SUPPLY CHAIN MANAGEMENT AND OPERATIONAL PERFORMANCE IN MANUFACTURING INDUSTRIES: A CASE OF RENE INDUSTRIES LIMITED (RIL)

BY

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JULY, 2019
DECLARATION

I, Kangume Kellen do declare that this research project is my own original work and has never been presented to any institution of higher learning for any award.

Signature: ........................................

Date: 27/07/2019
APPROVAL

This is to certify that this report has been conducted under my guidance and supervision and it's ready for submission to the College with my approval as the Supervisor.

Signature of Supervisor: ..................................  

AYASI BIN ASADI

Date: ..........................  

2019
DEDICATION

I dedicate this piece of work to my Mum, Mrs. Nyimwiza Justin Ninsiima, my Uncles: Martin, Wilson, Jojo and Jackson and to my sisters; Appo, Betsy, Patience.
ACKNOWLEDGEMENTS

All praise be to thy Almighty Lord for the gift of life and journey mercies throughout the course of my study.

I wish to acknowledge with sincere gratitude my supervisor, Mr. Ayasi Asaad for the valuable guidance he offered at the various stages of my study. His relentless efforts and suggestions made it possible for me to complete this research.

To all my friends and colleagues who helped in various ways and encouraged me to complete this work for they deserve a word of “thank you” for their efforts and God bless you.
TABLE OF CONTENTS

DECLARATION........................................................................................................... i
APPROVAL .................................................................................................................. ii
DEDICATION............................................................................................................... iii
ACKNOWLEDGEMENTS............................................................................................. iv
TABLE OF CONTENTS .............................................................................................. v
LIST OF TABLES .......................................................................................................... viii
LIST OF ACRONYMS / ABBREVIATIONS................................................................ ix
ABSTRACT ................................................................................................................ x

CHAPTER ONE.......................................................................................................... 1
INTRODUCTION ......................................................................................................... 1
1.1 Background of the study ...................................................................................... 1
1.2 Statement of the Problem ................................................................................... 3
1.3. General Objective; ............................................................................................. 3
1.3.1 Specific Objectives of the Study .................................................................. 3
1.4 Research Questions ............................................................................................ 3
1.5.1 Subject Scope .................................................................................................. 4
1.5.2. Geographical Scope ...................................................................................... 4
1.5.3. Time scope .................................................................................................... 4

CHAPTER TWO ......................................................................................................... 6
LITERATURE REVIEW ............................................................................................. 6
2.1 Key Concepts ....................................................................................................... 6
2.1.1 Supply Chain Management .......................................................................... 6
2.1.2 Operational Performance ............................................................................. 7
2.2 Transportation management and Cost Reduction .............................................. 7
2.3 The impact of Warehousing on Customer Satisfaction .................................... 10
2.4 The Relationship between Supply chain Management and Operational Performance ......................................................... 11
2.5 Related Studies ................................................................................................... 13
2.6 Summary of Literature ....................................................................................... 14
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.3 Relationship between Supply chain Management and operational</td>
<td>29</td>
</tr>
<tr>
<td>performance</td>
<td></td>
</tr>
<tr>
<td>CHAPTER FIVE</td>
<td>31</td>
</tr>
<tr>
<td>DISCUSSIONS, SUMMARY CONCLUSIONS AND RECOMMENDATIONS</td>
<td>31</td>
</tr>
<tr>
<td>5.0 Introduction</td>
<td>31</td>
</tr>
<tr>
<td>5.1 Discussions</td>
<td>31</td>
</tr>
<tr>
<td>Summary of the Findings</td>
<td></td>
</tr>
<tr>
<td>5.1.2 Warehouse and customer satisfaction</td>
<td>32</td>
</tr>
<tr>
<td>5.1.3 Relationship between Supply chain Management and operational</td>
<td>32</td>
</tr>
<tr>
<td>performance</td>
<td></td>
</tr>
<tr>
<td>5.2 Conclusions</td>
<td>33</td>
</tr>
<tr>
<td>5.3 Recommendations</td>
<td>34</td>
</tr>
<tr>
<td>5.4 Suggestions for Further Research</td>
<td>34</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>36</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>38</td>
</tr>
<tr>
<td>Appendix 1: Questionnaire</td>
<td>38</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table: 1 Sample size .................................................................................................................. 16
Table: 2 Gender of respondents ............................................................................................... 21
Table: 3 Marital status ............................................................................................................... 21
Table: 4 Age bracket of respondents ....................................................................................... 22
Table: 5 Level of education ...................................................................................................... 22
Table: 6 Position held ................................................................................................................. 23
Table: 7 Duration in Rene industries Limited (RIL) ................................................................. 24
Table: 8 Showing Descriptive Statistics transportation management and Cost reduction .... 25
Table: 9 Warehouse and customer satisfaction ......................................................................... 27
Table: 10 Relationship between Supply chain Management and operational performance .... 29
## LIST OF ACRONYMS / ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSPs:</td>
<td>Logistics Service Providers</td>
</tr>
<tr>
<td>Max:</td>
<td>Maximum</td>
</tr>
<tr>
<td>Min:</td>
<td>Minimum</td>
</tr>
<tr>
<td>RIL:</td>
<td>Rene Industries Limited</td>
</tr>
<tr>
<td>SC:</td>
<td>Supply Chain</td>
</tr>
<tr>
<td>SPSS:</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SSP:</td>
<td>Supply chain Service Providers</td>
</tr>
<tr>
<td>Std. Dev:</td>
<td>Standard Deviation</td>
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ABSTRACT
This study was conducted to determine the relationship between supply chain management practices and operational performance of manufacturing industries in Uganda. The objectives of the study were; to establish the impact of transportation management on cost reduction, to find out the impact of warehousing on customer satisfaction and to establish the relationship between supply chain management and operational performance. The research design adopted a descriptive survey involving both qualitative and quantitative approaches. The population of the study consisted of 58 employees of Rene Industries Ltd. The questionnaire formed the main data collection instrument. Data was analyzed using descriptive statistics and a regression model to establish the relationship between variables. The study found that Rene Manufacturing Industries adopted supply chain management practices to a great extent which has improved on operational performance, improved decision making, enhanced overall cost reduction and real-time delivery of goods and services. The study therefore recommends that Rene Industries Ltd puts in place measures that will ease adoption of supply chain management practices to improve their operational performance. The study therefore concludes that there are variations among the level of implementation of the practices. Hence the extent of implementation is concluded to base largely on the desired outcomes or the managements' preferences. The findings of this study and application thereof are however limited to Rene Industries in the manufacturing sector in Uganda only, further research is therefore recommended that Rene Industries Limited (RIL) to implement supply chain management practices to enhance their operation.
CHAPTER ONE
INTRODUCTION

1.1 Background of the study
The globalization of business and the competitive pressures have led companies to the growing strategic importance of the Supply chain function within the organization (Houseman, 2006). The new competitive advantages also come up in front in the form of flexibility, lead-time reductions, reliable and quality deliveries, where Supply chain Service Providers (SSP) play a key role in this regard (Kimura, 2002). Supply chain and the management thereof are key impact on the daily lives of people, as well as on the economic state and development of countries (Malhotra, 2005).

Supply chain knowledge is highly specialized and so external organizations, i.e. Supply chain service providers, are often engaged by firms to provide transportation and warehousing services, and sometimes to guide the development and implementation of best practices for both the transportation service itself as well as management of the transportation companies providing the service. Firms typically outsource a variety of activities in order to achieve specific objective, which includes reducing costs, improving product quality, improving flexibility (Rundquist, 2007), increasing market coverage (Kimura, 2002), or perhaps to gain ready access to additional capacity (Malhotra, 2005).

