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ROLE OF LOGISTICS MANAGEMENT ON THE OPERATIONAL PERFORMANCE OF ORGANIZATIONS IN RWANDA

[1] MUHIRE Assouman, [2]

[1]STUDENT AT UNIVERSITY OF KIGALI

***Abstract*:** Organizations strive for efficacy, cost efficiencies, and economies of scale in today's highly competitive business climate. Most of these firms carry out numerous logistical operations in order to suit the needs of their consumers. However, managing these operations in order to achieve their goals has proven to be a significant task for the corporations. Many businesses have yet to determine how much to invest in logistics and the appropriate combination of responsiveness and efficiency. To investigate the impact of multinational corporations' warehousing management on operational performance, to analyze how inventory management affects multinational corporations' operational performance, and to evaluate the impact of multinational corporations' transportation management on operational performance. The study used a descriptive survey design and was limited to the B Rwanda organization in Kigali. Data was gathered from 65 people working in Kigali, Rwanda. Structured questionnaires were used to collect data, which was then analyzed using both descriptive and inferential statistics with the support of the Statistical Package for Social Sciences (SPSS). A pilot study and the Cronbach's alpha coefficient of reliability were used to assess the research instrument's validity and reliability. Data was evaluated using frequency distribution tables and presented using means, percentages, and frequencies. According to the study, B Rwanda management should revise its cost-effective product transportation strategy, adjust and implement internal policy directives to track the use of inventory items, and strengthen network and route planning for transportation in consultation with all relevant parties.

Keywords: Logistics Management and Operational Performance

1. GENERAL INTRODUCTION

(Sople, 2010) explains that logistics capabilities increase the supply chain operation and that it plays a crucial role in both organizational strategy and organizational environment. Throughout the world, logistics has developed from the basic concepts of warehousing and transportation to become a strategic function in many companies. The field of logistics extends outside the organization's walls into the supply chain, and it deals with the challenges of coordinating the flow of information and commodities among numerous business activities. 2008 (Gravier). In Rwanda, the importance of logistics management continued to grow with Fast Moving Consumer Goods Companies opting for this mode to deliver their products across the country and beyond and not so much on other sectors (David, 2013). The usage of logistics has reportedly become a crucial component for firms in establishing a competitive edge in an era of shortening product life cycles, proliferation of product lines, shifting distribution chains, and quickly evolving technical innovation, according to (David, 2013). Monitoring company performance is crucial; in many industries, the supply chain accounts for over 75% of operational budget costs (Palevich, 2015). Efficiency is minimizing all costs across the entire system, from distribution and transportation to raw material, work-in-progress (WIP), and finished goods inventories. For such efficiencies to be attained, non-value-adding activities should be avoided, economies of scale should be explored, and optimization techniques should be used to produce

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the best results. For businesses to be efficient, strategies focused at producing the highest cost efficiency should be used.To be responsive means ensuring that customers` needs/demands are attended to at the right time without delays. To achieve responsiveness, the firms should be flexible to the changing and diverse needs of the customers and also build to order and mass customization processes as a means to meet the specific requirements of the customers.

Therefore, operational cost reduction and levels of customer service delivery are the most effective ways to gauge an organization's effectiveness. Therefore, it's crucial to comprehend the most effective cost-cutting techniques and pinpoint the major expenses that influence a company's operations. Even if there is a clear need for cost cutting, the truth is that many businesses are unaware of where the majority of a product's costs are incurred. Supply chain management, which deals with the effective administration of goods, is viewed as including logistics management. From the source of raw materials to the consumer, it is the management process that integrates the movement of products, services, information, and capital (Cooper, 2007). Providing the appropriate product is the logistics management's objective. (Emberson, 2016).

Logistics managers pay special attention to the records of the time required for procurement and retention according to each product. (Caridi, 2016)

Logistics managers are skilled at picking the ideal site for warehouses. Even though there will always be some "idle" time during a journey, businesses are continually looking for ways to minimize it by properly storing their items and extending their useful lives. (2017) Miles and Snow

Inventory control and product ordering are facilitated by logistics managers keeping electronic records of inventories (Caridi and Cigolini, 2014) The choice of each subsequent transport can be made easier by comparing the cost of past transports thanks to the thorough records kept for each executive transport in the business. The proof of every shipment demonstrates the so-called breakpoints and the amount of time needed for delivery.

