

**ASSESSMENT OF SUPPLY CHAIN STRATEGIES USING  
VALUE CHAIN MODEL FOR APPAREL COMPANIES IN  
HAWASSA INDUSTRIAL PARK**


**BY  
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**A THESIS SUBMITTED  
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FULFILLMENT OF THE REQUIREMENTS FOR MA DEGREE IN  
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This is to certify that the thesis prepared by Sisay Belay Wakjira; Assessment of supply chain strategies using value chain model for apparel companies in Hawassa industrial park submitted in partial fulfillment of the requirements for the Degree of Master of Logistics and Supply Chain Management complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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## LETTER OF CERTIFICATION

This is to certify that Sisay Belay has carried out his thesis on the topic of “Assessment of supply chain strategies using value chain model for apparel companies in Hawassa industrial park” under my Supervision. This work is original in its nature, and it is suitable for submission in partial fulfillment of the requirement for the award of Masters of Arts Degree in Logistics and Supply Chain Management.

Tesfaye Belay (Ass. Prof.)

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(Advisor)

Signature

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Date

## DECLARATIONS

I, Sisay Belay, declare that this Thesis entitled “Assessment of supply chain strategies using value chain model for apparel companies in Hawassa industrial park” is my own original work. I have carried out it independently with the guidance and suggestions of the research advisor. And it has not been presented in Addis Ababa University or any other University.

Sisay Belay

(The Researcher)

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Signature

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Date

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## **LIST OF ABBREVIATIONS**

CRS: Customer response system

ETB: Ethiopian Birr

HIP: Hawassa Industrial Park

IT: Information Technology

IMS: Inventory management system

SC: Supply Chain

SCS: Supply chain Strategy

SCM: Supply Chain Management

SMS: Supply management system

TMS: Transportation management system

## ABSTRACT

*Supply chain management (SCM) involves evaluating the entire supply chain, including all integrated members, to improve end customer experience. In Ethiopia, some enterprises face delays in product delivery, and the best practices don't just come from investing in supply chain challenges. This study assessed the supply chain strategies of apparel companies in Hawassa Industrial Park using a qualitative research approach with a value chain model. The study will browse the primary activities such as inbound & outbound logistics, operation management, marketing and after sales service management while focusing only on procurement and technology management from secondary activities of value chain model. The company's demonstrated success in supplier selection, transportation management, and inventory control in incoming logistics, but faced limitations in selecting suitable suppliers, ensuring reliability, and obtaining timely order updates. The company's capacity utilization led to challenges with inventory levels and market demands. Outbound logistics had effective order fulfillment and distribution, but occasional delays and logistics issues affected customer satisfaction. The company effectively implemented marketing strategies and customer relationship management but needed improvement in market diversification and customer feedback handling.*

*Keywords: supply chain management, challenges*

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background of the study

Supply chain Management is defined as a systemic, strategic coordination of the business functions, processes and transactions within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole (Stadtler, 2008, Houlihan, 1985). According to Ashish et al. (2007) Supply Chain Management includes every step of the product delivery process, from sourcing raw materials and parts to manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution through all channels, and customer delivery, as well as the information systems needed to keep track of all activity.

Global supply chain management integrates supply and demand management within and across businesses (including clients, suppliers to the apparel industry, intermediates, and other service providers) that are located in many nations and exhibit a range of economic and technological development (Köksal et al., 2017, Lam and Postle, 2006a). Supply chain experts are firmly responsible for monitoring that spending. Even though the role of supply chain experts differs from company to company, they all have the same objective: to design and position a company's supply chain so that it can compete and thrive in the current global market. However, the modern idea of the supply chain is relatively recent, but the principles of dealing with suppliers and consumers are as old as commerce itself (Kim and Rhee, 2012).

African manufacturers of clothing encounter difficulties managing their supply chains due to a lack of infrastructure, restricted local sourcing options, a shortage of skilled labor, political and economic instability, a lack of transparency and traceability, and ethical and sustainable concerns. Companies can spend in improving transportation and logistics networks, searching for alternative sources of supplies, funding training programs, and diversifying their operations across several nations across the supply chain to address these issues (Turker and Altuntas, 2014).

Even though Ethiopia's apparel sector has been highlighted as a critical growth sector since 1995, up to the GTP's implementation in 2015, it performed poorly (Okereke et al., 2019).

"Apparel purchasers today source basic, high-volume items from Ethiopia, with up to 60% of exports going to Germany and 10% to the United States," according to a 2015 McKinsey analysis. There is currently a significant supply gap for the product categories that consumers formerly purchased from Ethiopia (Berg et al., 2015).

The Hawassa Industrial Park in Ethiopia has become a major hub for textile and apparel manufacturing, attracting numerous international companies. The majority of the Hawassa Industrial Park enterprises struggled to receive orders that can full their capacity since vendors are looking for volume production of basic commodities, and purchasers are unable to meet the capacity. Thus this study will assess the performance of Ethiopia's textile and apparel sector following the implementation of its growth and transformation plan by looking at the effects of the supply chain tactics these companies employ. The report will also look into the status of investments for backward integration in order to extend Ethiopia's product line and give it a competitive edge over other country.

## **1.2. Statement of the problem**

In the contemporary global and networked economy, supply chain strategy—regardless of scale or sector has evolved as a crucial component of strategy. Many businesses today run the risk of being forced out of the market because they are unable to adequately plan and manage their supply chains' product, information, and cash flow.(Kano et al., 2020).

With worldwide demand for clothing declining by 15% in 2020, the COVID-19 pandemic has had a particularly negative impact on the textile and garment industry.(Chakraborty and Biswas, 2020). According to Accenture (2021), 81% of supply chain leaders say that the pandemic has been their organization's greatest stress test. And because textile and garment items often have lead times of 60 to 90 days, it may be challenging to react rapidly to changes in demand. In a survey by McKinsey, 45% of textile and apparel executives identified supply chain complexity as a key challenge for their industry(McKinsey Apparel, 2021).

According to reports (Balchin and Calabrese, 2019, Hollweg, 2019) the degree of integration on the backward is a critical aspect in the growth of the apparel industry and includes the manufacturing of raw materials, trims, and accessories Additionally, SCS had many difficulties due to insufficient technology utilization. Thus, according to a report by

Accenture (2021), 63% of supply chain executives believe that their organizations are not leveraging the full potential of digital technologies in their supply chain operations.

Textile & Garment manufacturing is the cornerstone for low-income countries development strategy(Khurana, 2018). In Ethiopia, Since the initiative to support the manufacturing sector's development of a strong backward value chain started, continuous expansion on an integrated supply chain is still a problem for enterprises. One of the largest industrial parks, Hawassa Industrial Park was created specifically to house apparel and textile businesses. The Park administration has planned for a factory that produces fabrics, clothing, and accessories all in one location. Due to this, the park currently houses one plant that makes fabric, four auxiliary product manufacturers, and fourteen other businesses that are active in the garment manufacturing sector. However, the majority of clothing manufacturers are compelled to import all of their products from foreign markets due to a lack of raw resources. As a result, the supply chain techniques these clothing firms have employed may cause them to store a sizable amount of raw materials in their garment factories and affect their propensity to be flexible with regard to demand availability (Negesa et al., 2022).

Moreover, according (Ejigu, 2018), The relationships between the garment factories and their clients, suppliers, and customer service are poor. The main issues with Ethiopian garment factories' supply chain integration are management's inadequate knowledge of the SCM and manufacturing, supply and demand uncertainties, which prevent efficient adoption of SCM. Political and economic instability in Ethiopia can disrupt regular operations and make it challenging for businesses to predict and plan for the future and supply chains may be hampered by this unpredictability, and businesses may struggle to operate effectively. Changes to governmental or economic policies could potentially result from it(Kobrin, 2022). Due to these difficulties, it is difficult for Ethiopian businesses, such as HIP, to compete on the international market and to guarantee that items are manufactured and transported in an ethical and sustainable manner.(Nandonde, 2019).Therefore, the main aim of this study is to evaluate evaluating supply chain strategies for apparel companies in Hawassa industrial park.

### **1.3. Research questions**

- ✚ What is the current supply chain inbound logistic management used by apparel companies in Hawassa Industrial Park?
- ✚ How effective is the supply chain process and information systems operation used by apparel companies in Hawassa Industrial Park?
- ✚ What outbound logistic management strategy used by apparel companies in Hawassa Industrial Park?
- ✚ How effective are the marketing and sale strategies used by apparel companies in Hawassa Industrial Park?
- ✚ How effective is the after-sale services used by apparel companies in Hawassa Industrial Park, and how effective are they?
- ✚ What is procurement strategy the apparel companies in Hawassa Industrial Park have been using?
- ✚ How the technologies are developed and implemented by apparel companies in Hawassa Industrial Park, and how effective are they?

### **1.4. Objective of the study**

#### **1.4.1. General objective**

The main aim this study is to evaluate supply chain strategies for apparel companies in Hawassa industrial park

#### **1.4.2. Specific objectives**

- ✚ To explore the inbound logistic management strategy used by apparel companies in Hawassa Industrial Park.
- ✚ To evaluate outbound logistic management strategy used by apparel companies in Hawassa Industrial Park.
- ✚ To assess the marketing and sale strategies used by apparel companies in Hawassa Industrial Park.
- ✚ To evaluate the after-sale services used by apparel companies in Hawassa Industrial Park.
- ✚ To explore procurement strategy the apparel companies in Hawassa Industrial Park.
- ✚ To explore the technologies are developed and implemented by apparel companies in Hawassa Industrial Park.

### **1.5. Significance of the study**

The current study finding can offer insights on how to create more resilient supply chains that are better able to provide insight by analyzing the various supply chain strategies and their effectiveness. The study will browse the primary activities such as inbound & outbound logistics, operation management, marketing and after sales service management while focusing only on procurement and technology management from secondary activities of value chain model. In the quickly evolving business climate of today, when businesses are under increasing pressure to adapt to new technology, change consumer tastes, and shifting global economic situations, this can be especially helpful.

Additionally, a study on supply chain tactics might offer important knowledge to academics, legislators, and researchers. It can help with the creation of new theories and models and add to the body of knowledge in the area of supply chain management. Additionally, it will serve as a foundation for upcoming research.

### **1.6. Scope/delimitation of the study**

The study will pay particular attention to the textile businesses located in Ethiopia's Hawassa Industrial Park. This will give the research a particular setting and context, enabling a more thorough analysis of the particular difficulties and opportunities these organizations face. Mixed research method will be used in the study's data collection and analysis. In-depth interviews with important stakeholders, such as company managers and employees, as well as document analysis may be part of this process. It will give a thorough grasp of the supply chain strategies of the firms.

Regarding the study's delimitations, it will only examine the garment businesses in Hawassa Industrial Park; it won't take other industries or sectors into account. The study will only focus on the garment firms' supply chain management practices; it won't look at things like their financial health or marketing plans. Additionally, the research is confined to the companies' current supply chain tactics; this may not forecast future events. And the research will be limited to the businesses working within the Hawassa Industrial Park; it won't take into account businesses operating elsewhere or locally owned small manufacturers.



## CHAPTER TWO

### 2. REVIEW OF RELATED LITERATURE

#### 2.1. Theoretical review

##### 2.1.1. The concept and meaning of Supply chain management

According to Oliver and Webber (1982) "Supply chain management (SCM) is the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. From the point of origin to the point of consumption, all raw materials, inventories for work-in-progress, and finished goods are moved and stored as part of the supply chain.

Supply chain management (SCM) is currently employed extensively across many different industry sectors. SCM involves integrating corporate functions using business procedures both within and between businesses.(Lambert and Cooper, 2000). Among supply chain partners, trust, mutual reliance, cooperation, and shared objectives are viewed as the ultimate core competencies and the driving force behind successful SCM. (Sanders and Premus, 2005, Horvath, 2001)

Supply chain management builds on this framework and seeks to achieve linkage and coordination between the processes of other entities in the pipelines, i.e. the suppliers, customers, and organization itself. Supply chain is essentially a planning orientation and framework that seeks to create a single "plan for flow of product, information, and funds through business." Coordination, trust, and the understanding that, when correctly managed, the whole can be greater than the sum of its parts are the main focuses of supply chain management.(Somapa et al., 2018). Additionally, since supply chain management is focused on relationship management in order to achieve more profitable outcomes for all parties in the chain, this poses some significant challenges because there may be times when one party's narrow self-interest needs to be put aside for the benefit of the chain as a whole (Linton et al., 2007).

Although the term "supply chain management" is now frequently used, experts in the field contend that it should actually be called "demand chain management" to reflect the reality that the market, not the suppliers, should be the one driving the chain. The word "chain" should also be changed to "network" because there will typically be a number of

suppliers—and suppliers to suppliers—as well as a number of customers and customers to be included in the overall system. Extending this idea, it has been suggested by (Aitken et al., 2016) that a supply chain could accurately be defined as: Controlling, managing, and improving the flow of goods and information from suppliers to end users through a network of interconnected and dependent businesses.

Tan et al. (1998) described Supply chain management as it includes materials/delivery management from the supply of basic raw materials to finished product (and possible recycling and re-use). How businesses exploit the capabilities, procedures, and technologies of their suppliers to gain a competitive edge is the subject of supply chain management.

Any consumer products transferred item undergoes a number of subsequent exchanges on the business-to-business market as it moves from manufacture to delivery. For instance, a final consumer who buys foam and plastic products does so via a middleman (such as a local retailer), and the product goes through numerous transactions on the circuit's business-to-business market.. (Căescu and Dumitru, 2011).

### **2.1.2. Theories of supply chain strategies**

There are several theories and frameworks that have been proposed to guide the development and implementation of supply chain strategies. Some of the most commonly cited theories include:

#### **2.1.2.1. Bullwhip Effect**

According to the Bullwhip Effect, slight changes in demand at the retail level can result in significant changes as you move upstream in the supply chain. This happens as a result of the tendency for each level of the supply chain to overreact to changes in demand, which causes the swings to get louder as you move upstream. A number of things, such as forecasting errors, order batching, pricing changes, and rationing and scarcity gaming, can lead to the Bullwhip Effect. These elements can have a range of detrimental effects on businesses and the supply chain as a whole, such as higher inventory prices, worse service levels, and longer lead times.(Agaran et al., 2007, Li et al., 2022).

The Bullwhip Effect theory's advantage is that it emphasizes the significance of precise demand forecasting, efficient coordination and communication among supply chain participants, and the use of suitable inventory management strategies. Businesses can

more effectively predict and manage these fluctuations, which can enable them to improve their inventory and service levels, by understanding how tiny differences in demand at one level of the supply chain can result in bigger variations farther upstream. However, the Bullwhip Effect idea has flaws as well. Overcoming the Bullwhip Effect and achieving flawless coordination and information sharing among all supply chain participants can be challenging. (Agaran et al., 2007, Li et al., 2022)..

#### **2.1.2.2.Transaction cost economy/analysis**

A paradigm known as the "transaction cost economy" or "analysis" contends that the price of a transaction within a supply chain can significantly affect how well a business performs. Several researchers have explained this idea, including.(Sarkis et al., 2011, Ketchen Jr and Hult, 2007, Lavassani and Movahedi, 2010)

This theory contends that firms can enhance organizational performance by reducing supply chain transaction costs. Costs related to contracting, monitoring, and enforcing agreements amongst supply chain participants are included in transaction costs. The experts claim that it fundamentally focuses on total costs, whether in buying or selling the things, rather than just transaction costs. The supply chain's participants' interpersonal relationships are not given much consideration.(Lavassani and Movahedi, 2010, Ketchen Jr and Hult, 2007). Ketchen Jr and Hult (2007) claim that organizations can perform better by reducing supply chain transaction costs and concentrating on total costs, which include both purchasing and selling costs.. Sarkis et al. (2011) imply that businesses can increase performance by reducing supply chain transaction costs and concentrating on total costs, which include both purchasing and selling costs.. Hitt (2011) Additionally, it contends that businesses can enhance their performance by reducing supply chain transaction costs and concentrating on total expenses, which include both purchasing and selling prices.

#### **2.1.2.3.Agency theory**

According to the framework of agency theory, the interaction between the principal, or organization, and the agent, or supplier, can significantly affect how well the supply chain functions. The theory of agency aims to comprehend the issues brought about when one party acts as an agent on behalf of another, the principle. There are two sides to agency: the activities and issues involved in finding and offering "acting for" services (the agent side), and the activities and issues involved in directing and correcting agent actions (the

principal side). It frequently does not pay the principal (or the agent) to insist on, or offer, flawless agency because all actions and corrections have costs.(Mitnick, 2015)

This theory contends that organizations can enhance their supply chain performance by coordinating the interests of the principal and the agent. This can be accomplished by leveraging cultural competition and prizes to grab the agents' attention and take advantage of their skills and resources.(Panda and Leepsa, 2017).

Ketchen Jr and Hult (2007) indicate that businesses can enhance their performance by aligning their interests with those of their suppliers and attracting suppliers' attention through cultural competition and rewards. Halldorsson et al. (2007) proposes that businesses can increase their performance by aligning their interests with those of their suppliers and attracting suppliers' attention through cultural competition and rewards.

#### **2.1.2.4. Resource dependent theory**

According to the resource dependence theory, an organization's performance may be significantly impacted by how much it depends on outside resources to survive and succeed.(Delke, 2015). RDT views an organization as an open system that is dependent on external environment contingencies, and its central tenet is to ensure organizational survival by avoiding any scenario of uncertainty and dependency (Pfeffer and Salancik, 1978),

However, managers can take a number of steps, where the idea of power plays a key role, to lessen environmental dependence and uncertainty. having executive successions, political actions, board composition and structuring, joint ventures, mergers and acquisitions, and other actions as opposed to each other (Hillman et al., 2009),. According to literature, RDT offers a paradigm for how organizational actions might minimize uncertainty, leading to a more stable supply market, based on the idea that the supply market is fundamentally unstable.(Handfield, 1993)

This idea contends that by creating a mutually reliant relationship with the supply chain partners, businesses can enhance organizational performance. Companies can increase their productivity, innovation, and overall success by relying on one another for resources and knowledge (Ketchen Jr and Hult, 2007).

#### **2.1.2.5. Institutional theory**

Institutional theory is a theoretical framework that enables researchers to identify and examine influences that support the survival and legitimacy of organizational practices. These influences include things like culture, the social environment, regulation (including the legal environment), tradition and history, as well as economic incentives, while also acknowledging the importance of resources.(Glover et al., 2014). Institutional theory has traditionally focused on how groups and organizations can strengthen their positions and legitimacy by adhering to the norms and rules of the institutional environment. Examples of these rules and norms include regulatory structures, governmental agencies, laws, courts, professions, and scripts as well as other societal and cultural practices that exert conformance pressures.(DiMaggio and Powell, 1983, Meyer and Rowan, 1977)

This idea states that organizations can enhance their organizational performance by coordinating their actions with the environmental influences and social norms. These pressures can come from a variety of sources, including as laws, regulations, and cultural norms, as well as from important stakeholders like consumers, suppliers, and investors. DiMaggio and Powell (1983) claim that organizations may perform better by sharing organizational recipes with their supply chain partners and by coordinating their actions with the external constraints and societal norms of their environment.

