ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLEGE OF COMMERCE

ASSESMENT OF FACTORS AFFECTING IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT PRACTICES IN INTERNATIONALNON-GOVERNEMTAL ORGANIZATIONs (NGOs) IN ETHIOPIA: THE CASE OF WORLD VISION ETHIOPIA

Dagmawit Asfaw Tafese

June, 2018

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By Dagmawit Asfaw Tafese

Advisor: Fisseha Afework (Asst. Professor)

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Thesis Approval Sheet

As a member of the board of Examiners of Master of Art (M.A) thesis open defense examination, we have read and evaluated this thesis prepared by Mrs Dagmawit Asfaw Tafese entitled "**ASSESMENT OF FACTORS AFFECTING IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT PRACTICES IN INTERNATIONALNON-GOVERNEMTAL ORGANIZATIONs (NGOs) IN ETHIOPIA: The case of World Vision Ethiopia**" We hereby certify that, the thesis is accepted for fulfilling the requirements for the award of the degree of Master of Art (M.A) in "Logistic and Supply Chain Management"

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Declaration

This is to certify that this thesis entitled "**ASSESMENT OF FACTORS AFFECTING IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT PRACTICES IN INTERNATIONALNON-GOVERNEMTAL ORGANIZATIONs (NGOs) IN ETHIOPIA: The case of World Vision Ethiopia"** submitted in partial fulfillment of the requirements for the award of the degree of Master of Art in "**Logistic and Supply Chain Management"** to the Graduate Program of College of Commerce, Addis Ababa University by Mrs **Dagmawit Asfaw Tafese** (ID. No GSE/0126/08) is an authentic carried by her under our guidance the matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of our knowledge and belief.

Name of the student

Dagmawit Asfaw Tafese

Signature and date: _____

Name of the Supervisor

Fesseha Afework (Asst. Professor)

Signature and date: _____

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Abstract

Supply chain management practices, like the use of information technology and decision making structures, along with information sharing, collaboration and stakeholders' integration, have allowed many industries to improve their supply chain by decreasing inefficiencies, improving service, and cutting costs of operating. Nevertheless, despite the well-documented indication of significant competitive advantage and cost decrease resulting from supply chain management practices, there is little known regarding the effect of supply chain management practices implementation in international NGOs in Ethiopia. Consequently, this study wanted to assess the influence of implementation of supply chain management practices in NGOs in Ethiopia. This study engaged descriptive survey design. The target population of this study comprised of all the 111 employees in the management level of the operation and Program divisions in Addis Ababa head office as identified from the human resources department. Because of the limited numbers of targets, the researcher used a census and sent out a questionnaire to all of them. The primary data was collected from WVE staffs at the management level using a self-administered semi structured questionnaire. The quantitative data collected was analyzed using descriptive statistics such as frequency, percentages, mean and standard deviation using Statistical Package for the Social Science (SPSS) version 20 to assess the relative importance of each of the five variables with respect to implementation of supply chain management practices in international NGOs in Ethiopia. The findings were then presented using frequency tables and graphs. Based on the research findings the study observed that human capital efficiency, Inventory management, management support and information sharing and communication strategy affects the implementation of SCM practices WVE. The study recommends that in order to improve on the level of human capital efficiency on SCM, managers of NGOs should recruit and continuously train SCM staff on how to improve on the efficiency of procurement functions, recruit competent staff with Knowledge and Skills on SCM functions and continuously train employees' on professional ethical practices. In relation to inventory management the managers in NGOs should ensure that inventory is properly managed, qualified employees with proper skills should be hired to manage inventory. Finally the study recommends that information gathering and processing should be improved in the implementation of SCM implementation in World Vision Ethiopia.

Keywords: *Supply chain management, information sharing, stakeholders' integration*

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List of Abbreviations

ADPs	**Area Development Programs**
CSCM	**Commercial supply chain management**
ECR	**Efficient Customer response**
EDI	**Electronic Data Interchange**
EMS	**Executive/ Management Support**
EVP	**Ethical value and principle**
HCE	**Human capital efficiency**
HR	**Human Resource**
HRM	**Human Resource Management**
HSC	**Human supply chain**
HSCM	**Humanitarian supply chain management**
ICT	**Information communication technology**
IM	**Inventory Management**
ISCS	**Information Sharing/Communication Strategy**
IT	**Information technology**
JIT	**Just in time**
NGO	**Non-government Organization**
QR	**quick response**
QRM	**Quick response manufacturing**
RBV	**Resource based view**
RFID	**Radio Frequency identification**
SC	**Supply chain**
SCM	**Supply Chain Management**
SME	**Small and Medium Enterprise**
SPSS	**Statistical Package for the Social Science**
UK	**United Kingdom**
UNICEF	**United nation Children's Fund**
VMI	**Vendor Management Inventory**
WHO	**World Health Organization**
WVE	**World Vision Ethiopia**

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CHAPTER ONE

INTORUDCTION

1.1 Background

In today's global economy, organizations are faced with a variety of changes in the business environment (McIvor, R. 2000). Supply chain management deals with growth of multinational corporations and strategic partnerships; global expansion and sourcing and environmental concerns. Owing to these emerging issues in the internal and external environment of organizations, supply chain management is the most critical discipline in the world today (Chopra, S. 2007).

As stated by (Ganeshan and Harrison, 1995) a 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 as cited by (Matiwos Ensermu,2013, pp.5). The ultimate goal of any supply chain is to deliver the right supplies in the right quantities to the right locations at the right time. Humanitarian supply chain management is applicable within societal settings, including medical missions; disaster relief operations and other kinds of emergencies and it helps improve quality of life.

Giulia S. et al. (1998), defined performance as the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. According to Heasip et al. (2004), supply chain performance is the entire chain's ability to meet end customer needs through product availability, responsive, on-time delivery and flexible as cited by (Jane Kiende Kinyua, 2013). The performance of a supply chain depends on how its members coordinate their decisions. Sharing information is the most basic form of coordination especially in the today's globalized environment. Increased globalization and competition has made SCM a very important and critical issue for any company if they have to deliver quality and timely services and products to their customers. SCM ensures that organizations get the right things to the right places at the right time thereby creating time and place utility (Watcharavee Chandraprakaikul, 1997). The SC performance characteristics with the greatest value in a supply chain are accuracy, responsiveness, cooperation, on time complete deliveries, reduction of inventory and mutual continuous improvement (Bonney, 2003).

The Oxford Dictionary defines challenges as a new or difficult task that tests somebody's ability and skill. Some of the challenges facing human beings include man-made and natural calamities, diseases, poverty, war, crimes, insecurity and poor

governance. The term challenge in this context is used to refer to the barriers that hinder effectiveness of supply chain management in the humanitarian sector. In humanitarian supply chain environment humanitarian staff often has to confront with many stakeholders, including large number of donors, the media, government, the military and the final beneficiaries (Tomasini and van Wassenhove, 2004). Interconnected or interlinked networks and node businesses are involved in the provision of products and services required by end customers in a supply chain. Lack of coordination among humanitarian organizations at the scene of a disaster is ordinary, as there can be as many as several hundred humanitarian organizations at the scene to carry out relief operations, all with different political agenda, ideologies and religious beliefs and all fighting for media and donor attention (Van Wassenhove, 2006). Oloruntoba and Gray (2005), posits that the humanitarian supply chain often entails high level of uncertainty in terms of demands, supplies and assessments. Logisticians are often frustrated by the need to operate in volatile environment. The performance management particularly the performance of supply chain is equally a challenge for humanitarian organizations. As clearly stated by Kunz and Reiner (2011), the humanitarian supply chain factors categorized as socio-economic situational factors, environmental situational factors, funding status, government situational factors, organizational factors and supply chain decision as cited by (Jane Kiende Kinyua, 2013). As stated by (Graham E. Heaslip, 2012), the primary objective of humanitarian aid organizations is to save lives, alleviate suffering and maintain human dignity during and in the aftermath of man-made crises and natural disasters, as well as to prevent and strengthen preparedness for the occurrence of such situations as quoted by (Peter Nyandega Agwata, 2014:6).

1.1.1 Background of World Vision

World Vision is an international Christian relief and development organization founded in 1950 and presently operating in over 100 countries. World Vision began its ministry in Ethiopia in the early 1970s and opened a national office in Addis Ababa in 1975. World Vision operated emergency response programmes during the 1984 famine, followed by a period of rehabilitation (1986-87) and a self-review that came up with the concept of Area Development Programmes (ADPs) as a model. World Vision Ethiopia has grown to become one of the biggest humanitarian or non-governmental and development organizations in Ethiopia. From the 1990s onwards, the integrated development approach of WV's ADP has ensured empowering, sustainable and transformational development across the nation. WV is currently delivering change for children though the 63 ADPs and a number of emergency and

humanitarian responses, in partnership with the government, community, faith-based organizations and other stakeholders throughout Ethiopia.

World Vision Ethiopia has provided over $1 billion over 40 years to support relief and development in the country. World Vision in general is what it is now because of a worldwide staff of more than 40,000, assisting approximately 100 million people in nearly 100 countries throughout Africa, Eastern Europe, the Middle East, Asia and the Americas. World Vision requires exceptional performance from its employees to accomplish this work. WV Ethiopia's 2016-2020 strategy outlines its continued commitments and aspirations toward child wellbeing. It is based on WV Ethiopia's accumulated experience over the last 40 years that have brought a meaningful and positive change in the lives of children and their communities. All national programs will align and contribute to the strategy goals as these will be cascaded down as Divisions, Departments, Cluster Programs and APs set their priorities.

1.2 Statement of the Problem

The effectiveness of the organizational performance depends, among other things, on the proper implementation of supply chain management practices. Humanitarian or Non-governmental organizations (NGOs) worldwide, like many other companies, are often times faced with the challenge of managing their supply chains with dwindling financial resources, a lack of expertise, and insufficient personnel. Most of these organizations are surprised to learn that use of best practices in procurement processes can actually help them operate more efficiently while reducing their operating costs by as much as 60%. An efficient but flexible NGO relief supply chains is the key subject in disaster relief (Kovác & Spens, 2007).

World Vision (WV) is a leading organization in the world providing emergency and hunger relief, long-term community development programs, agricultural development assistance and leadership training. World Vision is what it is now because of a worldwide staff of more than 40,000 assisting approximately 100 million people in nearly 100 countries throughout Africa, Eastern Europe, the Middle East, Asia and the Americas. Implementation of supply chain management practices in World Vision, just like some other international organizations, is still a key challenge regardless of the rising attention being paid by all modern enterprises to supply chain management practices globally. Munguti (2013) speculated that most of the NGOs used numerous supply chain activities such as collaboration with customers and beneficiaries and inventory optimization in their disaster response operations. Nevertheless, according to Thakkar et al (2012), supply chain management issues are more expansively explored in the context of large enterprises but less attention is paid to international NGOs. Additionally, Mohamed (2012) maintained that there

are various SCM practices prevalent among NGO's in Ethiopia although a bigger percentage of the Supply Chain Management practices have not been effectively implemented among the NGOs in Ethiopia.

There has been a rise in complaints by the public, professionals and other stakeholder's about the supply chain management performance within the Non-Governmental organizations in Ethiopia. The opinion of many is that supply chain management within the institutions weigh below the stakeholders' expectations (Campbell & Jones, 2011). In recent years, humanitarians have come under immense pressure from the donors, pledging millions in aid and goods, to prove that they are meeting their objectives in the most efficient and effective way. Eighty percent of NGO's operations is spent on logistics and Supply Chain Management (SCM). Supply chain challenges faced therefore worsen humanitarian operations creating a lot of uncertainty among NGOs (Kimani, 2013).