1.1 Statement of the Problem

Numerous businesses have experienced ongoing difficulties managing their logistics operations, primarily due to a shortage of trained personnel to carry out the various operational and strategic obligations of their logistics function. 2013 (Aronsson)

However, logistics management faces challenges such as reducing transportation costs, where rising fuel prices, rising wages, and peaking inflation indices all work together to increase transportation costs on a daily basis, and manpower management, where managing people is the trickiest of all management tasks. While keeping the best interests of your firm in mind and according to legislation, one must have a humanitarian attitude toward the employees. Transportation rules, regulations, and security norms might differ from city to city, state to state, and, very obviously, from country to country. The backbone of the firms in Rwanda, which are likewise quickly growing, is logistics management. This study aimed to investigate how the management of the logistics function influences the operational performance of the organization because the logistics function is generally undervalued in companies all over the world.

1.2. Specific Objectives of the Study

i. To examine the effect of warehousing management of organization on the operational performance of B Rwanda.

ii. To analyze how inventory management affects organization on the operational performance of B Rwanda.

iii. To assess the importance of transport management of organization on the operational performance of B Rwanda.

2. LITERATURE REVIEW

Theoretical Foundation

The Theory of Supply Chain Management

The planning and control of material and information movements, as well as logistics activities both internally within a company and externally between companies, have all been referred to as supply chain management (SCM) (Fisher, 2003). The growth of the SCM theory has been aided by a number of disciplines, including purchasing and supply, logistics and transportation, operations management, marketing, organizational theory, management information systems, and strategic management. The urgent necessity for conceptual frameworks and properly defined constructs has been emphasized by numerous authors in order to improve supply chain management theory Saunders. SCM theory places a strong emphasis on cooperative advantage. In order to provide mutual benefits to all supply chain partners, the business world is comprised of a network of interdependent connections that have been built and nurtured via strategic collaboration (Miles and Snow, 2017). SCM elevates inter-company competition to inter-supply chain competition by aiming for greater performance through better utilization of internal and external capabilities in order to establish a smoothly coordinated supply chain (Chopra and Meindl, 1999). Performance is therefore no longer influenced by a single firm in the context of SCM. Instead, the performance of every participant in the supply chain affects how well it functions as a whole.

The Systems Theory

The relationships between the pieces are the main emphasis of the systems theory. Systems theory places more emphasis on how the pieces are arranged and related to one another than on breaking down an object like the human body into its constituent parts or elements (such as organs or cells). The characteristics of the system are determined by how the elements are arranged and by how they interact. The characteristics of the constituents have no bearing on how the system behaves.

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This is frequently described as a holistic strategy for comprehending phenomena (Ahrne, 2000). (According to Richard (1998), systems theory can be a beneficial method of thinking about the work of managing. It offers a framework for seeing internal and exterior environmental elements as a totality. It enables the right placement and function of subsystems to be recognized. The systems in which businesspeople must work are inherently complex. Management through systems ideas, on the other hand, develops a style of thinking that, on the one hand, helps to dissolve some of the complexity and, on the other hand, assists the manager in recognizing the nature of the complicated challenges and so operating within the observed environment.

The Coordination Theory

The coordination theory is a set of ideas that govern how actions can be coordinated, or how actors can collaborate peacefully (Hewitt, 2000). Many different domains have theories, concepts, and discoveries that could both contribute to and benefit from the creation of such generic theories. Questions about how people coordinate their actions, for example, are clearly fundamental to aspects of organization theory, sociology, social psychology, anthropology, linguistics, law, and political science. Important aspects of economics and management science also examine how people may coordinate their labor, with a particular emphasis on efficient resource allocation (Huber, 2001). According to (Saunders, 2006), the coordination theory explains why the following common issues are related to coordination: How may overarching objectives be broken down into actions? How are resources distributed among several actors? How may information be distributed among many parties to aid in achieving the ultimate objectives? Coordination theory is similar to early work in systems theory and cybernetics in that it seeks generalizations that hold across disciplines and levels of investigation. The primary elements of coordination, according to several scholars, are goals, actions, actors, and interdependencies (Chopra and Meindl, 1999).

