ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FACTORS AFFECTING SUPPLY CHAIN PERFORMANCE IN THE CASE OF YEGNA TRADING PLC

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA)

BY: - MELAT MARKOS

ADVISOR: - DR. BERIHUN MUCHIE (PhD)

JULY, 2023

ADDIS ABABA, ETHIOPIA

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APPROVED BY BOARD OF EXAMINERS

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Declaration

I, the undersigned, declare that this study entitled *"**Factors affecting supply chain performance in the case of Yegna trading plc**"* is my original work and has not been presented in any other universities, and that all sources of material used for the study have been duly acknowledged.

Declared by

Name: Melat Markos

Signature: - _____

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CERTIFICATION SHEET

This is to certify that the thesis entitles "*Factors affecting supply chain performance in the case of Yegna trading plc",* submitted to St. Mary's University for the award of the Master's Degree of Business Administration (MBA) and is a record of confide research work carried out by Melat Markos, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any master's or degree.

Main Adviser's Name	Signature	Date
Dr. Berihanu Michie (PhD)	_____	_____

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Abbreviations and Acronyms

EDI: Electronic Data Interchange

NGO: Non-Governmental Organizations

SC: Supply Chain

SCM: Supply Chain Management

SPSS: Statistical package for social science

SRM: Supplier Relationship Management

SSCM: Sustainable Supply Chain Management

VIF: Variance inflation factor

ABSTRACT

The purpose of supply chain management is to reduce costs, introduce innovative products, make the operations run smoothly, meet uncertain demand with rapidly delivery and satisfy customers in order to increase revenue, allowing businesses to confront the competitive market. The main objective of the study was to assess the factors affecting supply chain management performance of Yegna Trading Plc. The study adopted mixed research approach, and used descriptive & explanatory research design. The data was analyzed using both descriptive and inferential statistics. Primary data was collected from Yegna Trading Plc employees using pre-tested and self-administered questionnaire. The researcher used census method, as the numbers of respondents were 94 and collected all the data accordingly. Statistical package for social science version 20 software was used to analyze the data. According to the findings of the study shows that the supply chain management performance of Yegna Trading Plc found to be influential or very good. The finding of study shows those inefficient procurement activities, absence of training and development, absence of quality culture and the stated external environment affects and have negative impact on the organizations supply chain performance. The researcher also recommended that Yegna Trading should make every effort to advance its supply chain management, mitigate the main internal and external challenges and improve the supply chain management performance so as to be competitive enough in the supply of Rebar for the construction Industry.

Key words: SCM Performance

CHAPTER ONE

INTRODUCTION

This chapter presented background of the study, statement of the problem, research question, objective of the study, significance of the study, scope of the study, definition of terms and organization of the study.

1.1. Background of the study

Supply chain performance is the ability to deliver quality products and Services in precise quantities and at precise times with the aim to minimize total cost of the products and services to the ultimate customers of the supply chain (Green and Inman 2005). Although organizational managers are ultimately held accountable for organizational performance; organizational success first depends upon the performance of the supply chains in which the organization functions as partner. Supply chain performance is optimized only when an "inter- organizational, Inter-functional strategic approach is adopted by all partners operating within the supply chain (Chopra and Meindl.2004).

Currently, changes in the environment (socio-political, changing demand, etc.) are the cause for increasing uncertainty in the market place. To deal with this, flexibility in the supply chain becomes more and more important. Supply chain management involves operations like sourcing, products, delivery, and the information systems linking the supply channel participants Serve, (M., Yen, D.C., Wang, J.C., and Lin, B. 2002).

The purpose of supply chain management is to reduce costs, introduce innovative products, make the operations run smoothly, meet uncertain demand with rapidly delivery and the satisfy customers in order to increase revenue, allowing businesses to confront the competitive market (Mclaren *et al.,* 2002, Simatupang and Sridharan, 2002).

The creation of a supply chain leads to a better understanding of the whole chain and thus the implementation of common standards becomes easier. It is implied and obvious that in coming era of hyper-competition the basis of competition in many industries will revolve around supply chain development. With changes to customization and personalized service for customers, building relationships has become important for corporate survival.

The relationships allow wholesalers to differentiate themselves from competitors, maintain loyalty, and in turn pass off value to its customers (Raghavendra *et al*. 2015).

Effective supply chain management (SCM) has become a potentially valuable way of improving organizational performance. It requires close integration of internal operational within corporate and efficient relationships with the external functions of members in the Supply Chain (Hau and Billington, 2000).

1.2. Statement of the problem

Currently, Supply chain management becomes a vital entity to organizations` performance measurement and metrics, and has received much attention from researchers and practitioners. For decades, supply chain performance had been a significant area of attraction for researchers. However, studies have established the factors affecting supply chain performance in manufacturing and commercial organizations whose focus is to deliver value to customers in order to make a profit (Reichhart & Holweg, 2007). The focus on the industrial supply chain is the final customer, who is the input source of funds for the entire chain.

Since the main objective of business companies is supply the right product at the right place at the right time to the right person; the internal and external supply chain integration plays a vital role to achieve the basic objective of these manufacturing companies. However, regardless of the antecedents of a supply chain, there are dominant problems in integrated chains such as: low flexibility during change in the market and supply chain complexity. Thus, due to this and other related supply chain process company's face different factors that will be challenge to create an integrated working environment between different functional units within the company.

SCM practices contribute 50 percent to the profitability and performance of any organization (Choy, 2002). This implies that SCM is one of the most effective approaches for any firms to improve their organizational performance and remain competitive. In the case Yegna trading, although it has the objective of being customer centric, offering the best quality of services, and building a financially sound company but SCM has not been considered as a key source to meet the objective and the SCM function is still largely regarded as a separate entity whose activities are distinct from the functioning of the rest of the company (Reichhart & Holweg, 2007). In addition, the company to be efficient and effective in its operation and therefore SCM can play an important role in company's performance through the planning, implementation and control of processes linked to physical flows, and the integration of

processes along the supply chain management. However, there has not been a study conducted about the factors affecting supply chain management performance of Yegna Trading Plc and this tried to help bridge this gap by determining major factors that affect supply chain performance then, as per the finding of the result the research suggested suitable measures to improve the supply chain performance.

1.3. Basic research questions

- What is the effect of environmental uncertainty on supply chain performance of Yegna Trading Plc?
- What is the effect of supply chain collaboration on supply chain performance of Yegna Trading Plc?
- What is the effect of management commitment on supply chain performance of Yegna Trading Plc?
- What is the effect of employee's competence on supply chain performance of Yegna Trading Plc?
- What is the effect of communication effectiveness on supply chain performance of Yegna Trading Plc?

1.4. Research Objectives

1. 4.1 General objective

The general objective of the study was to assessed and measure the major challenges affect performance of supply chain management of Yegna Trading Plc.

1.4.2 Specific objectives

- To examine the effect of environmental uncertainty on supply chain performance of Yegna Trading Plc.
- To analyze the effect of supply chain collaboration on supply chain performance of Yegna Trading Plc.
- To determine the effect of management commitment on supply chain performance of Yegna Trading Plc.
- To examine the effect of employee's competence on supply chain performance of Yegna Trading Plc.

- To analyze the effect of communication effectiveness on supply chain performance of Yegna Trading Plc.

1.5. Significance of the study

This study assessed factors affecting the performance of supply chain management of Yegna Trading Plc. Hence, the result of this study is help to scrutinize the effect on its supply chain performance. Besides, the study will be important as a reference to researchers similar to this topic, and it will also give additional insight to the challenges of supply chain management practice.

1.6. Scope of the study

1.6.1 Conceptual scope

Supply chain management covers a wide area and it would be difficult to do the study in all areas that summarize supply chain management in terms of time and finance. For this reason, the scope of this study will focus on only supply chain management performance (from the dimensions of product quality, delivery dependably, operational flexibility and customer responsiveness) of supply chain management of Yegna Trading Plc. Specifically, it will focus on department of purchasing. This study only measures the performance of supply chain management and related problems facing in Yegna Trading Plc.

1.6.2 Geographical scope

Yegna Trading has six branches in Addis Ababa. Bole branch, Lebu branch, Piassa branch, Megenagna branch, Teklehiamanot branch and Hayat branch. Also, Bahirdar Reginal branch. The study was conducted in all branches of Addis Ababa city.

1.6.3 Methodological scope

The researcher intention is measuring the performance of supply chain management of Yegna Trading Plc. To this effect, both descriptive and explanatory research were applied for the study, adequate qualitative data (survey questionnaire) was used, analyze and interpret the overall result. Therefore, the study was used qualitative and quantitative research approach.

1.6.4 Time Scope

The time scope of this study is delimited to 2022/23 academic year schedule of St. Mary's university.

1.7. Organization of the study

This project paper is organized into five chapters: Chapter one contains the introduction part dealing with back ground of the study and company, the research problem, objectives of the study, rational of the study, scope and significance of the study. The second chapter discusses the literature review about the subject matter. In chapter three the research methodologies were presented. Chapter four presents result and discussion of the study and finally, chapter five presents the major findings, conclusions and forwarded suggestions.

CHAPTER TWO

REVIEW OF RELATED LITERATURES

Under this part the researcher broadly discussed the theoretical literature review, empirical literature review, conceptual framework and identified literature gaps specific to the concepts and ideas of supply chain management performance with the aim of understanding its theoretical background according to different international scholars.

2.1 Theoretical Literature Reviews

2.1.1. Supply Chain Overview

According to (Chow, D. and Heaver, T. 1999), Supply Chain is the group of manufacturers, suppliers, distributors, retailers and transportation, information and other logistics management service providers that are engaged in providing goods to consumers. A Supply Chain comprises both the external and internal associates for the corporate.

(Ayers,J. B. 2001) also defined Supply Chain as life cycle processes involving physical goods, information, and financial flows whose objective is to satisfy end consumer requisites with goods and services from diverse, connected suppliers.

(Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D. and Zacharia, Z.G., 2001). Defined Supply Chain as a set of entities (e.g., organizations or individuals) directly involved in the supply and distribution flows of goods, services, finances, and information from a source to a destination (customer).