#### **2.1.2.6.Stakeholder theory**

According to the paradigm of "stakeholder theory," an organization's performance and decision-making may be significantly impacted by the goals and behaviours of its many stakeholders.(Wittke, 2014).

Stakeholder theory was subsequently developed as a strategy for strategic management and is currently found in a vast array of managerial publications that contribute to a variety of business knowledge areas (Donaldson and Preston, 1995) Stakeholder theory also incorporates elements of management, normative, descriptive, and instrumental theory. the scholars claim that its core is normative, while Freeman (1999) argues that it is built on instrumental premises. Descriptively, organizations are claimed to have stakeholders. From an instrumental perspective firm that consider their stakeholders' interests are said to be more successful than those that do not (Freeman, 1999). According to Donaldson and Preston (1995). The normative approach is a discipline that studies because businesses should take their stakeholders into account.

This idea contends that organizations can enhance performance by controlling stakeholder expectations and interests. Shareholders, employees, customers, suppliers, and the community are examples of groups or individuals who have an interest in or concern for a firm. Additionally, businesses have a moral obligation to manage the interests of their stakeholders because doing so will help them build a more resilient and prosperous company.(Sarkis et al., 2011, Freeman, 1999).

#### **2.1.2.7. System theory**

According to the concept of systems theory, the interconnectedness of organizational activities can significantly affect the effectiveness of the supply chain.(Ashmos and Huber, 1987, Sarkis et al., 2011).

This idea contends that by controlling the interconnectedness of their activities inside the supply chain, businesses can enhance their organizational performance. This includes being aware of the interactions and feedback loops that take place between suppliers, manufacturers, distributors, and customers, among other supply chain participants. Lavassani and Movahedi (2010) assert that businesses may perform better by controlling the interconnectedness of their activities throughout the supply chain and putting an emphasis on efficiency and process management. Ashmos and Huber (1987) say that by concentrating on efficiency and process management, as well as by understanding and controlling the interrelated nature of their activities within the supply chain, businesses may improve their performance.

#### **2.1.3. The importance and Objectives of Supply Chain Management**

The goal of the supply chain is to increase the profitability of the entire supply chain, or the gap between customer revenues and total supply chain costs.

Supply chain management (SCM) is a crucial task that is essential to every organization's success. From the sourcing of raw materials to the delivery of completed items to customers, it entails the coordination and control of all operations involved in the production and delivery of goods and services.

The main objectives of SCM are to increase productivity and efficiency, reduce expenses, improve customer service, increase adaptability and responsiveness, encourage collaboration, reduce risks, and advance sustainability. In order to do this, bottlenecks must be located and removed. Lead times must also be shortened and the flow of supplies

and information must be improved. By doing this, businesses can decrease the time and expense needed to bring their products to market, which will boost their competitiveness(Horvath, 2001)..

Cost savings are just another advantage of SCM. By making the best use possible of resources like labor, raw materials, and transportation, this can be accomplished. By choosing the most economical suppliers for their resources, getting better deals, and employing more effective production methods, businesses can cut expenses. Additionally, firms can lower the amount of inventory they need to keep by lowering lead times, which lowers costs.

Enhancing customer service is one of SCM's other key responsibilities. This entails making certain that the goods are accessible when and where they are required. Companies can accomplish this by putting in place inventory control systems that enable them to monitor product availability in real-time and by collaborating closely with clients to comprehend their requirements and preferences. Organizations can forge enduring relationships with customers and raise customer satisfaction by offering high-quality goods and services that satisfy customer needs.

The expansion of flexibility and responsiveness is another advantage of SCM. This is accomplished by having the ability to quickly respond to changes in demand and market circumstances. Companies can do this by putting in place adaptable manufacturing procedures, solidifying their connections with suppliers, and setting up inventory control procedures that enable them to react rapidly to changes in demand.

In the commercial sector, efficient and quick collaboration and communication amongst all parties would be crucial. To guarantee that everyone is working toward the same objectives, this calls for close collaboration with suppliers, clients, and other partners. By fostering collaboration and communication, organizations can reduce the risk of misunderstandings and delays, and build strong, long-term relationships that benefit everyone involved.

SCM also contributes to sustainability and the reduction of risk. This is accomplished by spotting and resolving possible issues before they arise. Companies may accomplish this by putting in place risk management systems that enable them to recognize and assess potential hazards, and by collaborating closely with suppliers and clients to reduce those risks. Organizations can lessen the possibility of supply chain interruptions and safeguard

their brand by avoiding risks. The use of environmentally friendly production methods, the adoption of sustainable sourcing procedures, and strong collaboration with suppliers and clients can help businesses achieve this. Organizations can lessen their environmental effect and cultivate a more responsible reputation by supporting sustainability.

#### **2.1.4. Strategic SCM and Operational SCM**

The majority of firms create a supply chain strategy based on their overall strategy and work with SCM facilitators to put it into practice and accomplish organizational goals.(Houlihan, 1985). Designing and operating an organization's supply chain in a way that is consistent with its entire business strategy is known as strategic SCM. It is a long-term strategy that aims to gain a competitive edge by streamlining every step of the supply chain, from the acquisition of raw materials to the distribution of finished goods to customers. Making decisions on the supply chain's overall design, including the selection of suppliers, the placement of production facilities, and the distribution networks used to reach clients, is a part of strategic supply chain management.(Stadtler, 2008).

On the other side, operational SCM is the process of overseeing the daily operations of the supply chain. It focuses on making sure that the supply chain is operating effectively and smoothly and that it can meet consumer requests quickly and affordably. Managing tasks like purchasing, inventory control, logistics, and production scheduling are all part of operational SCM.(Stadtler, 2008).

An organization's success depends on both strategic and operational SCM. While operational SCM is crucial for ensuring that the supply chain can meet customer expectations in a timely and cost-effective manner, strategic SCM is crucial for developing a competitive edge. Long-term success is more likely to be attained by organizations that can successfully balance these two methods. In contrast to operational SCM, which is more reactive and focused on resolving immediate problems, strategic SCM takes a proactive approach that involves forecasting the future and making decisions based on what would be best for the firm over the long term.(Stadtler, 2008).

Furthermore, Ramanathan and Gunasekaran (2014) discover that collaborative execution benefits from collaborative planning and decision-making. In supply chain cooperation, parties arrange manufacturing and distribution in concert with one another. In a supply



chain, decisions about special offers, discounted prices, and the launch of new products are usually made by all of the partners.. According to Ramanathan and Muyldermans (2010) such collaborative decision-making improves the implementation of sales plans in retail stores.

### **2.1.5. Supply chain strategies SCS**

Supply Chain Strategies (SCS) refer to the plans and actions taken by organizations to optimize the flow of goods and services from suppliers to customers. The goal of SCS is to improve efficiency, reduce costs, and increase customer satisfaction. There are several types of SCS, including lean, agile, and hybrid strategies. Lean strategies focus on reducing waste and increasing efficiency in the supply chain.

#### **2.1.5.1. Lean strategy**

The concept of a "lean" strategy in the supply chain refers to the implementation of Lean Thinking principles and practices to reduce waste, improve efficiency, and increase overall effectiveness. The goal of a lean supply chain strategy is to create value for customers while minimizing waste and maximizing efficiency(Christopher and Towill, 2001).

The detection and removal of waste is one of the main tenets of a lean strategy. Waste can take many different forms, including excess production, inventory, waiting, pointless motion, excessive processing, flaws, and unutilized talent. A business can increase productivity and cut expenses by locating and removing trash. The emphasis on continual improvement is a key tenet of a lean strategy. This implies that a business should make an ongoing effort to enhance its procedures and operations. This can be accomplished by utilizing instruments like Kaizen, a Japanese phrase for "improvement" or "change for the better." Kaizen is a continuous improvement method that engages all staff members in locating and resolving issues.(Qrunfleh and Tarafdar, 2013).

In addition to identifying and eliminating waste and focusing on continuous improvement, a lean strategy also involves the implementation of "pull" rather than "push" systems. In a push system, products are produced and shipped to customers based on forecasted demand. In contrast, a pull system is based on actual customer demand. By implementing

a pull system, a company can reduce inventory levels and increase efficiency(Christopher and Towill, 2001).

Just-in-time (JIT) inventory systems are another component of a lean strategy. Materials are provided and utilised in JIT, a form of inventory control, as soon as they are required for production. This improves productivity and lowers inventory levels. The lean strategy's focus on teamwork and communication is another crucial component. Throughout the supply chain, eliminating waste and increasing efficiency depend on cooperation and communication. Including suppliers, customers, and internal teams in the process allows a business to more effectively identify and address issues.(Qrunfleh and Tarafdar, 2013, Christopher and Towill, 2001).

#### **2.1.5.2.Vertical integration strategy:**

With vertical integration, a corporation can increase its control over the whole supply chain, from raw materials to finished goods. This can be done either through internal company activities or mergers and acquisitions. A corporation can boost productivity and cut expenses by managing the whole supply chain. The ability to manage the quality of a company's products is one of vertical integration's key benefits. A corporation may guarantee that the raw materials are of the highest quality and that the production process is effective by controlling the whole supply chain. Additionally, a business can guarantee that its items reach the appropriate clients at the appropriate time by managing their distribution.(Guan and Rehme, 2012).

Vertical integration can also aid a business in cost-cutting. A corporation can negotiate better pricing with suppliers and lower the expenses of transportation and distribution by managing the whole supply chain. A business can also lessen the risks related to depending on a single supplier by managing the complete supply chain. Vertical integration does have some disadvantages, though. The cost of acquiring the necessary resources and infrastructure is one of the biggest drawbacks. As a corporation may be less likely to invest in new technologies or processes if it already controls the whole supply chain, vertical integration might also result in a lack of innovation.(Li and Chen, 2020).

#### **2.1.5.3. Horizontal integration strategy:**

Horizontal integration is a supply chain strategy in which a company expands its control over multiple stages of production in the same industry. This can be achieved through

mergers and acquisitions, or through the company's own internal operations. By controlling multiple stages of production, a company can increase its efficiency and reduce costs(Naik et al., 2010).

The ability to manage the entire production process is one of the key benefits of horizontal integration. A business may guarantee that the production process is effective and that the products are of excellent quality by managing a number of production phases. Additionally, a business might lessen the risks of with relying on a single supplier by managing various production steps.(Gordon and Maurice, 2015).

Additionally, horizontal integration might assist a business in cost-cutting. A business can negotiate better rates with suppliers and lower the expenses of transportation and distribution by managing several phases of the production process. Additionally, a business can lower the risks connected to relying on a single market by managing several stages of the production process. But there are certain disadvantages to horizontal integration as well. The cost of acquiring the necessary resources and infrastructure is one of the biggest drawbacks. As a corporation may be less likely to invest in new technologies or processes if it already controls numerous stages of production, horizontal integration might also result in a lack of innovation.(Naik et al., 2010).

#### **2.1.5.4. Diversification strategy:**

Diversification is a supply chain strategy in which a company expands into new markets or industries to reduce the risk of relying on a single product or market. This can be achieved through mergers and acquisitions, or through the company's own internal operations. By diversifying its operations, a company can increase its efficiency and reduce costs(Gattorna, 1998).

The ability to disperse the risks associated with relying on a single product or market is one of the key benefits of diversification. A business can lower the risks involved with relying on a single supplier or market by diversifying its operations. Additionally, a business can boost productivity and cut costs by diversifying its sources of income. Diversification can also aid a business in cost-cutting. A business can negotiate better pricing with suppliers and lower the cost of transportation and distribution by diversifying its activities. A corporation can also lessen the risks associated with relying on a particular market by diversifying its operations.(Whitney et al., 2014).

Diversification has some disadvantages, though. Because a business must invest in new markets and industries, it can be expensive to implement. Additionally, if a company is spread across several markets and industries, it may be less able to concentrate on a particular market or product, which can result in a lack of focus as a result of diversification. Additionally, diversification can result in a lack of expertise because a business might not have the resources or the necessary expertise to successfully operate in new markets or industries.(Gattorna, 1998).

#### **2.1.5.5. Cost leadership strategy:**

Cost leadership is a supply chain strategy in which a company focuses on reducing costs in order to be able to offer products at lower prices than competitors. This can be achieved through various means, such as negotiating better prices with suppliers, reducing logistics costs, or increasing efficiency in production. By reducing costs, a company can increase its competitiveness and attract more customers. One of the main advantages of cost leadership is that it allows a company to offer products at lower prices than competitors, which can be a major selling point for customers. A corporation can also boost profitability and reinvest in other parts of the business by cutting costs. Cost leadership can assist a business in lowering the risks related to depending too much on a particular product or market. A corporation can lower the risks involved with relying on a particular market or product by lowering expenses, improving its competitiveness, and gaining more clients.(Amit, 1986).

Cost leadership can have certain disadvantages, though. One of the key drawbacks is that it can prevent innovation because a business may be less likely to invest in new technology or procedures if it is primarily concerned with cutting expenses. Cost leadership can also result in a lack of difference since a business may not be able to offer distinctive goods or services that are difficult for rivals to imitate.(Gattorna, 1998, Amit, 1986)..

#### **2.1.5.6.Differentiation strategy:**

A corporation uses differentiation as a supply chain strategy to command a higher price by providing distinctive goods or services that are difficult for rivals to imitate. This can be accomplished in a number of ways, such by creating a strong brand identity, inventing breakthrough technology, or providing exceptional customer service. A business can become more competitive and draw in more clients by setting itself apart from rivals. Differentiation enables a business to charge more for its goods or services. A corporation

can also boost its profitability and reinvest in other parts of the business by setting itself apart from rivals. A corporation can lower risks by differentiating itself from competitors by focusing on multiple markets or products. A business can lower the risks associated with reliance on a single market or product by attracting clients who are prepared to pay a premium price by providing distinctive goods or services.(Hilletofth, 2012)t.

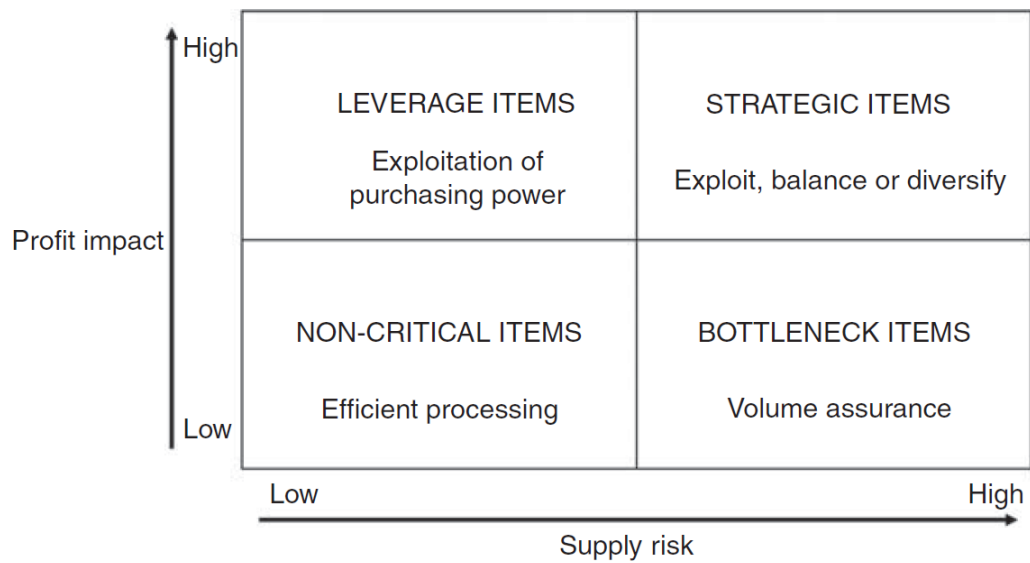
However, there are also some drawbacks to differentiation. One of the main disadvantages is that it can be costly to implement, as a company must invest in new technologies or processes in order to differentiate itself from competitors. Additionally, differentiation can lead to a lack of focus, as a company may be less able to concentrate on a specific market or product if it is focused on differentiating itself from competitors(Gattorna, 1998, Hilletofth, 2012).

In conclusion, Supply Chain Strategies (SCS) is a vital aspect of business operations as it helps companies optimize the flow of goods and services, improve efficiency, reduce costs, and increase customer satisfaction. There are several types of SCS, including lean, agile, and hybrid strategies. Companies can also choose to implement a vertical or horizontal integration strategy to gain more control over their supply chain and increase their competitiveness in the market.

#### **2.1.6. Kraljic's Matrix for product categorization**

A thorough portfolio approach was introduced by Kraljic (1977, 1983) as a tool for seasoned buyers. Professional buyers could effectively manage suppliers by making the best use of the capabilities of various suppliers with the aid of the portfolio matrix (Nellore and Söderquist, 2000). A component of Kraljic's strategy is the creation of two portfolio matrices. The first matrix divides a company's purchased goods into two categories based on profit impact and supply risk. There are two possible values for each dimension: "low" and "high." It produces a 2x2 matrix with four quadrants. Kraljic identifies various "main tasks" for the company in its interaction with its supplier based on the category. Additionally, he outlines the data needed and the organizational level of decision-making for each category.

Figure 1 Kraljic model (1983), with the different items concerning risk and value.



Source: Balchin et al. (2019)

Non-critical items have low risk and low value, leverage items have low risk and high value, bottleneck items have low value, but high risk, and strategic items have high risk and high value. In supply chain strategies, product categories are often classified into three main categories: low-volume/high-variety, high-volume/low-variety, and high-volume/high-variety (Tobias, 1991).

Low-volume/high-variety products are those that have a low demand and a high number of different variations. These products must be sourced and managed differently because they are frequently customized or one of a kind. For these products, businesses may employ a "make-to-order" method, in which they only produce what the market demands. These goods may be essential to the success of the organization yet have a low purchase volume; hence the Kraljic matrix can be used to classify them as strategic importance items. This could assist in guiding the business' make-to-order strategy for these goods.

