THE PRACTICES, CHALLENGES & PERFORMANCE OF SUPPLY CHAIN MANAGEMENT OF SHERATON ADDIS HOTEL

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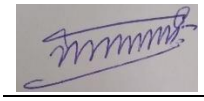
Dr. Berhanu Denu Signature  Date 29 June 2020

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DECLARATION

I, Biniyam Nigussie Woldeyes, declare that this thesis in title "The practices, challenges and performance of supply chain management of Sheraton Addis hotel" was conducted by myself, that the work contained herein is my own except where explicitly stated otherwise in the text, and this work has not been submitted for any other degree or professional qualification except as specified for the partial fulfillment of the requirements for the Degree of Masters of Art in Logistics and Supply Chain Management at Addis Ababa University, School of commerce. I have duly acknowledged all the sources and references from which the ideas and extracts have been taken.

Biniyam Nigussie Woldeyes

Signature: _____

Date: _____

CERTIFICATION

This is to certify that the thesis in title "The practices, challenges and performance of supply chain management of Sheraton Addis hotel" that is being submitted by Mr. Biniyam Nigussie Woldeyes for the partial fulfillment of the requirements for the award of the degree of Masters of Art in Logistics and Supply Chain Management at Addis Ababa University, School of commerce is a record of bona fide work carried out by him under my guidance and supervision. The results embodied in this thesis have not been submitted to any other University or Institute for the award of any degree or diploma.

Shiferaw Mitiku (PhD)

Signature: _____

Date: _____

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The Researcher

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List of Abbreviations and Acronyms

CRM: Customer Relationship Management

EDI: Electronic Data Interchange

NGO: Non-Governmental Organizations

MIDROC: Mohammed International Development and Research Companies

OP: Operational Performance

SAH: Sheraton Addis Hotel

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 main objective of the study was to assess the practice, identify the challenges, and measure the supply chain management performance of Sheraton Addis hotel. 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 study adopted qualitative research approach, and used descriptive & explanatory research design. The data was analyzed using both descriptive and inferential statistics. Primary data was collected from Sheraton Addis hotel associates using pre-tested and self-administered questionnaire. The researcher used census method, as the numbers of respondents were 41 and collected all the data accordingly. Statistical package for social science version 26 software was used to analyze the data. According to the findings of the study both the supply chain management practice and performance of Sheraton Addis hotel found to be influential or very good. The correlation between aggregated factors affecting the supply chain management and supply chain management Performance of Sheraton Addis Hotel also found to be positive and significant. The multiple regression analysis result also discovered that from the eight independent variables only environmental uncertainty found to be significant to affect the supply chain management performance of Sheraton Addis hotel. The researcher also recommended that Sheraton Addis 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 hotel industry.

Key words: Supply Chain Management, SCM Practice, SCM Challenges, 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, limitation of the study, scope of the study, definition of terms and organization of the study.

1.1. Background of the study

This study assessed the practice, identify challenges and measure the performance of Supply Chain Management of the Sheraton Addis Hotel. The researcher also assessed Supply Chain Management practices from the dimension of the hotel's strategic supplier relationship, customer/guest/ relationship, information sharing and quality of information. The study also identified the main internal and external challenges and measured the performance from the dimension of delivery dependability, product quality, operational flexibility, and responsiveness.

In the contemporary world, the role of supply chain management (SCM) has become increasingly important for firms in highly competitive markets, and we have recently seen, also in economic downturns. Ketchen & Hult (2007) describe this competitive rivalry among firms as "supply chain versus supply chain" instead of "firms versus firms". A well-coordinated supply chain process is difficult to imitate for competitors since it becomes more difficult to compete on the product level. Therefore, (Hult, *et. al*, 2004) describe that supply chain management is not anymore a support function to implement a business strategy; it is specifically meant to drive a firms' performance and supply chain management becomes a key element of the overall strategy for the entire chain.

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 CSM approach has been well studied in manufacturing business where the concept originated in the area of logistics, but little has been done in the tourism and hotel industry, despite supply management is critical to the survival of the industry. One area of the hotel industry that is usually left out in cost cutting efforts is its supply chain management practices. Even though supply chain is considered an operations management strategy in the hotel and other service industries, they can use these strategies to help add value to their properties. The supply chain is an important element within the hotel and catering industry. A well-established supply chain management system can help the hotel industry and give individual hotel companies a sustainable competitive advantage. The use of the right supply chain management strategies helps not only to improve the quality and service of the hotel but drive down costs.

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. Relationships are used to improve guest satisfaction and prevent guests from going to the next hotel. With changes to customization and personalized service for guests, building relationships has become important for corporate survival.

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

Therefore, this study assessed the practice, identified challenges and measured the supply chain management performance of the Sheraton Addis Hotel. Based on the findings, the paper aimed to suggest insight about what Sheraton Addis hotel should do to improve its SCM practice, performance and identify the challenges.

1.2. Statement of the problem

In today's competitive and uncertain market supply chain vulnerability has become an issue of significance for many organizations. As of today supply chain is becoming more and more complex due to global sourcing and continuous trend of leaning down and as a result supply chain challenges increases. The challenge to business organizations today is to mitigate that risk by creating more resilient supply chains. The motives behind organizations turning towards risk management approaches being the global competition, change in technology, and the continuous contention for competitive advantage (Brindley, 2004). The advancement of globalization in industries of any magnitude has increased uncertainties in both demand and supply and the likelihood of supply chain disruption.

Guests are the utmost importance for the hotel industry; guest satisfaction is of paramount importance to the hotel industry. In the hospitality industry, the guest-related activities such as food and beverage production and service, housekeeping, Front office management are given utmost importance. The back-office operations such as the accounts, purchases, supplies chain management, revenue recording, etc. take a back seat. In the hotel industry, all the efforts are guest oriented as a result lot of cost reduction which can be attained through improved upstream functions of supply chain management is lost.

A preliminary interview was made with the concerned staffs of the Sheraton Addis hotel to understand the existing practice, challenges and performance of supply chain management and the following challenges were identified which requires further in-depth investigation:

Inconsistent strategic supplier partnership, lack of supply chain integration, low level of trust among supply chain members, low level of information sharing, less quality of information sharing, supply uncertainty, unwillingness to share risk and benefit, inventory fluctuation due to inaccurate information sharing, irregular orders from inconsistent guests off the hotel (demand uncertainty), supply chain disruptions due to political and trade policy risks, long lead times and high variability of production capacity across the supply chain, mismatch between ordering amount and actual need, shortage of hard currency, increasing costs of raw materials, energy and labor due to economic constraints, unforeseen delays of deliveries, fast-changing markets, increasing costs throughout the supply chain, and finally, environmental changes and economic pressures.

Sheraton Addis is facing the aforementioned challenge which affects the competitiveness of the hotel in terms of quality of service, responsiveness, speed of service, flexibility, delivery dependability and other value adding services. These challenges have an impact on the hotel's supply chain performance, leading to decreasing profitability and driving up costs. To improve the performance of the hotel these problems/ challenges/ need to be resolved and the hotel should try to find innovative SCM practices. 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.

Therefore, the study assessed the practice, identified the challenges and measured the performance of supply chain management of the Sheraton Addis Hotel; more to this, the paper

was sought to contribute to fill the gap that has been witnessed in the existing empirical evidences.

1.3. Basic research questions

1. How supply chain management is being practiced at the Sheraton Addis Hotel?

2. What are the factors affecting the supply chain management performance of the Sheraton Addis Hotel?

3. What is the supply chain management performance of the Sheraton Addis Hotel?

1.4. Research objectives

1. 4.1 General objective

The general objective of the study is to assess the practices, to identify the major internal and external challenges and measure the performance of supply chain management of the Sheraton Addis hotel.

1.4.2 Specific objectives

1. To assess the supply chain practices of the Sheraton Addis Hotel.

2. To identify the major factors affecting supply chain management performance of the Sheraton Addis Hotel.

3. To measure the supply chain performance of the Sheraton Addis Hotel.

1.5. Significance of the study

This study assessed the practices, identified the challenges and measured the performance of supply chain management of the Sheraton Addis hotel. Hence, the result of this study showed the current supply chain management challenges of the hotel, which helped to scrutinize its supply chain management practice and the effect on its supply chain performance. It also helped to point out the weak link of the supply chain practice and could be used to make a better decision in the

process of improving the supply chain practice. 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. The study will also help students and other scholar's to gain knowledge in terms of information that was attained during this study. The study will be an enhancement to the existing body of knowledge for researchers, while to other scholars; it will be a source of reference material on the subject and useful for further study.

1.6. Scope of the study

Supply chain management covers a wide area and it will 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 focused on only the practice (from the perspective of strategic supplier partnership, customer relationship, information sharing and quality of information sharing), challenges (internal and external) and supply chain management performance (from the dimensions of product quality, delivery dependably, operational flexibility and customer responsiveness) of supply chain management of the Sheraton Addis Hotel. Specifically, it focused on department of purchasing. This study only assessed the practice, identified the challenges and measured the performance of supply chain management and related problems facing in the hotel no other areas in the hotel.

1.7. Limitation of the study

Because of inconvenience, budget constraints and inaccessibility the study could not include the entire domain of the supply chain which includes potential suppliers and customers of the hotel, so the study was limited only to assess the practice, identify the major challenges and measure the supply chain management performance of Sheraton Addis hotel. The other limitation of the study was that due to time constraints the study could not considered other variables or dimensions that could possibly affect the supply chain management of performance of the hotel.

1.8. Definition of terms

Supply chain (SC): according to Ganeshan & Harrison, (1995) supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers.

Supply chain management (SCM): as noted by Mentzer *et al.*, (2001). It 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.

Performance Measurement (PM): Performance measurement is the process of quantifying the efficiency and effectiveness of past actions (Neely *et al*. 2002).

Customer relationship management (CRM): It is a method of understanding the customer behavior through intense communication with him/her to improve the performance which is represented in attracting the customer, keeping him/her and increasing his/her loyalty and profitability (Swift, 2000).

Supplier relationship management (SRM): It is one approach to connect the supply chain and their key suppliers with the strategic interests of an organization, to successfully identify and drive untapped business opportunities (Deloitte, 2015).

1.9. Organization of the study

This research organized into five chapters: Chapter one included background of the study, statement of the problem, basic research questions, objective of the study, significance of the study, scope of the study, and limitation of the study and definition of terms. Chapter two

reviewed the existing literatures. This part dealt with theoretical literature review, empirical literature review, conceptual framework and finally identified literature gaps. Chapter three is methods of the study this chapter described the type and designs of the proposed study the subjects, participants of the study, the sources of data, the data collection instruments, the procedure of data collection, the methodology of data analysis, validity and reliability of the research. Chapter four described results and discussion of the study and it also interpreted or discussed the findings. This chapter utilized extensive use of literature review and tries to address the statement of the problem indicated in the first chapter. Chapter five is the final chapter of the research it comprised; summary of findings, conclusions, recommendations, and suggestions for further study.

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 practice, challenges and 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, Organization's Culture, Organization's Resources, Organization's 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, NGOs, 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) SCM's 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 SCM's 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 the Sheraton Addis hotel 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 increase 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/guest/ 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)

Lee *et al*., (2007) stressed that customer relations is related to the company's ability to communicate to the delivery of appropriate products and services to customers locally and globally in the right time, right place, and appropriate of quantity and quality. Customer linkage especially sharing product information with customers, receiving customer orders, interact with customers to manage demand, after placing the order system, share the status of orders with customers on scheduling orders, and product delivery stage.

Similarly, Qu *et al*., (2010) argued that a long term relationship with supplier facilitates in garnering positive results in an array of activities reflected in superior product quality, diminished lead time, and agile customer service leading to customer satisfaction.

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 organization’s 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).

The global markets offer a variety of products of different quality and cost. As a result, companies are always competing and trying to reduce costs and improve quality. Customers look for more choices, better service, higher quality, and faster delivery. The relationship with customers has turned a strategic issue for today's companies. Singh and Power (2009), who observe that organizations would derive better results if they remain, engaged in collaborative relationship with customers. The endeavor on the part of the companies in forging relationships with those in the supply chain translates into an enhanced customer satisfaction.

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.

In conclusion, this study will make out the practice from the perspective of strategic supplier partnership, customer relationship, information sharing and quality of information sharing of the Sheraton Addis hotel.

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).

The basis of integration can therefore be characterized by cooperation, collaboration, information sharing, trust, partnerships, shared technology, and a fundamental shift away from managing individual functional processes, to managing integrated chains of processes.

According to Ballou H. Ronald, (2000) the extent of integration can begin with product design, and incorporate all steps leading to the ultimate sale of the item (Transportation and Distribution, Modern Materials Handling) Some authors also include all activities throughout the useful life of the product including service, reverse logistics and recycling.

No	Author	Dimensions of SCM practices
1	Chin *et al*. (2011)	information sharing, customer relationship, strategic supplier partnership, material flow management and corporate culture
2	Inda , *et al* ,(2012)	Strategic supplier partnership , customer relationship , information sharing
3	Chowa , *et al* , (2008)	There are four elements (suppliers and customer mgt , information sharing , speed of communication , supply chain features)
4	Min & Mentzer , (2004)	There are seven elements of supply chain practice such as a greed vision and goals, information sharing, risk and award sharing, cooperation, process integration, long-term relationship and a greed supply chain leadership.
5	Chen & Paulraj (2004)	Using supplier base reduction , long-term relationship , communication , cross-functional teams and supplier involvement to measure buyer supplier relationships
6	Tan, Lyman and Wisner, (2002)	Six elements of supply chain practice (using factor analysis) supply chain integration , information sharing supply chain characteristics customer service management , geographical proximity and JIT capability
7	Alvarado & Kotzab , (2001)	Using inter-organizational system in supply chain practice such as EDI , and elimination of excess stock levels by postponing customization toward the end of the supply chain
8	Tan , Kannan and Handfield (1998)	Supply chain practice includes purchasing quality , and customer relations
9	Donlon , (1996)	Supply chain practice includes supplier partnership , outsourcing cycle time compression , continuous process flow and information sharing

Table.1. Dimensions of SCM practices

2.1.5. Challenges of supply chain management

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. Choosing a strategic supplier

According to Tom. K, (2018) having a global procurement network that can respond and support the supply chain needs is important, especially with the globalization of manufacturing operations. However, choosing a strategic supplier that has multiple manufacturing locations with consistent global quality and reliable service for local customers can be challenging.