Ineffective SCM systems have led to numerous negative consequences particularly to the beneficiaries as documented by various studies conducted on humanitarian Supply Chain management. Orukoh (2009) in his study found poor collaboration consequence in the goods and services not reaching the targeted beneficiaries in the right quality, time and the specifications. Richard and Gray (2009) study on customer service in emergency relief chain concluded that lack of understanding of numerous standpoints of the customer would lead in the beneficiaries getting goods and services which are not need based.

The complexity of Supply chains management practices has amplified in the last decade among NGOs as different processes, actors, decisions and information have to be mixed to serve the needs of the victims affected by a disaster. The necessity to enhance delivery in humanitarian aid has recently received increased attention due to the perceived failure in aid delivery systems following major crises resulting in loss of life and huge resource wastage (Abdifatah, 2013).

Even though there has been a great effort to enhance efficiency, NGOs systems are composed by a series of phases in which materials and information flow through different steps to fulfill the needs of the recipient (Ketchen, 2008). Trying to manage complexity of supply chains in an unsystematic, piecemeal and non-strategic way has resulted in sub optical outcomes, waste of resources and loss of lives hence the effective planning of emergency, the management of supply chains in times of crisis is required in minimizing complexities in the supply chain to address and implement better responses (Tomasini & Wassenhove, 2009).

In implementing SCM process in a relief situation, NGOs are guided by donor requirement, the organization's procurement policies and national laws. However, these guidelines are rarely followed during disasters. This is because managers coordinating logistics, during relief efforts, are often overwhelmed to deliver goods and services needed at

the shortest time possible. Failure to do so can result in the loss of life and resources. By doing this, organization in most cases, do not achieve their objectives of ensuring value for money, achieving efficiency and effectiveness, ensuring fair competition among suppliers, and ensuring accountability, transparency and ethics. This creates problems in the organization especially with donors who at time may disallow some expenses incurred or withdraw funding completely. Until recently, humanitarian SCM has not been given the proper attention needed and logistic skills remain underdeveloped (Wanssenhove, 2011). In addition, the donor organizations do not understand the challenges faced and often penalize the relief organizations for not adhering to set guidelines.

Despite SCM become central in NGO operation, previous studies in this field Miyare, 2014; Barua, 2013; Benita, 2008; Mungatia, 2012; and Ndambuki, 2013) have held on the relationship between SCM and performance of numerous industries and little has been done on the assessment of factors affecting the proper application of SCM practices in the NGOs environment. World Vision Ethiopia has supply chain department which is responsible for handling the flow of materials (product and services) from the point of origin to the beneficiaries. It comprises Logistics, Procurement and contract administration. Logistics manages Warehouse, Fleet and inventory management. The procurement team main team is sourcing and buying goods and various services. Contracts administration handles construction services. Although the head office SCM department has 30 professional staffs and 20 support staffs or drivers, all of the above mentioned activities are being handled by a two support service staff and three support staffs or drivers at the branch offices. In addition to the national level strategy document, the SCM department been guided by its donor and international office guideline.

Although WVE has been implementing SCM practices for a long time, no research has been done for assessing its proper implementation. Until recent time, most of the professionals or human resources of the department were being transferred from another department without having proper academic background. The SCM staffs are not properly capacitated with the current knowledge of the SCM practices. It does not have proper Inventory management. Whenever there is a new request, there is no way to check whether there is in stock or not. As a humanitarian organization playing a great role addressing beneficiaries need comparing to its strategic importance, the SCM department is not getting enough backing or support from the executives and management bodies. Although the SCM practice requests the flow of materials to be handled from the origin to the beneficiary and vice versa, there is no information back to the SCM department whether the materials reach to the beneficiary or not. The SCM team responsibility is only until the material reaches to the requester not to the actual beneficiary. All of these gaps in the application of the

application or implementation of the SCM practice should be studied to understand the effect of these factors for the effectiveness of the SCM. Accordingly, the central question of this research is to what extent do the selected factors affect the implementation of supply chain management in WVE? .The selected factors are Human capital efficiency, Inventory management, Executive/management support, and Information sharing / communication strategy. In the perspective of these factors, the study also assessed the five years trend of the implementation of key supply chain management practices in WVE.

1.3 Research Questions

The study pursued answers to the following questions:

1. What is the effect of human capital efficiency on effective implementation of supply chain management practices in NGOs in Ethiopia?
2. What is the influence of inventory management on effective implementation of supply chain management practices in NGOs in Ethiopia?
3. What is the effect of management support to effective implementation of supply chain management practices in NGOs in Ethiopia?
4. What is the influence of information sharing/ communication to effective implementation of supply chain management practices in NGOs in Ethiopia?

1.4 Research Objective

The general objective of this study is to conduct an assessment of factors affecting implementation of supply chain management practices in World Vision Ethiopia.

1.4.1 Specific Objective

The specific objectives of this study are;

1. To assess the influence of human capital efficiency on implementation of supply chain management in NGOs in Ethiopia.
2. To understand the influence of inventory management on implementation of supply chain management in NGOs in Ethiopia
3. To assess the effect of management support to implementation of supply chain management practices in NGOs in Ethiopia?
4. To study the influence of information sharing/ communication strategy on effective implementation of supply chain management practices in NGOs in Ethiopia

1.5 Significance of the Study

The findings of this study will allow managers and other decision makers to make decisions that will enhance service delivery in World Vision Ethiopia and other NGOs in

Ethiopia. The study can be of great importance to procurement managers and operation director in World Vision Ethiopia and other similar NGOs in Ethiopia as the study findings can provide a guiding framework for the implementation of supply chain management practices. The research can also be helpful to academicians and scholars who do research on supply chain management practices and service delivery in NGOs. Supply chain managers may employ the result of this study to formulate a more responsive supply chain.

1.6 Scope of the Study

Even though supply chain management practice is applicable in all types of organization regardless of its size, nature and goal, this study will focus on the assessment of factors affecting implementation of supply chain management practices in NGOs in Ethiopia by taking the factors that influences the implementation of SCM practices (human capital efficiency, information sharing/ communication strategy, inventory management and management/ executive support. For its manageability, the research limited itself to the study of supply chain practice at the national and branch offices of World Vision Ethiopia.

1.7 Definition of Terms

Human capital efficiency: A collection of resources; all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively by individuals in a population (Akintoye, McIntosh & Fitzgerald, 2010).

Information Sharing/ Communication strategy: Channels used in communication and sharing information within the organization (Burns, 2012).

Inventory Management: Activities employed in maintaining the optimum number or amount of each inventory item (Laundry, 2010).

Supply Chain Management: The duty of integrating organizational units along a supply chain and coordinating flows to satisfy customer needs with the aim of improving competitiveness of the supply chain as a whole (Adebayo, 2012).

1.8 Organization of the Research

This research report result will be organized into five chapters. The First Chapter already discussed the background, the problem statement that relate to the research, the research questions, and scope of the research. In the second chapter, literature reviews will include the theoretical, empirical and conceptual framework of the study. Chapter Three describes the research methodology that this study has followed while the findings are discussed in the Fourth Chapter. Finally, in Chapter Five discussion, conclusion and recommendations along with the future research directions are forwarded.

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1 Introduction

This chapter involves systematic identification, location and analysis of documents containing information related to the study. Literature review makes it possible for the researcher to come up with a clear and extensive study. It involves evaluation of any already existing literature related to the study to identify gaps in the previous studies.

2.2 Theoretical Review

This section discusses theories and models on which the study is anchored. Specifically, the partnership model, resource based view and the contingency theory are discussed.

2.2.1 Partnership Model

Partnership model offers a partial foundation for a theoretical framework of ethics in SCM (SCM-ethics). The model comprises four levels of commitment to ethical values and Principles (EVP), namely: ethical culture, to and from staff and shareholders, ethical organizational artifacts, and ethics in the marketplace. The partnership model stresses the importance of companies' commitment to EVP. This model and a pre-study have been used as inspiration to outline different orientations of SCM-ethics (Wood's, 2012). Four alignments of SCM-ethics may be distinguished derived from the relationships of organizations, the market place, the industry, and the society. They are based upon two mechanisms (union and connection), all of which apply to both upstream and downstream directions of corporate behavior and business operations (Rhee & Lee, 2010).

A vertical union strains the EVP in business behavior and business operations in supply chains from the point of-origin to the point-of-consumption, while the horizontal union stresses the EVP in corporate behavior and business operations in the resemblance between supply chains or outside supply chains (Matyusz, 2012). The direct connection of corporate behavior and business operations highlight the EVP in isolation, whereas the indirect connection of corporate behavior and business operations accentuate the EVP in sequence between supply chains or outside supply chains. All in all, four distinctive orientations of SCM-ethics may be distinguished (Wood's, 2012).

Relationship orientation is the vertical unions between EVP of corporate behavior and business activities (inside a supply chain), but it is limited to direct connections to others EVP in supply chains (either suppliers or customers). This is the most limited method of SCM-ethics. Essentially, it is limited to dyads such as buyer/seller relationships and

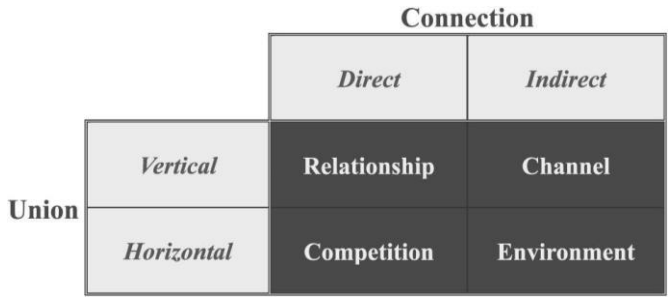
executive/ management support. The corporate alignment of SCM-ethics at this level is risky, as it only relies upon the atomistic features of EVP in a minor part of supply chains (Matyusz, 2012).

Channel orientation is also to the vertical unions between EVP of corporate behavior and business operations (i.e. inside a supply chain). It also includes indirect connections to other EVP in supply chains (i.e. either suppliers, customers' customers or beyond). This is an extended approach of SCM-ethics compared to the relationship orientation. It includes the whole supply chain from the point-of-origin to the point-of-consumption, all of which consist of the EVP of sequential or connected relationships. The corporate orientation of SCM-ethics at this level is rather sound, but it still neglects the conditions of EVP in the marketplace and society (Huang & Liu, 2014).

Competition (or comparative) orientation goes beyond vertical unions between corporate behavior and business operations towards horizontal unions of EVP (between supply chains). It comprises direct connections to EVP in other supply chains. This is a widened method of SCM ethics compared to relationship and channel orientations. It stresses the significance of EVP in the marketplace. It has also an emphasis on the EVP of competitors (Roy & Wilkinson, 2004).

Environment orientation refers to the horizontal unions between EVP of corporate behavior/business operations and the community through information sharing/communication strategy. It includes indirect connections to EVP in the society. This is the broadest tactic of SCM ethics compared to the previous orientations. It stresses the significance of EVP in the society at large. It also has an emphasis on the EVP of other industries and other marketplaces (Wood's, 2012).

Figure 1: Partnership Model



Source: Wood's (2012) P. 37.

2.2.2 Resource Based View Theory

Resource Based View (RBV) Theory explains that identification and ownership of internal strategic resources contributes to a firm's ability to create and uphold a competitive

advantage and improve SC performance (Shalakha, 2015). A resource is considered strategic if it meets certain criteria-valuable, non-substitutable, specific or rare and imitable to contribute to enhanced SC performance of the firm (Barney, 2012). Resources must be efficiently managed and exploited given the changing external situations that an organization faces in the competitive business environment (Lippman & Rumelt, 2003).