High-volume/low-variety products are those that have a high demand but only a few variations. Usually standardized, the demand for these goods is steady. Companies may produce and stock these products ahead of client demand as part of a make-to-stock strategy. These goods can be classified as leverage items using the Kraljic matrix because

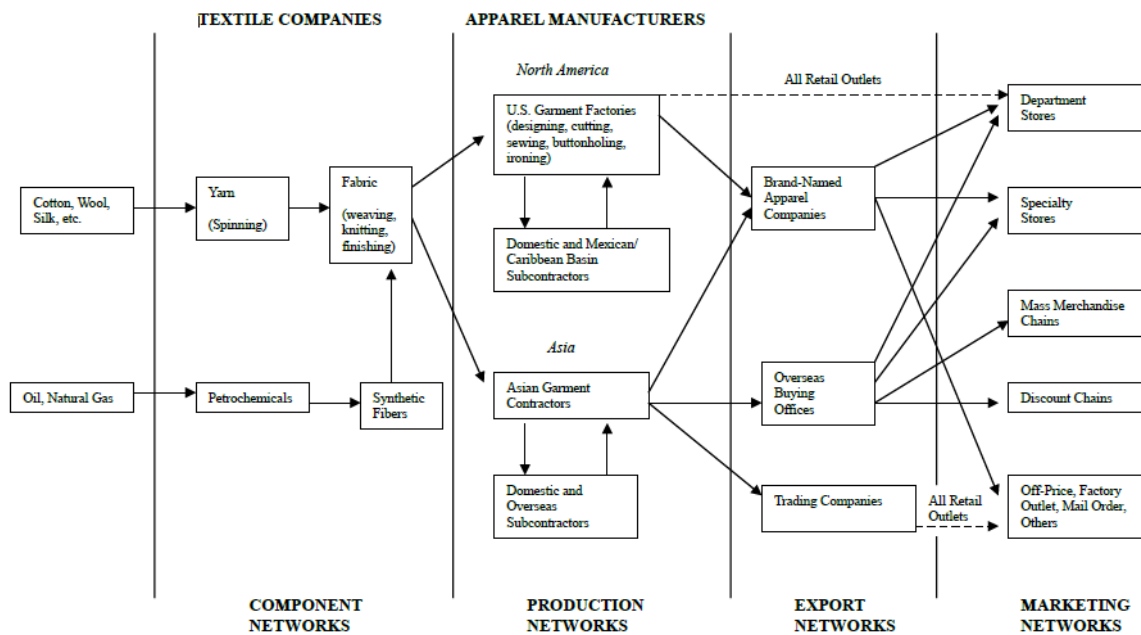
they have a large purchase volume but poor profit margins. This can assist in guiding the business's make-to-stock strategy for these goods and cost management.

Items with a high demand and numerous versions are classified as high-volume/high-variety products. The food and beverage business as well as other fast-moving consumer goods (FMCG) industries frequently carry these products. Businesses may opt to manage these goods' inventory using a hybrid technique that combines the make-to-order and make-to-stock methods. The Kraljic matrix can be used to categorize certain products as having strategic relevance because they are both essential to the company's success and in high demand. This can help the company create a hybrid strategy for these goods that balances production and inventory management.

### **2.1.7. Global value chain for clothing manufacturing**

Five major segments make up the structure of the apparel value chain: first raw material supply, second, the provision of components, such as yarns and fabrics (natural and synthetic fibres) manufactured by textile firms; third, production networks of garment factories, including their domestic and foreign subcontractors; fourth, export channels set up by trade intermediaries; and finally, retail marketing networks. Over time, there have been continual shifts in the location of both the most significant apparel exporting countries and regions, as well as their main end markets (Gereffi & Frederick, 2010; Gereffi & Memedovic, 2003, p. 5).

Figure 2 The Apparel Global Value Chain



Source: Gereffi & Memedovic, 2003.

By segmenting suppliers into tiers, companies that produce physical goods can better understand all of the components that go into the final product. The first tier includes the suppliers that provide the raw materials, while the second tier includes those that provide components or sub-assemblies. By categorizing suppliers into tiers, businesses can better understand which suppliers are critical to their production process and which ones can be replaced more easily. This can also help businesses identify potential risks and vulnerabilities in their supply chain.

The companies that develop and sell brand-name products have considerable control over how, when, and where manufacturing will take place, and how much profit accrues at each stage, essentially controlling how basic value-adding activities are distributed along the value chain. This control allows them to maximize their profits and maintain a competitive advantage in the market. However, this also means that they have a responsibility to ensure ethical and sustainable practices are implemented throughout the value chain.



### **2.1.8. Value chain analysis model application in the study**

The value chain is a strategic term that indicates the sequence of operations a business does to supply a product or service to clients, commencing with the procurement of raw materials and ending with the final satisfaction of the customer. It is a method for analysing and comprehending a company's internal processes and how value is produced at each stage of the procedure. The value chain model is a strategic framework that aids in analysing and identifying the supply chain operations that provide value to a firm. It encompasses all the activities involved in designing, producing, delivering, and supporting a product or service (Porter's, 1985)

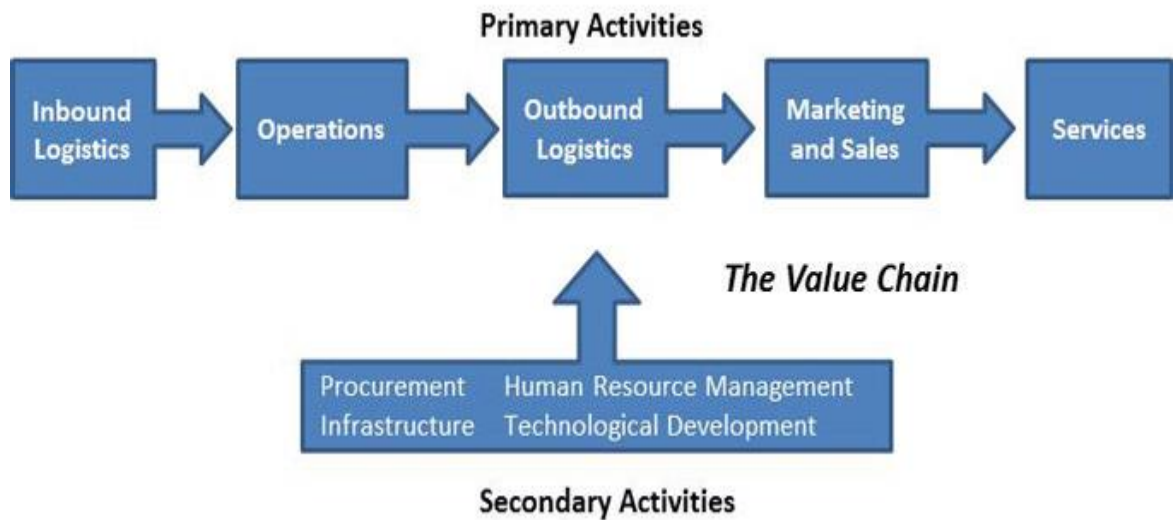
The primary activities in the value chain model include inbound logistics, operations, outbound logistics, marketing and sales, and service. These activities represent the core functions that directly contribute to the creation and delivery of the product or service. By examining each of these activities, companies can identify opportunities to optimize processes, reduce costs, and improve overall efficiency. For example, streamlining inbound logistics through efficient supplier selection and inventory management can lead to cost savings and improved responsiveness (Zamora, 2016). In the meantime, the value chain model's support activities are essential for facilitating and assisting the primary operations. The timely and cost-effective sourcing of raw materials or components is guaranteed by procurement activities, and the development of new technologies aids in utilizing creative ways to improve supply chain procedures. Both company infrastructure and human resource management ensure that the necessary talent is available to carry out supply chain tasks in an efficient manner. (Taylor, 2005). Thus, the study focused on analysing procurement management and technology development as secondary activities while covering the five primary activities.

Companies can find places where they can provide value for clients and set themselves apart from rivals by analysing the value chain. This may entail streamlining internal procedures, utilizing technology, forging strategic alliances, or improving customer service. An organization might, for instance, spot possibilities to improve service activities like warranty management or after-sales assistance.

The value chain model also highlights the significance of collaboration and integration with internal and external partners. It draws attention to how interdependent various operations are, as well as the necessity of flawless coordination to optimize value

production and reduce inefficiencies. Improved supply chain performance, lower costs, and higher customer satisfaction can all result from effective value chain collaboration. According to the Sweeney (2009) the components of the value chain in supply chain strategy is discussed as follows.

Figure 3 Primary and Secondary activities in value chain model



Sources: review of literatures(Sweeney, 2009).

### 2.1.8.1. Inbound Logistics management

Inbound logistics is crucial for supply chain management as it focuses on procuring and managing the flow of raw materials and components into the production process. Activities including supplier selection, order placement, transportation management, and inventory control are included in this component. Effective inbound logistics eliminates inventory holding costs, guarantees a consistent and timely delivery of resources, and lowers the possibility of stockouts or production halts.

The operations involved in acquiring, receiving, and storing the raw materials or components required for production are included in this component. It entails activities including choosing a supplier, placing an order, managing transportation, and maintaining inventory.

### **2.1.8.2. Operations:**

The actual production or transformation of raw materials into finished goods or services is part of the value chain's operations component. Operations must be optimized in supply chain management in order to increase productivity, cut costs, and satisfy consumer demand. This covers tasks including production, assembly, quality assurance, and equipment maintenance. Streamlining procedures ensures efficient manufacturing, reduces waste, and boosts overall output.

The conversion of inputs (raw materials or components) into finished goods or services is referred to as an operation. It entails tasks including production, assembly, packing, quality assurance, and upkeep of industrial machinery.

### **2.1.8.3. Outbound Logistics:**

Distribution of finished goods or services to clients is the main emphasis of outbound logistics. Order processing, packing, storage, transportation management, and distribution network management are all included in this component. Efficient outbound logistics is crucial for timely delivery, accurate order fulfillment, and customer satisfaction. It involves optimizing transportation routes, managing inventory at distribution centers, and ensuring on-time delivery through effective logistics coordination.

This component involves the activities required to deliver the finished products or services to customers. It includes order processing, packaging, storage, transportation management, and distribution network management.

### **2.1.8.4. Marketing and Sales:**

By generating demand and driving sales for the goods or services, marketing and sales activities are essential to supply chain management. Market analysis, advertising, pricing, distribution channel management, sales force management, and customer relationship management are all included in this component. Identifying consumer demands, focusing on the correct market segments, raising brand awareness, and maintaining solid customer connections are all made possible by effective marketing and sales methods.

Promotion of the good or service, determining consumer needs, and creating demand are all tasks that fall under the purview of marketing and sales activities. Market analysis, advertising, pricing, distribution channel management, sales force management, and customer relationship management are all included in this component.

#### **2.1.8.5. After sale Service:**

The service component of the value chain is primarily focused on after-sales operations and customer support. Providing excellent customer service in supply chain management is essential for keeping current customers happy and luring in new ones. Installation, repair, maintenance, warranty management, spare parts management, customer assistance, and addressing suggestions or complaints are all included in this. A quick response to client enquiries, effective handling of returns or repairs, and ongoing customer feedback-based improvement are all hallmarks of effective service management.

After-sale customer support is covered by the service component. Dealing with customer feedback and complaints, customer support, warranty management, spare parts management, installation, repair, and maintenance are all covered.

#### **2.1.8.6. Procurement:**

Procurement is crucial to supply chain management since it involves identifying, evaluating, and managing suppliers. This component ensures the accessibility of excellent materials or services required for production. Examples of efficient procurement procedures include supplier assessment, contract negotiations, supplier relationship management, and supply chain risk management.

Aspects of the procurement process include finding and selecting suppliers, negotiating contracts, and managing supplier relationships. This section aims to ensure the rapid availability of top-notch materials or services required for the value chain.

#### **2.1.8.7. Technology Development:**

Technology development uses cutting-edge technologies and creative solutions to enhance supply chain management. Process automation, data analytics, and the use of technologies like IoT, AI, or blockchain are all part of this component's research and

development activities. Companies may improve supply chain visibility, increase forecasting accuracy, optimize inventory management, and enable effective data-driven decision-making by adopting technology.

This part of the supply chain is focused on R&D initiatives, technical innovation, process automation, and using technology to improve supply chain activities. Activities including product creation, process improvement, data analytics, and implementing cutting-edge technology are included.

## **2.2. Empirical review**

Supply chain strategy empirical studies can assist businesses in identifying and implementing efficient supply chain methods that increase effectiveness, lower costs, and increase customer satisfaction. These studies can provide light on the most beneficial methods and successful tactics for streamlining the delivery of products and services from suppliers to consumers.

Based on the report of Li et al. (2006) One of the most important ways that supply chain efforts can impact an organization's success is through cost reductions. By effectively controlling the flow of goods and services, organizations can reduce costs for inventory, transportation, and other logistics. For instance, just-in-time (JIT) inventory management can help companies reduce the amount of inventory they need to keep on hand, which can save storage and handling costs. Similar to this, implementing transportation management systems (TMS) can help companies streamline their delivery processes and reduce their transportation costs.(Li et al., 2006).

According to Elmuti (2002), enhanced efficiency is a significant additional method that supply chain strategies can influence an organization's performance. Organizations that use effective supply chain management can raise the efficiency and accuracy of their processes, which can increase production and boost customer satisfaction. Implementing advanced planning and scheduling systems (APS), for instance, can assist businesses in streamlining their production plans and cutting lead times. Additionally, automating supply chain procedures with electronic data interchange (EDI) can help businesses eliminate errors and increase data transmission speed.

according to the evidence from Turkey by Tokatli and Kızılgün (2009) their clients' benefit, clothing companies deal with both fashion and everyday items. Based on the volume of production, level of style variance, and frequency of style changes, basic and fashion goods can be categorized. For instance, it is difficult to predict demand for fashion items because to their high level of fashion, seasonality, and style changes.

Based on the report by Lam and Postle (2006b) done on Textile and apparel supply chain management in Hong Kong, the garment sector faces a variety of special issues in terms of supply chain management. The supply chain's sheer complexity, which includes a variety of stages and a sizable number of suppliers, manufacturers, and retailers, is one of the biggest obstacles. Due to its complexity, it can be challenging to efficiently manage the flow of information and goods, which can result in problems including delays, stockouts, and overproduction.

According to a case study in Bangladesh garment industry, the drive to keep costs down is another important issue that the clothing business must deal with. Numerous reasons, such as the fierce competition within the business and the requirement to maintain low costs in order to remain competitive, contribute to this pressure. This pressure may result in a race to the bottom in terms of salaries and working conditions, which could be harmful to both the environment and employees.(Islam and Liang, 2012).

The study reported that sustainability is another issues of supply chain. The usage of water and energy, the production of trash, and the emission of pollutants are just a few of the ways that the sector has a large negative influence on the environment. A considerable social impact is also present, since many garment workers endure subpar working conditions and low pay..(Shen et al., 2017)

According to research, cost-cutting tactics in the clothing sector can be successful, especially when they concentrate on sourcing, logistics, and production. (Chen and Paulraj, 2004). However, cost-cutting measures may also have unfavorable effects, such as deteriorating working conditions and the environment.(Barrientos and Smith, 2007)

Ethiopian exporters have faced a number of difficulties despite the surge in exports under the AGOA framework and the incentive offered by the Ethiopian government. Managers claim that because raw materials are scarce, exporters must import from overseas to refine their products before reexporting. This encouraged businesses to just get involved in the

CMT business in Ethiopia. Other nations, like Kenya, have benefited from AGOA because they collaborate and promote their nation first (Etenesh E.,2018).

Higher level SCMP enablers were identified in the Ethiopian Textile and Garment Factories study by Nurizman and Singla (2017), including supportive top managers for supply chain management practices, pro-change employees, pro-change customers, respecting and collaborative employees, and cross-experience managers that will lead to higher level SCM practices (better strategic alliance with suppliers and customers, willingness to share strategic information across supply chain members, timely and adequately). The study also demonstrates that the presence of SCMP inhibitors (such as short-term thinking, local optimization, functional silos, a lack of management support for supply chain implementation, a lack of supply chain professionals, etc.) will negatively impact the success of a firm's SCM practices.

Also, based on another study done in Addis Ababa by Ejigu (2018), the relationships between the clothing factories and their clients, suppliers, and customer service are poor. The main issues with Ethiopian garment factories' supply chain integration are management's inadequate knowledge of the SCM and manufacturing, supply and demand uncertainties, which prevent efficient adoption of SCM.

### 2.3. Conceptual framework

The strategies and concepts within supply Chain Management (SCM), which is a holistic approach to controlling the flow of goods and services. This conceptual framework's main goal is to give readers a thorough knowledge of value chain dynamics within the study's particular setting. Examining the value chain will make it possible to more thoroughly explore the variables that affect value generation, cost effectiveness, and supply chain performance in general. The framework will act as a manual for analysing the major value chain elements and their interrelationships, enabling a more comprehensive comprehension of the supply chain strategy within the selected sector or environment.

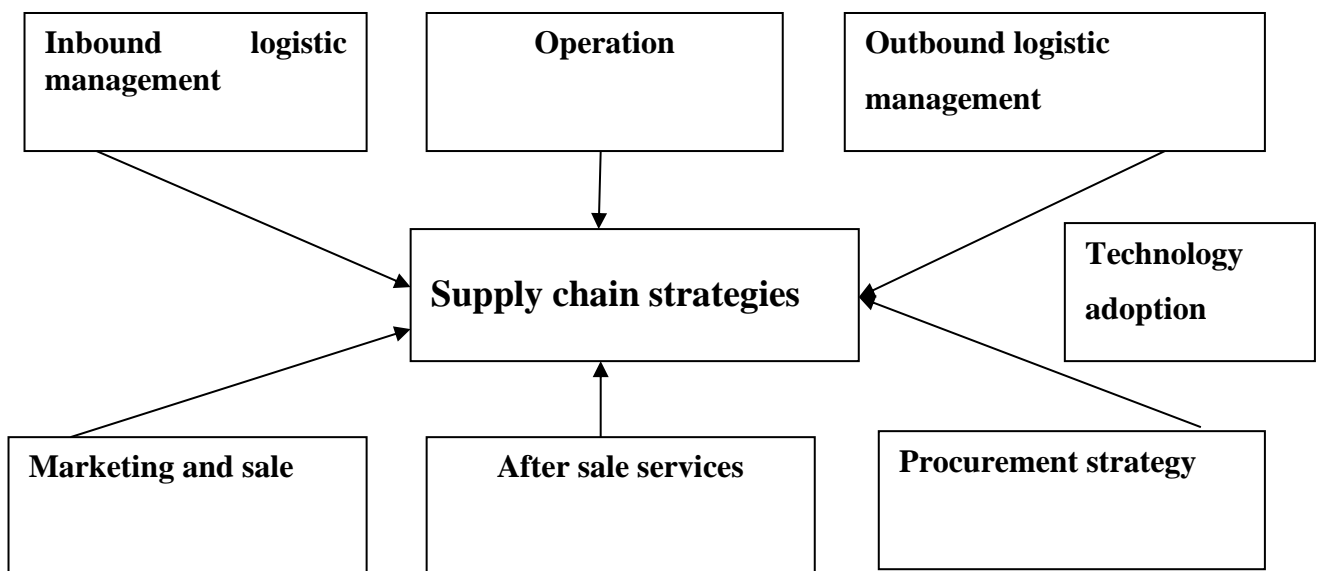


Figure 4 Value chain activities in value chain model

Sources: review of literatures(Sweeney, 2009).



