sales (Changalima & Mdee, 2023).

Statement of the Problem

According to Amtzen et al. (2015), well-governed State Corporation have experienced low performance. Mismanagement, bureaucracy, will betake, incompetence and irresponsibility by directors and employees are the main problems that have made State corporations (SCs) fail to achieve their performance. Also Ongeri and Osoro (2021), the problems highlighted include politicization of the appointment process, corruption, and impunity, mismanagement of state corporations' assets and the effect of the donor agencies' conditionality's. The irregular appointment of BOD contributes to poor performance of SOEs. Analysis of the performance of the State Corporations indicates that there will be marginal improvement in performance in the FY 2020/2021 compared to that of FY 2019/2020 since the average composite score changed from 3.1972 to 3.1191.

Performance of state corporations means the extent to which state corporations have achieved the agreed performance targets. Thomas & Palfrey (986) conceive that citizens are the clients and main beneficiaries of public sector operation and therefore should be involved in the process of performance evaluation. The challenges in corporate are; designing systems and processes; lack of direction/vision; coping with market competition; keeping up with market transformations; reducing dependencies on the founding team; balancing quality and growth and leveraging consultants and business advisors (Gelderman et al.2017). Therefore this study was done in the Kenyan context so as to bridge the research gap between supply chain agility and performance of State Corporation in Nairobi City County Kenya.

Objective of the Study

i. To examine the effect of virtual integration on performance of commercial State Corporation in Nairobi City County, Kenya.
ii. To assess the effect of market sensitivity on performance of commercial State Corporation in Nairobi City, County Kenya.

LITERATURE REVIEW

Theoretical Frameworks

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 (Sender, 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).

Organizing and maintaining a competent and flexible supply chain is a major challenge to manufacturers in today's increasingly competitive and uncertain environments. Virtual integration represents the substitution of ownership with partnership by integrating a set of suppliers through information technology (IT) for tighter supply-chain collaboration (Chorn, 981). From the systems and control perspectives, this study develops a theory of virtual integration with an empirical model to examine the role that virtual integration plays in facilitating manufacturers to achieve greater manufacturing flexibility and comparative cost advantage. Based on a survey of Taiwanese manufacturing firms, our results show that environmental uncertainty tends to motivate manufacturers to increase their manufacturing flexibility, with both virtual integration and supplier responsiveness playing a vital enabling role. The results demonstrate the importance of supplier responsiveness for manufacturers to gain manufacturing flexibility and comparative cost advantage in supply-chain operations (Sender, 98**7).**

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).

The most common inventory situation faced by manufacturers, retailers, and wholesalers is that stock levels are depleted over time and then are replenished by the arrival of a batch of new units. A simple model representing this situation is the following economic order quantity model or, for short, the EOQ model (Von Neumann & Morgenstern, 2007). (It sometimes is also referred to as the economic lot-size model.)The costs associated with storing ("carrying") inventory are also very large, perhaps a quarter of the value of the inventory. Therefore, the costs being incurred for the storage of inventory in the United States run into the hundreds of billions of dollars annually. Reducing storage costs by avoiding unnecessarily large inventories can enhance any firm's competitiveness. Some Japanese companies were pioneers in introducing the just-in-time inventory system a system that emphasizes planning and scheduling so that the needed materials arrive "just-in-time" for their use. Huge savings are thereby achieved by reducing inventory levels to a bare minimum. Many companies in other parts of the world also have been revamping the way in which they manage their inventories. The application of operations research techniques in this

area (sometimes called scientific inventory management) is providing a powerful tool for gaining a competitive edge (Rosenberg, 984).

2.3 Conceptual Framework

A conceptual framework is a representation of the relationship you expect to see between your variables, or the characteristics or properties that you want to study. Conceptual frameworks can be written or visual and are generally developed based on a literature review of existing studies about your topic.

