

**SUPPLY CHAIN MANAGEMENT PRACTICE AND ORGANIZATIONAL  
PERFORMANCE OF AGIP OIL AND GAS INDUSTRY OIL AND GAS INDUSTRY  
IN RIVERS STATE, NIGERIA**

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## ABSTRACT

*Supply Chain Management (SCM) practice is a set of activities undertaken in an organization to promote effective management of its supply chain. Effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organizational performance as competition is no longer between organizations, but among supply chains. Therefore, the study was carried out to analyze the relationship between supply chain management practices and organizational performance of Nigerian oil and gas industry using Nigerian Agip Oil Company as a case study. Therefore, in the study, the main aim was to empirically investigate the relationship between SCM practices (logistics outsourcing, supply chain collaboration, IT capability, vertical integration and horizontal integration) and organisational performance in Nigerian oil and gas industry using Nigerian Agip Oil Company as a case study, hence some set of objectives, questions and hypotheses were defined from it. In the study the researchers provided empirical evidence to support conceptual and prescriptive statements in the literature regarding the impact of SCM practices. The study adopted descriptive research design. The target population for the study comprised employees of Nigerian Agip Oil Company and was drawn from different departments of the organization. Data were presented and analyzed using frequencies, descriptive, inferential statistics while the hypotheses were tested using  $\chi^2$  tool. The findings of the study revealed that majority of the respondents (71.7%), had stayed in Agip for more than two (2) years and so were experienced enough to give credible opinion on their supply chain management practices. The results also showed that logistics outsourcing had become one factor in creating a global supply-chain management; Nigerian Agip Oil Company had adopted information communication technology to a very high extent (80.2%) and that clearly showed that ICT played a major role in enhancing and entrenching the SCM practices in the organization; Nigerian Agip Oil Company had embraced supply chain collaboration to a very high extent (80.2%). The results also showed that the relationship between logistics outsourcing, supply chain collaboration, IT capability, vertical integration and horizontal integration and organizational performance in Nigerian Agip Oil Company was significantly high ( $\chi > 0.05$ ). The study therefore concluded that outsourcing, ICT and supply chain collaboration positively related to performance of the Agip Oil and Gas Company. It was recommended that oil and gas companies need to investigate ways of improving and establishing relationship along the entire value chain and management must strive to break down the traditional functional silos, drive more cross-functional integration and consequently more collaboration.*

*Keywords: Supply Chain, Management Practice, Organizational Performance, IT & Performance*

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Supply chain management (SCM) has taken on a key role in the current competitive global market and is now acknowledged as a crucial element in corporate performance and competitive advantage (Ali, Sanyal and Sukati, 2020). It is a critical strategic driver for increasing operational performance and maximizing the achievement of organizational objectives, such as improved productivity, increased performance, better customer service and enhanced profitability. The age of both market globalization and outsourcing has started, and many companies tend to manage their supply chain and logistics activities. Most of these organizations understand that SCM needs to be tested for its performance in order to create an effective and efficient supply chain (Reddy and Reddy, 2021).

Organizations must not only re-establish their operations to produce goods and services of increased quality that will greatly differentiate them from competitors and make them respond to the changing market dynamics through the efficient and effective management of the supply chain because the number of competitors is growing and expanding both locally and globally (Stock & Boyer, 2009). Supply- chain management can be defined as the configuration, coordination and continuous improvement of a sequentially organized set of operations (Chima, 2007). Many organizations aim at achieving survival, global leadership and to increase innovation; this will only be achieved by implementing a quality supply chain and continuous improvement of customer management through distinguished services (Ngugi, 2007 cited in Kimechwa, 2015).

Supply chain management is the most significant factors of success in oil and gas organizations because they are the engines that drive their operation towards successful achievement of their goals. According to Jain *et al.*, (2009), a supply chain is a dynamic process and involves the constant flow of information, materials, and funds across multiple functional areas both within and between chain members. Supply chain management (SCM) has received in recent years a great deal of attention by researchers and practitioners. Supply chain initiatives have become a critical part of firms operations (Eskioglu *et al.*, 2009 cited in Kimechwa, 2015). Success in the process is increasingly being dictated by how well a company can control its supply base and mitigate supply bottlenecks and Liabilities.

Effective SCM will lead to a lowering of the total amount of resources required to provide the necessary level of customer service to a specific segment and improving customer service through increased product availability and reduced order cycle time (Banomyong & Supatn, 2011); engage in information exchange (forecasting techniques, inventory management, delivery) and structural collaboration (just-in-time system, outsourcing, vendor-managed inventory and co-locating plants) (Henry & Barro, 2009; Raja, Mazlan & Ali, 2006); relationships with downstream supply chain partners to create end-customer value (Iyer, 2011) and maximize benefits and minimize costs along the supply chain (Chima, 2007). Thus, the nature of SCM becomes visible to participating companies with successful implementation in the ever changing global environment of the business world, risks abound and it greatly affects the decision making processes of the business management. Supply chain Management involves providing maximum satisfaction to end users (consumers), in other words, delivering the right product to the right person at the right time while still maximizing profits. Today, there are many opportunities for the coordination of activities across the supply chain even in the ever complex oil and gas sector. This is largely due to the development of information systems and communication technologies within the sector. Integrating supply management with other factors of operations allows all functions to be involved in the management decisions (Chima, 2007).

Over the years, the oil industry has continued to face growing challenges, from stricter government regulation, political risks, competition, emergent new comers and political hostilities, which has affected growth and output. Due to the scramble for resources, many oil Companies have been driven to explore and produce in some of the most hostile and harsh environments, which in turn tend to be extremely costly (Kimechwa, 2015). The main challenge facing the oil industry is not the availability of oil resources, but putting these reserves into production and delivering the final products to consumers at the minimum cost possible. Thus, a solid supply chain management program will enhance this goal (Chima, 2007).

Supply Chain (SC) encompasses all activities associated with the flow of goods and services from raw materials stage to the final product usable by client and the supply chain management emphasizes on the integration of supply chain activities and information flows associated with them to achieve a competitive advantage of continuity and reliability (Zuckerman, 2004). Effective supply chain management (SCM) has become a potentially

valuable way of securing competitive advantage and improving organizational performance as competition is no longer between organizations, but among supply chains. As competition in the 1990s intensified and markets became global, so did the challenges associated with getting a product and service to the right place at the right time at the lowest cost (Childhouse and Towill, 2003). Organizations began to realize that it is not enough to improve efficiencies within an organization, but their whole supply chain has to be made competitive (Moberg *et al.*, 2002). The understanding and practicing of supply chain management (SCM) has become an essential prerequisite for staying competitive in the global race and for enhancing profitability (Power *et al.*, 2001; Tan *et al.*, 2002).

Against this background, this study will look at the effect of supply chain management on organizational performance in AGIP Nigerian oil and gas industry.

## **1.2 Statement of the Problem**

In oil and gas sectors, Supply chain management (SCM) is an important business integration technique which creates a strategic advantage for the organization. In the oil industry, the supply-chain network is composed of shipping via vessel, oil tankers, and pipelines that may run across multiple countries. This network is used to transport crude from wellhead to refinery for processing, to transport intermediates between multi-site refining facilities, and to transport finished products from product storage tanks to distribution centers and finally to the customers. Any disruptions arising in the global supply chain can have tremendous adverse effects in achieving operational efficiency, maintaining quality, and customer satisfaction. This affects profitability of the oil companies at the end. Environmental uncertainties in oil industry lead to a need for higher reliability and flexibility within the production systems and the planning and control systems in the supply chain. Reducing these uncertainties will be achieved by understanding the root causes and how they interact with each other. Change in markets, products, technology, and competitors are occurring at an increasingly rapid pace.

With dramatically falling oil prices, reductions in headcount and uncertainty regarding the industry's future, the global oil and gas industry is currently facing challenging times. A lack of standardization in the supplier selection process, insufficient collaboration between buyers and suppliers, and rising labor costs are placing the industry's productivity levels under increasing pressure and leaving oil and gas companies open to risks associated with their suppliers.

In the oil and gas industry, there is no longer the headcount there has been in previous years that allowed companies to utilize their staff to carry out proper validation, prequalification and auditing of their suppliers.” Failure to carry out reviews of suppliers puts main contractors in a significant position of risk, since supply chain problems can affect firms’ financial position and reputation. This implies that many oil and gas firms do not have clear strategies, processes or scrutiny in place to select the suppliers they work with, which could expose them to a significant amount of risk.

Across the globe, oil and gas companies are under pressure to cut costs, rather than risks from the supply chain, but in the real sense the cost of doing business with a risky supplier can be astronomical. It is not just financial risk that businesses face in this situation, but also potential damage to their brand name and reputation, as well as loss of procurement contracts and possible legal trouble arising due to failure to comply with supply chain legislation.

The performance of oil and gas corporations has been adversely affected by supply chain disruptions. It is for this reason that this research study wishes to investigate Supply Chain Management in the Nigerian context and examine the effects of a restructured supply chain on performance of AGIP oil and gas companies in Nigeria.

### **1.3 Objectives of the Study**

The major objective of this study is to determine the relationship between supply chain management practices and organisational performance of AGIP Nigerian oil and gas industry using Nigerian Agip Oil Company as a case study.

The specific objectives were to:

- i. Determine relationship between logistics outsourcing and employee commitment of Nigerian Agip Oil Company.
- ii. Ascertain the relationship between supply chain collaboration and employee commitment of Nigerian Agip Oil Company.
- iii. Assess the relationship between IT capability and employee commitment of Nigerian Agip Oil Company.
- iv. Determine the relationship between vertical integration and employee commitment of Nigerian Agip Oil Company.
- v. Examine the relationship between horizontal integration and employee commitment of Nigerian Agip Oil Company.

#### **1.4 Research Questions**

To achieve the above objectives, the following research questions were formulated.

- i. What is the relationship between logistics outsourcing and employee commitment of Nigerian Agip Oil Company?
- ii. What is the relationship between supply chain collaboration and employee commitment of Nigerian Agip Oil Company?
- iii. What is the relationship between IT capability and employee commitment of Nigerian Agip Oil Company?
- iv. What is the relationship between vertical integration and employee commitment of Nigerian Agip Oil Company?
- v. What is the relationship between horizontal integration and employee commitment of Nigerian Agip Oil Company?

#### **1.5 Research Hypotheses**

To answer the above research questions, the following alternate hypotheses were proposed:

- i. There is a relationship between logistics outsourcing and employee commitment of Nigerian Agip Oil Company.
- ii. There is a relationship between supply chain collaboration and employee commitment of Nigerian Agip Oil Company.
- iii. There is a relationship between IT capability and employee commitment of Nigerian Agip Oil Company.
- iv. There is a relationship between vertical integration and employee commitment of Nigerian Agip Oil Company.
- v. There is a relationship between horizontal integration and employee commitment of Nigerian Agip Oil Company.

#### **1.6 Scope of the Study**

This study examined the relationship between supply chain management practices and organisational performance in Nigerian Agip Oil Company. The SCM variables employed in this study were generated from an extensive literature review, and supported by many authors as critical success factors for SCM implementation. The extent of SCM implementation and effects on organisational performance was evaluated using the following

three accepted SCM variables: (1) logistics outsourcing (2) supply chain collaboration (3) IT capability (4) vertical integration (5) horizontal integration.

### **1.7 Significance of the Study**

The goal of this study was to determine how SCM methods affected the performance of firms in the oil and gas industry. This was predicated on the assumption that, despite the limited attention it receives from industry players, supply chain is crucial to the oil and gas sector. As such, it transforms into an obstacle on performance of these organizations. Again the issue of applying SCM practices in the oil and gas sector is a fairly new phenomenon in Nigeria; hence there is need for extensive research to unravel the various underlying dynamics of the research topic so as to be applied to increase their performance.

The study's justification was the demand for fresh ideas and all-encompassing methods that oil and gas companies could utilize to manage their supply chains. Thus, the study will attempt to provide specifics on the methods used by oil and gas businesses like Agip to streamline their supply chain processes. The basis for this is the absence of steps in oil and gas enterprises to strengthen the application of SCM principles that improve competitive advantage and organizational performance. The findings of this study would be valuable to diverse segments of the people. The oil and gas companies in Nigeria would benefit from the findings of this study as they would have the knowledge of the SCM practices that enhances the performance of an organization.

This study aims to contribute on the following levels.

- i. On a practical level, this study will provide oil and gas enterprises with more understanding about how their service performance, asset utilization, and financial performance are associated with supply chain strategies by summarizing the findings of the thesis articles. Given the various performance factors, these findings may serve as a guide for what to do and what to avoid.
- ii. On a theoretical level, this study makes two contributions. In this work, a sizable empirical dataset is used to evaluate some of the issues previously explored in the literature. Other topics like supply chain collaboration and outsourcing have been the subject of extensive prior research. While some of the conclusions related these notions challenge preexisting knowledge, others partially confirm earlier hypotheses.



The assessment and analysis of firm performance is also aided by this study. In contrast to most other studies, which assess either financial data derived from financial reporting or self-reported data; this study combines and analyzes both types of data. As a result, self-reported and "objective" indicators of firm success can be included in the thesis articles. The range of measurements of SCM employed in the thesis articles is extremely broad given this special combination.

Organizations will benefit from this study's explanation of supply chain management's (SCM) significance in today's cutthroat business environment. This study will fill a gap in the literature on supply chain management in the Nigerian oil and gas industry because it is one of only a handful that has attempted to assess the impact that the adoption of SCM practices can have. As anticipated, this study will pave the way for a wave of additional scholarly investigations into the function of SCM and related issues in Nigeria.

### **1.8 Limitations of the Study**

The limitations of this study are as follows:

- i. The limited time available within my disposal posed a major handicap on the execution of the research paper.
- ii. Organization operational huddles and the unavailability of some organizational document was a setback to this work.
- iii. The study focused on one organisation – Nigerian Agip Oil Company. This means that the results cannot be generalized or represent the situation in other Nigerian oil and gas companies.
- iv. The sample population selected for this study was limited to Nigerian Agip Oil Company, in Port-Harcourt.
- v. The ability to generate confidential data from each of the respondents without encountering challenges was difficult. Biased and uncooperative attitude of some staff members which limited the amount of information at my disposal.
- vi. The study followed the informed consent rules of research that allows for the respondents to voluntarily participate in the research. However, the study upheld participant's right to confidentiality and privacy in line with divulging information during the data collection. Nonetheless, the research was limited to the fear of the respondents to give information during the data collection process.

## 1.9 Operational Definitions of Terms

**Supply chain management:** Supply chain management in the oil and gas industry includes domestic and international transportation, ordering and inventory visibility and control, materials handling, import/export facilitation and information technology.

**Organizational performance:** Organizational performance is the ability of an organization to reach its goals and optimize results.

**Employee Commitment:** Employee Commitment is the bond employees experience with their organisation. It is a strong belief in and acceptance of an organization's goals and the level of enthusiasm an employee has towards his/her tasks assigned at a workplace.

## 1.10 Profile of Agip Oil and Gas Company

Agip (Azienda Generale Italiana Petroli, English: General Italian Oil Company) is an Italian automotive gasoline, diesel, LPG, lubricants, fuel oil, and bitumen retailer established in 1926. It has been a subsidiary of the multinational petroleum company Eni since 2003, when Eni acquired Agip Petroli S.p.A., creating the Refining and Marketing Division (R&M). Eni is an integrated energy company, headquartered in Italy, with over 31.000 people in nearly 68 countries in the world. The company commenced activities in Nigeria in 1962, through a wholly owned subsidiary – the Nigerian Agip Oil Company (NAOC) and has been active ever since in hydrocarbon exploration and production as well as power production.

Nigeria Agip Oil Company (AGIP) is owned by the ENI GROUP. It was incorporated as a limited liability company in 1962, to harness Nigeria's vast natural gas resources and produce Oil & Gas for export. The company operates in the land and swamp areas of the Niger Delta under a joint venture agreement with NNPC (60%), NADC (20%) and Conocophilips (20%) with concessions lying within Bayelsa, Delta, Imo and Rivers states of Nigeria. NAOC is also a partner in the SPDC joint venture with 5% stake.

**Mission Statement:** To produce and export oil and gas exploration & production safely, reliably and profitably, and to grow the business to its full potential, helping to maximize the value of Nigeria's gas reserves.

**Vision:** To be a world class oil and gas company helping to build a better Nigeria. Eni has proven the robustness and flexibility of its business model by reacting swiftly and effectively to the extraordinary crisis context, while progressing the Company's irreversible path for the

energy transition. Eni has been present in Nigeria since 1962 through its subsidiary Nigerian Agip Oil Company: in the country we work in the Exploration & Production sector in concessions in the states of Imo, Delta, Rivers and Bayelsa ([www.eni.com/en-NG/who-we-are/eni-in-nigeria.html](http://www.eni.com/en-NG/who-we-are/eni-in-nigeria.html)).

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Conceptual Review

##### 2.1.1 Supply Chain Management (SCM)

Some authors describe SCM as operational term involving the flow of materials and products. Others see it as management philosophy, yet to some others it is interpreted as management process (Mentzer *et al.*, 2001a). These conceptions of individuals' shape their definitions on SCM. The following are some of the definitions of supply chain management. SCM is an integrative idea that controls the flow of distribution channel from supplier to ultimate user (Cooper and Ellram, 1993 cited in Abubakar, 2014).

SCM is a management of networks of interconnected organisations involved in the provision of products and services to end customers (Harland, 1996 cited in Abubakar, 2014). SCM is a method of managing relationships, information and materials flow across company border to deliver enhanced customer service and economic value through synchronized management of the movement of physical goods and associated information from sourcing to consumption (La Londe, 1997 cited in Abubakar, 2014).

According to Tyndall *et al.* (1998) cited in Abubakar (2014) SCM is a total flow of materials, from procurement of raw materials to delivery of finished products to customers, as well as related counter flows of information that both control and record material movement. SCM is systematic and strategic coordination of the traditional business functions within a particular company and across businesses within supply chain, for the purposes of improving long term performance of individual companies and supply chain as a whole (Mentzer *et al.*, 2001b).

SCM can be defined as the configuration, coordination and continuous improvement of a sequentially organized set of operations (Chima, 2007). SCM is management of interconnection of organisations that relate to each other through upstream and downstream linkages between processes that create value to ultimate consumer in form of products and services (Slack *et al.*, 2007). SCM is 'a business philosophy that strives to integrate subsidiary activities, actors and resources between different levels of points, from origin to consumption in channels' (Svensson, 2007).

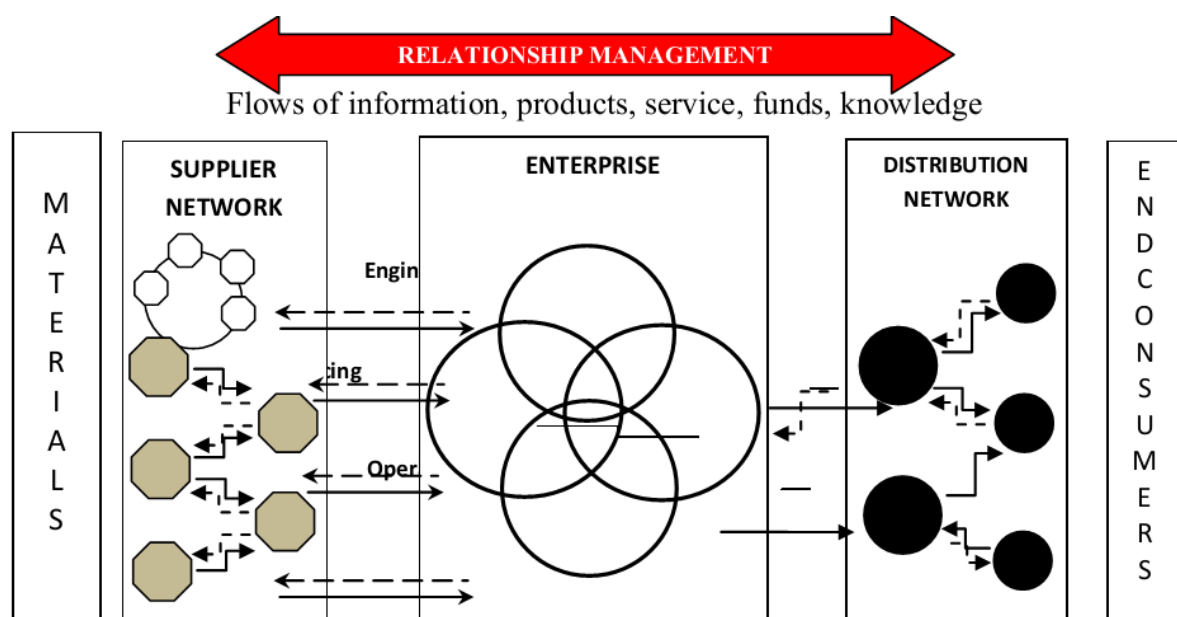
Stadtler (2008) defined SCM as task of integrating organisational units along supply chain and coordinating material, information and financial flows in order to meet customer demands with aim of improving competitiveness of supply chain as a whole. SCM is a combination of internal practices, those that are within the organization and external practices, those that are across organisational boundaries, integrating an organization with its customers and suppliers (Kaynak and Montiel, 2009).

SCM is an integration activity with primary responsibility of linking key business functions and business processes within and across companies into a cohesive and high-performing business model (Council of Supply Chain Management professional (CSMP), 2001 cited in Stadtler, 2008). SCM is managing upstream and downstream value added flows of materials, final goods and related information among suppliers, company, resellers and final customers (Kotler and Armstrong, 2008). SCM is a set of activities for managing and coordinating the transformational activities from raw material suppliers to ultimate consumers (Heikkila, 2002 cited in Kotzab *et al.*, 2011). SCM is a process of integration of supply chain activities and information flows associated with it, by improving and coordinating supply chain activities in manufacturing and product supply (Biniaziet *et al.*, 2011 cited in Abubakar, 2014). SCM is the 'degree to which a firm strategically collaborates with its supply chain partners and collaboratively manage intra and inter organization processes in order to achieve effective and efficient flows of products and services, information, money and decisions to provide maximum value to the customer' (Flynn *et al.*, 2010).

Definitions show that SCM structure requires different material functions for coordinating the entire materials process, as well as requiring collaborative relationships with suppliers across multiple tiers (Monczka *et al.*, 1998 cited in Abubakar, 2014). Looking at the above definitions, it can be observed that SCM is a managerial responsibility of co-coordinating and integrating all the tasks of the supply chain members in order to achieve the purpose of producing products/services. It is only through this that customers will be satisfied; leading to profitability and competitiveness of the entire supply chain.

Supply chain management is defined by Mentzer (2001) cited in Abubakar (2014) as the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole. SCM focuses on how firms utilize their suppliers' processes,

technology, and capability to enhance competitive advantage. Hence Supply chain management (SCM) enhances competitive performance by closely integrating the internal cross-functions within a company and effectively extending them to the external operations of external partners to be successful (Monzcka and Morgan, 1997; Ellram and Cooper, 1993; Lambert, James and Elram, 1998; Kim, 2006; Tan, Kannan, and Hadfield, 1998 all cited in Abubakar, 2014). Supply chain is a set of three or more entities directly involve in the upstream and downstream flows of products services, finances and information from a source to a customer (Hadfield, 2002; Mentzer, 2001 all cited in Abubakar, 2014). Figure 2.1 shows a network of supply chain.



**Figure 2.1: Supply Chain or Supply Chain Network**

**Source: Georgevitch (2005) cited in Abubakar (2014)**

Supply chain management as management philosophy takes a system approach to viewing the supply chain as a single entity. This means that the partnership concept is extended into a multi firm effort to manage the flow of goods from suppliers to the ultimate customer. Each firm in the supply chain directly or indirectly affects the performance of other supply chain members, as well as the overall performance of the supply chain (Cooper *et al.*, 1997 cited in Abubakar, 2014).

Supply chain management is increasingly being recognized as the integration of key business processes across the supply chain. Implementation is carried through by three primary elements; the supply chain network structure, the supply chain processes and the management

components (Otchere *et al.*, 2013). In terms of supply chain network structure, it is important to integrate decisions related to purchasing, manufacturing, stocks, warehousing and distribution. On the other hand, it is important to design a set of standard processes which will assure rational behavior of the individuals or companies that are part of the supply chain. Last but not least, it is necessary to define control mechanism to be able to audit performance of supply chain according to the plan. This is conducted by coordinating activities and processes in order to build links between supply chain members and making the right decision. There are several organizations trying to set cross-industry standard processes such as Global Supply Chain Forum (GSCF), Supply-Chain Operations Reference Model (SCOR), Collaborative Planning, Forecasting & Replenishment (CPFR) and Rosseta Net, which can help members of a supply chain integrate efficiently. The Global Supply Chain Forum defines supply chain management as “the integration of key business process from end user through to original suppliers that add value to customers and stake holders” (Lambert, 2005).

According to Lambert, Cooper & Pagh, 1998 as cited in Otchere *et al.*, 2013, there are eight (8) supply chain management (business) processes: as shown in figure 2.2.

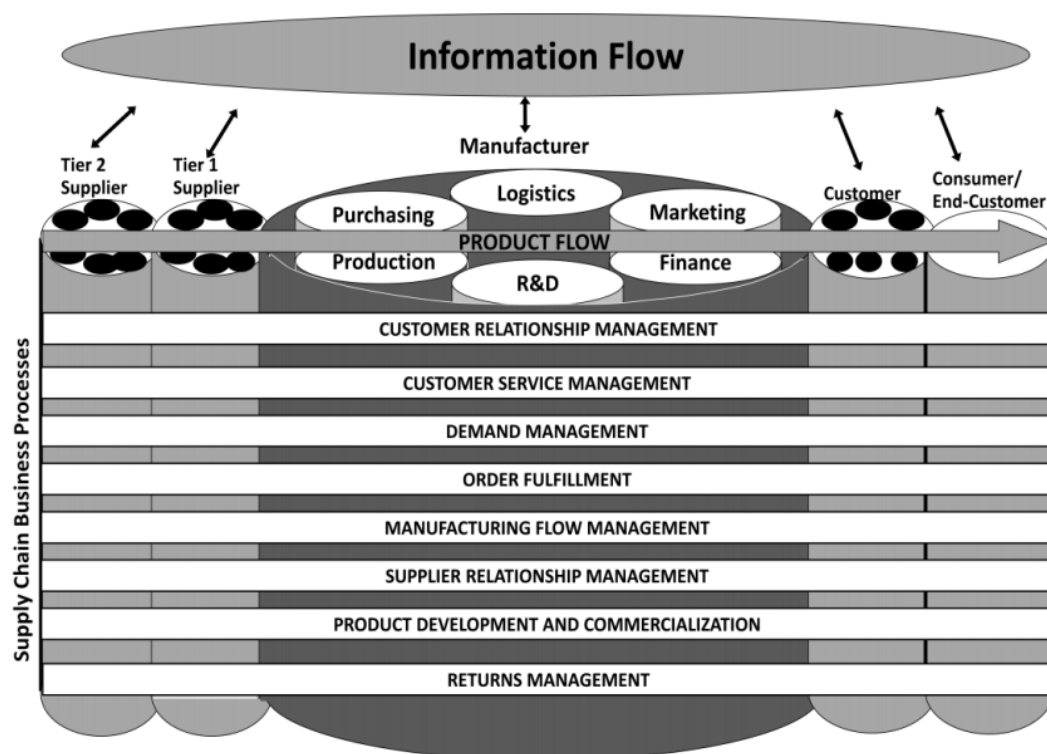


Figure 2.2 Integrating and Managing Business Processes across the Supply Chain

Source: (Adopted from Lambert, Cooper and Pagh, 1998 as cited in Otchere *et al.*, 2013).