## **CHAPTER THREE**

### **3. RESEARCH METHODS AND METHODOLOGY**

#### **3.1. Study area**

The Hawassa Industrial Park (HIP) is an eco-industrial park in Hawassa, Sidama Region, Ethiopia. The Park, which was officially opened on July 13, 2016, is a representation of Ethiopia's leadership in the textile, clothing, and garment manufacturing industries. The industrial park created 130 hectares of land, and the first phase might grow up to 400 hectares of land. HIP generated 20 million dollars in exports in the first nine years, the largest capacity when compared to Bole Lemi Industrial Park (32 million dollars). Compared to Bole Lemi Industrial Park, which has 10 enterprises in the Eastern Industry Zone, the industrial park is an eco-industrial park with 22 firms registered for clothing, apparel, and textile businesses to exclusively focus on export, Hawassa Industrial Park features a zero liquid discharge (ZLD) facility. The Park includes 37 sheds altogether. Ethiopia's Hawassa Industrial Park is home to 16 businesses at the moment. These businesses specialize in producing a range of clothing items, including t-shirts, jeans, jackets, and other clothing. According to the Ethiopian Investment Commission, the businesses in Hawassa Industrial Park benefit from the government's tax incentives, increased infrastructure, and the region's supply of cotton and other materials (Sutton, 2019).

#### **3.2. Research design**

Descriptive design was employed in this study to achieve the aforementioned objectives. The goal of a descriptive research design is to systematically gather data to describe a phenomenon, circumstance, or population. More specifically, it assists in providing answers to the research problem's what, when, where, and how questions as opposed to its why (Creswell, 2003).

#### **3.3. Research approach**

The research approach for this study is primarily involve qualitative methods. The objective, nature, focus, and research questions are all taken into consideration while choosing a research approach (Bechhofer and Paterson, 2012). Qualitative research using value chain model approach therefore is used to assess the supply chain strategies used by

Hawassa industrial park companies in order to fulfill the study's objectives and respond to the research questions.

The value chain model is used because it provides a comprehensive and detailed understanding of a company's operations and how they contribute to the creation of value for the company and its customers. The value chain model is a fundamental concept in supply chain strategy that provides a structured framework for analyzing and understanding the various activities involved in creating and delivering value to customers. To do this, quantitative data was also collected to integrate and summarize results for the study participants.

### **3.4. Study population**

According to Ayala and Elder (2011) a target population is referred to be a particular group of individuals or item for which inquiries can be made or observations made in order to provide the necessary data structures and information. Hawassa industry park have 14 garment vendors, 1 textile mill & 4 trim supplying factories. Garment Vendors that directly exporting their goods to US & other markets were selected to set target population, population consists of managers or department heads from various departments within the industrial park's apparel companies'. Each company's managers who directly influence supply chain management procedures are the intended respondents.

### **3.5. Source of data**

The primary and secondary data were used to perform the study and gain access to supply chain management. To fulfill the study's goal, the necessary data are gathered using both primary and secondary data gathering techniques. The investigator conducts survey & interviews to gather the primary sources of data. Secondary sources of data collected from prior research on SC strategy and Ethiopian textile and garment-related literature. Moreover, in this study document analysis was conducted on the company's product type, raw material annual consumption, capacity etc.

### **3.6. Sampling method and sample size**

Currently, in Hawassa industry park there are 14 garment vendors, 1 textile mill & 4 trim supplying factories. Garment Vendors that directly exporting their goods to US & other markets were selected. For survey part, participants were included from each department of the companies uniformly. Thus, a total of 60 participants were selected from marketing

and sales department, procurement department, inventory department, manufacturing and operation department and main and supply managers of the apparel companies included. In this study, the researcher attempted to collect accurate data by locating respondents who were knowledgeable about the subjects covered in their respective organizations hence, survey results has been instrumental on selecting appropriate candidate for further interview.

For qualitative data collection, purposive sampling technique was used Purposive sampling method is used when elements are selected due to a specific purpose, usually because of their unique position (Ayala and Elder, 2011). Therefore, for in-depth interview a total of 18 participants were included; four sales manager, four procurement managers, four inventory manger and two manager(business), four manufacturing and operational managers and other stakeholders were selected.

### **3.7. Methods of data collection**

With the intention of identifying appropriate candidate for in depth interview and to summarize study findings, the researcher will use quantitative data collection method using five-point Likert scale. Quantitative data was collected using questioner on the company's value chain activities to assess the practice in each of the component of supply chain strategy. Therefore, structured questionnaires were distributed to the selected sample of participants at apparel companies at Hawassa industrial park. Additionally, document review was conducted to explore the companies overall process of supply chain. Product type, types of raw material source, consumption of raw material, etc were identified using document review.

While qualitative data was collected through in-depth-Interview open ended questions to have in-depth data on SCM hence note was taken to capture qualitative data accordingly. In-depth interviews were conducted with selected business managers, procurement manager, inventory manager, manufacturing and operation department, marketing manager using interview guides. These interviews allow for detailed discussions on specific issues related to supply chain strategy at the companies.

### **3.8. Data analysis and presentation**

Data collected, reviewed, and summarized using descriptive statistics such as frequency, percentage, mean, and standard deviation. Qualitative data was analyzed using thematic analysis. Thematic analysis is a technique for studying qualitative data, such as transcripts of interviews, survey results, or written texts. In thematic analysis, patterns, themes, or subjects that arise from the data are sought after. The analyses' findings outlined in the presentation's outcomes, along with their consequences.

## CHAPTER FOUR

### 4. RESULT AND DISCUSSION

#### 4.1. Introduction

The result consists of both quantitative and qualitative data finding. In this study, out of the total questioner of 65 distributed to the study respondents, 60 were returned back with response rate of 97.99% in survey, while a total of 18 participants were included for in-depth interview four sales manager, four procurement managers, four inventory manger and two manager(business), four manufacturing and operational managers were selected. Descriptive report was generated using quantitative data and thematic analysis was used for qualitative data. The result and discussion section included six section such as socio demographic characteristics and components of supply chain strategies. The result and discussion are made as well as discussion was integrated with the findings.

#### 4.2. Socio-demographic characteristics

Out of the total study participants, 68.3% were male and more than one-third 36.7% were between 24-34 years old, Regarding educational status, half of (48.3%) had a bachelor's degree and 30.0% had a master's degree.

Table 1: Socio demographic characteristics, apparel companies, Hawassa industrial park, 2023

Variables	Frequency	Percentage
<b>Sex</b>		
Male	41	68.3
Female	19	31.7
<b>Age</b>		
<24 years	8	13.3
24-34 years	22	36.7
35-44 years	16	26.7
>44 years	14	23.3
<b>Education</b>		
Diploma	8	13.3
Bachelor	29	48.3
Masters	18	30.0
PhD	5	8.3

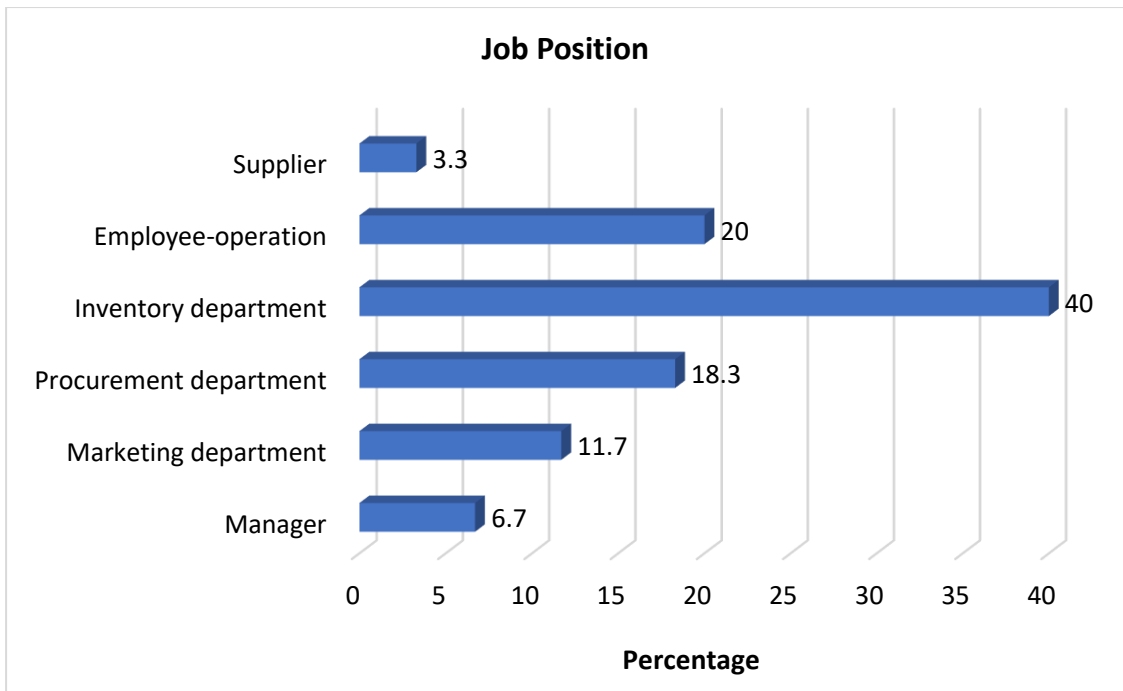


Figure 5: Job position, apparel companies, Hawassa industrial park, 2023

Based on the figure 2 above, participants were also categorized based on their positions within the company. 6.7% were managers (4), 11.7% were in the marketing department (7), 18.3% were in the procurement department (11), 40.0% were in the inventory department (24), 20.0% were employees in operations (12), and 3.3% were supply managers (2).

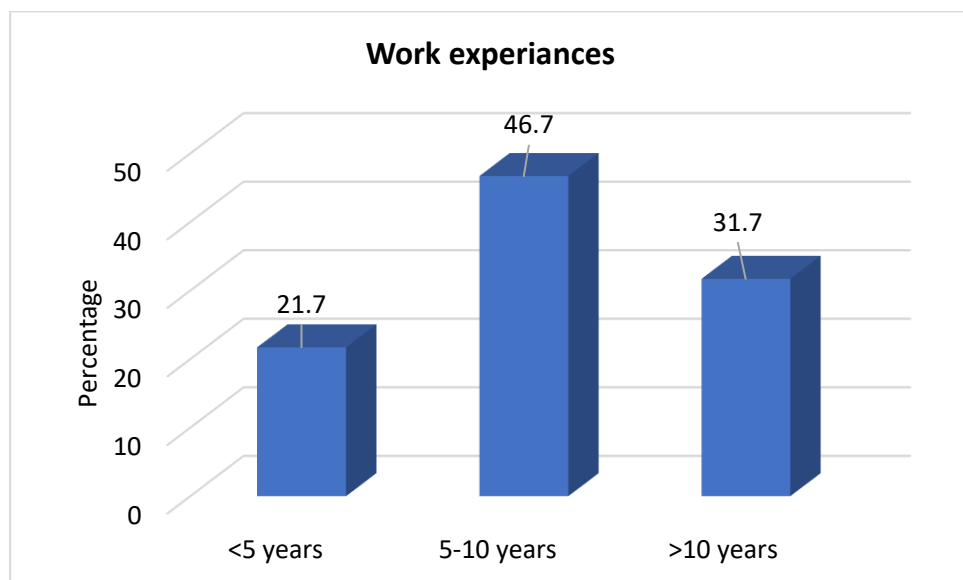


Figure 6: Work experiences, apparel companies, Hawassa industrial park, 2023

Above figure 3 indicate, study participants were evenly selected to the study regarding participants' experience, 21.7% had less than 5 years of experience and nearly half (46.7%) had 5-10 years of experience, and 31.7% had more than 10 years of experience.

### **4.3. Value chain of Apparel companies in HIP**

In the global economy, the apparel sector is one of the pioneering sectors. In comparison to other industries, this one is well-known in both developing and developed countries (EITE, 2012). Textile and apparel businesses relocate from developed to developing nations as a result of the industry's use of labour-intensive, low-skill processes in order to keep up with the market's growing competition (Daniel & Amare, 2012). There are many inputs that the garment exporting companies required as in raw material to proceed & make there finished output. For instance, fabric, sewing trims & packaging materials are the main items for constructing a garment.

Hawassa Industrial Park (HIP) has organized with the ambition of specifically to house both backward & forward integrated factories, currently there is one vertically integrated factory which manufactures both textile and garment components inside the park. From total number of factories, fourteen companies are focus on single operational excellence: garment manufacturing for export market.

A classic example of a buyer-driven value chain is the apparel industry, which is characterized by decentralized, globally dispersed production networks. Lead firms coordinate these networks and are in charge of activities that add "value" to products (such as design and branding), but they frequently outsource all or most of the manufacturing process to an international supplier network. These investors are running their business by integrating with the international brands like Calvin Klein, H&M, Levies, The Children Place (TCP) etc... to get better duty-free access to their markets. Supply chain management creates an opportunity for such industries to collaborate with the different level suppliers & manufactures in order to win and grasp the maximum benefit of the value chain.

Ethiopia's exporting of textile and apparel products has improved over the past five years, but the country still places a higher value on importing textile raw materials, claims the world trade report. According to the results of the HIP interview with the procurement management team, there is a serious lack of fabric sources in the nation. Materials are therefore coming from abroad to fill this gap.

Table:2 Ethiopia’s Apparel and Textiles Import/Exports to the World

Indicator - product group – annual (Million US dollar)	Product/Sector	2017	2018	2019	2020	2021
Exports	SI3_AGG - MATE - Textiles	23	19	21	13	22
Imports	SI3_AGG - MATE - Textiles	287	239	280	384	364
Exports	SI3_AGG - MACL - Clothing	74	106	164	143	149
Imports	SI3_AGG - MACL - Clothing	361	271	198	163	152

Source: WTO data base, downloaded on 6/11 6.38 pm (WTO, 2022)

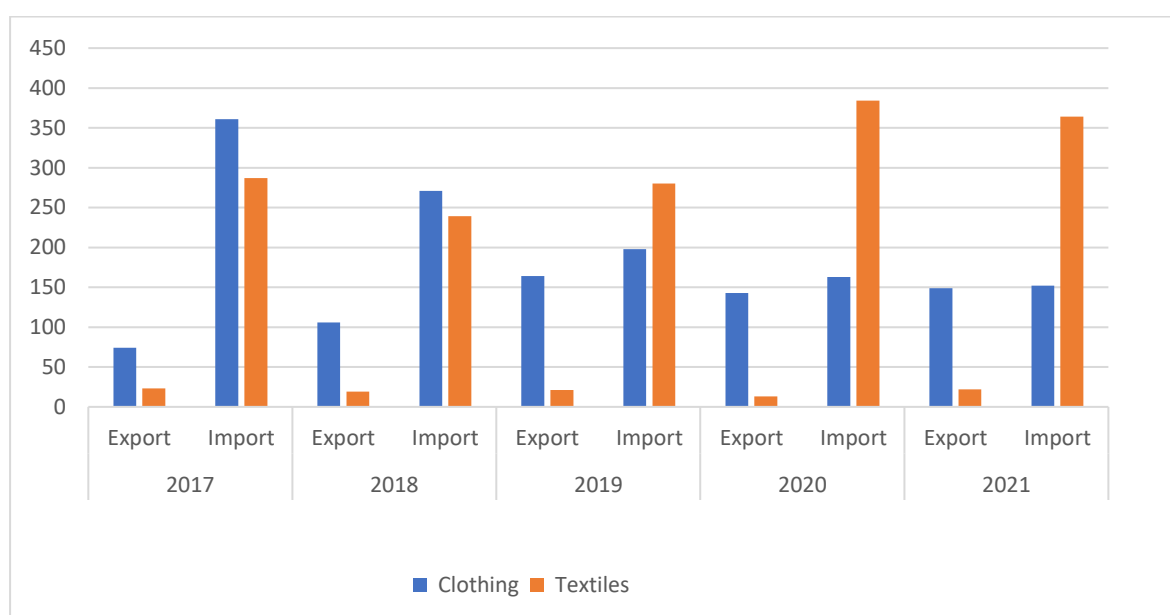


Figure 5 Ethiopia’s Apparel and Textiles Import/Exports to the World

### Value stream

Value stream is the sequence of activities and processes that transform raw materials or inputs into finished products or outputs that deliver value to the customer. Value stream mapping is a tool that visualizes the value stream and identifies the value-added and non-value-added activities, as well as the wastes and inefficiencies in the process.

The value stream in HIP consists of four main stages: sourcing, production, distribution, and consumption. While production focuses on translating these materials into finished products according to consumer demands, sourcing entails obtaining raw materials from domestic or international vendors. Consumption involves users buying and utilizing the products, whereas distribution includes sending goods to buyers' locations. This is consistent with earlier research on value chain analysis, which highlights the significance



of comprehending and maximizing the order of tasks and procedures involved in developing and providing goods and services to clients(Lam and Postle, 2006a). The evaluation of financial, material, and information flows, as well as the identification of value-added and non-value-added operations, are in line with the fundamental concepts of value chain analysis (Turker and Altuntas, 2014, Sweeney, 2009)

A crucial link in the value chain of HIP is financial flow analysis. When sourcing raw materials, HIP's apparel companies either pay in advance or after the supplies are delivered. While buyers pay for the clothing either before or after shipment, production-related costs such as labor, utilities, maintenance, and quality control are incurred at every stage of the process. Buyers receive ownership upon delivery, and distribution costs such as transportation costs, customs clearance fees, and insurance are all included. In order to use the products, consumers must pay for them. According to Ramanathan and Muyltermans (2010), the value chain includes financial flow analysis. Raw materials are purchased by clothing companies, frequently during the sourcing phase, and can be paid for upfront or after delivery.

Material flow analysis evaluates the efficiency, effectiveness, and sustainability of HIP's value chain. Raw materials are shipped to HIP during the sourcing phase and held there until they are required for production. Materials are transported from warehouses to production lines during manufacturing, where they are turned into completed goods in accordance with production instructions and standards. Following storage until they are ready to be sent, finished goods are inspected for quality and quantity before being released. Transporting finished goods from HIP to ports, where they are sent to customers' locations, is distribution. Customers finally obtain and use the merchandise. Studies by (Zamora, 2016, Taylor, 2005) that stress the examination of material movement and resource usage within the value chain are consistent with the material flow analysis in the value chain of HIP.

Information flow is crucial for coordinating the activities of HIP's value chain. Through a variety of methods, including telephone, email, and internet platforms, apparel companies engage with suppliers, customers, and logistical providers. They communicate about product specifications, production orders, shipping guidelines, and sourcing requirements. A value chain's participants may coordinate, communicate, and collaborate more easily with good information flow, which improves the chain's overall efficiency and

effectiveness. Taylor (2005) who emphasizes how crucial it is for value chain players to work together and communicate effectively.

The majority of garment factories are currently constrained to continue using CMT manufacturing due to the nation's raw material shortage. A cut-make-trim (CMT) manufacturer is typically responsible for sewing clothing, cutting the fabric, and providing simple trim, according to Turker and Altuntas (2014). The product specifications and the fabric are supplied by the buyer. Instead of receiving payment for the product, the factory receives a processing fee. The manufacturing companies in the Hawassa Industrial Park are depicted in the below-mentioned flow chart as they prepare and distribute finished goods.