Changes in the global business situation and increased competition among organizations have influenced the management complexity of all organizations. (Monczka *et al*. 2002) also pointed out that today's organizations must manage both the upstream firms' suppliers providing direct and indirect inputs and downstream firms or the distributive network delivering and offering after-market service to customers. Based on this, (Monczka et al. 2002) offered an extensive definition of supply chain and its management: The supply chain encompasses all activities associated with the flow and transformation of goods from the raw materials stage (extraction), through to end users, as well as the associated information flows. Material and information flow both up and down the supply chain. The supply chain includes systems management, operations and assembly, purchasing, production scheduling, order processing, inventory management, transportation, warehousing, and customer service.

Supply chains are essentially a series of linked suppliers and customers; every customer is in turn a supplier to the next downstream organization until the finished product reaches the ultimate end user.

According to (Lambert, Stock and Ellram, 1998). The concept of supply chain is generally referred to as the alignment of firms that bring products or services to the market. The supply chain includes manufacturers, suppliers, transporters, warehouses, wholesalers, retailers, other intermediaries and even customers themselves. Any product traded on the consumer goods market, in its evolution from raw material to finished products, undergoes a series of successive transactions on the business-to-business market. For example, when a final consumer purchases a bottle of Coca Cola, he/she does not buy directly from Coca Cola, but from an intermediary (for example the hypermarket or neighborhood store) and the product goes through several transactions on the business-to-business market on the circuit Coca-Cola wholesaler, retailer, final consumer, according to (Căescu and Dumitru, 2011). This is a supply chain.

On the other hand, according to (Chopra and Meindl, 2007) a supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service.

(Chen and Paulraj 2004) also stated that a typical supply chain is a network of materials, information, and services processing links with the characteristics of supply, transformation and demand. There are three traditional stages in the supply chain: procurement, production and distribution. Each one of these stages may be composed of several facilities in different locations around the world as explained by (Thomas and Griffin, 1996). For example, in automotive industry assembly plants are located in other countries than suppliers of different components and distribution is worldwide.

As said by (Mentzer *et al*. 2001) a supply chain is a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer. According to (Mentzer *et al*. 2001), there are three degrees of supply chain complexity: a direct supply chain, an extended supply chain, and an ultimate supply chain. The direct supply chain consists of a central organization, its suppliers and its customers. In addition, the extended supply chain includes suppliers of the immediate supplier and customers of the immediate customer. The ultimate supply chain includes all organizations that are involved in all flows of products, services, finance, and information from the ultimate suppliers to the ultimate customers. Also, the ultimate supply chain encompasses functional intermediaries such as market research firms, financial and logistics services providers.

The supply chain can have different degrees of complexity related to the numbers of members and the variety of business process, but always there is a central organization. This organization can manage the entire supply chain or not and even the supply chain is not managed, the supply chain as a phenomenon of business -still exists according to (Mentzer *et al*., 2001).

(Ayers, 2001) also suggested that a supply chain is: Life cycle processes comprising physical, information, financial, and knowledge flows whose purpose is to satisfy end-user requirements with products and services from multiple linked suppliers. According to this definition, the supply chain encompasses processes that cover a broad range of activities including sourcing, manufacturing, transporting, and selling physical products and services. Life cycle refers to both the market life cycle and the usage life cycle and these are not the same for durable goods and services. Therefore, product support after the sale becomes an important supply chain component (Ayers, 2001).

According to (Waller, 2003) an integrated supply chain model can generally contain three interrelated flows: material flows (which has itself three different stages (purchasing, transformation and distribution), informational flows (electronic data exchange or website linkages) and the financial flow (which include the payment to suppliers and subcontractors for the goods and services and the payment by the customer to the retailer for the final product).

As said by (Moise, 2008) the flows direction in the supply chain is not only forward, from the first supplier to final customer. Goods can flow back up the supply chain for different reasons such as service or repair, remanufacturing, recycling or disposal. The reverse chain can play an important role in areas such as customer satisfaction, recycling and environmental protection. Reverse logistics refers to a set of programs or competencies aimed at moving products in the reverse direction in the supply chain (i.e., from consumer to producer) and related activities may include handling product returns, recycling, reuse of materials, waste disposal, refurbishing or remanufacturing.

2.1.2. Definitions, Concepts and Drivers of Sustainable Supply Chain Management.

The concept of supply chain management was introduced in the 1980s and today due to the attention given to supply chain management the definition has gone through a significant number of changes. According to the Council of Supply Chain Management Professionals (CSCMP, 2011) supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.

As said by (Mentzer *et al.*, 2001) supply chain management is the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.

According to (Shukla, Garg and Agarwal, 2011) ―Supply Chain Management is the management of material, money, men, and information within and across the supply chain to maximize customer satisfaction and to get an edge over competitors. It also includes suppliers, logistics provider, customers, and other members so first it deals not only supply but also demand and other sides and secondly, it is not a simple chain but has become a complex network (Shahbaz, Rasi, Bin & Rehman, 2017; Whitten, Kenneth & Zelbst, 2012). Thus, for better understanding, it is essential to understand all member of the supply chain that has either indirect or indirect effects of performance.

Supply Chain management is aimed at examining and managing Supply Chain networks. The rationale for this concept is the opportunity (alternative) for cost savings and better customer service. An important objective is to improve a corporate competitiveness in the global marketplace in spite of hard competitive forces and promptly changing customer needs according to (Langley, C., Coyle, J., Gibson, B., Novack, R. and Bardi, E., 2008). The Supply Chain Management Professionals 'Council (2009) also asserted that Supply Chain management (SCM) includes the designing and management of all activities involved in sourcing and purchasing, transformation, and all logistics management activities. Principally, it also includes coordination and partnership with network partners, which can be suppliers, mediators, third party service providers and customers. Fundamentally, Supply Chain management (SCM) coordinates supply and demand management within and across corporate. Supply chain management (SCM) is one of business strategy increasingly being used in the business world today and has become the focus of academic attention in recent years (Ballou, Gilbert & Mukherjee, 2000). Because the concept of SCM is still in development, there are several theoretical frameworks and research methodologies need to be developed in the study of SCM (Tage, 1999).

Organizations are influenced by both internal and external factors (such as government, community, investors, customers, suppliers, and employees) to adopt sustainable supply chain initiatives. (Varsei, M.; Soosay, C.; Fahimnia, B.; Sarkis, J. 2014). These influencing factors are defined as pressures, triggers, enablers, and drivers. (Caniato, F.; Caridi, M.; Crippa, L.; Moretto, A. 2012) defined drivers of sustainable supply chain management (SSCM) as pressures that push organizations toward the implementation of specific sustainability initiatives. (Köksal, D.; Strähle, J.; Müller, M.; Freise, M. 2017) also defined drivers of SSCM as ―external factors that initiate and motivate focal organizations in implementing SSCM practices. Hence, drivers for SSCM can be defined here as ―motivators or influencers that encourage or push organizations to implement sustainability initiatives throughout the supply chain. (Saeed, M.A.; Waseek, I.; Kersten w. 2017.) However, different drivers affect supply chain decisions to different extents. (Haverkamp, D.-J.; Bremmers, H.; Omta, O. 2010). For example, the media can influence purchasing decisions, and shareholders have more impact on logistics-related supply chain decisions. Similarly, employees and non-governmental organizations (NGOs) have more

influence on decisions concerning the social dimension, whereas regulatory bodies are more influential in the environmental dimension as stated by (Meixell, M.J and Luoma, 2015).

Institutional theory is used to explain how drivers of SSCM affects decisions regarding sustainable actions, with the overarching theme as to how firms better secure their social fitness and legitimacy by conforming to the rules and norms within their operating sphere. (Glover, J.L.; Champion, D.; Daniels, K.J.; Dainty, A.J.D. 2014). To categorize drivers, first analyzed the institutional theory approach to understand the drivers of SSCM as three institutional pressures: coercive pressures, normative pressures, and mimetic pressures. (Hsu, C.-C.; Tan, C.T.; Zailani, S.H.M.; Jayaraman, V. 2013). Coercive pressures are considered the most influential type of pressure, and include pressures from the government, regulatory bodies, or authorities. Normative pressures originate from social obligations and are exerted by NGOs, trade unions, and society. Mimetic pressures arise when competitors adopt sustainability practices and organizations are, in turn, asked to undertake these sustainable actions. (Matuleviciene, M. and Stravinskiene, J. 2015) All institutional pressures have the ability to influence organizations in the adoption of sustainability initiatives. (Zhu, Q. and Sarkis, J. 2007). However, these three institutional pressures have been revealed to be theoretically distinct but not necessarily empirically distinguishable. (Hsu, *et al* 2013).

According to (Varsei, M.; Soosay, C.; Fahimnia, B.; Sarkis, J, 2014) to clearly define and set their goals, drivers of SSCM based on their degree of influence are categorized as internal and external drivers. External Drivers (Market Pressures, Societal Pressures, Regulatory Pressures)

Internal Drivers (Corporate Strategy, Organizations Culture, Organizations Resources, Organizations Characteristics). However, not all the internal and external influencing factors have a similar level of access to the organizational knowledge and level of value contribution within the supply chain. In this regard, stakeholder theory explains the role of pressure (direct or indirect) exerted by different stakeholders in the implementation of sustainability initiatives.

Based on the level of access to supply chain knowledge and value-contribution, drivers of SSCM are also categorized as primary and secondary drivers as indicated by (Varsei. *et*

al.2014). The more knowledge they have about the supply chain, and the greater the value contribution, and the greater the importance of the pressure group. (Saeed.*et al*. 2017). Primary drivers have a direct influence on organizations as well as their supply chains, and include pressure from shareholders, suppliers, employees, unions, customers/consumers, financial institutions, regulatory agents, competitors, and top management commitments (Zhu, Q. and Sarkis, J. 2007). Secondary drivers have an indirect influence on organizations as well as their supply chains, and include pressures such as reputation and image, media and press, communities, and social groups. (Hsu, *et al*.2013).

2.1.3. Supply Chain Management Objectives

As noted by Hassan, Zaharudin & Yunus, (2015) the objective of supply chain management is to mountain the sale either form goods or services while keeping the expenditures and expenses minimum. Previous logistics focused only on procurement, maintenance, inventory management, and distribution. Supply chain adds values like new product development, marketing, customer services, and finance. Now supply chain has its own objectives like customer satisfaction and sustainable organizational performance. The rapid growth in the global supply chain requires interconnectedness among stakeholders. As a result, a high level of interdependency and complexity develop in supply chain (Christopher, Mena, Khan & Yurt, 2011; Elkins, Handfield, Blackhurst & Craighead, 2005; Kamalahmadi & Parast, 2016). (Li *et al*. 2005) stated that successful SCM implementation is expected to enhance the relationship between upstream suppliers and downstream customers, increases customer satisfaction and firm performance. According to (Wisner *et al*, 2005) prior research has also indicated that SCM as a key driver of firm performance.