A resource-based view of a firm explains its ability to offer maintainable competitive advantage when resources are managed such that their results cannot be imitated by competitors, which eventually creates a competitive barricade (Mahoney & Pandian, 1992). Resource centered theory explains that a firm's sustainable competitive advantage is reached by virtue of exclusive resources being valuable, rare, non-tradable, inimitable, and non-substitutable, in addition to firm-specific (Barney, 2012). These authors write about the fact that a firm may reach an effective SCM through unique resources, which it possesses, and these resources cannot be easily transferred, bought, or copied, and simultaneously, they add value to a firm whereas being rare. It also high-points the fact that not all resources of a firm may add to a firm's effective SCM and therefore sustainable competitive advantage (Mahoney & Pandian, 1992).

Resource Based view offers the understanding that certain unique prevailing resources will result in superior SC performance and eventually build a competitive advantage. Sustainability of such an advantage will be determined by the ability of competitors to emulate such resources. Though, the current resources of a company may not be enough to facilitate the future market requirement, because of volatility of the contemporary markets. There is a significant need to adjust and develop resources such as human capital to encounter the future market competition. Barney (2012) emphasizes the difference between capabilities and resources by defining capabilities as a special type of resource, explicitly an organizationally embedded non-transferable firm-specific resource whose sole purpose is to enhance the efficiency of the other resources owned by the firm.

The resource-centered view has been a common interest for management researchers and various writings could be found for same (Mahoney & Pandian 1992). The RBV of the firm constitutes a theory about the nature of firms, instead of seeking to explain why firms. It is founded on the assumption that resources are heterogeneously scattered across firms, and that this distribution is long lasting. Developing earlier work by the most prominent proponent of the RBV, suggested that a firm's use of "idiosyncratic, immobile" resources is the source of sustained competitive advantage. This signifies a counter-point to the style of industrial organization economics, which examines a firm's response to its external competitors, but does not examine the "black box" of the internal respective interests in the project management of firm resources. While previous research had supposed that firms in an

industry had broadly similar resources (Porter, 2010), highlights the significance of the idiosyncratic attributes of the firm in developing its competitive position.

The theory comprises various management tools and techniques, chiefly developed to assist managers operating in complex settings. Main tenets of the theory comprise acknowledging that resources such as human capital are heterogeneously scattered across firms, they are not perfectly mobile and that this distribution is long lasting. It is thus vital to understand a firm's use of 'idiosyncratic, immobile resources' to maneuver an organization SCM with a minimum of conflict. RBV analysis is chiefly useful in combining bundles of tangible and intangible assets; firms can achieve a sustained competitive advantage. The RBV analysis thus seems like a suitable candidate remedy for the complexity related challenges of the balanced scorecard as a strategic management tool.

In current ultra-competitive global business, a well-managed supply chain is vital to formulate competitive advantage and value to the firm (Lambert &Cooper, 2000). Competition is no longer defined as firm against firm but instead supply chain against supply chain (Min & Mentzer, 2004). When a corporation makes linkages with suppliers and customers it eases the management of the flow and quality of materials into and out of the firm thus the benefits should accrue directly to operational performance (Mistry, 2014). This theory therefore points to the human capital efficiency as an important resource in the implementation of supply chain management practices among international humanitarian organizations.

2.2.3 Contingency Theory

Contingency theory states that in diverse situations, different solutions may prove effective (Barney, 2012), rather than propagating universally applicable organization management principles, the theory attempts to demonstrate that different situations necessitate different organization structures (Odhiambo, 2013). Organizations are affected by numerous contingencies including environment, size and technology. These contingencies are responsible for developing the specific structures and activities of an organization. When there is an incongruity between the contingent variables and the structure, the organization will achieve lower performance (Akintoye, McIntosh & Fitzgerald, 2010).

Kalakota and Robinson (2007) argued that in order to enhance supply chain performance for functional and innovative products, a corporation must change its organizational characteristics and organize its supply chain drivers such as management support and information sharing to create an efficient and responsive supply chain (Lee, 2001). Effective supply chain integration will likely be tied to a range of strategic, environmental, human and operations variable. For efficiency and effectiveness, a fit must

exists between specific supply chain integration and the strategic and environmental conditions (Christopher, 2011). This therefore opines to the essence of inventory management in the implementation of supply chain management practices.

2.3 Empirical Review

Various studies have been done in relation to SCM and humanitarian assistance. Endale (2016) conducted a research on assessing the Human Supply Chain (HSC) performance of selected humanitarian organizations in Ethiopia based on Triple-A framework proposed by Lee, 2004. Specifically, this study was also intended to explore and empirically test the possible relationships among Humanitarian Supply Chain Agility, Adaptability, Alignment and HSC performance of selected Humanitarian organizations in Ethiopia. Salvage et al (2007) did a study on the risks associated with corruption in humanitarian aid support. The findings were basically affirmative that there is a negative correlation between corruption and the level of donor support in humanitarian aid. However, the study could not divulge other issues that are related to humanitarian aid such as logistics. Either, the environment of study, Afghanistan, is way far different from the Ethiopian context.

Mohamed, (2012) study was pivotal in that it expunged how supply chain management practices help in the service delivery by humanitarian organizations. However, his study was limited to the performance relationship between supply chains and the service which humanitarian organizations deliver to the people. Moeiny and Mokhlesi (2011) study established that the success of any humanitarian aid support is only through a properly endowed supply chain. However, the economic and political setting of their study was benchmarked on a developed nation, unlike in a developing nation like Ethiopia.

Mbohwa (2010) discussed the challenges, difficulties and problems faced by humanitarian organizations in running logistics systems in Southern Africa, with a focus of some systems in Zimbabwe. Mini case studies of the operations of the World Health Organization (WHO), the International Red Cross Society and the Zimbabwe Red Cross Society, the World Food Programme, UNICEF and the Zimbabwean Civil Protection Organization were discussed. The research classified the challenges faced as lack of trained logistics personnel, lack of access to specialized humanitarian logistics courses and research information, the difficulty in using and adapting existing logistics systems in attending to humanitarian logistics and lack of collaborative efforts that address the area specifically. The study focused only on Zimbabwe and neighboring countries.

Vorst et al (2002) identified uncertainty as the major challenge facing humanitarian organizations. They stated that uncertainty could stem from many elements relating to the

mission, the organization itself or nature of the demand. They further stated that uncertainty might arise from inherent characteristics such as what and how much material is demanded, product traits, process fluctuations and supply problem. Vorst, et al also recognized how supply chain configuration and control structures, long forecast horizons, decision complexity, poor information reliability and agency culture may create uncertainty.

Okwach (2014) conducted a study on supply chain management: theory, practice and future challenges in Europe and identified supply chain management enablers and barriers as transparency of information and knowledge, supply chain behavior and performance measurement and SCM drivers as globalization, outsourcing and fragmentation and to some extent market polarization. This study although relevant was conducted in Europe and covered a broader scope than the focus of this study.

Richard (2009) conducted a study of supply chain management practice in UK Industrial SMEs and found that there was lack of effective adaptation of traditional adversarial relationships to modern collaborative e-supply chain and the issues businesses need to address to improve performance of their competiveness by grasping the benefits of effective supply chain management. This study had a main focus on the supply chain relationships and benefits of SCM. In addition, the study engrossed on industrial SMEs in UK hence the findings may not apply to international organizations.

Kimani (2013) conducted a study on the SCM challenges facing the oil industry in Kenya and established that information technology, supply chain design, partnership/ collaboration and people have a positive impact on the implementation of an effective supply chain management. This was a case study with a narrow focus on the SCM challenges facing the petroleum industry. The findings were therefore not conclusive since it had adopted a narrow focus on SCM challenges as opposed to the broader supply chain management issues.

Abdifatah (2013) conducted a study of SCM practices in humanitarian organization in Kenya and identified maintenance of good customer relations, efficient and effective internal operations, continuous improvement, flexible production processes, and use of information technology to speed up humanitarian work, inter-organizational integration and simplicity in internal operations to be the prevalent practices among the humanitarian organizations. Although this study was conducted in Ethiopia, the focus was on SCM practices themselves and not on the determinants of effective implementation of supply chain management practices in international organizations.

2.4 Discussion of the Study Variables

2.4.1 Human Capital Efficiency and Implementation of SCM

Research shows that there are solid interdependencies between supply chain management and Human capital management and hence it is not easy to identify exact boundaries. Additionally, these boundaries are constantly shifting to accommodate an integration of supply chain and human resource (HR) activities. The problem that the SCM professional faces is that managing companywide HR policies to effect coordinated change is often outside his or her management scope. This eliminates the greatest point of leverage in achieving cross-functional integration for those who have such responsibility without commensurate authority. Furthermore, it is tremendously difficult to tailor synchronized HR policies that span functional departments; many SCM professionals lack knowledge and experience in this complex area. If SCM professionals are to be reliably operative, they must have Integrative vision to form integrative, cross-functional, and cross-company programs that enable product to flow rapidly and responsively through the company and the channel. In addition, Human resources ability to harness the power of HR policies to ensure that the programs are implemented effectively throughout the company is also critical (Richard, 2009).

Furthermore, the economic power of cross-functional coordination is becoming broadly recognized, and the first capability is now progressively in evidence in our profession. Unfortunately, though, the second is all too rare. This is a major cause of the classic SCM dilemma, and it is stopping many companies from attaining their objectives. Because efficient, responsive product flow is necessary to strategic success in most firms, focused HRM must become a core element in the SCM professional's portfolio. The main elements that human resource management in supply chains must have are, technology, skills and education, demand of a supply chain talent as well as training & career development. Whereas process and production technology change has been profound, information management systems and related technology have evolved at a more rapid pace and have had a more profound influence on job design and skill necessities. Technology is most commonly employed for inventory and warehousing management. Looking forward, employers are considering employing technology for transportation, and customer and supplier relationship management. Not surprisingly, larger organizations have employed more supply chain-related information systems than smaller ones (Akintoye, McIntosh & Fitzgerald, 2010).

Skills and Education needs do not vary meaningfully by company size or region, which proposes that supply-chain employees can move between regions with some degree of ease. Employers indicate that communications and analytical skills are an obligation for all

occupation categories across all sub-functions. Other common skill necessities include technology, interpersonal and customer service skills. Demand for specific supply chain positions is predominantly anticipated to remain constant, with some growth predicted for positions in logistics information systems tactical and operational, warehousing operational, customer service tactical and transportation operational. There was a general increased reliance on knowledge-based positions (e.g., information technology knowledge, technical logistics knowledge, supply chain specialists) and customer service positions (sales, customer service, client management). Manager-level positions were frequently cited as difficult roles to fill (e.g., functional managers, general managers, project managers, etc.), with supervisor and analyst roles also identified as a challenge.

Anderson, Fornell and Lehmann (2010 perceive that corporations have generally developed skill sets internally. Frahm (2009) alternatively notes that whereas there is an emerging trend to source entry-level planners, analysts and schedulers from universities and colleges, new graduates still need on-the-job training and experience. According to Hau and Amaral (2012), 66% of employers propose that higher education with a logistics/supply chain management or related major is essential when considering new recruits. Tan et al (2012) carried out a study on a comparison of employee education requirements identified by employers to the current education level of employees reveals that. They found that a small percentage of supply chain managers owned an undergraduate degree, whereas the majority of employers needed it for that level; and Tactical and operational employees tended to have a higher level of education than the minimum required by employers for their levels (Tan et al, 2012).

In training & career development, Employers show that technical development courses are necessary for supply chain personnel to stay up to date. The most common means of employee development are on-the-job training and external courses. For the most part, employees show that they are content with the training they have gotten and that it has met their needs. The most common forms of support offered to employees are tuition repayment, time off for external courses and the provision of in-house training. Work/study programs for supply chain employees are not commonly used; though, all types are employed to some degree. Internal training inclines to be centered on technical supply chain and logistics development, interpersonal and people management skills (e.g., supervisory skills, negotiations, team building, coaching and leadership) and health and safety (Mistry, 2014).