The eight key business processes run along the supply chain and cut across firms and functional silos within each firm. Although functional expertise remains in place, implementing supply chain management requires making a transition from a functional organization to one focused on business processes. While management teams of all firms in each supply chain should consider these eight processes, the relative importance of each process and the specific activities included may vary. Another effective way of managing supply chain is by using the supply chain operations reference (SCOR) model developed the Supply Chain Council to ensure effective communication among the supply chain partners and to measure performance of the chain. The scope of the SCOR model is defined as “from company’s supplier’s supplier to company’s customer’s customer (Otchere *et al.*, 2013).

When defining supply chain management, it is common to relate it to logistics to better understand the approach, since the concept of supply chain management started in the logistics literature. Helldorsson and Larson (2000) Otchere *et al.*, (2013) show that supply chain management relative to logistics can be viewed in four different ways: Traditionalist, ReLabeling, Unionist and Intersectionist. Some authors do not distinguish between supply chain management and logistics, they just interchange the names. Christopher (1998) cited in Otchere *et al.* (2013) defines supply chain management as an extension of logistics. Logistics is essentially a planning orientation and framework that seeks to create a single plan for the flow of products and information through a business. Supply chain management builds upon this framework and seeks to achieve linkage and coordination between processes of the entities in the pipeline. Schary (1998) cited in Otchere *et al.*, (2013) also see supply chain as more than logistics. It includes the flow of material and products to customer and more than that, it includes also the organizations that are part of these processes crossing organizational boundaries to link their internal operations as part of this system. The scope of supply chain spans the entire set of organizations from procurement of material and product components to delivery of completed product to the first customer (Schary, 1998 cited in Otchere *et al.*, 2013).

### **2.1.2 Evolution of Supply Chain Management**

In the beginning of industrial age, production was simply manufacturing that occurred within a single firm. Companies would take raw material and manufacture a product entirely within a single firm (Fandel and Stammen, 2004; Hines, 2006; Kotzab *et al.*, 2011). Craft production was the standard, as each individual craftsman created one product from the beginning to the



end (Zacharia, 2001a). Increased marketing and environmental pressures forces organisations to form supply chains networks in order to satisfy increased customer demand (Zacharia, 2001a; Fandel and Stammen, 2004; Vonderembse *et al.*, 2006). From the 1970s to the 1980s materials flow from source of supply to customers was called pipeline (Hunter *et al.*, 1993; Lambert and Cooper, 2000 all cited in Abubakar, 2014) whilst in the 1990s supply networks became a more preferred phrase (Christopher, 1996 cited in Abubakar, 2014).

Business environment in the 1990s became increasingly dynamic in terms of increasing technological complexity, demanding markets, explosion of knowledge and increasing global competition (Peter, 1996 cited in Abubakar, 2014). Increased global competition inspired the development of supply chain (Zacharia, 2001). One significant paradigm shifts of modern business management is that individual businesses no longer compete as solely autonomous entities, but rather as supply chains (Schary and Skjøtt-Larsen, 2001; Zacharia, 2001a; Spekman *et al.*, 2002; Hines, 2006; Vonderembse, 2006; Stadtler, 2008). The shift in competition from among individual business organisations to amongst supply chains makes supply chain management imperative in modern production and operations management (Vonderembse, 2006; Stadtler, 2008; Ellinger *et al.*, 2012). The success of an organization depends on how well its entire supply chain competes with competitors' networks (Schary and Skjøtt-Larsen, 2001; Kotler and Armstrong, 2008; Attaran and Attaran, 2009).

SCM is now a key component of business organizations' strategies (Ellinger *et al.*, 2006). Improving supply chain effectiveness is vital to individual firm and entire supply chain profitability (Slack *et al.*, 2007; Stadtler, 2008). Therefore, developing a supply chain production system and utilizing a supply chain orientation lead to greater opportunities for lower costs, improved customer value and differential advantage in the future (Zacharia, 2001).

SCM was originally espoused by Oliver and Webber in 1982 as a range of activities coordinated by organization in obtaining and managing supplies (Hines, 2006; Halldorsson *et al.*, 2007; Svensson, 2007; Stadtler, 2008; Kotzab *et al.* 2011). SCM first appeared in logistics literature in around 1982 as inventory management process (Mentzer *et al.*, 2001; Min, 2001a; Hines, 2006).

The evolution of SCM can be viewed in two parts. The first starting from 1800s and proceeding to today, covering craft production, mass production, lean production, just-in-time

(JIT) production, tiered production, dispersed production and build-to-order production. The second are intra company production, intercompany production and eventually supply chain production (Zacharia, 2001a).

In the early part of the 20th century, the focus was on quality whilst the production method was craft production. In the 1930s and 1940s, cost was the overriding factor; mass production was the dominant production paradigm. In the 1980s, quality combined with low cost was the critical factor; lean production emphasizing supplier partnerships was the dominant production paradigm. The fundamental change between mass production and lean production is the increase in flexibility in workers and machines. In the 1990s and beyond, the critical factor was flexibility and the dominant production paradigm was SCM (Zacharia, 2001a). These show that practical field of SCM is constantly changing, as the competitiveness of global companies increasingly depend on their capability to produce and deliver customized products and services fast and efficient all over the world. At the same time, an increasing percentage of value creation takes place outside boundaries of individual firm (Bruce *et al.*, 2004; Halldorsson *et al.*, 2007; Kotzabet *et al.*, 2011). Supply chain production systems have a significant role to play in many companies because selection of appropriate production system can directly affect strategic capability of firms (Zacharia, 2001).

### **2.1.3 Objectives of Supply Chain Management (SCM)**

One of the primary objectives of SCM is integration and management of the sources and control of the flow of materials (Mckone-Sweet and lee, 2009) using complete system approach across various functions and multiple tiers of suppliers (Mentzer *et al.*, 2001a; Mckone-sweet and Lee, 2009). As supply chain links company to its suppliers upstream and to its distributors downstream in order to serve customers (Chima, 2007).

Another objective of SCM is creation of value to satisfy customers demand (Fawcett *et al.*, 2008; Mentzer *et al.*, 2001a). Provision of maximum customer service at lowest costs can improve customers' satisfaction (Chima, 2007). Product value is consumers' assessment on how well their needs were satisfied by particular goods or services (Goodstein and Butz, 1998 cited in Mentzer *et al.*, 2001b) whilst customer satisfaction is a measure that shows how successful an organisation provides products or services to the market place for customers' acceptance (Olsen and Johnson, 2003). Value dictates customers' desires (Porter, 1985). Organisations are expected to satisfy customers by providing what customers want at the time

they want it (Fawcett *et al.*, 2008). Understanding the entire process of supply chain is essential in identifying and delivering value (Mentzer *et al.*, 2001a): Customer satisfaction increases market share and profitability (Ellinger *et al.*, 2012; Daugherty *et al.*, 2008); return on investment and productivity (Anderson *et al.*, 1997 cited in Ellinger *et al.*, 2012); market value added (Ittner and Lacker, 1996 cited in Ellinger *et al.*, 2012); shareholder value (Anderson *et al.*, 1997 cited in Ellinger *et al.*, 2012); stock market performance (Fornell *et al.*, 2006 cited in Ellinger *et al.*, 2012) and customer loyalty (Oliver *et al.*, 1992 cited in Ellinger *et al.*, 2012). On the other hand, SCM minimizes total cost needed to provide required stocks at reduced order cycle time (Cooper and Ellram, 1993; Leonard and Cronan, 2002 in Fawcett *et al.*, 2008). This will in turn create competitive advantage (Bowersox and Closs, 1996; Cooper and Ellram, 1993 cited in Ellinger *et al.*, 2012) and reduce inventory at improved delivery services (Fawcett *et al.*, 2008).

#### **2.1.4 Supply Chain Management Processes**

SCM processes involve activities and methods that are used in coordinating the flows of materials, information and finance from supplier to final customers. These activities include SCM orientation, integration, partnerships, leadership and SCM competency.

Organisations implementing SCM should have supply chain orientation (SCO) (Mentzer *et al.*, 2001b). Supply chain orientation (SCO) is ‘the recognition by an organization of the systemic, strategic implications of the tactical activities involved in managing the various flows in a supply chain’ (Mentzer *et al.*, 2001b, p. 11). SCO is the idea of viewing the coordination of the supply chain from an overall system perspective, with each of the tactical activities of distribution flows viewed within a broader strategic context. SCO is an organizational mind-set required by an organization to leverage SCM competency into superior performance (Mentzer *et al.*, 2001b). Thus, an organization has SCO if its management (in its entirety, not just one or two individuals) can see the implications of managing the upstream and downstream flows of products, services, finances and information across their supplier and their customers (Zacharia, 2001a).

SCO occurs when the focal firm starts to consider its supplier’s supplier and its customers’ simultaneously (Zacharia, 2001a). It requires organisations to control SCM competency into better performance (Min, 2001). SCO depends on reliable information without which, right

decisions cannot be taken (Slack *et al.*, 2007). SCO implementation requires SCO across several companies directly connected in the supply chain.

SCO and SCM are inextricably linked. SCO is the “management philosophy” that recognizes SCM within the firm, while SCM is the ‘sum total of all the overt management actions undertaken to realize that philosophy’ (Mentzer *et al.*, 2001b, p. 11). In other words, SCM is the implementation of SCO across supplier and customers. Research shows that supply chain oriented firms successfully align their marketing and supply chain strategies more than those that are not (Defee *et al.*, 2009; Ellinger *et al.*, 2012). It better implement flow coordination mechanisms with supply chain partners (Fugate *et al.*, 2006) and improve the effectiveness of supply chain processes (Trent, 2004; Mollenkopf *et al.*, 2007).

Prior to implementing SCM in an organization, internal (supply chain readiness) and external (joint) conditions for adopting SCM have to be satisfied. Internal conditions are requirements for adopting SCM within the organization. They are commitments that involve human resources, financial resources, top management support, internal vision and goals, staff’s technical experts, central IT systems, guidelines for information exchange, education, project setup groups, processes and integration (Mentzer *et al.*, 2001b; Causins and Lawson, 2007). The External (joint) SCM conditions are requirements for adopting SCM processes between organisations within the supply chain. They includes shared production structures, joint project groups, systems perspective, trust, long term oriented relationships, power, shared profits and risks, mutual dependency, shared information on inventory status, forecasts, product development, organisational culture and corresponding control methods (Mentzer *et al.*, 2001b). Kotzab *et al.* (2011) empirically indicated that SCM requirements either internally or externally (jointly) play no significant role in changing the position of SCM implementation. Joint SCM conditions’ comprising both transactional and relationships related characteristics for supply chain partnerships are key requirement for adopting SCM related processes. Kotzab *et al.* (2011) developed hierarchy of activities toward adopting SCM:

- i. Develop organization’s internal SCM conditions
- ii. Work with external partners on developing joint SCM conditions both downstream (customers) and upstream (suppliers)
- iii. Adopting SCM related processes thereby executing SCM.

Effective Integration is the basic requirement of SCM practices. Similarly, integration and coordination are used interchangeably (Min, 2001b). Integration made supply chain operates as corporate entity, spans into a virtual enterprise without reference to traditional company boundaries and can be driven directly by customer demand (Cottrill, 1997 cited in Abubakar, 2014). SCM involves integrating processes from raw materials sourcing to manufacturing and to distribution across entire supply chain (Fandel and Stammen, 2004; Biniazi *et al.*, 2011; Kotzab *et al.*, 2011). This facilitates knowledge sharing that connects sourcing and manufacturing operations with market requirements to better match supply with demand (Ellinger *et al.*, 2012). Integration is ‘attempting to elevate the linkages within each component of the chain, to facilitate better decision making and to get all pieces of chain interact in a more efficient way (and thus) . . . create supply chain visibility (and) identify bottlenecks’ (Putzger, 1998 cited in Power, 2005). Integration encompasses coordination of both internal and external suppliers toward pursuing common goals (Mentzer *et al.*, 2001b). It coordinates all functions of distinct operations in order to achieve overall goal of the supply chain (Schary and Skjøtt-Larsen, 2001; Stadtler, 2008; Mckone-Sweet and Lee, 2009; Biniazi *et al.*, 2011; Kotzab *et al.*, 2012). As such integration manages entire supply chain as a single entity (Power, 2005); where every member organization is an integral partner (Haulihan, 1998 cited in Abubakar, 2014; Mckone-Sweet and Lee, 2009); such that actions of one firm directly affects overall channel performance (Cooper *et al.*, 1997 cited in Abubakar, 2014; Mckone Sweet and Lee, 2009); through a suitable information sharing system (Power, 2005). These indicate that integration is an operational perspective that allows organization to standardize operational procedures among different parts of organization and between organisations as a whole (Hines, 2006).

There are many types and classification of integration. A well-known distinction is between internal and external integration (Gimenez *et al.*, 2010 cited in Abubakar, 2014). Another distinction is between upstream and downstream integration – integration with suppliers or buyers – (Flynn *et al.*, 2010). Cooper and Ellram (1993) and Dobler and Burt (1996) cited in Abubakar (2014) classified integration into three ways: across functional boundaries (production, inventory holding and transport), organisational boundaries (manufacturers, carries, distributors and customers) and geographic boundaries (global supply and markets). Kotzab *et al.* (2012) classified integration in both forward and backward directions. Flynn *et al.*, (2010, p. 59) argues that supply chain integration is a multi-dimensional concept and ‘the

diverse dimensions of supply chain integration can ultimately be collapsed into three dimensions: customer, supplier and internal’.

Integration involves dispute resolution as different organisational interests may have conflict over resources, status and other factors (Lysons and Farrington, 2006). Organisational conflict can be reduced through effective information sharing and collaborative integration between internal and external supply chain members (Tracey *et al.*, 2005; Biniaziet *al.*, 2011; Ellingeret *al.*, 2012). Moreover, collaborative integration between internal and external supply chain participants focuses on better aligning supply chain participants’ incentives and reward systems (Fawcett *et al.*, 2008), so as to reduce duplication and non-value creating activities (Ellingeret *al.*, 2012).

Integration makes supply chain effective through keeping low inventory in the downstream of the network (Slack *et al.*, 2007; Stadtler, 2008), increase customer services and building competitive advantage for the network (Cooper and Ellram, 1993 cited in Abubakar, 2014). Integration in supply chains is implemented through partnerships, network organization/inter-organisational collaboration and leadership.

The general consensus in most SCM literature is that the more integration – the higher the performance of the supply chain; whether the integration is with customers or with suppliers (Huber and Sweeney, 2007 cited in Abubakar, 2014; Gimenez *et al.*, 2010 cited in Abubakar, 2014). The basis of integration can be characterised by cooperation, collaboration, information sharing, trust, shared technology, partnership and fundamental shift from managing individual functional processes, to managing integrated chains of processes (Akkermans *et al.*, 1999 cited in Power, 2005). ‘Integration improves firm profit and competitiveness . . . Since supply chain represents 60% to 80% of a typical company’s cost structure, just a 10% reduction can yield a 40% to 50% improvement in pre-tax profits’ (Wood, 1997, P. 26 cited in Abubakar, 2014). Therefore, effective integration increases channel competition and lower costs (Bowersox and Closs, 1996 cited in Power, 2005; Monczkaet *al.*, 1998; Skjott-Larsen *et al.*, 2005; Mitra and Singhal, 2008 all cited in Abubakar, 2014).

Supply chain integration dimensions improve service and cost performance in high supply complexity situations. Cooperative behaviour is the integration concept that is positively related to most performance measures when supply complexity is high. Cooperative

behaviour is associated with attitudes, the intentional and relational aspects of supply chain integration. Once some aspects (represented by our constructs) of SCM are in place and have become beneficial, a positive effect on cooperative behaviour might be the result, thus reinforcing the overall relationship performance (Gimenez *et al.*, 2012 cited in Abubakar, 2014).

In 1980s, SCM focus shifted to supplier partnership (Zacharia, 2001a). He explained that, successful SCM is made up of a series of partnerships that are built and maintain in a long term relationship (Cooper et al, 1997; Ellram and Cooper, 1990; Schary and Skjøtt-Larsen, 2001). ‘Partnership is when two or more firms in a supply chain reach a long term agreement . . . the development of trust and commitment to the relationship . . . the integration of logistics activities involving sharing of demand and sales data . . . and a shift in the locus of control of logistics process’ (La-Londe and Masters, 1994, p. 25 cited in Abubakar, 2014;). Organisations increasingly become interested in influencing what is happening outside the firm (Zacharia, 2001a). External interactions require building partnership with suppliers, resellers and customers of company’s supply chain (Kotler and Armstrong, 2008).

Buyers and sellers collaborate to build buyer-seller partnership and strategic alliance (Double and Burt, 1996 cited in Abubakar, 2014; Fandel and Stammen, 2004; Attaran and Attaran, 2007). Partnerships and strategic alliances are not legally binding (Double and Burt, 1996 cited in Abubakar, 2014). The collaboration is based on mutual trust and confidence among members (Kotzab *et al.*, 2011). This collaboration evolves economically independent and mutually connected organizations harmonising their individual course of action (Attaran and Attaran, 2007; Chauhan and Proth, 2005). To partnership to be effective, the partnership should be adequate in scope and include all aspects of supply chain (Man and Burn, 2006 cited in Abubakar, 2014; Kotzab *et al.*, 2012). Effective partnership improves reduction of overall inventory level, decreases product obsolescence, lower transaction costs, reacts more quickly to market changes and responds more quickly to customer request (Man and Burn, 2006 cited in Abubakar, 2014; Markley and Davis, 2007).

Furthermore, partnership gains should be appraised against investment in time and resources that has been spent in making partnership function (Ellram, 1991; Graham et al, 1994; Ellram, 1997 all cited in Abubakar, 2014). Time spent on partnership is an important factor in achieving desired outcome (Graham *et al.*, 1997 cited in Abubakar, 2014). Example of partnership in production processes is JIT production system (Richeson *et al.*, 1995 cited in

Abubakar, 2014). As organisations seek to develop partnerships and information links with trading partners, the internal processes become interlinked and span the traditional boundaries of firms (Power, 2005). A partner is expected to bring in special expertise regarding production process or knowledge of products and their development (Stadtler, 2008). Selection of partners is based on the future potential of the partner to support competitiveness of the supply chain as partnership consists of loosely joined, independent actors of equal rights. Supply chain may combine the best features of perfect market interaction and hierarchy, each entity in the partnership concentrates on its core competencies whilst information and expertise are shared openly among members (Stadtler, 2008).

The levels of cooperation and integration between partners increases confidence, lowers costs and improves efficiency and effectiveness, increases profit/ revenue and market share (Vurroet *al.*, 2000 cited in Abubakar, 2014; Satyaveer and Proth, 2005). Partnerships (suppliers, intermediaries and customers) with long term inter business relationships improve competitive advantages through creating customer value (Langley and Holcomb, 1992 cited in Abubakar, 2014; Ellram and Cooper, 2009).

Managing supply chain needs a leader as much as an organization needs a leader. A supply chain leader is an organization (focal company) with large size, economic power, customer patronage, comprehensive trade franchise or orientation of inter-firm relationships (Bowersox and Closs, 1996 cited in Abubakar, 2014). Others view focal company as a member having largest financial asset, best technical know-how of products and processes or has greatest percentage of values created in the order fulfillment. Yet to some focal company is the founder of the supply chain. At times management of supply chain is by a Steering committee which is a representative of all members of the supply chain, the decision making rules are subject to negotiation (Stadtler, 2008). The focal company will act like a channel captain and plays a role in coordinating and overseeing the entire channel (Ellram and Cooper, 1990 cited in Abubakar, 2014).

SCM competency is another key component of SCM process (Tracey *et al.*, 2005). Maintaining SCM competency is essential since SCM expenditures is 75 per cent of total company revenues (Trent, 2004; Johnson and Templar, 2011 cited in Ellingeret *al.*, 2012). SCM competency is a function of integration between and within supply chain member firms (Kim, 2006; Fawcett *et al.*, 2008). Furthermore, Lu *et al.* (2007) defined SCM competency as a set of skills and resources that were developed through strategic approach. These skills and



resources include domestic and external organisational skills, resources and functional proficiencies (purchasing, manufacturing, sales, marketing, research and development) (Bowen *et al.*, 2001; Lu *et al.*, 2007). To create competent SCM, partners must develop a single virtual organization (Satyaveer and Proth, 2005).

Gartner Supply Chain Group's Demand Driven Supply Network Ideal (DDSDI) proposed four key areas of SCM competency: Supply (supply chain execution, supply management and manufacturing), Information (sales and operations planning, use of technology, infrastructure and business management), Demand (service management, demand sensing and demand shaping) and Product (life cycle management, launch and innovation) (Ellinger *et al.*, 2012). SCM competency plays major role in building or destroying shareholder value (Green *et al.*, 2006). The literature regularly associates SCM competency with higher levels of customer satisfaction. As SCM competency enables firms to create value by better meeting customer expectations, customer satisfaction increases (Ellinger *et al.*, 2012). Competent SCM creates customer satisfaction, through value creation that satisfies customers' desire (La Londe, 1994; Tracey *et al.*, 2005; Green *et al.*, 2006; Ellinger *et al.*, 2012). Competency is the key driver of a company's financial performance such as: revenue growth, operating costs, working capital efficiency, higher profit and higher return on investment (Hines, 2006; Attaran and Attaran, 2007; Ellinger *et al.*, 2012). Added up together, supply chain competency is a source of supply chain competitiveness (Ellinger *et al.*, 2012).

### **2.1.5 Key Elements of SCM and steps in the SCM Process**

The five key elements of SCM that some authors have identified include:

- i. Strategy - aligning the supply chain with business goals,
- ii. Process - describing the activities involved and the links between them,
- iii. Model - showing structures, roles and responsibilities,
- iv. Information - IT supporting operations,
- v. Performance - a balanced set of indicators (CIPS: SCM & networks). The steps required to successfully operate SCM, include implementing the right training and structure; choosing the right team; rightly aligning with the strategic plan; piloting

SCM and achieving balance (Quiett, 2002; Chopra and Meindl, 2009; Slone *et al.*, 2007).

- a. Lysons and Farringdon (2006) posit that if an organisation is to successfully adopt SCM then it needs to key into the following four essential requirements in SCM: Connectivity – ensuring inter-organisational collaboration by enhancing the capability to exchange information with external supply chain partners;
- b. Integration - the combination or coordination of separate functions or processes to enable them to interact seamlessly;
- c. Visibility - the ability to access relevant data in terms of its relevance and importance to the supply chain; and
- d. Responsiveness - the ability to react quickly and effectively to customers.

### **2.1.6 Supply Chain Management (SCM) in the Oil and Gas Industry**

The petroleum industry supply chain is considered to be inflexible and the most complex industry relative to other industries (Hussain *et al.*, 2006). Because of the inflexibility and complexity linked to the petroleum industry supply chain managing it is a daunting challenge (Morton, 2003; Coia, 1999 cited in Enyinda *et al.*, 2011). Each stage in the supply chain pose a significant challenge (Jenkins and Wright, 1998 cited in Enyinda *et al.*, 2011) because the petroleum industry supply chain logistics network is very inflexible due to production capabilities of crude oil suppliers, long transportation lead times, and the limitations of modes of transportation (Hussain *et al.*, 2006). Also, improving the inflexibility and complexity of the petroleum industry supply chain is challenging because of its cultural reorientation, information systems and information sharing, integrated process management, and organizational restructuring (Ikram, 2004) The petroleum industry supply chain is bifurcated into upstream and downstream supply chain operations. The upstream Petroleum supply chain operation encompasses exploration and appraisal, production and transportation of crude oil and gas to the refineries for conversion into finished products. Nnadili (2006) describes Petroleum upstream supply chain can be “defined as all logistics activities occurring through feedstock of exploration and movement into the refineries to refining operations” (Nnadili, 2006). Hussain *et al.* (2006) describes upstream petroleum supply chain

as a process of acquiring crude oil, including the exploration, forecasting, production, and delivery of crude oil from remotely located oil wells to refineries, while the downstream petroleum supply chain is the point of refinery where the crude oil is converted into end products which includes the process of forecasting, production, and the logistics management of delivering the crude oil derivatives to customers around the globe. Or, it entails the distribution and marketing activities associated with all the products derived from oil or the so called feedstock. Manzano (2005) defines “petroleum downstream [supply chain] as the activities which take place between the purchase of crude oil and the use of the oil products by the end consumer. This covers transporting the crude oil, performing supply and trading activities, refining the crude oil, and distributing and marketing the refined products output.” The current research concentrates on the upstream petroleum supply chain operations with particular interest in mitigating upstream petroleum supply chain operation risk. According to Al-Thani (2008) “risk management can be applied effectively to oil and gas project like any other investment project.”

Despite the rising importance of SCM and the role of SCI in improving performance, oil and gas supply chains remain fairly under researched. For instance Schwartz (2000) cited in Seyed (2015), noted that the oil and gas company’s understanding of their supply chain is still in its infancy and needs much improvement (Chima, 2007; Mitchell *et al.*, 2012). As presented in the previous chapter global energy demand is increasing, this alongside the recent political unrest in the Middle East makes it difficult to guarantee sustainable global oil supply. Additionally oil and gas products need specific methods of transport (i.e. pipes, tanker ships, and railway). This is an essential feature of such industry since oil and gas production are limited to regions (Middle East) and demanded in all parts of the globe (source of energy for other industries). Thus costly and complex logistics, and lengthy lead-times have been commonly associated to oil and gas operations (Chima, 2007; Yergin, 2011). For such reasons, oil and gas companies have been forced to restructure their processes, preserve higher safety stock, and identify alternative sourcing supplies amongst many other activities (Ikram, 2004). The oil and gas supply chain is much more complex in comparison to other sectors. For instance the upstream supply chain includes several multi-tiered nodes (each node has its own structure and supply chain) such as, exploration and appraisal, fabrication, installation, drilling, production and logistics management. Similarly the downstream supply chain includes refining the crude oil into usable products (e.g. diesel, benzin), storage, transportation, and delivery to final consumers globally.