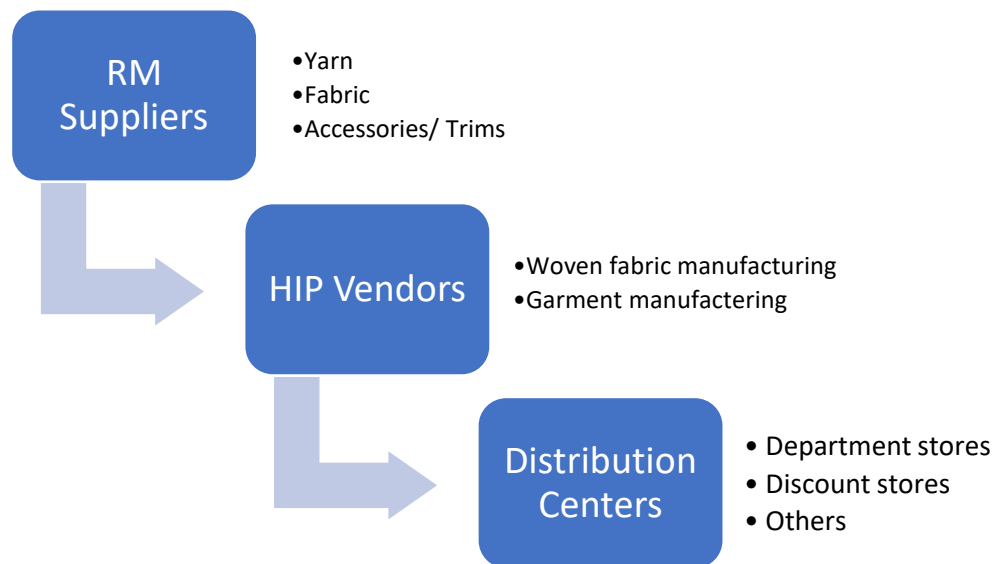


Figure 8: Value chain analysis for HIP companies

According to an interview with the top executives of the surveyed companies, only one of them purchases yarn from overseas markets and produces woven fabric with different specifications that can both meet its own needs and supply one of the garment factories. For their needs in knitted fabric & accessories, nearly all HIP garment manufacturers rely on the international market.

### 4.3.1. Primary activities in value chain

### 4.3.2. Inbound Logistics management

According to the descriptive analysis, the garment company located in an industrial park has a generally favorable attention for the importance of inbound logistics management., they have established higher focus on inbound logistics management (M=4.2). Their dedication to guaranteeing on-time delivery is highlighted by their regular monitoring of inbound logistics (M=3.6). However, there is room for growth in developing connections with trustworthy suppliers (M=3.3) and fostering teamwork to increase inbound logistics effectiveness (M=3.1). Overall, the industrial parks show promise for additional supply chain practice enhancement and optimization.

Table 3: Inbound logistic SCS, apparel companies, Hawassa industrial park, 2023

<b>Inbound Logistics management</b>	<b>Mean</b>	<b>Std. Deviation</b>
Inbound logistics importance for companies located in Industrial Park	4.2	1.04
How effectively does your organization identify and select suppliers during the inbound logistics process?	3.5	0.99
Regularly monitor their inbound logistics to ensure on-time delivery.	3.6	0.98
Establishing reliable relationship with suppliers	3.3	1.07
Efficiently places orders with suppliers during the procurement stage of inbound logistics.	3.1	1.10

Sources: Survey HIP, 2023

### Qualitative data report

Inbound logistics process started in apparel companies by ordering raw materials to source from eligible suppliers, transport those materials and finally keeping appropriate level of inventory for processing final exportable goods. In-depth interviews were conducted to explore strategies implemented for inbound logistics management activities of Apparel Company at industrial park. Thematic analysis was employed to identify main and sub-themes based on the value chain analysis framework. Based on the thematic analysis,

supplier selection process, supplier relationship management, supplier performance evaluation, inventory management and the transportation and delivery strategy were discussed based on the deductive approach. However, subthemes were emerged and discussed on the main components of inbound logistic management and the discussion was made based on value chain approach.

#### **A. Supplier selection process**

The interviews revealed a strong focus on the supplier selection process as a key aspect of Hawassa Apparel Company's inbound logistics management strategy. Based on the in-depth interview, the strategy of Evaluation Criteria such as quality, flexibility, prices and sustainability of the supplier and the issue of company value had significantly raised by the participants. In contrary, availability of local suppliers' shortage has emphasized hence companies are dependent on foreign raw material suppliers in order to maintain their supply pipeline.

Buyer nomination and vendor selection are the two methods used in HIP for supplier selection. Currently, materials that have an impact on design are purchased using an existing supplier matrix that buyers nominated, so quality expectations as well as price range are validated by buyers. The alternative method for finding suppliers is vendor selection, which gives vendors complete control over creating their own supplier matrices to find the right materials in accordance with the buyer's specifications. Vendors therefore verify and validate price, quality and other evaluation-related issues.

Supplier evaluation includes different criteria's including quality, competitive pricing, reliability, flexibility, sustainability, responsiveness, financial stability, payment terms, and capacity. Companies in HIP focus on lower prices, quality, short lead times, and sourcing location, while considering sustainability, financial stability, and reliability.

Another subtheme addressed the importance of aligning suppliers with the company's values and guiding principles. Honesty, integrity, professionalism, and conducting business ethically are a few of the company values mentioned by managers. The apparel company Hela Indochine, one of the businesses in HIP, is a pioneer in the use of ethical and environmentally friendly manufacturing techniques. The culture at Epic is fundamentally based on respect, sincerity, honesty, inclusiveness, and open-mindedness, according to other company profiles. Hence the need of finding suppliers who share their dedication to moral behavior, environmental accountability, and social responsibility are

vital for HIP vendors. The organization ensures a good partnership and mutual understanding with suppliers by choosing those who share their beliefs, which contributes to the overall success of their inbound logistics strategy. This result is in line with other research that highlights the critical role that supplier selection plays in achieving supply chain effectiveness and efficiency.(Aitken et al., 2016).

### **B. Supplier Performance Evaluation:**

According to the manager's interview, there is a lack of implementation of documented key performance indicators (KPIs) to evaluate suppliers' performance, with the exception of the fact that they discovered an issue related to inbound logistic management. a manager clarified,

*"We sometimes not give attention and there is lack closely monitor our suppliers' performance and conduct periodic assessments to ensure they meet our standards." [Manager]*

Interviews revealed that the whenever do evaluation process mostly concentrated on quantitative indicators like on-time delivery and product quality but fell short of doing a thorough analysis of other elements like supplier responsiveness and innovation potential. Depending on buyer nominated supply matrix for most of their sourced materials may impact vendors to give lower attention to invest themselves on other performance indicators. Hence, more comprehensive examination of supplier performance and continual supply chain improvement would be made possible by using a more holistic evaluation technique that takes into account both quantitative and qualitative factors.

### **Rigorous Evaluation Criteria**

The value of using strict evaluation criteria while choosing suppliers are discussed. The organization guarantees that chosen suppliers fulfill their high requirements set by buyers and, contribute to the integrity of the incoming supply chain by establishing strict criteria. One of evaluating mechanism that buyers implemented with their first and second tire suppliers are through analysis called "Good manufacturing practice". According to managers revealed that companies are subjected to conduct annual review with list of criteria's which buyers design to evaluate their supply chain including backward suppliers.

In contrary, the interview highlighted that using the current evaluation criterion implemented by apparel companies had limitations in terms of identifying key improvement areas. Meanwhile, choosing suppliers for a supply chain, the key challenge has been determining their quality, dependability and financial stability for local suppliers. According to Pal et al. (2013), any a company must choose a supplier if it wants to be certain that it has the resources required to run effectively. Choosing the right supplier can be challenging because it takes into account a number of aspects.

### **C. Supplier Relationship Management**

Procurement managers stressed the need of developing trusting relationships with suppliers. They emphasized the need of choosing reputable vendors that can reliably deliver high-quality supplies and parts.

Supplier relation management technique such as Partnership has mainly observed in HIP procurement practice. Partnerships often involve long-term contracts, and the business will typically share detailed information so that their supplier can deliver to their exact requirements(Lam and Postle, 2006a). hence, Material suppliers have long term relationship with this apparel companies. Accordingly, it helps both parties to share extensive information regarding annual demand projections and so as to smoothen production and make sure sufficient raw source availability. In addition to maintain better cost this collaboration helps them. As identified by the second interview, for buyer nominated suppliers since some of the materials sourced are brand specific, they build strategic alliance relationship. These alliances involve collaboration over new product innovation, sharing resources, pooling research & development efforts.

*"Over the years, we have developed solid relationships with our suppliers, and they are aware of our high standards for quality and on-time delivery. We are able to maintain a steady and reliable supply of resources because to this partnership.  
[Procurement manager]*

Suppliers, however, complained that it was difficult to get quick responses and information on the status of their orders for replenishment orders, which led to delays in the inbound logistics process. The quality issues observed in companies are slower when it comes to negotiate with suppliers for replenishment. This shows that better communication channels and more proactive supplier involvement are needed in order to strengthen the supplier relationship management strategy. The investigation revealed the

need for improved supplier collaboration and communication, which is in line with past studies that highlighted the importance of strong supplier relationships. (Turker and Altuntas, 2014).

Furthermore, due to sourcing strategy focus on procurement of materials with lower price as much as possible, there are resistance to absorb Air shipment cost for replenishments by suppliers. With such kind of discussions mostly it took more time to resolve the conflict on time so as to deliver buyers requirement as quick as possible. Geographical presence has identified as solution for these strategic partners. Since most of the materials are procured from Asia and Indian subcontinent such investment solution has its significance. By encouraging suppliers to expand to needle point buyers tried to strength the backward industry in HIP. PVH told its suppliers “this is a chance for us to learn from everything we wish we had done better in the past,” McRaith says. hence, as example, JP textile Ethiopia has invested in HIP due to high integration opportunity offered by PVH for its Shirt manufacturing plant.

Even if PVH decides to sale its production facility by year 2021, one of garment manufacturer called Century is still sourcing from this mill and benefited from avoiding multiple challenges hence its demonstrated towards suppliers moving to HIP creates better integration and such geographical presence for material suppliers can influence on achieving better price, eliminated logistical cost incurred by transportation and reduce production lead time.

#### **D. Inventory Management**

Efficient inventory management was identified as a critical component of the inbound logistics strategy. According to operations manager, the importance of maintaining optimal inventory levels to avoid stockouts and excess inventory.

*"We closely monitor inventory levels and implement just-in-time (JIT) practices to minimize holding costs and maximize operational efficiency." [ operations manager]*

HIP companies managed their own inventory level by placing orders once actual demand forecast known, such information shared from brands whenever they transfer their purchase orders to vendors visibility which is normally on avg of 120 days prior to delivery thus this paper has concluded that Vendor managed inventory (VMI) system has

designed as framework to manage flow of materials. Additionally, demand fluctuations have occasionally led to inventory surpluses or shortages, which raised holding costs hence, companies focus on procuring major materials just in time for production to avoid such challenges. According to Inventory managers response they highlighted most of the time different fabric types along with some accessories that changes seasonally, procurements decision has subjected to focus on JIT inventory management system.

Table 4: List of materials and items purchased by the HIP companies.

List of Items	UOM	Annual Volume	Avg. Purchasing Cost
Main Fabric	Yard	9,798,917	\$3.30
Lining Fabric	Yard	4,502,763	\$3.50
Decorative Fabric	Yard	1,158,514	\$3.90
Threads	cone	2,120,841	\$1.70
Elastics	Yard	66,470,486	\$0.30
Buttons	Gross	5,390,415	\$0.70
Collar Stand	Gross	442,010	\$0.30
Care Label	Pcs	97,750,342	\$0.03
Packaging Stickers	Pcs	33,005,757	\$0.02
Poly Bag	Pcs	103,159,257	\$0.04
Cartons	Pcs	7,238,381	\$1.03
Marketing Tags	Pcs	49,594,250	\$0.06
Metal Trims	Gross	2,640,000	\$2.00
Carton Tap	Roll	3,200,538	\$0.30
Foam Pad	Pcs	3,441,333	\$0.08
Hook & Eye	Gross	300,964	\$11.00
Ring & Slider	Pcs	12,439,188	\$0.01
Hanger	Pcs	10,868,395	\$0.09
Hanger Sizer	Pcs	1,105,648	\$0.01

Sources: Document retrieved from three HIP companies.

In contrast, minor materials that continues for over longer time without design change treated by holding 20% safety stock from annual requirement that can help to maintain production for a month without disruption. Due to in region sourcing limitations we can conclude that HIP companies are subjected to keep inventory holding costs for the safety stocks they reserved. Conversely, managing JIT inventory for major products may have supply risk due to logistics challenges time to time. The findings underscore the need for improved demand forecasting techniques and greater departmental collaboration in order to optimize inventory levels and reduce holding costs. These recommendations are consistent with the body of research that emphasizes the value of accurate demand forecasting and effective inventory management strategies.(Whitney et al., 2014).



## **E. Transportation and Delivery**

Based on the interview, even though the use of technology and established partnerships with logistics service providers to ensure efficient transportation, there have been challenges regarding timely delivery. One main manager mentioned,

*"Even though we track shipments and collaborate with trusted logistics partners to ensure on-time delivery, sometimes the shipment delivery the supplies late and the production process would be hampered. [logistics department]"*

In addition, problems with the delivery and transportation parts of the inbound logistics strategy were revealed by the interviewees. The irregular delivery schedules and periodic shipping delays worried several buyers.

According to (Sbhatu, 2005), the vast Ethiopian trade is transported through the Ethio-Djibouti Corridor. Due to its geographic isolation, Ethiopia currently relies on Djibouti port for over 95% of its trade. When fully operational, HIP is anticipated to generate \$1 billion in export revenue and 60,000 jobs (World Bank, 2020). Transporting its goods to the global market, however, is a significant challenge for the park. A truck needs about 3 days to travel the 900 km by road from Hawassa to Djibouti. Poor and crowded road conditions make for lengthy and expensive border crossing procedures. Ethiopians do not use transport management system for tracking the road transport efficiently. Due to the country's and the forwarders' limited resources, such as a lack of network providers and the inability of the Ethiopian network to function in Djibouti, each shipment that was transported into or out of the port of Djibouti could not be tracked automatically with high-tech (GPS mapping software's). Due to this shortfall, the majority of transporting forwarders are being forced to contact the designated drivers at odd hours to ensure that the trucks will arrive at the factory on the schedule.

Rail transportation, as opposed to land or truck transportation, is very important in reducing lead times for deliveries and has better financial advantages. However, as revealed by additional interviews with logistics managers, vendors based in and operating out of Hawassa Industrial Park (HIP) are currently not encouraged using this mode due to the inconsistent nature of the service and its higher or comparable cost to truck transportation. These transportation issues have a negative impact on the competitiveness and financial performance of the apparel companies at HIP, especially those that could produce fashion goods that require fast delivery to meet changing consumer preferences

and seasonal demands. In contrary Air shipment offers privileges for garment vendors to track merchandise and raw materials easier, but it's costly and not economical for bulk materials due to weight and size restrictions. This makes it difficult to source larger or heavier materials.

This shows that improved coordination between the organization and its logistics partners is necessary for the prompt transportation and delivery of goods. By investing in technologies that provide real-time visibility of shipments, these problems might be minimized, and the dependability of the transportation and delivery operations could be increased. The analysis revealed issues with delivery reliability and transportation, which is in line with earlier studies focuses on the implications of effective transportation management. (Ejigu, 2018, Nurizman and Singla, 2017)

### **4.3.3. Operation management**

According to the analysis of the descriptive data, the business places a high priority on standardizing the methods used to assemble its products (M=4.1) and assuring high-quality output through routine monitoring rated, (M=3.8) suggesting quality monitoring in HIP is vital. The use of technology to improve production processes suggests moderate attention & could be improved, (M=3.3). Additionally, survey implies higher mean value is rated for operation management importance (M=4.5) along with moderate value for building up effective procedures to deal with product faults and returns (M=3.2). The implications of the descriptive data analysis suggest that the business prioritize standardizing assembly methods, leverage technology for process improvement, however there is a room for improvement for addressing product faults and returns. By concentrating on these areas, the appeal company may be able to further enhance production operations as they strive to uphold high levels of quality and please clients.

Table 5: Operation SCS, apparel companies, Hawassa industrial park, 2023

<b>Operations</b>	<b>Mean</b>	<b>Std. Deviation</b>
Have a standardized process for product assembly.	4.1	0.73
Regularly monitor their production processes to ensure high-quality output.	3.8	0.83
park use technology to improve their production processes.	3.3	1.11
Operation management importance for companies located in Industrial Park	4.5	1.10
Have established procedures for managing product defects and returns.	3.2	1.15

Sources: Survey HIP, 2023

### **Qualitative data report**

The study's manufacturing/operation managers and inventory managers were among the participants who participated in in-depth interviews for the analysis. Finding major and supporting themes related to supply chain operation strategy was the goal. The participants concentrated on three sub-themes, including production processes, quality control procedures, and capacity utilization, based on the interview. The report also identifies and underlines various operational flaws.

#### **A. Manufacturing Processes**

Apparel retailers deal with both fashion goods and basic goods to offer product variety to their customers. Basic and fashion goods can be classified based on the volume of production, degree of style variation, and frequency of style changes. For example, fashion goods are hard to forecast the demand; have high fashion level and seasonality and have varied style change. Basic goods are relatively easy to forecast the demand, have low fashion level and limited seasonality, have a basic garment style that remains constant (lee & kincade, 2003).

According to the interviewee, companies in the HIP are concentrating on using simple/basic products with a longer product life cycle to fill their capacity. With a continuous mass production process, businesses will be able to concentrate on increasing productivity in order to lower operating costs and maintain their competitiveness in the

market. Therefore, make-to-order is essentially the strategy that businesses implement along with the lean principle. Study participants emphasized the importance of lean manufacturing principles and continuous improvement initiatives. In line with value chain principle, they highlighted the use of standardized operating procedures, efficient workflow design, and the implementation of automation technologies to enhance productivity and reduce waste. One participant stated,

*"We have implemented lean manufacturing principles to streamline our processes and eliminate non-value-added activities. As a result, we are now much more operationally efficient and are better able to satisfy consumer expectations."*[manufacturing manager]

Through the application of lean principles and the optimization of their processes, the apparel companies reduced lead times and increased throughput. This has allowed for faster product delivery to clients and an improvement in operational effectiveness. Additionally, the need of standardized operating procedures and their definition in terms of manufacturing processes was also emphasized by the attendees. As a vital part of value chain analysis, the effectiveness of the production process and waste reduction are being prioritized. In line with previous studies, the findings of the thematic analysis align with the principles of lean manufacturing. Lean manufacturing focuses on eliminating waste, improving efficiency, and enhancing overall operational performance (Kumar et al., 2022).