Mallard, (2006), emphasized that, Supply chain is a functional system which is crucial for improving efficiency, both in the flow of goods and information and to meet low-cost, fast, and reliable delivery objectives within a company and throughout a network of companies (Helpman, 2002). Supply chain significantly contributes to company’s competitive advantage in both efficiency and effectiveness. Supply chain activities and processes are fundamental elements that a company’s supply chain capabilities and competences are based upon (Aoife, 2004).

In African countries, Operational Performance in South Africa, Egypt, is about how well an organization achieves its market-oriented goals as well as its financial goals, (Malhotra, 2005). The short-term objectives of supply chain management and operational performance in Burundi, Rwanda among other member country were primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the Supply chain, (Mallard, 2006).
In East Africa, any organizational initiative, including Supply chain management in Tanzania and Kenya ultimately lead to enhanced Operational Performance (Whinston, 2003). observed that over the past few years and going forward in Kenya, the mission, goals and performance contributions required of purchasing and Supply chain by company executives have been increasing and will continue to do so (Quinn, 2000).

In Uganda, Supply chain management leads to operational performance in most organizations such Mukwano group of companies, Pepsi Color Company, Britannia Company among others. For example, refraining from investing in storage or trucks for the purpose of distribution capacity, which may reduce risk (Houseman, 2006). Although few studies related to Supply chain management have focused on operational performance, we argue that operational performance is an important area to focus on because Supply chain management in most organizations in Uganda are often expected to influence service performance. For example, it could provide greater flexibility in adapting to changes in the market (Chaturvedi et al., 2004). When demand surges beyond a firm’s own capability, a third party may be called in to help meet the increased demand (Rundquist, 2007). In addition, lead-time reduction could be another potential benefit of Supply chain alignment. Long lead-time is often a problem and requires large inventories in transit and at the sales subsidiary (Bin, 2004).

Rene industries Limited (RIL) in this increasingly demanding environment has made many firms to look for Supply chain service provider. They are used for many Supply chain functions, such as transport or warehousing. Supply chain activity (purchasing, warehousing, transport and distribution, Warehousing) can be realized more efficient than by manufacturing companies. The source of competitive advantage is the capability to adapt, integrate, and reconfigure internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment (Whinston, 2003). Manufacturing is the industry with the highest demands regarding Supply chain services and consequently it is judged as the most appropriate industry for comparisons within the Supply chain context (Kimura, 2002). Cooperation between manufacturers and Supply chain service provider has a leading role in supply chains. This factor has influenced the purpose of this paper, which is identification the drivers that determine the outsourcing decision in Supply chain (Kimura, 2002).
1.2 Statement of the Problem
Managing Supply chain has been a critical focus area for manufacturers, distributors and third-party Supply chain players in their pursuit of developing a lean, agile and efficient customer-oriented supply chain. However, many industries today are facing daunting challenges of maintaining a delicate balance of increased material, transportation costs against the expectations of improved service levels mandated by customers, loss of control of the operations of the activities being performed, lack of the necessary technological infrastructure which is compatible with that of the clients. In recent times, Rene industries Limited (RIL) has witnessed that Supply chain Management functions as a key business strategy to augment the feat of Supply chain Management (Chaffey, 2008). To achieve this end, Rene industries Limited (RIL) is collaborating with her key customers and vendors to improve her processes and systems and provide better service quality, reduce costs and improve visibility. To gain full advantage of such collaborative initiatives, building an efficient and effective supply chain intelligence infrastructure is a must. Thus, the study was aimed at establishing the role of Supply chain Management on operational performance of Rene industries Limited (RIL).

1.3 General Objective;
The main aim of this study was to establish the impact of Supply chain Management on Operational Performance of manufacturing Industries; the case of Rene industries Limited (RIL).

1.3.1 Specific Objectives of the Study
1) To establish the impact of transportation management on Cost reduction.
2) To find out the impact of warehousing on customer satisfaction.
3) To establish the relationship between Supply chain Management on operational performance.

1.4 Research Questions
1) What is the impact of transportation management on Cost reduction?
2) What is the impact of warehousing on customer satisfaction?
3) What is the relationship between Supply chain Management on operational performance?

Scope of the Study
1.5.1 Subject Scope
The study was confined to establishing the impact of transportation on Cost reduction, the impact of warehousing on customer satisfaction and the relationship between Supply Chain Management on operational.

1.5.2 Geographical Scope
The study was conducted at Rene Industries Limited (RIL). Rene Industries Ltd. is a Local pharmaceutical company based in Kampala, Uganda. The company is dedicated to the Development, Production and Sale of high quality generic and branded products. Rene Industries was established in 1998 and currently holds the leading market position in the sector. It’s located on Plot 680 KamuliKireka, along Kampala-jinja highway, 6km from the city.

1.5.3 Time Scope
The research was carried out within four months i.e. between February to May, 2019 and covered a period from 2016 to 2018. This period was chosen because a lot turbulences affected supply chain operations causing significant delays in delivery and transportation of materials and supplies across supply chains.

1.6 Significance of the study
i. The study findings will help to inform the company on different ways of how Supply chain Management can be made relevant to Operational Performance.

ii. The study findings will also help policymakers such as members of parliament by availing them with information that they may use to make decisions that are more informed, as far as outsourcing is concerned.

iii. The findings of the study will provide insight for managers in companies when confronted with the decision of whether or not to outsource services in their companies. Managers may also find the study result useful as a tool for decision making because they will relay on their concrete knowledge of understanding their transport to the profitability her respective firms.
iv. Finally, the findings will be of great use to the academia, especially those who may wish to carry out further research on Supply chain Management and performance. It may build on the existing body of literature and knowledge.

Conceptual framework showing independent and dependent variable

Figure 1.1: Conceptual Framework

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE</th>
<th>DEPENDENT VARIABLE</th>
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<tr>
<td>SUPPLY CHAIN MANAGEMENT</td>
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</table>
  - Transportation  
  - Warehousing  
  - Delivery |
| Operational Performance |
  - Customer satisfaction  
  - Reduced costs  
  - Timely deliveries |

Source: Researcher's own Conceptualization 2019

The conceptual framework diagrammatically shows the relationship between the different variables in the study. The independent variable is perceived as Supply chain management which includes the following a tribute (Transportation, Warehousing, Delivery) and dependent variable is perceived as the Operational Performance that consist of (Customer satisfaction, reduced costs, and Timely deliveries)
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
This chapter analyzes various studies on issues important to Supply chain management and provides broader awareness of Supply chain principles and concepts basing on research objectives which includes: - The impact of transportation on Cost reduction, the impact of warehousing on customer satisfaction and the relationship between Supply chain Management and operational performance.

2.1 Key Concepts
2.1.1 Supply Chain Management
Supply chain management (SCM) is a set of managerial practices which includes sourcing raw materials, manufacturing and assembling products, managing warehousing and inventory, monitoring supply and demand, distributing and delivering finished products to the customer (Windischer & Grote, 2003; Agus, 2010). Various definitions have been used to explain the term SCM. Schonsleben (2004) defines SCM as coordination of strategic and long-term cooperation in logistics networks (Windischer & Grote, 2003). Supply chain management is the governance of supply chain functions (Helpman, 2002). Supply chain management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, Supply chain network design, inventory management, supply/demand planning, and management of third party Supply chain services providers (Coase, 2007).

Supply chain management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods and services from origin to destination (Chaturvedi, 2004). Supply chain management helps companies reduce expenses and enhance customer service. In supply chain management, unwise decisions create multiple issues. For example, deliveries that fail or are delayed lead to buyer dissatisfaction. Damage of goods due to careless transportation is another potential issue. Poor supply chain planning gradually increases expenses, and issues may arise from the implementation of ineffective supply chain software. Most of these problems occur due to improper decisions related to outsourcing, such as selecting
the wrong vendor or carrying out delivery tasks without sufficient resources (Whinston, 2003). To resolve these issues, organizations should implement best logistic management practices. Companies should focus on collaboration rather than competition. Good collaboration among transportation providers, buyers and vendors helps reduce expenses. An efficient and safe transportation provider is also vital to business success (Rundquist, 2007).