### **2.1.7 Supply-Chain Link in the Oil and Gas Industry**

Exploration → Production → Refining → Marketing → Consumer

The links shown above represent the major supply-chain links in the oil and gas industry. The links represent the interface between companies and materials that flow through the supply-chain. As long as oil companies have needed a phalanx of vendors to keep their systems continuously re-supplied, there has been a supply-chain. Within each stage there are many operations. For example, exploration includes seismic, geophysical and geological operations, while production operations include drilling, reservoir, production, and facilities engineering. Refining is a complex operation and its output is the input to marketing. Marketing includes the retail sale of gasoline, engine oil and other refined products. Each stage of the link can be a separate company or a unit of an integrated firm. The common issue along the links in the oil and gas industry supply-chain is economics; weighing benefits versus costs along the chain.

Very few industries can benefit from maximizing supply-chain efficiencies more than the oil and gas companies. In this industry, the types of shipments made vary widely from gloves to pipes, valves, cranes, chemicals, cement, steel, and drilling rigs, just to mention a few. In addition, very few industries require this immense array of supplies to be moved daily and frequently in large quantities domestically, globally, onshore and offshore. In exploration and production, most of the work and activities are repetitive. The companies drill a lot of oil and gas wells every year. A drilling contractor is required and as many as 45 or more different services are required to drill and complete each well.

In the oil and gas industry, almost all significant and important operations are planned in advance. Thus, the whole process can be massaged and fine-tuned into a high performance money making machine. The goal of supply chain management is to provide maximum customer service at the lowest possible cost. In the industry supply-chain link, exploration operations create value through seismic analysis and identifying prospects. Production operations become the customers that use the output of exploration. In like manner, refining is the customer of production while marketing is the customer of refining and the consumer of refined products such as gasoline is the ultimate customer.

There is a need to ensure that each company or operator along the supply-chain can respond quickly to the exact material needs of its customers, protect itself from problems with

suppliers and buffer its operations from the demand and supply uncertainty it faces. For oil and gas companies, the profit margin can be greatly enhanced if the companies manage their purchasing dollars throughout the entire supply-chain.

One of the weaknesses of a supply-chain is that each company is likely to act in its best interests to optimize its profit. The goal of satisfying the ultimate customer is easily lost and opportunities that could arise from some coordination of decisions across stages of the supply-chain could also be lost. If suppliers could be made more reliable, there would be less need for inventories of raw materials, quality inspection systems, rework, and other non-value adding activities, resulting in lean production.

## **2.1.8 Supply Chain Practices Connected With Organisational Performance**

As with firm performance, the supply chain practices connected to it have been analyzed from various perspectives, with multiple outcomes. In this thesis, the analyzed practices include outsourcing of logistics operations, supply chain collaboration, and information systems support (IT capability).

### **2.1.8.1 Logistics Outsourcing**

Fynes and Foss (2005) cited in Kimechwa (2015), inform that outsourcing is the sub-hiring of activities, services or product parts that are not core to the company business, usually aiming at cost reduction, quality improvement and delivery struggle especially if both organizations in supply relationship brings to an end the existing relationships. Lyons and Gillingham (2003) cited in Kimechwa (2015), states that outsourcing is the strategic use of resources to perform activities traditionally handled by internal staff and their resources. It is a management strategy by which an organization outsources major non-core functions to specialized and efficient service providers to help the organizations perform best where it is best capable. The main focus to this SCM practice in many organizations is that the company will increasingly focus on the activities which are in the value chain addition where it has a distinctive advantage.

The relationship between outsourcing and firm performance has also been studied increasingly over the last few years. Kotabe and Mol (2009) identified a curvilinear relationship between the level of outsourcing and firm performance, suggesting that there would be an optimal level of outsourcing, and distractions from it would be costly. Hsiao *et*

*al.*, (2010) analyzed the effects of logistics outsourcing on service performance, being unable to find any significant effects.

Wallenburg (2009) cited in Solakivi (2014) and Brewer, Ashenbaum and Ogden (2013) cited in Solakivi (2014) have recently analyzed the effect of logistics outsourcing on firm performance, both concluding that the motives, and thus the focus, of outsourcing is crucial to the performance outcomes. Both Wallenburg (2009) and Brewer *et al.* (2013) cited in Solakivi (2014) argue that cost-driven outsourcing is dominant from the performance perspective. Wallenburg takes the idea further, suggesting that also more strategic motives for outsourcing could be beneficial on a long term basis.

Susan (2011) cited in Kimechwa (2015), observed that firms in each level of the supply chain Outsourcing relationships will generate profits by squeezing margins of the firm to the tier. The path may become a recipe for stagnation of many firms in this relationship. The SCM practice has been applied in many organizations and thus it has become increasingly important over the last decade, outsourcing is a major part of business strategy practices that drives an organization to a greater success. The empirical challenge of outsourcing to many organizations is the failure to incorporate all the many assumed extreme costs hence making close to 80% of companies practicing outsourcing fail. According to Fynes and foss, (2005) cited in Kimechwa (2015), outsourcing depends on the trust firms have in an outsourcing strategy over each other. This happens when companies believe that they both will perform actions that will result in positive benefits for the development, increase of communication is considered to be a lack of trust concerning the integrity, and support between both parties will increase.

Many of the studies of outsourcing have focused primarily on the motives for outsourcing. Pagnocelli (1994) cited in Kimechwa (2015), has explored the main reasons for the outsourcing, such as changing one business function to make it more "centralized" in pursuit of improved efficiency (Pagnocelli, 1994 cited in Kimechwa, 2015). Bailey *et al.*, (2002) cited in Kimechwa (2015), researched the outsourcing in Edinburgh and Lothians and suggested that improving the quality of service, focusing on the core business functions, reducing operation costs and accessing advanced technology and management experience were some of the major motivations for outsourcing. Relatively speaking, the motivations such as sharing risks and forming strategic alliance were not as important as the former ones. What's more, outsourcing also helps the firms to gain professional technical capacities from

the suppliers during the process of corporation, and it is particularly useful in the field of Information Technology (Marshall *et al*, 2007 cited in Kimechwa (2015),). Cost reduction is usually viewed as the internal motivation for outsourcing (Smith *et al*. 1998 cited in Kimechwa (2015), which means that using the external resources to provide the same level of services at a lower price than operating it inside (Weaver, 1998 cited in Kimechwa, 2015), analyzed the financial characteristics of firms with outsourcing, and clearly categorized some motivations: to reduce costs; to concentrate attention on core business functions; to meet the demands for the realization of assets and; to obtain the external capacity.

Manzi (2004) cited in Kimechwa (2015), states that the most common economic factor that influences the decision is the need to reduce costs .Where the benefits analysis has been carried out and has been established that it is most economical to outsource rather than continue to operate a given function looks forward to making profits in business. Kulumba, (2005) cited in Kimechwa (2015), states that, outsourcing is a popular phenomenon with managers because they believe that outsourcing vendors are inherently more efficient due to economies of scale. The outsourcing organization benefits from getting the services from the provider at a reduced cost since it are provided on a large scale and usually for a reasonable time if it is good work.

Belcourt (2006) cited in Kimechwa (2015), suggested that outsourcing is promoted as one of the most powerful trends in modern management. The rationale for outsourcing some functions and/or processes includes substantial financial economies, increased ability to focus on strategic issues, access to technology and specialized expertise, and an ability to demand measurable and improved service levels. Outsourcing differs from alliances, partnerships or joint ventures in that the flow of resources is one-way, from the vendor to the outsourcer; typically, profit sharing or mutual contribution are not a common practice.

Farrington (2006) cited in Kimechwa (2015), also shows how important competence is, it is the core activities of the company that tell or manifest the performance of the organization. These activities need much more time so as to come out at their best and give the company competitive advantage over others. This can be achieved through outsourcing non-core activities and concentrate on its core competence.

### 2.1.8.2 Supply Chain Collaboration

One of the most discussed factors to affect firm performance is definitely supply chain integration. Numerous researchers report positive effects of collaboration on performance. For example Bagchi, Ha, Skjoett-Larsen and Soerensen (2005) report these positive effects on logistics costs and operational performance metrics such as perfect order fulfillment rate. Sanders and Premus 2005 report positive effects on a composite measure of firm performance consisting of cost, quality, delivery and new product introduction time. Cao and Zhang (2010 and 2011) identify positive effects between supply chain collaboration and growth of sales, ROI, growth of ROI and profit margin. Despite the vast amount of research already done on supply chain collaboration, the discipline has been unable to determine a unified definition for it. Stank *et al.* (2001) and Giménez and Ventura (2005), for example, consider supply chain integration to consist of internal and external integration, whereas Flynn, Huo and Zhao (2010) divide it into three dimensions: customer, supplier and internal. Barratt (2004) provides a detailed description on which activities are considered to be intra-organizational and which are inter-organizational.

Other classifications also exist. Simatupang and Sridharan (2005) divide supply chain integration into three dimensions: information sharing, decision synchronization and incentive alignment. Recently, Leuschner, Rogers and Charvet (2012) compiled a meta-analysis on the relationship between supply chain integration and performance, concluding that based on previous literature supply chain integration has three dimensions:

- 1) Information integration,
- 2) Operational integration and
- 3) Relational integration.

According to Vereecke and Muylle (2006), firms engage in two forms of collaboration: exchange of information on forecasts, planning, inventory etc. or alternatively structural collaboration such as installing Kanban systems or co-locating plants.

Most of the previous research assumes a straightforward relationship between supply chain integration and supply chain performance: the more integration, the better the performance (Fabbe-Costes & Jahre 2008) but this consensus has also been questioned. Das, Narasimhan and Talluri (2006) argue that once a certain threshold level of integration has been reached, increasing integration does not necessarily increase performance. Kampstra, Ashayeri and



Gattorna (2006) on the other hand are more concerned about “sub-optimization”, in other words the failure of firms to commit enough to collaboration within a single supply chain. In their meta-analysis, Leuschner, Rogers and Charvet (2013) review 86 articles analyzing the connection of supply chain integration and firm performance, concluding that while supply chain integration would seem to have a positive impact on firm performance, the effects depend on the nature of the collaboration. Interestingly, they were unable to find support for the connection between operational integration and firm performance.

#### **2.1.8.3 It Capability (Information Technology)**

The development of information and communications technology (ICT) has created new possibilities for improving firm performance.

Brynjolf and Hitt (2000) cited in Solakivi (2014) review the evidence on how investments in (and thus the increased use of) IT influences performance. As part of their definition, Simatupang and Sridharan (2005) include information sharing as one of the dimensions of supply chain collaboration. Assuming that supply chain collaboration has a positive effect on firm performance, the Simatupang and Sridharan (2005) framework can be interpreted such that increased information systems support is linked to better performance by enabling deeper supply chain collaboration.

Information and Communication Technology involves the designing, developing, implementing, supporting or management of computer based information systems particularly software applications and computer hardware encompassing the information systems. It's the capability to electrically input, process, store, output, transport and receive data and information including text, graphs, sound, video as well as the ability to control machines of all kinds electronically (Shelly, 2009 cited in Kimechwa, 2015). The implementation of IT to enhance the management of SC is no longer something new. The implementation of IT technologies such as Electronic Data Interchange (EDI) has evolved to the current web technologies such as Business to Business technologies and collaborative commerce technologies (Chong and Ooi, 2008 cited in Kimechwa, 2015). The implementation of IT in the SC has been shown to have numerous impacts on the performance of organizations.

With ICT technologies companies are able to reduce issues with cost and system compatibility and are able to integrate their backend systems to have seamless SC processes.

Petrovic (2007) cited in Kimechwa (2015) in their study of SCM practices and organizational performances in an Australian Service industry found that IT technologies have now moved towards wireless and with technologies such as Radio Frequency Identification (RFID), 3rd generation Wi-Fi communications. These technologies have enabled the management of SC through wireless and mobile technologies. On the other hand many studies have also shown that IT implementation in SC has often been associated failures as well. Beheshti, (2004) cited in Kimechwa (2015), stated that there is a high failure rates in many IT implementations and the failure might sometimes result in organizations facing bankruptcy.

The European Commission (2009) cited in Kimechwa (2015), reiterates the importance of ICT has been in technology itself than in the ability to create greater access to information technology in the underserved populations. In the development of and the maintenance of SCM Information systems both the software and the hardware must be addressed, hardware includes computers output/input and storage modes, the software includes the entire system and the application programs used for processing transactions management control, decision making and strategic planning. Lack of ICT application in SCM of many service organizations affects the effective execution of the SC functions and thus leads to poor interchange of information between the suppliers and other external partners hence affecting the general performance of the organization.

Most of the previous literature seems to assume an indirect rather than direct impact of IT on performance. Byrd and Davidson (2003) assume that the technical quality of IT and the utilization plan for it, and support by top management for IT development influence its impact on the supply chain, which in turn affects firm performance. Kent and Mentzer (2003) identify investment in inter-organizational IT as having an effect on logistics efficiency through relationship commitment. For their part, Wu *et al.* (2006) consider that the alignment and advancement of IT are positively connected to supply chain capabilities, which in turn are tied to both the firm's marketing and financial performance.

Also direct relationships between IT and performance have been identified. Bayraktar, Demirbag, Koh, Tatoglu and Zaim (2009) detect a significant positive connection between information systems practices and operational performance of small and medium enterprises (SMEs), whereas Dehning *et al.* (2007) pinpoint a positive relationship between a firm's investment in IT based SCM systems and performance.

Some of the research (Vijayasathy, 2010) has also been unsuccessful in identifying connections between information technology and IT use and performance. Sanders and Premus (2005) executed a survey-based study measuring IT capabilities and supply chain collaboration and their effects on firm performance. Their results suggest that IT capabilities positively affect firm performance. Closs, Swink and Nair (2005) argue that information systems would have a mediating role between the flexibility of logistics and performance, in the form of information connectivity.

#### **2.1.8.4 Vertical Integration**

Vertical integration is a coordination strategy in which a company owns its supply chain by incorporating supplier and/or distributor supply chains in its operations strategy or by expanding its operations to perform activities traditionally performed by suppliers and distributors (Hill & Jones, 2012). This strategy helps organizations to ensure high levels of control and to avoid the “hold up” problem, a situation in which an organization’s contract with another party in its supply chain results in delays and loss of profit due to delays, non-performance of contract or imbalance of bargaining power between the 2 parties (Hill & Jones, 2012).

A vertical integrated supply chain can be implemented to varying degrees, broadly classified into 3 categories:

1. Backward vertical integration, in which a company owns subsidiaries that produce the inputs/components used in production.
2. Forward vertical Integration in which a company owns or controls its distribution centres and/or retailers, thereby having direct contact with customers at the bottom of the value chain. For example, airlines performing the traditional roles of travel agents (Hill and Jones, 2012).
3. Balanced vertical Integration in which a company implements both backward and forward integration by owning/controlling its supply, production, marketing and/or retail centres. Apple is a good example of a company implementing balanced vertical integration by owning their own data centres, manufacturing equipment to produce their own chips and other proprietary components, as well as their own marketing and retail stores, content platforms and support centres (Hill and Jones, 2012).

As a strategic tool, a vertically integrated supply chain can provide companies with solutions to mitigate or remove the threat of powerful suppliers, decrease bargaining powers of suppliers, distributors and customers as well as reduce transaction costs. When properly implemented, a vertically integrated supply chain can help companies achieve competitive advantage and higher profits through economies of scale and scope (Fresard *et al.*, 2014).

#### **2.1.8.5 Horizontal Integration**

Horizontal Integration is a single industry SCM strategy whereby companies seek to achieve competitive advantage and profitable growth through value creation activities that are focused on a single business or industry.

This SCM structure provides the advantage of focus and scope, particularly in fast growing, dynamic industries where companies are required to focus substantial resources and capabilities on competing in one area in order to achieve long term competitive advantage (Lambert, 2008). Technological advancements, changing customer needs, fierce competition and low levels of entry barriers are common features of horizontally integrated supply chains. Due to changing customer needs, new competition and the pace of change in such industries, companies often find it difficult to sustain competitive advantage without changing/adapting their business model (Juttner *et al.*, 2010).

A successfully implemented horizontal integration strategy can increase a company's profitability due to reduction in cost structures as a result of (Hill and Jones, 2012):

- Economies of scale, particularly in industries with high fixed cost structures;
- Increased product differentiation due to the combined product lines from merger or acquisition which enables the company to be able to offer product bundles and innovative new products to customers at different price points;
- Replication of the business model due to the ability to leverage the increased product differentiation and lower cost structure achieved through horizontal integration to replicate the business model in new market segment.
- Reduced industry rivalry, as excess capacity is eliminated in the industry through acquisition or merging of competitors which results in more stable price environments and the elimination/reduction of price wars;

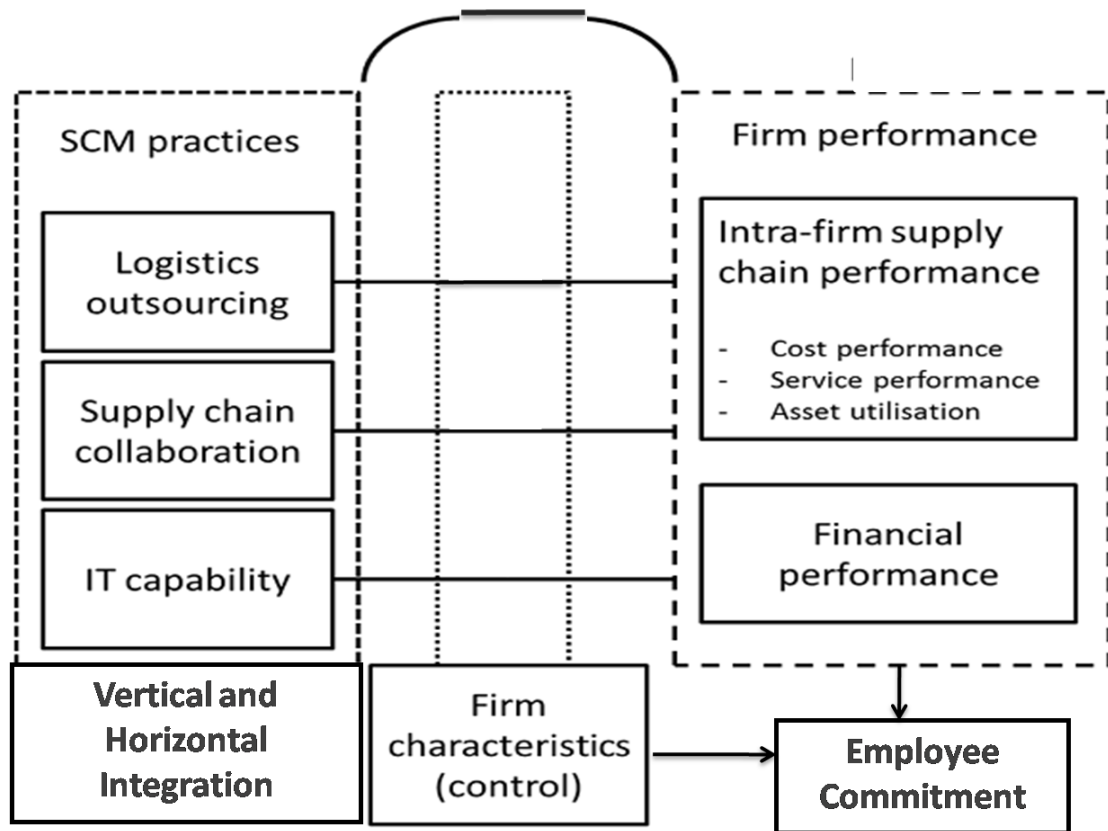
- Increased bargaining power due to the consolidation of the industry resulting in companies that are a much larger buyer and hence wield a level of leverage or “buyer power” which can be used to drive down the price it pays to suppliers.

Horizontal integration has limitations that are worth noting and guarding against. Similar to vertical integration, horizontal integration is a complex and difficult strategy to implement. For example, it is difficult to successfully merge companies with very different corporate cultures and where the merge/acquisition is a hostile takeover, it often results in high staff turnover and loss of much needed talent and expertise hence resulting suboptimal benefits or downright failure. There is also the risk of failure or penalty due to antitrust laws when companies attempt to use horizontal integration to become a dominant industry player as these laws exist to ensure fair trading and prevent companies from using their market powers to prevent competition.

### **2.1.9 Model of the Study**

The motivation for this study can be expressed in this question: What are the connections between certain supply chain practices and organizational performance?

As such, the question requires clarification. Since the concept of SCM is rather broad, and there are numerous possibilities as to what kind of practices to include and exclude, it is unrealistic to assume that a single thesis could cover them all. A few practices have been selected based on the earlier literature. Figure 2.3 shows the research framework in greater detail.



**Figure 2.3: Conceptual Framework of Supply Chain Management**

Fig 2.3 is in line with the findings of Bettis, Bradley and Hamel (1992) cited in Solakivi (2014) argued that outsourcing might aid competitiveness. Aertsen (1993) cited in Solakivi (2014) analyzed the benefits of outsourcing on distribution performance; whereas D'Aveni and Ravens craft (1994) cited in Solakivi (2014) identified outsourcing to have a positive influence on cost performance. Recently, Kotabe and Mol (2009) were able to find a positive connection between outsourcing and financial performance. Thus, outsourcing of logistics operations was included as one of the supply chain practices with a possible connection to firm performance. The first sub-research question is:

**RQ1. What is the connection between logistics outsourcing and organizational performance?**

A vast body of literature is addressing the connection of supply chain integration or supply chain collaboration to performance. Fabbe-Costes and Jahre (2008) presented a detailed review of previous literature on supply chain integration or collaboration and performance, concluding that both concepts have been analyzed with various definitions. All in all, the vast

amount of literature on supply chain collaboration justifies its place as one of the possible contributors to performance. The second sub-research question is:

RQ2. What is the connection between supply chain collaboration and organizational performance?

Information technology (IT) has developed rapidly over the past two decades. Sanders and Premus (2005) and Wu, Yenyurt, Kim and Cavusgil (2006) among others have analyzed IT capability on firm performance. Closs, Swink and Nair (2005) approached information systems from the information connectivity point of view. Following their example, information systems support (Töyli, Häkkinen, Naula & Ojala 2008 cited in Solakivi, 2014) was included in this research.

Töyli *et al.* (2008) cited in Solakivi (2014) also list benchmarking capability as a possible contributor to firm performance, which is also associated with information systems support through the resources the firm possesses to collect and analyze information. Thus, the third sub-research question is:

RQ3. What is the connection between firm-level information systems support and organizational performance?

In addition to the three practices included in the research questions, numerous other supply chain practices possibly contributing to firm performance could be identified. Shang and Marlow (2005) and Shah and Singh (2001) highlight the role of benchmarking capability on performance. The role of logistics capabilities is stressed for example by Zhao *et al.* (2001) and Richey, Daugherty and Roath (2007), whereas Töyli *et al.* (2008) cited in Solakivi (2014) add logistics performance evaluation and improvement as possible contributors to supply chain performance. Environmental management of supply chains or Green Supply Chain Management (GSCM) and their effects on firm performance have been a growing topic of interest in recent years.

RQ4. What is the connection between vertical integration and organizational performance?

RQ5. What is the connection between horizontal integration and organizational performance?

Already in 1996, Klassen and McLaughlin argued that environmental management would have a positive effect on environmental performance, which in turn would have a positive

effect on the financial performance of the firm. Later on, Zhu *et al.* (2008) cited in Solakivi (2014) further refined a measurement model for GSCM, including lower costs and higher operational performance as possible benefit from it. Undoubtedly other practices could also be identified, but those included here have been chosen with the supply chain perspective in mind. The integrative factor between the selected practices is collaboration, either with suppliers and customers (supply chain collaboration) or with the service providers (outsourcing). Information systems support can be seen as an enabling factor for all the other collaborative actions.

## **2.2 Theoretical Review**

The following theories guided the study

- i. The Theory of Constraints developed by Goldratt in 1984
- ii. Strategic Choice Theory by Rond & Thietart, 2007
- iii. The Resource Based View (RBV)The theory grew largely out of Penrose's (1959)
- vi. Stakeholder Theory proposed by R. Edward Freeman (1984)

The study was anchored on Strategic Choice theory because it lies in the make or buy decision top management should balance dependence versus value to achieve organizational goals. Regarding decision point 2, the sourcing strategies, strategic choice theory advises to minimize dependence in order to ensure the high freedom of choice for the dominant coalition. Then decision point 3, supplier strategies, can consider whether to collaborate or rather exploit suppliers.

### **2.2.1 The Theory of Constraints**

Theory of constraints is an approach to the management of operations and it was developed by Goldratt in 1984. It provides a management theory of how organizations should be run. The concept was extended to theory of constraints (TOC) with a publication in 1999 which views any manageable system as being limited in achieving more of its objectives by a very small number of constraints. There is always one constraint and the TOC uses a focusing process to identify the constraint and restructure the organization around it (Cox and Goldratt, 1986 cited in Kimechwa, 2015).



TOC emphasizes on the optimization of performance within a defined set of constraints of the existing process and it provides an action framework which combines the activities of the managers and the visible system elements. This theory incorporates the idea that the goal or mission of an organization exists, and organizations can be measured and controlled by variations on three measures throughput, operational expense and inventory. Throughput is the rate at which the system generates money through sales, inventory is all the money that the system has invested in purchasing things it intends to sell. Operational expense is all the money a system spends in order to draw the the inventory into throughput. In the context of this study one of the variables of Outsourcing will show the linkage to one of the measures operational expense used to measure the performances of organizations in the oil and gas sector.

### **2.2.2 Strategic Choice Theory**

Strategic choice theory considers the interaction between organizational actions and events (De Rond & Thietart, 2007 cited in Kimechwa, 2015). The integrative approach of strategic choice theory is of importance and beneficial for strategic management, for instance, by stressing cross-functional cooperation in organizations (Jemison, 1981 cited in Kimechwa, 2015). Theories enhance research and practice as they help make sense of complex and dynamic environments (Chicksand & Johnston, 2012 cited in Kimechwa, 2015). Strategic choice theory depicts the relationship between top management's choices and firm performance and the overall interaction between environment and organizations. It is developed to underline the inadequacy of deterministic organizational views and stress the importance of managerial choice (Child, 1972 cited in Kimechwa, 2015), views organizations to be partially influenced by environments and primarily affected by top management choices (Miles *et al.*, 1978 cited in Kimechwa, 2015). Despite the opposing views to deterministic management theories, Campling and Michelson, 1998, established the strategic choice resource dependence model to further underline the interdependence of environment and organizations in regards of strategic choices, actions and overall firm performance. As stated before, strategic choice theory is characterized by an integrative view and thus also underlines the view of businesses as adaptive organizations, which learn over time; thereby, their strategic choices lead to actions directed by top management (Child, 1997 cited in Kimechwa, 2015).

