



Griffith College

**BENEFITS OF SUSTAINABLE SUPPLYCHAIN
MANAGEMENT IN SINGAPORE'S RETAIL SECTOR**

Research dissertation presented in partial fulfilment of the requirements
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Dissertation Supervisor: *Dr. Eoghan MC Conalogue.*

MSc Candidate: Palaniappan Palaniappan

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Candidate Declaration

Candidate Name: Palaniappan Palaniappan

I certify that the dissertation entitled:

Benefits of Sustainable Supply Chain Management in Singapore's Retail Sector

submitted for the degree of **MSc in Procurement and Supply Chain Management** is the result of my work and that where reference is made to the work of others, due acknowledgment is given.

Candidate signature: Palaniappan Palaniappan

Date: August 31st, 2020

Supervisor Name: *Dr. Eoghan Mc Conalogue*

Supervisor signature:

Date: August 31st, 2020

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Abstract

In chapter 1, the introduction chapter states about the sustainability of the supply chain management in the retail industry of Singapore. It determines the aims, objectives, and research questions on which the whole research is based on independently. The retail industry of Singapore is highly sustainable as it offers products to the consumers that are based on environmental concerns. It states that the retail industry of Singapore is dependent on the supply chain management system so that it can obtain high efficiency in the market.

In chapter 2, that is the Literature Review section; several aspects of SCM have been discussed. Consumer Buying Behaviour and several factors influencing the buying intention of consumers have been also discussed in this. Several aspects such as Stakeholder Pressure, Technological Integration, and Consumers' perception of SSCM have been also discussed in this chapter. Knowledge-based theory and Behavioural-decision Theory have been used to gain an understanding of integrated SSCM.

In chapter 3, the conceptual framework is engaged in making the discussions related to the two effective theories such as behavioural decision theory as well as the knowledge-based theory that is highly focussed to attain the success of the retail industry among the competitors in the competitive market in an effective manner.

In chapter 4, the overall chapter has been exclaiming about the research methods which are being used in this research. In this regard, the descriptive design, inductive approach, and positivism philosophy has been used by the researcher. However, the primary and secondary qualitative method has been used to collect and analyse the data eventually.

In chapter 5, the primary qualitative analysis along with the secondary analysis has been conducted in the findings and analysis chapter. The qualitative analysis is the conduction of the interview which has been done with the online presence. However, the secondary analysis has been focused on the case scenarios related to the companies of Singapore. Thus, the Isetan, Henkel, and Zara company's case studies have been determined in the following chapter.

In chapter 6, the conclusion and recommendation show the SSCM as to be analysed that proper management plays an important role in the retail industry to conduct sustainable

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supply chain management for extracting the necessary advantages that will be beneficial to the industry for gaining the competitive advantage in a significant manner.

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Chapter 1: Introduction

1.1 Introduction

In the current environment of business, the benefits of management of sustainable supply chain (SSCM) in the retail sector are a subject, which needs to be taken under major consideration. Proper management of SSCM refers to the environment-friendly supply chain along with the logistics network of an organization that is suitable for three main aspects such as social, environmental, and economic benefits. The retail industry of Singapore is considered to be one of the most prominent and important sectors in the economy of the country. Retailing plays a pivotal role in the concerned country and making the country a viable place to reside and travel. The retail industry is regarded as one of the largest producers and largest sectors in Singapore that deal with sales and marketing of goods through several distribution channels to intensify financial gain as well as the profitability of the business. The retail sector of Singapore consists of hypermarkets, small specialist stores, and retail outlets. Singapore has been named as “shopper’s paradise”. The following research paper sheds light on the SSCM in the current business environment and referring to the Singapore retail industry to demonstrate the discussion appropriately.

1.2 Background

In recent times, there has been an appositive shift towards sustainability in all the aspects of life, which is majorly driven by the emergence of consciousness related to the global climate. Organizations are striving to gain long-term and clear strategy for their customers and products. Along with this it has become equally important for the retail sector to implement the necessary strategy for value creation with the help instilling business practices with sustainability. It provides the key advantages and success even in the competitive market as the organizations follow up the sustainability by focusing on the value chain. In Singapore, the spending habit of the consumers has resulted in the development of niche and new retail trends. It is being conducted with the use of the supply chain system that transfers each of the products from the manufacturers to that of the final consumers. It has been evident that in Singapore, the cost of operating business is quite high and there is major scope for small size enterprises to improve business productivity with the help of SSCM. (Dubey *et al.* 2017). It is now considered necessary for the organizations to introduce sustainability into the fabric of corporate activities, to permeate into business processes, value propositions, and workplace protocols. SSCM has a major positive impact on the business of the

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retail organizations by reducing wastage, operational costs, energy, and emissions as well as contributes to employee retention, ecosystem goodwill, and reputation of the organization.