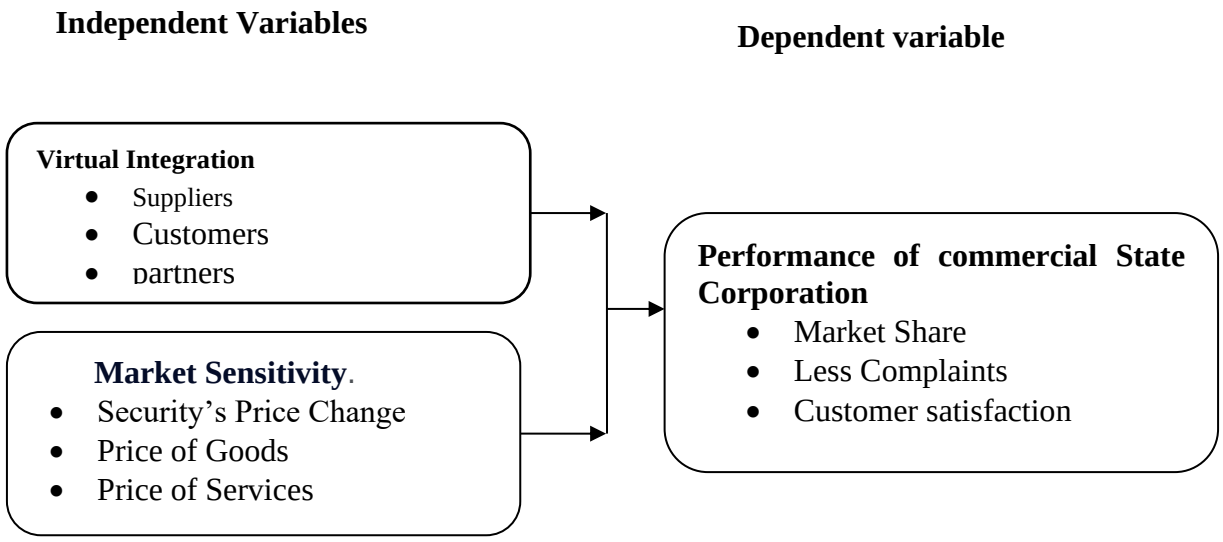

Figure 2.1 Conceptual Framework

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 problem addressed in this research is how virtual integration can improve a firm's ability to enhance their dynamic strategic planning. Moreover, pertinent to this research problem is the need to explicate the intervening variables that enable a firm to develop its dynamic strategic planning capability. We address the aforementioned research problem by augmenting the research on digitalization and inter-organizational interfaces in SMEs (Okumu & Bett, 2019).

Additionally, we put this into the context of contract-based design, enabling us to reason about the overall specification satisfied by the integrated implementation in a compositional way. More specifically, we consider the following scenario (Nsanzimana & Mulyungi, 2020). The bottom part of Figure 1 shows a target platform that is envisioned by say an Original Equipment Manufacturer (OEM). It consists of two processing nodes (CP U1 and CP U2). Suppose the OEM wants to implement two applications, components C1 and C2, on this architecture and delegates their actual implementation to two different suppliers. Both applications share a subset of the resources of the target platform, e.g. tasks $\tau 2$ and $\tau 4$ are executed on CP U2 after integration. Furthermore, we assume the system specification to be given from previous design phases. While some components together with their (local) specifications may also be known (e.g. in case of reuse), the OEM generally has to negotiate proper specifications with the suppliers, in our case C1 and C2. Now two tasks have to be accomplished: It must be ensured that (1) the composition of C1 and C2 conforms to the specification C, and the composed implementation satisfies C as well. It is highly desirable that both tasks are performed before the suppliers start to implement the respective components. Later integration issues would require to repeat this step, causing increased development time and costs (Ongeri & Osoro, 2021).

Developing safety-critical real-time systems is becoming increasingly complex due to the growing number of functions realized by these systems (Nsanzimana & Mulyungi, 2020). Moreover, an increasing number of functions are realized in software, which are then integrated on a common target platform in order to save costs. The integration on a common platform causes interferences between the different software functions due to their shared resource usage. It is desirable to bound these interferences in a way to make guarantees about the timing behavior of the individual software functions. A schedulability analysis delivers such bounds for interferences between software-tasks sharing a CPU by means of a scheduling strategy (Ongeri & Osoro, 2021).