The strategic type of organizations, Analyzer, Defender or Prospector thereby influences how managers and organizations organize and operate in purchasing; according to strategic choice theory prospectors would strive to be proactive, innovative (Nollet *et al.*, 2005 cited in Kimechwa, 2015) and produce internally or even change their product portfolio, whereas defenders would rather source the item from an established supplier in order to ensure efficient production and establish a stable product portfolio (Shook *et al.*, 2009 cited in Kimechwa, 2015).

In the context of this study, some of the variables i.e. Strategic Partnerships with Suppliers, globalization and adoption of ICT are strategic and it focuses on involving the top management critical decision to make these strategic decisions to invest on these practices to improve the performance of their organizations and achieve a competitive advantage.

### **2.2.3 The Resource Based View (RBV)**

The theory grew largely out of Penrose's (1959) study, in which she cites unused managerial resources as the primary driver of growth. Penrose recognized that internal managerial resources are both drivers and limits to the expansion any one firm can undertake. The theory argues that resources including employees, systems and business partners are combined into ways of working which are rare, inimitable, valuable and non-substitutable so that they become sources of competitive advantage (Tyson & York, 2006). HR systems create the human capital pool of skilled people so that they can sustain what Wright, (2001) described as strategically relevant behaviours. The Resource-Based Approach focuses on internal resources that are viewed as the principal factor for a sustainable competitive advantage.

In effect, the value brought by human resource is the core of this approach where flexibility is optimized in order to reduce costs and increases efficiency. Human resources, by adding value, uniqueness and the most effective way to use resources, tend to increase the competitive advantage of a company in comparison to another (Porter, 1991). The (RBV) tends to ignore the baseline of specific industries as it takes into account the differences of firms in the same sector as a competitive advantage. However, competitive advantages are gained by the rightsizing process (Hamel & Prahalad, 1993), which implies that an organization obtains more output from its existing resources and optimizes the way in which they are used.

Therefore, it is the way in which these resources are used, along with the same baseline in an industry, which create the competitive advantages rather than the differences between firms. According to (RBV), managers seek to gain a competitive advantage through the quality of the people employed. The basic requirement to trade in most industries is a well trained workforce, flexible and responsive to customer demands. These basic policies Purcel (1994) describes as ‘table stakes’ the price necessary for terms and trading in the market, but not a sufficient differentiator for a long term competitive advantage. The RBV, therefore requires, a skills and capability focus, so that firms learn faster than their rivals, and that they protect and enlarge their intellectual capital. As a consequence, companies can generate a human capital advantage as well as an organizational process advantage.

Mavrinac and Siesfield (2017) asserts that 35% of an institutional investor’s valuation of a company is attributed to non-financial attributes, such as management credibility and expertise, innovativeness, the ability to attract and retain talent, compensation practices, and the quality and execution of the business strategy. As a basis of competitive advantages the (RBV) lies primarily in the application of the bundle of valuable interchangeable tangible resource at the firm’s disposal (Wernerfelt, 2018). To transform a short-run competitive strategy into a sustained competitive advantage require that these resources are heterogeneous in nature and not perfectly mobile (Peteraf, 2018).

Effectively, this translates into valuable resources that are neither perfectly imitable nor substitutable. Such elements as the speed of response to the customer, the brand image, the quality of the product or service and the relationship, marketing approach are the constituent parts of the competitive strategy, into which the HRM component of competency recruitment and development, motivation and retention, innovation and problem-solving are embedded (Tyson & York, 2016). Despite the enthusiasm with which the theory has been embraced, it has received a lot of criticisms. The theory focuses on the macro phenomena averaged over a wide industry samples (Rouse & Daellebach, 2019). This approach seems inconsistent with major tenets of the resource based view which include resource heterogeneity which directs researchers to uncover unique, firm specific assets that can result in sustained profitability of the firm and not tailor research to understand what is the case for the average representative firm (Aharoni, 2018).

Resource based view has been unable to obtain more basic understanding of the specific resource set applicable to various industries and firms. Moreover, the specific managerial

processes through which resources become valuable have been extremely neglected, (Barney, 2018) despite scholars acknowledging that it is the management of resources and skills that is crucial to firm's competitiveness and not just the resources themselves (Aakar, 2019). This theory is relevant to the study because to get human resources who are rare, inimitable, valuable and unique, state corporation's managers must ensure that their recruitment and selection practice guarantee hiring of people with the right skills which . State Corporations also must understand that for the employees to be a source of competitive advantage, they need to be knowledgeable. Knowledge acquired and possessed by employees is a source of competitive advantage as this is tacit knowledge which is impossible to imitate. Therefore training and developing the staff hired becomes inevitable so that employee's skills and knowledge is improved.

#### **2.2.4 Stakeholder Theory**

Modern stakeholder theory, was proposed by R. Edward Freeman in his seminal book, *Strategic Management: A Stakeholder Approach* (1984), has been one of the most controversial theories to be introduced in management. Stakeholder Theory is a view of capitalism that stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have a stake in the organization. The theory argues that a firm should create value for all stakeholders, not just shareholders.

In 1984, R. Edward Freeman originally detailed the Stakeholder Theory of organizational management and business ethics that addresses morals and values in managing an organization. His award-winning book *Strategic Management: A Stakeholder Approach* identifies and models the groups which are stakeholders of a corporation, and both describes and recommends methods by which management can give due regard to the interests of those groups. The theory has become a key consideration in the study of business ethics and has served as a platform for further study and development in the research and published work of many scholars, including those featured on this website. Since the 1980s, there has been a substantial rise in the theory's prominence, with scholars around the world continuing to question the sustainability of focusing on shareholders' wealth as the most fundamental objective of business.

### **2.2.5 Institutional Theory**

Institutional theory was introduced in the late 1970s by John Meyer and Brian Rowan as a means to explore further how organizations fit with, are related to, and were shaped by their societal, state, national, and global environments. Institutional theory seeks to explain the processes and reasons for organizational behavior as well as the effect of organizational behavior patterns within a broader, interorganizational context. The study of organizational institutions occurs across fields of research in sociology, business, and communication and informs public relations practitioners' understanding of corporate reputation and legitimacy.

Institutions are defined as conventional, standardized patterns of behavior found within and across organizations and giving meaning to social exchange and order. These patterns of behavior include organizational and industry standards, routines, and norms. Institutional theory suggests that organizational behaviors are copied and reproduced, establishing taken-for-granted norms and, eventually, widespread standardized expectations of practice.

Understanding how adhering to institutions, or relatively fixed and formal working rules, confers legitimacy on organizations thus enables researchers to conceptually differentiate institutions from an organization's reputation, or its perceived status. This entry discusses the development of institutional theory, recent research pertaining to the theory, and the theory's implications for corporate reputation. The foundations of institutional theory as it is currently understood took root between 1977 and 1983 amid a broader search for understanding the elements that support successful and sustained organizational performance. The general focus of organizational research had shifted during this period from analyzing the elements contained within the boundaries of the organization, otherwise known as a closed system, to one that recognized the interaction between an organization and its environment, an open system.

Concurrent theories, including population ecology theory, resource dependence theory, and structural contingency theory, sought to explain the adequate adaptation of the organization to the environment, thus improving its fit and its market or industry performance. Sociologists John Meyer and Brian Rowan integrated and extended Max Weber's theory of bureaucratic rationalization and Philip Selznick's administrative research on organizational leadership in communities. In so doing, they reinterpreted Weber's version of institutionalism, termed new institutionalism, into this environment-focused research trend

with a pivotal, original article in 1977. Meyer and Rowan argued that complex relational networks between organizations, as well as the societal rules, norms, and ideologies of the institutional context, result in Weber's rationalization and diffusion of formal bureaucracy.

Similar to structuration, or the way agents produce and reproduce social structure, the institutional context recursively shapes and is shaped by shared understandings of acceptable conduct (i.e., rational myths), to which organizations conform (i.e., the process of isomorphism) to attain social approval (i.e., legitimacy) and survive. However, conformity may be adopted only ceremonially or superficially by separating the symbolic practices from the organization's technical efficiency (i.e., decoupling). Meyer and Rowan helped explain institutionalized symbolic or cultural organizational behavior that defied rational theories of the firm. Organizations in the same industry tend to have similar practices and forms, leading to a sector-specific homogenization. In a pivotal article in 1983, sociologists Paul DiMaggio and Walter Powell introduced the idea of institutionalized fields and identified three isomorphic pressures: (1) coercive isomorphism, (2) mimetic isomorphism, and (3) normative isomorphism.

## **2.3 Empirical Review**

### **2.3.1 Logistics Outsourcing and Employee Commitment**

Muhindo, Zhou and Mzuza (2014) conducted a study on the impact of logistics outsourcing strategy in oil and gas industry in Uganda. The purpose of the study is to analyze the impact of logistics outsourcing strategy in the oil and gas industry in Uganda. The purpose sought to examine how companies outsourced their logistics activities to restructure their distribution networks and achieve competitive advantage. The study adopted quantitative method. Findings show that there are many benefits resulting from using logistics outsourcing strategy in the oil and gas industry and in the same way, challenges are faced by both oil and gas companies and logistics service providers in executing business contracts. The study concluded that it is very important to outsource full or part of logistics activities to logistics service providers in order to attain competitive advantage. The study recommended that logistics outsourcing strategy plays an important role in the business especially in minimizing operating costs and spreading risk between the parties engaged in business contracts.

Charles (2016) assess that outsourcing (logistics) services and supply chain efficiency - A critical review of outsourcing function in Mukwano group of companies. The study sought to

examine the various approaches and terminologies used by organizations and explore possible options on adoption of such approaches. The study used a self-administered questionnaire and an interview guide. The finding shows that, the current market is then analyzed and discussed regarding the impact of outsourcing decisions on organizations. The study concludes by projecting the likely future trends in the field of outsourcing in general and makes recommendations and conclusions on how organisations can move forward with the outsourcing function

Emah, Mehraz and Mridula (2017) conducted a study on third party logistics outsourcing: an exploratory study of the oil and gas industry in Nigeria. The study sought to investigate the feasibility of logistics outsourcing by the international oil and gas companies in the emerging business environment of Nigeria. An exploratory, multicase, qualitative approach was applied. The sample size of forty was used. The findings show those vendors' capabilities, host community issues, joint venture influence, and employees' reactions challenge international oil companies' logistics outsourcing implementation while relationship management, contract management, and change management skills enable them handle these challenges. The study concluded show that surveyed organizations implement logistics outsourcing piecemeal and need to scale up their current capabilities to effectively integrate logistics outsourcing. The study recommended that logistics outsourcing is achievable in Nigeria, but requires synergies and symbiosis between the oil companies and their local vendors.

Wenwen, Stephen, Zhiqiang and Xiande (2017) conducted a study on the role of outsourcing management process in improving the effectiveness of logistics outsourcing. The purpose was to examine the effects of the outsourcing management process (OMP), which is an operational mechanism, on the following two types of logistics service outsourcing: basic outsourcing and advanced outsourcing. The study was conducted in China. The study adopted survey method. The sample size of two hundred and fifty was used. The finding shows that OMP affects the effectiveness of the two types of logistics outsourcing differently. The study concluded that logistics outsourcing has been widely adopted by firms as a means to reduce costs and increase flexibility. The study recommended that, to ensure these expected outcomes, logistics outsourcing processes must be managed with appropriate governance mechanisms, but their effects on firm performance have hitherto been inconclusive in the literature due to overlooking of operational mechanisms.

Sung, Hong-Hee & Taewon (2020) conducted a study on logistics integration in the supply chain: a resource dependence theory perspective South Korean. The study sought to examine the relationship between logistics integration and supply chain performance. A five-point Likert scale was used. The sample size of two hundred and fifty was used. The finding shows there is a positive impact of trust, satisfaction, and commitment on logistics integration between manufacturing firms and logistics service providers that enhances logistics service capabilities of the firms. The study recommended that building a strategic relationship for logistics services helps the manufacturing firms improve their business and operations performances in their supply chain. Implications and suggestions for future research are discussed.

Mwanzia (2020) examined a critical success factors and organizational performance of indigenous third party logistic businesses in transport sector in Kenya. The objective was to investigate how third party logistics industry has been constantly changing due to global industry consolidation, technology integration, industry specialization, and industry alliance networks. The population of eight hundred and eighty one was used. The study employed descriptive research design an exploratory factor analysis, multi- collinerity test, inferential statistical analyses and linear regression method. Data were analyzed using SPSS. The finding shows that there positive impact on operations cost, innovation, resilience, quality service and relationship management

Suharno, Bayu and Hima (2020) conducted a study on the influence of outsourcing, organizational commitments and employee satisfaction on outsourcing employee performance at the ministry of public work and public housing China. The purpose was to determine the effect of outsourcing, organizational commitment and employee satisfaction on the performance of outsourced employees of ministry of public works and public housing. The study adopted quantitative method with associative method. The sample size of one hundred and ten was used. Data were analyzed by multiple linear regression analysis. The sample size of one hundred and ten was used. The finding showed that there were significant and negative influences between outsourcing and employee performance. The study concluded that outsourcing (system) conducted by the Secretariat General of the Ministry of Public Works and Public Housing has a significant and negative effect on employee performance.



Nurain, & Adesunkanmi (2022) examined the extent of logistics outsourcing practices among manufacturing companies in Southwestern Nigeria. The study sought to examine the extent of logistics outsourcing practices among manufacturing companies in Southwestern Nigeria. This was with a view to providing information on the logistics outsourcing operations of the selected manufacturing companies in Southwestern Nigeria. The study adopted a descriptive survey design. The population of the study comprised six hundred and twenty (620) senior managers, middle-level officers, and supervisors who were employees of the selected food manufacturing companies in Lagos, Oyo and Ogun states of southwestern Nigeria. A sample size of two hundred and sixty (260) employees of manufacturing companies in Southwestern Nigeria was selected for the study using Taro Yamane's formula. Data were analysed using tables, percentages, and regression analysis. Findings showed that logistics outsourcing practices such as transportation management, storage management, and facility/asset management were averagely high among manufacturing firms in Southwestern Nigeria. The study concluded that logistics outsourcing is highly in use among manufacturing companies in Southwestern.

Alrwashdeh, Adaileh & Ali (2022) conducted a study on the impact of outsourcing on operational performance: A field study in industrial companies in Jordan. The purpose were to examine outsourcing positively impacts operational performance, outsourcing positively impacts organizational structure, organizational structure positively impacts operational performance, organizational structure is positively mediate the impact of outsourcing on operational performance, outsourcing positively impact organizational culture, organizational culture positively impacts operational performance, and organizational culture is positively mediate the impact of outsourcing on operational performance. The study adopted questionnaire method. The finding shows that outsourcing is a strategic decision, the outsourcing decision should be linked to strategic planning, the study concluded that the large, medium and small companies provides a clearer view of the unique organizational and cultural characteristics for each company type.

Lei (2022) conducted a study on the strategic outsourcing's role in driving economic value by examining mediating role of organizational capabilities and sustainable innovation. The purpose sought to evaluate the relationship between strategic HR outsourcing and organizational sustainability. Data was collected from 400 HR professionals in China using a questionnaire technique. The Smart-PLS software and a structural equation modeling (SEM)

technique were used to analyzed the data. The finding shows that, organizational capabilities and HR proficiency were discovered to mediate the association between strategic HR outsourcing and organizational sustainability. The study concluded by analyzing the impact of strategic HR outsourcing on organizational sustainability, this paper provided an important theoretical contribution.

Mwende and Wambui (2022) carried out a study on the effect of marketing outsourcing on organizational performance of automotive assembling firms in Nairobi City County, Kenya. The study sought to investigate the effect of marketing outsourcing on organizational performance of automotive assembling firms in Nairobi City County, Kenya. The study applied a descriptive survey design. The population consists of one hundred and fourteen. Data were analyzed using multiple regression model inferential statistics. The finding shows that customer relations and follow-up are conducted on a regular basis through different public media outlets in the automobile assembling firms. The study recommended that the firm management must develop partnerships with the suppliers, and they should not be taken as contractors, which will help share value and missions over the long term.

Adesunkanmi, & Nurain (2022) conducted an empirical study of logistics outsourcing practices and firm productivity of selected manufacturing companies in Nigeria. The objective sought to determine the effect of efficiency of logistics outsourcing on productivity of the selected manufacturing companies in Southwestern, Nigeria. The study adopted a descriptive survey design. The population of the study comprised six hundred and twenty (620). Sample size of two hundred and sixty (260) employees of manufacturing companies in South western, Nigeria was selected for the study using Taro Yamane's formula. The finding showed that logistics outsourcing had significant effect on productivity of manufacturing companies in the Southwestern Nigeria. The study concluded that logistics outsourcing had significantly enhanced productivity of manufacturing companies in the Southwestern Nigeria. The study recommended that government should invest more in infrastructure development such as roads construction and maintenance in order to reduce current problems of bad roads and scale up activities on the maintenance of those in deplorable conditions.

Mohamed, Yasser, Abu and Muhammad (2022) conducted a study on the relationship between organizational culture and organizational commitment in the Egyptian Hotels. The purpose sought to examine the relationship between dimensions of stability, innovation, performance orientations, and emphasis on rewards, social responsibility and supportiveness.

The population of 490 employees in was used. The study adopted multiple regression method. The finding showed that there is a statistically significant relationship between relationship between dimensions of stability, innovation, performance orientations, social responsibility and supportiveness. The study recommended that hotel management focusing on employee's stability and encouraging them to give opinion inside the hotel and pay greater attention to characteristics of corporate culture to increase employee commitment.

Khwanruedee and Peevara (2023) conducted a study on tourism outsourcing relationship performance in Thailand. The objectives are to investigate the relationship between outsourcing relationship commitment and outsourcing relationship performance, to investigate the relationship between communication qualities and outsourcing relationship performance, and to investigate the relationship between inter-organizational trust and outsourcing relationship performance. The population of four hundred and a simple size of two hundred and twenty five firms were used in the study. The study adopted multiple regression analysis. The finding shows that outsourcing relationship intensity such as inter-organization trust, communication quality, and outsourcing relationship commitment has a positive significant impact on outsourcing relationship performance. The study concluded that, the effectiveness of outsourcing relationship performance between outsourcers and providers. trust, sharing information, and responsible commitment are a solution where organizations provide effective communication services under a friendly work atmosphere to another organization for fulfilling their mutual performance needs and focusing on their core competencies.

Onuoha (2022) conducted a study on the effect of outsourcing on organizational performance and employee commitment in selected banks in Owerri. The sample size of four hundred was used. Data were analyzed using frequency tables and simple percentages. Finding showed that outsourcing positively affected capacity building through constant training. The study concluded that employees manifested both affective and continuance commitment despite the emerging work trend and positively affected organizational performance. The study recommended that organizations should limit outsourcing while enhancing capacity building through constant training, build more of affective commitment, improve on leadership quality and style and improve general workplace environment to retain commitment and constantly improve on performance, set clear goals and communicate same to employees in an era that experiences change of business strategies to enhance performance.

Ihunwo and Ikegwuru (2023) conducted a study on the logistics outsourcing and organizational performance of oil and gas companies in Rivers State. The objective was to examine the relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers. The study employed descriptive research design and the target population was two hundred and ninety-five (295) oil and gas firms in Rivers State. The population of five hundred and ten, and the sample size of this study was 170 oil and gas firms was used. Descriptive statistics was adopted while, the Pearson's Product Moment Correlation technique was used analyzed the data. The finding showed that, operational outsourcing services positively and significantly correlated with organization performance, and manufacturing outsourcing positively and significantly correlated with organization performance. The study concludes that there is a significant and positive relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers State. The study recommends that the management of oil and gas firms should use adequate logistics outsourcing strategies such as operational outsourcing services and manufacturing outsourcing to connect to organizational performance for sustainable growth in business

Lee and Ha (2023) conducted a study on the Influence of the relationship between logistics outsourcing partners on logistics performance: focusing on logistics management in crisis situations in China. The purpose sought to examine the relationships between supply chain parties and psychological factors on logistics outsourcing. The population was three hundred. The data was analyzed using SPSS and AMOS model. The finding shows that, commitment level had a positive influence on the satisfaction level but did not have a significant influence on logistics performance. The study concluded by recommending that the effects of the relationships between supply chain parties and psychological factors on logistics outsourcing.

Umuhire & Irechukwu (2023) conducted a study on logistics outsourcing services and performance of firms in the tele-communications sector: A Case of Airtel Rwanda Ltd. The objectives were to determine the effect of financial systems, network monitoring tools services, and supplier network responsiveness outsourcing on organizational performance of Airtel Rwanda Plc. The population comprises of sixty five, and sampled size of fifty six was used. Data was analyzed using Pearson's correlation method. The findings showed that the supply chain operating system responds rapidly to changes in product volume demanded by customers. The study concludes that Airtel Rwanda Plc in Rwanda have outsourced financial system billing. Airtel Plc had outsourced networking monitoring tools which play a pertinent

role to the organizational success. The study recommends that to adopt masts/towers and fleet management in means, the government should revise competition policy, and contract duration for outsourcing activities.

### **2.3.2 Supply chain collaboration and Employee Commitment**

Nyangweso (2013) conducted a study on supply chain management and organizational performance in the sugar industry in Kenya. The objective of the study was to establish the effect of supply chain management practices on organizational performance of Sugar firms in Kenya. The study adopted descriptive research design. The findings showed that supply chain management practices had a positive effect on various parameters of performance. The study concluded that effective implementation of supply chain management practices led to decrease in the operational cost of the firm, reduction on the response time for product design change, increased accuracy of order processing for customers which leads to improved market share and customer satisfaction. The study recommends that the management of the sugar firms consider implementing fully various supply chain practices due to its positive effects and also for the government to provide incentives on adoption of certain supply chain practices such as green supply chain due to its effect on the environmental sustainability.

Hashem, Hui, Noor, Nurulhud, & Che (2013) conducted a study on the impact of supply chain management on the relationship between enterprise resource planning system and organizational performance. The objective was to investigate the enterprise resource planning adoption and its influence on organizational performance through supply chain management. Structural equation model was utilized. The sample size of one hundred and seventy four companies in Malaysia was used. The finding shows that, the existence of positive effects of enterprise resource planning on the supply chain which ultimately results in improved overall performance of the studied organizations.

Abdallah, Obeidat, and Aqqad (2014) conducted a study on the impact of supply chain management practices on supply chain performance in Jordan: The moderating effect of competitive intensity. The study sought to examine the effect of strategic orientation and innovation on organizational performance, and innovation acted as a mediator between strategic orientation and organizational performance. Data were analysed using Structural Equation Modelling (SEM) and the finding showed that strategic orientation had a significant

effect on innovation but not on organizational performance. The study concluded that innovation significantly affected organizational performance.

Cheng (2016) conducted a study on the influence of supply chain management (SCM) practices on organizational performance: knowledge management processes as mediator Malaysia. The objectives were to examine the relationship between supply chain management practices and organizational performance, knowledge management processes, and to examine whether knowledge management processes mediates the relationship between supply chain management practices and organizational performance. Quantitative method was adopted. The sample of one hundred and thirty eight was used. Finding showed that SCM practices of information sharing, quality of information sharing and lean practices were positively related to organizational financial and non financial performance.

Li and Ragu-Nathan (2016) conducted a study on the impact of supply chain management practices on competitive advantage and organizational performance China. The study sought to examine the relationship between strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement. The study adopted descriptive design method. The sample size of 196 was used. The finding shows that higher levels of SCM practice can lead to enhanced competitive advantage and improved organizational performance. The study concluded that effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organizational performance since competition is no longer between organizations, but among supply chains.

Al-Shboul, Barber, Garza-Yeyes, and Kumar (2017) conducted a study on the effect of supply chain management practices on supply chain and manufacturing firms' performance. The purpose was to explore the causal relationship between SCP and MFP. Linear regression, ANOVA and Pearson correlation were used. The finding shows that SCMPs have a positive effect on SCP which in turn also positively affects MFP. The finding shows that, the effect of Partnering members as one of the major related to SCM over operational performance.

Ayalew (2018) conducted a study on the effect of supply chain management practices on operational performances: The Case of Heineken Kilinto Brewery. The study sought to examine the strategic supplier partnership, customer relationship, level of information

sharing, quality of information sharing, and internal lean practices and tests the relationships between supply chain management practices and operational performance. The study used both descriptive and explanatory research designs. Data were analyzed using Pearson correlation method and ordinary least square multiple regressions (OLS) method. The finding shows that supply chain management has significant effect on operational performance of HBSC Kilinto Factory. The study recommends that management of the company has to improve strategic supplier partnership, customer relationship and internal lean practice of the company.

Manuela (2019) conducted a study on the impact of supply chain management processes on competitive advantage and organizational performance. The study was carried out at China. The objectives were to assess the effect of supplier relationship management to competitive advantage and organisational performance, to determine the impact of manufacturing flow management on competitive advantage and organisational performance, to assess the impact of product development and commercialization on competitive advantage and organisational performance. Statistical Package for the Social Sciences (SPSS), Pearson correlation coefficient were used to analyzed the data. The finding shows that higher levels of supply chain management practice can lead to enhanced competitive advantage and improved organizational performance. The study concluded that SRM, MFM, and PDAC processes have a positive impact on competitive advantage and organizational performance. The study recommended that, business organizations should take an active role in managing all facets of their supply chain.

Waqas (2019) conducted a study on the impact of supply chain management practices on organizational performance of textile industry, Bahria Karachi. The objective of the study was to examine the relationship between strategic supplier partnership and organizational performance. Quantitative approach, explanatory type, correlational design, convenience sampling and multiple linear regression method of analysis were adopted. The finding shows that strategic supplier partnership; customer relationship, level of information sharing and quality information sharing was all significantly affecting the organizational performance except postponement. The study recommended that managers are recommended to improve the performance of organization by developing the relationship with supplier.

Khalil, Khalil & Khan (2019) conducted a study on the effect of supply chain management practices on organizational performance with the mediating role of innovation in SMEs. The

purpose was to examine the relationship between supply chain management and organizational performance. Data were collected from 207 small and medium enterprises (SMEs) in Punjab, Pakistan. PLS-SEM was used to analyze the study. Findings showed that strategic partnership with supplier and level of information sharing had no influence on organizational performance. The study concluded that quality of information sharing, internal supply chain process, and lean practices had significant influence on organizational performance.