2.1.5.2. Barriers to information sharing

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)

2.1.5.3. Supply Chain Volatility

According to Blume., (2019) volatility and complexity don't just create problems at a specific point in the supply chain, instead the impact can ripple throughout the entire infrastructure. Supply chain managers must deal with these issues promptly before they create delays, backlogs, bottlenecks and other issues. Political circumstances and protectionism are introducing tariffs across trade routes that results in additional fees, delays and increased customs processing time. This means slower international shipping and the ability for competitors in different countries to take advantage of lower tariffs. Increasing volumes of internationally-sourced goods are driving up port congestion. This creates additional pressures as ships, trucks and trains need to wait to load, unload and transfer products. These issues are exacerbated as port authorities and operators charge organizations to store goods at the port.

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 customers' 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, and 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.

2.1.6.1. Product quality

Traditionally, quality in manufacturing has been regarded as conformance quality, which is described as the degree to which products meet manufacturing specifications (Lau Antonio *et al.* 2007, Slack *et al.* 2009). However, according to Chan (2003) there are other important characteristics of quality that go beyond product specifications (e.g. performance, reliability and durability) such as service quality, and thus quality is not solely related to the product itself but also to the service that comes with it.

2.1.6.2. Delivery dependability (Consistency)

According to Ward *et al.* (1998) delivery dependability is a timed-based performance measure defined as the ability to deliver products at the specified time. Nair (2005) defines delivery dependability as the ability to meet quoted or anticipated delivery dates and quantities on a consistent basis. Hall, R. W., Johnson, H. T., and Turney, P. B. B. (1991). Define dependability as consistently performing at the time scheduled or promised. According to Blackburn (1991), delivery dependability is the ability of an organization to have accurate and reliable deliveries. Dependability refers to doing things on time and whether a company can deliver products on promised due dates (Lau Antonio *et al.* 2007, Slack *et al.* 2009).

2.1.6.3. Operational flexibility

(Beamon, 1999; Hill, 2000) stated that flexibility can be defined as "the extent to which a company intends to respond to market changes e.g. significant increases in demand". Or as Harrison (2001) states: "flexibility is the management of reacting to changes in demand by preserving the resources of time, money, materials, people, plants and suppliers until they are

specifically required". Both definitions characterize flexibility as the capability to respond to individual customer requirements. This is a broad performance measure that includes: demand increases (volume), product range (mix), order handling (time), order size etc.

Hill (2000) also argued that, in some markets, a company's ability to respond to increases in demand is an important factor in winning orders. Japanese car manufacturers provide a good example of flexibility; they have established and continue to develop a production system capable of responding to individual customer requirements.

Slack (1991) on the other hand identified four types of system flexibility where each type can be measured in terms of range and response: volume flexibility (the ability to change the output level of products produced), delivery flexibility (the ability to change planned delivery dates), mix flexibility (the ability to change the variety of products produced) and new product flexibility (the ability to introduce and produce new products).

2.1.6.4. Customer Responsiveness (speed)

According to Hill, C. and Jones, G. (1998) customer responsiveness can be defined as providing customers with their rightful needs at the right time. Therefore understanding the changing needs of customers and performing a prompt fulfillment of them in an effective approach will provide a firm with sustaining competitive advantage. According to Day, G. (1994) indeed, one of the most important determinants of the firm's success in competitive markets is the firm's capability in providing its customers with proper responds to their needs. Jayachandran, S., Hewett K., and Kaufman P. (2004). A rapid respond to customers' requests may position the firm as a first mover in the market and as a result enhances the performance of the firm in the market. Kerin, *et al (*1992). Customer responsiveness is also an important factor that significantly and positively affects the firm's performance Sousa, *et al* (2010). In order to achieve superior customer

responsiveness a firm must have the ability of doing a superior job over its rivals in identifying the right needs of its customers and fulfilling their satisfaction which can eventually generate a differentiation based competitive advantage as noted by Hill, C. and Jones, G. (1998).

2.2. Empirical Literature Review

2.2.1. Supply Chain Management practices

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.

2.2.2. Identification of Supply Chain Management affecting factors / challenges/

In order to understand how a supply chain works, it is important to identify the factors affecting supply chain management. The identification of these factors has been based on previous work by Li (2002), and Quesada and Meneses (2010). The following sections show generic supply chain management factors and sub-factors that might affect supply chain management activities.

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.

1.1 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.

1.2 Government support

It is the level of support that the company receives from the government when importing raw materials or products from overseas or using domestic materials. It includes the use of norms, regulations, policies, and advice for the sector. The research conducted by Elzarka *et al*., (2011) described how government can make a series of reforms to encourage exporters by increasing manufacturing sector's competitiveness in the international market through logistics competency. The increase of international trade for acquiring resources from other countries introduces complicated matters such as language barriers, transportation, transportation costs, exchange rates, tariffs, and administrative practices as indicated on the study of (Quayle, 2006).

1.3 Uncertainty aspects from overseas

When requiring the outsourcing of raw materials or products, it is important to acknowledge the existence of environmental factors such as political uncertainties in other countries that can increase risk for suppliers, provoke decisions of no investment, change business strategies, and in general influence business decisions. Social uncertainties such as religion, environment, language, cultural issues, limitations of communication (Bhattacharyya *et al*., 2010) and also the technology used in other countries might interfere with supply chain planning and function (Bized, 2007).

2. Supply chain relationships

Supply chain relationships play an important role in achieving the firm's goals. The coordination and integration of activities with suppliers and understanding of customer's needs results in greater benefits for companies. According to Fraza (2000), supply chain management is directly related to relationship management, which includes suppliers and customers. Strategic supplier

partnerships and customer relationships are main components in the supply chain management practices (Li et al., 2005), leading to information sharing, which is one of the five pillars in achieving a solid supply chain relationship (Lalonde, 1998). Two sub-factors are considered in the model relationship with suppliers and customers.

2.1 Relationships with suppliers

Companies are inclined to work with different suppliers in different ways. It is important that the relationship with suppliers satisfies their company needs. Hines (2004) mentioned that in commodity products, it is common to find an adversarial relationship mainly based on price between buyer and supplier. This type of relationship with suppliers does not allow for cost reduction in the supply chain.

It may be beneficial to network the supplier, to develop partnerships and alliances that will benefit both partners. This could be based on production, personal, and or symbolic networking, that will turn on strategic alliances (Hines, 2004), allowing the information sharing, risk sharing, obtaining mutual benefits and coordinating plans, permitting the improvement of the supply chain.

2.2 Relationships with customers

The global markets offer a variety of products of different quality and cost. As a result, companies are always competing and trying to reduce costs and improve quality. According to Burguess (1998) and Hoek (1999), customers look for more choices, better service, higher quality, and faster delivery. The relationship with customers has turned a strategic issue for today's companies.

3. Supply Chain Management performance (SCM)

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.

3.1 Logistics

Logistics is defined by Bowersox, Closs, and Cooper as "*the responsibility to design and administer systems to control movement and geographical positioning of raw materials, work-in process, and finished inventories at the lowest total cost*" (Bowersox *et al.*, 2007). The research of Autry, Zacharia and Lamb (2008) establishes that logistics must be focused on the coordination and collaboration of activities, logistics social responsibility, strategic distribution planning, and technology and information systems.

3.2 Supplier markets

According to Yushan and Cavusgil (2006), changes in the market create sensible companies regarding firm-supplier relationship. For manufacturers it is more important to build supplier's trust and to rely on suppliers, focusing on customer orientation, competitor orientation, and inter-functional coordination. The current competitive environment makes manufacturers aware of the need to reduce costs and to develop new products quickly. This is when supplier's expertise plays an important role. Superior supply chain management requires significant information with respect to supplier markets. Implementation of strategies in the supply chain will make the precious firm-supplier relationship difficult to copy by competition according to (Eltantawy, 2005).

3.3 Supplier performance

When looking for successful supplier performance, it is important to emphasize relationship quality. Researchers such as Walter, Kaufman, and Palmatier, proposed that relationship quality as a "multi-dimensional construct consisting of trust, satisfaction, and commitment." Steward, Wu, and Hartley (2010) also considered factors such as product quality; responsiveness to requests for change; sales, service and/or technical support; total value received; and overall cost

performance as a measurement of supply chain performance. They also found that "supplier performance is higher when the supply manager perceives trust and satisfaction on the part of the supplier's account executive."

3.4 Material sourcing

According to Lockamy and McCormack, (2010), Companies in any manufacturing sector are always looking for low-cost raw material, domestic or imported with the objective of improving their competitive advantage, some of them see importing as an appealing option. As there are some advantages when importing resources, such as lower labor cost and lower cost of resources, there are also some disadvantages that companies have to take into account when evaluating whether or not to work with offshore companies. Importing raw materials, components or products increases the dependence on suppliers and some risks are identified such as culture, language, foreign exchange rate, regulations, quality, political and economic stability, and transportation delays (Canbolat *et al*., 2008).

Supply chain management reduce unnecessary inventory, accurate information sharing, and developed trust among supply chain partners. Gorane & Kant (2015). Supply chain management is influenced by internal and external barrier related to organization; lack of top management commitment, lack of top management support, employee's education and training, financial resources, Information technology, information communication technology are challenges within the organization. Unwillingness to share information among supply chain partners, lack of supply chain collaboration, information sharing, lack of trust among supply chain partners are outside of organization affecting challenges. (Subrahmanya .B ,Jagadeesh R,(2009) ; Dev Raj A (2010).

Gorane and kant (2015) on their Journal of modeling in management stated that lack of top management commitment and support, unclear organizational objective, resistance to change, lack of motivation and employee involvement, mistrust among employee and SC partners, lack of education and training to employee and supplier, poor ICT infrastructure, lack of financial resources, unwillingness to implement Supply chain practice, lack of integration among SC Partners, lack of collaboration among SC Partners, unwillingness to share information among SC partners, lack of responsiveness, low customer satisfaction index, lack of education and training to employers and suppliers are some of the challenges in the process of implementing supply chain management. They put as a remark that all challenges are affecting on implementation of supply chain, effect on operational and financial performance of organization. They also confirmed that organization with weak top management support results in unclear organization goal.

Luthra and haleem (2015) on their journal name of "Procedia -social and behavioral sciences" acknowledged that lack of legislative framework, political instability, unawareness among society about social practices, lack of customer support, top management commitment inadequacy, lack of knowledge among SC members, lack of trust among SC members and technical obstructions are some of the challenges that they have witnessed.

Lalit *et al. (*2014) on their journal name: "International journal of engineering research and technology" clearly stated that lack of necessary tools, management skills and knowledge, lack of management commitment, loose government legislation, increment in overall cost or financial burden, incompatibility with different management & manufacturing systems, lack of research & empirical studies, inadequate coordination between different departments, inability to adopt

adequate environment treatment measures, lack of customers, suppliers and shareholder's awareness are some of the challenges.

2.2.3. Supply Chain Management performance

Studies have investigated supply chain management performance in several dimensions and perspectives. It is evident that as a supply chain is a network of several organizations; hence working in collaboration is essential for optimal performance. There are several constituents that affect the collaboration potential of a supply chain and any unmeasured changes in these can have adverse effects on performance.

Lockamy & McCormack (2004) investigated that the relationship between supply- chain management planning practices and supply chain performance based on the decision areas provided in SCOR Model Version 4.0 (PLAN , SOURCE , MAKE, DELIVER) and nine key supply-chain management planning practices derived from supply-chain management experts and practitioners. The study utilized a sample consisting of practitioners from the supply chain council. Based on factor analysis and unit linear regression analysis, the findings show that planning processes are important in all SCOR supply chain planning decision areas. Collaboration was found to be most important in the Plan, Source and Make planning decision areas, while teaming was most important in supporting the Plan and Source planning decision areas. Process measures, process credibility, process integration, and information technology were found to be most critical in supporting the Deliver planning decision area.

Aramyan *et al.* (2007) also evaluated a novel conceptual framework of supply chain performance measurement in a Dutch-German tomato supply chain. The study initially reviewed existing literature on supply chain performance measurement and categorized agro-food supply chain performance indicators into four main categories (e.g. efficiency, responsiveness, flexibility,

food quality).Case study research was adopted in the aforesaid study and for data collection they employed focus interview in accordance with the protocol developed by Yin (2003).The findings of the case study advocates that the four main categories of performance measures (i.e. efficiency, flexibility, responsiveness, and food quality) are identified as key performance components of the tomato supply chain performance measurement system. Moreover, the concept is the first step in developing an integrated performance measurement system that contains financial as well as nonfinancial indicators combined with the specific characteristics of agro-food supply chains.

Wagner and Bode (2008) investigated the impact of various types of supply chain risk on supply chain management performance. The study classified supply chain risks into supply side risk, demand side risk, regulatory, legal and bureaucratic risk, infrastructure risk and catastrophic risk. The findings indicate supply side risk and demand side risk as the only significant predictors of supply chain performance and hence suggest supply chain managers to keep these two risks as contextual variables during strategic decision making in the organization.

Srinivasan *et al*. (2011) investigated the relationship between buyer-supplier partnership quality and supply chain performance along with the moderating role of demand side risk, supply side risk and environmental uncertainty on this relationship. The findings clearly establish the presence of a positive relationship between buyer-supplier partnership quality and supply chain performance. The study also indicated that this positive relationship is moderated significantly by the presence of demand side risk and environmental uncertainty thereby implying the need for supply chain managers to form close relationships with their suppliers based on mutual trust and transparency as the same will enable to ward of the demand side risk and will also lead to better preparation for any meeting any contingency arising from the environment.

Saad & Patel (2006) investigated the relevance and importance of supply chain performance in developing countries like India through a combination of qualitative and quantitative methods. The study attempted to identify and discuss the main motives and determinants for the adoption and implementation of supply chain management concepts. Primary data were collected through semi-structured interviews and an exploratory survey. Performance measure sets were identified through factor analysis. The findings reveal that the Indian companies are predominantly using financial, productivity-based measures and less of the intangible measures. The main emphasis remains on productivity and cost related measures. There exists several difficulties like operationalization of intangible measures specificity of the Indian business and operating environment, management practices and culture in implementing intangible measures in the Indian context. In addition, in most cases the efforts to measure performance were confined to organizational boundaries rather the whole supply chain. The above study lays the foundation for studying green supply chain performance measurement in other Indian industry contexts.