Given that attraction is one of the most common human resources challenges being faced, and is anticipated to persist as such over the next five years, it is not astonishing that employers also show meeting a variety of recruitment matters (Copacino, 2010). The most

common recruitment issue facing employers is finding employees with the skills needed. This may be compounded by other common challenges, which comprise competition for resources, and lack of awareness of/interest in the supply chain sector (Copacino, 2010).

Similar challenges are faced by organizations regardless of size, with organizations identifying ‘finding employees with the skills needed as the most important challenge. Manager and supervisor positions are usually cited as difficult roles to fill, chiefly employees with general managerial skills. There is an urgent need to attract new qualified resources, as the existing internal growth and development strategy is no longer offering a sufficient pool of qualified resources (Filedman & Miller 2013). According to Harland (2010), attraction to the supply chain sector is a function of interesting work, opportunity to solve problems, opportunities for learning and growth, diversity of tasks, and the role of the supply chain in an organization or industry.

2.4.2 Inventory Management and Implementation of SCM

Managing inventories efficiently and effectively throughout the supply chain is a vital element for superior supply chain performance. Benefits of lower inventories comprise diminished general supply chain cost, decreased risk of obsolescence, and increased responsiveness and flexibility. General Motors, which was able to decrease cost by 26 percent yearly via better inventory management, serves as an illustrative example (Gunasekaran, 2009). Commonly known for its super-efficient supply chain, Dell effectively uses a build to order and direct sales business models to hold down its inventory to only a four-day supply while shipping 95% of customer order in eight hours (Gowen & Tallon, 2005). Hewlett-Packard depends on postponement approach to minimize forecasting errors and to manage inventory and production. The use of information technology to help with inventory control decisions can be considered another best practice in material management. IT systems play a crucial role in the supply chain as it assists corporations collect and analyze information (Chopra & Meindl, 2004).

Inventory flow management entails planning and building design for the movement of materials or with logistics that deal with the components that are tangible in supply chain (Christopher, 2012). Mainly it covers the attainment of spare parts and replacements, quality control of purchasing and ordering, shipping standards and warehousing. The material requirement planning system utilizes data from the master schedule and the inventory system. It then breaks the master schedule items into sub-assembly and raw material requirements matches these against what is already on hand and computes specific requirements (item by item) of everything required. It states when orders should be releases so that components will

be available as specified in the proposed master schedule. The master schedule is not revised if procurement or production time is inadequate (Goldsby, 2003).

Therefore, computer software applications should be used to calculate order quantities, based on demand forecasting, and safety stock levels. This can significantly reduce user interventions and time spent in order processing (Kim, 2005). Moreover, having high inventory turn signifies another benefit for international organizations. By increasing the number of inventory turns, international organizations can hold less inventories leading to less capital invested at any given time (Alverson, 2003). Last minute customization can be done according to actual demand, with managing and predicting inventory of generic products being more efficient. Other developments and best practices in this area comprise vendor managed inventory (VMI – an approach where the supplier manages inventory at the customer's location), quick response manufacturing (QRM – an approach to reduce lead times), and efficient consumer response (ECR – an approach to create the best value for the customer at the lowest cost).

The activities related with efficiently managing inventories include then some of the following activities; use of direct sales and build-to-order model, use of postponement strategy to reduce finished goods inventories, use of information technology (EDI or RFID) up and down the supply chain to share demand and manufacturing information to reduce component and finished goods inventories. Others include, use of the internet to share demand and manufacturing information up and down the supply chain to reduce inventory cost, strive for product availability without increasing service levels to compete in the market place, use of vendor-managed inventories (VMI) to manage inventories effectively, use of Quick Response (QR) Code to manage inventories efficiently, use of efficient consumer response (ECR) to manage inventories effectively and efficiently, use of just-in-time (JIT) to reduce inventories and lastly collaboration with suppliers and customers for better inventory management and replenishment (Burns, 2012).

A study by Laundry (2010) showed that the main challenges that managers in inventory flow management encounter is maintaining a consistent flow of materials for production. Factors that hinder accuracy of inventory hindering effective production include; incorrect bills of materials, imprecise cycle counts, shipping errors, un-reported scrap, receiving errors and production reporting errors. Another central challenge that managers in material flow management face is the provision of timely release to the supply base.

2.4.3 Management Support and Implementation of SCM

Executive support has been cited by many authors, including Nelson et al (2001), as a crucial characteristic for fruitful supply chains. Callender (2007) in a study observed that a

significantly high proportion of respondents (45%) reported that they agree with this statement. Additionally, 7.8% disagreed with the statement, and 15.8% of participants showed a neutral position. Likewise, McKone-Sweet et al (2005) found that lack of executive support is a big a barrier to effective application of SCM practices. Top management participation and their vision play an important role in reshaping an organization's belief and orientation in attaining a strong foundation of trust, interdependency, commitment, organization's strategy and reducing conflicts in reaching agreements among collaborative partners.

Managerial support presents four supporting facets to ensure the proposed practices are fully applied in industries. They include; Management responsibility. Higher degree of management commitment and leadership is very crucial for the implementation of supply chain management practices. Furthermore, the organizational culture may have some contributing factors to the failure or success of any application. The fundamental management systems in organizations cannot also be ignored or abandoned. Correspondingly, resource management is an indispensable requirement to provide for an interactive training programme to aid organizations in achieving an operational excellence like employee development, infrastructure and work environment (Andebe, 2013).

2.3.4 Information Sharing and Implementation of SCM

Information sharing and communication play a significant role in supply chain management practices application. Information and communication strategy allows sharing of information which is a vital element in sharing of new ideas and concepts (Jack, Powers & Skinner, 2010). Information sharing ideas and concepts act as catalysts towards effective application of supply chain management. Innovation in supply chain highly relies on ideas and concepts that can best be conveyed through use of information communication technology to enhance the way of doing things. Most corporations that have thrived in the application of innovation in supply chain management invest largely in modern technologies for instance information communication technology. ICT enhances systems and processes; it allows firms to perform their operations in a more efficient manner, at a decreased cost (Kazi, 2012).

Sharing information across a supply chain can greatly decrease disorganizations by better matching demand with supply. In their research on major hindrance for applying SCM practices in the healthcare sector observed that about 40% participants showed that there is limited information sharing between sellers and healthcare providers, 30% of participants disagreed, and another 30% remained neutral. Though responses were divided, the majority expressed that there is a lack of information sharing which represents a major barrier. Again,

results for this section seem to be consistent with those who documented that information sharing is a barrier for implementation (Burns, 2012). Successful implementation of information in the application of supply chain management practices has the effect of reducing levels of complexity. Senge (2010) defines two types of complexity, detail and dynamic. Detail complexity exists when there are many variables needing to be managed. Dynamic complexity exists where cause and effect are separated, and difficult to associate, in both time and space.

The "bullwhip effect" is an instance of a typical supply chain management consequence resulting from situations that are dynamically complex, and was first highlighted by Forrester (1961). According to Chen et al (2010), this spectacle states that the demand process seen by a given stage of a supply chain becomes more variable as we move up the supply chain (i.e. as one move away from customer demand). In other words, the orders seen by the upstream stages of a supply chain are more variable than the orders seen by the downstream stages. Symptomatic of this effect are low customer service levels, excessive inventories, inaccurate and untimely capacity planning, lost income, increased transportation costs and ineffective production scheduling (Lee et al., 2007). Lee et al (2007) also state that access to, and management of, information is critical to minimizing this type of variation. Innovative companies in different industries have found that they can control the bullwhip effect and improve their supply chain performance by coordinating information and planning along the supply chain.

Provenance of causes for the bullwhip effect have varied as it was first observed. Forrester would say that the behavior in the system is a function of the interaction of structure. I.e. effective organization structure and information sources, delays and amplification (the inherent effects of policies) Sterman (1989) sees the primary effects as being irrational Handfield and Nichols (1999) summarize the potential for information technology applications for supply chain integration. With the emergence of the personal computer, optical fiber networks, the explosion of the Internet and the World Wide Web, the cost and availability of information resources allows easy linkages and eliminates information related time delays in any supply chain network. Bowersox and Calantone (2005) state that the notion of a combined supply chain is not a new one, but that it has only recently become feasible as corporations have access to information that is timely, accurate and affordable. They also make the point that information is the only element in the supply chain that has become less expensive over time. An example of this trend is the swelling use of e-mail for communication both within companies and between trading partners.

At a nominal cost email is being utilized to transfer word processor files, design documentation and CAD files, spreadsheets and trading documents like orders and invoices

between trading partners (Braue, 2009). The breadth of applications and uses that e-mail is being put to in the streamlining of supply chain communications is often under-estimated. The use of e-mail is a crucial facilitator of better communications and relationships between trading partners in an international context (Carter, 2000).

2.5 Supply Chain Management (SCM)

Supply chain management (SCM) can be referred to as all the events involved in delivering a product from raw materials through to the customer, including sourcing parts and raw materials, manufacturing and assembly, warehousing and inventory tracking, distribution across channels, delivery to the customer, order entry and order management, and the information systems necessary to monitor these activities (Lummus & Vokurka, 2008). Six constructs have been developed from supply chain management practices which are; supply chain integration, chain characteristics, information sharing, supply customer service management and JIT capability (Tan, 2012).

Humanitarian supply chain management (HSCM) is referred to as the process of effective and cost-efficient plans, implementations and controls for aid flows (i.e., materials, goods, services, financial resources, information, etc.) from the point of origin to the point of consumption with the intention of meeting the aid recipients' requirements (Day et al., 2012). As a subset of supply chain management, it covers almost all of the functional processes that a commercial supply chain management (CSCM) does, including processes such as sourcing, procurement, inventory management, logistics and distribution, information management, and so forth (Day et al., 2012). However, unlike the "financial" objectives of CSCM, the primary goal for HSCM is to minimize human suffering -- more specifically to prevent further loss of life and harm to humans, as well as provide immediate treatment to those with injuries and illness (Beamon & Balcik, 2008).

On the other hand, as have been discussed by some researchers, humanitarian supply chains operate under highly uncertain conditions relative to commercial supply chains (Wassenhove, 2011). First of all, the unpredictability of disaster occurrence and the magnitude of damage make forecasting extremely difficult. Second, the typical collapse of infrastructure in the affected area severely inhibits aid to the disaster region. Third, the humanitarian supply chain network is temporary making the management of the whole system especially challenging. Meanwhile, raising the necessary financial and material resources is difficult to predict because each disaster is unique. These factors collectively shape humanitarian supply chain as a complex and delicate system, thereby making the management of humanitarian supply chains more challenging compared to CSCM.

These unique characteristics of humanitarian supply chains require a high level of agility, flexibility and effectiveness (Abdifatah, 2013). Since saving lives and reducing human suffering are top priorities during disaster, the management philosophies accordingly differ from those of CSCM. For example, distinct from the traditional cost minimization and profit maximization objectives for CSCM, the objective of HSCM is minimizing social costs, which is comprised of both supply chain costs and deprivation costs (Abdifatah, 2012).

2.6 Critique of Literature

Literature suggests that organizations operate under different situations, and hence different solutions may prove effective (Antal, 2010). Rather than propagating universally applicable organization management principles, the contingency theory tries to demonstrate that various situations necessitate different organization structures (Baranyi, 2010). Organization are influenced by several contingencies comprising size, environment and technology and when there is a mismatch between these variables and the structure, the organization will attain lower performance (McGovern &Earl, 2001). Supply chain management enablers and hinders as transparency of information and knowledge, supply chain behavior and performance measurement and SCM drivers as globalization, outsourcing and fragmentation and to some extent market polarization are some of the supply chain management enablers (Storey, et al 2011).