Karimi & Rafiee (2022) examined on analyzing the impact of supply chain management practices on organizational performance through competitive priorities (Case Study: Iran Pumps Company). The purpose was to identify the relationships among SCM practices, competitive advantage and organizational performance. The study adopted Pre-pilot Study, and Pilot Study. The finding shows that SCM practices produce competitive advantage to the organization in the first place, and competitive advantage will, in turn, lead to improved organizational performance. The study concluded that supply chain management influence in Iran pumps Company, according to competitive priorities.

Abate (2023) conducted a study on the effects of supplier relationship management practices on organizational performance and competitive advantage of large manufacturing companies in Bahir Dar, Ethiopia. The purpose of the study is to examine the effects of supplier relationship management practices on organizational performance and competitive advantage of large manufacturing companies in Bahir Dar, Ethiopia. The study employed an explanatory research design. The sample of twenty three was used. The finding shows that supplier relationship management practices lead to enhancing organizational performance and competitive advantage. The study concluded that effects of supplier relationship management practices on organization performance and competitive advantage. The study recommended that supply chain help managers in large manufacturing companies to have a deeper understanding of supplier relationship management and its importance to organizational performance and competitive advantage.

### **2.3.3 IT Capability and Employee Commitment**

Nwachukwu, Chládková and Olatunji (2018) carried out a study on the relationship between employee commitment to strategy implementation and employee satisfaction in Nigeria. The objective was to examined the relationship between employee commitment to strategy



implementation and employee satisfaction in mobile telecommunication firms in Nigeria. This study used a descriptive quantitative research approach. The sample size of 120 and sample size of 105 was used. Data were analysed using the regression analysis, Pearson correlation and ANOVA techniques. The findings show that employee commitment to strategy implementation has a positive and significant relationship with employee satisfaction. The study concluded that employee commitment to strategy implementation is correlated with employee satisfaction, the more committed employees are to their firms.

Shafique-ur, Mohamed & Hazeline (2019) conducted a study on the mediating role of organizational capabilities between organizational performance and its determinants, Pakistan. The objective of the study was to determine the influence of management control system (MCS) as a package on organization performance, and organizational capabilities play an important role to explain this relationship. One hundred sixty were sampled. Data were analysed through partial least square equation modeling technique. The findings showed that with cultural, cybernetic, rewards and compensation, planning, and administrative controls with organizational capabilities.

Arokodare, Asikhia and Makinde (2020) conducted a study on information technology capability and performance of selected oil and gas marketing companies in Lagos State, Nigeria: The moderating role of organizational culture. The objective was to investigate the relationship between information technology capability and performance of oil and gas marketing companies in Lagos State, Nigeria. The study employed survey research design. The population comprised 515 oil and gas marketing and retail outlets operating in Lagos State, Nigeria. Findings showed that there is a significant and positive relationship between information technology capability and market share and also organisational culture significantly moderate the relationship between information technology capability and market share of oil and gas marketing companies in Lagos State, Nigeria. The study concludes that there is relationship between information technology capability and market share. Also, organisational culture moderates the relationship between information technology capability and market share. It is recommended that oil and gas marketing companies should evolve dynamic business models that will enhance adoption of information technology capability and organisational culture flexibility in order to achieve the advantage of larger market share.

Anggita and Winarno (2023) carried out a study on exploring the mediating role of organizational commitment between organizational culture and employee performance:

evidence from public sector organization. The objective of the study was to examine the relationship between organizational culture and employee performance at the Regional Inspectorate of Sumedang Regency. A survey questionnaire was used to collect data from 64 employees in the Regional Inspectorate of Sumedang Regency. The data were analyzed using PLS-SEM. The finding showed that organizational culture significantly positively impacted organizational commitment and employee performance. The study concluded that organizational culture affects employee performance, organizational culture affects organizational commitment, organizational commitment affects employee performance, and organizational commitment plays a role in mediating the influence of organizational culture on employee performance. The study recommended that organizations seeking to boost employee performance should consider both variables and ensure that organizational culture and commitment are adequately maintained.

Arokodare (2021) conducted a study on knowledge management and dynamic capabilities of the upstream oil and gas sector in the era of a new normal: the moderating effect of innovation strategy. The study carried out at India. The study sought to examine the relationship between innovation strategy, knowledge management and dynamic capabilities of the upstream oil and gas industry. The population of one hundred and twenty (120) was used. Survey research design was employed. Hierarchical regression method was used for data analysis. Findings showed that innovation strategy significantly moderated the relationship between knowledge management and dynamic capabilities of the upstream oil and gas sector. The study recommended that for operators in the upstream oil and gas sector to sustain their competitiveness, they should harness the knowledge embedded in their firms, and be dynamic in sensing the developments in the global arena in the era of the new normal.

Muoghalu & Tantua (2021) conducted a study on the workplace ethics and employee commitment of oil and gas companies in Rivers State. The objective was to examine the relationship between workplace ethics and employee commitment of oil and gas companies in Rivers State. The study adopted the cross-sectional survey. The population was thirty three. Data were analyzed using descriptive and inferential statistical techniques; Spearman's Rank Order Correlation Statistics. The finding shows that there is a significant relationship between workplace ethics and workplace ethics and employee commitment of oil and gas companies in Rivers State. The study recommends that management of oil and gas companies

should develop a way of finding building integrity among employee to help build trustworthiness and commitment.

Murray and Holmes (2021) conducted a study on the impacts of employee empowerment and organizational commitment on workforce sustainability in Canada. The study sought to examine the influence of empowerment on organizational commitment and organizational commitments influence on turnover intention. The study adopted structural equation model, and census approach was adopted. The population of 346 was used. Findings showed that the development of meaning through employee empowerment, particularly when the ideals and standards between workers and their organization are aligned, creates a strong emotional commitment which appears to strongly reduce an employee's intention to leave. The study concluded that feelings of emotional connection or duty towards an organization show clear positive relationships with reduced intentions to leave.

Arokodare & Asikhia & Makinde (2021) Information technology capability and performance of selected oil and gas marketing companies in Lagos State, Nigeria: The moderating role of organizational culture. The purpose of the study was to investigate the relationship between information technology capability and market share as well as the moderating effect of organisational culture on the relationship between information technology capability and performance of oil and gas marketing companies in Lagos State, Nigeria. The study employed survey research design. The population comprised 515 oil and gas marketing and retail outlets operating in Lagos State, Nigeria. Findings showed that there is a significant and positive relationship between information technology capability and market share and also organisational culture significantly moderate the relationship between information technology capability and market share of oil and gas marketing companies in Lagos State, Nigeria. The study concludes that there is relationship between information technology capability and market share. The study recommended that oil and gas marketing companies should evolve dynamic business models that will enhance adoption of information technology capability and organisational culture flexibility in order to achieve the advantage of larger market share.

Jin, Lulu, Xufan, Chen and Tian (2022) conducted a study on technological configuration capability, strategic flexibility, and organizational performance in Chinese High-Tech Organizations. The objective was to investigate the moderating effect of corporate technology configuration capability on the relationship between strategic flexibility and organizational performance. The study adopted survey design method. The population consists of six

hundred and eighty and sample size of four hundred and thirty nine was used. The finding shows that firms with considerable technological configuration capability are more likely to search beyond the domain of their neighborhood knowledge and embark on a broader level of exploration that transcends existing technological and organizational boundaries.

Emumena, & Hamilton (2022) conducted a study on market innovation capability and performance of indigenous oil and gas companies in South-South, Nigeria. The purpose of study was to examine the relationship between market innovation capability and performance of indigenous oil and gas companies in South-South, Nigeria. The study adopted the cross-sectional research survey design. The population of thirty-three (33) was used. Data were analyzed using the Spearman's Rank Order Correlation. The finding shows that market innovation enhances the ventures into new markets and support better market shares. The study recommends that the management of indigenous oil and gas companies should expand the capacity of their digital marketing teams as well as support digitalization of their marketing strategies as this will enhance market innovations.

Sari, Hady and Elfiswandi (2023) carried out a study on employee commitment model: analysis of the work environment and digital literacy on organizational performance to introduce the potential of west sumatera tourism objects (case study on west Sumatera tourism employees). The purpose was to evaluate the direct influence of the work environment and digital literacy on employee commitment. The sample size of two hundred and forty eight was used. Partial Least Square (PLS) analysis method with SmartPLS Application was used. The finding showed that the work environment and digital literacy had a direct impact on employee commitment and the influence of the work environment construct and digital literacy on organizational performance. The study concluded that a comfortable work environment and good digital literacy can improve organizational performance through employee commitment.

Ogola, Rheeta and Bagire (2023) conducted a study on managerial capabilities and strategic business success in the petroleum industry in Uganda. The purpose explores the relationship between managerial capabilities and strategic business success in the petroleum industry in Uganda. The population was 347, and sample of 186 was used. The study used a survey research design. Regression and correlation were used to analyze the data. The finding showed that managerial capabilities have positive and significant relationship with strategic business success. The study concludes that leadership partially mediated the relationship

between managerial capabilities and strategic business success. The study recommended that the level of conceptual skills be internally assessed by each company since it was ranked lower than other dimensions.

Okharedia & Adekunle (2023) conducted a study on technological environment and sustainable performance of oil and gas firms: a structural equation modelling approach, Niger Delta region of Nigeria. The purpose sought to examine the impact of technology infrastructure on the sustainable performance of oil and gas firms. The study adopted a cross-sectional survey research design. The population of three hundred (300), and sample size of two hundred and twenty-seven (227) was used. The finding shows technology infrastructure has a positive but insignificant impact on the sustainable performance of oil and gas firms. The study recommends that oil and gas companies continually employ, reward, and train individuals to absorb and utilize acquired technologies to develop a standard for addressing the social and environmental problems in the Niger Delta region.

Jain, Choudhary, Panda, Jain and Dey (2023) conducted a study on the impact of institutional pressures and dynamic capabilities on sustainability performance of oil and gas sector. The purpose was to examine the impact of the institutional pressures and dynamic capabilities on the overall sustainability performance of OG industry. The study adopted survey method. Data were analyzed using partial least squares structural equation modeling. The sample of two hundred and seventy five was used. The finding shows that both institutional pressures and firm's dynamic capabilities have significant positive impact on its economic and environmental performances in OG sector in India.

Masoud and Basahe (2023) conducted a study on the effects of digital transformation on firm performance: the role of customer experience and IT innovation in Saudi Arabia. The purpose was to examine the effect of digital transformation on firm performance by classifying the capabilities required to realize digital transformation, customer experience, and IT innovation. The study employed structured questionnaire. The sample size of one hundred and sixty four was used. The finding shows that digital transformation, customer experience, and IT innovation positively impact a firm's performance, with customer experience exhibiting the strongest effect. The study concluded that that digital transformation positively affects customer experience and IT innovation, and confirm its direct influence on firm performance.

Hifza and Kalaiselvi (2023) conducted an empirical study on employee commitment and job performance of private sector employees. The objective was to investigate the effect of an employee commitment on job performance. The study adopted descriptive survey method. The finding shows that the success and failure depends on employee commitment. The study concluded that the committed employees have good leadership quality, increased productivity, high turnover, reduced absenteeism and job satisfaction. The study concluded that employee job satisfaction, organizational support, and employee engagement improve the employee performance.

#### **2.3.4 Vertical Integration and Employee Commitment**

Amu and Ozuru (2014) conducted study supply chain integration in organizations: an empirical investigation of the Nigeria Oil and Gas Industry. The study sought to examine a conceptual model of supply chain integration and operational performance where integration of its supply chain network helps to keep closer look at the current performance to ensure flexibility in business operations. The study adopted descriptive survey design. The finding shows that the three dimensions of supply chain integration and a moderator. The study concluded that, information technology capability demonstrates that the availability of well integrated phenomena will enhance operations' performance.

Mapira, Chikozho, Mkandatsama, Magagada, Mugogo and Vengesayi (2014) examined on the impact of downsizing on employee commitment: A Case Study of Surface and Mashwede Refinery. The purpose was to assess the impact of downsizing on employee commitment in cooking oil manufacturing companies in Zimbabwe. The sample of ninety eight from a population of one hundred and eight employees was used. The study employed a case study approach. The finding shows that the task of managing survivors syndrome and employee commitment would not be difficult if the leadership recognized that survivors have special needs, provides the emotional support they deserve to ensure continuous and honest communication. The study recommends that for any change strategy to produce desired results companies should embark on job counselling, climate survey to check morale and provide frequent and transparent communication before, during and even after downsizing in order to retain employee commitment.

Barrera-Rey (2015) conducted a study on the effects of vertical integration on oil company performance. The study was conducted at Oxford. The purpose was to explore the average

degree of integration of the industry does not exhibit a specific trend over time. The study employed survey design. The finding shows that vertical integration reduces the level of efficiency of companies while it also reduces its variability. The study concluded that, market power seems to reduce company efficiency probably because of the slack and complacency associated with monopoly. The study recommended that the measure of costs of integration should reflect the effects of slack, diseconomies of size and diseconomies of diversification.

Photis, Andeou and Louca (2015) carried out a study on the impact of vertical integration on inventory turnover and operating performance in Cyprus. The study sought to investigate how vertical integration may influence inventory turnover and firm operating performance. The study adopted regression method. The finding shows that vertical integration has a positive effect on RMI and FGI turnover but no significant effect on WIPI turnover. The study concluded that FGI contributes to a reduction in supporting processes costs which causes an improvement in return on sales (ROSs). Vertical integration impacts ROS directly.

Ebrahimi (2015) evaluate on examining the impact of supply chain integration on organization structure and operational performance in oil and gas supply chain in Sheffield: A Contingency Approach. The study sought to the relationship between organization structure (OS) (centralization, formalization and hierarchical relationship) and operational performance. The study adopted a quantitative approach. Data were analyzed using statistical techniques. Findings showed that centralization, formalization, and hierarchical relationship negatively impact operational performance of oil and gas supply chains, and that SCI dimensions positively affect operational performance. The study concluded that professional employees bring a set of externally (professionally) derived standards, which affects their behaviors

Alfalla-Luque, Marin-Garcia and Medina-López (2015) conducted an analysis of the direct and mediated effects of employee commitment and supply chain integration on organisational performance in Sevilla. The purpose was to examine the relationship between employee commitment and supply chain integration dimensions to explain several performance measures flexibility, delivery, quality, inventory and customer satisfaction. Data were analysed with Structural Equation Models. The sample of two hundred and sixty six was used. The findings showed that the relationship between employee commitment and operational performance is fully mediated by supply chain integration. The study concluded that employee commitment contributes to improving internal integration, and internal

integration affects performance both directly and indirectly. The study recommended that companies should strive to achieve both employee commitment and internal integration, as they mutually reinforce each other.

Mark, Andreas, Lars and Tom (2016) conducted a study on the strategic decisions regarding the vertical integration of human resource organizations: Evidence for an integrated HR model for the financial services and non-financial services industry in Germany, Austria and Switzerland. The purpose was to gain insights into the current status of HR outsourcing and understand the differences between the financial services and the non-financial services industry. The study employed Ordinary Least Squares (OLS)-regression. The finding shows that, there is a significant negative interrelationship between the relative size of the HR department compared to company size and vertical integration. The study concluded that companies that show superior financial performance in terms of Return on Equity (RoE) display lower levels of vertical integration for the HR sub-process.

Misund and McMillan (2016) carried out a study on vertical integration and value-relevance: Empirical evidence from oil and gas producers Stirlin. The objective of the study was to investigate how degree of vertical integration can lead to structural changes in the relationship between accounting figures and market valuation. The study adopted descriptive survey design. The study concluded by recommending that, E&P companies should have lower value relevance than integrated companies. The finding shows that, the presence of supplementary estimates for oil and gas reserves values mitigate the potential problem associated with the presence of intangible assets experienced in other industries.

Khan (2017) conducted a study on the effects of human resource management practices on organizational performance - An empirical study of Oil and Gas Industry in Pakistan. The study sought to evaluate the effects of human resource management practices on organizational performance in Oil and Gas Industry in Pakistan. A total of 150 managers of 20 randomly selected firms from Oil and Gas Industry responded to self-reported questionnaire that measured five HRM practices and subjective measures of organizational performance. The study adopted regression analysis. The finding provides an insight to management to use these practices as strategic tool for superior performance, and add to the limited empirical knowledge that exists in Pakistani context.



Gandhi, Shaikh and Sheorey (2017) conducted a study on the impact of supply chain management practices on firm performance: Empirical evidence from a developing country. The purpose was to investigate the adoption and implementation of supply chain management practices (SCMPs) on supply chain performance (SCP) and firm performance (FP) in the organized retail industry in a developing country like India. The study employed descriptive method. A sample size of one hundred and twenty five was used. The finding shows that customer relationship management and supplier relationship management are reported as the most important SCMPs, which had the maximum impact on the FP in the organized retailing context in India.

Muhammad (2019) conducted a study on the impact of employee commitment on supply chain integration and operational performance: in context to manufacturing firms in Pakistan. The objectives were to Identify the role of a committed employee on supply chain integration, and understand how both the elements work together to improve the overall operational performance of an organization. The study adopted both qualitative and quantitative techniques. Data were analyzed using Microsoft Excel, SPSS and Amos Graphics. A total of seven hundred, and two hundred and seventy eight were sampled. The finding shows that operational performance basically is about the effective and efficient utilization of resources to get maximum advantage. The study concluded that Supply chain integration and operational performance are directly linked and various studies prove the positive impact that exists. The study recommended that, the factors of human resources or any other discipline that might affect the operational performance of a company.

Putri, Darwanto, Hartono and Waluyati (2019) conducted a study on the effect of supply chain practices on competitive advantages and supply chain performance in small household Agroindustry: Direct and Indirect Effect. The study was conducted at Indonesia. The study sought to determine the effect of supply chain practices on the competitive advantage and supply chain performance (SCP) in small household agro-industry. The study adopted Partial Least Square Method. The sample size of one hundred and fifty was used. The finding shows that there is a positive relationship between supply chain practices, competitive advantage and supply chain performance. The study concluded that the dimensions of the practices supply chain use strategic partnerships, information sharing, internal integration, and customer integration.

Ogbu (2019) conducted a study on the talent management and workers' commitment to oil & gas firms in Nigeria. The study sought to investigate the relationship between talent management and workers' commitment to oil and gas firms in Nigeria. The study made use of a cross-sectional survey. A population of one hundred and twenty five was surveyed from ten oil and gas firms in Rivers state, while a sample of 95 was sampled. Pearson Product Moment Correlation Coefficient(rs) was used to analyze the study. The finding shows that talent management has a positive significant relationship with workers commitment. The study concluded that talent management measured in terms of talent attraction, talent development and talent retention promotes workers commitment in oil and gas firms in Nigeria. This study recommends that managers of oil and gas firms should endeavor to employ all compensation plans necessary to retain talents in the industry as this will enhance their commitment towards achieving organizational goals.

Misund (2020) conducted a study on vertical integration and value-relevance: Empirical evidence from oil and gas producers. The purpose was to examine how vertical integration affects the relationship between accounting information and valuation. The study applied structural break method. The finding shows that companies with higher earnings volatility and higher levels of intangibles among their assets should have lower value relevance of accounting information than companies with higher levels of tangible assets on their balance sheets. The study concluded that the presence of supplementary estimates for oil and gas reserves values mitigate the potential problem associated with the presence of intangible assets experienced in other industries. The study recommended that E&P companies should have lower value relevance than integrated companies.

Oluwakoya, Ojo and Ayantoyinbo (2020) conducted a study on the extent of supply chain integration among selected manufacturing firms in Lagos Metropolis, Nigeria. The study sought to examine the relationship between manufacturing firms and their supply chain partners. The study employed a mixed research design structure. The finding shows that a collaborative and cohesive pattern of supply chain integration among manufacturing firms in Lagos metropolis. The study concluded that, a strong and robust relationship between manufacturing firms and their supply chain partners. The study recommended that a deeper working relationship between the supply chain and department and supplier partners to mitigate the challenges affecting supply chain integration in the manufacturing industry in Nigeria and enhance better production performance among the manufacturing firms.

E-Vahdati, Mohsen and Khosro (2020) conducted a study on the impact of supply chain management practices on supply chain performance in Iranian oil and gas companies. The study sought to examine the influence of supply chain management practices on the performance of the supply chain in oil and gas companies in Iran. The study adopted quantitative survey-based research. The sample size of one hundred and seventy was used. Data were analyzed using descriptive statistics and structural modeling. The finding shows that supply chain unity, information sharing, and partner relationship management, have a significant positive impact on supply chain performance. The study concluded by implementing in the oil and gas industry to enhance supply chain performance. The study recommended that chain managers will understand the effects of implementing effective and high-quality supply chain unity, information sharing, and partner relationship management in performing of the supply chain in their companies.

Mpuon, Eyo and Kajang (2020) conducted a study on supply chain planning and business performance of Nigeria oil and gas industry. The study was conducted at Calabar, Nigeria. The objective was to examine the relationship between supply chain planning and business performance of Nigeria oil and gas industry. The study adopted correlation research design. The total of one hundred and sample of ninety eight were used. Pearson's product moment correlation were used to analyzed the study. The finding shows that supply chain planning has a significant positive correlation with business performance dimensions such as market share, sales growth and demand forecasting in Nigerian oil and gas industry. The study concluded that supply chain planning has a positive significant relationship with business performance. The study recommended that, managers should take into consideration appraisals of company's strengths and weaknesses.

Đorđević, Ivanović, Lepojević, and Milanović (2020) conducted a study on the impact of employees' commitment on organizational performances. The purpose was to identify the types of organizational commitment that have the greatest impact on the performance of organizations in Serbia and to propose measures to HR managers whose implementation can improve the operations of domestic organizations. The study employed correlation and regression analysis methods. The sample of 169 employees was used. The finding shows that all types of commitment have a major impact on the performance of organizations. The concluded that overall organizational commitment, as well as its certain types, have a positive

impact on the productivity of organizations in Serbia, with the impact of normative commitment on performance greater than other types of commitment.

Emeka and Igah (2021) conducted a study on employee commitment and resource utilization in oil and gas companies in Port Harcourt, Rivers State, Nigeria. The objectives were to ascertain the relationship between continuous commitment, normative commitment, and affective commitment and resource utilization in oil and gas companies in Port Harcourt, Rivers State, Nigeria. The correlational survey design was adopted for the study. The population of the study was six hundred and fifty, while the study sample was two hundred and forty eight was sampled using Tsaro Yamen formula. The study employed Pearson's Product Moment Correlation (R). The finding shows that significant relationship existed between affective commitment and time minimization; continuous commitment and cost minimization; normative commitment and waste minimization. The study concluded that in organizational milieu where affective commitment, continuous commitment and normative commitment existed, time minimization, cost minimization and waste minimization are enhanced in oil and gas companies in Port Harcourt. The study recommended amongst others that employees should be well paid to achieve cost minimization and where policy adherence were strongly enforced, only enacted roles and not expected roles should be expected from workers.

Ohue and Akhator (2021) conducted a study on supply chain management and performance of brewing firms in South-South, Nigeria. The objective was s to ascertain the extent of relationship between agile supply chain and organizational innovation. Survey research design was adopted for the study. The population of two hundred and forty-eight (248) was used for the study. Data were done using the linear regression analysis. The finding shows that a strong significant positive relationship exists between agile supply chain and organizational innovation. The study concluded that there exists a strong significant positive relationship between supply chain management and performance of brewing firms in South-South, Nigeria. The study recommended an enactment and implementation of an agile supply chain strategy by the production department of the focused brewing firms as it could impact organizational innovation.

Azmi and Ika (2021) conducted a study on the effect of supply chain management on competitive advantage and organizational performance: Studies on the Batik Industry in Yogyakarta City. The objective was to examine the relationship between SCM, and

competitive advantage of the organizational performance. The study adopted Structural Equating Modeling, and data were analyzed using SmartPLS3. A population of 56 small medium enterprises was used. The finding shows that supply chain management has a significant positive effect on competitive advantage and company performance. The study concluded that SCM practice is still constrained by problems with strategic supplier performance and financial performance related to the price obtained.

Eshnaf & Alawi (2022) conducted a study on the effect of supply chain management practices on corporate performance in Libya oil and gas industry. The objective was to examine the relationship between supply chain management practices (SCMPs) on the performance of the Libyan oil and gas sector. The sample was four hundred and seventy nine. Descriptive statistics and structural modelling systems are employed. Data were analyzed using Smart PLS. The findings show that supply chain management practices are greatly and positively linked to the performance of Libyan oil companies. The study concluded that financial performance was significantly and positively affected strategic supplier partnering, logistics management, and information sharing and quality. The study recommended that supply chain directors will learn about the implications of efficient and high-quality supply chain implementation practices in their companies' supply chains, such as: strategic supplier partnering, logistics management, information sharing and quality, and materials procurement and inventory management.

Kitaka and Muli (2022) conducted a study on the influence of supply chain management practices on the performance of oil supplying companies in Nairobi city, Kenya. The objective was to evaluate the influence of customer's service management practice on performance of oil supplying companies, to examine the influence of demand forecasting management practice on the performance of oil supplying companies and to assess the influence of information communication technology management practice on performance of oil supplying companies in Nairobi City County. The sample of eighty four was used. The study adopted survey research design. The finding shows that, oil supplying industry in Kenya is currently facing challenges ranging from uncontrollable high fuels costs as a result of high cost of importation, transportation and storage of the oil products which has led to low level of customer satisfaction, hence low performance of the oil supplying industries.

Oboma (2022) conducted a study on human resources management practice and employee commitment in oil and gas servicing firms in Rivers State. The objectives of the study were

to determine the extent of relationship between recruitment, training, and compensation and employee commitment in oil and gas servicing firms in Rivers State. The cross-sectional survey method was used. Statistical Package for Social Sciences, descriptive statistics was utilized to analyze the data. The finding shows that organizational commitment in oil and gas service companies in Rivers State was significantly influenced by human resource management techniques. The study concluded that the link between human resource management techniques and an organization's potential to be more inventive, adaptive, and competent would help the latter, boosting its chances of survival. The study recommended that businesses explore spending money on employee education and training, which would not only help workers preserve their core competencies but also improve their flexibility and innovativeness.