2.3. Identified Literature Gap

Based on the above literature reviews, the researcher understood different authors 'literatures who were studied the impacts of each variable on the other variables. As the literatures indicated, little research has been done on the supply chain management practice, challenges and performance. As a result, by reviewing those studies, the researcher made an effort to fill the gap focusing on supply chain management practices, challenges and SCM performances of Sheraton Addis hotel.

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.

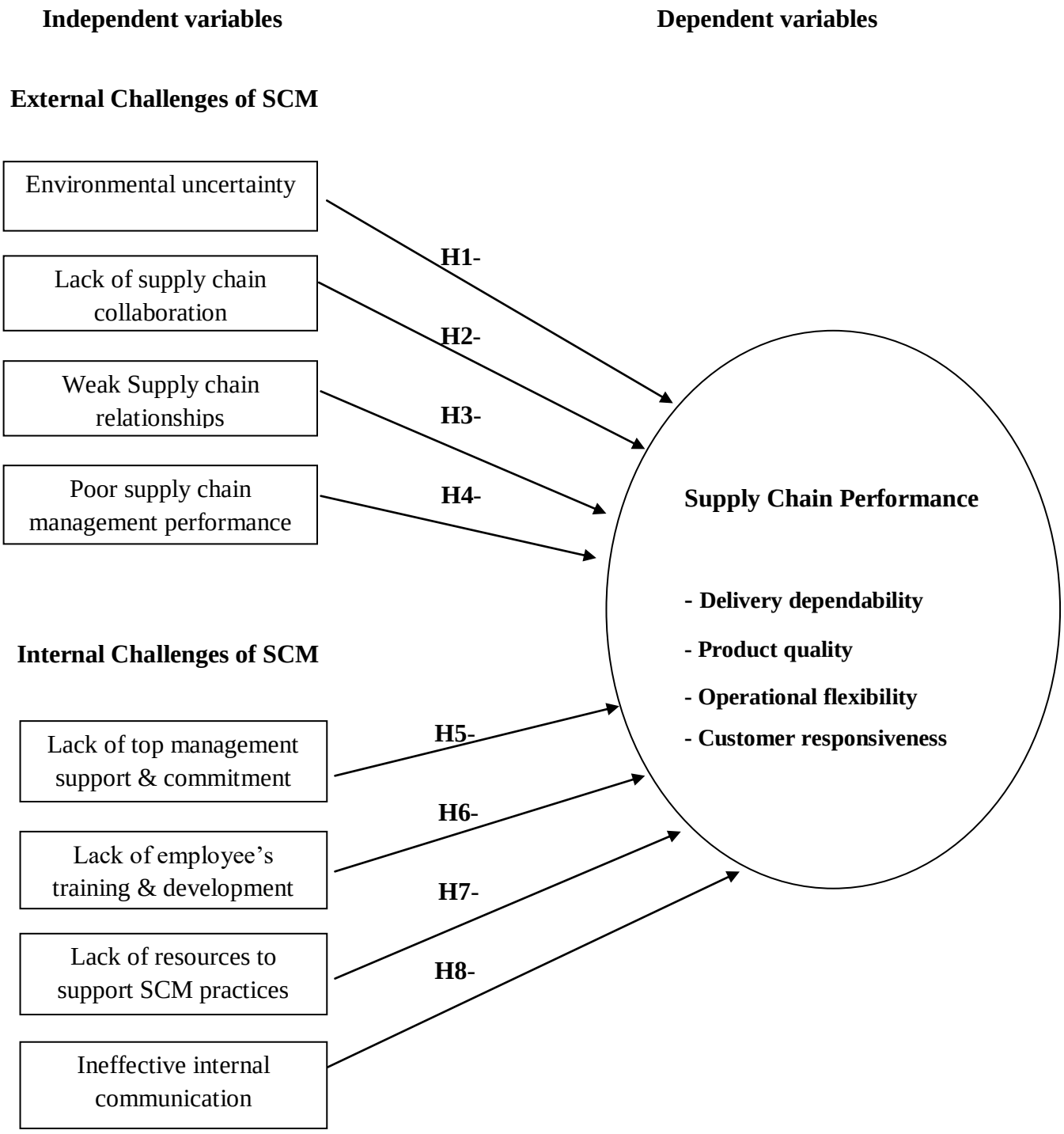

Figure 2.1: conceptual framework

Source: Adopted and modified from Shiferaw Mitiku (PhD) humanitarian Logistics Module AAU 2017.

NB. Supply chain management practices of the Sheraton Addis hotel will be descriptively analyzed using the four dimensions of SCM practice viz; strategic supplier partnership, customer relationship, supply chain integration and information sharing & quality of information. (Inda ,*et al* , 2012).

2.5 Hypothesis summary

***H1a** : Environmental uncertainty negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

***H0a:** Environmental uncertainty has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

***H1b:** Lack of supply chain collaboration negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

***H0b:** Lack of supply chain collaboration has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

***H1c**: Weak Supply chain relationships negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0c: *Weak Supply chain relationships has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H1d: *Poor supply chain management performance negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0d: *Poor supply chain management performance has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H1e: *Lack of top management support & commitment negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0e*:Lack of top management support & commitment has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H1f:*Lack of employee's training & development negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0f:*Lack of employee's training &development has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H1g:*Lack of resources to support SCM practice negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0g:*Lack of resources to support SCM practice has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H1h: *Ineffective internal communication negatively and significantly affects supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

H0h:*Ineffective internal communication has no effect on the supply chain management performance of the Sheraton Addis hotel in terms of; delivery dependability, product quality, operational flexibility and customer responsiveness.*

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. Description of the study area

The study assessed the practices, identified the challenges and measured the performance of supply chain management of Sheraton Addis hotel. A well-established supply chain management practice can help the hotel to have a sustainable competitive advantage. The use of the right supply chain strategies helps not only to improve the quality and service of the hotel, but also drive down costs. Sheraton Addis hotel also can be benefited from the comprehensive and integrated practices of supply chain management, by delivering a consistently reliable and high quality service at the best costs.

Therefore, the researcher initiated to assess the practices, identify the challenges and measure the performance of the supply chain management and it was conducted in consultation with associates involved in supply chain management using survey design with structured self-administered questionnaires.

3.2. Research approach

To address the general objective and to fill the knowledge gap, adequate qualitative data (survey questionnaire) was used, analyzed and interpreted the overall result. Therefore, the study used qualitative research approach.

3.3. Research design

The research designs of the study were descriptive and explanatory. For this study questionnaire was used to gather data. The researcher also used pre-tested questionnaire during the survey. The questioning consists of close ended questions. The qualitative data was collected from the identified areas of data sources, edited, organized, and analyzed using SPSS version 26 based on appropriate statistical methods and tools. Therefore, the researcher used both descriptive and explanatory research design in order to give a more in-depth insight about what the current practices, challenges and performance of supply chain management seems like in Sheraton Addis hotel.

3.4. Population and sample

3.4.1 Population of the study

In this study the population consisted of the employees of Sheraton Addis hotel who are working in the department of purchasing, cost control, store keeper, department of finance and other related departments of the hotel. Therefore, the target population of this study were 41 employees comprises of 03 managers and 38 staff members of the hotel who have been working in the area of operation, cost control, supply chain management and procurement. 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.

3.5. Data source and type

The research consisted of primary data and questionnaires were designed in such a way to give a comprehensive overview of the practices, challenges and supply chain management performance of Sheraton Addis hotel.

3.6. Data collection procedures

Before commencing data collection, the researcher made an effort to obtain necessary authorization and clearance from pertinent authority of Sheraton Addis hotel. In order to assure the respondents that the information that was given, anonymous and confidential, a cover letter was attached to each questionnaire. Before administering the questionnaire, the researcher visited the respondents, explained the purpose of the study and data collection procedures and made appointment for data collection. On the day of appointment, the researcher personally delivered the questionnaire and waited 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 collected the questionnaire and reviewed the completed questionnaires at the point of data collection. Any unclear and incomplete responses were sorted out with the respondent immediately.

3.7. 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 26 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. Finally, the researcher also used kendall's w coefficient of concordance model to rank the internal and external supply chain management challenges as the least to the most severe challenges of SCM.

3.8. 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 was obtained from Addis Ababa University, School of Commerce Graduate Studies which can be referred whenever required. A covering letter was attached to the questionnaire ensuring participant's anonymity and confidentiality that information obtained 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 respondent were applied in the course of action.

3.9. Validity and reliability test

3.9.1 Validity test

To achieve validity the questionnaires included 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 Sheraton Addis hotel.

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 aimed at identifying the unreliable questions, and to check its result.

3. 9.2 Reliability test

It is the extent to which results are consistent over time and an accurate representation of the total population under study. A statistical investigation (Cronbach's alpha) was 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 (George and Mallery, 2003). Hair *et al*. (2010) reported that Cronbach's alpha ought to be equal to or above 0.70 or 0.60. For better consistency, the current study used scale reliability of greater than 0.7 as a value of Cronbach's alpha and the results was presented in the form table.

3.9.2.1 Reliability Test Results

Statistical investigations (Cronbach's alpha) was 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: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and < .5 – Unacceptable".

Table 3.1 Summary of Cronbach's alpha Reliability Coefficient

No	Variable	Cronbach's Alpha	No of Items
1	Strategic Supplier Partnership Practices	.818	9
2	Customer Relationship Management Practice	.745	8
3	Information Sharing Practices	.814	10
4	Supply chain integration practice	.764	12
5	External factors(challenges) affecting supply chain management performance	.882	16
6	Internal factors/ challenges/ affecting supply chain management performance	.896	16
7	Supply chain performance from the dimensions of product quality	.829	04
8	Supply chain performance from the dimensions of delivery dependability(speed)	.725	04
9	Supply chain performance from the dimensions of operational flexibility	.725	04
10	Supply chain performance from the dimensions of customer responsiveness	.741	04

Source: SPSS Data Analysis, 2020

Reliability Statistics	
Cronbach's Alpha	N of Items
.954	87

Table 3.2 Reliability statistics

As depicted in table 3.1, strategic supplier partnership practices had Cronbanch's alpha value of (0.818), followed by customer relationship management practice had (0.745), information sharing practices had (0.814), supply chain integration practice had (0.764), external factors (challenges) affecting supply chain management performance had (0.882), internal factors/ challenges/ affecting supply chain management performance had (0. 896), supply chain performance from the dimensions of product quality had (0.829), supply chain performance from the dimensions of delivery dependability (speed) had (0.725), supply chain performance from the

dimensions of operational flexibility had (0.725) and supply chain performance from the dimensions of customer responsiveness had (0.741).

From table 3.1 it is easy to understand that all the variables had Cronbanch'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 Sheraton Addis hotel. 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 Sheraton Addis hotel, the data tabulated and analyzed using descriptive and inferential statistical tools.

4.1 Response Rate

Totally 41 questionnaires were distributed to Sheraton Addis associates and all of them were completed and returned to the researcher. Therefore the response rate was 100% 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 and frequencies.

Table 4.1Demographic and general information of respondents

Item No	Dimensions	Variables	Frequency	Percent	Cumulative percent
1	**Gender**	Male	34	82.9	82.9
		Female	7	17.1	100
		Total	41	100	_
2	**Age**	26 - 35	15	36.6	36.6
		36 - 45	20	48.8	85.4
		Above 45	6	14.6	100
		Total	41	100	_
3	**Educational qualification**	College diploma	6	14.6	14.6
		First degree	35	85.4	100
		Total	41	100	_
4	**Job title**	Manager	3	7.3	7.3
		Other	38	92.7	100
		Total	41	100	_
5	**Department or work units**	Purchasing department	5	12.2	12.2
		Cost control	9	22.0	34.1
		Finance	11	26.8	61.0
		Other departments	16	39.0	100
		Total	41	100	_

Source: Survey Data, 2020

Table 4.1 clearly showed that among 41 total respondents 34 respondents (82.9%) were male and 7 respondents (17.1%) were female. the table also clearly showed that most of the respondents were males in addition to that, most of the respondents (48.8%) were between the age of 36 – 45 and followed by age 26 – 35 which accounts (36.6%) of the respondents and the remaining were above 45 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 it's evidently showed that 100% of the respondents had at least college diploma in procurement & supply chain management plus related fields and that helped them to understand the questions that was included in the questionnaire.

Among the 41 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, (22%) of the respondents were from cost control department, (26.8%) of the respondents were from department of finance and the remaining (39%) 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 the hotel's practices on each item. It means the overall performance of the hotel's 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 un-influential, 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 Descriptive Statistics Analysis on Supply Chain Management practices

Supply chain management practices included the following four variables namely; Strategic supplier partnership, customer relationship, information sharing & quality of information and supply chain integration. The respondents were asked to give their response regarding supply chain management practices of Sheraton Addis hotel and after collecting their response it was analyzed, tabulated and presented as follows.

4.3.1.1. Strategic Supplier Partnership Practices

To assess the strategic supplier partnership practices of Sheraton Addis hotel ten questions were given to particular Sheraton Addis associates plus it was analyzed and the findings presented hereunder in table 4.2.