Supply chain objective is not only to improve profitability, customer response and ability to deliver value to the customers but also to improve the interconnection and interdependence among firms as stated by (Sukati *et al*, (2013). The basic objective of supply chain management is to create sourcing, making and delivery processes and logistics functions seamlessly across the supply chain as an effective competitive weapon (Li *et al*., 2005). Moreover, supply chain management links the end customers, the channels of distribution, the production processes and the procurement activity in such a

way that customers service expectations are exceeded and yet at a lower total cost than their competitors (Ibrahim and Hamid, 2014).

2.1.4. Supply Chain Management Practices

According to (Harland, 1996) SCM has been defined as the design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally. The supply chain encompasses organizations and flows of goods and information between organizations from raw materials to end-users as explained by (Handfield & Nichols, 2002).

According to (Ayers, 2001) supply chain is knowledge movement that includes all activities related to the back flow of product from customers back up to the chain in the form of product return, reuse, and recycling. Ayers definition suggests that every single company depends on other businesses to deliver its products or services to its customers.

According to (Narasimhan & Kim, 2007) supply chain as a set of three or more entities organizations or individuals directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer owing to the fact that SCM practices are a key to firm performance, this concept has attracted a great deal of interest among academicians and practitioners alike over the past two decades.

(Ou *et al*., 2010) clearly stated that as effective SCM provides benefits that transcend across the entities on both upstream and downstream sides, firms are realizing the potential of integrating their external supplier-firm-customer relationships and internal operational practices with a view to enhancing their level of competitiveness and performance as well as customer satisfaction.

A sound understanding of SCM practices thus assumes utmost importance in coping with the global competition and sustained profitability according to (Power *et al*., 2001; Moberg *et al*., 2002).

On the other hand, according to (Koh *et al.*, 2007) SCMs practices involve a set of activities undertaken by organization to promote effective management of their supply chain.

(Tutuncu and Kucukusta 2008) also go beyond that and stated that SCM lead to changes in the structure of the organization by integrating internal functions and linking these with the external operation of suppliers, customers and others stakeholders of the supply chain. In today's competitive business there is an increased focus on delivering value to the customer. The focus on attention of most of businesses is providing products and services that are more valuable compared to its competitors.

Concurrent to the focus on customer value, the marketplace in which businesses operate today is widely recognized as being complex and turbulent (Christopher, 2000; Goldman *et al.,* 1995). According to (Braunscheidel, 2005) the growth of supply chain aims to improve profitability, customer response and ability to deliver value to the customers and also to improve the interconnection and interdependence among firms. Due to market expanding from domestic market to global market increase customer demands, for instance demanding lower prices, faster delivery, higher quality products or services and increase the variety of items.

Many previous researches explored the importance of integrating suppliers, manufacturers, and customers or supply chain integration (Frohlich and Westbrook, 2001; Clinton and Closs, 1997) (i.e., supply chain management) so as to obtain flexibility and speed. By addressing supply chain management practices that contribute to supply chain responsiveness, will help the researcher better understand the scope and activities related to supply chain management that create enhanced level of supply chain responsiveness in competitive business marketplace.

(Koh *et al* 2007) stated that SCMs practices involve a set of activities undertaken by organization to promote effective management of their supply chain. (Tutuncu and Kucukusta, 2008) went beyond that and stated that SCM lead to changes in the structure of the organization by integrating internal functions and linking these with the external operation of suppliers, customers and others stakeholders of the supply chain. The study of practices on Supply Chain Management (SCM) improves the understanding of how all the process are integrated in way to provide products, services and information that add value for costumers (Cooper *et al*., 1997). This study focused on supply chain management practices of Yegna trading and assessed the practices form the dimension of strategic

supplier partnership, customer relationship, information sharing and quality of information.

2.1.4.1. Strategic Supplier Partnership

According to (Stuart F. 1997) Strategic supplier partnership or relationship is defined as the long-term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant on-going benefits. A strategic partnership emphasizes direct, long-term relationships between trading partners and encourages mutual planning and problem-solving efforts as noted by (Gunasekaran A, Patel C, Tirtiroglu E., 2001)**.**

(Wisner, 2003) also said that strategic supplier partnership relationship activities play an important role in SCM. Through close relationship supply chain partners are willing to share risks and reward, and maintain the relationship on long term basis (Cooper & Ellram, 1993; Stuart, 1993; Thatte, 2007). Long-term perspective between the buyer and supplier increases the intensity of firm-supplier integration. Such strategic partnerships are entered into to promote shared benefits among the parties and ongoing participation in one or more key strategic areas such as technology, products, and markets as said by (Yoshino M and Rangan S. 1995).

According to (Tan KC, Lyman SB and Wisner JD, 2002) strategic partnerships with suppliers enable organizations to work more effectively with a few important suppliers who are willing to share responsibility for the success of the products. Suppliers participating early in the product design process can offer more cost-effective design choices, help select the best components and technologies, and help in design assessment.

Strategically aligned organizations can work closely together and eliminate wasteful time and effort as stated by (Balsmeier PW and Voisin W. 1996). An effective supplier partnership can be a critical component of a leading-edge supply chain as explained by (Noble D. 1997).

2.1.4.2. Customer Relationship

It comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction. (Tan KC, Kannan VR & Handfield RB. 1998).

(Noble D. ,1997) and (Tan KC, Kannan VR & Handfield RB. 1998). In their study considered that customer relationship management as an important component of SCM practices. As pointed out by (Day GS. 2000), committed relationships are the most sustainable advantage because of their inherent barriers to competition. The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival according to (Wines L 1996).

Good relationships with supply chain members, including customers, are needed for successful implementation of SCM programs (Moberg cr. *et al*, 2002.) Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers. (Magretta J. 1998).

Customer Relationship practices can generate the organizational success in supply chain management efforts as well as its performance as indicated by (Ellram, 1991 & Turner, 1993). The success of supply chain management encompasses customer integration at the downstream and supplier integration at the upstream, considering that each entity in a supply chain is a supplier as well as a customer (Thatte, 2007).

According to (Thatte, 2007) in the competitive business, better relationship management with customers is crucial for organization success. Good relationship with business partners, including key customers are important role to success of supply chain management practiced by organizations. Customer relationship is recognized as an internal component of an organizations marketing strategy to increase sales and profits. Close customer relationship allows product differentiation from competitors; helps sustain customer satisfaction and loyalty, and elevated the value provided to customer (Thatte, 2007).

2.1.4.3. Information Sharing and Quality of Information Sharing

As stated by (Lee, 2002) information sharing is the ability of the firm in sharing knowledge with supply chain partners in an effective and efficient approach. Effective information sharing is considered as one of the most important abilities of supply chain process. Information sharing is one of the most important tools for achieving an integrated and coordinated supply chain. Information should be inter-operable, which means that one system can talk to another.

Information sharing provided the access to private data between business partners thus enabling them to monitor the progress of products and orders as they pass through various processes in the supply chain according to the study of (Simatupang & Sridharan, 2002). Information shared in a supply chain is of use only if it is relevant, accurate, timely, and reliable (Simatupang & Sridharan, 2005; Thatte, 2007). Information sharing with business partners enables organizations making better decisions and making action on the basis of greater visibility (Davenport, *et al*., 2001; Thatte, 2007).

(Landeros, *et al*, 1989) also considered sharing of information as one of the five building blocks that characterize a solid supply chain relationship. According to (Stein & Sweat, 1998), supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker. Many studies have reported that information sharing can bring many benefits both to suppliers and buyers, such as inventory reduction, and reduced manufacturing costs. The empirical findings from (Narasimhan & Nair, 2005), revealed that information sharing can increase the operational synergy amongst supply chain partners. The impact of information sharing on SCM depends on what information is shared, quality on shared information, and companies' capability in using and translating the information into a supply chain strategy and operational activities (Lee & Whang, 2000; Moberg *et al.,* 2002). According to (Suhong, *et al*, 2009) organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion so as to achieve customer satisfaction.

Information sharing includes such aspects as the accuracy, timeliness, adequacy, consistency and credibility of information exchanged as noted by (Moberg *et al.,* 2002;

Monczka, 1998). Information sharing is important; the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom according to (Chizzo SA., 1998; Holmberg S, 2000.)

Divergent interests and opportunistic behavior of supply chain partners, and informational asymmetries across supply chain affect the quality of information according to (Feldmann M and Müller S. 2003). It has been suggested that organizations will deliberately distort information that can potentially reach not only their competitors, but also their own suppliers and customers as noted by (Mason-Jones R and Towill DR, 1997). It appears that there is a built-in reluctance within organizations to give away more than minimal information. (BerryD, Towill DR and Wadsley N. 1994). Since information disclosure is perceived as a loss of power. Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM. (Feldmann M and Müller S. 2003). Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

2.1.4.4. Supply Chain Integration

The integration of supply chains has been described by Clancy as: attempting to elevate the linkages within each component of the chain, (to facilitate) better decision making and to get all the pieces of the chain to interact in a more efficient way and thus, create supply chain visibility and identify bottlenecks. The main drivers of integration are listed by (Handfield, R. and Nichols, E.L. Jr ,1999) as: the information revolution; increased levels of global competition creating a more demanding customer and demand driven markets, the emergence of new types of inter organizational relationships. They describe the three principal elements of an integrated supply chain model as being information systems (management of information and financial flows), inventory management (management of product and material flows), and supply chain relationships (management of relationships between trading partners).

2.1.5. Factors Affecting Supply Chain Performance

For a growing business, supply chain management challenges are numerous. In the current environment, procurement costs are rising, supply chains are becoming more complex and businesses have to manage increasingly collaborative relationships with suppliers.

Although it can be difficult for many businesses to keep up, investing in the supply chain capability is well worth the cost. In the current competitive scenario supply chain management assumes a significant importance and calls for serious research attention, as companies are challenged with finding ways to meet ever-rising customer expectations at a manageable cost. To do so, businesses must search out which parts of their supply-chain process are not competitive, understand which customer needs are not being met, establish improvement goals, and rapidly implement necessary improvements. Here are some of the most common supply chain management challenges SCM as stated by (Unleashed, 2019).