In Ethiopia, Mebrhatom Tesfay (2016) conducted a study on The Effect of Supply Chain Management Challenges on the Performances of Humanitarian Aid Organization. The finding of the study shows that each dimension of supply chain management challenges has a negative effect on responsiveness, collaboration, flexibility and cost performances. Mebrhatom recommends in his study that closely working and collaboration with different partners and stakeholders is extremely essential to minimize the SCM challenges, and ensure service quality and sustainability. He concluded that his study expects to fill the empirical gap in literature on effects of supply chain management challenges on the humanitarian aid organization, which need to be bridged to ensure that humanitarian supply chains are improved and managed on the basis of informed evidence.

Tigist Yigezu (2016) also conducted a research on related topics “Challenges of Humanitarian Supply chain Management: In the case of National Disaster Risk Management Commission of Ethiopia”. The objective of this study is ‘assessing the supply chain management practices of humanitarian organizations, identifying supply chain challenges facing humanitarian organization in emergencies and identifying supply chain practices that can be adopted to overcome the challenges and evaluate the effectiveness of national disaster risk management commission response rate in terms of timeliness, suitability and adequacy

of relief quantities.' The finding of Tigist study are 'challenges facing humanitarian organization grouped into management related challenges, financial related challenges and operating environment related challenges.' She mentioned in her note that beneficiaries of the Ethiopian drought victims were satisfied with the emergency responses for 2015/16 response rate in terms of timeliness, adequacy, and suitability of the delivery of relief items. The result of the study puts forth a simple framework of supply chain management techniques for management of disaster during relief operations and examines why governments and other humanitarian organization should considered their use.

From the literature reviewed by the researcher, it is observable that there is no general consensus on the determinants of effective implementation of supply chain management practices in international organizations in Ethiopia. This study will therefore seek to determine in totality the factors that affect implementation of supply chain management practices among the international humanitarian organizations in Ethiopia.

2.7 Conceptual Framework

In this study, the conceptual framework will look at the factors affecting for the implementation of supply chain management practices in international NGOs in Ethiopia.

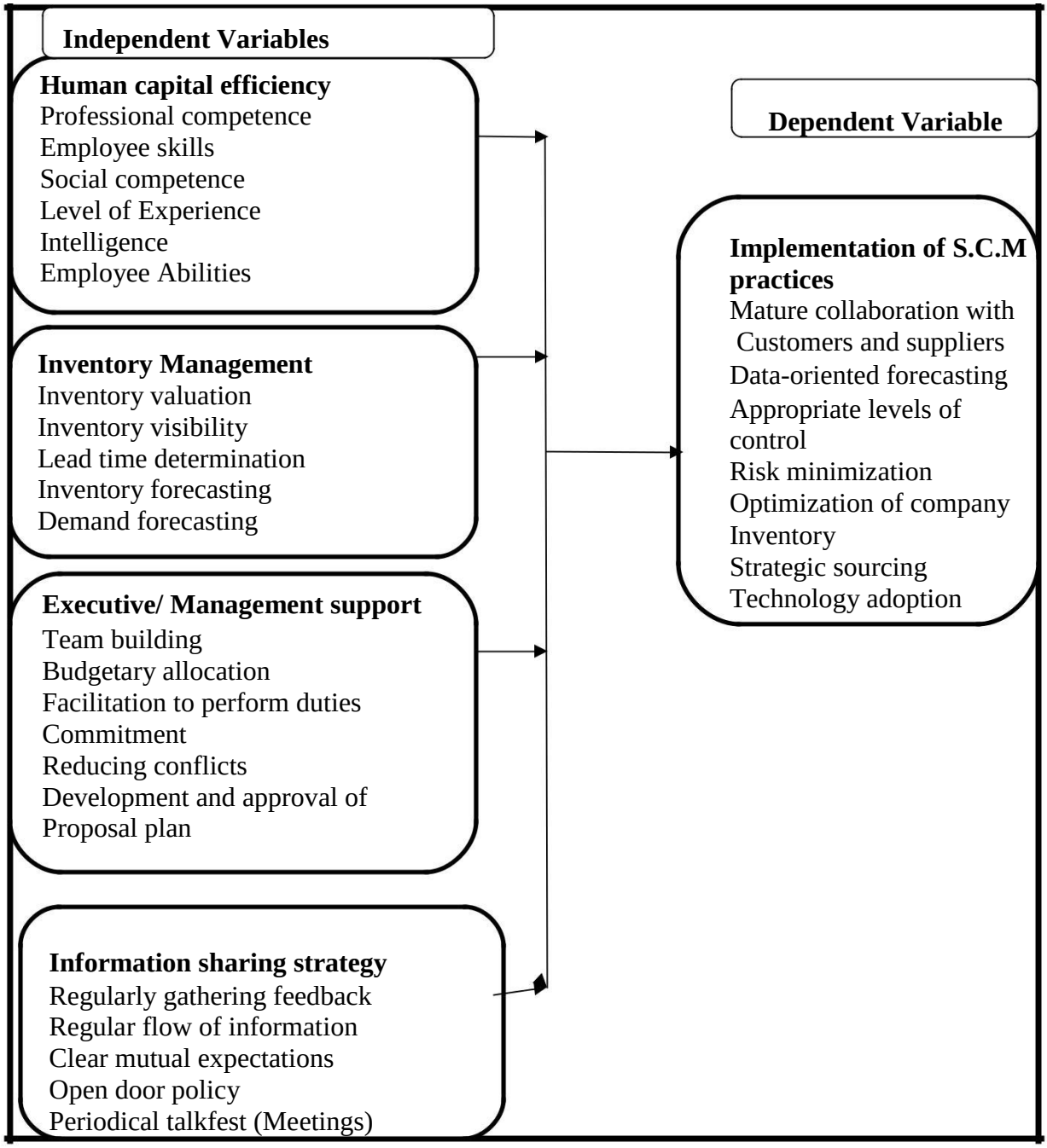


Figure 2 Conceptual Framework
Source: (Marwa, 2016)

Human capital efficiency is anticipated to have strong interdependences with supply chain management. With enough and well-articulated human capital, the organization will be able to apply supply chain management activities. Inventory management comprising valuation and forecasting is also vital in supply chain management application. This study expects a positive relationship between the two variables. Executive support is a key characteristic for successful supply chain management. This study expects a significantly

high relationship between executive support effective implementation of supply chain management practices. Contradictory goals concerning inventory choices in the organizational supply chain has been found to be a barrier in the application of supply chain management practices. This study expects a negative relationship between contradictory goals and application of supply chain management practices. Information sharing and communication play a significant role in supply chain management practices implementation. Information and communication strategy permits sharing of information, which is a crucial component in sharing of new ideas and concepts. This study thus expects a positive relationship between sharing of information and of supply chain management practices implementation. Firm or firm demographics are sets of characteristics to segment prospect organizations variables allow to consider the features of organizational behavior in details. Fir characteristics are expected to influence all variables positively but for conflicting goals which is expected to be negatively influenced.

2.8 Research Hypothesis

The researcher sought to address the following hypothesis

H01: There is no significant relationship between human capital efficiency and effective implementation of supply chain management practices in World Vision Ethiopia

H02: There is no significant relationship between inventory management and effective implementation of supply chain management practices in World Vision Ethiopia

H03: There is no significant relationship between executive/ management support and effective implementation of supply chain management practices in World Vision Ethiopia

H04: There is no significant relationship between information sharing/ communication strategy and effective implementation of supply chain management practices in World Vision Ethiopia

Table 1: Operationalization of Variables

Objective	List of Variables	Indicators	Data analysis
To assess the role of human capital efficiency on implementation of SCM practice in international NGOs in Ethiopia.	Human capital efficiency	• Professional competence • Employee skills • Social competence • Level of Experience • Intelligence • Employee Abilities	Descriptive Regression
To understand the influence of inventory management on implementation of SCM practices in international NGOs in Ethiopia	Inventory Management	• Inventory valuation • Inventory visibility • Lead time determination • Inventory forecasting • Demand forecasting	Descriptive Regression
To assess the role of management support on effective implementation of SCM practices international NGOs in Ethiopia	Executive /Management support	• Team building • Budgetary allocation • Facilitation to perform duties • Commitment • Reducing conflicts • Development and approval of proposal plan	Descriptive Regression
To understand the role of information sharing or communication strategy on implementation of SCM practices international NGOs in Ethiopia	Information sharing/ communication strategy	• Regularly gathering feedback • Regular flow of information • Clear mutual expectations • Open door policy • Periodical talkfest (meeting)	Descriptive Regression
	Implementation of SCM practices	• Mature collaboration with consumers and suppliers • Data-oriented forecasting • Approaches level of control • Risk minimization • Optimization of company inventory • Strategic sourcing • Technology sourcing	Descriptive

CHAPTER THREE

Research Design and Methodology

3.1. Description of the Study Area

In this chapter, the practical methods that was used in order to answer the research questions and meet the objectives of this research are presented. The purpose of this research is to assess factors affecting for implementation of supply chain management practices in international NGOs by taking World Vision Ethiopia as a case. The main reason for this research is the belief that finding the factors for implementation of supply chain management practices is critical to the long-term improvement of the performance of the organization.

3.2. Study Design

This study employ survey design; the design was the most appropriate since it will ensure that the data obtained gave appropriate answers to the research questions. A descriptive research describes a situation or condition at hand; it examines aspects such as opinion, abilities, behavior, knowledge and beliefs of individuals, groups or situation (Kothari, 2005). It can only describe a set of observations on the data collected but it cannot draw conclusions from the data about which way the relationship goes (Jackson, 2009).

3.3. Target Population

According to Alan S. Kaufman and Nadeen L. Kaufman, (2005), population is a group of individuals, objects, items or it is an entire group of persons, or elements that have at least one thing in common. The population of this study comprise of all the employees working in the operation and program divisions of World Vision Ethiopia's at Addis Ababa, as identified the list of them from the human resources department. The respondents are top management, middle level management and other management staff. A total of 111 management and employees are identified to form the population. The researcher was employing a census survey method; because, everyone has an opportunity to participate, and it use to obtain reliable and accurate information than sampling. Conducting a census can be very time-consuming and costly. However, the advantage is that it allows the researcher to gain accurate information (John W. Creswell, 2009).

3.4. Sources of data

The method of data collection depends mainly upon the nature, purpose, and the scope of research conduct. Data were collected through primary and secondary sources that were

able to directly answer and fulfill the objective of the study. From the primary source of data instrument, structured questionnaire was used in the study to collect crucial information from the World Vision Ethiopia employees. The secondary sources of data collection method were used from exploring the written materials which include peer review articles, books, published and unpublished materials. This enabled the researcher to compare the data from the questionnaires with the written materials.

3.5 Research Instrument

The primary research data was collected from the top management, middle and low level management using a self-administered semi structured questionnaire.

3.6 Data Collection Procedure

The researcher administered the questionnaire individually to all respondents. Care and control by the researcher was exercised to ensure all questionnaires issued to the respondents were received. To achieve this, the researcher maintained a register of questionnaires, which were sent, and those received. The questionnaires were administered using a drop and pick later method to the respondents.

3.7 Ethical Consideration

Confidentiality – the respondents was assured that they would not be confused and that their response would remain confidential. The information they provide is confidential and used for academic purpose only. Purpose of the study was explained to the respondents prior to the collection of data.

3.8 Data analysis

The quantitative data collected and analyzed using descriptive statistics such as frequency, percentages, mean and standard deviation and regression using SPSS version 20. The findings are presented using frequency tables and graphs so as to understand the importance of each of the five variables with respect to the implementation of supply chain management practices in World Vision Ethiopia and other international NGOs in Ethiopia.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter discusses the findings obtained from the primary instrument used in the study. It discusses the characteristics of the respondents, their opinions for the assessment on the factors affecting implementation of supply chain management practices in international non-governmental organization in Ethiopia. In order to simplify the discussions, the researcher provided tables and graphs that summarize the collective responses of the respondents.