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-scape (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-scape, 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). Business wellness, in terms of new product success, sales growth, and profitability is a strategic goal of every firm. The marketing function is the closest to the customers and competitors of the firm. It has thus been under immense pressure to report its activities and the successes recorded therefrom (Ateke & Iruka, 2015). Efforts therefore, have been made to determine how marketing efforts and actions affect various aspects of business health. Hence, the aim of this study is to determine the extent to which market sensitivity relates to business wellness of deposit money banks.

The imperative of anticipating and serving customer needs for organizational success is well recognized and advanced by scholars. However, firms can only anticipate and serve market needs when they are sensitive to market dynamics (Wolf1 & De Groot, 2020). It is therefore argued that the wellness of a business firm depends largely on its sensitivity to market dynamics, its responsiveness to marketplace changes and its collective capabilities to adapt its operations to market demands. Sensitivity to market dynamics is the ability to extract useable information from the marketplace, response is the ability of an organization to configure or reconfigure its resources and processes to attend to the demands of the environment, while collective capabilities refers to the ability of an organization to take advantage of the synthesis of its resources (Nyakundi, 2018).

Market sensitivity requires firms to be continually abreast with the needs and wants of customers. Market sensitivity is akin to the market orientation construct, viewed as a contribution of marketing to business strategy (Wolf1 & De Groot, 2020). Market orientation is argued to be a consequence of improved market-sensing capabilities of the firm, and improved responsiveness to market needs. Market sensitivity facilitates customer orientation, and goes beyond simply listening to customers; but also involves understanding the current and future needs of customers, and devising ways to satisfy those needs. Business firms are challenged to innovate, if they must remain in the business-scape (Nyakundi, 2018).

The role of market sensitivity in facilitating firm's innovativeness is pronounced. Market sensitivity accords the firm the capacity to sense the needs of consumers and understand its strengths and weaknesses (Wolf1 & De Groot, 2020). It also confers on the firm, an understanding of the firm's competitors. Market sensitivity thus impact business wellness positively. Being market sensitive enables the firm to anticipate, respond to, and take advantage of environmental changes. It also enables firms in devising and executing appropriate marketing strategies that lead to superior performance. Market sensitivity has been of interest to scholars, and has often been discussed within the market orientation discourse. It is deemed a key driver of business performance. Studies link market orientation with business performance (Nyakundi, 2018).

Thus, market sensitivity contributes to a firm's continuous learning and knowledge accumulation through continuous information gathering about customers and competitors and using the information to create superior customer value (Wolf1 & De Groot, 2020). It is also believed to be positively associated with business performance; as several studies found it to be positively related to profitability, market share, new product success and customer satisfaction. Market sensitivity thus has profound effects on business performance, given that it enables quick response to current and future customer needs and preferences, and enables firms to design and offer a marketing mix

that its core customers will perceived as being of superior quality, while making a profit and building competitive advantage (Nyakundi, 2018).

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).

The Kenyan perspective of vendor rating is companies who evaluate their suppliers find that they have better visibility into supplier performance, uncover and remove hidden cost drivers, reduce risk, increase competitive advantage by reducing order cycle times and inventory, gain insight on how to best leverage their supply base, and align practices between themselves and their suppliers. Companies pursuing supplier assessment commonly see over a 20% improvement in supplier performance metrics e.g., on time delivery, quality, and cost. Some of the parameters they apply are lowest price on a bid and the track record of the suppliers in the previous orders they supplied. Nyakundi (2018) views vendor rating as the process of measuring the performance of a vendor (supplier).His study notes the importance of measuring performance of the vendors by first establishing the issues that are unique to the company and fashioning a way to monitor how suppliers deliver on orders. The guiding principle towards understanding the effectiveness of the suppliers is the track record and the principles instituted by the organization itself to assure delivery of their orders. In effect the vendor rating as an avenue where an organization can continually assess the suppliers determining those that are effective in undertaking their roles (Njoki, Isamil & Osoro, 2021).