Table 4.2.Strategic Supplier Partnership Practices

Descriptive Statistics (N= 41)		
Strategic Supplier Partnership Practices	Mean	Std. Deviation
Sheraton Addis has strategic supplier partnership to its main suppliers.	4.44	.673
Sheraton regularly solves problems jointly with its suppliers.	4.15	.691
Sheraton has been using strategic supplier partnership to leverage its strategic and operational capabilities.	3.95	.740
Sheraton has continuous improvement programs that include key suppliers.	3.95	.705
Sheraton frequently interacts with suppliers to set reliability responsiveness, and other standards for itself.	3.90	.735
There is long-term partnership agreement between Sheraton and its suppliers to increase the intensity of firm-supplier integration.	4.15	.760
Sheraton encourages mutual planning and problem solving efforts with the suppliers.	3.88	.842
Sheraton facilitates supplier's ability to seek assistance from itself.	3.66	.855
Sheraton evaluates the importance of its relationship with the suppliers.	4.20	.749
Grand mean	**4.03**	**0.750**

Source: Survey Data, 2020

As depicted in table 4.2 among strategic supplier partnership practices variables; Sheraton Addis has strategic supplier partnership to its main suppliers has the highest mean of (4.44), then Sheraton evaluates the importance of its relationship with the suppliers (mean 4.20), then Sheraton regularly solves problems jointly with its suppliers (mean 4.15), then There is long-term partnership agreement between Sheraton and its suppliers to increase the intensity of firm-supplier integration (mean 4.15), then Sheraton has continuous improvement programs that include key suppliers (mean 3.95), then Sheraton has been using strategic supplier partnership to leverage its strategic and operational capabilities (mean 3.95), then Sheraton frequently interacts with suppliers to set reliability responsiveness, and other standards for itself (mean 3.90), then Sheraton encourages mutual planning and problem solving efforts with the suppliers (mean 3.88), and then Sheraton facilitates supplier's ability to seek assistance from itself (mean 3.66).

A study was conducted by Suhong Li, Bhanu Ragu-Nathan, T.S. Ragu-Nathan, S. SubbaRao. (2004) on 196 organizations located in USA and focused on the supply chain management practices with respect to strategic supplier partnership dimension accounted a mean value of 3.7 and similar study was conducted by Hilda Mwale in the year 2012 in Kenya based on large manufacturing firms in Nairobi and their strategic supplier partnership dimensions accounted a grand mean value of 3.85. Another study was conducted by Mohamed Ismail Mohideen B. (2014) in Sir Lanka to determine the factors of the supply chain management practices and to know the important factors of the supply chain management practices in the hotel industry with Sample size of 210 hoteliers and the result from the strategic supplier partnership dimensions accounted a grand mean value of 3.45.

Therefore, this study proved that the supply chain management practice aspect of the Sheraton Addis Hotel from the strategic supplier partnership dimension found to be in an influential or significant position with grand mean value of 4.03 compared with large manufacturing firms in Nairobi, 196 organizations located in USA and 210 hoteliers in Sir Lanka as it was supported by the study.

Based on mean value, the results indicated that Sheraton Addis has performed better to have strategic supplier partnership to its main suppliers (mean 4.44). On the other hand, the findings also clearly indicated that Sheraton Addis has little practice with respect to facilitating supplier's ability to seek assistance from itself. (Mean 3.66) And the average mean score was 4.03.

4.3.1.2. Customer Relationship Management Practice

To assess customer relationship management practices of Sheraton Addis hotel eight questions were distributed to particular Sheraton Addis associates and then it was collected, analyzed and the findings presented in table 4.3 as follows.

Table 4.3 Customer Relationship Management Practice

Descriptive Statistics (N = 41)		
Customer Relationship Management Practice	Mean	Std. Deviation
Sheraton has documented procedures to deal with customer complaints.	4.44	.709
Sheraton regularly gets feedback from customers.	4.22	.852
Sheraton use customer relationship to build long-term relationships with customers and improving customer satisfaction.	4.20	.813
Sheraton frequently measure and assess satisfaction of its customers.	4.32	.756
Sheraton takes customer relationship as an important input to differentiate its service from competitors & sustain customers.	4.34	.825
Customer relationship is recognized as an internal component of Sheraton's marketing strategy to increase sales and profits.	4.07	.787
Sheraton periodically evaluates the importance of its relationship with its customers.	3.85	.760
Sheraton frequently evaluates the formal and informal complaints of its customers.	4.17	.892
Grand mean	**4.20**	**.799**

Source: Survey Data, 2020

As indicated in table 4.3 among the variables of customer relationship management practice the variable that has the highest mean was, Sheraton has documented procedures to deal with customer complaints (mean 4.44), then Sheraton takes customer relationship as an important input to differentiate its service from competitors & sustain customers (mean 4.34), then Sheraton frequently measure and assess satisfaction of its customers (mean 4.32), then Sheraton regularly gets feedback from customers (mean 4.22), then Sheraton use customer relationship to build long-term relationships with customers and improving customer satisfaction (mean 4.20), then Sheraton frequently evaluates the formal and informal complaints of its customers (mean 4.17), then customer relationship is recognized as an internal component of Sheraton's marketing strategy to increase sales and profits (mean 4.07), and Sheraton periodically evaluates the importance of its relationship with its customers (mean 3.85).

A study was conducted by Suhong L. *et al* (2004) on 196 organizations located in USA and focused on the supply chain management practices with respect to customer relationship dimension accounted a mean value of 3.96 and similar study was conducted by Hilda Mwale in the year 2012 in Kenya based on large manufacturing firms in Nairobi and their customer relationship management dimensions accounted a grand mean value of 4.53. Another study was conducted by Mohamed Ismail Mohideen B. (2014) in Sir Lanka with Sample size of 210 hoteliers and the result from the customer relationship management dimensions accounted a grand mean value of 3.33.

Therefore, this study proved that the supply chain management practice aspect of the Sheraton Addis Hotel from the customer relationship dimension found to be in a very influential or significant position with grand mean value of 4.20 compared with 196 organizations located in USA and Sir Lanka 210 hoteliers but relatively less when compared with large manufacturing firms in Nairobi as it was supported by the study.

Based on the overall variables of the customer relationship management practices, the findings have clearly indicated and the respondent agreed that Sheraton has been doing in an excellent way to handle customer complaints by using documented procedures to deal with customer complaints (mean 4.44). On the contrary, Sheraton has shown relatively less effort to periodically evaluate the importance of its relationship with its customers (mean 3.85). The average mean score was 4.20 and it means that most of the respondents agreed with the customer relationship management practices of the hotel.

4.3.1.3. Information Sharing Practices

In an attempt to assess the information sharing practices of Sheraton Addis hotel ten questions were distributed to specific Sheraton Addis associates and then it was collected, analyzed and the findings presented hereunder in table 4.4.

Table 4.4Information Sharing Practices

Descriptive Statistics (N = 41)		
Information Sharing Practices	Mean	Std. Deviation
Sheraton has developed the policy to guide the information sharing within and outside the organization.	4.00	.949
Sheraton view information as a strategic asset and ensure that it flows with minimum delay and distortion so as to achieve customer satisfaction.	3.95	.921
Production and delivery schedules to Sheraton are shared across its supply chain.	3.95	.740
Sheraton shares its business unit's proprietary information with its trading partners.	3.68	.879
Trading partners of Sheraton hotel share proprietary information with the hotel.	3.88	.781
Sheraton communicate its trading partners about changes in advance.	4.12	.714
Sheraton's trading partners keep Sheraton fully informed about issues that affects its business.	3.95	.865
Information sharing with business partners enables Sheraton to make better decisions and action on the basis of greater visibility.	4.05	.893
Sheraton's trading partners exchange information on important business practices with Sheraton.	3.93	.787
Sheraton and its suppliers exchange information that helps in establishment of business planning	3.83	.892
Grand mean	**3.93**	**.842**

Source: Survey Data, 2020

As table 4.4 clearly showed among the variables of information sharing practices; Sheraton communicate its trading partners about changes in advance has the highest (mean 4.12), then Information sharing with business partners enables Sheraton to make better decisions and action

on the basis of greater visibility (mean 4.05), then Sheraton has developed the policy to guide the information sharing within and outside the organization (mean 4.0), then Production and delivery schedules to Sheraton are shared across its supply chain (mean 3.95), then Sheraton's trading partners keep Sheraton fully informed about issues that affects its business (mean 3.95), then Sheraton view information as a strategic asset and ensure that it flows with minimum delay and distortion so as to achieve customer satisfaction (mean 3.95), then Sheraton's trading partners exchange information on important business practices with Sheraton (mean 3.93), then Trading partners of Sheraton hotel share proprietary information with the hotel (mean 3.88), then Sheraton and its suppliers exchange information that helps in establishment of business planning (mean 3.83), and Sheraton shares its business unit's proprietary information with its trading partners (mean 3.68).

A study was conducted by Hilda Mwale (2012) in Kenya based on large manufacturing firms in Nairobi and it focused on the supply chain management practices with respect to information sharing dimension accounted a mean value of 3.58 and similar study was conducted by SiddigBalal I & Abdelsalam A. Hamid (2014) in Sudan based on 110 manufacturing companies located in the country (Sudan) and their information sharing dimensions accounted a grand mean value of 3.52.

Another study was conducted by Mohamed Ismail Mohideen B. (2014) in Sir Lanka in the hotel industry with Sample size of 210 hoteliers and the result from the information sharing dimensions accounted a grand mean value of 3.35.

Therefore, this study proved that the supply chain management practice aspect of the Sheraton Addis Hotel from the information sharing dimension found to be in an influential or significant

position with grand mean value of 3.93 compared with large manufacturing firms in Nairobi and 110 manufacturing companies of Sudan as it was supported by the study.

Based on the overall variables of the information sharing practices, the findings have clearly indicated that Sheraton has been doing in a very good manner to communicate its trading partners effectively about changes in advance (mean 4.12). On the other hand the respondents also agreed that Sheraton has made relatively less effort to shares its business unit's proprietary information with its trading partners (mean 3.68). The average mean score was 3.93.

4.3.1.4. Supply chain integration practice

In order to assess supply chain integration practices of Sheraton Addis hotel twelve questions were distributed to specific Sheraton Addis associates and then it was collected, analyzed and the findings presented hereunder in table 4.5.

Table 4.5Supply chain integration practice

Descriptive Statistics (N = 41)		
Supply chain integration practice	Mean	Std. Deviation
Departments at Sheraton collaborate with the company development programs.	4.15	.823
Sheraton utilizes periodic interdepartmental meetings among internal functions.	4.00	.922
In Sheraton there is high level of data integration among internal functions of the company.	4.20	.749
In Sheraton there is quick ordering system with major suppliers.	4.00	.894
Sheraton has effective communications with suppliers on research activities and new service development.	3.71	1.031
Sheraton and its suppliers share technical information with each other if required.	3.88	.812
Sheraton has high level of linkage with customers through information networks.	3.85	.654
Sheraton has a systematic way to constantly measure customer satisfaction.	4.27	.775

There are integration of objectives, planning, and resources between Sheraton and external organizations.	3.76	.799
Distribution and delivery is made at the right time and place due to external supply chain integration, information sharing and coordination.	3.78	.822
Sheraton has the capability to measure supply chain performance in terms of impact on its business profit.	3.88	.954
Performance measurement data across supply chain partners of Sheraton is available on a timeline basis.	4.00	.775
Grand mean	**3.96**	**.834**

Source: Survey Data, 2020

Table 4.5 clearly showed that among the supply chain integration practices the variable that has the highest mean score was; Sheraton has a systematic way to constantly measure customer satisfaction (mean 4.27), then in Sheraton there is high level of data integration among internal functions of the company (mean 4.20), then departments at Sheraton collaborate with the company development programs (mean 4.15), then performance measurement data across supply chain partners of Sheraton is available on a timeline basis (mean 4.0), then in Sheraton there is quick ordering system with major suppliers (mean 4.0), then Sheraton utilizes periodic interdepartmental meetings among internal functions (mean 4.0), Sheraton and its suppliers share technical information with each other if required (mean 3.88), then Sheraton has the capability to measure supply chain performance in terms of impact on its business profit (mean 3.88), then Sheraton has high level of linkage with customers through information networks (mean 3.85), then distribution and delivery is made at the right time and place due to external supply chain integration, information sharing and coordination (mean 3.78), then there are integration of objectives, planning, and resources between Sheraton and external organizations (mean 3.76), and Sheraton has effective communications with suppliers on research activities and new service development (mean 3.71).

A study was conducted by Vivek, N., Sen, S., Savitskie, K., Ranganathan, S.K. and Ravindran, S. (2011) on small-scale manufacturing companies located in India and it focused on the supply chain management practices with respect to supply chain integration dimension accounted a grand mean value of 2.97 and similar study was conducted by Siddig Balal I &Abdelsalam A. Hamid (2014) in Sudan based on 110 manufacturing companies in the country (Sudan)and their supply chain integration dimensions accounted a grand mean value of 3.71.

Therefore, this study proved that the supply chain management practice aspect of the Sheraton Addis Hotel from the supply chain integration dimension found to be in an influential or significant position with grand mean value of 3.96 compared with small-scale manufacturing companies located in India and 110 manufacturing companies in Sudan as it was supported by the study.

Based on the overall variables of supply chain integration practices, the findings have clearly indicated that Sheraton has been performing in an excellent way to measure customer satisfaction constantly and in a systematic way. (Mean 4.27) on the contrary, the respondents also agreed that Sheraton has been performing relatively less to have effective communications with suppliers on research activities and new service development (mean 3.71). The average mean score was 3.96.

4.3.1.5 Summary of SCM Practices

Hereunder table 4.6 showed the summary of supply chain management practices which includes; strategic supplier partnership practices, customer relationship management practice, information sharing practices and supply chain integration practice.

Table 4.6 summary of supply chain management practices

SCM Practices(N = 41)	Mean	Std. Deviation
Strategic supplier partnership practices	4.03	.750
Customer relationship management practice	4.20	.799
Information sharing practices	3.93	.842
Supply chain integration practice	3.96	.834
Grand mean	**4.03**	**.806**

Source: Survey Data, 2020

As depicted in table 4.6 the most frequently used supply chain management practice was customer relationship management practice (mean 4.20, very influential), then strategic supplier partnership practices (mean 4.03, influential), then supply chain integration practice (mean 3.96,influential) and finally information sharing practices (mean 3.93,influential). The results clearly indicated that Sheraton Addis has been doing better on customer relationship management practices, but comparatively less emphasis was given to information sharing practices.

In conclusion, based on the average grand mean result (mean 4.03) the SCM practice of Sheraton Addis hotel is influential or very good.

4.3.2 Descriptive Analysis on supply chain management performance

Supply chain management performance included the following four variables namely; delivery dependability, product quality, operational flexibility and customer Responsiveness. The respondents were asked to give their response regarding supply chain management performance of Sheraton Addis hotel and after collecting their response it was analyzed, tabulated and presented as follows.