### **B. Quality Control Measures:**

The in-depth interview highlighted the significance of quality control measures in ensuring product quality and customer satisfaction. Participants emphasized the implementation of stringent quality assurance procedures, including thorough inspections, testing, and adherence to international quality standards. They also emphasized the importance of continuous employee training and engagement in quality control activities.

*" We invest in employee training and ensure that everyone understands the importance of quality control. Our quality control team works closely with production to identify any potential issues early on and take corrective actions."* [Manufacturing manager]

According to the inventory manager, quality control procedures guarantee good product quality, which is essential for enhancing the end product's worth. A commitment to providing high-quality products is shown by the application of extensive inspections, testing, and adherence to quality standards. This is in line with the TQM (Total Quality Management) principles, which place a strong emphasis on the value of quality across the entire production process.(Saragih et al., 2020).

### **C. Capacity Utilization**

The results indicate that capacity utilization was a key sub-theme in Hawassa Apparel Company's operations. In order to meet customer expectations, participants in this study emphasized the requirement of increasing production capacity while guaranteeing optimal resource allocation. To achieve optimal utilization, they talked about the importance of widening their product offerings through including vast style diversification along with usage of technologies for demand forecasting, production planning, and capacity monitoring.

However, a few limitations were noted, including inconsistent manufacturing, underutilization of resources, and difficulties matching production capacities with shifting market demands. The participants emphasized the difficulties in matching production capabilities with shifting market demands due to characteristics of including fashion products. In order to meet customer needs while reducing production costs, efficient capacity use is essential(Somapa et al., 2018).

Table 6: HIP companies product type & their capacities

Companies at HIP	Product Type	Installed	Attainable	Utilization Rate	Clients/Buyers	Number employee
Quadrant Apparel PLC	Face Mask Medical Mask	35,200,000 55,920,000	31,200,000 49,920,000	89% 89%		138
NASA Garment PLC	Knit Garment Woven Garment	1,500,000 pcs 200,000 pcs	1,000,000 pcs 150,000 pcs	67% 75%	PVH, H&M, C&S	2200
KGG Garment PLC	Boys Pant T-Shirt	3,000,000 pcs 530,000 pcs	2,000,000 pcs 430,000 pcs	67% 81%	TCP/H&M/, New Wave/DG	1280
Silver Spark Apparel Ethiopia PLC	Jacket Trouser Vest	900,000 pcs 1,200,000 pcs 60,000 pcs	350,000 pcs 510,000 pcs 50,000 pcs	39% 43% 83%	JC Penny, Peerless, Hagger, TMW, Express	1000
TAL Garment Manufacturing PLC	Shirt	1,800,000 pcs	1,200,000 pcs	67%		1067
Hirdaramani Garment PLC	Polo Crew neck	4,660,230 Pcs 1,540,764 Pcs	2,598,516 Pcs 974,748 Pcs	56% 63%	San Mar	1,600
Indochine Apparel PLC	Casual Pant/Kids Denim Pant Tshirts	3,960,000 pcs 2,640,000 pcs 2,640,000 pcs	1,848,000 pcs 2,640,000 pcs 2,112,000 pcs	47% 100% 80%	: HBI, TCP, FOTL	4,820
Everest Apparel (Ethiopia) S.C	Polo Trouser T-shirt Mask	2,400,000 pcs 2,880,000 pcs 3,600,000 pcs 1,500,000 pcs	1,920,000 pcs 2,600,000 pcs 2,880,000 pcs 1,200,000 pcs	80% 90% 80% 80%	Decathlon, TCP, Jecopany	Hope Powder

Hela Indochine Apparel PLC	Ladies UWear	2,500,000 pcs	1,500,000 pcs	60%	HBI, TCP, FOTL	1253
EPIC Apparel PLC	Jeans Pants	5,700,000 pcs	3,000,000 pcs	53%	TCP	1,400
Best International Garment PLC	T-Shirts	10,000,000 Pcs	6,500,000 Pcs	65%	HBI, TCP, FOTL	1,000
	Leggings	4,000,000 Pcs	2,500,000 Pcs	63%		
	boxers	2,000,000 Pcs	1,500,000 Pcs	75%		
Century Garment PLC	Men's Shirt	650,000 Pcs	650,000 Pcs	100%	PVH	: 869

Source: ETID company profile (2021).

According to the company profile, Quadrant apparel PLC has used 89% of its capacity to produce masks. For NASA clothing, utilization rates for knitted and woven garment production are 67% and 75%, respectively. For their boy pants and t-shirts, KGG clothing accounted for 67% and 81% of usage. Jacket, Trouser, and Vest, in that order, use 39%, 43%, and 83% of the Silver spark capacity. While Century Garments utilized 100% of its capacity, TAL Garments only showed a 67% utilization rate for its shirt manufacturing.

Overall, HIP companies like Everest, Quadrant Apparel, and Century have utilized their capacity at a rate of 80 to 100%. Best international, EPIC, Hela, Hirdaramani, KGG, NASA, and TAL are only able to use 50% to 80% of their capacity. Currently, attaining less than 50% is due to Indochine and Silver Spark. As a result, there is a significant capacity gap that manufacturers were unable to close for a variety of reasons. One of the main reasons cited was that businesses couldn't maintain a diverse product portfolio due to their inability to pull off diversified business models. However, as industry experts pointed out, this had drawbacks; factories that wanted to diversify their product lines would have to pay more for training staff and machine downtime during setup. The shortage of skilled workers in the manufacturing sector is another factor contributing to the capacity gap. Finding employees with the knowledge and experience needed to operate their equipment and produce high-quality products is a challenge for many manufacturers.

#### **4.3.4. Outbound logistics management**

The findings reveal that on average they only have a reasonably well-designed procedure (M=3.4) in place to handle their outbound logistics. The use of technology to track shipments and deliveries has a higher mean score of (M=3.7). The organization's average rating of (M= 3.6) also implies that using sustainable transportation options is one of its top priorities. A modest mean score of (M=3.1), demonstrating a generally positive view among respondents, represents the company's proactive assessment of outbound logistics costs and adjustments. Accordingly, mean value of (M=3.9) rated for the importance of outbound logistics managements for this companies.



Table 7: Out bounding logistic regression, apparel companies, Hawassa industrial park, 2023

<b>Outbound logistics management</b>	<b>Mean</b>	<b>Std. Deviation</b>
Have a well-designed process for managing their outbound logistics.	3.4	1.01
Use technology to track their shipments and deliveries.	3.7	0.93
Prioritize using sustainable transportation methods for their outbound logistics.	3.6	1.06
Outbound logistics management importance for companies located in Industrial Park	3.9	1.11
Regularly evaluate their outbound logistics costs and make necessary adjustments.	3.1	1.29

Sources: Survey HIP, 2023

### **Qualitative data report**

In-depth interview was done with marketing manager, inventory manger and marketing officers. Based on the in-depth interview, four subthemes were discussed such as report on outbound logistics: order fulfillment processes, distribution channels, and on-time delivery performance

#### **A. Order Fulfillment Processes.**

The in-depth interviews shed light on the order fulfillment processes within the outbound logistics of the company. Participants highlighted the importance of efficient order processing, accurate picking and packing, and timely shipment preparation. Once, orders are fulfilled in accordance with specifications, and then the finished goods are shipped to various locations. For HIP vendors, the USA and Germany account for the majority of shipment destinations, while Spain, France, and Canada accounted for lower volumes than the USA. HIP vendors therefore keep their finished products in their production facility until the scheduled shipping date. Due to their solely make-to-order business model, they typically only hold finished goods for delivery. By using this strategy, HIP vendors can cut back on inventory expenses and lower the chance of overproduction. To guarantee prompt delivery of goods to customers, it also calls for effective coordination between production and shipping.

Meanwhile, this subtheme's shortcomings were noted. Some participants voiced worries about sporadic delays in order processing and delivery that resulted in unhappy customers. Whenever there are rejections more than anticipated from the materials sourced, replenishing those materials are very difficult due to longer lead time will be impacting production & delivery. As one person put it:

*"There are instances where we struggle to meet the promised order processing time, resulting in delayed shipments." [Inventory manager]*

These results are consistent with earlier research by Nurizman and Singla (2017) emphasizes the significance of order fulfillment activities along the value chain. the need for effective coordination and communication among the numerous departments involved in completing orders in order to decrease delays and improve performance.

### **B. Distribution Channels**

The interviews also revealed insights into the distribution channels employed by the company. Participants mentioned utilizing a combination of direct sales and using buyers' distribution center platforms to reach customers. One participant stated,

*"We have established our own distribution center in one of our target markets so that it easier for our customer for order management." [Marketing officer]*

However, since the strategies of buyers, in particular their global sourcing policies, importantly shape production and trade patterns, most HIP manufacturers are shipping their processed orders directly to one of their buyers warehousing. This strategy has helped them on avoiding Warehouse operating costs and help them to focus on their business objectives.

### **C. On-time Delivery Performance**

The interviews also explored the on-time delivery performance of the company. Participants highlighted the company's commitment to delivering products to customers within the promised time frame. One participant stated,

*"Our logistics team is dedicated to ensuring that products are shipped promptly and reach customers on time." [logistics manger]*

However, shortcomings were found, such as delivery delays, particularly during busy times or while dealing with logistical difficulties. Since late March 2023 there are

observations that companies are forced to delay their delivery due to empty container availability for exports. These results are consistent with other research that emphasized the value chain importance of on-time delivery performance. For example, Islam and Liang (2012) highlight the significance of reliable and timely deliveries in building customer trust and loyalty.

#### 4.3.5. Marketing and Sales management

According to descriptive data, the mean score of (M=3.4) for having a well-defined target market for its products indicate the organization generally has a good understanding of its target market. However, the lower mean score of (M=2.9) for using consumer input to improve goods and services indicates that there is space for progress in using customer insights. The average score for the company's pricing strategy is (M=3.1), which reflects a moderate perception of pricing competitiveness. Mean value of (M=3.3) has rated for the importance of marketing & sales managements for this companies, hence moderate attention is given to manage marketing activities.

Table 8: Marketing and sale SCS, apparel companies, Hawassa industrial park, 2023

<b>Marketing and Sales</b>	<b>Mean</b>	<b>Std. Deviation</b>
Have a well-defined target market for their products.	3.4	1.34
Use various marketing channels to promote their products.	3.2	1.39
Use customer feedback to improve their products and services.	2.9	1.22
Have a competitive pricing strategy for their products.	3.1	1.41
Importance of Marketing management for businesses located in Industrial Park	3.3	1.30

Sources: Survey HIP, 2023

#### Qualitative data report

According to the interviews conducted with the marketing manager and marketing and sales managers the company's marketing plans, and customer relationship management emphasized a few positives in these areas, but they also pointed out several areas that needed work.

## A. Marketing strategies

Participants noted the company's emphasis on maintaining low price strategy as competitive advantage against rivals. Through improving productivity, HIP companies able to reduce production cost and helps them to offer better order processing cost. These initiatives were regarded as successful in attracting the target market and raising brand awareness. However, one respondent has elaborated the challenges on keeping low manufacturing price to their buyers by only focusing on productivity. Raw material cost is accounted for most part of the operational cost, hence getting material with lower sourcing price are vital to stay competitive. Additionally, logistics cost for Ethiopia is estimated to be around 30% of the total cost of goods, which is much higher than the global average of 15%. In HIP companies, the logistic cost is significantly higher, the average cost of logistic from Hawassa to USA one of the destination countries is \$2800 - \$4000 for 40-feet full container load (FCL). This may affect the marketing strategies of the companies. The impact of high logistics costs on a low-price strategy aligns with findings from previous studies in the field of logistics and supply chain management. Numerous studies have examined the relationship between logistics costs and pricing strategies, highlighting the challenges and implications faced by companies aiming to offer low-priced products(Lam and Postle, 2006a, Tokatli and Kızılgün, 2009, Ejigu, 2018). Therefore, logistics costs can significantly affect the overall cost structure of exported goods, potentially eroding the cost advantage gained from low-priced production. This aligns with the example we discussed, where high logistics costs, including port charges and sea freight, increase the per unit cost and pose challenges for exporters implementing a low-price strategy.

Also, a weakness identified was the lack of comprehensive market research and analysis, resulting in a less understanding of customer needs and preferences on quickly changing market.

*"We need to invest more in market research to understand our customers better and tailor our marketing strategies accordingly." [Marketing Manager]*

The marketing manager acknowledges the effectiveness of digital marketing in expanding the company's reach. However, the weakness of limited market research hampers their ability to expand potential markets. According to (Ramanathan and Gunasekaran, 2014)

creating successful marketing strategies to promote consumer engagement and brand success.

## **B. Customer relationship management (CRM)**

The marketing and sales focus included a large component on customer relationship management (CRM). The company's attempts to interact with clients through loyalty programs, individualized offers, and routine communication were acknowledged by the participants. However, shortcomings in CRM data handling and analysis were found, which restricted the company's capacity to customize services and foresee client wants.

*“Although clients have embraced our CRM activities, we still need to strengthen our data management and analytic skills to acquire deeper insights and deliver more individualized experiences.” [Marketing Manager]*

Customer relationship has got little attention according to interview, and by using analytics technology and improving data management capabilities, the company may acquire significant client insights. Data utilization helps to design targeted marketing campaigns, improve the overall customer experience, and adapt marketing strategies. Effective CRM procedures foster the growth of strong customer connections and boost client loyalty. (Kano et al., 2020)

### **4.3.6. After-sales Service management**

Based on the descriptive statistics, the mean scores indicate that, on average, the company is perceived to have moderately well-trained staff ( $M = 3.0$ ) and a lower attention given to after sales service by companies has scored ( $M = 2.9$ ). And product return and refund management has rated ( $M = 3.2$ ) for establishing proper process by companies. In the meantime, importance of managing After sales services for businesses located in Industrial Park rated ( $M=2.5$ ). These results emphasize the business's developed proper management, such as employee development and product refund management, while also pointing out areas for improvement, particularly in terms of timely customer service and accurate information.

Table 9: After sale services in SCS, apparel companies, Hawassa industrial park, 2023

<b>After-sales Service</b>	<b>Mean</b>	<b>Std. Deviation</b>
Have well-trained staff to provide high-quality customer service	3.0	1.23
Provide high attention for after sales service in order to maintain customers satisfaction	2.9	1.01
Have established procedures for managing product returns and refunds.	3.2	1.26
Regularly solicit feedback from customers to improve their service offerings.	3.2	1.22
Importance of managing After sales services for businesses located in Industrial Park	2.5	1.29

Sources: Survey HIP, 2023

### **Qualitative data report**

After-sales support processes play a crucial role in ensuring customer satisfaction and building long-term relationships. which emphasizes the significance of prompt and efficient after-sales support in enhancing customer loyalty and advocacy. Based on the in-depth interview with marketing manager and manufacturing manager, after sale support process and customer feedback collections were discussed.

#### **A. After-Sales Support Processes:**

After-sales support processes play a crucial role in ensuring customer satisfaction and building long-term relationships. HIP vendors communicate with destination warehouse for any delivered orders with shortfall, the interview highlights the importance of timely and effective problem resolution.

*“Our team is trained to address customer concerns with utmost care and ensure their satisfaction.” [Manger]*

The vendor compliance team is in charge of determining the underlying reason for failing to meet the requirements of the buyer and working with their production team to determine whether the impacted deliveries require replenishment. According to the buyer's

instructions, they might be asked to replenish the balance or receive a chargeback for the items that were sold.

However, the business occasionally has difficulties with complaint management. Due to continuous disagreement on absorbing the cost for non-compliant products, vendors end up with longer negotiation with buyers to identify root cause. In order to ensure client happiness and retention, problems must be resolved quickly and effectively. This aligns with previous studies that emphasize the importance of prompt and efficient after-sales support in enhancing customer loyalty and advocacy (Hollweg, 2019).

## **B. Customer Feedback Mechanisms**

Actively seeking and leveraging customer feedback is crucial for continuous improvement and service enhancement. The sample quote highlights the importance of proactive feedback collection and analysis. This aligns with the Somapa et al. (2018), who emphasize the role of customer feedback in identifying areas for improvement and tailoring after-sales services to meet customer expectations. Based on the operation manager, the company have various channel to collect customer's feedback.

### **4.3.7. Secondary activities in value chain**

### **4.3.8. Procurement**

According to the descriptive analysis, the mean scores show that the organization is thought to have well-established processes for choosing and evaluating suppliers (M= 4.3) indicating an emphasis on implementation of effective supplier management. Importance of Procurement management for businesses located in Industrial Park has scored (M = 4.8) implying procurement management given high attention by companies located in HIP. However, there is space for improving relationships to make sure steady supply of raw materials (M = 3.4) and working with suppliers who follow ethical and sustainable standards (M = 3.1). The company also receives a moderate mean score for managing procurement risks, such as supply chain disruptions (M = 3.3). These results reveal that although the organization succeeds in some areas of supplier management and procurement, there are still areas where it can improve in terms of its risk management techniques, supplier alliances, and ethical sourcing methods.

Table 10: Procurement strategy, apparel companies, Hawassa industrial park, 2023

<b>Procurement</b>	<b>Mean</b>	<b>Std. Deviation</b>
Have established procedures for selecting and evaluating suppliers.	4.3	0.88
Prioritize working with suppliers who adhere to ethical and sustainable practices.	3.1	1.24
Have established partnerships with their suppliers to ensure consistent supply of raw materials.	3.4	1.12
Importance of Procurement management for businesses located in Industrial Park	4.8	0.90
Have established procedures for managing procurement risks, such as supply chain disruptions.	3.3	0.86

Sources: Survey HIP, 2023

### **Qualitative data report**

The qualitative data report on the procurement provides insights into the company's procurement practices. By emphasizing a well-defined procurement process, technology utilization and procurement strategies, the company aims to optimize procurement efficiency and performance. In this regard, procurement manager was interviewed to explore additional insight regarding procurement strategies.

#### **A. Procurement Process:**

Procurement process is designed to ensure the selection of reliable suppliers and the acquisition of high-quality materials. According to the interview, the apparel companies established robust procedures for supplier evaluation, negotiation, and contract management.

*"We have established robust procedures for supplier evaluation, negotiation, and contract management." [procurement manager]*

The companies attempt to reduce risks and guarantee the purchase of high-quality products by developing extensive procedures for supplier selection, negotiation, and



contract administration. However, flaws could appear if the procedure isn't adaptable or sensitive to shifting market factors. According to earlier research, efficient procurement procedures are crucial for reducing costs, preventing supply chain interruptions, and improving overall organizational performance (Köksal et al., 2017)

Companies operating in HIP have diverse raw material needs for their range of products they manufacture. This highlights the necessity for a well-established procurement process capable of efficiently sourcing and managing various types of materials. According to the study, this company's primary sourcing strategy is buyer nomination product sourcing. As a result, the majority of vendors managed their procurement needs through their overseas mother companies or delegated procurement management to third parties on their behalf. In order to improve its ability to concentrate on manufacturing and increase the efficiency of managing raw materials, EPIC demonstrated that it uses a third-party agent to handle all of its raw material requirements for both its Ethiopian facility and for its various facilities on the Indian subcontinent. In order to generate profit for itself, a company by the name of ASL consolidated all requirements for EIPC and offered with a very low markup. With the help of this strategy, EPIC has also been able to take advantage of ASL's expertise in logistics and purchasing, leading to a more efficient and affordable supply chain. By outsourcing their procurement handling to a trusted third party, EPIC has been able to free up valuable resources and focus on their core competencies of manufacturing and delivering high-quality products to their customers.