Oroka, Don-Baridam and Obulor (2022) conducted a study on workplace civility and employee commitment in oil and gas industry in Nigeria. The objectives of the study was to assess the extent to which organizational trustworthiness impacts on employee commitment measures such as affective, continuance and normative commitment in the oil and gas firms. The study adopted cross-sectional survey design. A total of three hundred and forty three workers within the firms were used. The Cronbach alpha reliability was also employed. Data were analysed using mean and standard deviation, Spearman correlation. The finding showed that workplace civility contributes significantly to measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry. The study concluded that workplace civility is a significant predictor of employee commitment as it enhances measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry. The study recommends that managers in the target oil and gas organizations create a more warm and supportive work atmosphere where workers get along easily and are able to relate cordially and politely with each other as such an environment fosters quality relationships and exchanges which allow for friendships and collaboration which also influence the workers level of enthusiasm, interest and commitment in work.

Ejikeme and Onuoha (2022) conducted a study on a workplace safety and employee commitment of oil and gas firms in Rivers State. The objectives were to examine the relationship between affective commitment, and management safety practices and continuance commitment. The sample size of one hundred and seventy five and a total population of three hundred and twenty were used. Spearman Rank Order Correlation

Coefficient was employed. The finding showed that employees at oil and gas companies in Rivers State felt more committed to their jobs when they felt safe on the job, both in the short and long terms. The study concluded that oil and gas enterprises in Rivers State benefit from increased employee engagement when management safety practices are in place. The study recommended that oil and gas companies should establish internal policies and procedures governing working conditions to ensure the affective and continuance commitment of employees, and implement a regular monitoring team to verify that employees are wearing the protective equipment they have been given before performing their duties.

Utari, Agung and Ari (2022) conducted a study on the impact of supply chain management and risk management on a state oil and gas industry with competitive advantage. The study was carried out at Indonesian. The study sought to determine the influence of supply chain management, risk management, competitive advantage and corporate. The study adopted quantitative approach. Data were analyzed using Structural Equation Modeling (SEM). The sample size of two hundred was used. The finding shows that supply chain management, risk management and competitive advantage have a significant influence on corporate performance and competitive advantage has a significant influence in mediating supply chain management and risk management on corporate performance.

Hao, Amoako, Ewudzie, Danso and Dawud (2023) conducted an assessment of the impact of management commitment and supply chain integration on SMEs' innovation performance: Moderation role of government support. The study sought to investigate the effect of management commitment, supply chain integration, and government support on small and medium enterprises (SMEs) innovation performance in China. The study was quantitative, and the cross-sectional method. The population was six hundred and eighty five (685) was used. Data were analyzed using Statistical Package for Social Sciences. The findings showed that management commitment influenced internal, customer, and supplier integration and SMEs' innovation performance. The study concluded that a partial mediation effect of internal, customer, and supplier integration in the relationship between management commitment and SMEs' innovation performance.

### **2.3.5 Horizontal Integration and Employee Commitment**

Köhler (2014) conducted a study on bargaining in vertical relationships and suppliers' R&D profitability in Europe. The purpose was to examine the relationship between R&D and firm

profitability on the impact of horizontal market structure. The study employed descriptive survey design. The sample size of four hundred and seventy two was used in the study. The finding shows that the importance of taking a supplier's bargaining power into account when estimating R&D profitability. The study concluded that for an average R&D performing supplier an increase of R&D intensity percentage point would reduce profits by given the supplier depends completely on the largest three buyers and does hold an average market share. The study recommended that, a monopolist R&D performing supplier with average buyer concentration would experience a profit increase

Maha (2015) conducted a study the impact of employee engagement on job performance and organisational commitment in the Egyptian Banking Sector. The study sought to identify the key drivers of employee engagement within the Egyptian context. The study adopted a research survey design, also employed Regression analysis. The population of two hundred and forty five (245), and sample size of two hundred (200) was used. Data were analyzed using Pearson correlation matrix. The finding shows that leadership and organisational justice were the most significant drivers of employee engagement. The study concluded that employee engagement had significant impact on job performance, but less impact on organisational commitment.

Yuen and Thai (2016) conducted a study on the relationship between supply chain integration and operational performances: A study of priorities and synergies. The study was carried out at China. The study sought to examine the effect of internal and external SCI on operational performance. The sample of one hundred and seventy two was used. The study adopted regression method. The finding shows that firm performances can be maximized from establishing closer relationships with supply chain partners. The study concludes that performance can be realized from synergies that are generated from performing similar internal and external SCI activates.

Mohsen, Jamshid, Matin and Zahra (2017) conducted a study on the mediation role of supply chain integration in relationship between employee commitments with organisational performance. The study was carried out at Qazvin province. The study sought to investigate the impact of supply chain integration on organisation's commitment and performance. The study adopted multiple regression analysis. The finding shows that employee commitment directly influences on supplier, customer, internal integration, and organisation's performance. The study concluded that, internal integration positively influences on supplier



and customer integration, whereas affects organisation's performance. The study recommended that supply chain managers to understand the impact of employee commitment on integration and the organisation's performance in order to improve this relationship and performance.

Adeleke, Onodugo, Akintimehin & Ike (2019) examined that effect of forward integration strategy on organizational growth: evidence from selected insurance and banking organizations in Nigeria. The purpose of the study was to examine the nature of the relationship between direct marketing and the firm's profitability. The study utilized a descriptive survey design, and sample of seven hundred and fifty three was used. The finding shows that there was a significant positive relationship between direct marketing activities and profit growth in the selected organizations. The study concluded that there were a limited number of strategic integration moves, especially vertical integration among most of the Nigerian financial organizations. The Nigerian banking and insurance organizations are therefore advised to enhance the personalization of their service to ensure that the existing customers remain locked in and new customers continue to be attracted.

Egrah, Omari and Ngacho (2019) carried out an empirical evaluation of the role of horizontal and vertical integration on performance of public organizations Kenya. The study sought to evaluate the role of horizontal and vertical integration on performance of public organizations. The study adopted descriptive survey design. The population consists of four hundred, and sample size of two hundred was used. The data were analyzed using descriptive statistics and the reliability of the research. The findings showed that horizontal integration improved performance.

Fernando and Wulansari (2021) carried out a study on perceived understanding of supply chain integration, communication and teamwork competency in the global manufacturing companies in Indonesia. The objective was to examine the relationship between PUSCI and PUSCR to improve the communication and teamwork competency of a supply chain manager. The study employed survey questionnaire. The sample of 413 was used. The finding shows that PUSCR significantly and positively affected the communication and teamwork competency of supply chain manager and knowledge, task skill and proficiency as mediating variables improved communication and teamwork competency.

Don-Baridam & Obulor (2022) conducted a study on workplace civility and employee commitment in Nigeria oil and gas industry. The objectives of the study were to examine the relationship between workplace civility and employee commitment measures such as affective, continuance and normative commitment in the oil and gas firms. The study adopted cross-sectional survey design. A sample of three hundred and forty three was used. Data were analysed using Spearman correlation coefficient. The finding showed that workplace civility contributes significantly to measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry. The study concluded that workplace civility is a significant predictor of employee commitment as it enhances measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry. The study recommends that managers in the target oil and gas organizations create a more warm and supportive work atmosphere where workers get along easily and are able to relate cordially and politely with each other as such an environment fosters quality relationships and exchanges which allow for friendships and collaboration which also influence the workers level of enthusiasm, interest and commitment in work.

Alnaqbi, Dweiri and Amin (2022) conducted a study on the impact of horizontal mergers on supply chain performance: the case of the upstream oil and gas industry. The objective was to evaluate the extent to which economies of scope and economies of scale favorably impact potential mergers. The study adopted descriptive survey method. The finding shows that when only economies of scale are performed, the COSC fails to achieve the targeted cost/barrel (cost/bbl) after the merger. The study concluded that, joint performance of economies of scale and scope in reducing shared services costs at different supply chain echelons leads to a substantial synergy gain.

Yang, Ling & Jing (2022) conducted a study on vertical or horizontal: optimal integration strategy under separation of ownership and control in China. The study sought to investigate the optimal integration strategy in different control distribution and discuss how external market influences the best strategic choice in China. The study adopted research design. The finding shows that unintegrated strategy works best, if the level of control-ownership disparity is extremely high. The study concluded that the profits distribution in supply chain is dependent on the market structure. The study recommended that, substitute market is more beneficial for upstream firms than complementary market.

Mohammed (2022) conducted a study on the effect of strategic commitment and supply chain collaboration on operational and innovation performance in Bangladesh. The objective was to explore the interaction between strategic commitment (SC), supply chain collaboration (SCC), operational performance (OP), and innovation performance (IP). The study adopted questionnaire survey. The population was two hundred and four. Findings showed that SC has a substantial direct influence on SCC, and direct and indirect influence on OP and IP. The study concluded that SCC has a direct impact on IP and an indirect effect on OP. the study concluded that IP has a substantial direct influence on OP. The study recommended that it would be of help to managers in building relations with their partners to enhance OP and IP, and in ensuring supply chain effectiveness.

Aslam, Waseem, Muneeb, Ali, Roubaud and Oksana (2023) conducted a study on customer integration in the supply chain: the role of market orientation and supply chain strategy in the age of digital revolution. The study was conducted at Pakistan. The study sought to investigate the mechanisms through which customer integration is developed and affects supply chain performance. The study employed structural equation method. The finding shows that marketing-supply chain alignment does not moderate the relationship between supply chain strategy and customer integration.

Ibini & Okonta (2023) conducted a study on the effects of employee voice on organisational commitment of oil and gas companies in Lagos State Nigeria. The objectives are to determine the effect of workplace meetings, employee participation in decision making, and supervisor-subordinate mutual relationships on organisational commitment of oil and gas companies in Lagos State Nigeria. The study employed cross sectional survey research design. The population of the study consists of 1724. The sample size of 313 was used. A test-retest method was used. Data were analyzed using descriptive statistics, and multiple regression method. The findings showed that workplace meetings, employee participation in decision making and supervisor-subordinate mutual relationship have positive effect on organizational commitment. The study concluded that employee voice significantly predict organizational commitment of oil and gas companies in Lagos State Nigeria. The study recommended that companies should encourage a culture where employees feel comfortable expressing their opinions and ideas.

Kadiane, Zhang and Shi (2023) conducted a study on the impact of supply chain management practices on firm performance in developing economics: an empirical study from Cote

D'Ivoire Agrifood Companies. The purpose sought to examine the relationship among these practices, the local business environment and the firm performance. Data was analyzed using multiple linear regressions. The finding shows that there are three best SCMPs commonly implemented by targeted firms, such as customer relationship, supplier collaboration and Information sharing. The study concluded that with rigorous SCMPs implementation, sample firms improve financial and market share performance.

### 2.3 Empirical Table

S/N	Authors	Year	Place/Location	Topics	Objectives	Methods/Analysis	Findings
1.	Hashem, Hui, Noor, Nurulhud, & Che	2013	Malaysia	Impact of supply chain management on the relationship between enterprise resource planning system and organizational performance	Enterprise resource planning adoption and its influence on organizational performance through supply chain management	Structural equation model	The finding shows that, the existence of positive effects of enterprise resource planning on the supply chain which ultimately results in improved overall performance of the studied organizations
2.	Nyangwes o	2013	Kenya	Supply chain management and organizational performance in the sugar industry in Kenya	Effect of supply chain management practices on organizational performance of Sugar firms in Kenya.	Descriptive research design	The findings showed that supply chain management practices had a positive effect on various parameters of performance.
3.	Hashem, Hui, Noor, Nurulhud, & Che	2013	Malaysia	impact of supply chain management on the relationship between enterprise resource planning system and organizational performance	the enterprise resource planning adoption and its influence on organizational performance through supply chain management	Structural equation	The finding shows that, the existence of positive effects of enterprise resource planning on the supply chain which ultimately results in improved overall performance of the studied organizations
4.	Amuhindo, Zhou, and Mzuza	2014	Uganda	Impact of logistics outsourcing strategy in oil and gas industry	Companies outsourced their logistics activities to restructure their distribution networks and achieve competitive advantage.	Qualitative method	Findings show that there are many benefits resulting from using logistics outsourcing strategy in the oil and gas industry and in the same way, challenges are faced by both oil and gas companies and logistics service providers in executing business contracts.

### Summary of Related Reviewed Empirical Table Continued

5.	Köhler	2014	Europe	Bargaining in vertical relationships and suppliers' R&D profitability in Europe	The relationship between R&D and firm profitability on the impact of horizontal market structure	descriptive survey design	The finding shows that the importance of taking a supplier's bargaining power into account when estimating R&D profitability
6.	Abdallah, Obeidat, and Aqqad	2014	Jordan	impact of supply chain management practices on supply chain performance in Jordan: The moderating effect of competitive intensity	effect of strategic orientation and innovation on organizational performance, and innovation acted as a mediator between strategic orientation and organizational performance	Structural Equation Modelling (SEM)	The finding showed that strategic orientation had a significant effect on innovation but not on organizational performance
7.	Mapira, Chikozho, Mkandatsa ma, Magagada, Mugogo and Vengesayi	2014	Zimbabwe	Impact of downsizing on employee commitment: A Case Study of Surface and Mashwede Refinery	The impact of downsizing on employee commitment in cooking oil manufacturing companies in Zimbabwe	Case study approach	The finding shows that the task of managing survivors syndrome and employee commitment would not be difficult if the leadership recognized that survivors have special needs, provides the emotional support they deserve to ensure continuous and honest communication
8.	Amu and Ozuru	2014	Nigeria	Supply chain integration in organizations: an empirical investigation of the Nigeria Oil and Gas Industry	Conceptual model of supply chain integration and operational performance where integration of its supply chain network helps to keep closer look at the current performance to ensure flexibility in business operations	Descriptive survey design	The finding shows that the three dimensions of supply chain integration and a moderator
9.	Barrera-Rey, R.	2015	Oxford	The effects of vertical integration on oil company performance	The average degree of integration of the industry does not exhibit a specific trend over time	survey design	The finding shows that vertical integration reduces the level of efficiency of companies while it also reduces its variability

### Summary of Related Reviewed Empirical Table Continued

10.	Alfalla-Luque, Marin-Garcia and Medina-López	2015	Sevilla	An analysis of the direct and mediated effects of employee commitment and supply chain integration on organisational performance	The relationship between employee commitment and supply chain integration dimensions to explain several performance measures (flexibility, delivery, quality, inventory and customer satisfaction)	Structural Equation Models	The findings showed that the relationship between employee commitment and operational performance is fully mediated by supply chain integration
11.	Ebrahimi	2015	Sheffields	Examining the impact of supply chain integration on organization structure and operational performance in oil and gas supply chain	The relationship between organization structure (OS) (centralization, formalization and hierarchical relationship) and operational performance	Quantitative approach; statistical techniques	The finding showed that centralization, formalization, and hierarchical relationship negatively impact operational performance of oil and gas supply chains, and that SCI dimensions positively affect operational performance
12.	Photis, Andeou and Louca	2015	Cyprus	The impact of vertical integration on inventory turnover and operating performance	How vertical integration may influence inventory turnover and firm operating performance	regression method	The finding shows that vertical integration has a positive effect on RMI and FGI turnover but no significant effect on WIPI turnover
13.	Maha	2015	Egypt	The impact of employee engagement on job performance and organisational commitment in the Egyptian Banking Sector	The key drivers of employee engagement within the Egyptian context	Pearson correlation matrix; research survey design, and Regression analysis	The finding shows that leadership and organisational justice were the most significant drivers of employee engagement
14.	Misund and McMillan	2016	Stirlin	vertical integration and value-relevance: Empirical evidence from oil and gas producers	How degree of vertical integration can lead to structural changes in the relationship between accounting figures and market valuation	Descriptive survey design	The finding shows that, the presence of supplementary estimates for oil and gas reserves values mitigate the potential problem associated with the presence of intangible assets experienced in other industries.

### Summary of Related Reviewed Empirical Table Continued

15.	Mark, Andreas, Lars and Tom	2016	Germany	Strategic decisions regarding the vertical integration of human resource organizations: Evidence for an integrated HR model for the financial services and non-financial services industry	To gain insights into the current status of HR outsourcing and understand the differences between the financial services and the non-financial services industry.	Ordinary Least Squares (OLS)-regression	The finding shows that, there is a significant negative interrelationship between the relative size of the HR department compared to company size and vertical integration
16.	Cheng	2016	Malaysia	The influence of supply chain management (SCM) practices on organizational performance: knowledge management processes as mediator Malaysia	The relationship between supply chain management practices and organizational performance, knowledge management processes, and to examine whether knowledge management processes mediates the relationship between supply chain management practices and organizational performance	Quantitative method	The finding showed that SCM practices of information sharing, quality of information sharing and lean practices were positively related to organizational financial and non financial performance.
17.	Li and Ragu-Nathan	2016	China	Impact of supply chain management practices on competitive advantage and organizational performance	The relationship between strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement.	descriptive design method	The finding shows that higher levels of SCM practice can lead to enhanced competitive advantage and improved organizational performance
18.	Yuen and Thai	2016	China	The relationship between supply chain integration and operational performances: A study of priorities and synergies	The effect of internal and external SCI on operational performance.	Regression method	The finding shows that firm performances can be maximized from establishing closer relationships with supply chain partners

### Summary of Related Reviewed Empirical Table Continued

19.	Charles	2016		Outsourcing (logistics) services and supply chain efficiency - A critical review of outsourcing function in Mukwano group of companies	The various approaches and terminologies used by organizations and explores possible options on adoption of such approaches.	Self-administration	The finding shows the current market is then analyzed and discussed regarding the impact of outsourcing decisions on organizations. The study concludes by projecting the likely future trends in the field of outsourcing in general and makes recommendations and conclusions on how organisations can move forward with the outsourcing function
20.	Khan	2017	Pakistan	Effects of human resource management practices on organizational performance - An empirical study of Oil and Gas Industry	The effects of human resource management practices on organizational performance in Oil and Gas Industry	Regression	The finding provide an insight to management to use these practices as strategic tool for superior performance, and add to the limited empirical knowledge that exists in Pakistani context
21.	Emah, Mehraz and Mridula	2017	Nigeria	Third party logistics outsourcing: an exploratory study of the oil and gas industry	The feasibility of logistics outsourcing by the international oil and gas companies in the emerging business environment of Nigeria	Exploratory, multicase, qualitative approach	The findings show those vendors' capabilities, host community issues, joint venture influence, and employees' reactions challenge international oil companies' logistics outsourcing implementation while relationship management, contract management, and change management skills enable them handle these challenges
22.	Al-Shboul, Barber, Garza-Yeyes, and Kumar	2017		The effect of supply chain management practices on supply chain and manufacturing firms' performance	The causal relationship between SCP and MFP	Linear regression, ANOVA and Pearson correlation	The finding shows that, the effect of Partnering members as one of the major related to SCM over operational performance. Initially the questionnaire was checked for validity and reliability.



### Summary of Related Reviewed Empirical Table Continued

23.	Wenwen, Stephen, Zhiqiang and Xiande	2017	China	The role of outsourcing management process in improving the effectiveness of logistics outsourcing	The effects of the outsourcing management process (OMP), which is an operational mechanism, on the following two types of logistics service outsourcing: basic outsourcing and advanced outsourcing	Survey method	OMP affects the effectiveness of the two types of logistics outsourcing differently
24.	Mohsen, Jamshid, Matin and Zahra	2017	Qazvin province	The mediation role of supply chain integration in relationship between employee commitments with organisational performance	The impact of supply chain integration on organisation's commitment and performance	Multiple regression	The finding shows that employee commitment directly influences on supplier, customer, internal integration, and organisation's performance
25.	Gandhi, Shaikh and Sheorey	2017	India	Impact of supply chain management practices on firm performance: Empirical evidence from a developing country	Adoption and implementation of supply chain management practices (SCMPs) on supply chain performance (SCP) and firm performance (FP) in the organized retail industry in a developing country	Descriptive method	The finding shows that customer relationship management and supplier relationship management are reported as the most important SCMPs, which had the maximum impact on the FP in the organized retailing context in India
26.	Nwachukwu, Chládková and Olatunji	2018	Nigeria	The relationship between employee commitment to strategy implementation and employee satisfaction.	The relationship between employee commitment to strategy implementation and employee satisfaction	Descriptive quantitative research approach; regression analysis, Pearson correlation and ANOVA techniques.	The findings show that employee commitment to strategy implementation has a positive and significant relationship with employee satisfaction
27.	Ayalew	2018	Kilinto	The effect of supply chain management practices on operational performances: The Case of HEINEKEN Kilinto Brewery	The strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and internal lean practices and tests the relationships between supply chain management practices and operational performance	Descriptive and explanatory research designs; Pearson correlation method and ordinary least square multiple regressions (OLS) method	The finding shows that supply chain management has significant effect on operational performance of HBSC Kilinto Factory

### Summary of Related Reviewed Empirical Table Continued

28.	Khalil, Khalil & Khan	2019	Punjab, Pakistan	The effect of supply chain management practices on organizational performance with the mediating role of innovation in SMEs	The relationship between supply chain management practices and organizational performance with the mediating role of innovation	PLS-SEM	Strategic partnership with supplier and level of information sharing had no influence on organizational performance
29.	Putri, Darwanto, Hartono and Waluyati	2019	Indonesia	The effect of supply chain practices on competitive advantages and supply chain performance in small household Agroindustry: Direct and Indirect Effect	The effect of supply chain practices on the competitive advantage and supply chain performance (SCP) in small household agro-industry	Partial Least Square Method	The finding shows that there is a positive relationship between supply chain practices, competitive advantage and supply chain performance
30.	Ogbu	2019	Cross Rivers, Nigeria	Talent management and workers' commitment to oil & gas firms in Nigeria	The relationship between talent management and workers' commitment to oil and gas firms in Nigeria	cross-sectional survey; Pearson Product Moment Correlation Coefficient(r s)	The finding shows that talent management has a positive significant relationship with workers commitment
31.	Muhamma d	2019	Pakistan	Impact of employee commitment on supply chain integration and operational performance: in context to manufacturing firms	The role of a committed employee on supply chain integration, and understand how both the elements work together to improve the overall operational performance of an organization	Qualitative and quantitative techniques, Microsoft Excel, SPSS and Amos Graphics	The finding shows that operational performance basically is about the effective and efficient utilization of resources to get maximum advantage
32.	Manuela	2019	China	The impact of supply chain management processes on competitive advantage and organizational performance.	The effect of supplier relationship management to competitive advantage and organisational performance, to determine the impact of manufacturing flow management on competitive advantage and organisational performance, to assess the impact of product development and commercialization on competitive advantage and organisational performance	Statistical Package for the Social Sciences (SPSS), Pearson correlation coefficient	The finding shows that higher levels of supply chain management practice can lead to enhanced competitive advantage and improved organizational performance.

### Summary of Related Reviewed Empirical Table Continued

33.	Waqas	2019	Bahria Karachi	The impact of supply chain management practices on organizational performance of textile industry,	The relationship between strategic supplier partnership and organizational performance	Quantitative approach, explanatory type, correlational design, convenience sampling and multiple linear regression method	The finding shows that strategic supplier partnership; customer relationship, level of information sharing and quality information sharing was all significantly affecting the organizational performance except postponement
34.	Egrah, Omari and Ngacho	2019	Kenya	empirical evaluation of the role of horizontal and vertical integration on performance of public organizations Kenya	The role of horizontal and vertical integration on performance of public organizations	descriptive survey design	The findings showed that horizontal integration improved performance.
35.	Adeleke, Onodugo, Akintimehin & Ike	2019	Nigeria	Effect of forward integration strategy on organizational growth: evidence from selected insurance and banking organizations in Nigeria	The nature of the relationship between direct marketing and the firm's profitability	Descriptive survey design	The finding shows that there was a significant positive relationship between direct marketing activities and profit growth in the selected organizations
36.	Arokodare, Asikhia and Makinde	2020	Lagos State, Nigeria	Information technology capability and performance of selected oil and gas marketing companies in Lagos State, Nigeria: The Moderating Role of Organizational Culture	The relationship between information technology capability and performance of oil and gas marketing companies in Lagos State, Nigeria	survey research design	The finding showed that there is a significant and positive relationship between information technology capability and market share and also organisational culture significantly moderate the relationship between information technology capability and market share of oil and gas marketing companies in Lagos State, Nigeria
37.	Sung, Hong-Hee & Taewon	2020	South Korean	Logistics integration in the supply chain: a resource dependence theory perspective	The relationship between logistics integration and supply chain performance	five-point Likert	There is positive impacts of trust, satisfaction, and commitment on logistics integration between manufacturing firms and logistics service providers that enhances logistics service capabilities of the

### Summary of Related Reviewed Empirical Table Continued

38.	Suharno, Bayu and Hima	2020	China	The influence of outsourcing, organizational commitments and employee satisfaction on outsourcing employee performance at the ministry of public work and public housing	Outsourcing, organizational commitment and employee satisfaction on the performance of outsourced employees of ministry of public works and public housing	Quantitative method, by multiple linear regression analysis d	The finding showed that there were significant and negative influence between outsourcing and employee performance
39.	Oluwakoya , Ojo and Ayantoyin bo	2020	Lagos State, Nigeria	Extent of supply chain integration among selected manufacturing firms in Lagos Metropolis, Nigeria	The relationship between manufacturing firms and their supply chain partners	mixed research design structure	The finding shows that a collaborative and cohesive pattern of supply chain integration among manufacturing firms in Lagos metropolis
40.	E-Vahdati, Mohsen and Khosro	2020	Iran	Impact of supply chain management practices on supply chain performance in Iranian oil and gas companies	influence of supply chain management practices on the performance of the supply chain in oil and gas companies in Iran	quantitative survey-based research	The finding shows that supply chain unity, information sharing, and partner relationship management, have a significant positive impact on supply chain performance
41.	Mwanzia	2020	Kenya	Critical success factors and organizational performance of indigenous third party logistic businesses in transport sector	<i>How</i> how third party logistics industry has been constantly changing due to global industry consolidation, technology integration, industry specialization, and industry alliance networks	Descriptive research design an exploratory factor analysis, multi-collinerity test, inferential statistical analyses and linear regression	Finding shows that there positive impact on operations cost, innovation, resilience, quality service and relationship management
42.	Mpuon, Eyo and Kajang	2020	Calabar, Nigeria	Supply chain planning and business performance of Nigeria oil and gas industry	The relationship between supply chain planning and business performance of Nigeria oil and gas industry	Pearson's product moment correlation	The finding shows that supply chain planning has a significant positive correlation with business performance dimensions such as market share, sales growth and demand forecasting in Nigerian oil and gas industry

### Summary of Related Reviewed Empirical Table Continued

43.	Dorđević, Ivanović, Lepojević, and Milanović	2020	Serbia	The impact of employees' commitment on organizational performances	The types of organizational commitment that have the greatest impact on the performance of organizations in Serbia and to propose measures to HR managers whose implementation can improve the operations of domestic organizations	Correlation and regression analysis methods	The finding shows that all types of commitment have a major impact on the performance of organizations
44.	Emeka and Igah	2021	Port Harcourt, Rivers State, Nigeria	Employee commitment and resource utilization in oil and gas companies in Port Harcourt, Rivers State, Nigeria	The relationship between continuous commitment, normative commitment, and affective commitment and resource utilization in oil and gas companies in Port Harcourt, Rivers State, Nigeria	Correlational survey design; Pearson's Product Moment Correlation (R)	The finding shows that significant relationship existed between affective commitment and time minimization; continuous commitment and cost minimization; normative commitment and waste minimization
45.	Fernando and Wulansari	2021	Indonesia	Perceived understanding of supply chain integration, communication and teamwork competency in the global manufacturing companies	relationship between PUSCI and PUSCR to improve the communication and teamwork competency of a supply chain manager	Survey questionnaire	The finding shows that PUSCR significantly and positively affected the communication and teamwork competency of supply chain manager and knowledge, task skill and proficiency as mediating variables improved communication and teamwork competency
46.	Muoghalu & Tantua	2021	Rivers State	Workplace ethics and employee commitment of oil and gas companies	the relationship between workplace ethics and employee commitment of oil and gas companies in Rivers State	cross-sectional survey; descriptive and inferential statistical techniques; Spearman's Rank Order Correlation Statistics	The finding shows that there is a significant relationship between workplace ethics and workplace ethics and employee commitment of oil and gas companies

### Summary of Related Reviewed Empirical Table Continued

47.	Murray and Holmes	2021	Canada	Impacts of employee empowerment and organizational commitment on workforce sustainability	The influence of empowerment on organizational commitment and organizational commitments influence on turnover intention	structural equation model, and census approach	The finding showed that the development of meaning through employee empowerment, particularly when the ideals and standards between workers and their organization are aligned, creates a strong emotional commitment which appears to strongly reduce an employee's intention to leave.
48.	Ohue and Akhator	2021	South-south, Nigeria	Supply chain management and performance of brewing firms in South-South, Nigeria	The extent of relationship between agile supply chain and organizational innovation	Survey research design; the linear regression analysis	The finding shows that a strong significant positive relationship exists between agile supply chain and organizational innovation
49.	Azmi and Ika	2021	Yogyakarta City	Effect of supply chain management on competitive advantage and organizational performance. Studies on the Batik Industry in Yogyakarta City	The relationship between SCM, and competitive advantage of the organizational performance	Structural Equating Modeling; SmartPLS3	The finding shows that supply chain management has a significant positive effect on competitive advantage and company performance
50.	Oroka, Don-Baridam and Obulor	2022	Nigeria	Workplace civility and employee commitment in oil and gas industry	organizational trustworthiness impacts on employee commitment measures such as affective, continuance and normative commitment in the oil and gas firms	cross-sectional survey design; Cronbach alpha reliability; mean and standard deviation, Spearman correlation.	The finding showed that workplace civility contributes significantly to measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry
51.	Utari, Agung and Ari	2022	Indonesia	The impact of supply chain management and risk management on a state oil and gas industry with competitive advantage	The influence of supply chain management, risk management, competitive advantage and corporate	Quantitative approach; Structural Equation Modeling (SEM)	The finding shows that supply chain management, risk management and competitive advantage have a significant influence on corporate performance and competitive advantage has a significant influence in mediating supply chain management and risk management on corporate performance.