2.1.2 Operational Performance
Operational performance can be defined as the level up to which products and services supplied by an organization meet the customer expectation. It provides an indication of the potentiality of the supply chain in providing products and services to the customer. This metric is most important in supply chain management as it integrates (involves) the measurement of performance right from supplier end to the customer end. Performance refers to the ability of an organization to accomplish the goals and targets it has set. It is the efficiency and effectiveness of the organization ([Taylor, 2006]. Specifically, operational performance of a firm determines how well the 4 business is doing in wealth creation and acquiring of resources (Stango, 2005). Operational performance is also termed as the efficiency of an organization with relation to its internal operations such as product quality, productivity and satisfaction of its customers (Quinn, 2000).

Qualitative measures of operational performance may include the non-financial measures such as flexibility, efficiency, responsiveness and quality (Kimura, 2002). All these aspects aim at accessing how well the organization is able to conduct itself with the available resources in attaining competitive advantage (Chaturvedi, et al, 2004). Enhancing the operational performance is vital in improving the overall performance of the organization. Firms that have low operational performance have been established to struggle in terms of remaining profitable (Rundquist, 2007).

2.2 Transportation management and Cost Reduction
Critical operations performance objectives are crucial factors that are strategically important to organizations. Being strategically important means that the performance objectives have to be considered as strategic goals to be achieved and the primary aim of the operations function is to deploy the appropriate resources to support the achievement of those goals (Aoife, 2004).
Typically, the operations performance objectives are specifically related to satisfying customers’ requirements. In general, the fundamental performance objectives that apply to all types of organisation and are closely related to customer satisfaction requirements are speed, dependability, flexibility, quality, and cost (Malhotra, 2005).

**Transportation Speeds Production:** Speed means doing things quickly. It is about delivering goods and services to customers as fast as possible. This involves making quick decisions and rapidly moving materials and information inside the operations. For example, in the context of trade and transport facilitation, ‘automated processes’ can be a speed performance factor (Taylor, 2006).

**Dependability:** Dependability means doing things on time and as promised. It is about developing trustworthiness (Chaturvedi, et al, 2004). Dependability can be achieved through the use of reliable equipment’s, effective communication, efficient scheduling systems, motivated workforce, transparency of processes, etc. In the context of trade and transport facilitation, ‘transparency of border processes’ can be an example of dependability performance factor (Rundquist, 2007).

**Flexibility:** Flexibility is about being able to change the operations to fulfil new requirements. As requirements can change over time, organisations need to develop operations ability to introduce new or modified products and services, as well as to produce a wide range or mix of products and services. Flexibility also involves volume flexibility (the ability to change volume of output over time) and delivery flexibility (the ability to change delivery time). Flexibility can be achieved to the use of more versatile equipment’s, suppliers with good flexibility performance, multi-skilled workforce, etc. In the context of trade and transport facilitation, ‘different entrance times’ can be an example of flexibility performance factor (Bin, 2004).

**Quality:** Quality is about doing things right. It means consistently producing goods and services that meet expectations. The quality objective can be achieved by the provision of error-free products or services that fulfil customer requirements. This requires skilled workforce, adequate job specifications, proper technologies, and effective communication. For example, in the context of trade and transport facilitation, ‘adequate transport infra-structure’ can be a quality performance factor (Whinston, 2003).
Cost: Cost performance is about doing things economically. Low cost is a universally attractive aspect. Lower cost of production or service delivery reflects to the customer in form of lower price. Cost reduction can be achieved by developing good relationships with suppliers, good negotiation of supplying contracts, getting the right mix of resources and facilities as inputs, etc. In the context of trade and transport facilitation, ‘no hidden costs’ can be an example of cost performance factor (Chaffey, 2008).

Mallard, (2006), established a positive role of Supply chain transportation on returns in the performance of milk industries. Similarly, Quinn, (2000), conducted a study on the transport management practices in the humanitarian organisations in Kenya and found out that performance indicators were enhanced by improvements in the Supply chain. On the contrary, other studies established minimal to no significant relationship between Supply chain and transportation on the firm performance. Whereas, (Rundquist, 2007), who did a study on transforming the Dairy Sector in Kenya found out that integrating Supply chain and transportation into the milk industries led to incurring additional expenses which resulted in decreased returns (Coase, 2007).

Transportation is only one activity responsible for providing time and place utilities through inbound and outbound Supply chain. Supply chain also involves forecasting demand, planning inventory, and storing goods as well as delivering them (Whinston, 2003). Optimized Supply chain performance means that these activities are working closely together so that the customer of the Supply chain service is satisfied with the service, yet the cost the company incurs is minimized. This optimal performance requires an understanding of how the various Logistical decisions and actions affect service for customers and total cost (Rasheed, 2000).

Consider, for instance, that a company seeks to minimize its investment in inventory. The company elects to hold all its inventory in one central warehouse location, for it has been shown that consolidated inventory reduces inventory investment (Chaffey, 2008). Warehousing cost should also be minimized because the company is maintaining only a single facility instead of several locations. Customers located close to the central warehouse will be pleased with this decision because the company must travel only a short distance to deliver items to these nearby customers (Bin, 2004). However, customers located farther from the central warehouse are likely to be disappointed. They will ask for faster transportation to reduce the order lead times (Coase.
This might involve using faster means of transporting the goods, which, as noted, tends to cost more than using slower modes. In sum, holding inventory in one central location might reduce inventory and warehousing costs, but it will increase transportation costs. The business might also be at risk of losing sales to competitors who can offer shorter and more reliable order lead times (Helpman, 2002).

Conversely, a supply chain strategy that seeks to minimize transportation cost will likely not represent an optimal solution for the company. This might call for shipping orders to customers in large volumes and using slow means of transportation. Requiring large order quantities and using slow forms of transport are two more ways to disappoint customers and risk losing business to competitors. So although transportation is usually a sizeable expense for a company, and often the largest expense in the function of Supply chain, supply chain managers must consider the interrelationships among the various Logistical actions and costs (Malhotra, 2005). Tradeoffs are often associated with these decisions, and the company's customers are also affected. The recognition of interrelationships among transportation, inventory, warehousing, information exchange, and customer service is the embodiment of a systems approach. The manager seeks to optimize the performance of the Supply chain system instead of optimizing a singular element of the system. This book, therefore, treats transportation as one important element of the Supply chain system (Aoiife, 2004).

2.3 The impact of Warehousing on Customer Satisfaction

**Time to Fulfillment:** Good Warehousing means that your time to fulfill orders stays low. If you use your Warehousing system to analyze product sales, you can have your popular items in stock and ready to instantly fulfill any customer's order. You also know which special orders sell on occasion and have those products available in a limited quantity to keep your inventory costs down and to develop a positive reputation for quickly filling special orders (Houseman, 2006).

**Returns:** Warehousing helps you maintain customer satisfaction when it comes to product returns. When product is returned because it is damaged or dead on arrival, and it is still under warranty, you can arrange with the manufacturer to do an instant swap of the product to keep the customer happy. If you are the manufacturer, then you should maintain extra inventory levels that mirror your return rates to help maintain customer satisfaction (Kimura, 2002).
**Pricing:** When you have a well-designed Warehousing system, you are able to reduce the amount of time that products sit on your shelves. When you don't carry extra inventory for extended periods of time, your inventory costs decrease. This is a savings that you can pass on to clients in the form of lower pricing (Malhotra, 2005).