### **B. Procurement Strategies:**

Using the table of company data, the sourcing models utilized by apparel companies has established. Three distinct garment products—underwear, t-shirts, and formal shirts—have been chosen in order to review the raw material sources, sourcing methods, and product categorization used by current HIP companies. A second interview was conducted in order to categorize the supply chain strategy that was employed based on the on the company's raw material purchases.

Table 11: Apparel companies sourcing methods

No	List of Items	Main Source of RM	Sourcing method	Product category
1	Main Fabric	Overseas	Single Source	High volume/ Low variety
2	Lining Fabric	Overseas	Multiple Source	High volume/ Low variety
3	Decorative Fabric	Overseas	Multiple Source	Low volume/ High Variety
4	Threads	Overseas	Single Source	High volume/ High variety
5	Elastics	Overseas	Single Source	High volume/ Low variety
6	Buttons	Overseas	Single Source	High volume/ Low variety
7	Collar Stand	Overseas	Single Source	High volume/ Low variety
8	Care Label	Overseas/ In house	Multiple Source	High volume/ Low variety
9	Packaging Stickers	Overseas	Single Source	High volume/ Low variety
10	Poly Bag	Overseas	Single Source	High volume/ Low variety
11	Cartons	Overseas/Local	Multiple Source	High volume/ Low variety
12	Marketing Tags	Overseas	Single Source	High volume/ High variety
13	Metal Trims	Overseas	Single Source	High volume/ Low variety
14	Carton Tap	Local	Multiple Source	High volume/ Low variety
15	Foam Pad	Overseas	Single Source	High volume/ Low variety
16	Hook & Eye	Overseas	Single Source	High volume/ High variety
17	Ring & Slider	Overseas	Single Source	High volume/ High variety
18	Hanger	Overseas	Multiple Source	High volume/ High variety
19	Hanger Sizer	Overseas	Single Source	High volume/ Low variety

Source: HIP company material profile (Document review)

According to the findings from the table almost all raw materials are sourcing from overseas including different type of fabrics, sewing threads, packaging materials and marketing items. Currently as per the factory procurement managers comment, they are only able to source small portion of cartons from local suppliers. Sixty-eight percent of the raw materials listed in the table are obtained from a single supplier, and the remaining thirty-two percent are obtained by using the multiple sourcing method. Aside from product categories that divide materials into groups based on order quantities and variety mixes, price and supply risk are the primary factors in determining the most appropriate sourcing strategies. It is important for companies to carefully evaluate their sourcing strategies to ensure they are maximizing efficiency and minimizing risk. By diversifying their suppliers and considering factors beyond just price, businesses can create a more stable and sustainable supply chain.

#### 4.3.9. Technology Development:

The descriptive statistics related to the company's utilization of technology in their supply chain processes and overall operations revealed a moderate level of technology integration (M=2.9). The company also obtains a mean score of (M=2.8) for its investment in research and development to improve its goods and services, indicating room for growth in this area. Importance of technology development management for businesses located in

Industrial Park has score of (M=3.5). A mean score of (M=3.9), on the other hand, shows that the organization has partnered with technology providers to guarantee system reliability. These results indicate both the company's technological strengths and prospective improvement areas, highlighting the need for additional attention to efficiently integrating technology.

Table 12: Utilization of technology, apparel companies, Hawassa industrial park, 2023

<b>Utilization of technology</b>	<b>Mean</b>	<b>Std. Deviation</b>
Use technology to integrate their supply chain operation.	2.9	1.21
Invest in research and development to improve their products and services.	2.8	1.09
Have established partnerships with technology vendors to ensure the reliability of their systems.	3.9	1.35
Importance of Technology development management for businesses located in Industrial Park	3.5	1.46
Regularly evaluate their technology costs and make necessary adjustments.	3.4	1.46

Sources: Survey HIP, 2023

### **Qualitative data report**

Qualitative data was also collected using in-depth interview to explore technology utilization in overall supply chain. Based on the interview, the companies have invested in technology infrastructure to support supply chain operations. Previous studies emphasize the role of technology infrastructure in achieving supply chain visibility, reducing lead times, and enhancing overall operational efficiency (Agaran et al., 2007)

Accordingly. Infor nexus (GTN) is a system that enables buyers to transfer order details quickly and accurately, is one of the popular information technology programs used by the majority of apparel companies in HIP. Buyers enter their needs into the system to generate purchase orders once the demand projection changed to an actual need. Consequently, by accepting the order on the platform, finished good suppliers will be able to process production and ship the necessary items. The system also enables both parties to track shipments until they arrive at their destinations in a suitable manner. Moreover,

the info nexus system also enables real-time communication between buyers and suppliers, allowing for quick resolution of any issues that may arise during the production and shipping process. Additionally, the system provides detailed analytics and reporting capabilities, giving companies valuable insights into their supply chain performance and helping them make data-driven decisions.

Furthermore, The majority of HIP companies use a vendor managed system (VMS) to update buyers on all production activities. This system has shown that technological information sharing can replace manual sharing. To ensure that operations are running smoothly, data about the dates of material arrival, cutting, stitching, and packaging will be uploaded to the system. Product lifecycle management (PLM), on the other hand, assists vendors in locating product specifications requested by clients. Additionally, the PLM system also allows vendors to manage product data, including design, development, and production information. This helps to streamline the entire production process and ensures that all parties involved have access to the most up-to-date information. According to the respondent, they also use a CAD system inside their facility for pattern making and cutting tasks. This system ensures effective fabric usage for production by reducing waste. It is clear that the companies have some shortcomings in the field of data analytics based on the qualitative data that was gathered and the prior descriptive report on mean values. Hela's production manager asserts that they are attempting to come to an agreement with a technology developer by the name of SAP in order to assist them integrating all operational activities using RFID with the various software programs applicable in their facility. Due to the high cost of the required investment, as was already mentioned, this limitation affects the majority of HIP vendors.

The importance of data analytics in supply chain strategy, face challenges in fully leveraging our data said one production manager.

*We lack a centralized data repository and face difficulties in accessing and analyzing the data effectively. This hampers our ability to derive meaningful insights and make data-driven decisions."*

The absence of a centralized data repository and inability to access and use data effectively may make it difficult for the business to gain insightful information, spot trends, and make defensible judgments. The most frequent cause of technology utilization issues in our organization is a lack of experienced and trained personnel in this field, as adopting technology frequently necessitates a workforce with the necessary abilities to use and

maintain the technologies. Successful technology implementation might be hampered by inadequate training and experience. Additionally, study participants reported that investing in technology can be expensive, particularly for smaller businesses with limited resources. According to earlier research, data analytics is important for supply chain management since it can increase operational performance overall, forecasting accuracy, and inventory levels (Chopra & Meindl, 2021; Gunasekaran et al., 2020).

#### **4.4. Value chain model for Apparel companies in HIP**

Value chain modelling is crucial for companies looking to acquire an edge over their rivals or hold onto an edge they currently have because it enables them to precisely pinpoint their process where customer value is generated. based on the overall descriptive statistics, The assessment gather question related to the importance of implementing value chain activities for inbound, operation, outbound, marketing, and service from primary activities and for secondary activities focusing only on procurement and technology management with the intention of finding the level of attention given by HIP companies when conducting supply chain management using value chain analysis.

In comparison to other primary and secondary value chain activities, procurement has the highest mean score (M=4.8) among the organizations, showing that companies in HIP place a great deal of emphasis on managing procurement activities. Operation management received a higher score rate from the primary activity (M=4.5). In contrast, inbound and outbound logistics management scored (M=4.2) and (M=3.9), respectively, making them both slightly less effective than operation and procurement management. Additionally, the ratings for marketing and after-sales management have a mean of (M=3.3) and (M=2.5), indicating that HIP companies give these activities less attention than they do to the primary activities of the value chain model. Technology development management is the secondary activity's lower-rated activity (M=3.5).

As evidenced by the mean scores and qualitative data report of various components, the garment companies at the Hawassa Industrial Park have used the value chain model to diverse degrees. The scores for marketing and sales as well as services indicate a considerably lower emphasis on these areas, despite the fact that incoming logistics, operations, and outbound logistics are given moderate attention. This result is consistent with Taylor (2005) that highlights the difficulties businesses have integrating marketing and service operations into the value chain. However, the businesses have demonstrated

a higher focus on procurement, giving significant attention to strategic sourcing, contract negotiations and supplier relationship management. The research of Monczka et al. (2015), which emphasizes the strategic significance of procurement activities in achieving supply chain excellence, is consistent with this finding. The utilization of technology also given a moderate amount of attention, demonstrating understanding of its significance in assisting the supply chain. Previous research by Laudon and Laudon (2016) and Cascio (2018) emphasizes the contribution of technology to improving the effectiveness and efficiency of the supply chain.

Hence, the value chain model below is developed based on how much attention businesses place on each value chain component in their supply chain strategies. The companies placed varying amounts of emphasis on each component. In the graphic, the primary activities were represented by the higher block height, while the secondary activities were represented by the block's breadth.

### HIP companies Value chain model

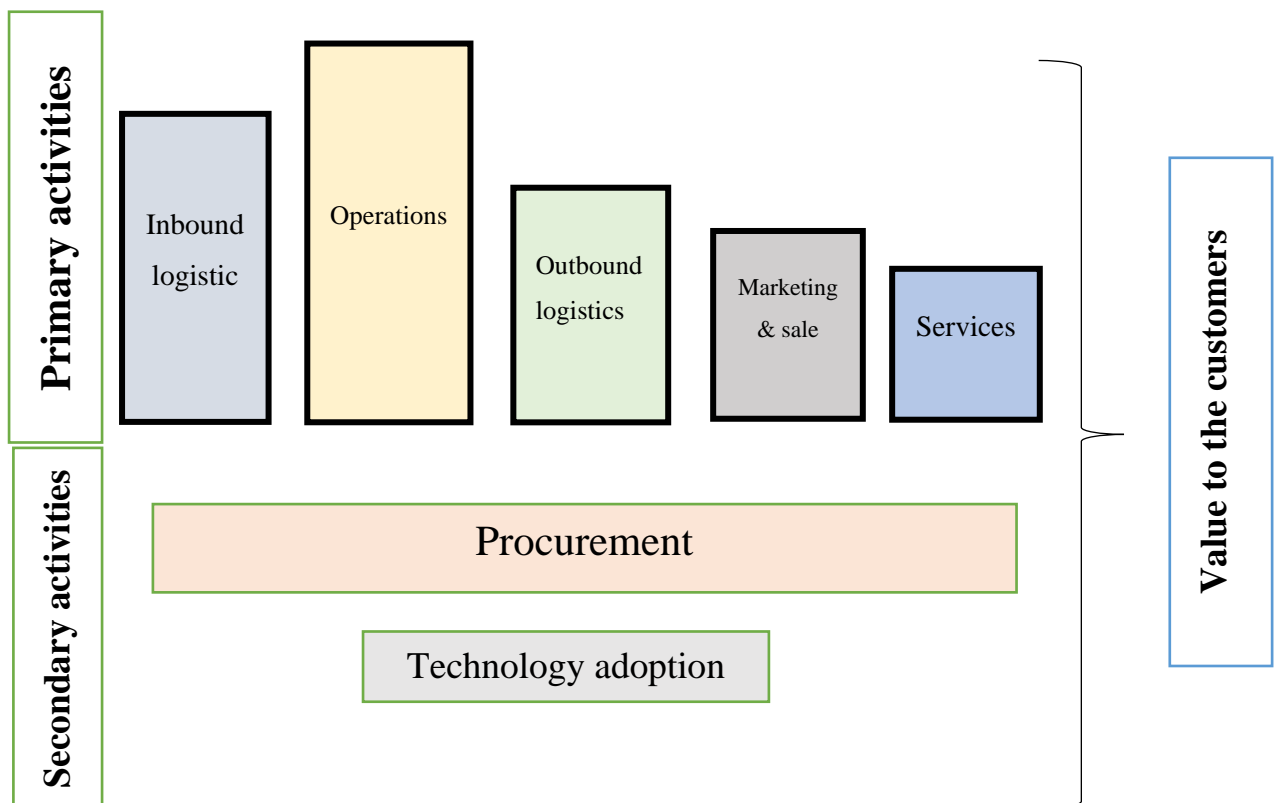


Figure 6 Overall value chain activities of the companies, Hawassa industrial park, 2023.

Source: Figure constructed based on Survey obtained from HIP companies.

#### 4.5. The Kraljic matrix for Apparel companies in HIP

The Kraljic matrix is a widely used procurement portfolio analysis tool that categorizes items based on their supply risk and profit impact. The classification helps companies understand the strategic importance of their raw material purchases and enables them to develop appropriate procurement strategies.

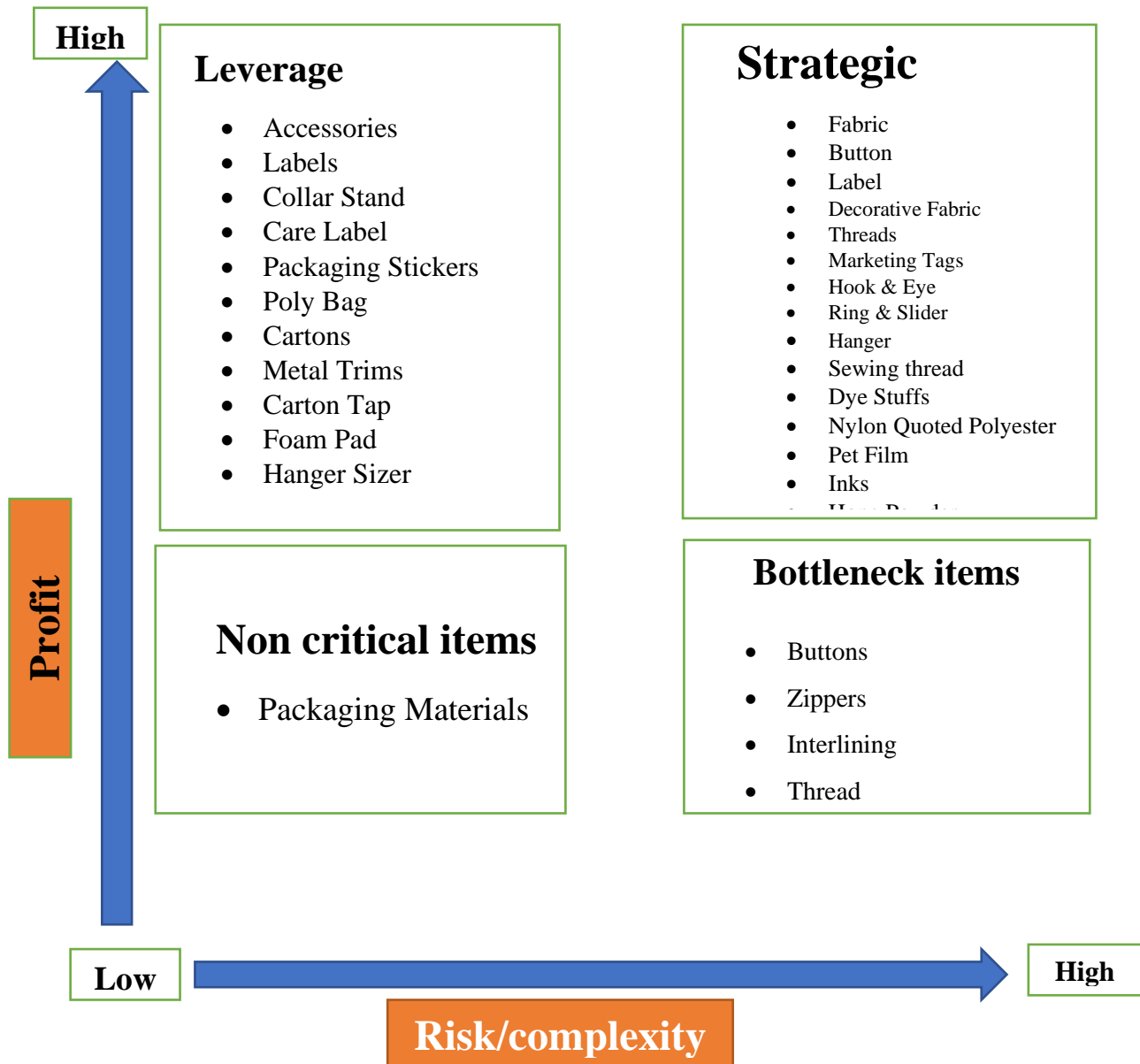


Figure 7 Classification of items into the Kraljic matrix, HIP, 2023

Sources: Figure constructed based on data obtained from HIP companies

Based on the on the company's raw material purchases, it is classified into four categories using the Kraljic matrix model: strategic items, leverage items, bottleneck items, and non-critical items.

**Strategic Items:** These are important raw materials for the business's operations and have a big impact on the finished product. They frequently pose a significant supply risk and earnings impact. Several examples of strategic objects are, Fabric, Button, Label, Decorative Fabric, Threads, Marketing Tags, Hook & Eye, Ring & Slider, Hanger and Sewing thread. Companies such as Hela Indochine, NASA Garment PLC, and TAL garments procure strategic items for their respective industries.

**Leverage Items:** Although the supply risk for these raw materials is generally minimal, they have a substantial profit impact. They present chances for cost reduction and bargaining. Accessories, Labels, Collar Stands, Care Labels, Packaging Stickers, Poly Bags, and Cartons are a few examples of leverage items. For their production operations all apparel companies including Century Apparel and Best International Garment PLC buy leverage goods.

**Bottleneck Items:** Due to the significant supply risk associated with these raw materials, production delays or interruptions may result from issues with their quality or availability. Even while they might not individually have a big influence on profits, they may have a big impact on the business as a whole. Items that are bottlenecks include buttons, zippers, and interlining. EPIC and KGG Garment PLC procure highly bottleneck items for their manufacturing needs.

**Non-Critical Items:** These are raw materials with a small impact on profits and a small supply risk. They are frequently easily accessible on the market and have no impact on the business's operations or profitability. Certain kinds of packaging materials and non-strategic fabrics are examples of non-critical products. It is possible that some businesses, like Quadrant Apparel PLC, Hirdaramani Garment PLC, and Everest apparel, are more focused on sourcing the non-critical category due to there product simplicity.