2.1.5.1. Environmental Uncertainty

According to (Dwivedi and Butcher, 2009). Environmental uncertainty refers to the environmental issues in the product chain. On the other hand, according to (Ettlie and Reza 1992) this described as the unexpected changes of customer, supplier, competitor, and technology. It was also said by (Yusuf 1995) that government support plays an important role for business success. According to (Paulraj and Chen ,2007) environmental uncertainty is an important factor in the realization of strategic supply management plans. The increase of outsourcing activities in the industry had augmented the awareness of the importance of strategic supply management, which leads to better relationship among organizations. Under this factor, three sub-factors were identified: Company environment, government support, and uncertainty aspects from overseas.

Company environment: According to the study of (Wu, 2006) this sub-factor is related to the company's relationship with suppliers and their level of trust and commitment. Company environment is also related to the company's expectations of quality, on time delivery, competition in the sector, and the level of rivalry among firms. In order to respond effectively to demand, companies realize that imports are a good option for obtaining flexibility in response, even though working with countries from overseas implies working with uncertainty. According to a study carried out by (Ambrose et al. 2010), uncertainty negatively affects company performance. But this can be reduced if a strategic relationship with critical suppliers is established (Chen et al., 2004). Thus,

companies need to implement new strategies that allow them to deal with environmental uncertainties in the supply chain (Wu, 2006) in order to perform in a proficient manner.

2.1.5.2 Supply Chain Collaboration

According to (Mangan et al, 2008) "Supply chain integration is the alignment and interlinking of business processes, collaboration is a relationship between supply chain partners developed over a period of time". Supply chain integration comprises a set of firm's activities adapted to fostering its relationships with suppliers and customers; these are designed to harmonize supply chain activities with suppliers on the upstream side and enhance customer satisfaction on the downstream side through offering superior products (Petrovic-Lazarevic et al., 2007). supply chain integration is a building block comprised of bricks of joint collaboration, high level of coordination, shared vision, shared information and technical infrastructure between manufacturer and distributors (Flynna et al., 2010).

Integration is now widely taken the central concept of successful supply chain management (SCM), because the implementation of SCM needs the integration of processes from sourcing, to manufacturing, and to distribution across the supply chain (Cooper et al., 1997; Ellram and Cooper, 1990; Mentzer et al., 2001). The scope of supply chain integration is not limited but it has wide scope ranging from supplier integration to customer integration covering central concept of internal integration also (Flynn et al., 2010; Zhao et al, 2010).

2.1.5.3 Management Commitment

SCM performance is defined as the operational excellence to deliver leading customer experience (Simchi-Levi et al., 2003). (Beamon, 1999) mentioned that some features present in effective performance measurement systems and these include the following: inclusiveness (measurement of all pertinent aspects), universality (allows for comparison under various operating conditions), measurability (data required are measurable), and consistency (measures consistent with organization goals). Also, the strategic goals include key elements such as the measurement of resources (generally cost), output (generally customer responsiveness) and flexibility. (Stevens, 1990) stated that to build up

an integrated supply chain requires the management of material flow from three perspectives: strategic, tactical, and operational. From these perspectives, the use of systems, facilities, and people must be seen as a whole and work in a coordinated manner. He also mentioned that a company can measure the supply chain performance by inventory level, service level, throughput efficiency, supplier performance, and cost. (Lear-Olimpi, 1999) also stated that logistics play an important role in pursuing supply chain excellence which will lead to improved business performance (Lear-Olimpi, 1999). Another critical sub-factor of successful supply chain management is the analysis of the supplier market (Purchasing, 2007). An important point according to (Canbolat, Gupta, Matera and Chelst, 2008) is outsourcing, which is significant in the supply chain management for the opportunities and risks that it offers. Then, this factor comprises four sub-factors logistics, supplier markets, supplier performance, and materials sourcing.

2.1.5.4 Employees Competence

Performance measurement as the process of quantifying the efficiency and effectiveness of an action using a set of performance metrics (Neely, Gregory and Platts 1995). Effectiveness is the extent to which a customer's requirements are met and efficiency measures how economically a firm's resources are utilized when providing a pre-specified level of customer satisfaction. Performance measurement systems are described as the overall set of metrics used to quantify both the efficiency and effectiveness of action. It has been argued that measuring SC performance can facilitate a greater understanding of the supply chain and improve its overall performance (Chen and Paulraj 2004).

2.1.5.5. Communication Effectiveness

As stated by (Zhao Y. 2002) sharing Information within a supply chain may encounter certain challenges. Among these barriers are confidentiality of the information shared, incentive issues, reliability and cost of information technology, anti-trust regulations, the timeless and accuracy of the shared information, and finally the development of capabilities that allow companies to utilize the shared information in an effective way.

One of the main barriers of interpersonal information sharing may be concerns about information privacy. A trusted network should be created for individuals to share information. (Ardichvili A., Page V. and Wentling T. 2003). Organization members may lack trust in each other which may impede information sharing. (Cetindamar D., Çatay B., Basmaci O.S. 2005). Learning to use IT systems for individuals in a supply chain is proven to take both time and energy. (Goodman P.S. and Darr E.D. 1998) Making use of user-friendly IT applications may improve information sharing. (Kim S. and Lee H. 2006). An inefficient and non-user-friendly system would have a negative impact on information sharing causing less information and knowledge to be shared.
(Yang T.-M. and Maxwell T.A., 2001).

2.1.6. Supply Chain Operational Performance

Performance is a set of metrics used to quantify the efficiency and effectiveness of supply chain processes and relationships, spanning multiple organizational functions and multiple firms and enabling supply chain orchestration‖ according to (Maestrini, Luzzini, Maccarrone & Caniato, 2017). The aim of every organization is to enhance the performance but for improvement, they must need to measure it accurately first (Gunasekaran & Kobu, 2007). Previously performance was measured by cost with the passage of time more financial indicator were added like return on asset, return on investment, sale and etc. (Anand & Grover, 2015). Only financial indicators are not enough for measure overall and accurate performance, consequently, with the intent of balance scorecard approach some operational indicators were added (Attia, 2015; Gunasekaran, Patel & McGaughey, 2004; Shahbaz, Rasi, Zulfakar, Bin & Asad, 2018).
Other approaches also added values in measuring supply chain like quantitative or qualitative measures, strategic, tactical and operational measures and etc. (Arzu-Akyuz &Erman-Erkan, 2010).

According to (Shahbaz, Rasi, Zulfakar, Bin, Abbas & Mubarak, 2018) a comprehensive review revealed that for the good performance measure all the members should be considered, performance measure should consider both financial and non-financial items, all the levels of supply chain must be considered and all process of supply chain should be included so the performance should be measured by operational performance. According

to (Heizer *et al*., 2008) operational performance refers to the ability of a company in reducing management costs, order time, lead-time, improving effectiveness of using raw material and distribution capacity.

On the other hand, according to (Kaynak, 2003), Operational performance has an important meaning to firms, it helps to improve effectiveness of production activities and to create high quality products, leading to increased revenue and profit for companies. Several literatures such as (Boyer & Lewis 2002; Ward *et al*., 1998), cited in Miguel & Brito (2011:59), identified cost, quality, flexibility and delivery as the most basic dimension of competitive priorities or as significant competitive priorities which can be conceptualized as measures of operational performance. Dimensions of operational performance are conveniently coinciding with the common set of competitive priorities, i.e., quality, delivery, flexibility and cost performance (Hallgren, 2007).

According to (Croom *et al*., 2000) and (Wisner and Tan, 2000) Supply Chain Management (SCM) has been a melting pot of various aspects, with influences from logistics and transportation, operations management and materials and distribution management, marketing, as well as purchasing and information technology (IT). Ideally, the compassing philosophy of SCM embraces each of these functions to produce an overall supply chain strategy that ultimately enhances firm performance.

SCM had been measured by operational performance and its indicators were quality performance, flexibility performance, customer service, delivery performance and cost performance (Kauppi *et al*., 2016). (Effendi, 2015) also noted and has used logistic effect for SCM and its metric consisted in order fill rate, order fulfillment lead time, operations flexibility, inventory turnover, and total logistics cost. SCM has been measured SCM with organizational performance and its dimension was profit, cost, return on investment and sale (Florian & Constangioara, 2014).

It can be concluded that SCM performance had been measured by various ways like operational, organizational, firm, financial measures.

According to (Shahbaz, Rasi, Zulfakar, Bin, Abbas & Mubarak, 2018). A model had been developed for measuring performance and revealed that for measuring overall

performance, these items should be considered; cost, quality, flexibility, customer satisfaction, capacity, time and consistency.

(Slack and Lewis, 2011) also categorized performance objectives in the five groups of quality, cost, speed, dependability, and flexibility. These five performance objectives illustrate competitive advantages. The definitions of each of the five mentioned competitive advantages are as follows: Quality: Performing tasks properly, procuring goods and services without error and in accordance with the previously-determined goals.

Speed: Performing tasks rapidly, minimizing the time between the customer's request for goods or services and the delivery.

Dependability: Carrying out the work in a timely manner, abiding by the delivery commitments promised to the customers.

Flexibility: Changing what you do or the way the work is done, the ability to change or match the activities of operations in order to overcome unexpected circumstances or gain customers unique behavior or introducing new products or services.

Cost: Carrying out the work in an inexpensive manner, producing goods and rendering services with a cost that enables them to properly perform pricing for the market in a way that the organization revenue is also allowed for. Thus, this study will consider all the requirement of better operational performance.

Based on the above literature review, four performance metrics including delivery dependability, product quality, operational flexibility and customer responsiveness were adopted as dimensions of operational performance measurement in this study. Therefore, these measures of the operational performance construct used in this study briefly described in the following paragraphs.

2.2. Empirical Literature Review

Several previous researches in the area of the study explained the relationship of SCM practices and organizational performance from different perspective/dimensions/. With the emerging spotlight on the SCM practices, a number of researchers have tried to understand

the link between SCM practices and the organizational performance (Karimi & Rafiee, 2014 Wijetunge, 2016). They also studied the link among SCM practices, operational performance and SCM related organizational performance (Karimi & Rafiee, 2014). Several of the existing literatures on SCM have asserted that improvements in organizational performance are brought about by SCM practices. (Basnet *et al*. 2007).