**In Stock:** A good Warehousing system means that you have an up to date inventory count at all times. Part of giving good customer service is giving accurate information even if the customer does not plan on making a purchase that day. By being able to give clients accurate inventory information, you improve the image of your company and add one more element to customer retention (Mallard, 2006).

2.4 The Relationship between Supply Chain Management and Operational Performance

In recent years the management and coordination of the Supply chain has become increasingly important as companies need to minimize their costs and maximize their opportunities on the market. Supply chain management can be seen as a way in which firms can find cost reduction opportunities. However, the cost saving is not the only objective of Supply chain management. The final goal is the creation of customer value, satisfaction and loyalty, which lead to improved profit margins and better firm profitability (Taylor, 2006). Successful SC and distribution operations result in operational improvements throughout their facility and are reaping the rewards of higher throughput and lower labor costs (O'Connor, 2001).

Firms in business-to-business markets are embedded in a complex network of relationships with suppliers, customers as well as a number of other stakeholders (Chaturvedi, et al. 2004). According to (Kimura, 2002), economic actions of firms are influenced by the social context in which they are embedded and that actions can be influenced by the position of actors in the social networks. Networks of contacts between actors can be important sources of information for the participants. Not only does the identity of the members of a network matter, but the pattern of ties among them also matters. Houseman, (2006), also argues that strong Supply chain relationships enable firms to react to changes in the market: changes in what customer’s value and how competitors move (Stango, 2005).

Malhotra, (2005), defined the following Supply chain management practices: information sharing, long range relationships, and advanced planning techniques, leveraging the internet, and supply and distribution network structures. They found a positive relationship between Supply
chain Management practices and Operational Performance with the moderating effect of Supply chain role. (Kimura, 2002) developed and validated five dimensions of Supply chain management practices: supplier and customer relationships, level and quality of information sharing, and postponement. They found a positive effect of SC practices on competitive advantage and Operational Performance. (Whinston, 2003) identified and validated the following Supply chain Management constructs: SC integration, information sharing, customer and supplier relationships, and postponement. (Bin, 2004) investigated Supply chain management in terms of the following aspects: SC integration, SC information sharing, and SC design. He found that none of the three Supply chain Management practices affected flexibility performance, and only SC design affected output performance and resource performance (Quinn, 2000).

Chaffey, (2008), measured Supply chain Management using the following constructs: supplier and customer relationships, level and quality of information sharing, postponement, agreed goals and vision, and reward/risk sharing. They found that all Supply chain management practices, except customer relationship, positively affected SC performance. Coase, (2007), investigated Supply chain management in terms of supplier and customer partnerships, and level and quality of information sharing. They found that Supply chain management practices were positively related to both SC performance and export performance (Taylor, 2006).

Rasheed, (2000), measured Supply chain management using the following practices: customer linkage, supplier linkage, and internal linkage. (Mallard, 2006). They found that internal integration is the most contributing practice to cost performance while integration with the supplier is the most important practice to SC reliable performance. Kimura, (2002), investigated the impact of SC integration on operational and business performance. They found that internal integration and customer integration were positively related to operational performance, while only internal integration was related to business performance. They also found that supplier integration was neither related to operational nor to business performance (Rundquist, 2006).

Any organizational initiative, including Supply chain management, should ultimately lead to enhanced Operational Performance. Mallard, (2006), observed that over the past few years and going forward, the mission, goals and performance contributions required of purchasing and Supply chain by company executives have been increasing and will continue to do so. Increasing contributions in cost reduction, effective asset management, and revenue generation are being
required by firms worldwide. Minimum contributions expected of Supply chain include providing ongoing purchase price and cost reduction, combined with quality and delivery performance improvement (Rundquist, 2007).

2.5 Related Studies
Ali & Güven (2009) carried out a study on Supply Chain Management as a Sustainable Performance Booster for the Accommodation Enterprises. Their objective was to access the supply chain practices of the hotels and to reveal effects of such practices on the hotels’ performance. The survey instrument was adopted from previously used and tested measures of past researchers. The result showed that there is positive relationship between the supply chain practices of the hotels and their performance.

Sachin & Vincent (2010) carried out a research on exploring the relationship between efficient supply chain management and firm innovation: An archival search and analysis. The data was generated from an archival financial statement information and patent citation data for firms in the manufacturing sector, over a 10-year period from 1987 to 1996. Longitudinal analysis, focusing on the influence of efficient supply chain management on a firm’s innovation over time, was conducted. The results of the research indicate that over time a firm’s supply chain performance and supply chain stability positively influence the volume of its innovations.

Furthermore, Arawati (2011), studied Supply chain management, supply chain flexibility and business performance. The researcher’s objective was to examine the importance of incorporating supply chain management in Malaysian manufacturing companies. The study was a quantitative, cross-sectional research utilizing primary data. The overall result suggests that supply chain management has significant correlations with supply chain flexibility and business performance. Specifically, supply chain flexibility and business performance have high correlations with SCM comprising programs such as ‘strategic supplier partnership’, ‘lean production’, ‘postponement concept’ and ‘technology and innovation’.

Adebayo (2012) conducted a study on the impact of SCM practices on SCM Performance. The SCM practices considered in this paper were namely strategic supplier partnership, customer relations practices, information sharing, information quality and postponement. The research
provides empirical justification for five key dimensions of SCM practices identified and describes the relationship among SCM practices and SCM performance as well as the impact of these practices on SCM performance. The study thus showed that SCM practices definitely impacts SCM performance.

2.6 Summary of Literature
Recent studies have considered the effect of supply chain management on the financial performance of the organization using different dimensions and measurements of supply chain management such as supply integration, customer integration, internal integration, lean production, postponement concept, production performance, product quality, and delivery performance. However, there have been few researches on the effect of SCM on operational performance in the context of supply chain strategy and supply chain flexibility as far as the knowledge of the researcher is concerned (Arawati, 2011; Mohamed, Abdellatif & Fakher, 2012; Hamid & Hamid, 2014). This research intends to address the research gap by studying the effect of supply chain management in the context of supply chain strategy and supply chain flexibility on the operational performance of the organization. This is necessary as there have been past researches which have tested SCM against other organizational outcomes like profitability, productivity, and customer satisfaction; yet, few studies have studied the effect on the operational performance of the organization.
CHAPTER THREE
METHODOLOGY

3.0 Introduction
This chapter explains the approaches the researcher used to gain information on the research problem and includes the research design, study population and sample size, sampling design and procedure, data collection methods, measurement of variables. Procedure of data collection, data processing, analysis and presentation and anticipated problems to the study.

3.1 Research Design
The study employed a descriptive survey design; the design was appropriate since it ensures that the data obtained give appropriate answers to the research questions. Kothari (2010) explains descriptive research as a situation or condition at hand, it is one in which information is collected without changing operating environment. The research design permitted the researcher to find out the effect of supply chain management on the operational performance of manufacturing industries in Uganda. The quantitative approach was used to quantify incidences in order to describe current conditions and to investigate the relationships between supply chain Management and Operational Performance using information gained from the questionnaires. All this enabled the researcher to gain in-depth information that was used to find solutions for the research questions of the study.

3.2 Study Population
Rene Industries Limited employs over 500 employees at its various facilities. The target population included staff of Rene industries Limited (RIL) in Kampala. The total population included 58 staff from various departments of the organization.