4.1.1 Response Rate

The study targeted 111 supply chain managers and other managers of World Vision Ethiopia in National office in Addis Ababa and regional branch office. The survey questionnaire was sent to all 111 targets of them and a total of 88 filled questionnaires were returned giving a response rate of 79% which is within what Mugenda and Mugenda (2003) prescribed as a significant response rate for statistical analysis and established at a minimal value of 50%.The study made use of frequencies (absolute and relative) single response questions. For matrix questions, the study used six constructs in collecting and analyzing where a scale of 5 points was used in computing the mean scores and standard deviations. These were then presented in tables as appropriate with explanations being given in prose.

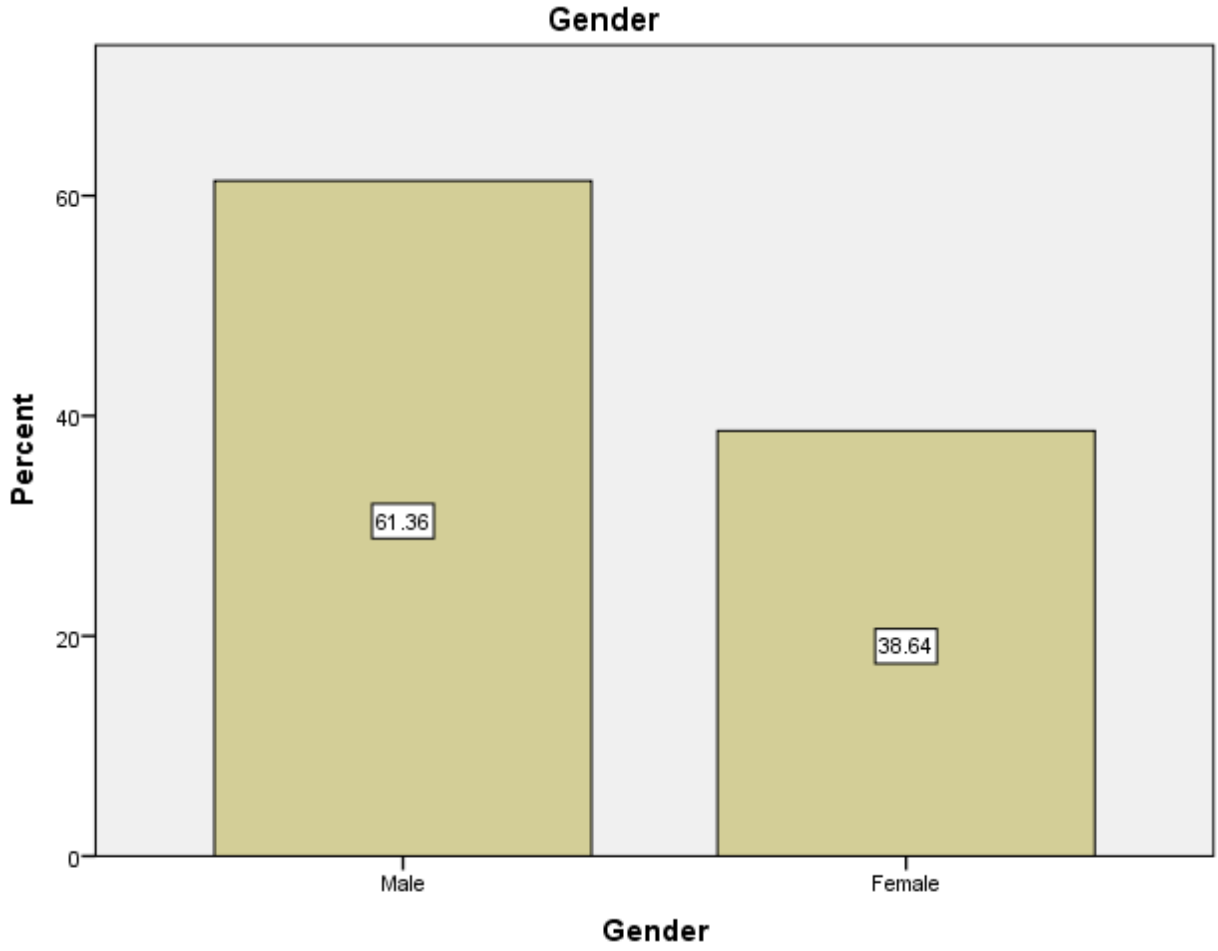
4.2 Demographic Information of Respondents

The study sought to enquire on the respondents' general information including gender, highest academic qualification and the experience.

4.2.1 Gender of the Respondents

The researcher wanted to know who the gender of the respondent is. The results were as shown in the figure 3.

Figure 3 Gender of the Respondents

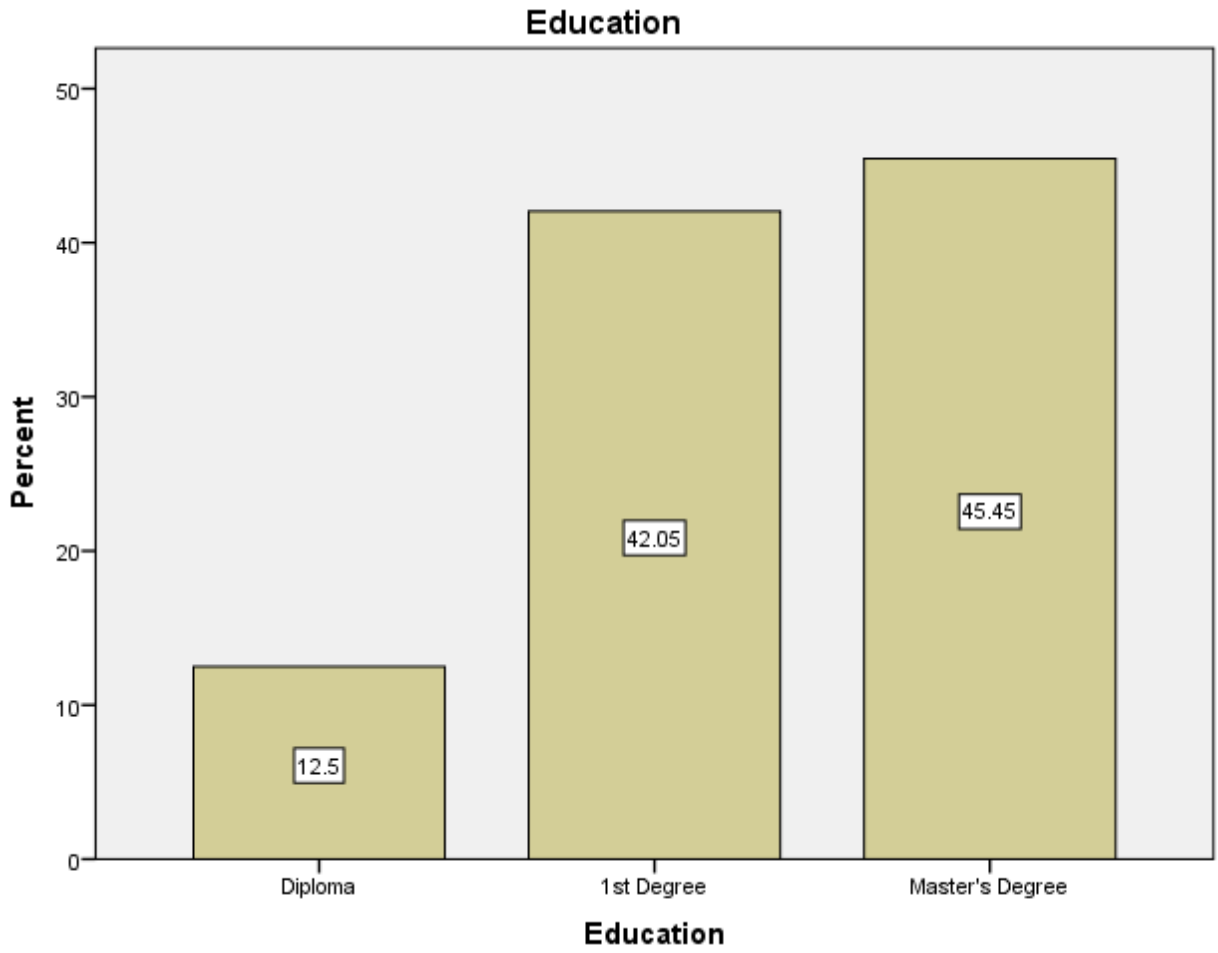


The findings in figure 3 indicated that male respondents were 61.36 % while female respondents were 38.64%. This shows that the researcher is not biased since It was considered both gender would be in the study but there were more male than female.

4.2.2 Education Level of the Respondents

The respondents were further requested to indicate their education level. The results were as shown in the figure 4.

Figure 4: Education Level of the Respondents

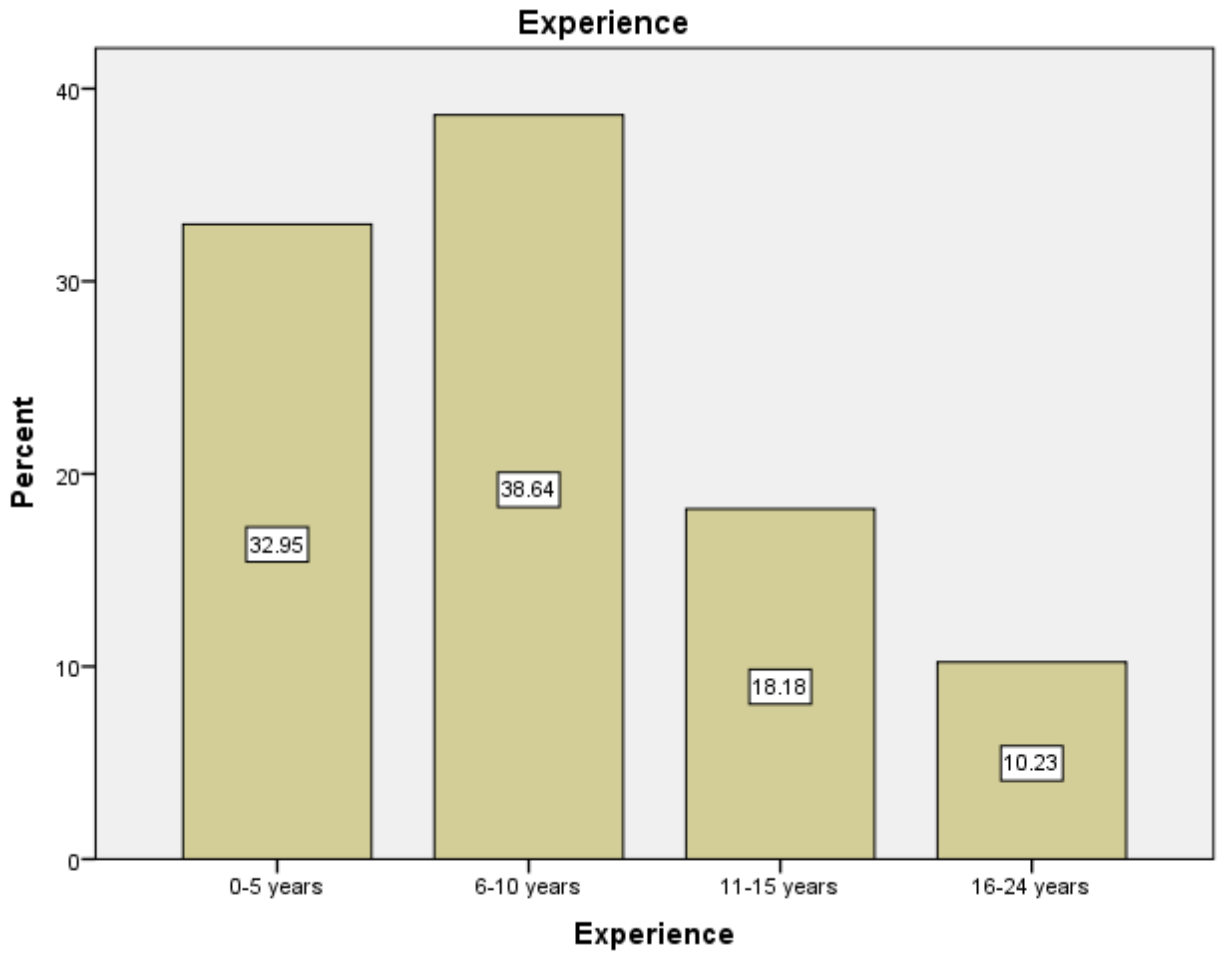


From the findings in figure 4, 42.05% of the respondents indicated that their education level was the bachelor's degree level, and 45.45% were masters' holders while 12.5% indicated the diploma level 6.3%. As per the findings majority of the respondents were masters and bachelor degree holders. This suggests that the respondents were well conversant with the issues relating to supply chain management practices in international non-government organizations and therefore they gave accurate and relevant information needed for the study.