In summary, the position of a supplier in the Kraljic matrix is not itself positive or negative, but it must be justified by a real interest of the company to have a specific relationship with the supplier (Bianchini et al. 2019). The products being investigated for garment factories are therefore primarily in the leverage quadrant, which highlights goods with a high profit margin and little supply risk. The Kraljic matrix leverage items have a



high purchase volume but low profit margins. These items are typically commodities that can be easily sourced from multiple suppliers. Therefore, garment factories should focus on negotiating favorable pricing and terms with suppliers to maximize profitability. Because of the high product variety in the raw material, according to procurement management, decorative fabric and a select few accessories (threads, marketing tags, hook & eye, ring & slider, and hanger) are placed in the strategic quadrant. Companies that are concerned about supply sensitivity use both single and multiple sourcing strategies.

#### 4.6 Overall supply chain strategies of Apparel companies

This paper has examined HIP vendors who produce their goods for the export market. According to the author's research, all HIP companies operate manufacturing businesses by making their capacity available to foreign customers, making them second tire producers. Therefore, as producers who are focused on their customers, they source raw materials, transform them into deliverable products, and then ship those products to distribution centers that are situated in the target market. In order to maintain their competitiveness in the global market, HIP companies also place a high priority on effective and economical production methods. They also put a lot of emphasis on quality control in order to satisfy customers and keep up their reputation as trustworthy suppliers.

RM suppliers	HIP vendors	Distribution Centers
<ul style="list-style-type: none"> <li>• JIT inventory system</li> <li>• High volume/Low price strategy</li> <li>• Quality</li> <li>• Overseas sourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Cost leadership strategy</li> <li>• Basic product category</li> <li>• Single/Multiple sourcing strategy</li> <li>• Make-to-order strategy</li> <li>• Lean manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>• Buyers warehouse management</li> <li>• Own warehouse management</li> </ul>

Figure 8 Supply chain strategies of Apparel companies in HIP

Source: data from HIP, 2023.

The results of the interview indicate that the HIP companies' supply chain strategies are being implemented for a variety of reasons. Low price offerings are one of the factors influencing the selection of the appropriate type of strategy. This company's goals are to keep or increase operational productivity while lowering production costs, which will enable them to provide customers with competitive prices. As a result, HIP vendors are constantly seeking out high volume orders with minimal style variation in order to cut down on repetitive operation changing.

The availability of raw materials in the local market is another motive for selecting supply chain strategies that can support their current operation. As per the findings of this research paper, due to limitations on backward suppliers in the country, vendors are forced to procure their required inputs from overseas markets, which impacts these companies' ability to process fashion products at their facilities. Since fashion products go-to-market lead times are shorter than those of any other type of basic product, companies are struggling to be able to diversify their product offerings, which can help them hold different portfolios.

Based on the results of the interviews, a single or multiple sourcing model along with Just in time (JIT) inventory management is used to source raw materials. The management team asserts that the decision regarding the sourcing model is influenced by the range of available products, the cost of materials, and the supply risk associated with locating better lead times. Additionally, in order to meet customer demand, they chose a continuous mass production with make-to-order strategy. The majority of businesses have adopted this strategy as evidence that the lean manufacturing model is very popular. The literature section of this study provides examples of how this model can help businesses cut waste and boost productivity.

Contrary to investing in their own distribution centers abroad, most HIP companies ship their finished goods directly to buyers' warehouses. This has helped them to cut warehouse management costs, but of the companies surveyed, only one has developed a strategy to supply their finished goods by holding inventory in its own warehouse closer to its target market; hence, this strategy has helped them to attract buyers with the ambition of avoiding logistical activities.

## CHAPTER FIVE

### 5. CONCLUSION AND RECOMMENDATIONS

#### 5.1. Conclusion

The purpose of the study is to investigate the supply chain strategies used by HIP's apparel companies. Both qualitative and quantitative methods were used to collect the data. Data from HIP companies was gathered both directly and indirectly. In this study, the value chain model approach was used. The study's findings were based on an analysis of the apparel company's supply chain strategy in the Hawassa Industrial Park, which was done using a combination of descriptive statistics and thematic analysis based on a survey and in-depth interviews.

The study highlights the use of a comprehensive value chain model approach in improving the efficiency of apparel supply chains. By analysing and optimizing each stage of the value chain, companies can identify areas for improvement and implement strategies to enhance productivity and reduce costs. This approach allows for a holistic view of the supply chain, enabling companies to make informed decisions and streamline their operations. Value chain modelling plays a crucial role for companies aiming to gain or maintain a competitive edge by identifying the key areas where customer value is generated. A comprehensive assessment of various activities within the value chain model, indicating procurement is the most important value chain activity for HIP companies, with a mean score of 4.8. Operation management also has a higher score, while inbound and outbound logistics management are given slightly less attention. Marketing and after-sales management are less important for HIP companies on their primary activities. Technology development management is the lowest-rated secondary activity.

It was discovered that the business has successfully adopted techniques for supplier selection, transportation management, and inventory control in incoming logistics. Accordingly, Just in time (JIT) inventory management are preferable across analyzed companies. However, the interview revealed that there is limitation of finding fitting supplier based on the selection criteria. The limitation of suitable backward integrated suppliers in the country has influenced vendors on sourcing raw materials locally hence, quick response for damage material replenishment and implementing agile supply chain strategy is a challenge. Another gap identified is challenges in transportation and delivery

within the inbound logistics strategy. Despite the use of technology and partnerships with logistics service providers, there have been issues with timely delivery and irregular delivery schedules. The transport management system in Ethiopia is also mentioned as not being well occupied for tracking road shipments. Performance evaluation is also another limitation of the companies, evaluation process primarily focused on quantitative metrics such as on-time delivery and product quality but lacked a comprehensive assessment of other factors such as supplier responsiveness and innovation capabilities.

The business exhibits basic product with high volume/low variety have the most apparel companies to effectively utilize capacity, nevertheless HIP companies like Everest, Quadrant Apparel, and Century have utilized their capacity 80–100%, while Best International, EPIC, Hela, Hirdaramani, KGG, NASA, and TAL have only used 50%–80%. Indochine and Silver Spark are currently below 50%, causing a significant capacity gap for manufacturers. This gap is exacerbated by businesses' inability to maintain diverse product portfolios, increased costs for training staff, and a shortage of skilled workers.

Accordingly, Lean manufacturing is a core strategy for HIP garment companies and, the product characteristics has influenced them to adopt continuous mass production on make to order operation strategy. However, according to the interview there is limitation against product diversification. Moreover, even though quality control measures have been utilized, a few limitations were noted, including uneven manufacturing, underutilization of technological resources, and difficulties matching production capacities with shifting market demands with limited product category choice.

In the outbound logistics theme, the company has implemented effective order fulfillment processes, distribution channels, and on-time delivery performance. Warehouse management strategy has implemented by one of garment manufacturer however other vendors has described they are shipping there goods directly to buyers warehousing facilities. In contrary, there are limitation such as sporadic delays in order processing for replenishment request due to sudden demand change or inadequate material quality which impacted by longer raw material sourcing lead time. Moreover, weaknesses were identified such as delays in deliveries, especially during peak seasons or when facing logistical challenges.

In the marketing and sales theme, the company has implemented effective marketing strategies and customer relationship management. Cost leadership strategy has identified

by HIP companies as a competitive model for their product offerings. However, there is room for improvement in terms of market diversification. Moreover, use customer feedback to improve their products and services had lower mean score that suggests the companies has poor in customer feedback handling.

Regarding after-sales services, the company demonstrates effective after-sales support processes. However, based on descriptive data, prioritize responding to customer inquiries and complaints in a timely manner had got lower attention by the companies. And difficulties with complaint management of the customers after services too.

In the procurement theme, the company has established effective procurement processes. Overall, most vendors source their required raw materials (yarns, fabrics and accessories) from abroad. Single sourcing strategy has implemented for sixty-eight percents of their materials procurement according to product analysis. Other thirty-two percent of materials are sourced from multiple suppliers. Due to product variety mix and sourcing price influence along with lead time risk some materials are sourced through multiple sourcing strategies. The Kraljic matrix revealed that majority of materials has categorized under leverage items, which demonstrated the materials sourced has lower supply risk with high profit impact for vendors. Conversely small portion of raw material are categorized under strategic items, due to different specifications (product variety) these items identified as strategic items hence, it demonstrated the materials has higher supply risk & high profit impact for vendors.

Finally, in the technology utilization theme, the company has adopted technology to enhance various aspects of the supply chain. However, there are weaknesses in data analytics capabilities, hindering the company's ability to fully leverage the potential of its data.

## 5.2. Recommendations

Based on the findings from the analysis of the company's supply chain strategy, several key recommendations can be made to improve various aspects of the operations.

Finding backward integrated businesses for local raw material sources is difficult, according to research findings. The majority of clothing manufacturers, as stated in the study's body, obtain their materials from abroad, which makes them rigid when deciding what products to mix together. The inflexibility in product mix has made it difficult for the company to respond quickly to changes in market demand. This has resulted in missed opportunities and potential loss of market share to competitors who are more agile in their product offerings. Therefore, it is important for the company to re-evaluate their product mix strategy and consider more flexible options to better adapt to market changes and mitigate material shortage risks.

In addition, due to buyers' inability to supply orders that can maintain high volume requirements & the material shortage, has thus shown that companies are unable to fill anticipated capacity. Hence, because of these limitations, they have influenced to buy materials in bulk in order to effectively utilize the costs associated with logistics. In contrary, because of the lengthy lead times required, it is difficult to secure materials for replenishment whenever there is a shortage or high-quality rejections.

Therefore, vendors should encourage their strategic partners to work together and enhance the raw material supply by strategically locating in the area. Vendors can look for a diversified market with a variety of product offerings that can improve their ability to use fashion products in order to be advantageous when asking for a higher price by having materials closer to the needle point. Moreover, in order to effectively reduce their raw material needs for leverage items, HIP apparel companies should search for horizontal integration opportunities with locally owned businesses in Ethiopia. Vendors can improve their relationship with local suppliers and elevate them to achieve better quality, price, and capability by utilizing an integrative approach. This will not only benefit the apparel companies, but also contribute to the economic growth of the local community.

Another finding that highlights a gap in supplier relationship management shows that improved communication and collaboration are essential for handling negotiations over replenishment and non-compliant product specifications. The prompt handling of

customer inquiries and complaints should be a top priority for apparel companies. Hence, it is important for apparel companies to establish clear and concise communication channels with their suppliers to ensure that product specifications are met and negotiations are successful. This can be achieved through regular meetings and updates, as well as the use of technology such as supplier portals. In addition, implementing a system for tracking and addressing customer complaints in a timely manner can improve overall customer satisfaction and prevent potential supply chain disruptions. Implementing designated supplier evaluation criteria and tracking KPIs will aid them in improving their ability to spot bottlenecks and develop better strategies. By consistently evaluating supplier performance and measuring key performance indicators, apparel companies can identify areas for improvement and develop effective strategies for optimizing their supplier relationships.

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## ANNEX: DATA COLLECTION TOOL

### Personal information

S. No	Questions	Response
1	Age	
2	Sex	1. Male 2. Female
3	Educational level	1. Diploma 2. Bachelor degree 3. Master's degree 4. PhD Degree
4	Profession	_____
5	Position in the company	1. Manager 2. Marketing manager 3. Procurement manager 4. Inventory manger 5. Employee 6. Supplier
6	Experience	_____ years

**Quantitative survey questions on evaluation of supply chain management please rate the following statement based on your experience and knowledge 1= Strongly disagree; 2= Disagree; 3= Neutral; 4= Agree; 5=Strongly agree**

Supply chain strategy		1	2	3	4	5
<b>1</b>	<b>Inbound Logistics:</b>					
1.1	How crucial inbound logistics management activities are for the park's apparel companies.					
1.2	The apparel companies have clear procedures for handling inbound freight.					
1.3	The apparel companies regularly monitor their inbound logistics to ensure on-time delivery.					

1.4	The apparel companies in Hawassa industrial park have established relationships with reliable suppliers.					
1.5	The apparel companies in industrial park work collaboratively with their suppliers to improve the efficiency of their inbound logistics.					
<b>2</b>	<b>Operations management</b>					
2.1	The apparel companies in Hawassa industrial park have a standardized process for product assembly.					
2.2	The apparel companies in Hawassa industrial park regularly monitor their production processes to ensure high-quality output.					
2.3	The apparel companies in Hawassa industrial park use technology to improve their production processes.					
2.4	How crucial operations management activities are for the park's apparel companies.					
2.5	The apparel companies in Hawassa industrial park have established procedures for managing product defects and returns.					
<b>3</b>	<b>Outbound Logistics:</b>					
3.1	The apparel companies in Hawassa industrial park have a well-designed process for managing their outbound logistics.					
3.2	The apparel companies in Hawassa industrial park use technology to track their shipments and deliveries.					
3.3	The apparel companies in Hawassa industrial park prioritize using sustainable transportation methods for their outbound logistics.					
3.4	How important is outbound logistics management for businesses located in Industrial Park.					
3.5	The apparel companies in Hawassa industrial park regularly evaluate their outbound logistics costs and make necessary adjustments.					
<b>4</b>	<b>Marketing and Sales:</b>					
4.1	The apparel companies in Hawassa industrial park have a well-defined target market for their products.					
4.2	The apparel companies in Hawassa industrial park use various marketing channels to promote their products.					

4.3	The apparel companies in Hawassa industrial park use customer feedback to improve their products and services.					
4.4	The apparel companies in Hawassa industrial park have a competitive pricing strategy for their products.					
4.5	How crucial is handling marketing management activities for the park's apparel companies.					
<b>5</b>	<b>After sales Service:</b>					
5.1	The apparel companies in Hawassa industrial park have well-trained staff to provide high-quality customer service					
5.2	The apparel companies in Hawassa industrial park provide high attention for after sales service in order to maintain customers satisfaction					
5.3	The apparel companies in Hawassa industrial park have established procedures for managing product repairs and refunds.					
5.4	The apparel companies in Hawassa industrial park regularly solicit feedback from customers to improve their service offerings.					
5.5	How crucial is handling After sales services management activities for the park's apparel companies.					
<b>6</b>	<b>Procurement:</b>					
6.1	The apparel companies in Hawassa industrial park have established procedures for selecting and evaluating suppliers.					
6.2	The apparel companies in Hawassa industrial park prioritize working with suppliers who adhere to ethical and sustainable practices.					
6.3	The apparel companies in Hawassa industrial park have established partnerships with their suppliers to ensure consistent supply of raw materials.					
6.4	How crucial is handling procurement management activities for the park's apparel companies.					
6.5	The apparel companies in Hawassa industrial park have established procedures for managing procurement risks, such as supply chain disruptions.					
<b>7</b>	<b>Technology Development:</b>					
7.1	The apparel companies in Hawassa industrial park use technology to improve their supply chain processes.					

7.2	The apparel companies in Hawassa industrial park invest in research and development to improve their products and services.					
7.3	The apparel companies in Hawassa industrial park have established partnerships with technology vendors to ensure the reliability of their systems.					
7.4	How crucial is handling technology development management activities for the park's apparel companies.					
7.5	The apparel companies in Hawassa industrial park regularly evaluate their technology costs and make necessary adjustments.					

## **Interview guidelines**

### **In-depth Interview Questions for Business Managers:**

1. How would you describe the overall supply chain strategy of your apparel company in Hawassa Industrial Park? What factors influenced its development?
2. What are the key objectives and goals of your inbound logistic management strategy? How does it contribute to the overall value chain approach?
3. Can you provide examples of specific initiatives or practices employed by your company to optimize inbound logistics and ensure timely delivery of raw materials and components?
4. How do you assess the effectiveness of your outbound logistic management strategy in terms of meeting customer demands, minimizing lead times, and reducing costs?
5. What measures do you take to collaborate and coordinate with transportation and distribution partners to streamline outbound logistics and enhance customer satisfaction?
6. How do you evaluate and select the most suitable logistics service providers for your company's outbound operations in Hawassa Industrial Park?

### **In-depth Interview Questions for Procurement Managers:**

1. Could you describe the procurement strategy employed by your apparel company in Hawassa Industrial Park? How does it contribute to the overall value chain approach?

2. What type of materials do you purchase?
3. What is the annual purchasing volume & Avg. price of each component?
4. Where is your sourcing location?
5. Can you describe your sourcing model?
6. What factors do you consider when selecting suppliers for your raw materials and components? How do you ensure their reliability and quality standards?
7. How do you manage supplier relationships and negotiate favorable terms and conditions for procurement? Are there any specific strategies or practices you employ?
8. Can you provide examples of how your procurement strategy incorporates sustainability and ethical considerations in supplier selection and purchasing decisions?
9. How do you monitor and assess supplier performance and manage any potential risks associated with the procurement process?
10. What technologies or tools do you utilize to enhance procurement efficiency and effectiveness in your apparel company at Hawassa Industrial Park?

**In-depth Interview Questions for Inventory Managers:**

1. What inventory management strategies are implemented in your apparel company at Hawassa Industrial Park to ensure optimal levels of raw materials, work-in-progress, and finished goods?
2. How do you balance the need for maintaining sufficient inventory levels to meet customer demand with the objective of minimizing carrying costs and obsolescence risks?
3. Can you describe the technologies or systems you employ to track and monitor inventory, including real-time visibility and demand forecasting?
4. How do you address inventory discrepancies and challenges, such as stockouts, overstocking, or slow-moving items? Are there any specific practices or processes you follow?
5. How do you assess the impact of inventory management on your company's overall supply chain performance and competitiveness?

**In-depth Interview Questions for Marketing Managers:**



1. What marketing and sales strategies are employed by your apparel company in Hawassa Industrial Park to effectively promote and distribute your products?
2. How do you identify and target your customer segments? What market research or consumer insights do you utilize in developing marketing strategies?
3. Can you provide examples of marketing campaigns or initiatives that have been successful in increasing brand awareness and driving sales for your company?
4. How do you leverage digital marketing channels and e-commerce platforms to reach a wider audience and enhance customer engagement?
5. How do you collaborate with other departments, such as manufacturing and logistics, to align marketing activities with overall supply chain objectives and ensure seamless coordination?
6. What metrics or performance indicators do you track to evaluate the effectiveness of your marketing and sales strategies in generating customer satisfaction and driving business growth?

**In-depth Interview Questions for Manufacturing Managers:**

1. How would you describe the manufacturing strategy adopted by your apparel company in Hawassa Industrial Park? How does it support the overall value chain approach?
2. What kind of product category does your company focus on?
3. What factors do you consider when making decisions related to production capacity, resource allocation, and production scheduling?
4. How do you ensure quality control and compliance with industry standards throughout the manufacturing operations in your apparel company?
5. What measures do you take to optimize production lead times and minimize bottlenecks in the manufacturing process?
6. How do you assess the effectiveness of your manufacturing strategy in terms of meeting production targets, cost efficiency, and overall customer satisfaction?