Warehousing Management

Storage of goods (raw materials, parts, commodities-in-process, and finished items) at and between places of origin and consumption is accomplished through warehousing, a crucial component of a company's logistics system. Distribution centers and warehouses also offer warehousing services (Emberson, 2016). The criteria for choosing where to locate the warehouse facilities is a crucial choice for many businesses. Cost considerations are frequently included in decision-making models. Some of the models also place a strong emphasis on resources like skilled labor. Another important element is what may be called accessibility, which refers to the infrastructure and range of available transit options (Storey and Godsell, 2006). (Mamad, 2013) also underlines the importance of reliability and time-related issues. It also takes into account how close suppliers' and customers' production facilities are.

As warehouses transition from "holding yards" to "switching yards," their functions become more crucial. The make-or-break bulk consolidation centers, transshipment facilities, assembly facilities, product fulfilment centers, returned goods depots, and other ad hoc functions like customer service are listed as the duties of warehouses in (Karimi, 2016). As a result, warehouses are crucial to supporting supply chain strategy. They might just keep inventory or serve markets, which would allow for better customer service and cost-cutting in a setting with protracted lead times and disruptions.

Inventory Management

In addition to the many tasks connected to a lean supply chain, many businesses worldwide are constantly looking for new ways to cut back on their inventory expenditures because doing so directly harms their capacity to make a profit. The efficiency and efficacy of the entire supply chain system are impacted by inventory management, which is a critical component of logistics operations.

Although inventories offer some protection against variations in the level of consumer demand, there is concern that they may make it more difficult for the supply chain to adapt to shifts in the demand's makeup. Therefore, inventories in the global supply chain may serve as a buffer against one risk while escalating another. (Davis, 2016) cites elements including new product market entry speed, market niche responsiveness, and quality issue feedback time. (Harrison, 2008) have proposed ways for reducing inventory, such as shortening lead times for production, delaying products, reducing total cycle time, compressing inventory, centralizing inventory, and the idea of virtual warehousing.

An inventory problem can be seen as the management of all types of assets inside a company. The criteria of cost minimization or profit maximization are used in almost all of the literature on the best way to manage inventories. The objective of an inventory management, for instance, is modeled as maximizing profit or lowering cost while meeting client needs. An excessive amount of inventory takes up room, costs money, and raises the risk of damage, spoilage, and loss. Furthermore, bad management, ineffective forecasting, haphazard scheduling, and a lack of focus on process and procedures are frequently made up for by an abundance of inventory. The pioneering lean production philosophy of (Cooper, 2007) has been associated with lower levels of inventories in this setting.

Transport Management

The act of purchasing and managing transportation services by either a shipper or a consignee is known as transportation management. Because it is a significant budget item, corporations are more worried than ever about transportation

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management. For many businesses, transportation is the most expensive logistics activity, and it is essential to the efficient running of any supply chain (Karimi, 2015). According to (Sople, 2010), many forms of transportation are used to convey things from the place of production to the point of consumption. Different types of networks are utilized depending on the transportation load, quantity of delivery locations, existing distribution centers, product value, frequency of delivery, urgency, and cost economics.

According to (Spillan, 2014), the distance and the quantity of the items sent determine the transportation cost for a particular form of transportation. Transport costs often decrease as distance increases. This suggests that as travel distance increases, transportation expenses will rise less quickly. The associated fixed expenses at the places of origin and destination are dispersed over a greater number of kilometers for longer distances traveled. Additionally, a vehicle is more likely to be used overall when larger distances are covered. This is referred to as transportation distance economies. As stated by (Storey, 2017), In order to maximize the return from these assets, a carrier invests in the transportation infrastructure (such as rail) as well as the transportation equipment (such as locomotives, trucks, and airplanes). In contrast, a shipper makes use of transportation to the entire cost (transportation, inventory, information, sourcing, and facility) while still offering the client the right amount of responsiveness.

Customer Service Delivery Levels

Companies that can react swiftly to shifting market conditions have a competitive advantage (Mentzer, 2019). The Internet is perfectly suited to assist businesses in keeping up with their logistical environments because it enables almost instantaneous information sharing across different elements in the supply chain. Real-time information about the status of orders and production from other supply chain participants has become more important to many enterprises Demers (2001). An example of one of these companies is Federal Express (Cooper, 2007). Customers can track parcels easily and fast in real time with Federal Express. Due to this, Federal Express is a crucial link in the supply chains of other companies. A company may maintain the right inventory levels and supply what the customer needs at the precise time with the help of a good logistics management system. For optimal management of the logistics operations, an efficient logistics information system (LIS) also enables real-time interchange of logistical information.