3.3 Sample Size
The sample size was determined by Solvens’ formula as calculated bellow:

$$n = \frac{N}{1 + N (e)^2}$$

N = the known population
n = the sample size
e = the level of significance and l is a constant
N= 58
n= ?
e= 0.05
n= \frac{58}{1+58(0.05)^2}
\quad n= \frac{58}{1+0.145}
\quad n= \frac{58}{1.145}
\quad n= 50

Table: 1 Sample size

<table>
<thead>
<tr>
<th>Category of staff</th>
<th>Population size</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Accountants</td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td>Operational Staff</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Casual workers</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

Source: Company Records (2019)

3.4 Sample Procedure
According to Amin (2005), sampling is the process of choosing the research units of the target Population, which are to be included in the study. The samples to be used in the study were selected using purposive sampling which is a function of non-probability sampling. Under purposive sampling technique, the researchers were purposely chosen who, in their opinion are thought to be relevant to the research topic. In this case, the judgment of the researcher was more important than obtaining a probability sample. The process of sampling in this case involved purposive identification of the respondents.
3.5 Data Sources

3.5.1 Primary Data
According to (Bryman, 2004), primary data is that kind of data that has been gathered for the first time, it has never been reported anywhere. Primary data was obtained through the use of self-administered questionnaire to respondents following systematic and established academic procedures, as suggested by Creswell, (2003). The questionnaires were used for the collection of data.

3.5.2 Secondary Data
Nassali, (2002), defines secondary data as that kind of data that is available, already reported by some other scholars. Secondary data was used to support the empirical findings of the study. These other sources of data (Literature review) was majorly used to back up the arguments and findings in chapter four and five. Secondary data was obtained from existing literature in audited and registered annual reports of the Rene industries Limited (RIL) to determine the various ratios and journal articles, previous research paper findings, journal articles, Text books, Newspapers, reports and conference proceedings and individual Rene industries Limited (RIL) publications and websites. The reason for this was to make comparison of secondary data with primary data.

3.6 Data Collection Instruments

3.6.1 Questionnaire
Nijenhuis, (2015), defines questionnaire as a list of questions generally mailed or handed to the respondents and filled in by her with no help to the interviewer. The questionnaire tool was informed of both open ended and closed ended in nature and this was self-administered though the researcher to fill the questionnaire in the study field as per respondents' responses. Self-administered questionnaires covering all the aspects of the study variables and accompanied with a five-point Likert scale response continuum, that is 5 = strongly agree, 4 = agree, 3 = undecided, 2 = disagree and 1 = strongly disagree, was used for this study to collect data from low level staff.

3.6.2 Document Analysis
Scott, (2002) defines Document Analysis as a careful reading, understanding and analysis of written documents for some purposes other than social research. The record of past events that was written or printed Scott, noted that documentation is the analysis of data that exist in boxes.
in some enterprise's basements or hidden in the core of a computer. In this research, the researcher collected the already existing data, by finding them where they are stored or filed. The researcher read documents such as manual procedures, newspapers and other publications. The study reviewed existing information materials related to the study problem and variables in form of reports, journals, websites and databases to gain information on the topic.

3.7. Procedure of Data Collection
A letter of introduction from the department of Supply & HR was obtained to enable the researcher seek management's permission to administer the questionnaires from the selected respondents in the area of study. After permission was sought, the researcher went ahead to administer the questionnaires on the selected respondents based on their convenience. Questionnaires were directly distributed to the respondents in their respective areas to fill out and later were collected after 1 week following editing, coding and tabulation.

3.8 Data Processing, Analysis and Presentation
Data analysis was the science of examining raw data with the purpose of drawing conclusions about that information.

The collected data was analyzed using quantitative analysis which majorly involved six major activities namely, data preparation, counting, grouping, and relating, predicting and statistical testing.

Data preparation involved all forms of manipulations that were necessary for preparing data for further processing, coding, categorizing answers to open-ended questions, editing and checking as well as preparation of tables; counting included the mechanical task of registering the occurrence and frequency of the occurrence of certain answers or research items; grouping and presentation involved ordering of similar items into groups and this resulted in distribution of data presented in the form of tables and graphs; relating involve cross-tabulation and statistical tests to explain the occurrence and strength of relationships; predicting is a process of extrapolating trends identified in the study into the future and this statistical method helped the researcher complete this task and finally statistical testing; this refers to the stage where test of significance, inference, hypotheses and correlation employed during the process of analysis.

Quantitative data was collected, edited and coded using the Statistical Package for the Social Sciences (SPSS). Two types of analyses were computed. They included descriptive statistics
(frequencies and percentages). The frequencies and percentages were used to determine the respondents' views on each of the study variables. Pearson's correlation was used to test for significant relationships between the variables. Qualitative data presentation was done thematically considering the variables in the main objectives of the study.

3.9 Ethical Consideration
Before embarking on the data collection process, the researcher obtained an introductory letter from the college of economics and management, Kampala International University. This letter was presented to Rene industries Limited (RIL). After getting the clearance from the companies' human resource managers, the researcher obtained the knowledgeable consent from the respondents and informed them about the purpose of the study. The data was aggregated to avoid having data being related to an individual and the questionnaires were destroyed after data analysis.

3.10 Validity and Reliability
3.10.1 Validity
To ensure the validity and reliability of the instrument, the researcher employed expert judgment method. After constructing the questionnaire, the researcher contacted experts in this area to go through it to ensure that the instrument is clear, relevant, specific and logically arranged. Also, a pre-test was conducted in order to test and improve on the reliability and validity of the instrument.

3.10.2 Reliability
Inter-rater reliability was employed. Here research assistants were used to do content analysis for the researcher. To calculate this kind of reliability, the researcher reported the percentage of agreement on the same subject between her raters and that of the assistants. However, half of the test, instrument, or survey, analyzed half as if it was the whole thing. Then comparisons of these results were taken with the overall analysis.

Cronbach method measured the validity of research using alpha option in a numerical coefficient of reliability. Computation of alpha was based on the reliability of a test relative to other tests with same number of items, and measuring the same construct of interest. Alpha coefficient ranges in value from 0 to 1 described the reliability of factors extracted from the study (that is.
questions with two possible answers) and/or multi-point formatted questionnaires or scales (that is, rating scale: 1 = strongly agree, 5 = strongly disagree). The higher the score, the more reliable the generated scale. 0.5 was acceptability of reliability coefficient.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction
This chapter presents data interpretations, analysis and presentation: on “The role of Supply chain Management on operational performance of Rene industries Limited (RIL).

4.1.1 Demographic Information
Table: 2Gender of respondents

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>20</td>
<td>40.0</td>
<td>40.0</td>
<td>40.0</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>60.0</td>
<td>60.0</td>
<td>101.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary data, 2019

From the findings, Table 2 shows the majority of respondents were female with (60%), while (40%) male among 50 respondents, this implies that the highest percentage of the respondents were represented by female employee at Rene industries Limited (RIL).

4.1.2 Marital status of the respondents
Table: 3Marital status

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>9</td>
<td>18.0</td>
<td>18.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Married</td>
<td>31</td>
<td>62.0</td>
<td>62.0</td>
<td>80.0</td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td>20.0</td>
<td>20.0</td>
<td>101.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>101.0</td>
<td>101.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary data, 2019

Findings from table 3 above indicated that the majority of the respondents were married 31 (62%) followed by others 10 (20%), and Single 9 (18%). This implies that the composition of married to single employees at the institution higher, an indication that the company takes into consideration the demands of its various statuses.
4.1.3 Age bracket of Respondents

Table: 4 Age bracket of respondents

<table>
<thead>
<tr>
<th>Age bracket</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>20 - 29 years</td>
<td>10</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>30 - 39 years</td>
<td>26</td>
<td>52.0</td>
<td>52.0</td>
<td>72.0</td>
</tr>
<tr>
<td>40 - 49 years</td>
<td>5</td>
<td>10.0</td>
<td>10.0</td>
<td>82.0</td>
</tr>
<tr>
<td>50 - 59 years</td>
<td>8</td>
<td>16.0</td>
<td>16.0</td>
<td>98.0</td>
</tr>
<tr>
<td>Above 60 years</td>
<td>1</td>
<td>2.0</td>
<td>2.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: primary data 2019

Findings from Table 4 indicated that majority of the respondents 52% were of age bracket 30-39 years, followed by 20% with the age of 20 -29 years, 10% were between 40-49 years, and 2% above 60 years. This implies that there were adequate representation of the study population and data provided represented the views of age groups.