4.3.2.1. Supply chain performance from the dimensions of product quality

In an attempt to assess the supply chain performance of Sheraton Addis hotel from the dimensions of product quality four questions were distributed to specific Sheraton Addis associates and then it was collected, analyzed and the findings presented hereunder in table 4.7.

Table 4.7Supply chain performance from the dimensions of product quality

Descriptive Statistics(N = 41)		
Supply chain performance from the dimensions of product quality	Mean	Std. Deviation
Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through maintaining strategic supplier partnership.	4.15	.792
Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference by using supply chain integration.	4.29	.750
Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference by its timely and quality information sharing practices.	4.22	.725
Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through building a good customer relationship.	4.39	.703
Grand mean	**4.263**	**.742**

Source: Survey Data, 2020

Table 4.7 clearly showed that among the supply chain performance from the dimensions of product quality the variable that has the highest mean score was; Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through building a good customer relationship (mean 4.39), then Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference by using supply chain integration (mean 4.29), then Sheraton Addis hotel provides quality products and service

which meets its customer's cultural difference, value difference, and their test and preference difference by its timely and quality information sharing practices (mean 4.22), and Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through maintaining strategic supplier partnership (mean 4.15).

Based on the overall variables of supply chain performance from the dimensions of product quality, the findings have clearly indicated that Sheraton has been performing much better to provide quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through building a good customer relationship (mean 4.39,very influential), on the other hand the hotel performs moderately less to provide quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through maintaining strategic supplier partnership.(mean 4.15, influential).

In conclusion, based on grand mean result of supply chain performance from the dimensions of product quality (mean 4.26, very influential) it can be concluded that product quality is very influential or important for the supply chain performance of Sheraton Addis hotel.

4.3.2.2. Supply chain performance from the dimensions of delivery dependability (consistency)

In order to assess supply chain performance of Sheraton Addis hotel from the dimensions of delivery dependability four questions were distributed to specific Sheraton Addis associates and then it was collected, analyzed and the findings presented hereunder in table 4.8.

Table 4.8 Supply chain performance from the dimensions of delivery dependability

Descriptive Statistics (N = 41)		
Supply chain performance from the dimensions of delivery dependability (consistency)	Mean	Std. Deviation
Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining strategic supplier partnership.	4.20	.679
Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors by sharing quality of information to its partners.	3.93	.721
Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintain supply chain integration.	3.76	.860
Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining customer relationship.	4.20	.813
Grand mean	**4.023**	**.768**

Source: Survey Data, 2020

As table 4.8 clearly showed among the variables of Supply chain performance from the dimensions of delivery dependability**;** Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining strategic supplier partnership has the highest mean score of (4.20), then Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining customer relationship (4.20), then Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors by sharing quality of information to its partners (mean 3.93) and Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintain supply chain integration (mean 3.76).

Based on the overall variables of supply chain performance from the dimensions of delivery dependability (consistency), the findings have clearly indicated that Sheraton Addis hotel has

been providing delivery dependable service which delivers products and services faster than competitors through maintaining strategic supplier partnership (mean 4.20, very influential), on the other hand it showed less effort to provide delivery dependable service which delivers products and services faster than competitors through maintain supply chain integration (mean 3.76, influential).

In conclusion, based on grand mean result of Supply chain performance from the dimensions of delivery dependability (grand mean 4.02, influential) it can be concluded that delivery dependability or consistency is influential or important for the supply chain performance of Sheraton Addis hotel.

4.3.2.3. Supply chain performance from the dimensions of operational flexibility

To assess the Supply chain performance of Sheraton Addis hotel from the dimensions of operational flexibility four questions were distributed to specific Sheraton Addis associates and then it was collected, analyzed and the findings presented in table 4.9.

Table 4.9 Supply chain performance from the dimensions of operational flexibility

Descriptive Statistics (N = 41)		
Supply chain performance from the dimensions of operational flexibility	Mean	Std. Deviation
Sheraton Addis hotel is flexible in terms of its strategic supplier partnership practices to accommodate the unseen volatile demand and supply condition.	4.07	.818
Sheraton Addis hotel is flexible in terms of its customer relationship to attract more customers, make them loyal and to coup up with the ever changing demand of customers.	4.10	.664
Sheraton Addis hotel is flexible in terms of sharing quality of information to its partners to achieve an integrated and coordinated supply chain.	3.85	.760
Sheraton Addis hotel is flexible in terms of its supply chain integration to elevate the linkages within each component of the chain.	4.05	.805
Grand mean	**4.018**	**.762**

Source: Survey Data, 2020

Table 4.9 clearly showed that among the supply chain integration practices the variable that has the highest mean score was; Sheraton Addis hotel is flexible in terms of its customer relationship to attract more customers, make them loyal and to coup up with the ever changing demand of customers (mean 4.10), then Sheraton Addis hotel is flexible in terms of its strategic supplier partnership practices to accommodate the unseen volatile demand and supply condition (mean 4.07), then Sheraton Addis hotel is flexible in terms of its supply chain integration to elevate the linkages within each component of the chain (mean 4.05) and Sheraton Addis hotel is flexible in terms of sharing quality of information to its partners to achieve an integrated and coordinated supply chain (mean 3.85).

On the whole, based on the variables of supply chain performance from the dimensions of operational flexibility, the findings have clearly indicated that Sheraton Addis hotel has been performing in a better way and flexible in terms of its customer relationship to attract more customers, make them loyal and to coup up with the ever changing demand of customers (mean 4.10, influential), on the other hand the hotel also has been performing moderately less to be flexible in terms of sharing quality of information to its partners to achieve an integrated and coordinated supply chain. (Mean 3.85, influential).

In conclusion, based on grand mean result of Supply chain performance from the dimensions of operational flexibility (grand mean 4.02, influential) it can be concluded that operational flexibility is influential or important for the supply chain performance of Sheraton Addis hotel.

4.3.2.4. Supply chain performance from the dimensions of customer responsiveness (speed)

With the aim of assessing supply chain performance from the dimensions of customer responsiveness of Sheraton Addis hotel four questions were distributed to specific Sheraton

Addis associates and then it was collected, analyzed and the findings presented in table 4.10.

Table 4.10 Supply chain performance from the dimensions of customer responsiveness (speed)

Descriptive Statistics (N = 41)		
Supply chain performance from the dimensions of customer responsiveness (speed)	Mean	Std. Deviation
Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and their test and preference difference through maintaining strategic supplier partnership.	3.95	.865
Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and build long-term relationships with customers through maintaining customer relationship.	4.02	.880
Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and make decision on the basis of greater visibility by sharing quality of information.	4.15	.727
Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and elevate the linkages within each component of the chain through maintaining supply chain integration.	4.02	.689
Grand mean	**4.035**	**.790**

Source: Survey Data, 2020

Table 4.10 clearly showed that among the supply chain performance from the dimensions of customer responsiveness the variable that has the highest mean score was; Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and make decision on the basis of greater visibility by sharing quality of information (mean 4.15), then Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and elevate the linkages within each component of the chain through maintaining supply chain integration (mean 4.02), then Sheraton

Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and build long-term relationships with customers through maintaining customer relationship (mean 4.02) and Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and their test and preference difference through maintaining strategic supplier partnership (mean 3.95).

Overall, based on the variables of supply chain performance from the dimensions of customer responsiveness, the findings have clearly indicated that Sheraton Addis hotel has been performing in a better way to provide customer responsive service which meets customers with their rightful needs at the right time and make decision on the basis of greater visibility by sharing quality of information (mean 4.15, influential) in contrast, Sheraton Addis has been performing somewhat less to provides customer responsive service which meets customers with their rightful needs at the right time and their test and preference difference through maintaining strategic supplier partnership (mean 3.95, influential).

In conclusion, based on grand mean result of supply chain performance from the dimensions of customer responsiveness or speed (grand mean 4.04, influential) it can be concluded that customer responsiveness (speed) is influential or important for the supply chain performance of Sheraton Addis hotel.

4.3.2.5 Summary of SCM Performance

The Summary of supply chain performance included; supply chain performance from the dimensions of product quality, supply chain performance from the dimensions of delivery dependability, supply chain performance from the dimensions of operational flexibility and supply chain performance from the dimensions of customer responsiveness and it has presented hereunder in table 4.11.

Table 4.11 Summary of SCM performance

SCM Performance (N=41)	Mean	Std. Deviation
Supply chain performance from the dimensions of product quality	4.263	.742
Supply chain performance from the dimensions of delivery dependability	4.023	.768
Supply chain performance from the dimensions of operational flexibility	4.018	.762
Supply chain performance from the dimensions of customer responsiveness	4.035	.790
Grand mean	**4.085**	**.766**

Source: Survey Data, 2020

As depicted in table 4.11 the most frequently used SCM performance was Supply chain performance from the dimensions of product quality (mean 4.26, very influential), then Supply chain performance from the dimensions of customer responsiveness or speed (mean 4.03, influential), then Supply chain performance from the dimensions of delivery dependability or consistency (mean 4.02, influential) and finally Supply chain performance from the dimensions of operational flexibility (mean 4.01, influential). This implies that Sheraton has very influential or excellent supply chain performance from the dimensions of product quality and comparatively less supply chain performance from the dimensions of operational flexibility. In conclusion, based on the average grand mean result (mean 4.085) the SCM performance of Sheraton Addis hotel found to be influential or very good.

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).

4.4.1 Correlation analysis between factors affecting the supply chain management and supply chain management Performance.

Using Pearson correlation coefficient, correlation analysis was conducted between factors affecting the supply chain management and supply chain management Performance of Sheraton Addis hotel. The analysis was aimed at examining the degree and significant relationship between the independent variables (Environmental uncertainty, lack of supply chain collaboration, weak Supply chain relationships, poor supply chain management performance, lack of top management support & commitment, lack of employee's training & development, lack of resources to support SCM practices, ineffective internal communication)and independent variable (Responsiveness, product quality, delivery dependability ,flexibility) of Sheraton Addis hotel.

Table 4.12 Correlation Matrix between factors affecting the supply chain management and supply chain management Performance.

Correlations (N=41)													
		EU	LC	WR	PP	LS	LD	LSS	IC	PR	DD	FL	RS
EU	Pearson Correlation	1											
	Sig. (2-tailed)												
LC	Pearson Correlation	.421**	1										
	Sig. (2-tailed)	.006											
WR	Pearson Correlation	.264	.679**	1									
	Sig. (2-tailed)	.095	.000										
PP	Pearson Correlation	.215	.539**	.504**	1								
	Sig. (2-tailed)	.176	.000	.001									
LS	Pearson Correlation	.043	.556**	.511**	.421**	1							
	Sig. (2-tailed)	.790	.000	.001	.006								
LD	Pearson Correlation	.056	.555**	.590**	.615**	.558**	1						
	Sig. (2-tailed)	.728	.000	.000	.000	.000							
LSS	Pearson Correlation	.294	.447**	.507**	.688**	.313*	.693**	1					
	Sig. (2-tailed)	.062	.003	.001	.000	.047	.000						
IC	Pearson Correlation	.132	.301	.410**	.546**	.288	.606**	.732**	1				
	Sig. (2-tailed)	.410	.055	.008	.000	.068	.000	.000					
PR	Pearson Correlation	.575**	.140	.197	.261	.092	.205	.303	.129	1			
	Sig. (2-tailed)	.000	.383	.217	.099	.565	.199	.054	.423				
DD	Pearson Correlation	.509**	.311*	.231	.284	.129	.289	.326*	.103	.705**	1		
	Sig. (2-tailed)	.001	.048	.145	.072	.421	.067	.038	.520	.000			
FL	Pearson Correlation	.537**	.176	.149	.286	.126	.181	.337*	.298	.543**	.439**	1	
	Sig. (2-tailed)	.000	.271	.351	.070	.433	.258	.031	.058	.000	.004		
RS	Pearson Correlation	.387*	.102	.048	.093	.150	.113	.101	.217	.433**	.434**	.508**	1
	Sig. (2-tailed)	.013	.527	.765	.564	.350	.482	.530	.173	.005	.005	.001	
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													

Where,
EU*: Environmental uncertainty*
LC: *Lack of supply chain collaboration*
WR*: Weak Supply chain relationships*
***PP**: Poor supply chain management performance*
***LS:** Lack of top management support & commitment*
***LD**: Lack of employee's training & development*
***LSS**: Lack of resources to support SCM practices*
***IC:** Ineffective internal communication*

***SCMP**: Supply Chain Management Performance*
***RS**: Responsiveness*
***PR** : Product Quality*
***DD:** Delivery dependability*
***FL** : Flexibility*

As depicted on the above table 4.12Environmental uncertainty has significant and positive correlation with the supply chain management performance of Sheraton Addis Hotel in terms of flexibility with correlation value of ($r = 0.53$, $p<0.01$), delivery dependability ($r = 0.51$, $p<0.05$), product quality ($r = 0.57$, $p<0.01$) and responsiveness ($r = 0.38$, $p<0.05$).

Similarly, lack of resources to support SCM practices has significant and positive correlation with the supply chain management performance of Sheraton Addis Hotel in terms of delivery dependability($r = 0.32$, $p<0.05$) and flexibility ($r = 0.33$, $p<0.05$).

Likewise, lack of supply chain collaboration has significant and positive correlation with the supply chain management performance of Sheraton Addis Hotel in terms of delivery dependability with correlation value of ($r = 0.31$, $p<0.05$).

The correlation analysis result confirmed that there are moderate positive correlations between three of the factors affecting the supply chain management (Environmental uncertainty, lack of resources to support SCM practices and lack of supply chain collaboration) and supply chain management Performance (responsiveness, product quality, delivery dependability and flexibility). whereas, the rest of five factors (weak supply chain relationships, poor supply chain management performance, lack of employee's training & development, ineffective internal communication and lack of top management support & commitment) have weak but positive correlation with the supply chain management performance of Sheraton Addis hotel.

Table 4.13 Correlation matrix for group of factors affecting the supply chain management (SCM Challenges) and supply chain management Performance.