For instance, (Frohlich and Westbrook, 2001) reviewed the chain upstream and downstream, measured the integration level taking the following practices into consideration: production planning sharing, combined utilization of electronic data interchange, knowledge level and inventory mix levels, packaging customization, delivery frequency, shared use of containers, equipment and logistic services. Among the conclusions of the upper mentioned study, it was verified that the bigger the SCM integration level, the stronger the association with performance improvement. Nevertheless, the same study suggests future researches could consider this integration level as part of the operation strategy, as the manufacture needs to be properly lined up with all the supply chain and not only within the company boarders.

(Li *et al*. 2006), on the other hand, investigated the relation among five SCM practices (strategic partnership with suppliers, customer relationship, level of information sharing, information quality and postponement), competitive advantage and organizational performance. The findings of the study highlighted that the implementation of practices such as strategic leadership of suppliers, building a relationship with suppliers and postponement gave the organization a competitive advantage concerning cost, quality, reliability, flexibility and delivery.

Following the same research line, (Fynes, Voss *et al.* 2005) evaluated four dimensions of the relationship with suppliers (communication, commitment, cooperation and adaptation) and its impact on the operational performance in traditional competitive priorities (quality, costs, delivery and flexibility). The research results revealed that the dimensions of relationship are a successive phase that accumulates over time, as in the adaptation phase improvement on the quality of the product and production cost reduction are conducted, but there are no effects on the performance of delivery and flexibility indicators.

(Martin and Patterson, 2009) conducted a survey with 143 purchasing, logistics and material management managers. The research aimed to identify which performance measures the companies that adopted SCM practices were using to manage their first tiers.

The results indicated that the practices positively affected inventory (raw material, final product and storage volume) and cycle time (inventory turnover, cycle time and order fulfillment) indicators. However, the financial performance was not significantly affected by the SCM practices adopted by the analyzed companies. Despite the success of studies on impact identification of the SCM practices over business and operational performance, it is possible to perceive a great diversity of practices adopted by the researchers with different nomenclatures, but with strong conceptual similarity, a fact that can result in a confused understanding of the concepts. It reinforces the findings that SCM is a highly contemporary area in business management that is still in developing and, as a consequence, still lacking some systematization, as in its terminology (Pires, 2004).

Researches that evaluate the indirect effects of SCM practices on business performance through operational performance improvement would also be interesting. (Martin and Patterson, 2009) identified that product cycle time (inventory turnover and order fulfillment) and inventory indicators are easy measures for the organizations, as information could be shared with no restrictions with members of the whole supply chain, the opposite of the financial performance measures. Besides, the inventory and cycle time cause an impact on the operations and may not affect directly the financial performance. For example, the financial invoicing is related to indicators of sales and profit margin on sales. (Li, Ragu Nathanb *et al*. 2006) confirmed this supposition when they argue that SCM practices directly affect operational performance and might indirectly affect financial performance when improving operational performance. The same point of view appears in (Vickery *et al*. 2003), as they discuss that managers always expect a direct effect or impact of action programs on market or financial performances and if the effect is not enough, they conclude the action was not successful.

However, such conclusion might be cursory, as the practices might indirectly affect business performance through its impact on operational results.

2.3. Identified Literature Gap

Based on the above literature reviews, the researcher understood different authors literatures who studied the impacts of each variable on the other variables. As the literatures indicated, little research has been done on the supply chain management performance. As a result, by reviewing those studies, the researcher made an effort to fill the gap focusing on supply chain management performances of Yegna Trading Plc.

2.4. Conceptual Framework of the Study

According to the literature review, a conceptual model for the study was adopted and modified. This model consisted of the following components of dependent and independent variables.

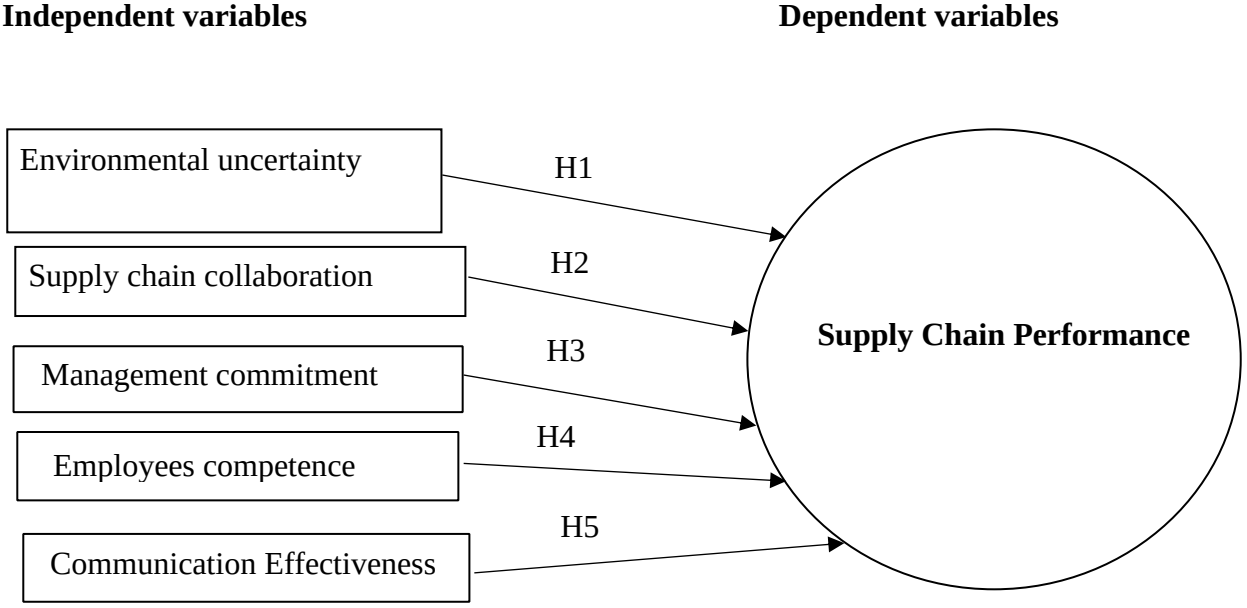


Figure 2.1: Conceptual Framework

Source: Adopted from review literature

NB. Supply chain management practices of Yegna Trading Plc is descriptively analyze using the five dimensions of SCM practice, Environmental uncertainty, Supply chain

collaboration, Management commitment, Employees competence and Communication Effectiveness.

2.5 Research Hypothesis

H1: Environmental uncertainty has a significant and positive effect on Supply chain performance Yegna trading.

H2: Supply chain collaboration has a significant and positive effect on Supply chain performance Yegna trading.

H3: Management commitment has a significant and positive effect on Supply chain performance Yegna Trading.

H4: Employees competence has a significant and positive effect on Supply chain performance Yegna Trading.

H5: Communication Effectiveness has a significant and positive effect on Supply chain performance Yegna Trading.

CHAPTER THREE

METHODOLOGY OF THE STUDY

A method of the study shows the overall framework on how research results may be achieved through data collection and analysis. This chapter included the research approach, the research design, the research population and data source and type, data collection procedure, ethical considerations, data analysis, validity and reliability test.

3.1. Research Approach

This study was used combination of both the qualitative and quantitative research Approach, qualitative and quantitative approaches are used to provide an in-depth look at context, processes, and interactions and make precise measurement. In this mixed method the presentation of the results can be convincing and powerful (Marguerit, Dean and Katherine, 2006).

3.2. Research Design

The research design of this study was adopted descriptive and explanatory. For this study questionnaire was used to gather data. The researcher used both descriptive and explanatory research design in order to give a more in-depth insight about what the current performance of supply chain management seems like in Yegna Trading Plc.

3.3. Population and Sample

3.3.1 Population of the study

In this study the population consist of the employees of Yegna Trading Plc who are working in the department of purchasing, store keeper, department of finance and other related departments of the company. Therefore, the target population of this study were 94 employees comprises of 6 managers and 88 staff members of the company. Hence, census method was used as the number of the total population is manageable. This method also helped the researcher to get accurate information for many sub-divisions of the population.

3.4. Data Source and Type

There are two types of data: primary data and secondary data. Primary data was collected for a specific issue. It could be either qualitative such as interviews, semi-structured or unstructured; focus groups; observations; and case studies, or it could be quantitative such as

questionnaires; and structured interviews. On the other hand, secondary data is available to any researcher to obtain what is required, and consequently, it is not created for specific topics. Secondary data embraces raw data and published summaries (Saunders et al., 2012). Primary type of data is suitable for both descriptive and explanatory research, for example, (Collis and Hussey 2003), (Hair et al. 2007) and (Saunders et al., 2012). Based on the research questions and objectives, the study was employed primary data.

3.5. Data Collection Procedures

Before commencing data collection, the researcher was making an effort to obtain necessary authorization and clearance from pertinent authority of Yegna Trading Plc. In order to assure the respondents that the information that they give, anonymous and confidential, a cover letter would have attached to each questionnaire. Before administering the questionnaire, the researcher was visited the respondents, explain the purpose of the study and data collection procedures and make appointment for data collection. On the day of appointment, the researcher is personally delivering the questionnaire and wait as the respondent complete it. This gave an opportunity to the researcher to provide additional information to the respondent when required. After completion, the researcher collects the questionnaire and reviews the completed questionnaires at the point of data collection. Any unclear and incomplete responses were sorted out with the respondent immediately.

3.6. Data Analysis Methods

In the process of analyzing the data, both descriptive and inferential statistics were applied. To address descriptive nature of the study the qualitative data was collected from the identified areas of data sources, edited, organized, and analyzed using SPSS version 20 based on appropriate statistical methods and tools. Descriptive statistics methods such as frequency distribution, mean calculation and cross tabulation was used to summarize the collected data. Correlation analysis was run to measure the strength of relationship between independent variable (SCM challenges) and dependent variable (SCM performance). Furthermore, multiple regression analysis was run to measure the role of independent variables on the dependent variable.

3.7. Ethical Consideration

Research ethics is important in our daily life research endeavors and requires that researchers should protect the dignity of their subjects and publish well the information that is researched (Fouka & Mantzorou, 2011).

To undertake the research, necessary approval and permit were obtained from St. Mary's University, School of post Graduate Studies which can be refer whenever require. A covering letter were attached to the questionnaire ensuring participants anonymity and confidentiality that information obtain from them will not be disclosed to the third party. Apart from that, the respondents were participated knowingly, voluntarily, intelligently, and in a clear and manifest way.