4.1.4 Level of education

Table: 5 Level of education

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post graduate</td>
<td>13</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Certificate</td>
<td>10</td>
<td>20.0</td>
<td>46.0</td>
</tr>
<tr>
<td>Diploma</td>
<td>13</td>
<td>26.0</td>
<td>72.0</td>
</tr>
<tr>
<td>Degree</td>
<td>5</td>
<td>10.0</td>
<td>82.0</td>
</tr>
<tr>
<td>Others</td>
<td>9</td>
<td>18.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: primary data 2019
From table 5 above, the majority of the respondents 26% were Post graduate and diploma holders respectively and 10%) were degree holders while 18% of the respondents did not specify their educational background. This implies that the respondents had at least a minimum level of education which makes the work easier for the Rene industries Limited (RIL) despite the role of Supply chain Management on operational performance that has been taking place in the region.

4.1.5 Position held

Table: 6 Position held

<table>
<thead>
<tr>
<th>Position held</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>11</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Accountants</td>
<td>28</td>
<td>56.0</td>
<td>56.0</td>
<td>78.0</td>
</tr>
<tr>
<td>Operational Staff</td>
<td>9</td>
<td>18.0</td>
<td>18.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Casual workers</td>
<td>2</td>
<td>4.0</td>
<td>4.0</td>
<td>101.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>101.0</td>
<td>101.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: primary data 2019

From the Table 6, majority of the respondents 56%, were Accountants, followed by Administrators 22% were, 18% Operational Staff and 4% were Casual workers.

4.1.6 Period served in this organization

The researcher also considered the period the respondents have worked in Rene industries Limited (RIL) and the findings are presented in the table below.
Table: Duration in Rene industries Limited (RIL)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Less 1 year</td>
<td>11</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>1-5yr</td>
<td>21</td>
<td>42.0</td>
<td>42.0</td>
</tr>
<tr>
<td></td>
<td>5-10years</td>
<td>8</td>
<td>16.0</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td>Above 10yrs</td>
<td>10</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>101.0</td>
<td>101.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: primary data, 2018

Table 7, clearly shows that the biggest percentage of 42% had worked for a period between 1 to 5 years in Rene industries Limited (RIL), 22% for Less than 1 year, 20% for were Above 10yrs. 16% were between 5-10years. This implies that most respondents in Rene industries Limited (RIL) have worked for many years. Results in the figure above Demonstrates the biggest percentage of 42% have worked for a period of 1 to 5 years in Rene industries Limited (RIL), 22% for Less than 1year, 20% for were above 10 years, and 16% were between 5-10years. This implies that most respondents in Rene industries Limited (RIL) have worked for many years.

4.2 Descriptive Statistics
Respondents were asked to respond to a number of statements regarding the impact of transportation management on Cost reduction. The following were the results;
4.2.1 The impact of transportation management on Cost reduction.

Table: 8 showing Descriptive Statistics transportation management and Cost reduction

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective route planning reduce operational cost</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>2.78</td>
<td>1.542</td>
</tr>
<tr>
<td>Flexibility in route planning enhances cost reduction</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>4.00</td>
<td>1.355</td>
</tr>
<tr>
<td>Consolidation of deliveries is an effective cost reduction</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.88</td>
<td>1.136</td>
</tr>
<tr>
<td>Proper selection and Identification of appropriate</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.22</td>
<td>1.433</td>
</tr>
<tr>
<td>We normally empower our service providers to manage</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.10</td>
<td>1.764</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source. Primary data, 2019

The study used the questionnaire that was designed and generated using a five-point scale with different levels of agreement for each statement that is, 1-Strongly Disagree, 2-disagree, 3-Undecided, 4-Agree and 5-Strongly Agree. This therefore shows that all responses averaging 3.0 and above accounted for “Agree” whereas all responses averaging below 3.0 accounted for “Disagree”. The descriptive statistics are discussed in the table 4.4 below;

Effective route planning reduces operational cost

From Table 8 above, majority of the respondents agreed that effective route planning reduce operational cost with a mean of 2.78 although some of the respondents had different views as shown by the standard deviation of 1.542. This was supported by Taylor, (2006) who asserts that it is about delivering goods and services to customers as fast as possible. This involves making quick decisions and rapidly moving materials and information inside the operations. For example, in the context of trade and transport facilitation, ‘automated processes’ can be a speed performance factor.
Flexibility in route planning enhances cost reduction

Table 8. above shows that majority of the respondents agreed that there is Flexibility in route planning enhances cost reduction with a mean of 4.00. However; some of the respondents had different views as shown by the standard deviation value of 1.355.

According to Bin, (2004), Flexibility is about being able to change the operations to fulfil new requirements. As requirements can change over time, organizations need to develop operations ability to introduce new or modified products and services, as well as to produce a wide range or mix of products and services. Flexibility also involves volume flexibility (the ability to change volume of output over time) and delivery flexibility (the ability to change delivery time).

Consolidation of deliveries is an effective cost reduction

Table 8 above shows that majority of the respondents agreed that Consolidation of deliveries is an effective cost reduction with a mean of 3.88 and some respondents, however, had different views as shown by the standard deviation of 1.136, this was supported by Whinston, (2003) who consistently producing goods and services that meet expectations. The quality objective can be achieved by the provision of error-free products or services that fulfil customer requirements. This requires skilled workforce, adequate job specifications, proper technologies, and effective communication. For example, in the context of trade and transport facilitation, ‘adequate transport infra-structure’ can be a quality performance factor.

Proper selection and Identification of appropriate

The results of the survey as reflected in Table 8 suggest that respondents agree that there is Proper selection and Identification of appropriate. This is shown by a mean of 3.22. However, a standard deviation of 1.433 is a clear manifestation of varied responses from respondents as far as Low cost is a universally attractive aspect. Lower cost of production or service delivery reflects to the customer in form of lower price. Cost reduction can be achieved by developing good relationships with suppliers, good negotiation of supplying contracts, getting the right mix of resources and facilities as inputs, etc. In the context of trade and transport facilitation, ‘no hidden costs’ can be an example of cost performance factor.
We normally empower our service providers to manage
The results of the survey as reflected in Table 8 suggest that respondents were indifferent as to whether they were normally empowering our service providers to manage as revealed by the mean value 3.10. However, a standard deviation of 1.764 reveal varied responses from the respondents about the Supply chain management practices in Rene industries Limited (RIL) and found out that performance indicators were enhanced by improvements in the Supply chain management that led to cost reduction.