Aggregated correlation analysis			
		SCM Challenges	Supply Chain Management Performance
SCM Challenges	Pearson Correlation	1	.395*
	Sig. (2-tailed)		.011
	N	41	41
Supply Chain Management Performance	Pearson Correlation	.395*	1
	Sig. (2-tailed)	.011	
	N	41	41
*. Correlation is significant at the 0.05 level (2-tailed).			

Source: Survey Data, 2020

Similarly, the researcher run aggregated correlation analysis between aggregated variables of factors affecting the supply chain management (SCM Challenges) and supply chain management Performance. As table 4.13 Indicated, the Correlation is significant at $p< 0.05$ level. In other words it means that, it is significant at 95% confidence level. Consequently, it is possible to conclude that there is weak but positive and a significant correlation between aggregated factors affecting the supply chain management (SCM Challenges) and supply chain management performance of Sheraton Addis Hotel ($r = 0.395$, $p<0.05$).

4.5. Multiple Regression analysis for supply chain management challenges 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 Sheraton Addis hotel 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;

$$Y = \beta0 + \beta1\ X1 + \beta2\ X2 + \beta3\ X3 + \beta4\ X4 + \beta5\ X5 + \beta6\ X6 + \beta7\ X7 + \beta8\ X8 + e$$

Where:

Y = SCM performance of Sheraton Addis hotel

β0 = Constant when x is zero

β1 = Regression coefficients for environmental uncertainty

X1 = Environmental uncertainty

β2 = Regression coefficients for lack of supply chain collaboration

X2 = Lack of supply chain collaboration

β3 = Regression coefficients for weak Supply chain relationships

X3 = Weak Supply chain relationships

β4 = Regression coefficients for poor supply chain management performance

X4 = Poor supply chain management performance

β5 = Regression coefficients for lack of top management support & commitment

X5 = Lack of top management support & commitment

β6 = Regression coefficients for lack of employee's training & development

X6 = Lack of employee's training & development

β7 = Regression coefficients for lack of resources to support SCM practices

X7 = Lack of resources to support SCM practices

β8 = Regression coefficients for ineffective internal communication

X8 = Ineffective internal communication

e = The error

4.5.1 Multiple Regression Assumptions

Most statistical tests rely on certain assumptions about the variables used within an analysis to ensure that the analysis is as accurate and true as possible, and therefore it is valid (Osborne & Waters, 2002; Stevens, 2009). Assumptions are critical in statistics because if the underlying assumptions are not valid, then the process is unreliable, unpredictable, and out of the researcher's control (Stevens, 2009). This could lead the researcher to draw conclusions that are not valid or scientifically unsupported by the data. Researchers are encouraged to examine the data of an analysis to ensure the values are plausible and reasonable. The assumptions of multiple regression include; the assumptions of Collinearity**,** independence, normality, linearity, and homoscedasticty, which will be discussed separately in the proceeding sections.

4.5.1.1. Assumption of Collinearity

Multiple regression assumes that the independent variables are not highly correlated with each other. This assumption is may be tested with three central criteria. The first one is when computing the matrix of Pearson's Bivariate Correlation among all independent variables the correlation coefficients need to be smaller than one. The second one is the tolerance measures the

influence of one independent variable on all other independent variables; the tolerance is calculated with an initial linear regression analysis. Tolerance is defined as $T = 1 – R^2$ for these first step regression analysis. With $T < 0.1$ there might be collinearity in the data and with $T < 0.01$ and the third one is the variance inflation factor**(VIF)** of the linear regression is defined as $VIF = 1/T$. With $VIF > 5$ there is an indication that collinearity may be present; with $VIF < 10$ there is certainly collinearity among the variables.(Statistics solution2020).

Hereunder on table 4.14result of the data showed that the tolerances are greater than 0.1 and the variances inflation factor (VIF) are less than 10, so in that case it is possible to say that the assumption is met.

Table 4.14 Collinearity test

Model		
	Tolerance	**VIF**
(Constant)		
Environmental uncertainty	.668	1.498
Lack of supply chain collaboration	.358	2.794
Weak Supply chain relationships	.455	2.199
Poor supply chain management performance	.441	2.267
Lack of top management support & commitment	.556	1.799
Lack of employee's training & development	.319	3.135
Lack of resources to support SCM practices	.273	3.660
Ineffective internal communication	.433	2.311

Constant: Dependent Variable: Supply Chain Management Performance

Source: Survey Data, 2020

4.5.1.2. Assumption of independence

Multiple regression assumes that the errors, which are the residuals between the actual score and the estimated score obtained through the regression equation, are independent and there is no serial correlation (Stevens, 2009). Having no serial correlation between the residuals implies that the size of the residual for one variable has no impact on the size of the residual for another variable. Therefore, the independence assumption requires that the variables and residuals are independent and the subjects are responding independently of each other (Stevens, 2009). The independence assumption is a significant assumption that should be investigated prior to any interpretation of multiple regression analysis, as violation of this assumption could hold critical implications (Stevens, 2009).

The Durbin-Watson is a statistic test which can be used to test for the occurrence of serial correlation between residuals. The value of Durbin-Watson statistics ranges between 0 and 4, however, the residuals are considered not correlated if the Durbin-Watson statistic is between 1.5 and 2.5.(Statistics solution 2020).

As depicted below on the Model Summary table 4.15 which includes a Durbin-Watson statistic, The Durbin-Watson statistic is **1.910**, indicating that the residuals are uncorrelated; therefore, the independence assumption is met for this analysis.

Table 4.15 Model summary for Durbin-Watson

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.710[a]	.504	.380	.36595	1.910
a. Predictors: (Constant), Ineffective internal communication, Environmental uncertainty, Lack of top management support & commitment, Weak Supply chain relationships, Poor supply chain management performance, Lack of employee's training & development, Lack of supply chain collaboration, Lack of resources to support SCM practices					
b. Dependent Variable: Supply Chain Management Performance					

Source: Survey Data, 2020

4.5.1.3. Assumptions of Normality

Screening for normality is an important early step when conducting multiple regression, as residuals are normally distributed (Stevens, 2009; Tabachnick & Fidell, 2006). To test the Normality Assumptions Graphical methods, such as histograms and normality plots, can be conducted to provide a visual inspection of the normal distribution of a data set prior to further interpretation of the regression analysis (Tabachnick & Fidell, 2006). Histograms can provide important information about the shape of a distribution. If most of the scores are gathered around the middle of the continuum and a gradual, symmetric decrease of frequency on either side of the center score occurs, it is considered a normal distribution. However, if the scores are not symmetric and are spread out away from the majority it is considered skewed. If the 'tail' (a small number of the distribution) is spread out to the right, it is considered positively skewed, and if the 'tail' is spread out to the left, it is considered negatively skewed. Kurtosis is the shape of any or lack of peaks within a distribution (Tabachnick & Fidell, 2006). Though no distribution can be considered 'perfect', a distribution is regarded as normal when the values of both skewness and kurtosis are zero; however a suggested acceptable range for both is between -2 and +2. Below the histogram showed the normality of the distribution so it is possible to say that the assumption is met.

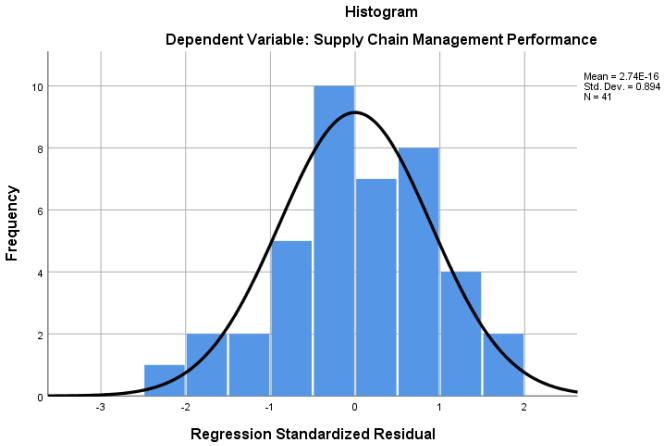

Figure. 4.1 Assumptions of Normality using histogram

The normality assumption can also be tested through the visual examination of normal probability plots (P-P plots) of the standardized residuals. In a P-P plot, the normal distribution is depicted by a random scatter of plots around a 45 degree line. So in that case also it is possible to say that the assumption is met again.

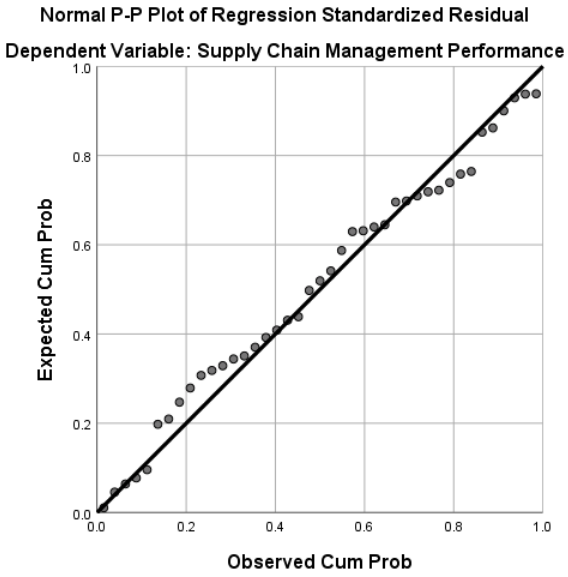

Figure 4.2 Assumptions of Normality using normal P-P plot

4.5.1.4. Assumptions of Linearity

Relationships between variables are considered linear when they are consistent and directly proportional to each other (Stevens, 2009; Tabachnick & Fidell, 2006). Violations of this assumption may result in the estimates obtained from the analysis, such as regression coefficients, standard errors, and statistical significance, being biased; as a result of not portraying the accurate or true population values (Osborne & Waters, 2002; abachnick & , 2006).

The linearity assumption can be tested through the visual examination of residual plots (Kivilu, 2003; Osborne & Waters, 2002; Stevens, 2009). A residual scatter-plot is a figure that depicts one axis for the standardized residuals and the other axis for the predicted values (Stevens, 2009).

If the linearity assumption is met, the standardized residuals will scatter randomly around a horizontal line which represents the standardized residuals equaling zero (Stevens, 2009; Tabachnick & Fidell, 2006). When linearity is violated, the residual plot portrays a c-curved or u-curved shape of distribution around the horizontal line.

The following eight figures depicted an example of a residual plot portraying a clustering of residuals along the horizontal line; therefore, a linear relationship is present or the fourth assumption is met.

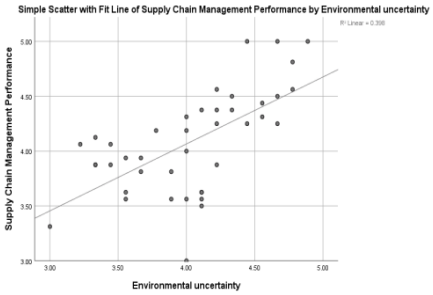

Figure 4.3 Assumptions of linearity using residual plots for environmental uncertainty.

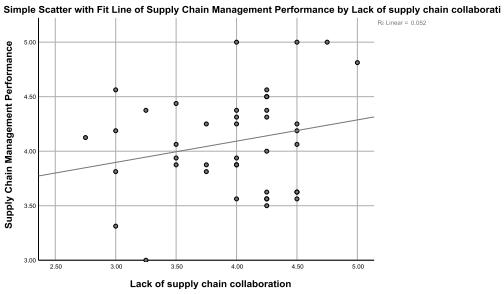

Figure 4.4 Assumptions of linearity using residual plots for lack of supply chain collaboration

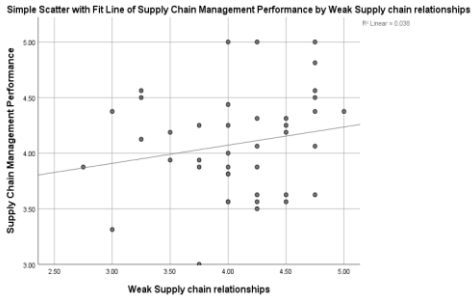

Figure 4.5 Assumptions of linearity using residual plots for weak supply chain relationships

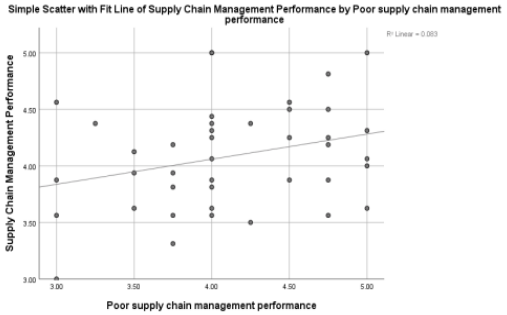

Figure 4.6 Assumptions of linearity using residual plots for poor supply chain management performance.

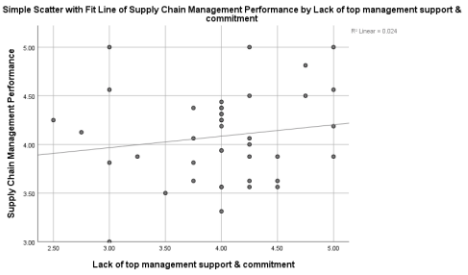

Figure 4.7 Assumptions of linearity using residual plots for lack of top management support and commitment.

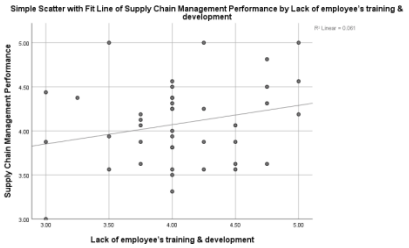

Figure 4.8 Assumptions of linearity using residual plots for lack of employee's training& development.

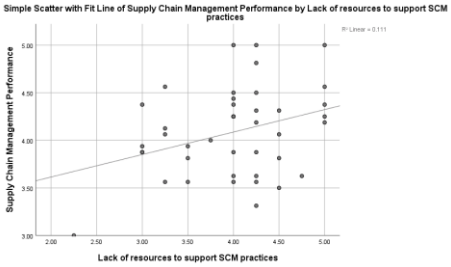

Figure 4.9 Assumptions of linearity using residual plots for lack of resources to support SCM practices.