Empirical Review

Virtual Integration

There has been a considerable amount of study on compositional real-time scheduling frameworks. These studies define interface theories for components abstracting the resource requirement of a component by means of demand functions, bounded-delay resource models [6], or periodic resource models (Wolf1 & De Groot, 2020). Based on these theories the required resources of a component, captured by its interface, can, for example, be abstracted into a single task. This approach gives rise to hierarchical scheduling frameworks where interfaces propagate resource demands between different layers of the hierarchy. Our proposed resource segregation abstraction is an extension of the real-time interfaces presented in. Contrary to the aforementioned approaches, our real-time interfaces and resource segregation are based on ω-regular languages. This means the approach can for example be employed in automata-based model-checking frameworks. In addition the results we present are not bound to specific task and resource models, like periodic or bounded delay (Njoki et al., 2021).

Analytical methods provide efficient analysis by abstracting from concrete behavior. This, however, typically leads to over-approximations of the analysis results. Computational methods on the other hand, such as model-checking for automata, typically provide the expressive power to model and analyze real-time systems without the need for approximate analysis methods. This flexibility comes with costs (WB.2017). Model-checking is computationally expensive, which often prevents analysis of larger systems. The contribution of this paper will help to reduce verification complexity for the application of computational methods. The paper is structured as follows: We start with an introduction of real-time interfaces as presented in, which characterize components including their resource demands. Section 3 recapitulates the basic notions of contract-based design that are consistent with our interfaces. Sections 4 and 5 provide the notions and results to reason about the integration of interfaces in a compositional way in the context of contract-based design (Njoki et al., 2021).

Dynamic strategic planning (DSP) involves continuously reviewing and adapting a company's strategic plans to changing market conditions, customer needs, and other external factors, allowing small and medium-sized enterprises (SMEs) to be more agile and responsive to market changes, and to take advantage of new opportunities (WB, 2017). Virtual integration, on the other hand, refers to the use of technology to connect different parts of a business, including employees, suppliers, customers, and partners, allowing for better collaboration, more efficient processes, and faster decision making. Combining these two concepts can be particularly beneficial for SMEs because it allows them to be more nimble and adaptable in their strategic planning whilst leveraging technology to improve their operations (Njoki et al., 2021).

Market Sensitivity

Market sensitivity is the propensity of firms to sense and respond to customers' real demand promptly. It is the tendency of firms to be driven, not by forecasts but by customers' real demand; such that instead of relying on past sales to forecast future sales, firms rely on direct feed-forward from the marketplace through data on actual customer requirements (Ateke & Didia, 2017). There is a pervasive transformation in strategies and operating policies of firms. Firms are adopting technologies to aid their processes in order to respond promptly to the challenges of today's customers' unique and rapidly changing needs, such as high quality products at low prices. Market sensitivity has the potential to confer on firms, the capacity to surmount these challenges. Customers are fickle by nature. The products that caught their admiration yesterday no longer appeal to them today; and the products they patronize today will cease to appeal to them tomorrow (Njoki et al., 2021).

This suggests that firms cannot afford to lose track of their customers' requirements (Rajab, 2018). Little wonder, firms have over the years sought ways of reengineering their operations to keep track of customers' changing demands. Satisfying customers' requirements is the central purpose of any business and basic aim of marketing. The point therefore is that, the more sensitive a firm is to its customers' needs, the more appealing that firm will be to customers. Delighting the customership is a marked way of outsmarting competitors, since customers are the pivot of firms' strategies and processes, and are preeminent in strategic planning, quality initiatives, product customization, and responsiveness of firms (Njoki et al., 2021).

RESEARCH METHODOLOGY

The study used descriptive cross-sectional research design. The target population in this study was all the commercial state corporations in Kenya, who are members of the Kenya Association of Manufacture. Target population was 125 respondents who comprised of procurement manager, Finance manager and administration manager respectively from 125 commercial state corporations and this was my unit of analysis and my unit of observations were commercial state corporations. This study used purposive random sampling techniques as the respondent have the same experience, skills and features.

Data was collected using a self-administered semi-structured questionnaire. Semi-structured and structured questionnaires was used since they enabled the researcher collect quantitative data (Kothari, 2011). Questionnaires are a good method because they provide clarifications seek by respondents and they can be collected immediately after they are completed. Structured questionnaires are easy to administer, analyze and are economical in terms of time and money. A five-point Likert scale was to measure all variables (Mugenda & Mugenda, 2008). The lowest rating of 1 signifies a low opinion by respondent while a high rating of 5 signifies a high rating by the respondents.