Therefore, the ethical consideration that includes right to choose, right to safety, right to be informed, right to privacy and confidentiality for the respondents were applied in the course of action.

3.8. Validity and Reliability Test

3.8.1 Validity test

To achieve validity, the questionnaires include a variety of questions on the knowledge of the respondents. To ensure content validity, the questionnaires were developed after rigorous review of related supply chain management literatures. The questionnaires included a variety of questions on the knowledge of the top management officials, their staff and suppliers about practice challenges and supply chain management performance of Yegna Trading Plc. The questionnaires were also initially evaluated by university lecturer. The questionnaire had adequate sample size to make inference about the population as a result, it fulfilled external validity or the study can generalize about the population based on the sample. Finally, there was validation exercise or pilot test which aim at identifying the unreliable questions, and to check its result.

3. 8.2 Reliability test

Statistical investigations (Cronbach's alpha) were done in order to check the reliability of an instrument to capture intended objective of the study. The values of Cronbach's alpha range from 0 (observed items are not consistent) to 1 (they completely correlate). This means that

internal consistency will be acceptable if Cronbach's alpha is high or ≥ 0.7 (George and Mallery, 2003).

According to George and Mallery (2011), the rules of thumb for Cronbach ‘s Alpha values includes: ≥ 0.9 Excellent, ≥0.8 Good, ≥0 .7 Acceptable, ≥0.6 Questionable, ≥0.5 Poor, and < 0.5 Unacceptable‖.

Table 3.1 Summary of Cronbach’s alpha Reliability Coefficient

No	Variable	Cronbach ‘s Alpha
1	Environmental uncertainty	.818
2	Supply chain collaboration	.745
3	Management commitment	.814
4	Employees competence	.764
5	Communication Effectiveness	.882

Source: SPSS Data Analysis, 2023

From table 3.1 it is easy to understand that all the variables had Cronbach’s alpha value of greater than 0.7. It means that the questionnaire as a data collation was reliable.

CHAPTER FOUR

RESULTS, DISCUSSION AND INTERPRETATION

The study sought to establish the practices, challenges and performance of supply chain management of Yegna Trading Plc. This chapter included the results, discussion and interpretation part of the research. In an attempt to show the findings of the study on the practices, challenges and performance of supply chain management of Yegna Trading Plc, the data tabulated and analyzed using descriptive and inferential statistical tools.

4.1 Response Rate

Totally 94 questionnaires were distributed to Yegna Trading Plc and 86 of them were completed and returned to the researcher. Therefore, the response rate was 91.5% and it was more than sufficient for this study. With the intention of achieving such response the researcher before collecting the data clearly explained the purpose of the study and confidentiality of the data above all, more time was given to complete the questionnaires.

4.2 Demographic and Respondents' Profile

It is highly recommended to have better information about the respondents so as to have a better understanding and collect the data accordingly. Thus, the first part of the questionnaire included general information about the respondents specifically it includes; demographic information, educational qualification, job title, years stayed at the organization and the departments or work units. The data also analyzed using percentage.

Table 4.1 Demographic and general information of respondents

Item No	Dimensions	Variables	Percent	Cumulative percent
1	**Sex**	Male	17.1	100
		Female	82.9	82.9
		Total	86	_
2	**Age**	21 - 30	36.6	36.6
		31 - 40	48.8	85.4
		Above 40	14.6	100
		Total	86	_
3	**Educational qualification**	College diploma	14.6	14.6
		First degree	85.4	100
		Total	86	_
4	**Job title**	Manager	7.3	7.3
		Other	92.7	100
		Total	86	_
5	**Department or work units**	Purchasing department	12.2	12.2
		Trading business unit	39.0	100
		Finance	26.8	61.0
		Other departments	22.0	34.1
		Total	86	_

Source: Survey *Data, 2023*

Table 4.1 clearly showed that 17.1% of respondents were male and 82.9% respondents were female. The table also clearly showed that most of the respondents were Females in addition

to that, most of the respondents (36.6%) were between the age of 21 – 30 and followed by age 31 – 40 which accounts (48.8%) of the respondents and the remaining were above 40 that covers (14.6%) of the total respondents.

Regarding educational qualification of the respondents (85.4%) of them had first degree and (14.6%) of the respondents had college diploma and its evidently showed that 100% of the respondents had at least college diploma plus related fields and that helped them to understand the questions that was included in the questionnaire.

Among the 86 respondents 7.3% of them were working as managers and the remaining 92.7% of them were working in deferent department as department head, team leaders and staff member.

Regarding respondents work unit as table 4.1 showed (12.2%) of the respondents were from purchasing department, (39%) of the respondents were from cost trading business unit department, (26.8%) of the respondents were from department of finance and the remaining (22%) of the respondents were from other related departments. The response without a doubt showed that the respondents are directly or indirectly related to the supply chain management practice thus, it lent a hand to the researcher to collect relevant and reliable data.

4.3 Descriptive Analysis on Variables' Used

In the case of descriptive analysis mean value of the respondents was considered as an important indicator to the extent of Yegna Trading Plc practices on each item. It means the overall performance of Yegna Trading Plc practices on each variable grand mean was calculated and used. In the course of descriptive data analysis, averages (mean) were calculated for each construct in the Likert Scales, from strongly Disagree = 1 to Strongly Agree = 5. The numbers entered into the SPSS thus represented the weight and thus the weighted averages for the scales were calculated to understand the mean values. This was accomplished by dividing the distance between the scale values 4 in a 5-point Likert Scale by the number of values 5. Thus, the period length is 4/5 = 0.80, which is used to calculate the weighted averages. (Alfarra, W. A., 2009).

The weighted average categories for each result are shown below and each result is interpreted with the degree of agreement for each factor calculated accordingly. If weighted average or mean for 5-point Likert Scale is 1.00 – 1.79 the result is Strongly Disagree and result interpretation is very un-influential, for 1.80 – 2.59 the result is Disagree and result

interpretation is uninfluential, for 2.60 – 3.39 the result is Neutral and result interpretation is neutral or do not know, for 3.40 – 4.19 the result is Agree and result interpretation is influential and for 4.20 – 5.00 the result is Strongly Agree and result interpretation is very influential. (Alfarra, W. A., 2009).

To have a better result and for the sake of convenience the questionnaires were designed using five-point Likert type scales with 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree and after collecting the data descriptive analysis was made, the result analyzed, tabulated and presented as follows.

4.3.1 Perception on Supply Chain Practices and Performance

Table 4.2: Perception on Supply Chain practices and Performance

Variables	**mean**	**Standard deviation**
Environmental uncertainty	3.66	0.6
Supply chain collaboration	3.63	0.7
Management commitment	3.73	0.5
Employees competence	3.91	0.6
Communication Effectiveness	3.82	0.7
Grand mean	4.03	0.87

Source: Own Survey (2023)

In the table above showed that Environmental uncertainty has the mean value scored of 3.66. If the mean value falls between 3.40 and 4.19 the respondent agrees with this practice (Alfarra, W. A., 2009). This implies that Environmental uncertainty highly affect supply chain performance practice in Yegna Trading Plc.

The above table showed that Supply chain collaboration practice aggregated mean scored of 3.63. If the mean value scored between 3.40 and 4.19 then according to likert scale assumptions (Alfarra, W. A., 2009) the respondent's response rate falls with agree. This means Supply chain collaboration practice effect on supply chain performance in Yegna

Trading was high. Management commitment practice aggregated mean scored of 3.73. If the mean value scored falls between 3.40 and 4.19 then the respondents were agreeing with effect of Management commitment. Hence, the researcher can conclude that Management commitment in Yegna Trading was high. And also, the table above showed that Employees competence practice average mean has scored of 3.91. According the assumption given above the respondents were agree with this practice. This showed that Employees competence has high practice in training and development. Finally, the researcher asked the perception of employees on Communication Effectiveness level the mean scored result was falls under agreed level. Therefore, in this study the researcher can conclude that all practice (Environmental uncertainty, Supply chain collaboration, Management commitment, Employees competence and Communication Effectiveness) and supply chain performance in Yegna Trading the respondents were agree and the level these practices were high.

4.4 Correlation Analysis

Correlation, also called as correlation analysis, is a term used to denote the association or relationship between two or more variables. This analysis is fundamentally based on the assumption of a straight line or linear relationship between the quantitative variables. (NJ. Gogtay & Thatte UM. 2017). In statistics, the correlation coefficient *r* measures the strength and direction of a linear relationship between two variables on a scatter-plot. The value of *r* is always between+1 and –1. To interpret its value, see which of the following values of the correlation *r* is closest to and determine.

- Exactly –1. A perfect downhill (negative) linear relationship
- **–**0.70. A strong downhill (negative) linear relationship
- –0.50**.** A moderate downhill (negative)relationship
- **–**0.30**.** A weak downhill (negative) linear relationship
- No linear relationship
- +0.30**.** A weak uphill (positive) linear relationship
- +0.50. A moderate uphill (positive) relationship
- +0.70. A strong uphill (positive) linear relationship
- Exactly +1. A perfect uphill (positive) linear relationship. (Talari P.2014).

Table 4.3 Correlation Matrix between factors affecting the supply chain management and supply chain management Performance.

Correlations (N=86)							
		EU	SCC	MC	EC	CE	SCMP
EU	Pearson Correlation	1					
	Sig. (2-tailed)						
SCC	Pearson Correlation	.421**	1				
	Sig. (2-tailed)	.006					
MC	Pearson Correlation	.264	.679**	1			
	Sig. (2-tailed)	.095	.000				
EC	Pearson Correlation	.215	.539**	.504**	1		
	Sig. (2-tailed)	.176	.000	.001			
CE	Pearson Correlation	.043	.556**	.511**	.421**	1	
	Sig. (2-tailed)	.790	.000	.001	.006		
SCMP	Pearson Correlation	**.607****	**.555****	**.590****	**.615****	**.558****	1
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	
**. Correlation is significant at the 0.01 level (2-tailed).							

*. Correlation is significant at the 0.05 level (2-tailed).

Where,

EU*: Environmental uncertainty*

SCC: *Supply chain collaboration*

MC: *Management commitment*

EC*: Employee's competence*

CE: *Communication Effectiveness*

SCMP*: Supply Chain Management Performance*

As depicted on the above table 4.3 Environmental uncertainty has significant and positive correlation with the supply chain performance of Yegna Trading Plc with correlation coefficient value of ($r = .607$, $p<0.05$), Supply chain collaboration ($r = 0.555$, $p<0.05$), Management commitment ($r = 0.590$, $p<0.05$), Employee's competence ($r = 0.615$, $p<0.05$) and Communication Effectiveness ($r = 0.558$, $p<0.05$).