Operational Cost Reduction

By minimizing errors, improving the tracking of purchase orders and the delivery of items, streamlining ordering procedures, and shortening acquisition cycle times, effective logistics management aids in cost reduction. An automated inventory system, which is a component of logistics management, can reduce average expenditures from $100 (when done manually) to $33 according to recent research by the Aberdeen group, an Internet research company (Chopra and Meindl, 1999). According to a survey of large businesses conducted by an IT research and consulting firm, Internet-based inventory management can offer a high return on investment, allow for a 10% personnel reduction in warehousing, and save about 5% on expensive strategic products (Konrad, 2014). Typically, logistics account for 30% of the entire product cost, therefore a reduction of the organization.

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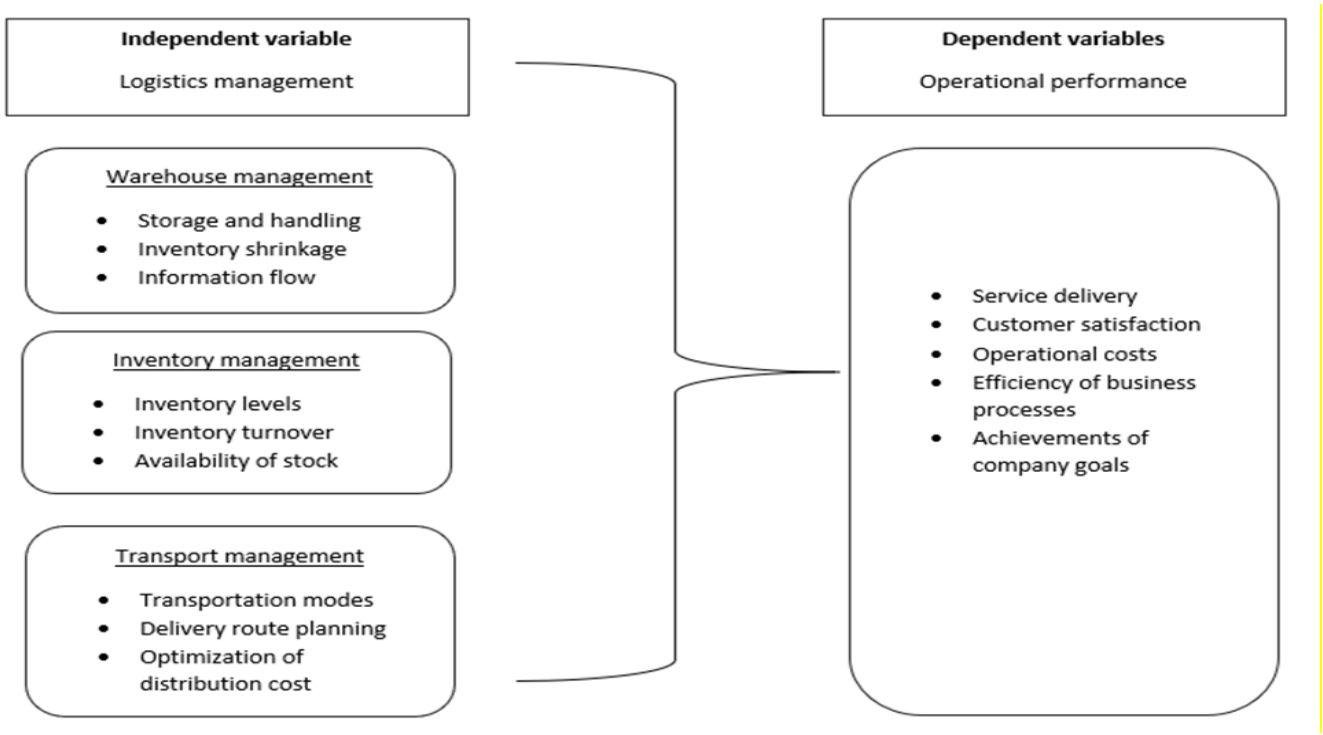

Source: Researcher (2022)

Figure 1: Conceptual framework

3. RESEARCH METHODOLOGY

Research design

The overall approach used to integrate the various study components in a logical and cogent manner is known as the research design. This ensures that the research challenge is adequately addressed. (Kara, 2012) The setting up of settings for data collection and analysis in a way that tries to blend relevance with study purpose is known as a research design. It serves as the guide for gathering, measuring, and analyzing data.