The data collection procedure involved getting an introduction letter from the department authorizing data collection from targeted respondents (Kothari, 2011). Also, before data collection the researcher obtained an authorization letter from the National Council for Science and Technology. Data was collected using a self-administered structured questionnaire. A drop and pick later method was applied in administering the questionnaire which gave the respondent ample time to fill in the data questionnaire based on questionnaire understanding in my studies.

A pilot test was conducted to determine validity and reliability of the data collection instrument. According to Mugenda and Mugenda (2008) the pretest sample should be between 1% and 10% depending on the sample size. The researcher did a pilot test of 10% (13) respondents so as to ascertain the reliability and validity of questionnaire. Data obtained from the field was coded, cleaned, and entered into the computer for analysis using the Statistical Package for Social Science (SPSS) version 28. Qualitative reports is now presented in form of essay which was discussed as per the study objectives aligned with the theories and empirical study.

RESEARCH FINDINGS AND DISCUSSION

Out of 112 questionnaires that were circulated to the respondents, 98 of the respondents dully filled and retuned questionnaires; yielding a response of 87.5%. This was considered to be a very reliable response rate for the generalization of study findings is in line with Sharma (2015), states that a response rate of 70% and above is believed to be a reliable response rate. This was less 11 (10%) respondents who were pilot tested.

Descriptive Statistics

Virtual Integration

Respondents were requested to give their responses in regard to Virtual integration in a five point Likert sale where SA=Strongly Agree, A=Agree, N= Neutral, D=Disagree, and SD= Strongly Disagree. Results obtained were presented in Table 1 below:

Respondents were requested to give their opinion on the variable Virtual integration. From table 4.7, the respondents unanimously agreement that Virtual integration ensured performance of commercial state corporation and periodic review in Nairobi City County in Kenya viable with agreement of a mean was 3.742, and Standard Deviation of 1.0602; Through supplier assessment in Nairobi City County the respondents gave neutral response with a mean of 3.533 and Standard Deviation of.9202; customers assessment has contribution to the quality and innovation of the virtual integration with strongly agree a Mean of 3.903, and Standard Deviation of .9007; assessment of partners in Virtual integration it is important to put in place and maintain procurement the respondents gave a strongly agree with a Mean of 4.061, and Standard Deviation of .9851; The management of Nairobi City County in Kenya implements performance of commercial state corporation award the respondents disagreed with a Mean of 3.541 and SD=1.3020); and Virtual integration enhances performance of commercial state corporation at Nairobi City County in Kenya, they agreed with a Mean of 3.566, Standard Deviation of .7017. This finding agrees with the findings of Nyile *et al.* (2022) who observed that clear description of Virtual integration, enhance effective performance of commercial state corporation in Nairobi City County, Kenya.

Table 1: Virtual integration

Statement	Mean	Std. Dev.
My In Kenya ensures supplier assessment Sharing through Real time basis	3.370	1.060
Through customer assessment in Nairobi City County Kenya has been able to make decisions on timeliness	3.531	.9202
Responsiveness of partners has contribution to performance of Nairobi City County, Kenya	3.903	.9007
By Quick, frequent & accurate process alignment It is important to put in place Virtual integration	4.061	.9851
The management of supplier evaluation in virtual integration	3.541	1.3020
Virtual integration enhances performance of Nairobi City County, Kenya.	3.566	.8017

Market Sensitivity

Respondents were asked to give their responses in regard to market sensitivity on performance of commercial state corporation in Nairobi City County in Kenya i.e. 5 point likert sale where SA=Strongly Agree, A=Agree, N= Neutral, D=Disagree, and SD= Strongly Disagree. Their responses are presented in table 2 below:

From table 2, 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 in 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.

These findings are in line with the findings of Nyile *et al.* (2022) who observed that the characteristic of market sensitivity are the best value reaction to sort out non-performance of, after Market sensitivity, for resolving return on investment. The problem areas giving rise to disputes are mainly related to Nairobi City County's matters.