### Summary of Related Reviewed Empirical Table Continued

52.	Kitaka and Muli	2022	Nairobi city	Influence of supply chain management practices on the performance of oil supplying companies	The influence of customer's service management practice on performance of oil supplying companies, to examine the influence of demand forecasting management practice on the performance of oil supplying companies and to assess the influence of information communication technology management practice on performance of oil supplying companies in Nairobi city county	Survey research design	The finding shows that, oil supplying industry in Kenya is currently facing challenges ranging from uncontrollable high fuels costs as a result of high cost of importation, transportation and storage of the oil products which has led to low level of customer satisfaction, hence low performance of the oil supplying industries
53.	Emumena, & Hamilton	2022	South-South, Nigeria	Market innovation capability and performance of indigenous oil and gas companies	The relationship between market innovation capability and performance of indigenous oil and gas companies	Cross-sectional research survey design; Spearman's Rank Order Correlation	The finding shows that market innovation enhances the ventures into new markets and support better market shares
54.	Ejikeme and Onuoha	2022	Rivers State	Workplace safety and employee commitment of oil and gas firms	The relationship between affective commitment, and management safety practices and continuance commitment	Spearman Rank Order Correlation Coefficient was employed	The finding showed that employees at oil and gas companies in Rivers State felt more committed to their jobs when they felt safe on the job, both in the short and long terms
55.	Eshnaf & Alawi	2022	Libya	The effect of supply chain management practices on corporate performance in Libya oil and gas industry	The relationship between supply chain management practices (SCMPs) on the performance of the Libyan oil and gas sector	Statistics and structural modeling; Smart PLS	The findings show that supply chain management practices are greatly and positively linked to the performance of Libyan oil companies
56.	Oboma	2022	Rivers State	Human resources management practice and employee commitment in oil and gas servicing firms in Rivers State	The extent of relationship between recruitment, training, and compensation and employee commitment in oil and gas servicing firms in Rivers State	Cross-sectional survey; Statistical Package for Social Sciences, descriptive statistics	The finding shows that organizational commitment in oil and gas service companies in Rivers State was significantly influenced by human resource management techniques

### Summary of Related Reviewed Empirical Table Continued

57.	Nurain, & Adesunkanmi	2022	Southwestern Nigeria	Logistics outsourcing practices among manufacturing companies in Southwestern Nigeria. The study evaluated the extent of logistics outsourcing practices among manufacturing companies in Southwestern Nigeria	The extent of logistics outsourcing practices among manufacturing companies in Southwestern Nigeria. This	Descriptive survey design	Logistics outsourcing practices such as transportation management, storage management, and facility/asset management were averagely high among manufacturing firms in Southwestern Nigeria
58.	Lei	2022	China	Strategic outsourcing's role in driving economic value by examining mediating role of organizational capabilities and sustainable innovation	The relationship between strategic HR outsourcing and organizational sustainability	Smart-PLS software and a structural equation modeling (SEM) technique	The finding shows that, organizational capabilities and HR proficiency were discovered to mediate the association between strategic HR outsourcing and organizational sustainability
59.	Karimi & Rafiee	2022	Iran	Impact of supply chain management practices on organizational performance through competitive priorities (Case Study: Iran Pumps Company).	relationships among SCM practices, competitive advantage and organizational performance	Pre-pilot Study, and Pilot Study.	The finding shows that SCM practices produce competitive advantage to the organization in the first place, and competitive advantage will, in turn, lead to improved organizational performance
60.	Mwende and Wambui	2022	Nairobi City County, Kenya	Effect of marketing outsourcing on organizational performance of automotive assembling firms in Nairobi City County, Kenya	The effect of marketing outsourcing on organizational performance of automotive assembling firms in Nairobi City County, Kenya	Descriptive survey design; multiple regression model inferential statistics	Customer relations and follow-up are conducted on a regular basis through different public media outlets in the automobile assembling firms
61.	Adesunkanmi, & Nurain	2022	Southwestern Nigeria	Empirical study of logistics outsourcing practices and firm productivity of selected manufacturing companies in Nigeria	Effect of efficiency of logistics outsourcing on productivity of the selected manufacturing companies in Southwestern, Nigeria	Descriptive survey design	Logistics outsourcing had significant effect on productivity of manufacturing companies in the Southwestern Nigeria



### Summary of Related Reviewed Empirical Table Continued

62.	Mohamed, Yasser, Abu and Muhammad	2022	Egypt	The relationship between organizational culture and organizational commitment in the Egyptian Hotels	The relationship between dimensions of stability, innovation, performance orientations, emphasis on rewards, social responsibility and supportiveness	Multiple regression method	The finding shows that, there is a statistically significant relationship between relationship between dimensions of stability, innovation, performance orientations, emphasis on rewards, social responsibility and supportiveness.
63.	Alrwashdeh, Adaileh & Ali	2022	Jordan	The impact of outsourcing on operational performance: A field study in industrial companies	Outsourcing positively impacts operational performance, outsourcing positively impacts organizational structure	Questionnaire method	Outsourcing is a strategic decision, the outsourcing decision should be linked to strategic planning, the study concluded that the large, medium and small companies provides a clearer view of the unique organizational and cultural characteristics for each company type
64.	Jin, Lulu, Xufan, Chen and Tian	2022	China	Technological configuration capability, strategic flexibility, and organizational performance in Chinese High-Tech Organizations	Moderating effect of corporate technology configuration capability on the relationship between strategic flexibility and organizational performance	Survey design	Firms with considerable technological configuration capability are more likely to search beyond the domain of their neighborhood knowledge and embark on a broader level of exploration that transcends existing technological and organizational boundaries.
65.	Don-Baridam & Obulor	2022	Nigeria	Workplace civility and employee commitment in Nigeria oil and gas industry	The relationship between workplace civility and employee commitment measures such as affective, continuance and normative commitment in the oil and gas firms	Cross-sectional survey design; Spearman correlation coefficient	The finding showed that workplace civility contributes significantly to measures such as affective, continuance and normative commitment in the Nigerian oil and gas industry

### Summary of Related Reviewed Empirical Table Continued

66.	Yang, Ling & Jing	2022	China	Vertical or horizontal: optimal integration strategy under separation of ownership and control	The optimal integration strategy in different control distribution and discuss how external market influences the best strategic choice in China	Research design	The finding shows that unintegrated strategy works best, if the level of control-ownership disparity is extremely high
67.	Karimi & Rafiee	2022	Iran	Analyzing the impact of supply chain management practices on organizational performance through competitive priorities (Case Study: Iran Pumps Company)	The relationships among SCM practices, competitive advantage and organizational performance	Pre-pilot S, and Pilot Study	The finding shows that SCM practices produce competitive advantage to the organization in the first place, and competitive advantage will, in turn, lead to improved organizational performance
68.	Onuoha	2022	Owerri	Effect of outsourcing on organizational performance and employee commitment in selected banks in Owerri	Examine how capacity building through constant training, build more of affective commitment, improve on leadership quality and style and improve general workplace environment to retain commitment	Descriptive survey research design	The finding showed that outsourcing positively affected capacity building through constant training
69.	Mohammed	2022	Bangladesh	The effect of strategic commitment and supply chain collaboration on operational and innovation performance	The interaction between strategic commitment (SC), supply chain collaboration (SCC), operational performance (OP), and innovation performance (IP)	Questionnaire survey	showed that SC has a substantial direct influence on SCC, and direct and indirect influence on OP and IP
70.	Ibini & Okonta	2023	Lagos State Nigeria	Effects of employee voice on organisational commitment of oil and gas companies	The effect of workplace meetings, employee participation in decision making, and supervisor-subordinate mutual relationships on organisational commitment of oil and gas companies in Lagos State Nigeria	Cross sectional survey research design; A test-retest method was used; descriptive statistics, and multiple regression	The findings showed that workplace meetings, employee participation in decision making and supervisor-subordinate mutual relationship have positive effect on organizational commitment

### Summary of Related Reviewed Empirical Table Continued

71.	Kadiane, Zhang and Shi	2023	Cote D'Ivoire	Impact of supply chain management practices on firm performance in developing economics: an empirical study from Cote D'Ivoire Agrifood Companies	The relationship among these practices, the local business environment and the firm performance	Multiple linear regressions	The finding shows that there are three best SCMPs commonly implemented by targeted firms, such as customer relationship, supplier collaboration and Information sharing
72.	Hao, Amoako, Ewudzie, Danso and Dawud	2023	China	Assessment of the impact of management commitment and supply chain integration on SMEs' innovation performance: Moderation role of government support	The effect of management commitment, supply chain integration, and government support on small and medium enterprises (SMEs) innovation performance in China	Cross-section method, Statistical Package for Social Sciences	The findings showed that management commitment influenced internal, customer, and supplier integration and SMEs' innovation performance
73.	Masoud and Basahe	2023	Saudi Arabia	The effects of digital transformation on firm performance: the role of customer experience and IT innovation	The effect of digital transformation on firm performance by classifying the capabilities required to realize digital transformation, customer experience, and IT innovation	Structured questionnaire	The finding shows that digital transformation, customer experience, and IT innovation positively impact a firm's performance, with customer experience exhibiting the strongest effect
74.	Okharenia & Adekunle	2023	Niger Delta region of Nigeria	Technological environment and sustainable performance of oil and gas firms: a structural equation modelling approach	Impact of technology infrastructure on the sustainable performance of oil and gas firms	Cross-sectional survey research design	The finding shows technology infrastructure has a positive but insignificant impact on the sustainable performance of oil and gas firms
75.	Anggita and Winarno	2023		Exploring the mediating role of organizational commitment between organizational culture and employee performance: evidence from public sector organization	The relationship between organizational culture and employee performance at the Regional Inspectorate of Sumedang Regency	PLS-SEM	The finding showed that organizational culture significantly positively impacted organizational commitment and employee performance

### Summary of Related Reviewed Empirical Table Continued

76.	Sari, Hady and Elfiswandi	2023	West sumatera	employee commitment model: analysis of the work environment and digital literacy on organizational performance to introduce the potential of west sumatera tourism objects (case study on west Sumatera tourism employees)	The direct influence of the work environment and digital literacy on employee commitment.	Partial Least Square (PLS) analysis method with SmartPLS Application	The finding showed that the work environment and digital literacy had a direct impact on employee commitment and the influence of the work environment construct and digital literacy on organizational performance
77.	Jain, Choudhary , Panda, Jain and Dey	2023	India	Impact of institutional pressures and dynamic capabilities on sustainability performance of oil and gas sector	Institutional pressures and dynamic capabilities on the overall sustainability performance of OG industry.	Survey method; partial least squares structural equation modeling	The finding shows that both institutional pressures and firm's dynamic capabilities have significant positive impact on its economic and environmental performances in OG sector in India
78.	Hifza and Kalaiselvi	2023		An empirical study on employee commitment and job performance of private sector employees.	The effect of an employee commitment on job performance	Descriptive survey	The finding shows that the success and failure depends on employee commitment
79.	Abate	2023	Bahir Dar, Ethiopia	The effects of supplier relationship management practices on organizational performance and competitive advantage of large manufacturing companies	Supplier relationship management practices has positive effect on organizational performance and competitive advantage	Explanatory research design	The finding shows that supplier relationship management practices lead to enhancing organizational performance and competitive advantage
80.	Khwanrued ee and Peevara	2023	Thailand	Tourism outsourcing relationship performance	The relationship between outsourcing relationship commitment and outsourcing relationship performance.	multiple regression analysis	The finding shows that outsourcing relationship intensity such as inter-organization trust, communication quality, and outsourcing relationship commitment has a positive significant impact on outsourcing relationship performance.

### Summary of Related Reviewed Empirical Table Continued

81.	Ihunwo and Ikegwuru	2023	Rivers State	Logistics outsourcing and organizational performance of oil and gas companies in Rivers State	The relationship between logistics outsourcing and organizational performance of oil and gas firms in Rivers	Descriptive research design; the Pearson's Product Moment Correlation technique	The finding showed that, operational outsourcing services positively and significantly correlated with organization performance, and manufacturing outsourcing positively and significantly correlated with organization performance
82.	Lee and Ha	2023	China	Influence of the relationship between logistics outsourcing partners on logistics performance: focusing on logistics management in crisis situations	The relationships between supply chain parties and psychological factors on logistics outsourcing	SPSS and AMOS model	The finding shows that, commitment level had a positive influence on the satisfaction level but did not have a significant influence on logistics performance
83.	Umuhire & Irechukwu	2023	Rwanda	Logistics outsourcing services and performance of firms in the tele-communications sector: A Case of Airtel Rwanda Ltd	The effect of financial systems, network monitoring tools services, and supplier network responsiveness outsourcing on organizational performance of Airtel Rwanda Plc the study provides useful data to management of Airtel	Pearson's correlation method	The findings showed that the supply chain operating system responds rapidly to changes in product volume demanded by customers

**Source: Researchers Field Survey, 2023**

## 2.4 Gap in Empirical Review

The gaps identified by the study was in the objective of the study, study, geographical location and time in which the reviewed studies were carried out. These gaps were observed from the reviewed studies which shows that some studies done were carried outside the relationship between supply chain management practices and organisational performance of Nigerian oil and gas industry using Nigerian Agip Oil Company and did not focus to best of my knowledge on the logistics outsourcing, supply chain collaboration, IT capability, vertical integration and horizontal integration and employee commitment of Nigerian Agip Oil Company. Most of the studies reviewed analysed their data through purposeful sampling

technique, Descriptive statistics and appropriate inferential statistics, Purposive Sampling technique, Pearson Moment Correlation Coefficient, Multiple sampling technique, Partial Least Square Structural Equation Modeling (PLS-SEM), Multiple Regression Analysis (MRA) method, Simple linear regression and Pearson correlation coefficient ( $r$ ) while the present study made use of Z test to test the hypotheses. Therefore, the study aimed at filling this research gap by evaluating the relationship between supply chain management practices and organisational performance of Nigerian oil and gas industry using Nigerian Agip Oil Company.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Research Design**

The study adopted cross sectional survey research design in order to provide a framework to examine the characteristics of the independent variables (Logistics outsourcing, Supply chain collaboration, information technology capability, vertical and horizontal integration). This was appropriate to obtain information concerning the status of the phenomenon, to describe what the current situation is with respect to the variable of the study. Ghauri and Gronhaug (2005) cited in Kimechwa (2015) asserts that in descriptive design the problem is structured and well understood. Mugenda and Mugenda (2003) agree that descriptive design is most preferred because it gives a report on things as they actually are. Thus this study used this design to get clear information from the respondents with much ease.

#### **3.2 Area of Study**

The study was conducted in an oil and gas company (Agip) in Rivers State. River State is found in the South South part of Nigeria. Nigeria Agip Oil Company (AGIP) is owned by the ENI GROUP. It was incorporated as a limited liability company in 1962, to harness Nigeria's vast natural gas resources and produce Oil & Gas for export.

#### **3.3 Sources of Data**

The sources of data are classified into two groups namely the primary and the secondary data sources.

##### **3.3.1 Primary Data**

Primary data was collected from members of staff of the Oil and Gas industry in Rivers State. The information was obtained directly from the target population.

##### **3.3.2 Secondary Data Source**

These constitute additional information obtained from textbooks, periodicals, publication, newspaper, published/unpublished works and internet sites which relate to the subject of

study. The data from these sources helped the research to capture vital variables that assisted in the development of the conceptual framework of the study.

### 3.3 Population of the Study

The target population for this study comprised of employees of Nigerian Agip Oil Company. The target population of the study was composed of all junior, senior and managerial staff of Nigerian Agip Oil Company. The study population was not homogeneous as it consisted of employees from different departments of the organisation making it the most appropriate sample to come up as the target sample. The population was drawn from the following departments of the organization: business services, ICT, finance, facilities, asset management, planning, downstream gas, technical and engineering, contract and budget, procurement and materials, public affairs and human resources.

Table 3.1 shows the distribution of the population.

**Table 3.1 Distribution of the Population of the Study**

Department	Number	%
HR	50	12.3
Contract and Budget	20	5.0
Facilities	21	5.2
Research, planning and strategy	21	5.2
Business services	80	19.7
Technical and engineering	50	12.3
Downstream Gas	38	9.4
Procurement and materials	28	6.8
Asset Management	24	6.0
Finance and accounts	20	5.0
Public Affairs	20	5.0
ICT	34	8.4
Total	406	100.0

**Sources: Field Survey, 2023**

### 3.4 Determination of Sample Size

Consequently, the formula for estimating sample size was applied to determine the study sample.

To determine the sample size (n)

$$n = \frac{N}{1 + Ne^2}$$

Where: N = size of population

n = sample size

$\alpha$  = alpha (0.05)



$$\begin{aligned}
&= \frac{406}{1 + 406 (0.05)^2} \\
&= \frac{406}{1 + 406 (0.0025)} \\
&= \frac{406}{1 + (1.015)} \\
&= \frac{406}{2.015} \\
n &= 201
\end{aligned}$$

### 3.5 Sampling Techniques

A sample is a subset of population (Hyndman, 2008 cited in Njeri *et al.*, 2016). Sampling is the selection of a subset of individuals from within a population to yield some knowledge about the whole population especially for the purposes of making predictions based on statistical inference (Black and William, 2004 cited in Njeri *et al.*, 2016).

This study employed stratified random sampling. Stratified random sampling (also known as proportional random sampling and quota random sampling) is a probability sampling technique in which the total population is divided into homogenous groups (strata) to complete the sampling process. to sample staff of Nigerian Agip Oil Company by cadre, because it enabled the generalization of a larger sample size of percentage of the total population. A sample size of 406 respondents was drawn from the sample frame using simple stratified random sampling to promote the needs for efficiency and representativeness. The stratified random sampling was preferred because; the population that was sampled was divided into homogenous groups based on characteristics considered important to the indicators being measured. This method also helps to achieve precision, flexible in the choice of the sample design for different strata and finally one is able to get estimates of each stratum in addition to the population estimate (Kothari, 2011).

### 3.6 Instrument for Data Collection

The study employed the questionnaire as the instrument for data collection for this research work. The instrument was organized in sections with each section capturing propositions. Differential semantic propositions were adopted to accommodate a broadband of opinions and sensitivities of respondents. For instance SA = Strongly Agree, A = Agree, D = Disagree

and SA = Strongly Disagree. The questionnaire was designed using the variables identified as important for meeting the study objectives. The questionnaire contains both open and closed ended questions in order to enable effective data collection using the questionnaire.

### **3.7 Validity of the Instrument**

Mugenda and Mugenda (2003) asserts that, the accuracy of data to be collected largely depend on the data collection instruments in terms of validity and reliability. Validity of the research ‘is concerned with the idea that the research design fully addresses the research questions and objectives’ that the researcher is trying to answer and achieve (White, 2002). As the literature review section revealed, the relationships between supply chain management practices and organizational performance were all focused in the research.

The validity of the questionnaire was improved by asking the respondents of the pilot study ‘for feedback to identify ambiguities and difficult questions; record the time taken to complete the questionnaire and decide whether it is reasonable; discard all unnecessary; difficult or ambiguous questions; re-word or re-scale any questions that are not answered as expected’. Based on the feedback, the survey questionnaire was significantly improved for its simplicity.

### **3.8 Reliability of the Instrument**

In this study, reliability of the instrument was analyzed using Cronbach Alpha to show how best the variables are best suited for the questionnaire was done. The Cronbach’s alpha analysis gave an average value of 0.8043 which is ideal for reliability purposes.

### **3.9 Method of Data Analyses**

Data Analysis is the processing of data to make meaningful information (Saunders, Lewis and Thornbill, 2009). After data had been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS was used to produce frequencies, descriptive and inferential statistics which was used to derive conclusions and generalizations regarding the population.

The hypotheses were tested using  $\chi^2$  tool.

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

Where:

$\chi^2$  = Chi-square table reading

$f_o$  = Observed frequencies

$f_e$  = Expected frequencies

Decision rule is that if  $\chi^2$  calculated is  $> \chi^2$  tabulated, then reject  $H_o$  (null hypotheses) and accept  $H_A$  (alternate hypotheses).

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1 Analysis of Questionnaire Return Rate

This section presents the pattern of questionnaire return rate. Table 4.1 demonstrates this:

**Table 4.1: Questionnaire Return Rate**

Departments	No of Questionnaire Administered	Questionnaire Returned	Mean %
Human resources	24	12	50.0
Contract and budget	10	5	50.0
Public affairs	10	5	50.0
Research, planning and strategy	10	5	50.0
Business Services	42	20	50.0
Technical and engineering	24	12	50.0
Finance and accounts	18	10	55.0
Procurements and materials	14	8	57.0
Asset management	12	8	67.0
Public affairs	10	5	50.0
ICT	10	5	50.0
Downstream gas	17	10	59.0
Total	201	106	53.0%

**Source: Field Survey, 2023**

Table 4.1 shows that the departments participating in the study returned their questionnaires.

This indicates that this research had a response rate of about 53.0% thereby demonstrating a willingness of the respondents to participate in the study.

## 4.2 Demographic Analysis

Table 4.2 below demonstrates the demography of the respondents.

**Table 4.2: Demography of the Respondents**

Proposition	Responses	Number	%
Length of period at NigerianAgip Oil Company	0 – 1 yr	30	28.3
	2 – 3 yrs	36	34.0
	3yrs plus	40	37.7
	Total	106	100.0
Plan to make a great career in the job	SA	80	75.5
	A	10	9.4
	D	-	-
	SD	16	15.1
	Total	106	100.0
The organization places high emphasis on supply chain management	SA	80	75.5
	A	-	-
	D	10	9.4
	SD	16	15.1
	Total	106	100.0
Supply chain is purely driven by the need to achieve organizational performance.	SA	40	37.7
	A	40	37.7
	D	26	24.5
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**

Table 4.2 reveals that a strong majority of the respondents 71.7% have stayed in Nigerian Agip Oil Company for more than two (2) years. This means that a strong majority of respondents in this study are experienced enough to give credible opinion on their supply chain management practices.

## 4.3 Analysis of Research Questions

This section provides the data that formed the basis of analysis and findings, conclusions and recommendations made in this study.

From the literature review above, three SCM practices (logistics outsourcing, supply chain collaboration and IT capability) were identified. To further analyze their effect on organizational performance, the study sought to know the roles of these SCM practices and the result is presented below.

**Table 4.3: Roles of Logistic Outsourcing**

Proposition	Responses	Number	%
Logistics outsourcing offers companies with access to up to date information technology	SA	50	47.2
	A	30	28.3
	D	10	9.4
	SD	16	15.1
	Total	106	100.0
Outsourcing not only reduces business risk but also reduces financial risk.	SA	90	85.0
	A	-	-
	D	16	15.0
	SD	-	-
	Total	106	100.0
Logistics outsourcing is a much more cost-effective option, as it provides the best and quickest express delivery solutions.	SA	100	94.3
	A	-	-
	D	6	6.0
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**

According to the data presented above, Logistics outsourcing offers companies with access to up to date information technology (65.5%). 85.0% (90) were of the opinion that outsourcing not only reduces business risk but also reduces financial risk whilst 94.3% (100) were of the opinion that logistics outsourcing is a much more cost-effective option, as it provides the best and quickest express delivery solutions.

On the role of supply chain collaboration, the result is shown in table 4.4 below.