4.2.2 Warehouse and customer satisfaction
Table 9 below shows the descriptive statistics on Warehouse and customer satisfaction. Below are the results;

*Table: 9 Warehouse and customer satisfaction*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining the right materials within the warehouse increases customer responsiveness.</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>2.74</td>
<td>1.575</td>
</tr>
<tr>
<td>A wide variety of materials are maintained to cater for the various customer needs.</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.30</td>
<td>1.313</td>
</tr>
<tr>
<td>Warehousing saves time for the customers to pick the right product from the right place at the right time</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.50</td>
<td>1.266</td>
</tr>
<tr>
<td>Warehousing facilitates order assembly</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.96</td>
<td>1.456</td>
</tr>
<tr>
<td><strong>Valid N (listwise)</strong></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source. Primary data, 2019

Maintaining the right materials within the warehouse increases customer responsiveness.
Good Warehousing means that your time to fulfill orders stays low. As noted from table 8 findings show that the respondents agree that maintaining the right materials within the warehouse increases customer responsiveness with a mean value of 3.50. However, some of the respondents had different views as shown by the standard deviation of 1.266. This was because.
the special orders sell on occasion and have those products available in a limited quantity to keep your inventory costs down and to develop a positive reputation for quickly filling special orders. Table 9 above shows the respondents who agree that there is a wide variety of materials are maintained to cater for the various customer needs with a mean value of 3.28. However, some of the respondents had different views as shown by the standard deviation of 1.313. This implied that in Burundi, 27% of families experience foodless days. This was supported by the study carried out by Mallard, (2006) who asserts that a good Warehousing system means that you have an up to date inventory count at all times. Part of giving good customer service is giving accurate information even if the customer does not plan on making a purchase that day. By being able to give clients accurate inventory information, you improve the image of your company and add one more element to customer retention.

**Warehousing saves time for the customers to pick the right product from the right place at the right time.**

Respondents believe that Warehousing saves time for the customers to pick the right product from the right place at the right time. This is revealed by a mean value of 3.50. However, a significant standard deviation value of 1.266 under the same test revealed varied responses from the respondents. This is also in argument that Warehousing helps to maintain customer satisfaction when it comes to product returns. When product is returned because it is damaged or dead on arrival, and it is still under warranty, you can arrange with the manufacturer to do an instant swap of the product to keep the customer happy.

**Warehousing facilitates order assembly**

From table 9, it has been revealed that Warehousing facilitates order assembly. This is shown by a mean value of 3.96 although the standard deviation of 1.456 under the same test revealed varied responses from the respondents. The results of the study were that efficiency in the supply chain management and cost reduction resulted in improved organizational performance and product innovation.
4.2.3 Relationship between Supply chain Management and operational performance

The respondents were asked on the solutions to address the challenges facing international organizations in ensuring food security. The results for the analysis were as indicated in table 4.8 below;

*Table: 10* Relationship between Supply chain Management and operational performance

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements in logistic operations enhances customer perceived value of the products</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.48</td>
<td>1.249</td>
</tr>
<tr>
<td>Managing key supply chain operational activities enhances organizational productivity.</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.56</td>
<td>.972</td>
</tr>
<tr>
<td>Effective management of supply chain activities facilitates timely delivery of materials to customers</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.20</td>
<td>1.385</td>
</tr>
<tr>
<td>Responsiveness to customer orders is a key aspect of achieving customer service targets.</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.76</td>
<td>1.492</td>
</tr>
<tr>
<td>Efficiency in Supply chain management facilitates cost reduction and flexibility.</td>
<td>50</td>
<td>1</td>
<td>5</td>
<td>3.40</td>
<td>1.485</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: primary data 2019

**Improvements in logistic operations enhances customer perceived value of the products**

Table 10 above, showed the majority of the respondents who agreed that improvements in logistic operations enhances customer perceived value of the products. This is revealed with a mean of 3.48. However, a standard deviation of 1.249 from the same test revealed varied responses. Thus, Supply chain management can be seen as a link to cost reduction opportunities. However, the cost saving is not the only objective of Supply chain management.
Managing key supply chain operational activities enhances organizational productivity.
Table 10 above reveals that the respondents agree that Policy change that champions sustainable and locally produced food can increase community food security. With a mean value of 3.56 however, some of the respondents had different views as shown by the standard deviation of .972.

Effective management of supply chain activities facilitates timely delivery of materials to customers
Table 10 above reveals that effective management of supply chain activities facilitates timely delivery of materials to customers with a mean of 3.20 and standard deviation of 1.385 showing that some respondents had different views. Firms in business-to-business markets are embedded in a complex network of relationships with suppliers, customers as well as a number of other stakeholders.

Responsiveness to customer orders is a key aspect of achieving customer service targets.
The results of the survey as reflected in Table 10 suggest that respondents agree that Responsiveness to customer orders is a key aspect of achieving customer service targets, this is shown by a mean of 3.76. However, a standard deviation of 1.492 is a clear manifestation of varied responses from respondents as far as they found a positive relationship between Supply chain Management practices and Operational Performance with the moderating effect of Supply chain role.

Efficiency in Supply chain management facilitates cost reduction and flexibility.
The results of the survey as reflected in table 10 suggest that Efficiency in Supply chain management facilitates cost reduction and flexibility as revealed by the mean value 3.40. However, a standard deviation of 1.485 reveals varied responses from the respondents found that all Supply chain management practices, except customer relationship, positively affected SC performance. Ibrahim and Ogunyemi (2012) investigated Supply chain management in terms of supplier and customer partnerships, and level and quality of information sharing.
CHAPTER FIVE
DISCUSSIONS, SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
This chapter presents the discussion of the key findings basing on objectives. The main objective of this chapter is the presentation and discussion of the findings on the impact of transportation management on Cost reduction, the impact of warehousing on customer satisfaction and the relationship between Supply chain Management on operational performance. Tables have been used to present the findings. This chapter investigated sample characteristics, provide descriptive statistics on the responses for each variable and the relationship between different variables.

5.1 Discussions Summary of the Findings
5.1.1 The impact of transportation management on Cost reduction.
The study sought to determine the extent that effective route planning reduces operational cost with a mean of 2.78 although some of the respondents had different views as shown by the standard deviation of 1.542. This was supported by Taylor, (2006) who asserts that it is about delivering goods and services to customers as fast as possible. This involves making quick decisions and rapidly moving materials and information inside the operations. For example, in the context of trade and transport facilitation, 'automated processes' can be a speed performance factor (Quinn, 2000).

Also, the majority of the respondents agreed that there is Flexibility in route planning enhances cost reduction with a mean of 4.00. However, some of the respondents had different views as shown by the standard deviation value of 1.355. According to Bin, (2004), Flexibility is about being able to change the operations to fulfil new requirements. As requirements can change over time, organisations need to develop operations ability to introduce new or modified products and services, as well as to produce a wide range or mix of products and services. Flexibility also involves volume flexibility (the ability to change volume of output over time) and delivery flexibility (the ability to change delivery time).

The study also aimed at determining whether that Consolidation of deliveries is an effective cost reduction with a mean of 3.88 and some respondents, however, had different views as shown by the standard deviation of 1.136, this was supported by Whinston, (2003) who consistently...
producing goods and services that meet expectations. The quality objective can be achieved by
the provision of error-free products or services that fulfil customer requirements.

5.1.2 Warehouse and customer satisfaction
From the findings, maintaining the right materials within the warehouse increases customer
responsiveness with a mean value of 3.50. However, some of the respondents had different views
as shown by the standard deviation of 1.266. This was because, the special orders sell on
occasion and have those products available in a limited quantity to keep your inventory costs
down and to develop a positive reputation for quickly filling special orders.

The study adopted the descriptive research design in obtaining information about the study topic
where there is a wide variety of materials are maintained to cater for the various customer needs
with a mean value of 3.28. However, some of the respondents had different views as shown by
the standard deviation of 1.313. This implied that in Burundi, 27% of families experience
foodless days. This was supported by the study carried out by Mallard, (2006) who asserts that a
good Warehousing system means that you have an up to date inventory count at all times. Part of
giving good customer service is giving accurate information even if the customer does not plan
on making a purchase that day. By being able to give clients accurate inventory information, you
improve the image of your company and add one more element to customer retention.

The results also indicated that respondents believe that Warehousing saves time for the customers
to pick the right product from the right place at the right time. This is revealed by a mean value
of 3.50. However, a significant standard deviation value of 1.266 under the same test revealed
varied responses from the respondents. This is also in argument that Warehousing helps to
maintain customer satisfaction when it comes to product returns. When product is returned
because it is damaged or dead on arrival, and it is still under warranty, you can arrange with the
manufacturer to do an instant swap of the product to keep the customer happy.