The correlation analysis result confirmed that there are moderate positive and significant correlations between the five factors affecting the supply chain management (Environmental uncertainty, Supply chain collaboration, Management commitment, Employees competence and Communication Effectiveness) with the supply chain management performance of Yegna Trading Plc.

4.5. Multiple Regression Analysis for Supply Chain Management Factors and Performance

Multiple regression analysis is a statistical tool used to predict a dependent variable from multiple independent variables (Harlow, 2005; Stevens, 2009). The focus of multiple regression is to investigate which, if any, of these predictor variables can significantly predict the dependent variable. Thus, multiple regression analysis is used to know by what extent the dependent variable is explained by a number of independent variables. To conduct multiple regression analysis, the data that was collected from employees of Yegna Trading Plc was used. Thus, hereunder the model is illustrated to show to what extent the SCM challenges (independent variables) can affects SCM performance (dependent variable).

Multiple regression Model;

$$Y = \beta 0 + \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + \beta 5\ X5 + e$$

Where:

Y = SCM performance of Yegna Trading Plc β0 = Constant when x is zero β1 = Regression coefficients for environmental uncertainty X1 = Environmental uncertainty β2 = **Regression** coefficients for supply chain collaboration X2 = Supply chain collaboration β3 = Regression coefficients for Management commitment X3 = Management commitment β4 = Regression coefficients for Employees competence X4 = Employees competence β5 = Regression coefficients for Communication Effectiveness X5 = Communication Effectiveness e = The error

4.6 Results of Multiple Regression Analysis

4.6.1 Assumption of Regression Analysis

Meeting the assumptions of regression analysis is necessary to confirm that the obtained data truly represented the sample and that researcher has obtained the best results (Hair et al., 1998). Two assumptions for regression analysis used in this study discussed for the individual variables: multi-collinearity and linearity (Hair et al., 1998). In the following paragraphs, each assumption is explained.

4.6.1.1 Multi-Collinearity Diagnostics:

The results of multi collinearity confirm that there are no high correlations between the independent **variables** using the Variance Inflation Factor (VIF), Tolerance test for each variable to ensure the independence of errors. Taking into account the Variance Inflation Factor not to exceed the allowable value (10), Tolerance value greater than (0.2). Table 4.5 shows the results of these tests.

Table 4.4 Results of Multi collinearly

	Tolerance	**(VIF)**
Environmental uncertainty	.385	2.596
Supply chain collaboration	.206	4.851
Management commitment	.381	2.622
Employees competence	.682	1.467
Communication Effectiveness	.564	1.798

Source: Survey (2023)

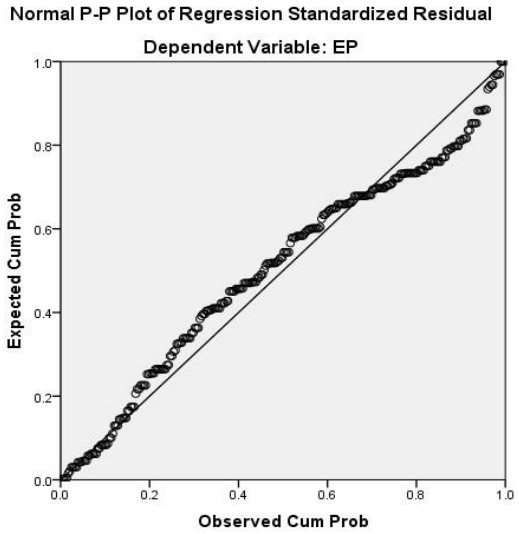
The multi collinearity in this study was checked using the Tolerance and VIF value. As it is showed in the Table 4.5 all independent variables have a Tolerance value greater than 0.2 and a VIF value less than 10. i.e., the data checked multi collinearity passed for further regression analysis.

4.6.1.2 Homoscedastic Test

The linearity of the relationship between the dependent and independent variable represented the degree to which the change in the dependent variable is associated with the independent variable (Hair et al., 1998). In a simple sense, linear models predict values falling in a straight line by having a constant unit change (slope) of the dependent variable for a constant unit change of the independent variable (Hair et al., 1998).

The scatter plot is a visual way to describe the nature of the relationship between the independent and dependent variables (Bluman, 2009). In our case the graph shows most likely linear relationship between human resource practices and perceived employee performance.

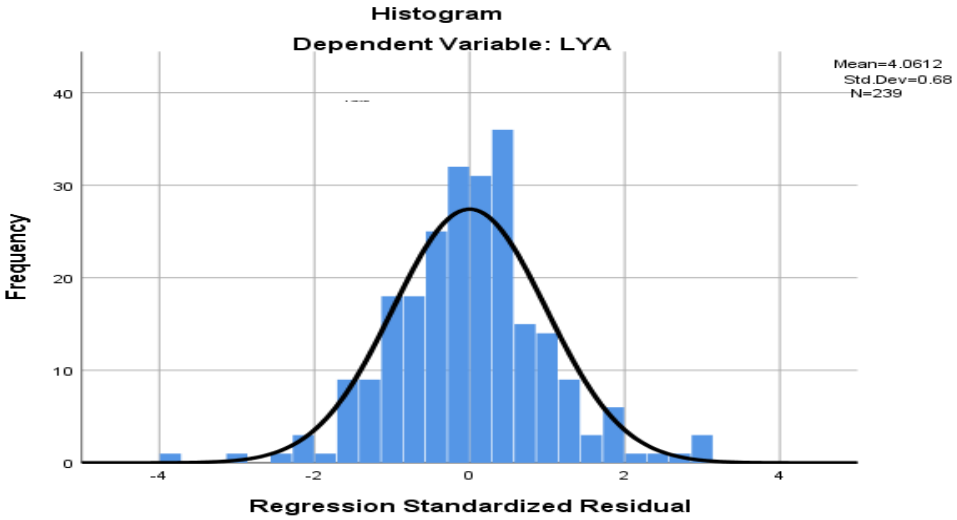
Figure 4.1 Homoscedastic test



Source: own survey (2023)

4.6.1.3 Normality test

The histogram below indicates how the data is distributed. Accordingly, it is possible to state that the data are nearly normally distributed since the histogram has a close to bell shape.



Source: Questionnaire survey, (2023)

4.6.2. Regression Analysis Model Summary

The first table of interest is the model summary and it provides the R, R2, adjusted R2, and the standard error of the estimate, which can be used to determine how well a regression model, fits the data. The "R" column represents the value of R, the multiple correlation coefficient R can be considered to be one measure of the quality of the prediction of the dependent variable; in this case, SCM performance. A value of .710 indicates a good level of prediction.

The R^2 column represents the R^2value (also called the coefficient of determination), which is the proportion of variance in the dependent variable that can be explained by the independent variables. The R^2 always lies between 0 and 1, where a higher R^2 indicates a better model fit. When interpreting the R^2, higher values indicate that more of the variation in y (dependent variables) is explained by variation in x (independent variables).

The result of the regression R= 0.710 and R^2 = 0.504 showed that there is a good linear correlation between SCM challenges and SCM performance of Yegna Trading Plc. Not only that as depicted on the table 4.4 from the value of 0.504 the independent variables explain 50.4% of the variability of dependent variable that means SCM performance and 49.6% (100% - 50.4%) of the variation is caused by factors other than the predictors included in this model. thus, an additional study should be conducted to learn about the other factors (49.6%) that affect SCM performance in Yegna Trading Plc. At first glance, R-squared seems like an easy-to-understand statistic that indicates how well a regression model fits a data set. However, it doesn't show everything. To get the full picture, one must consider R2 value in combination with residual plots, other statistics, and in-depth knowledge of the subject area.

Table 4.6: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.700[a]	0.710	0.504	0.26706

Source: Own Survey, 2023

4.6.3. Coefficients of Regression Analysis

The main purpose of coefficient of regression analysis is to identify which of the predictors has contributed significantly to our understanding of the dependent variable. To see clearly the effect of SCM (X1 = Environmental uncertainty, X2 = Supply chain collaboration, X3 = Management commitment, X4 = Employees competence, X5 = Communication Effectiveness, on SCM performance (dependent variable) coefficient of regression analysis was conducted and hereunder on table 4.5 the result is presented.

Table.4.7 Coefficients results

Model	**Unstandardized Coefficients**		**Standardized Coefficients**		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	.326	.142		1.593	.112
Environmental uncertainty	.343	.085	.293	4.062	.000
Supply chain collaboration	.172	.095	.278	1.808	.002
Management commitment	.112	.077	.206	1.458	.001
Employees competence	.264	.061	.337	4.358	.000
Communication Effectiveness	.101	.126	.334	1.800	.000

Source: Survey Data, 2023

The coefficients table shown above reveals the contribution of each independent variable to the multiple linear regression model and its statistical significance. The statistical significance of the test is found in the "Sig." column (p-value column). From these results we can see that Environmental uncertainty (p-value=0.000<0.05), Supply chain collaboration (p-value= 0.002<0.05), Management commitment (p-value=0.001), Employees competence(p-value=0.000), and Communication Effectiveness (p-value= 0.000) add significant contribution to the model prediction (i.e, the variables, Environmental uncertainty, Supply

chain collaboration, Management commitment, Employees competence and Communication Effectiveness had significant influence on supply chain performance of Yegna Trading).

The coefficients of standardized estimation result indicate that, out of the five independent variables considered in the model, Employees competence and Communication Effectiveness had the highest beta coefficient, which is (.337) and (.337), this confirms that it had higher level of sensitivity to affect Yegna trading supply chain performance. On the other hand, Management commitment has relatively a lower beta coefficient value of (.206). This indicates that making Management commitment has lower effect in changing supply chain performance of Yegna trading.

Similarly, Environmental uncertainty and Supply chain collaboration has a beta coefficient value of (.293), and (.278) respectively. In this regard, both explanatory variables have considerable impact in affecting supply chain performance of Yegna trading.

4.6.4 Hypothesis test

H1: Environmental uncertainty has a significant and positive effect on Supply chain performance Yegna trading.