**Table 4.4: Roles of Supply Chain Collaboration**

Proposition	Responses	Number	%
Supply chain collaboration improves sharing of information and leads to enhanced knowledge across the chain	SA	80	75.5
	A	-	-
	D	26	24.5
	SD	-	-
	Total	106	100.0
It mirrors the benefits of customer retention: long-term relationships ultimately lead to higher profits	SA	100	94.3
	A	-	-
	D	-	-
	SD	6	6.0
	Total	106	100.0
Enhances supply chain transparency, promote higher ethical and environmental standards, and exert better leverage over parts of your supply chain that are resistant to positive change.	SA	85	80.2
	A	-	-
	D	21	19.8
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**

From the table above, the result showed that supply chain collaboration improves sharing of information and leads to enhanced knowledge across the chain (75.5%). Supply chain collaboration mirrors the benefits of customer retention: long-term relationships ultimately lead to higher profits (94.3%). It enhances supply chain transparency, promote higher ethical and environmental standards, and exert better leverage over parts of your supply chain that are resistant to positive change (80.2%).

**Table 4.5: Roles of IT Capability**

Proposition	Responses	Number	%
Technological capability can promote company internationalization as it enables the formation of strategic partnerships, investment in R&D	SA	70	66.0
	A	36	34.0
	D	-	-
	SD	-	-
	Total	106	100.0
Technological capability enables firm to identify, acquire and apply new external knowledge to develop operational competencies, which leads to the attainment of superior performance	SA	16	15.0
	A	90	85.0
	D	-	-
	SD	-	-
	Total	106	100.0
It enables resource sharing, technology transfer, and economies of scale	SA	100	100.0
	A	-	-
	D	-	-
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**

100% of the respondents further indicated that technological capability can promote company internationalization as it enables the formation of strategic partnerships, investment in R&D; it enables firm to identify, acquire and apply new external knowledge to develop operational competencies, which leads to the attainment of superior performance; it enables resource sharing, technology transfer, and economies of scale (100%).

On the role of vertical integration, the result is shown in table 4.6 below.

**Table 4.6: Roles of Vertical Integration**

Proposition	Responses	Number	%
Helps to gain greater control over the supply chain process	SA	106	100.0
	A	-	-
	D	-	-
	SD	-	-
	Total	106	100.0
Provides more opportunities to differentiate by means of increased control over inputs	SA	106	100.0
	A	-	-
	D	-	-
	SD	-	-
	Total	106	100.0
Improves supply chain coordination	SA	80	75.5
	A	-	-
	D	26	24.5
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**

100% of the respondents further indicated that vertical integration helps to gain greater control over the supply chain process; Provides more opportunities to differentiate by means of increased control over inputs (100%); Improves supply chain coordination (75%).

On the role of horizontal integration as shown table 4.7 below, the result showed that 72.6% of the respondents further indicated that horizontal integrations help companies grow in size and revenue.

**Table 4.7: Roles of Horizontal Integration**

Proposition	Responses	Number	%
Horizontal integrations help companies grow in size and revenue	SA	77	72.6
	A	29	27.4
	D	-	-
	SD	-	-
	Total	106	100.0
Helps a company expand into new markets through diversification product offerings and differentiation	SA	15	14.2
	A	91	85.8
	D	-	-
	SD	-	-
	Total	106	100.0
Enables a company to achieve economies of scale and reduces competition	SA	100	100.0
	A	-	-
	D	-	-
	SD	-	-
	Total	106	100.0

**Source: Field Survey, 2023**



85.8% strongly agreed that horizontal integration helps a company expand into new markets through diversification product offerings and differentiation. It enables a company to achieve economies of scale and reduces competition (100.0%).

#### **4.4 Test of Hypotheses**

According to Saunders *et al.* (2009), Chi-Square test enables a researcher to find out how likely it is that two variables are associated. Pearson Chi-Square test was used to test whether there is any significant association between the variables.

The chi-square statistic was computed using the formula below.

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

Where;

$\chi^2$  is the chi-square statistic value;

$O_i$  is the observed value;

$E_i$  is the expected value.

The test was performed using SPSS computer software where the level of significance was set at 0.05 (5%).

#### **Hypothesis One**

H<sub>0</sub><sup>1</sup>: There is no relationship between logistics outsourcing and employee commitment in Nigerian Agip Oil Company.

H<sub>A</sub><sup>1</sup>: There is a relationship between logistics outsourcing and employee commitment in Nigerian Agip Oil Company.

**Table 4.8: Chi-square Table on the Relationship between Logistics Outsourcing and Employee Commitment**

Options	O <sub>i</sub>	E <sub>i</sub>	O <sub>i</sub> -E <sub>i</sub>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup> E <sub>i</sub>
Strongly Agree	52	21.2	30.8	948.64	44.7
Agree	36	21.2	14.8	219.04	10.3
Undecided	12	21.2	-9.2	84.64	4.0
Disagree	2	21.2	-19.2	368.64	17.4
Strongly Disagree	4	21.2	-17.2	295.84	14.0
Total	106	106	0	1916.8	90.4

**Source: Computed from Data, 2023**

#### Test Statistics

	Relationship between Logistics Outsourcing and Organizational Performance
Chi-Square (a)	90.4
Df	4
Asymp. Sig.	.000

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.

**Decision rule:** Reject H<sub>0</sub>, where  $\chi^2$  calculated is greater than  $\chi^2$  tabulated, otherwise, accept H<sub>A</sub>.

$$\text{Calculated } (\chi^2) = \sum \frac{(O - E)^2}{E} = \frac{1916.8}{21.2} = 90.4$$

Degree of freedom “d.o.f” = n – 1

Where n = number of rows

Therefore, d.o.f = 5 – 1 = 4.

The tabulated value ( $\chi^2$ ) at 0.05% level of significance for 4 degrees of freedom is 9.488.

**Decision:** Since the calculated  $\chi^2$  (90.4) is greater than the tabulated  $\chi^2$  (9.488), we reject the null hypotheses (H<sub>0</sub>) and accept the alternative hypotheses (H<sub>A</sub>). This indicates that there is a relationship between logistics outsourcing and employee commitment in Nigerian Agip Oil Company.

## Hypothesis Two

$H_0^2$ : There is no relationship between supply chain collaboration and employee commitment in Nigerian Agip Oil Company.

$H_A^2$ : There is a relationship between supply chain collaboration and employee commitment in Nigerian Agip Oil Company.

**Table 4.9: Chi-square Table on the Relationship between Supply Chain Collaboration and Employee Commitment**

Respondents View	$O_i$	$E_i$	$O_i - E_i$	$(O_i - E_i)^2$	$(O_i - E_i)^2 / E_i$
Strongly Agree	28	21.2	6.8	46.24	2.18
Agree	34	21.2	12.8	163.84	7.73
Undecided	21	21.2	-0.2	0.04	0.002
Disagree	6	21.2	-15.2	231.04	10.9
Strongly Disagree	17	21.2	-4.2	17.64	0.83
Total	106	106	0	533.56	25.1

**Source: Computed from Data, 2023**

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.

**Decision rule:** Reject  $H_0$ , where  $\chi^2$  calculated is greater than  $\chi^2$  tabulated, otherwise, accept  $H_A$ .

$$\text{Calculated } (\chi^2) = \sum \frac{(O - E)^2}{E} = \frac{533.56}{21.2} = 25.1$$

Degree of freedom "d.o.f" =  $n - 1$

Where  $n$  = number of rows

Therefore, d.o.f =  $5 - 1 = 4$ .

The tabulated value ( $\chi^2$ ) at 0.05% level of significance for 4 degrees of freedom is 9.488.

**Decision:** Since the calculated  $\chi^2$  (25.1) is greater than the tabulated  $\chi^2$  (9.488), we reject the null hypotheses ( $H_0$ ) and accept the alternative hypotheses ( $H_A$ ). This indicates a significant relationship between supply chain collaboration and employee commitment in Nigerian Agip Oil Company.

### Hypothesis Three

H<sub>0</sub><sup>3</sup>: There is a relationship between IT capability and employee commitment in Nigerian Agip Oil Company.

H<sub>A</sub><sup>3</sup>: There is no relationship between IT capability and employee commitment in Nigerian Agip Oil Company.

**Table 4.10: Chi-square Table on the Relationship between IT Capability and Employee Commitment**

Options	O <sub>i</sub>	E <sub>i</sub>	O <sub>i</sub> -E <sub>i</sub>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>	$\frac{(O_i - E_i)^2}{E_i}$
Strongly Agree	60	21.2	38.8	1505.44	71.0
Agree	30	21.2	8.8	77.44	3.7
Undecided	16	21.2	-5.2	27.04	1.3
Disagree	0	21.2	-21.2	449.44	21.2
Strongly Disagree	0	21.2	-21.2	449.44	21.2
Total	106	106	0	2508.8	118.4

**Source: Computed from Data, 2023**

- 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.

**Decision rule:** Reject H<sub>0</sub>, where  $\chi^2$  calculated is greater than  $\chi^2$  tabulated, otherwise, accept H<sub>A</sub>.

$$\text{Calculated } (\chi^2) = \sum \frac{(O - E)^2}{E} = \frac{2508.8}{21.2} = 118.4$$

$$\text{Degree of freedom "d.o.f"} = n - 1$$

Where n = number of rows

$$\text{Therefore, d.o.f} = 5 - 1 = 4.$$

The tabulated value ( $\chi^2$ ) at 0.05% level of significance for 4 degrees of freedom is 9.488.

**Decision:** Since the calculated  $\chi^2$  (118.4) is greater than the tabulated  $\chi^2$  (9.488), we reject the null hypotheses (H<sub>0</sub>) and accept the alternative hypotheses (H<sub>A</sub>). This indicates that there is a relationship between IT capability and employee commitment in Nigerian Agip Oil Company.

### Hypothesis Four

H<sub>0</sub><sup>4</sup>: There is no relationship between vertical integration and employee commitment in Nigerian Agip Oil Company.

H<sub>A</sub><sup>4</sup>: There is a relationship between vertical integration and employee commitment in Nigerian Agip Oil Company.

**Table 4.11: Chi-square Table on the Relationship between Vertical Integration and Employee Commitment**

Respondents View	O <sub>i</sub>	E <sub>i</sub>	O <sub>i</sub> -E <sub>i</sub>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>
					E <sub>i</sub>
Strongly Agree	28	21.2	6.8	121	5.7
Agree	34	21.2	12.8	163.84	7.7
Undecided	21	21.2	-0.2	0.04	0.002
Disagree	6	21.2	-15.2	231.04	10.9
Strongly Disagree	17	21.2	-4.2	17.64	0.8
Total	106	106	0	533.56	25.1

**Source: Computed from Data, 2023**

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.

**Decision rule:** Reject H<sub>0</sub>, where  $\chi^2$  calculated is greater than  $\chi^2$  tabulated, otherwise, accept H<sub>A</sub>.

$$\text{Calculated } (\chi^2) = \sum \frac{(O - E)^2}{E} = \frac{533.56}{21.2} = 25.1$$

Degree of freedom "d.o.f" = n - 1

Where n = number of rows

Therefore, d.o.f = 5 - 1 = 4.

The tabulated value ( $\chi^2$ ) at 0.05% level of significance for 4 degrees of freedom is 9.488.

**Decision:** Since the calculated  $\chi^2$  (25.1) is greater than the tabulated  $\chi^2$  (9.488), we reject the null hypotheses (H<sub>0</sub>) and accept the alternative hypotheses (H<sub>A</sub>). This indicates a significant relationship between vertical integration and employee commitment in Nigerian Agip Oil Company.

### Hypothesis Five

H<sub>0</sub><sup>4</sup>: There is no relationship between horizontal integration and employee commitment in Nigerian Agip Oil Company.

H<sub>A</sub><sup>4</sup>: There is a relationship between horizontal integration and employee commitment in Nigerian Agip Oil Company.

**Table 4.12: Chi-square Table on the Relationship between Horizontal Integration and Employee Commitment**

Options	O <sub>i</sub>	E <sub>i</sub>	O <sub>i</sub> -E <sub>i</sub>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>	(O <sub>i</sub> -E <sub>i</sub> ) <sup>2</sup>
					E <sub>i</sub>
Strongly Agree	52	21.2	30.8	948.64	44.7
Agree	36	21.2	14.8	219.04	10.3
Undecided	12	21.2	-9.2	84.64	4.0
Disagree	2	21.2	-19.2	368.64	17.4
Strongly Disagree	4	21.2	-17.2	295.84	14.0
Total	106	106	0	1916.8	90.4

**Source: Computed from Data, 2023**

- 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.

**Decision rule:** Reject H<sub>0</sub>, where  $\chi^2$  calculated is greater than  $\chi^2$  tabulated, otherwise, accept H<sub>A</sub>.

$$\text{Calculated } (\chi^2) = \sum \frac{(O - E)^2}{E} = \frac{1916.8}{21.2} = 90.4$$

Degree of freedom "d.o.f" = n – 1

Where n = number of rows

Therefore, d.o.f = 5 – 1 = 4.

The tabulated value ( $\chi^2$ ) at 0.05% level of significance for 4 degrees of freedom is 9.488.

**Decision:** Since the calculated  $\chi^2$  (90.4) is greater than the tabulated  $\chi^2$  (9.488), we reject the null hypotheses (H<sub>0</sub>) and accept the alternative hypotheses (H<sub>A</sub>). This indicates that there is a relationship between horizontal integration and employee commitment in Nigerian Agip Oil Company.

## 4.5 Discussion of Findings

In this section correlation between constructs under study were conducted. The essence of correlation is to show how closely correlated or otherwise are the variables under considerations. Where the variables have significant correlation we assume that the variables are related with one another. The implication of this is that there is an association between supply chain management and organisational performance. This could invariably be interpreted that supply chain management practices leads to achievement of competitive objectives of the companies. In the analysis of hypothesis one, the study found that there is a relationship between logistics outsourcing and employee commitment in Nigerian Agip Oil Company. The result is in line with the study by Musau (2016) whose study indicated that cost-driven outsourcing enhances short-term and long-term performance by reducing costs and risks and boosting operational efficiency. Furthermore, the report found that innovation-oriented outsourcing enables firms to create, develop and offer value to their consumers faster than their competitors. However, the success of innovation-led outsourcing has depended significantly on cost management and core competence concentration, and should thus be thoroughly examined. Finally, the research found that, focusing on outsourced services allows a company to free up resources so that its core business may be focused on, therefore, leads to increased corporate performance. Based on the findings made in the study, shows that outsourcing logistics activities contributes to organizations ability to control costs, improve customer service and allow company to focus on its core competencies.

On hypothesis two, the study indicated a relationship between supply chain collaboration and employee commitment in Nigerian Agip Oil Company. The finding of the study is in agreement with a study by Farhad, Byrne, Mohammad and Cathal (2018) which showed significant evidence in support of the role of information sharing in effective collaboration and the positive effects of collaboration on a firm's performance. The study identified a set of three interconnecting dimensions that make up effective supply chain collaboration: trust, information readiness and information security. Collaboration has great potential to enhance firm's performance where partners collaborate with others to ensure that their supply chain can response to dynamic market needs (Cao and Zhang, 2011). In a collaborative SCM, trading partners (e.g. suppliers and their customers) exchange and integrate information to make strategic or tactical joint decisions (e.g. supply and demand forecasts). Benefits of collaboration schemes on firms' performance have been discussed in previous studies, and

consist broadly of improvement of forecasting accuracy, reduction of the bullwhip effect, increase revenues and earnings, increase responsiveness, reduction in stock-outs and greater transparency in the supply chain (Farhad *et al.*, 2018). On hypothesis three, the study indicated a relationship between IT Capability and employee commitment in Nigerian Agip Oil Company. The importance of information accuracy is echoed in the study conducted by Christopher and Lee (2004) cited in (Farhad *et al.*, 2018). They reported that in an information-centered collaborative supply chain, information such as inventory, demand, forecasts, production and shipment plans and work in progress should be accurate and timely, rendering it useful for all trading partners for planning and re-planning purposes. Vertical integration looks at financial measures, customer measures, internal process measures and employee measures. On the other hand, horizontal integration focuses on the alignment of measures across organizational functions and processes. In agreement with the above, the study indicated a relationship between vertical and horizontal integration and employee commitment in Nigerian Agip Oil Company while testing hypothesis four and five.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary of Findings**

The summary of the findings are as follows:

- i. There was a positive relationship between logistics outsourcing and employee commitment of Nigerian Agip Oil Company. This implies that when there is division of labour, employees tend to be more committed with their specific duties.
- ii. There was a positive relationship between supply chain collaboration and employee commitment of Nigerian Agip Oil Company. This implies that supply chain collaboration enhances employee commitment in Agip Oil company.
- iii. There was a positive relationship between IT capability and employee commitment of Nigerian Agip Oil Company. The knowledge of IT helps employees to carry out their duties effectively most especially online duties.
- iv. There was a positive relationship between vertical integration and employee commitment of Nigerian Agip Oil Company. This implies that vertical integration may lead to lower transportation costs, smaller turnaround times or simpler logistics process for the employees.
- v. There was a positive relationship between horizontal integration and employee commitment of Nigerian Agip Oil Company. This implies that horizontal integration improves employee commitment and as well allows the company to grow, expand, diversify, and gather a larger market presence.

#### **5.2 Conclusion**

Efficient supply chain management practices have greater impact on organizational performance when properly identified and implemented. This study provides empirical evidence to support conceptual and prescriptive statements in the literature regarding the impact of SCM practices.

From the study findings, it is concluded that outsourcing, ICT and supply chain collaboration affected performance of the oil and gas company. In terms of outsourcing; lack of expertise, improved quality services and strict timelines influenced performance to a great extent. Technological capability therefore influenced the implementation of competitive strategies in

the organization as it determined the adoption and the appropriate roles that improved performance of the organization. Supply chain collaboration also affected performance of the organization through its advantages and its roles.

### **5.3 Recommendations**

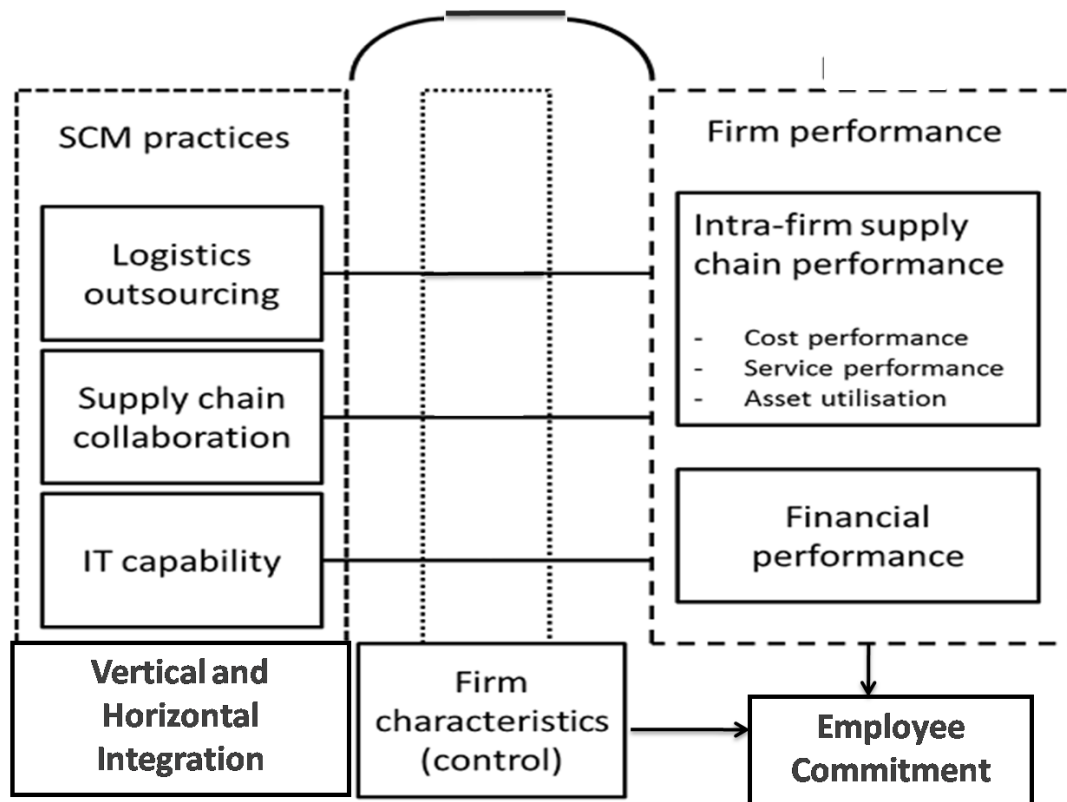
Based on the research findings, it is recommended that

- i. Management must strive to break down the traditional functional silos, drive more cross-functional integration and consequently more collaboration.
- ii. Oil and gas companies need to investigate ways of improving and establishing relationship along the entire value chain. There are competitive advantages lengthy relationships, which are more likely to include assets dedicated to the partnership. Sharing greater information and assets enable such programmes as just-in-time manufacturing, which will increase the efficiency for the oil and gas companies and accrue benefits to all parties through cooperation and coordination.
- iii. Organisations should improve on the mode of outsourcing. They should choose a mode that is appropriate and will maximize the goals and objectives of the organization so as to enable execution of the competitive strategies in place that enhance performance.
- iv. The use of technology that does not support crucial realization of objectives should be sidestepped by first ensuring that all employees are well inducted into their roles and space in service delivery by using the appropriate technology.
- v. The oil and gas industry requires balance of integration between upstream and downstream to stabilize the organizational operations. There need to be more integration with upstream supply chain members through sharing of information and development of collaborative relationships. There should be more supply chain integration in the downstream sector of the oil and gas industry in order to improve outsourced customer touch points.
- vi. The organisation must focus on empowering designated groups. As such special training and development initiatives should be investigated which focus on providing respondents with the tools for effective decision making.

#### 5.4. Contribution to Knowledge

The result of the research has added to the extent literatures in Supply Chain Management in particular with emphasis on logistics, information, and collaboration, vertical and horizontal integration and how to leverage their profit and improve performance in the competitive environment, through employee commitment that will not only enhance their performance but improve the overall performance of the organization.

Also, the conceptual framework of the study helps to bridge the gap observed by the study



#### 5.5 Suggestions for Future Research

Further studies are needed to strengthen the findings of this research and extend the management understanding and academic knowledge in the important oil and gas industry.

The researcher recommends that further studies be done on emerging themes in supply chain performance management systems such as: Measure and manage risk in extended supply networks; Aligning performance measures to achieve strategic objectives; Recognizing and incorporating the varying cultural elements in the supply network; and Response to a volatile demand led environment that may include lean and agile elements.

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## **APPENDIX 1**

### **LETTER OF INTRODUCTION**

Department of Human Resource Management  
Faculty of Management Science  
Enugu State University of Science and  
Technology, (ESUT), Enugu

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Dear Respondent,

### **KINDLY COMPLETE MY QUESTIONNAIRE**

I am a post graduate (PhD) student of ESUT Business School, Enugu. I am currently conducting a study on the ‘Effect of Supply Chain Management on Organisational Performance in Nigerian Oil and Gas Industry: A Study of Nigerian Agip Oil Company.

Kindly complete the Questionnaire attached. You are not obliged to write your name.

Your responses will be treated with great confidentiality.

Thank you for your cooperation.

.....  
Nwenekorum Franklin Kinikanwo

(Researcher)

## APPENDIX 2

### SURVEY QUESTIONNAIRE

NB: SA= Strongly Agree, A= Agree, Undecided= UD, D= Disagree, SD= Strongly Disagree

What is your department?.....

#### SECTION 1: INTRODUCTION

1. You have worked for Nigerian Agip Oil Company for  
0 – 1yr ☐      2 – 3yrs ☐      3 yrs plus ☐
2. You plan to make a great career in your job in Nigerian Agip Oil Company  
SA ☐      A ☐      D ☐      SD ☐
3. The organization places high emphasis on supply chain management  
SA ☐      A ☐      D ☐      SD ☐
4. Supply chain is purely driven by the need to achieve organizational performance.  
SA ☐      A ☐      D ☐      SD ☐

#### SECTION 2: ROLE FOR LOGISTICS OUTSOURCING

5. Logistics outsourcing offers companies with access to up to date information technology  
SA ( )      A ( )      D ( )      SD ( )
6. Outsourcing not only reduces business risk but also reduces financial risk.  
SA ( )      A ( )      D ( )      SD ( )
7. Logistics outsourcing is a much more cost-effective option, as it provides the best and quickest express delivery solutions.  
SA ( )      A ( )      D ( )      SD ( )

### SECTION 3: SUPPLY CHAIN COLLABORATION

8. Supply chain collaboration improves sharing of information and leads to enhanced knowledge across the chain

SA ( )      A ( )      D ( )      SD ( )

9. It mirrors the benefits of customer retention: long-term relationships ultimately lead to higher profits.

SA ( )      A ( )      D ( )      SD ( )

10. Enhances supply chain transparency, promote higher ethical and environmental standards, and exert better leverage over parts of your supply chain that are resistant to positive change.

SA ( )      A ( )      D ( )      SD ( )

### SECTION 4: IT CAPABILITY (INFORMATION TECHNOLOGY)

11. Technological capability can promote company internationalization as it enables the formation of strategic partnerships, investment in R&D

SA ( )      A ( )      D ( )      SD ( )

12. Technological capability enables firm to identify, acquire and apply new external knowledge to develop operational competencies, which leads to the attainment of superior performance.

SA ( )      A ( )      D ( )      SD ( )

13. It enables resource sharing, technology transfer, and economies of scale.

SA ( )      A ( )      D ( )      SD ( )

### SECTION 5: VERTICAL INTEGRATION

14. Helps to gain greater control over the supply chain process

SA ( )      A ( )      D ( )      SD ( )

15. Provides more opportunities to differentiate by means of increased control over inputs.

SA ( )      A ( )      D ( )      SD ( )

16. Improves supply chain coordination

SA ( )      A ( )      D ( )      SD ( )

## **SECTION 6: ROLES OF HORIZONTAL INTEGRATION**

17. Horizontal integrations help companies grow in size and revenue

SA ( )      A ( )      D ( )      SD ( )

18. Helps a company expand into new markets through diversification product offerings and differentiation

SA ( )      A ( )      D ( )      SD ( )

19. Enables a company to achieve economies of scale and reduces competition.

SA ( )      A ( )      D ( )      SD ( )

## **SECTION 5: PROPOSITIONS**

20. There is no relationship between logistics outsourcing and organizational performance in Nigerian Agip Oil Company.

SA ( )      A ( )      D ( )      SD ( )

21. There is no relationship between supply chain collaboration and organizational performance in Nigerian Agip Oil Company.

SA ( )      A ( )      D ( )      SD ( )

22. There is no relationship between IT capability and organizational performance in Nigerian Agip Oil Company.

SA ( )      A ( )      D ( )      SD ( )

**THANK YOU!**