Table 2: Market Sensitivity

Statement	Mean	Std. Dev.
My county a embrace market sensitivity on performance of Nairobi City County in Kenya.	4.035	.7307
My county embrace fair security'price change on performance of Nairobi City County in Kenya.	4.004	.7307
My county embrace price of goods on performance of Nairobi City County in Kenya	4.010	.9873
In cases of price of services on performance of commercial state corporation in Nairobi City County in Kenya	3.926	.8306
Alternative market sensitivity for money process on performance of commercial state corporation Nairobi City County in Kenya	4.105	.8055
To enhance market sensitivity processes on performance of Nairobi City County in Kenya	4.054	.7105

Performance of Commercial State Corporation in Nairobi City County

Respondents gave their level of agreement on various statements relating with performance of commercial state corporation in Nairobi City County, Kenya. The results were as presented in Table 3 below:

From the findings, 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 in Kenya..

Table 3: Performance of Commercial State Corporation in Nairobi City County

Statements	Yes (%)	No (%)
Customer Satisfaction an affects performance of commercial state corporation Nairobi City County in Kenya	62.2	37.5
No. of commercial state corporation can affects their performance Eastern in Kenya	70.6	26.4
Access to market share growth can affect performance of commercial state corporatio in Kenya	44	56
less customer satisfaction can affects performance of commercial state corporation Nairobi City County in Kenya	69.7	31.3
Complaints can affects performance of commercial state corporation Nairobi City County in Kenya	42.2	57.5
performance of commercial state corporation in Nairobi City County in Kenya	74.1	25.9

Regression Analysis

To establish the degree of the effect of supply chain for a regression analysis was conducted, with the assumption that: variables are normally distributed to avoid distortion of associations and significance tests, which was achieved as outliers were not identified; a linear relationship between the independent variables and dependent variable for accuracy of estimation, which was achieved as the standardized coefficients were used in interpretation.

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, 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 4: Model of Goodness Fit

R	R2	Adjusted R	Std. Error of the Estimate
0.785	0.881	0.732	0.063

a. Predictors: (constants); Virtual integration, and Market sensitivity
b. Dependent Variable: performance of commercial state corporation

With an R-squared of 0.881, the model shows that Virtual integration, and Market sensitivity an contribute up to 88.1% on performance of commercial state corporation in Nairobi City County in 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. This finding is in line with the findings of Mwakubo and Ikiara (2007).

Analysis of Variance (ANOVA)

From the results in table 5, analysis of variance statistics was conducted to determine the differences in the means of the dependent and independent variables to show whether a relationship exists between the two. The P-value of 0.005 implies that organizational performance of commercial state corporation in Nairobi City County have a significant relationship with Virtual integration, and market sensitivity which is significant at 95 % level of significance.

Table 5 Anova Test

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	4.155	1	1.058	.431	.000
Residual	6.466	97	.530		
Total	**10.611**	**98**			

Regression Coefficients of Determination

To determine the relationship between the independent variables and the dependent variable and the respective strengths, the regression analysis produced coefficients of determination. Findings in table 6 reveal a positive relationship between the performances of commercial state corporation in Nairobi City County in Kenya,

Table 6 Regression Coefficient Results

Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta	
(constant)	-.132	.060	-1.144	4.004	.002
Virtual integration	.468	.132	.555	5.472	.003
Market sensitivity.	.260	.115	.321	2.657	.001

a. Predictors: (constants), Virtual integration,]and Market sensitivity

b. Dependent Variable: performance of commercial state corporation in Nairobi City County in Kenya

A unit change in virtual integration would thus lead to a .468 effect on performance of commercial state corporation in Nairobi City County in Kenya sector ceteris paribus; while a unit change in market sensitivity would lead to .260 change in performance of commercial state corporation in Nairobi City County. This finding is in line with the findings of Ongeri and Osoro (2021). This implies that among other factors, Virtual integration, and Market sensitivity are significant determinants of performance of commercial state corporation in Nairobi City County, Kenya.