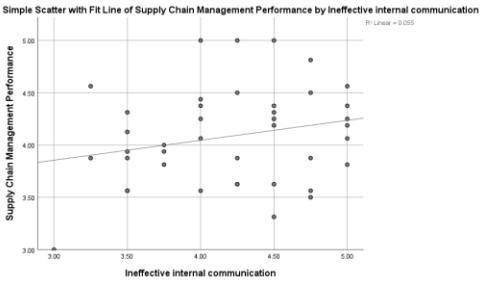

Figure 4.10 Assumptions of linearity using residual plots for ineffective internal communication

4.5.1.5. Assumption of Homoscedasticity

The assumption of homoscedacity indicates that the variance of errors is equal and constant across all levels of the variables (Osborne & Waters, 2002; Stevens, 2009). Homoscedasticity is related to the assumption of normality because when the assumption of normality is met, the relationship between the variables is homoscedastic (Tabachnick & Fidell, 2006).

The homoscedasticity assumption can be tested through the visual examination of the same residual plots of the standardized residuals and predicted values depicted in the assumption of linearity section of this paper (Osborne & Waters, 2002). When the homoscedasticity assumption has been met, the residuals will present as being randomly scattered around the horizontal line depicting ri=0. The below figure portrays an example of a residual plot demonstrating a relative equal clustering of residuals along the horizontal line somewhat in a rectangular shape, therefore, the homoscedasticity assumption seems to have been met.

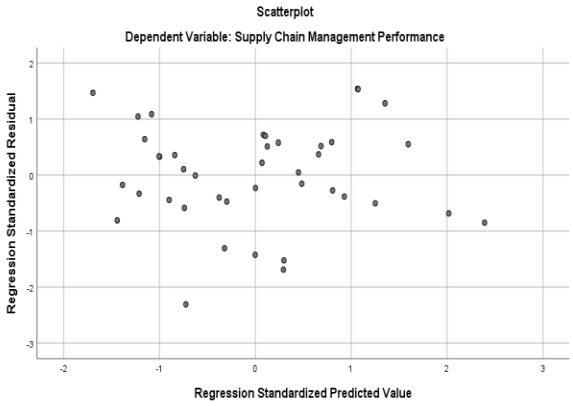

Figure 4.11 Assumption of Homoscedasticity using residual plots

4.6 Results of Multiple Regression Analysis

4.6.1. Regression Analysis Model Summary

The first table of interest is the model summary and it provides the *R*, R^2, adjusted R^2, 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).

Table 4.13 depicted a multiple regression results that predict the SCM performance from the dimensions of SCM challenges; X1 = Environmental uncertainty, X2 = Lack of supply chain, collaboration, X3 = Weak Supply chain relationships, X4 = Poor supply chain management

performance, X5 = Lack of top management support & commitment, X6 = Lack of employee's training & development, X7 = Lack of resources to support SCM practices and X8 = Ineffective internal communication. 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 Sheraton Addis hotel. Not only that as depicted on the table 4.21 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 Sheraton Addis. 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.

4.6.2. Analysis of Variance (ANOVA)

The F-ratio in the ANOVA tests whether the overall regression model is a good fit for the data. The below table 4.16 showed that the independent variables statistically and significantly predict the dependent variable, F (8, 32) = 4.070, p (.002) < .05 (i.e., the regression model is a good fit of the data). In other words it means that there is only 2 percent chance that all regression parameters are zero. Therefore, it is possible to say that SCM challenges can significantly and statically predict the SCM performance of Sheraton Addis hotel.

Table 4.16 ANOVA test result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.360	8	.545	4.070	.002[b]
	Residual	4.285	32	.134		
	Total	8.645	40			
a. Dependent Variable: Supply Chain Management Performance						
b. Predictors: (Constant), Ineffective internal communication, Environmental uncertainty, Lack of top management support & commitment, Weak Supply chain relationships, Poor supply chain management performance, Lack of employee's training & development, Lack of supply chain collaboration, Lack of resources to support SCM practices						

Source: Survey Data, 2020

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 challenges of SCM (X1 = Environmental uncertainty, X2 = Lack of supply chain, collaboration, X3 = Weak Supply chain relationships, X4 = Poor supply chain management performance, X5 = Lack of top management support & commitment, X6 = Lack of employee's training & development, X7 = Lack of resources to support SCM practices and X8 = Ineffective internal communication) on SCM performance (dependent variable) coefficient of regression analysis was conducted and hereunder on table 4.17 the result is presented.

Table.4.17Coefficients results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.718	.718		1.000	.325		
Environmental uncertainty	.731	.147	.755	4.960	.000	.668	1.498
Lack of supply chain collaboration	-.294	.179	-.343	-1.648	.109	.358	2.794
Weak Supply chain relationships	-.052	.154	-.063	-.341	.736	.455	2.199
Poor supply chain management performance	.099	.144	.129	.688	.496	.441	2.267
Lack of top management support & commitment	.101	.126	.134	.800	.430	.556	1.799
Lack of employee's training & development	.277	.196	.312	1.414	.167	.319	3.135
Lack of resources to support SCM practices	-.037	.169	-.053	-.222	.826	.273	3.660
Ineffective internal communication	.003	.154	.004	.021	.983	.433	2.311

Source: Survey Data, 2020

$Y = \beta 0 + \beta 1\ X1 + e$

$Y = 0.718 + 0.755 + 0.05$

$\beta 0 = 0.718$, beta predicts this amount (0.718) of SCM performance of Sheraton Addis hotel when all eight independent variables (X1 = Environmental uncertainty, X2 = Lack of supply chain, collaboration, X3 = Weak Supply chain relationships, X4 = Poor supply chain management performance, X5 = Lack of top management support & commitment, X6 = Lack of employee's training & development, X7 = Lack of resources to support SCM practices and X8 = Ineffective internal communication) are zero.

Unstandardized coefficients indicate how much the dependent variable varies with an independent variable when all other independent variables are held constant. The regression coefficient provides the expected change in the dependent variable (SCM performance) for a one-unit increase in the independent variable.

By using the above Unstandardized Coefficients beta it is possible to say that one unit increase in environmental uncertainty will increase (0.731 units), one unit increase in lack of supply chain collaboration will decrease (-0.294), one unit increase in weak Supply chain relationships will decrease (-0.052), one unit increase in poor supply chain management performance will increase (0.99), one unit increase in lack of top management support & commitment will increase (0.101), one unit increase in lack of employee's training & development will increase (0.277), one unit increase in lack of resources to support SCM practices will decrease (-0.037) and one unit increase in ineffective internal communication will increase (0.003) on the SCM performance of Sheraton Addis hotel.

Accordingly, standardized coefficients are called beta weights, given in the "beta" column. The beta weight measure how much the outcome variable increases (in standard deviations) when the predictor variable is increased by one standard deviation assuming other variables in the model are held constant. These are useful measures to rank the predictor variables based on their contribution (irrespective of sign) in explaining the outcome variable.

Hence in this case, environmental uncertainty (0.755 beta) is the highest contributing predictor to explain SCM performance, then lack of employee's training & development (0.312 beta), then lack of top management support & commitment (0.134 beta), then poor supply chain management performance (0.129 beta), then ineffective internal communication (0.004 beta), then lack of resources to support SCM practices (-0.053 beta), then weak Supply chain

relationships (-0.063 beta), and finally lack of supply chain collaboration (-0.343 beta).This indicates that all variables except environmental uncertainty insignificantly explain the variance of SCM performance of Sheraton Addis hotel.

The unstandardized coefficient of environmental uncertainty (X1) was 0.731 which is above zero. The t-statistics is 4.960 with p-value of 0.000 which is < 0.05. It showed that environmental uncertainty is significant to explain the variance in the hotel's SCM performance but not affect the SCM performance.

The multiple regression analysis resulted that among the challenges of SCM environmental uncertainty found to be challenge that would positively and significantly affects the SCM performance, while 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. Finally, ineffective internal communication, lack of employee's training & development, lack of top management support & commitment and poor supply chain management performance found to be positively but not significantly affect the supply chain performance.

Furthermore, the Beta Coefficients in the regression model proved that five of the independent variables had positive relationship with SCM performance of Sheraton Addis hotel while three of the independent variables had negative relationship.

4.7. Hypothesis test summary

Table 4.18. Hypothesis summary

Hypothesis result	P-value	Remark
Lack of supply chain collaboration negatively but insignificantly affects the supply chain performance of the hotel.	0.109	null hypothesis is accepted
Weak Supply chain relationships negatively but not significantly affects the supply chain performance of the hotel.	-0.341	null hypothesis is accepted
Lack of resources to support SCM practices negatively but not significantly affects the supply chain performance of the hotel.	0.826	null hypothesis is accepted
Environmental uncertainty positively and significantly affects the supply chain performance of the hotel.	0.000	null hypothesis is rejected
Poor supply chain management performance positively but not significantly affects the supply chain performance of the hotel.	0.496	null hypothesis is accepted
Lack of top management support & commitment positively but not significantly affects the supply chain performance of the hotel.	0.430	null hypothesis is accepted
Lack of employee's training & development positively but not significantly affects the supply chain performance of the hotel.	0.167	null hypothesis is accepted
Ineffective internal communication positively but not significantly affects the supply chain performance of the hotel.	0.983	null hypothesis is accepted

Source: Survey Data, 2020

4.8Rank Order Analysis of internal and external supply chain management challenges (Kendall's. Wallis Coefficient of Concordance model)

According to Kendall and Babington Smith (1939) Kendall's coefficient of concordance (W) is a measure that uses ranks to assess agreement between observers. The objective is to test the utility of Kendall's W for determining the level of agreement among the respondents. Kendall's W is always between 0 and 1**.** If the value of W = 0 it is perfect disagreement where as if the value of W = 1 it indicate that there is perfect agreement among the respondents. (Ruben G. Van den Berg. 2019).

The researcher used kendall's w coefficient of concordance model to rank the internal and external supply chain management challenges as the least to the most severe challenges affecting the supply chain management performance.

Table 4. 19 Kendall's W Test

Item N = (41)	Mean Rank	Rank
Environmental uncertainty	4.56	4th
Lack of supply chain collaboration	4.07	2nd
Weak Supply chain relationships	4.59	5th
Poor supply chain management performance	4.71	7th
Lack of top management support & commitment	4.26	3rd
Lack of employee's training & development	4.62	6th
Lack of resources to support SCM practices	4.00	1st
Ineffective internal communication	5.20	8th

Source: Survey Data, 2020

Table 4.20 Kendall's W Test

Test Statistics	
N	41
Kendall's W[a]	.028
Chi-Square	8.142
df	7
Asymp. Sig.	.320
a. Kendall's Coefficient of Concordance	

Source: Survey Data, 2020

As table 4.19 Showed based on the result of Kendall's w coefficient of concordance model the least challenge that affects the supply chain management performance was found to be; lack of resources to support SCM practices (mean rank 4.0) followed by lack of supply chain collaboration (mean rank 4.07), lack of top management support & commitment (mean rank 4.26), environmental uncertainty (mean rank 4.56), weak Supply chain relationships (mean rank 4.59), lack of employee's training & development (mean rank 4.62), poor supply chain management performance (mean rank 4.71) and finally ineffective internal communication

(mean rank 5.20). Found to be the most severe challenge that affects the supply chain management performance of the Sheraton Addis hotel. In conclusion, using Kendall's coefficients model the top three supply chain management challenges are ineffective internal communication, followed by poor supply chain management performance and lack of employee's training & development.

Table 4.20 also clearly depicted that Kendall's W value = 0.03 with p- value > 0.05. It means that the respondents almost perfectly disagree with each other to super high extent.

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, recommendations and suggestions for future research.

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 the Sheraton Addis hotel from different dimensions.

The findings of the study indicated that there is above average level of supply chain management practice in Sheratons Addis hotel 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 internal and external challenges affect the supply chain performance of the hotel and summary of the findings presented hereunder.

Among the SCM practice of the hotel, the most frequently used SCM practice was customer relationship management practice (mean 4.20, very influential), then strategic supplier partnership practices (mean 4.03), then supply chain integration practice (mean 3.96) and finally information sharing practices (mean 3.93). The results clearly indicated that Sheraton Addis has been doing very well on customer relationship management practices, but less emphasis was given to information sharing practices. In general, based on the average group mean result (mean 4.03) the SCM practice of Sheraton Addis hotel is influential or very good.

Similarly, the SCM performance of Sheraton Addis Hotel was assessed using; product quality, customer responsiveness, delivery dependability and operational flexibility parameters and product quality (mean 4.26, very influential) found to be the highest followed by customer responsiveness (mean 4.03), delivery dependability (mean 4.02) and operational flexibility (mean 4.01). This implies that Sheraton Hotel has excellent supply chain performance from the dimensions of product quality and relatively very good at operational flexibility. On the whole, based on the average grand mean result (mean 4.085) the SCM performance of Sheraton Addis hotel found to be influential or very good.

Among factors affecting SCM performance environmental uncertainty found to be positively and significantly affects the supply chain management performance while 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. Finally, ineffective internal communication, lack of employee's training & development, lack of top management support & commitment and poor supply chain management performance found to be positively but not significantly affect the supply chain performance.

Regarding the correlation analysis result, it is confirmed that there is moderate positive correlation between three of the factors affecting the supply chain management (Environmental uncertainty, lack of resources to support SCM practices and lack of supply chain collaboration) and supply chain management Performance (responsiveness, product quality, delivery dependability and flexibility). whereas, the rest of five factors (weak supply chain relationships, poor supply chain management performance, lack of employee's training & development, ineffective internal communication and lack of top management support & commitment) have

weak but positive correlation with the supply chain management performance of Sheraton Addis hotel.

In addition to that findings of the study also showed that there is weak, positive and a significant correlation between aggregated factors affecting the supply chain management (SCM Challenges) and supply chain management Performance of Sheraton Addis Hotel ($r = 0.395$, $p<0.05$).

According to Kendall's coefficients model result the top three supply chain management challenges found to be ineffective internal communication, followed by poor supply chain management performance and lack of employee's training & development.