4.2.3 Duration Respondents had worked in the Organization

The respondents were also requested to indicate the duration of time they had worked in the organization .The responses obtained are shown in the figure 5.

Figure 5: Duration Respondents had worked in the Organization



As per the findings in figure 5, a majority of the respondents had worked in the organization between 6 and 10 years representing 38.64% of the total respondents, those who had worked between 0-5 years were 32.95%, those who had worked between 11 and 15 years were 18.18%, those responders who had worked in the international non-governmental organization between 16 and 24 years are only representing 10.23%. The findings indicated that majority of the respondents had worked in the organization between 6 and 10 years. This implies that the respondents were well conversant with the supply chain procedures at the international non-governmental organizations and therefore they gave the correct and accurate information the researcher needed for the study.

4.3 Assessment on the factors affecting implementation of SCM practices

Supply chain management (SCM) can be referred to as all the events involved in delivering a product from raw materials through to the customer, including sourcing parts and raw materials, manufacturing and assembly, warehousing and inventory tracking, distribution across channels, delivery to the customer, order entry and order management, and the information systems necessary to monitor these activities (Lummus & Vokurka, 2008).

4.3.1 Human Capital Efficiency

The respondents had to indicate the extent at which human capital efficiency influences supply chain management practices in international non-governmental organizations in Ethiopia. The responses are indicated in table 2.

Table 2: Extent at which human capital efficiency influences SCM

	Frequency	Percent
To not extent	2	2.3
To moderate extent	15	17.0
To great extent	36	40.09
To very great extent	35	39.8
Total	88	100.0

From the findings in table 2, 40.09 % of the respondents indicated that human capital efficiency influences effective implementation of supply chain practices to a great extent, 17.0% indicated moderate extent. It was also indicated with 39.8 % that human capital efficiency determines implementation of supply chain practices to a very great extent. Only 2.3% indicated that human capital efficiency affects implementation of supply chain practices to no extent. This implies that that human capital efficiency affects implementation of supply chain management practices to a great extent.

Table 3 Extent aspects of human capital efficiency affect implementation of SCM

	Mean	Std. Deviation
Professional competence	4.01	0.953
Employee skills	4.1	.0.947
Social competence	3.69	.0.902
Level of Experience	3.78	1.088
Intelligence	3.73	0.906
Employee Abilities	3.76	1.174

The respondents in table 3 indicated with mean 4.1 that employees' skills affects implementation of supply chain to a great extent. It was indicated with mean of 4.01 that Professional competence also influences implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.78 that Level of Experience affects implementation of supply chain management practices to a great extent. Employee Abilities was also noted with mean of 3.76 that moderately determines supply chain management practices implementation. The respondents also indicated with a mean of 3.73 that Intelligence affects implementation of the supply chain practices to moderate extent. Finally social competence has a moderate extent with mean of 3.69 in affecting

implementation of supply chain management practices in international non-government organizations.

4.3.2 Inventory Management

The respondents were requested to indicate the extent at which inventory management affects supply chain management practices in international non-government organizations in Ethiopia. The responses are indicated in table 4.

Table 4 Extent to which inventory management influences SCM

	Frequency	Percent
Little extent	5	5.7
Moderate extent	26	29.5
Great extent	40	45.5
Very great extent	17	19.3
Total	**88**	**100.0**

According to the findings in table 4, 45.5 % of the respondents indicated that inventory management affects implementation of supply chain practices to a great extent, 19.3.2% indicated very great. It was also indicated with 29.3% that inventory management determines implementation of supply chain practices to a moderate. Only 5.7% indicated that inventory management affects implementation of supply chain practices to a little extent. The finding implies that inventory management affects implementation of supply chain management practices in international non-government organizations in Ethiopia to a great extent.

Table 5 Extent that aspects of inventory management affect implementation of SCM

	Mean	Std. Deviation
Inventory valuation	3.74	1.011
Inventory visibility	3.6	1.012
Lead time determination	3.65	.983
Inventory forecasting	3.6	.929
Demand forecasting	3.74	.953

The respondents in table 5 indicated with mean 3.74 that each of the Inventory valuation and demand forecasting affects implementation of supply chain to a great extent, it was indicated with mean of 3.65 that Lead time determination also influences implementation of supply chain management practices to a great extent. The respondents also indicated with a mean of 3.6 that each of Inventory visibility and inventory forecasting determine implementation of the supply chain practices to a great extent.

4.3.3 Management Support

The respondents were asked to indicate the extent at which management support affects supply chain management practices in non-governmental organization in Ethiopia. The responds are indicated in table 6.

Table 6 Extent to which management support influences SCM

	Frequency	Percent
Moderate extent	27	30.7
Great extent	27	30.7
Very great extent	34	38.6
Total	**88**	**100.0**

From the findings in table 6, 38.6% of the respondents indicated that management support affects implementation of supply chain practices to a very great extent, 30.7% indicated great extent. It was also indicated with 30.7 % that management support affects implementation of supply chain practices to a moderate. Since none of the respondents indicated little or no extent implies that all respondents agree that management support affects implementation of supply chain management practices in non-governmental organizations in Ethiopia. The findings agree with Nelson et al (2001) that executive support is a crucial characteristic for fruitful supply chains

Table 7 Extent aspects of management support affects implementation of SCM

	Mean	Std. Deviation
Team building	4.09	0.942
Budgetary allocation	3.9	0.898
Facilitation to perform duties	3.85	0.766
Commitment	4.13	0.828
Reducing conflicts	3.74	1.058
Development and approval of proposal plan	3.59	0.811

The respondents indicated in table 7 with mean 4.13 that commitment affects implementation of supply chain to a great extent, it was indicated with mean of 4.09 that team building also affects implementation of supply chain management practices to a great extent. Respondents further indicated with a mean of 3.9 that budgetary allocation determines implementation of supply chain management practices to a great extent. Facilitation to perform duties was also noted with mean of 3.85 that determines supply chain management practices implementation to a great extent. The respondents also indicated with a mean of 3.74 that Reducing conflicts determine implementation of the supply chain practices to a great extent. Finally Development and approval of proposal plan has also moderate extent with mean of 3.59 in determining implementation of supply chain management practices in international NGOs.

4.3.4 Information Sharing

The respondents had to indicate the extent at which information sharing affects supply chain management practices in non-governmental organization in Ethiopia. The responds are indicated in table 8.

Table 8 Extent to which information sharing influences SCM

	Frequency	Percent
To a little extent	2	2.3
To a moderate extent	25	28.4
To a great extent	33	37.5
Very great extent	28	31.8
Total	**88**	**100.0**

The results on table 8 indicates 37.5% of the respondents indicated that information sharing affects implementation of supply chain practices to a great extent, 31.8% indicated very great extent. It was also indicated with 28.4% that information sharing affects implementation of supply chain practices to a moderate. 2.3 % of the respondents indicated that information sharing affects implementation of supply chain practices to a little extent.

Table 9 Extent aspects of information sharing affects implementation of SCM

	Mean	Std. Deviation
Regularly gathering feedback	3.66	1.027
Regular flow of information	3.92	.937
Clear mutual expectations	3.61	.999
Open door policy	3.74	1.034
Periodical talkfest (Meetings)	3.69	.902

The findings of respondents on table 9 indicated with mean 3.92 that regular flow of information affects implementation of supply chain to a very great extent, it was indicated with mean of 3.72 that open door policy influences implementation of supply chain management practices to a great extent. Respondents further indicated with a mean 3.69 of that periodical talkfest (meeting) affects implementation of supply chain management practices to a great extent. Regular gathering feedback was also noted with mean of 3.66 that it affects supply chain management practices implementation to a great extent. The respondents also indicated with a mean of 3.61 that clear mutual expectation determine implementation of the supply chain practices to great extent.

4.3.5 Supply Chain Management Practices

The respondents were requested to indicate the trend of the following aspects of supply managements over the last five years. The findings are indicated in table 10.

Table 10 Aspects of supply chain management practices

	Mean	Std. Deviation
Mature collaboration with customers and suppliers	3.57	.920
Data-oriented forecasting	3.56	.895
Appropriate levels of control	3.73	.798
Risk minimization	3.53	.970
Optimization of company inventory	3.66	.896
Strategic sourcing	3.87	.855
Technology adoption	3.66	.815

The findings on table 10 indicates that strategic sourcing has improved for last five years with a mean of 3.87, Appropriate levels of control has improved with mean of 3.73, and both optimization of company inventory and technology adoption have improved for the last five years with a mean of 3.66. It was indicated with a mean of 3.57 that mature collaboration with customers and suppliers has also improved for last five years. Furthermore, Data-oriented forecasting was indicated with mean of 3.56 that has improved for last five years. Lastly, risk minimization was also indicated with mean of 3.53 that has remained constant for last five years.

4.4 Regression Analysis

Regression analysis shows how dependent variable is influenced with independent variables. For example, the combined effect of all independent variables on the dependent variable.

Table 11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.604[a]	.365	.334	.57604

a. Predictors: (Constant), Information Sharing/Commutation Strategy, Human Capital Efficiency, Inventory Management, Executive or Management Support

Table 11 is a model fit which establish how fit the model equation fits the data. The R2 was used to establish the predictive power of the study model and it was found to be 0.365 implying that 36.5% of effective implementation of supply chain management practices is determined by the following variables; human capital, inventory management, management support and information sharing leaving 63.5% unexplained. Therefore, further studies should be done to establish the other factors (89.6%) that determine effective implementation of supply chain management practices in World Vision Ethiopia.

Table 12 ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.835	4	3.959	11.930	.000b
	Residual	27.541	83	.332		
	Total	43.376	87			

a. Dependent Variable: Implementation of SCM practices
b. Predictors: (Constant), Information Sharing Commutation Strategy, Human Capital Efficiency, Inventory Management, Executive or Management Support

Table 12 shows the probability value of 0.000 indicating that the regression relationship was significant in determining how human capital, inventory management, management support and information sharing influence effective implementation of supply chain management practices in World Vision Ethiopia.

Table 13 Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.938	.411		2.279	.025
	Human Capital Efficiency	.228	.098	.249	2.316	.023
	Inventory Management	.143	.134	.143	1.067	.289
	Executive or Management Support	.060	.153	.057	.394	.695
	Information Sharing Communication Strategy	.283	.100	.315	2.842	.006

a. Dependent Variable: Implementation of SCM practices

The established model for the study was: Y = .938 + .228X1 + .143X2 + .060X3 + .283X4

The regression equation above on table 13 has established that taking all factors into account (human capital, inventory management, management support and information sharing) constant at zero effectiveness in implementation of S.C.M practices will be .938. The findings presented also show that taking all other independent variables at zero, a unit increase in the human

capital efficiency would lead to a 0.058 increase in the score of effective implementation of supply chain management practices. The findings also indicated that a unit increase in the scores inventory management would lead to a .143 increase in the scores of implementation of supply chain management practices. Further, the findings shows that a unit increases in the scores of management support would lead to a 0.060 increase in the scores of supply chain management practices. The study also found that a unit increase in the scores of information sharing would lead to a 0.283 increase in the scores of effective implementation of supply chain management practices in World Vision Ethiopia. The study deduced that Information sharing and human capital efficiency were significant ($p<0.05$) while Inventory management and management support were insignificant.