Conclusion

The study concludes that there is a positive relationship between Virtual integration and Performance of commercial state corporation Speciation identification, periodic design assessment, continues improvement and proactive assessment are among the Virtual integration factors that significantly influenced the performance of commercial state corporation in Nairobi

City County, Kenya. The study further concludes that by implementing Virtual integration has enhanced performance of commercial state corporation in Nairobi City County, Kenya, leading to operational increase in efficiency and effectiveness..Therefore, the study concludes that commercial state corporation in Nairobi City County, Kenya has significantly increased their suppliers' quality management in the In Kenya government in the supply chain practices.

The study concludes that there is a positive relationship between Market sensitivity and performance of commercial state corporation in Nairobi City County, Kenya. Partnership enforcement policy, collective bargaining, alternative dispute resolution processes, free expression of concerns by involved practices are among the coordination factors that significantly influenced the performance of commercial state corporation in Nairobi City County, Kenya. The study further concludes that by adopting alternative coordination and partnership mechanisms as it was observed at Nairobi City County in the level of performance of commercial state corporation in Nairobi City County has increased. Therefore, the study concludes that Nairobi City County in Kenya has been experiencing significant increase in service delivery through embracing proper coordination in the supply chain practices.

Recommendations

The study recommend that Virtual integration formalizes relations between practices within a robust legal framework, but is much more besides; it is an opportunity to define the arrangements that encompass every aspect of what outcomes the Nairobi City County in Kenya wants from the supplier and how it wants the relationship to work. This means that the In Kenya needs to take an active role in the development of the quality mechanism early on; it should not be left as a supplementary activity post negotiation. At preparation of every quality management can contribute to supplier evaluation on performance of commercial state corporation in Nairobi City County, Kenya. Proper Virtual integration can result to high procurement in Nairobi City County, Kenya.

This study recommends that market sensitivity had a strong relationship with performance of commercial state corporation in Nairobi City County, Kenya. When relationship are not properly managed, they may cause supplier delays, undermine team spirit, increase delay costs, and, above all, damage business relationships. With the increase in the number of participants in a supplier management, it is obvious that more business interactions and arguments end up with an increase in the number of supplier relationship disputes. Research in preventing and resolving relationship disputes supports the effort for better understanding and harmonization of the different cultures. Therefore, this study recommends to the management of Nairobi City County in Kenya to enhance and upgrade on the implementation of all applicable alternative disputes resolution mechanisms so to protect relationship with its stakeholders in the supply chain practices.

Areas for Further Studies

This study focused on virtual integration, and market sensitivity and performance of commercial state corporation in Nairobi City County, Kenya. The study therefore recommends a further study to be conducted to other counties in Kenya. Then get their findings and compare with this and agree or disagree. The study also recommends replication of the study in other sectors such as manufacturing sector and public sector to allow comparison of research findings. Future researchers an investigate the factors affecting supply chain best practices broadly in all areas of concern in this profession on performance of commercial state corporation the supply chain practices.

REFERENCE

Ateke, B. W., &Didia, J. U. D. (2017). Agile supply chain management practices for efficient service delivery. International Journal of Social Policy, Management and Administration, 5(2), 31-50.

Ateke, B. W., &Kalu, S. E. (2016). Collaborative marketing and business wellness of Global System of Mobile-communication service providers in Nigeria International Journal of Marketing and Communication Studies, 1(1), 14- 26. [10]

Ateke, B. W., Asiegbu, I. F., &Akekue-Alex, N. (2016).Value customization and relationship commitment of business-to-business customers.African Social and Educational Journal, 5(1), 178-197.

Ateke, B. W., Asiegbu, I. F., &Akekue-Alex, N. (2016).Value customization and relationship commitment of business-to-business customers.African Social and Educational Journal, 5(1), 178-197.

Blos, M. F., Hoeflich, S. L., Dias, E. M. and Wee, H.-M. 2016. A note on supply chain risk classification: discussion and research. International Journal of Production Research, 54, 1568-1569.