5.1.3 Relationship between Supply chain Management and operational performance
The study also sought to determine the relationship between supply chain management and cost
reduction where the majority of the respondents agreed that improvements in logistic operations
enhances customer perceived value of the products. This is revealed with a mean of 3.48.
However, a standard deviation of 1.249 from the same test revealed varied responses. Thus
Supply chain management can be seen as a link to cost reduction opportunities. However, the cost saving is not the only objective of Supply chain management.

From the analysis, the respondents agree that Policy change that champions sustainable and locally produced food can increase community food security. With a mean value of 3.56 however; some of the respondents had different views as shown by the standard deviation of .972.

The results of the survey as table 4.6 above reveals that effective management of supply chain activities facilitates timely delivery of materials to customers with a mean of 3.20 and standard deviation of 1.385 showing that some respondents had different views. Firms in business-to-business markets are embedded in a complex network of relationships with suppliers, customers as well as a number of other stakeholders.

The results of the survey as reflected in table 4.6 suggest that respondents agree that Responsiveness to customer orders is a key aspect of achieving customer service targets. this is shown by a mean of 3.76. However, a standard deviation of 1.492 is a clear manifestation of varied responses from respondents as far as they found a positive relationship between Supply chain Management practices and Operational Performance with the moderating effect of Supply chain role.

To results of the survey as reflected in table 4.6 suggest that Efficiency in Supply chain management facilitates cost reduction and flexibility as revealed by the mean value 3.40. However, a standard deviation of 1.485 reveals varied responses from the respondents found that all Supply chain management practices, except customer relationship, positively affected SC performance. Ibrahim and Ogunyemi (2012) investigated Supply chain management in terms of supplier and customer partnerships, and level and quality of information sharing.

5.2 Conclusions
The study found out that Supply chain management practices were implemented to a large extent, supply chain information practices were implemented to a low extent, and cost reduction was implemented to a moderate extent while distribution management was implemented to above average extent. The study therefore concludes that there are variations among the level of
implementation of the practices. Hence the extent of implementation is concluded to base largely on the desired outcomes or the managements' preferences. The study also found out that there are challenges that limit the effectiveness of the implementation process. The study thus concludes that for the implementation to be successful these challenges have to be addressed.

The study further found out that there exists a strong positive relationship between logistic management and cost reduction at Rene industries Limited (RIL). The study thus concludes that increase in the supply chain management would result in enhanced cost reduction that leads to operational performance. This is because it results in increased speed and flexibility of transactions and knowledge transfer allow for more efficient coordination, and eventually higher revenues and profits.

5.3 Recommendations

Based on the study's findings, the study makes various recommendations.

1) The study thus recommends that the management at Rene industries Limited monitors and evaluates these strategies more often. This will enable them formulate measures to ensure proper implementation and success of these strategies.

2) The study further recommends that Policy makers and legislative bodies should consider the need for facilitating and setting up policies which will enhance implementation process of supply chain management strategies in the firm.

3) The study also recommends adopting a supply chain information system as a strategy to improve communication and information sharing which are vital to timely customer feedback.

4) Finally, monitoring and evaluation of all the supply chain management practices is crucial to excellent cost reduction at Rene industries Limited. Therefore, management should be keen on the timing and frequency of the evaluation process.

5.4 Suggestions for Further Research

Despite the study being able to address the research questions, few areas are yet to be addressed, requiring further research. To begin with, the study found out that there were challenges faced in the implementation process of supply chain management practices. The study thus suggests that further studies to be conducted on how these challenges may be addressed.
1) The study only concentrated on Rene industries Limited as the case study which may not be an equal representation or provide adequate information on all manufacturing companies. The study thus recommends that further studies be undertaken on other firms for further comparison and generalization.

2) Further research should also be conducted using a different approaches indetermining the impact that supply chain management has on cost reduction.

3) Future research could also be conducted using the longitudinal study designs in order to provide a better assessment of how the study variables improve over time.
REFERENCES

Amin, M.E. (2005). Social Science Research: Conception, Methodology and Analysis. Printed and Published in Uganda by Makerere University Printery.


Rundquist, J. (2007). Outsourcing of New Product Development - A decision Framework. Luleå University of Technology, Department of Business Administration and Social Sciences, Division of Industrial Management
APPENDICES
Appendix 1: Questionnaire

Dear respondent,

I am an undergraduate student of Kampala International University conducting a study on "Supply Chain Management on Operational Performance". You have been chosen to participate in this research by providing your views. Information provided will be treated confidentially and so you do not need to write any of your identity on the questionnaire. The information will be used only for academic purposes. Follow the instructions while filling in this questionnaire.

Section A: Background information
Note: For each of the questions, tick against your response or write your response in the blank space provided.

1. Gender
   - Female ☐   - Male ☐

2. Marital status
   - Single ☐   - Married ☐   - Others ☐

3. Age range
   - Less than 30yrs ☐   - 30-39yrs ☐   - 40-49yrs ☐   - 49-50yrs ☐   - Over 60yrs ☐

4. Level of education
   - Post graduate ☐   - Certificate ☐   - Diploma ☐   - Degree ☐   - Others ☐

5 Position held
   - Administrators ☐   - Accountants ☐   - Operational Staff ☐   - Casual workers ☐

6. Period you have served in this organization
   - Less than 2 years ☐   - 2-5 years ☐   - 6-10 years ☐   - Over 10 years ☐

Section B: Impact of transportation on Cost reduction
Note: Use the following scale in this section:

  - Strongly Disagree (1)
  - Disagree (2)
  - Not sure (3)
  - Agree (4)
  - Strongly Agree (5)
Please respond to the following statements by indicating the extent to which they have been applied to your organization by ticking your response against the corresponding scale given in the box against the statement.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Effective route planning and scheduling reduce operational cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Flexibility in route planning enhances cost reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Consolidation of deliveries is an effective cost reduction strategy in logistic operation.</td>
<td></td>
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</tr>
<tr>
<td>4.</td>
<td>Proper selection and Identification of appropriate mode of transportation reduces transportation costs.</td>
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<td></td>
</tr>
<tr>
<td>5.</td>
<td>We normally empower our service providers to manage their deliveries to their convenient locations</td>
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<td></td>
</tr>
</tbody>
</table>

Section C: Warehouse

Note: Use the following scale in this section:

Strongly disagree (1) Disagree (2) Not sure (3) Agree (4) strongly agree (5)

Please show your level of agreement to indicate the extent to which the following statements have been applying your organization by ticking your response corresponding to the number in the scale given above in box against statement.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Maintaining the right materials within the warehouse increases customer responsiveness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>A wide variety of materials are maintained to cater for the various customer needs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Warehouse Worker needs to have outstanding organizational abilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Warehouse workers are responsible for all the fine details involved in the timely delivery of warehouse products.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>5.</td>
<td>Warehouse positions require employees to perform manual labor for long periods of time while adhering to strict safety regulations</td>
<td></td>
<td></td>
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</tbody>
</table>
Section D: Relationship between Supply chain Management and operational performance

Note: Use the following scale in this section:

Strongly disagree (1) Disagree (2) Not sure (3) Agree (4) strongly agree (5)

Please show your level of agreement to indicate the extent to which the following statements have been applying your organization by ticking your response corresponding to the number in the scale given above in box against statement.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improvements in logistic operations enhances customer perceived value of the products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Managing key supply chain operational activities enhances organizational productivity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Effective management of supply chain activities facilitates timely delivery of materials to customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Responsiveness to customer orders is a key aspect of achieving customer service targets.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Efficiency in Supply chain management facilitates cost reduction and flexibility.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your cooperation!