These are useful measures to rank the independent variables based on their contribution in explaining the outcome variable. Hence in this case, environmental uncertainty (0.755 beta) is the highest contributing independent variable to explain SCM performance, then lack of employee's training & development (0.312 beta), then lack of top management support & commitment (0.134 beta), then poor supply chain management performance (0.129 beta), then ineffective internal communication (0.004 beta), then lack of resources to support SCM practices (-0.053 beta), then weak Supply chain relationships (-0.063 beta), and finally lack of supply chain collaboration (-0.343 beta).This indicates that all variables except environmental uncertainty insignificantly explain the variance of SCM performance of Sheraton Addis hotel.

The multiple regression analysis resulted that among the challenges of SCM environmental uncertainty found to be challenge that would positively and significantly affects the SCM performance, while 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. Furthermore, the Beta Coefficients in the regression model

prove that five of the independent variables had positive relationship with SCM performance of Sheraton Addis hotel while three of the independent variables had negative relationship.

5.2. Conclusions

The main objective of the study was to assess the practice, identify the main internal and external challenges and measure the SCM performance of Sheraton Addis hotel and the following conclusions are given based on the summary of findings.

To assess the SCM practices of the hotel the researcher used the four SCM practice dimensions (strategic supplier partnership, customer relationship, information sharing & quality of information and supply chain integration) and found that all the variables accounted a grand mean value of 4.03.The result also clearly indicated that Sheraton Addis has been doing very well on customer relationship management practices, but moderately less emphasis was given to information sharing practices.

In conclusion, based on the average grand mean results of the study, it can be concluded that Sheraton Addis has a very good SCM practice.

To measure the SCM performance of the hotel four dimensions (Supply chain performance from the dimensions of product quality, delivery dependability, operational flexibility and customer responsiveness) were used. Among the four dimensions the most frequently used SCM performance was supply chain performance from the dimensions of product quality, then supply chain performance from the dimensions of customer responsiveness, then supply chain performance from the dimensions of delivery dependability or speed and finally supply chain performance from the dimensions of operational flexibility. This implies that Sheraton has high or very good supply chain performance from the dimensions of product quality and relatively less supply chain performance from the dimensions of operational flexibility.

On the whole, based on the average group mean result (mean 4.085) the SCM performance of Sheraton Addis hotel was found to be influential or very good.

To identify which of the independent variable (internal and external challenges) has contributed significantly to our understanding of the dependent variable (SCM performance) and to see clearly the effect of internal and external challenges of SCM on performance multiple regression analysis was conducted and it resulted that among the challenges of SCM environmental uncertainty found to be challenge that would positively and significantly affects the SCM performance, while 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. Finally, ineffective internal communication, lack of employee's training & development, lack of top management support & commitment and poor supply chain management performance found to be positively but not significantly affect the supply chain 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 hotel.

- Regarding SCM practices of Sheraton hotel 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 the hotel so as to have effective communication and better decisions.
- Regarding SCM performance of Sheraton Addis hotel 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 hotel industry.

5.4. Suggestions for future research

It goes without saying that more research has to be done on supply chain management practices, challenges and performance particularly in the hotel industry as most of the research focused on other business fields than the hotel industry. 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. It is also highly suggested to conduct more research in many hotels by including large number of respondent in the study to increase the accuracy of the results and also so as to have a better understanding and result regarding the practice, challenges and performance of supply chain management in the hotel industry.

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ANNEX I: Questionnaire of the Survey

QUESTIONNAIRE

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

MASTERS OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Dear respondents, this questionnaire is designed to collect data from Sheraton Addis hotel associates, data related to the supply chain management practices, challenges and performance for the partial fulfillment of the MA Degree in Logistics and supply chain management from Addis Ababa University school of commerce. 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 items of the question very carefully.

Your Sincerely,

Biniyam Nigussie

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: 0911059353 or e-mail: bini2999*@yahoo.com*)

Thank you for sacrificing your precious time in advance!

PART I:
Demographic Information:

Q1. Sex 1) Male ☐ 2) Female ☐

Q2. Age 1)Below 25 ☐2) 26 - 35 ☐ 3)36 - 45 ☐ 4) Above 45 ☐

Q3. Educational Qualification:

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

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

Q4. Job title:

1) CEO/President /Vice President ☐ 2) Director ☐ 3) Manager ☐ 4) Other ☐

Q5.Years stayed at the organization:

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

Q6. Your department/work unit:

1) Purchasing department ☐ 2) Cost control ☐ 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	**Strategic Supplier Partnership Practices**	1	2	3	4	5
A1	Sheraton Addis has strategic supplier partnership to its main suppliers.					
A2	Sheraton regularly solves problems jointly with its suppliers.					
A3	Sheraton has been using strategic supplier partnership to leverage its strategic and operational capabilities.					
A4	Sheraton has continuous improvement programs that include key suppliers.					
A5	Sheraton frequently interacts with suppliers to set reliability responsiveness, and other standards for itself.					
A6	There is long-term partnership agreement between Sheraton and its suppliers to increase the intensity of firm-supplier integration.					
A7	Sheraton encourages mutual planning and problem solving efforts with the suppliers.					
A8	Sheraton facilitates supplier's ability to seek assistance from itself.					
A9	Sheraton evaluates the importance of its relationship with the suppliers.					
B	**Customer Relationship Management Practice**	1	2	3	4	5
B1	Sheraton has documented procedures to deal with customer complaints.					
B2	Sheraton regularly gets feedback from customers.					
B3	Sheraton use customer relationship to build long-term relationships with customers and improving customer satisfaction.					
B4	Sheraton frequently measure and assess satisfaction of its customers.					
B5	Sheraton takes customer relationship as an important input to differentiate its					
B6	Customer relationship is recognized as an internal component of Sheraton's marketing strategy to increase sales and profits.					
B7	Sheraton periodically evaluates the importance of its relationship with its customers.					
B8	Sheraton frequently evaluates the formal and informal complaints of its customers.					

C	**Information Sharing Practices**	1	2	3	4	5
C1	Sheraton has developed the policy to guide the information sharing within and outside the organization.					
C2	Sheraton view information as a strategic asset and ensure that it flows with minimum delay and distortion so as to achieve customer satisfaction.					
C3	Production and delivery schedules to Sheraton are shared across its supply chain.					
C4	Sheraton shares its business unit's proprietary information with its trading partners.					
C5	Trading partners of Sheraton hotel share proprietary information with the hotel.					
C6	Sheraton communicate its trading partners about changes in advance.					
C7	Sheraton's trading partners keep Sheraton fully informed about issues that affects its business.					
C8	Information sharing with business partners enables Sheraton to make better decisions and action on the basis of greater visibility.					
C9	Sheraton's trading partners exchange information on important business practices with Sheraton.					
C10	Sheraton and its suppliers exchange information that helps in establishment of business planning.					
D	**Supply chain integration practice**	1	2	3	4	5
D1	Departments at Sheraton collaborate with the company development programs.					
D2	Sheraton utilizes periodic interdepartmental meetings among internal functions.					
D3	In Sheraton there is high level of data integration among internal functions of the					
D4	In Sheraton there is quick ordering system with major suppliers.					
D5	Sheraton has effective communications with suppliers on research activities and new service development.					
D6	Sheraton and its suppliers share technical information with each other if required.					
D7	Sheraton has high level of linkage with customers through information networks.					
D8	Sheraton has a systematic way to constantly measure customer satisfaction.					
D9	There are integration of objectives, planning, and resources between Sheraton and external organizations.					
D10	Distribution and delivery is made at the right time and place due to external					

	supply chain integration, information sharing and coordination.					
D11	Sheraton has the capability to measure supply chain performance in terms of impact on its business profit.					
D12	Performance measurement data across supply chain partners of Sheraton is available on a timeline basis.					
E	**External factors(challenges) affecting supply chain management performance**	1	2	3	4	5
E1	Environmental uncertainty reduces the delivery dependability of Sheraton Addis hotel's supply chain management performance.					
E2	Environmental uncertainty reduces the product quality of Sheraton Addis hotel's supply chain management performance.					
E3	Environmental uncertainty reduces the operational flexibility of Sheraton Addis hotel's supply chain management performance.					
E4	Environmental uncertainty reduces the customer responsiveness of Sheraton Addis hotel's supply chain management performance.					
E5	Lack of supply chain collaboration among supply chain partners reduces the delivery dependability of Sheraton Addis hotel's supply chain management performance.					
E6	Lack of supply chain collaboration among supply chain partners reduces the product quality of Sheraton Addis hotel's supply chain management performance.					
E7	Lack of supply chain collaboration among supply chain partners reduces the operational flexibility of Sheraton Addis hotel's supply chain management performance.					
E8	Lack of supply chain collaboration among supply chain partners reduces the customer responsiveness of Sheraton Addis hotel's supply chain management performance.					
E9	Weak Supply chain relationship reduces the delivery dependability of Sheraton Addis hotel's supply chain management performance.					
E10	Weak Supply chain relationship reduces the product quality of Sheraton Addis hotel's supply chain management performance.					
E11	Weak Supply chain relationship reduces the operational flexibility of Sheraton Addis hotel's supply chain management performance.					
E12	Weak Supply chain relationship reduces the customer responsiveness of Sheraton					

	Addis hotel supply chain management performance.					
E13	Poor supply chain management performance reduces the delivery dependability of Sheraton Addis hotel's supply chain management performance.					
E14	Poor supply chain management performance reduces the product quality of Sheraton Addis hotel's supply chain management performance.					
E15	Poor supply chain management performance reduces the operational flexibility of Sheraton Addis hotel's supply chain management performance.					
E16	Poor supply chain management performance reduces the customer responsiveness of Sheraton Addis hotel supply chain management performance.					
F	**Internal factors/ challenges/ affecting supply chain management performance**	1	2	3	4	5
F1	Lack of top management support & commitment reduces the delivery dependability of the hotel's supply chain management performance.					
F2	Lack of top management support & commitment reduces the product quality of the hotel's supply chain management performance.					
F3	Lack of top management support & commitment reduces the operational flexibility of the hotel's supply chain management performance.					
F4	Lack of top management support & commitment reduces the customer responsiveness of the hotel's supply chain management performance.					
F5	Lack of employee's training & development reduces the operational flexibility of the hotel's supply chain management performance.					
F6	Lack of employee's training & development reduces the delivery dependability of the hotel's supply chain management performance.					
F7	Lack of employee's training & development reduces the product quality of the hotel's supply chain management performance.					
F8	Lack of employee's training & development reduces the customer responsiveness of the hotel's supply chain management performance.					
F9	Lack of resources to support Supply chain management practices reduces the operational flexibility of the hotel's supply chain management performance.					
F10	Lack of resources to support Supply chain management practices reduces the delivery dependability of the hotel's supply chain management performance.					
F11	Lack of resources to support Supply chain management practices reduces the					

	product quality of the hotel's supply chain management performance.					
F12	Lack of resources to support Supply chain management practices reduces the customer responsiveness of the hotel's supply chain management performance.					
F13	Ineffective internal communication reduces the operational flexibility of the hotel's supply chain management performance.					
F14	Ineffective internal communication reduces the delivery dependability of the hotel's supply chain management performance.					
F15	Ineffective internal communication reduces the product quality of the hotel's supply chain management performance.					
F16	Ineffective internal communication reduces the customer responsiveness of the hotel's supply chain management performance.					
G	**Supply chain performance from the dimensions of product quality**	1	2	3	4	5
G1	Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through maintaining strategic supplier partnership.					
G2	Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference by using supply chain integration.					
G3	Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and					
G4	Sheraton Addis hotel provides quality products and service which meets its customer's cultural difference, value difference, and their test and preference difference through building a good customer relationship.					
H	**Supply chain performance from the dimensions of delivery dependability(speed)**	1	2	3	4	5
H1	Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining strategic supplier partnership.					
H2	Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitorsby sharing quality of information to its partners.					
H3	Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintain supply					

	chain integration.					
H4	Sheraton Addis hotel provides delivery dependable service which delivers products and services faster than competitors through maintaining customer relationship.					
J	**Supply chain performance from the dimensions of operational flexibility**	1	2	3	4	5
J1	Sheraton Addis hotel is flexible in terms of its strategic supplier partnership practices to accommodate the unseen volatile demand and supply condition.					
J2	Sheraton Addis hotel is flexible in terms of its customer relationship to attract more customers, make them loyal and to coup up with the ever changing demand of customers.					
J3	Sheraton Addis hotel is flexible in terms of sharing quality of information to its partners to achieve an integrated and coordinated supply chain.					
J4	Sheraton Addis hotel is flexible in terms of its supply chain integration to elevate the linkages within each component of the chain.					
K	**Supply chain performance from the dimensions of customer responsiveness**	1	2	3	4	5
K1	Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and their test and preference difference through maintaining strategic supplier partnership.					
K2	Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and build long-term relationships with customers through maintaining customer relationship.					
K3	Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and make decision on the basis of greater visibility by sharing quality of information.					
K4	Sheraton Addis hotel provides customer responsive service which meets customers with their rightful needs at the right time and elevate the linkages within each component of the chain through maintaining supply chain integration.					

ANNEX II: Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.818	9

Reliability Test Results for strategic Supplier partnership.

Reliability Statistics	
Cronbach's Alpha	N of Items
.745	8

Reliability Test Results for customer Relationship.

Reliability Statistics	
Cronbach's Alpha	N of Items
.814	10

Reliability Test Results for information Sharing & Quality of information.

Reliability Statistics	
Cronbach's Alpha	N of Items
.764	12

Reliability Test Results for Supply chain integration.

Reliability Statistics	
Cronbach's Alpha	N of Items
.882	16

Reliability Test Results for external factors (challenges) affecting supply chain management performance.

Reliability Statistics	
Cronbach's Alpha	N of Items
.896	16

Reliability Test Results for internal factors/ challenges/ affecting supply chain management performance.

Reliability Statistics	
Cronbach's Alpha	N of Items
.829	4

Reliability Test Results for Supply chain performance from the dimensions of product quality.

Reliability Statistics	
Cronbach's Alpha	N of Items
.725	4

Reliability Test Results for Supply chain performance from the dimensions of delivery dependability (speed)

Reliability Statistics	
Cronbach's Alpha	N of Items
.725	4

Reliability Test Results for Supply chain performance from the dimensions of operational flexibility.

Reliability Statistics	
Cronbach's Alpha	N of Items
.741	4

Reliability Test Results for Supply chain performance from the dimensions of customer responsiveness.

ANNEX III: Plagiarism check result

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