Broom M., Rychtář, J. Spears-Gill, T. (2016). Game Theory, Malaria Prevention, Optimal Strategy, Epidemic Modelling, SIS Model. *Journal of Applied Mathematics*, Vol.7 No.9

Changalima, I. A., & Mdee, A. E. (2023). Procurement skills and performance in public organizations: The mediating role of Virtual integration. *Cogent Business & Management*, *10*(1), DOI: 10.1080/23311975.2022.2163562.

Chorn, N.H. (981), "The "Alignment" Theory: Creating Strategic Fit", *Management Decision*, Vol. 29 No. 1

Cooper, M. N., Updegrove, A. H., & Bouffard, J. A. (2019). Predictors of Criminal Justice Undergraduates' Intentions to Pursue Graduate Education in Criminology or Criminal Justice", *Journal of Criminal Justice Education*, 30(1), 46-70.

Didia, J. U. D., &Nwokah, N. G. (2015). Supply chain integration and business performance in the telecommunication industry in Nigeria. International Journal of Supply Chain Management, 4(2), 81-89.

DOI:10.1080/09540962.2017.1344027

Gelderman, C. J., Semeijin, J. & Vluggen, R. (2017). Development of sustainability in public sector procurement. Public Money & Management 37(6):435-442.

Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of financial economics, 391976),* 305-360

Khayyam, Y. E. and Herrou, B. Risk assessment of the supply chain: Approach based on analytic hierarchy process and group decision-making. 2017 International Colloquium on Logistics and Supply Chain Management (LOGISTIQUA), 27-28 April 2017 2017. 135-141.

Kothari, O. (2011). Research methods: Quantitative and qualitative approaches. Nairobi: ACTS Press

Li, X. W., Qun; Holsapple, Clyde W. 2015. Best-value supply chains and firms' competitive performance: empirical studies of their linkage. International Journal of Operations and Production Management, 35, 1688- 1709.

Mugenda, A. & Mugenda, O. (2008). Research methods: Quantitative and qualitative approaches. Nairobi: ACTS Press

Njoki, G. C., Ismail, N., & Osoro, A. (2021). Preferences and Reservations Groups and Performance of State Corporations in Kenya.

Nsanzimana, J., & Mulyungi, P. (2020). *Effect of Contract Management Practices on Performance of Road Construction or road construction project, Kigali.* [Masters project, Kigali university]

Nyakundi, M. G. (2018). *Procurement Best Practices and Performance of Smes in Nairobi County* (Doctoral dissertation, university of Nairobi)

Okumu, E. A., & Bett, S. (2019). Inventory management practices and organization performance of steel industries in Kisii County, Kenya. International Journal of Current Aspects, 3(III), 71-82.

Ongeri, N.V. and Osoro, A. (2021) Effect of Warehouse Consolidation on Performance of Registered Distribution Firms in Kisii City County, Kenya. The international journal of business & management Publications, Volume 9, Issue 10, October 2021 ISSN 2321–8916.

Onyango, R. A. (2017). *Inventory management practices and supply chain performance of fast moving consumer goods manufacturers in Nairobi* [Doctoral dissertation, University of Nairobi].

Rajab, F.N. (2018). Regulation of E-tendering and Implementation Preferences in Kenya. *Supply Chain Management Journal, 7(1),* 25–36.

Rosenberg, A. (984) What is the cognitive status of economic theory, in New Directions in Economic Methodology, Backhous, R.E. (ed), Routledge & Kegan Paul, London, pp. 216±35.

Salome, O. L. (2018). *Contract management practices and performance of housing construction projects in Nairobi City County, Kenya: A Case of National Construction Authority* (Doctoral dissertation, Kenyatta University)

Sender, S. W. (987). Systematic agreement: A theory of organizational alignment. Human Resource Development Quarterly, 8(1), 23–40

Von Neumann, J. & Morgenstern, O. (2007). *Theory of Games and Economic Behavior* (Commemorative Edition). Princeton University Press.

Wolf1 G, .I & De Groot M. (2020). *A conceptual framework for personal science*. Frontiers in computer science. 2, 1-5doi: 10.3389/fcomp.2020.00021

World Bank (2015, May). *Final Report: Preparation of Guidelines on How to Prevent Corruption and Promote Integrity in the Selection and Employment of Professional Consultants.*