Based on generated data on the above table 4.7, Environmental uncertainty has a positively and significantly influence the supply chain performance, where the at p value <0.05. The value of the coefficient of Environmental uncertainty was also found to be .293 which means that, keeping other things remain constant, a unit change in Environmental uncertainty cause 29.3% increase in supply chain performance. The ρ value is less than 0.05 so H1 is accepted.

H2: Supply chain collaboration has a significant and positive effect on Supply chain performance Yegna trading.

The coefficient of Supply chain collaboration was .278, has a positive and significantly influence supply chain performance, where p value <0.05 which means a unit change in this variable increase Supply chain performance on by 27.8%, keeping other variables constant. The ρ value is less than 0.05 so H2 is accepted.

H3: Management commitment has a significant and positive effect on Supply chain performance Yegna Trading.

The result in table 4.7 shows, Management commitment practice has a positively and significantly influence on the Supply chain performance, where p value < 0.05. The value of the coefficient of Management commitment was also found to be 0.206 which means that,

keeping other things constant, a unit change in Management commitment cause 20.6% increase in Supply chain performance. The ρ value is less than 0.05 so H3 is accepted.

H4: Employees competence has a significant and positive effect on Supply chain performance Yegna Trading.

The coefficient of Employees competence was 0. 337, which means a unit change in this variable increases Supply chain performance by 33.7%, keeping other variables constant. The significant at p value < 0.05, which makes Employees competence has positive and statistically significant relationship. The ρ value is less than 0.05 so H4 is accepted.

H5: Communication Effectiveness has a significant and positive effect on Supply chain performance Yegna Trading.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Chapter five is the final chapter the study which includes summary of the study findings, conclusions based on the study findings, and recommendations.

5.1. Summary of the study findings

The main objective of the study was to assess the supply chain practices, identify the major factors affecting supply chain management performance and measure the supply chain performance of Yegna trading Plc from different dimensions.

The findings of the study indicated that there is above average level of supply chain management practice in Yegna trading Plc with a grand mean value of 4.03. The study was analyzed using descriptive analysis to assess SCM practice & performance and inferential statistical analysis to understand to what extent the major factors affect the supply chain performance of Yegna trading and summary of the findings presented here under.

Among the SCM practice of Yegna trading, the most frequently used SCM practice was Employees competence practice (mean 3.91, very influential), then Communication Effectiveness practices (mean 3.82). The results clearly indicated that Yegna trading has been doing very well on Employees competence, but less emphasis was given to Supply chain collaboration. In general, based on the average group mean result (mean 4.03) the SCM practice of Yegna trading Plc is influential or very good.

Among factors affecting SCM performance all factors found to be positively and significantly affected the supply chain management performance.

Regarding the correlation analysis result, it is confirmed that there is moderate positive correlation between all the factors of affecting the supply chain management and supply chain management Performance of Yegna trading Plc.

The model has R square value of 50.4%, this indicates that 50.4% percent of the variation in supply chain performance of Yegna trading is explained by explanatory variables. From the table F-test has p-value =0.000 <0.05, which indicates that all the explanatory variables included in the model are jointly significant since p-value is less than 0.005. From the

above table strategic Environmental uncertainty (p-value=0.000<0.05), Supply chain collaboration (p-value= 0.002<0.05), Management commitment (p-value=0.001), Employees competence(p-value=0.000), and Communication Effectiveness (p-value= 0.000), this result shows all the independent variables are statistically significant, which means significant influence on supply chain performance of Yegna trading.

5.2. Conclusions

The main objective of the study was to assess factors affecting SCM performance of Yegna trading Plc and the following conclusions are given based on the summary of findings.

To assess the SCM performance of the trading the researcher used the five SCM practice dimensions (Environmental uncertainty, Supply chain collaboration, Management commitment, Employees competence and Communication Effectiveness) and found that all the variables accounted a grand mean value of 4.03. The result also clearly indicated that Yegna trading Plc has been doing very well on all supply chain management practices.

To identify which of the independent variable has contributed significantly to our understanding of the dependent variable (SCM performance) and to see clearly the effect of SCM practices on supply chain performance multiple regression analysis was conducted and it resulted that among the factors of SCM all factors found that would positively and significantly affects the SCM performance.

5.3. Recommendations

On the basis of the findings and conclusions reached, the following suggestions were forwarded in order to improve the SCM practice, SCM performance and mitigate internal and external SCM challenges of the trading.

- Regarding SCM practices of Yegna trading Plc it is vital and highly recommended to keep up or sustain the good work of customer relationship management practices and to emphasis more on improving information sharing practices of Yegna trading so as to have effective communication and better decisions.
- Regarding SCM performance of Yegna trading Plc it is important and highly suggested to improve more or maintain supply chain performance from the dimensions of product quality and relatively to work more on supply chain performance from the dimensions

of operational flexibility so as to improve and cope with the ever-changing demand of customers.

- Concerning SCM challenges the result showed that lack of supply chain collaboration, weak supply chain relationship and lack of resource to support SCM practices found to be factors negatively but not significantly affecting the SCM performance therefore, it is strongly suggested to focus on the above three SCM challenges so as to mitigate and be competent enough in the trading.

5.4. Suggestions for future research

It goes without saying that more research has to be done on supply chain management performance particularly in the construction material dealers as most of the research focused on other business fields. Additional research is needed to study the practices of supply chain management from different dimensions or variables that were not included in this study. It would be also possible to get a better result by including in the study other participants of the supply chain namely the major suppliers and customers. In the future, to address the general objective and to fill the knowledge gap, it is also highly suggested to collect adequate data from both quantitative (survey questionnaire) and qualitative (in-depth interview) sources and converge the data that would be collected from both sources at the same time to get a comprehensive analysis of the research problem and better result.

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QUESTIONNAIRE

ST. MARY'S UNIVERSITY

MASTERS OF BUSINESS ADMINISTRATION

Dear respondents, this questionnaire is designed to collect data from Yegna Trading PLC associates, data related to the supply chain management practices, challenges and performance for the partial fulfillment of the Masters of Business Administration from St. Mary's University. The study is purely for academic purpose and the information you are providing will be confidential, *thus* not affects you in any case. So, your genuine, frank and timely response is vital for successfulness of the study. Therefore, I kindly request you to respond to each item of the question very carefully.

Your Sincerely,

Melat Markos

General Instructions

- ✓ There is no need of writing your name.
- ✓ Where answer options are available, please tick (√) in the appropriate box.

Contact Address

If you have any query, please do not *hesitate* to contact me and I am available as per your convenience at (Mobile: *0991101010*/0921029605 Email; melatmarkos8@gmail.com)

Thank you for sacrificing your precious time in advance!

PART I:

Demographic Information:

1. Sex 1) Male ☐ 2) Female □

2. Age 1) Below 25 □2) 26 - 35 ☐ 3)36 - 45 ☐ 4) Above 45 ☐

3. Educational Qualification:

1) Grade 10 completed □2) Grade 12 completed □ 3) Certificate ☐

4) College diploma □ 5) First Degree □ 6) Second Degree and above ☐

4. Job title: 1) Manager □ 4) staff □

5.Years stayed at the organization:

1) Less than 2 years □2)2–5 years □ 3) 6–10 years ☐ 4) Over 10 years □

6. Your department/work unit:

1) Purchasing department □ 2) Trading business unit □ 3) Finance □

4) other departments ☐

Part II: The Supply chain management practices, challenges and operational performance of the company.

With regard to Supply Chain Management practices, challenges and operational performance of *your* firm *please* tick (√) the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Liker type scales with 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

S.N	Variables	Rating numbers				
A	**Environmental Uncertainty**	**1**	**2**	**3**	**4**	**5**
A1	Environmental uncertainty reduces the delivery dependability of Yegna trading supply chain management performance.					
A2	Environmental uncertainty reduces the product quality of Yegna trading supply chain management performance.					
A3	Environmental uncertainty reduces the operational flexibility of Yegna trading supply chain management performance.					
A4	Environmental uncertainty reduces the customer responsiveness of Yegna trading supply chain management performance.					
A5	Environmental uncertainty reduces relationships with customers and customer satisfaction.					
B	**Supply Chain Collaboration**	**1**	**2**	**3**	**4**	**5**
B1	Supply chain collaboration among supply chain partners increase the delivery dependability of Yegna Trading supply chain management performance.					
B2	Supply chain collaboration among supply chain partners increase quality of Yegna Trading supply chain management performance.					
B3	Supply chain collaboration among supply chain partners increase the operational flexibility of Yegna Trading supply chain management performance.					
B4	Supply chain collaboration among supply chain partners increase the customer responsiveness of Yegna Trading supply chain management performance.					
B5	Yegna Trading use customer relationship to build long-term relationships with customers and improving customer satisfaction.					
B6	Yegna Trading regularly gets feedback from customers.					

C	**Management Commitment**	**1**	**2**	**3**	**4**	**5**
C1	Top management support & commitment increase the delivery dependability of Yegna Trading supply chain management performance.					
C2	Top management support & commitment increase the product quality of Yegna Trading supply chain management performance.					
C3	Top management support & commitment increase the operational flexibility of Yegna Trading supply chain management performance.					
C4	Top management support & commitment increase the customer responsiveness of Yegna Trading supply chain management performance.					
C5	Top management commitment increases quality products and service which meets its customers cultural difference, value difference and preference difference through maintaining strategic supplier partnership.					

D	**Employees Competence**	1	2	3	4	5
D1	Employees training & development increase the operational flexibility of Yegna Trading supply chain management performance.					
D2	Employees training & development increase the delivery dependability of Yegna Trading supply chain management performance.					
D3	Employees training & development increase the product quality of Yegna Trading supply chain management performance.					
D4	Employees training & development increase the customer responsiveness of Yegna Trading supply chain management performance.					
D5	Employees training & development increase the operational flexibility of Yegna Trading supply chain management performance.					

E	**Communication Effectiveness**	1	2	3	4	5
E1	Effective communication increases the operational flexibility of Yegna Trading supply chain management performance.					

E2	Effective communication increases the delivery dependability of Yegna Trading supply chain management performance.					
E3	Effective communication increases the product quality of Yegna Trading supply chain management performance.					
E4	Effective communication increases the customer responsiveness of Yegna Trading supply chain management performance.					
E5	Yegna Trading informs trading partners in advance of changing needs.					
E6	We and our trading partners exchange information that helps establishment of business planning.					
E7	Information exchange between our trading partners and us is timely, accurate, complete, adequate and reliable.					