Target Population

The population is defined as the entire group of components that seek to generate a sum (Donald and Schindler, 2006). Staff from various divisions at B Rwanda, comprising 65 individuals, comprised the population of this study.

Table 1: Research population and sample size

Department	Population	Sample size
Internal Audit	2	2
Research	3	3
Finance	7	7
Logistics	7	7
Communication	3	3
Product and device	5	5
Control	4	4

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Call center	16	16
Innovation	5	5
Legal	2	2
Device	3	3
Information Technology	2	2
Support	6	6
Total	65	65

Therefore, equal opportunity was given to participate in the research study since my research is census.

Sampling Techniques

In this study, the researcher employed universal sampling as the sample method. According to (Richard & Margaret, 2015), "universal sampling" refers to the process of choosing a sample where not every member of the population has the same chance of being chosen and where each person's chance of being chosen is unknown. Because they are the ones who may be able to provide the useful information to test the research's hypothesis, the researcher preferred to use the universal sampling technique to choose respondents from the internal audit, research, finance, logistics, communication, device, control, call center, innovation, and human resource departments. All of those are potential factors that could be investigated in the poll.

SUMMARY OF MAJOR FINDINGS

To examine the effect of warehousing management of organization on the operational performance of B Rwanda.
Generally, all respondents agreed that they have to assess the importance of Warehousing management which leads to operational performance. This presented with the mean of 3.13 Which is interpreted as Strong and the standard deviation of 0.33 Which is interpreted as Homogeneity.

To analyze how inventory management affects organization on the operational performance of B Rwanda.
Generally, all respondents agreed that inventory management affects organization on the operational performance. This presented with the mean of 3.54 Which is interpreted as Strong and the standard deviation of 0.36 Which is interpretant as Homogeneity.

To assess the importance of transport management of organization on the operational performance of B Rwanda.
Generally, all respondents agreed that transport management of organizations affects the operational performance. This presented with the mean of 3.14 Which is interpreted as Strong and the standard deviation of 0.32 Which is interpreted as Homogeneity.

CONCLUSION

The main purpose of this study was to Role of Logistics Management on Operational Performance of organizations in Rwanda. After analyzing the data collected from the B Rwanda employees and basing on the findings, the researcher concludes that there is a considerable contribution of Logistics management on operational performance in Rwanda. The study established that there was a role of logistics management on the operational performance of in B Rwanda. It also confirmed that components such as warehouse management, inventory management and transport management were highly practiced in most of the firms studied and this had a positive impact on organization's operational performance. Therefore, as Pearson correlation coefficient show that between Logistics management and Operation performance of 0.92. Statistical evidence showed that there is a significance relationship between Logistics management and Operation performance. The Pearson relationship between Logistics management and Operation performance indicated that there is a positive strong correlation.

RECOMMENDATIONS

After carrying out the study entitled the Role of Logistics Management on Operational Performance of organizations in Rwanda" case study of B Rwanda, the researcher hereby recommends the followings to B Rwanda.

Based on this study finding that concerned object number one, B Rwanda management should to revice on the method used on cost-effective when it come to transportation products. As table 13 indicates that all respondents agreed that they have

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Access to cost-effective transportation to bring products in or move them out as orders are fulfilled to improve operational performance. This presented with the mean of 2.67 Which is interpreted as strong and the standard deviation of .40 Which is interpreted as Homogeneity.

Based on this study finding that concerned object number two, B Rwanda management should adjust and put in place policy guidelines within the firm to monitor the use of inventory items in the organization. As indicated in table 10 all respondents agreed that they have There are adequate policy guidelines within the firm to monitor the use of inventory items in the organization this presented with the mean of 2.48 Which is interpreted as moderate and the standard deviation of.36 Which is interpreted as Homogeneity.

Based on this study finding also, that concerned object number three, B Rwanda management should put strength on transport network and route planning in consultation with the various stakeholders. As table 11 indicates all respondents agreed that they have The firm does its transport network and route planning in consultation with the various stakeholders. This presented with the mean of 3.45 Which is interpreted as Strong and the standard deviation of .51 Which is interpreted as Heterogeneity,

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