4.5 Regression Diagnostic tests

4.5.1 Multicollinearity Test

The VIF detects multi Collinearity by measuring the degree to which the variance has been inflated. A VIF greater than 10 is thought to signal harmful multi Collinearity as suggested by Baum (2006).

Table 14 Summary of Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	VIF
Human capital efficiency	0.665	1.505
Inventory Management	0.428	2.336
Information Sharing strategy	0.371	2.699
Executive/ Management support	0.622	1.607

The Variance inflation factor (VIF) was checked in all the analysis which is not a cause of concern according to Baum (2006) who indicated that a VIF greater than 10 is a cause of concern. The basic assumption is that the error terms for different observations are uncorrelated (lack of autocorrelation).

4.5.2 Tests of Independence

Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test. Durbin Watson (DW) test check that the residuals of the models were not auto correlated since independence of the residuals is one of the basic hypotheses of regression analysis. Its statistic ranges from zero to four. Scores between 1.5 and 2.5 indicate independent observations (Garson, 2012).

Table 15 Durbin Watson Test

Variables	**Durbin Watson**
Human capital efficiency	2.413
Inventory Management	2.642
Information Sharing strategy	2.471
Executive/ Management support	2.311

The DW statistics of all except Inventory management were close to the prescribed value of 2.0. Thus, it can be concluded that there was no autocorrelation and the residuals were independent.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the objective of the study.

5.2 Summary

The general objective of this study is to conduct an assessment of factors affecting implementation of supply chain management practices in international NGOs in Ethiopia. The respondent rate of the study was 79% representing 88 respondents who filled and returned the questionnaires. Most respondents were male gender and were represented in the study with 61.36%. The research also revealed that most of respondents had an education level of Master's degree and had experience of above 5 years in the organization.

The study noted that employees skills affects the implementation of supply chain management practices in international NGOs in Ethiopia to a great extent, employee abilities also influences implementation of supply chain management practices to a great extent. The findings further summarizes that professional competence affects implementation of supply chain management practices to a great extent. Research also established that intelligence influences supply chain management practices implementation to a great extent. On addition level of experience greatly influences the implementation of the supply chain management practices. Finally, results from analysis also revealed that social competence determines implementation of supply chain management practices in international NGOs to a great extent. The study concur with Mistry (2014) who argued that internal training inclines to be centered on technical supply chain and logistics development, interpersonal and people management skills (e.g., supervisory skills, negotiations, team building, coaching and leadership) and health and safety.

Research established that inventory management has great influence on implementation of supply chain management. Demand forecasting was recorded that it affects implementation of supply chain to a great extent. It was also noted that inventory valuation influences implementation of supply chain management practices to a great extent. Further study revealed

that lead time determination influences implementation of supply chain management practices to a great extent. Inventory visibility was noted that it greatly affects supply chain management practices implementation. The study results also showed that inventory forecasting determines implementation of the supply chain practices to great extent. The findings were in agreement with Alverson (2003) who noted that by increasing the number of inventory turns, international organizations can hold less inventories leading to less capital invested at any given time.

Results from analysis also showed that management support has great effect in determining implementation of supply chain management practices. Furthermore, development and approval of proposal plan affects implementation of supply chain to a greatly. The study also noted that team building and budgetary allocation implementation of supply chain management practices to a great extent. Results of the findings also noted that commitments affects supply chain management practices implementation to a great extent. Study results also showed that facilitation to perform duties affecting implementation of the supply chain practices to great extent. Finally, study findings noted that social reducing conflicts influences implementation of supply chain management practices in international humanitarian organizations to a great extent. The findings concur with Andebe (2013) which states that resource management is an indispensable requirement to provide for an interactive training program to aid organizations in achieving an operational excellence like employee development, infrastructure and work environment. The findings agree with McKone-Sweet et al (2005) who found that lack of executive support is a big a barrier to application of SCM practices.

Research further established that information sharing greatly affects the implementation of supply chain management practices in international NGOs in Ethiopia. In relation to information sharing aspects clear mutual expectations has a great effect on supply chain management implementation. The study also assessed that other aspects such as regular flow of information and open door policy affects implementation of supply chain management practices to a great extent. Research noted that regular gathering feedback affects supply chain management practices implementation in international humanitarian organization to a great extent. The research finally noted that periodical talkfest (meetings) determine implementation of the supply chain practices to great extent. Results for this section seem to be consistent with those who documented that information sharing is a barrier for implementation (Burns, 2012). The results also concur with Senge (2010) that successful implementation of information in the application of supply chain management practices has the effect of reducing levels of complexity. The result implies that information sharing affects implementation of supply chain

management practices in international NGOs in Ethiopia to a great extent. Results for this section seem to be consistent (Jack, Powers & Skinner, 2010) that information sharing ideas and concepts act as catalysts towards effective application of supply chain management.

5.3 Conclusions

Based on the research findings the study concludes that human capital efficiency affects implementation of supply chain management practices in international NGOs in Ethiopia. The study further concludes that employees' skills, professional competence, intelligence, social competence as well as level of experience greatly influences implementation of supply chain management practices in international NGOs in Ethiopia.

The study also concludes that inventory management influences implementation of supply chain management practices in international NGOs in Ethiopia. Research concludes that the following aspects of inventory management such as demand forecasting, lead time determination, inventory valuation, inventory visibility and inventory forecasting affects implementation of supply chain management practices in international NGOs in Ethiopia.

The research further concludes that management support affects implementation of supply chain management practices in international NGOs in Ethiopia. Development and approval of proposal plan have a great influence in affecting implementation of supply chain management practices. Budgetary allocation, commitments, facilitation to perform duties and social conflicts reducing moderately determines implementation of supply chain management practices.

The research finally concludes that information sharing plays a big role in influencing implementation of supply chain management practices in international NGOs in Ethiopia. An aspect of clear mutual expectations greatly affects implementation of supply chain management organization in the organizations. The study also concludes that other aspects such as regular flow of information, open door policy, periodical talkfest (meetings) and regular gathering of feedback have a great influence on implementation of supply chain management practices.

5.4 Recommendations

To enhance implementation of supply chain management practices in international NGOs in Ethiopia, the study makes the following suggestions;

The study recommends that in order to improve on the level of human capital efficiency in the organization which leads to implementation of supply chain management practices the managers of humanitarian organizations should recruit and continuously train supply chain management

staff on how to improve on the efficiency of supply chain management. The managers should also recruit competent staff with Knowledge and Skills on SCM and the recruitment process should be based on professional qualifications and experience in supply chain management functions.

The study also recommends that managers in NGOs organization should ensure that inventory is properly managed, qualified employees with proper skills should be hired to manage inventory. The managers of NGOs should always take into consideration aspects such as demand forecasting, lead time determination, inventory valuation, inventory visibility and inventory forecasting in determining implementation of supply chain management practices in the organization.

To improve on management support, the study recommends that supply chain managers in humanitarian organizations should develop proposal plan which should be approved by the employees. The plan will aid in managing the implementation of supply chain effectively. Managers of NGOs should ensure that budget is well allocated in every department in the organization. Lastly the employees' in-charge of supply chain implementation should be well facilitated to ensure they are committed and effective in their duty.

Lastly the study recommends that the managers of NGOs should ensure that there is regular flow of information in the organization. The managers should come up with procedure of how the information should flow from top to all employees in the organization. The managers of humanitarian organization are further advised to be holding meeting with regularly with supply chain officers in order to access on performance of supply chain management practices. In those meetings challenges that faces the implementation of supply chain management practices has to be discussed and remedies to overcome them suggested.

5.5 Recommendations for Future Research

NGOs should investigate the potential benefits that can come from IT-enabled SCM, such as barcode technology, and enterprise resource planning (ERP) that could improve supply chain efficiency by supporting supply replenishment and reduce operating cost.

The role of top management in building supply chains in international NGOs, effectiveness of information sharing in supply chains should also be considered as an area of future study.

From the above findings, conclusion and recommendation the study recommends that an in-depth study should be carried to determine the challenges faced by international NGOs in affecting implementation of supply chain management practices.

The study recommends another study should be done to investigate effects of factors of implementation of supply chain management practices by other organizations rather than the humanitarian organizations or NGOs.

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Annex

Research Questionnaire

Department of Logistics and Supply Chain Management

Addis Ababa University School of Commerce

Research-Questionnaire on Assessment of factors affecting implementation of Supply Chain Management Practices in Non-Governmental Organizations (NGOs) in Ethiopia: The case of World Vision Ethiopia

Dear Respondent

This questionnaire is designed to assist the researcher to make an objective assessment of factors affecting implementation of supply chain management practices in World Vision Ethiopia. The exercise is basically academic and your answers will be treated with the utmost confidentiality they deserve. The researcher is postgraduate student of Logistics and Supply Chain Management in Addis Ababa University School of Commerce. Your maximum co-operation is highly anticipated. Please tick (√) the response applicable to you.

SECTION I: DEMOGRAPHIC INFORMATION Instructions

You are requested to fill out your personal information in the spaces below. Please tick only one response.

1. Gender.

Male ☐ .Female ☐

2. State your experience in the organization

a) 0-5 years ☐ b) ☐ 5-10 years

c) 11-15 years ☐ d) ☐ 16-24 years

3. State your education level.

a).Diploma ☐ b)1st degree ☐

c) Master's degree ☐ d) PhD ☐

1. **SECTION 2:** Assessment of Factors affecting implementation of supply chain management practices

Human capital efficiency

1) To what extent does human capital efficiency affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ]

To no extent[ ]

2) To what extent do the following aspects of human capital efficiency affect implementation of supply chain management practices in your organization?

	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent [ ]
Professional competence					
Employee skills					
Social competence					
Level of Experience					
Intelligence					
Employee Abilities					

Inventory Management

3) To what extent does inventory management affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ]

To no extent[ ]

4) To what extent do the following aspects of inventory management affect implementation of supply chain management practices in your organization?

	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent [ ]
Inventory valuation					
Inventory visibility					
Lead time determination					
Inventory forecasting					
Demand forecasting					

Executive/ Management support

5) To what extent do of executive/ management support affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ]

To no extent[ ]

6) To what extent do the following aspects of executive/ management support affect implementation of supply chain management practices in your organization?

	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent [ ]
Team building					
Budgetary allocation					
Facilitation to perform duties					
Commitment					
Reducing conflicts					
Development and approval of proposal plan					

Information Sharing/ Communication strategy

7) To what extent does information sharing/ communication strategy affect implementation of supply chain management practices in your organization?

To a very great extent [ ] To a great extent [ ]

To a moderate extent [ ] To a little extent [ ]

To no extent[ ]

8) To what extent do the following aspects of information sharing/ communication strategy affect implementation of supply chain management practices in your organization?

	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent [ ]
Regularly gathering feedback					
Regular flow of information					
Clear mutual expectations					
Open door policy					
Periodical talkfest (meetings)					

Implementation of Supply Chain Management Practices

9) 12) What is the trend of the following in your business for the last five years?

	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent [ ]
Mature collaboration with consumers and suppliers					
Data-oriented forecasting					
Approaches levels of control					
Risk minimization					
Optimization of company inventory					
Strategic sourcing					
Technology sourcing					

END

THANK YOU