SSCM has a major impact on the retail company's supply chain as it helps in developing intermediary relationships between the customers and the producers. In recent times, the organizations belonging to the retail sector in Singapore are taking initiatives and implementing necessary strategies to gain business sustainability. SSCM has been considered majorly important and significant for organizations reputation and succeeds in the present competitive market. SSCM is majorly effective for the organizations as this also spurs innovation for new business proceeds, policies, and products. It has the capability of bolstering the supply chain resilience with the help of enhancing operational efficiency. The organizations in the recent times are considering sustainability as a key as this is majorly helping the organizations in bringing a sense of responsibility and purpose towards the environment, embedding it across the all the business functions including maintenance and following of regulations resulting in a reduction in carbon footprint, environmental hazards, and wastage. Retail organizations face major issues, which at the time designing production and business model which, can fulfil the requirements of the customers and have a positive impact on the environment. SSCM is necessary for the organization in the making of appropriate business and production models (Ansari&Kant, 2017). With the proper implementation of sustainable strategies and initiatives in several business activities such as acquisition, production packing patterns, distribution, new product development, and development of HR strategies and strategic decision making. The retail sector of Singapore is hugely contributed to the entire economy of the concerned country. The preferences of the customers are changing, and customers are willing to purchase sustainable products. The retail sector of the concerned country is implementing SSCM strategies in different business practices and activities. SSCM has made the retail market challenging and systematic as well. In this research, the researcher has analysed the challenges and benefits of SSCM in influencing the retail sector of Singapore.

1.3 Rationale

It can be found in the current era of business that along with the increasing awareness of people regarding the impact on the environment, the demand for sustainable practices in the business operations is also increasing. In this term, it is essential to mention that people are becoming highly eco-conscious where they are very concerned about the impact on the

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environment of the products that they have purchased the services that they have received as well as the activities that they have Such eco-consciousness of the people greatly reflected on their purchasing behaviours in the purchase of both luxurious and daily life products.

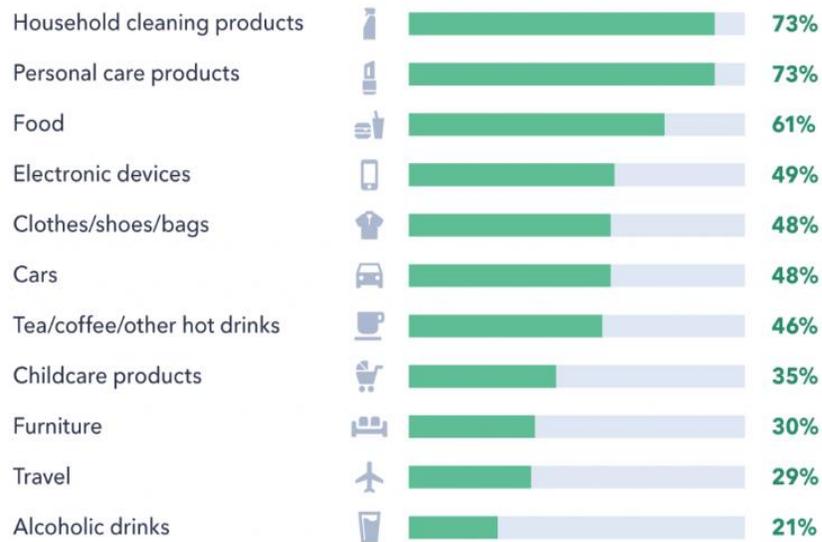


Figure 1: *Percentage of eco-conscious consumers*

(Source: Ghadimi, Wang& Lim, 2019)

From the above figure, the percentage of eco-conscious consumers is remarkably high, and this is increasing day by day due to the continuous increasing awareness regarding environmental sustainability among them. The impact of eco-consciousness among consumers largely influenced their purchasing behaviours in terms of different products, however, the perception of them regarding buying daily household necessary items have been impacted extremely. In this term, it can be stated that people are looking for environment-friendly goods for their daily usage in households to minimize the bad impact on the environment and contribute to the sustainability as much as possible (Aliet *al.* 2017). For this reason, the demand for sustainability in such businesses has enhanced that significantly influenced the business persons and entities to switch to a sustainable approach in their business practices and introduce themselves as eco-friendly in the market in front of the consumer base to attract them and influence their purchasing perception.

The retail industry is considered as one of the largest and productive sectors in the business markets that deal with sales and marketing of goods through several distribution channels. Apart from this, this industry runs its business along with multiple stakeholders for multiple purposes including acquiring raw materials, manufacturing, distribution, and much more that requires a

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strong SC network in the sector. In this term, the continuously increasing demand for sustainability from the side of consumers significantly influences the retail industry to adopt sustainable practices in its business, especially in its SCM (Gaoet al. 2017).

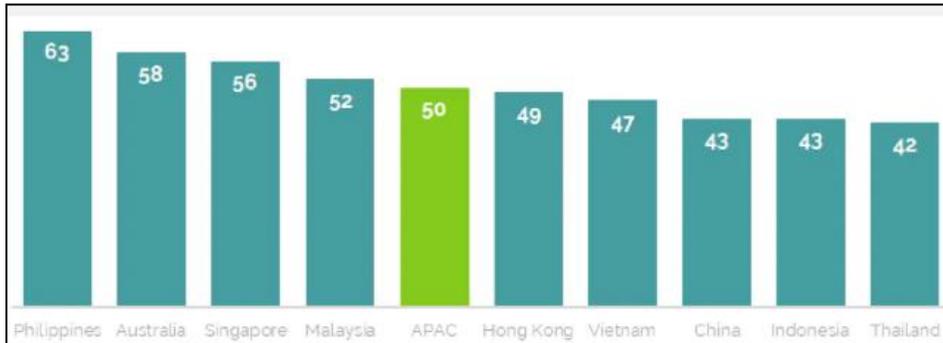


Figure 2: *Sustainable retailing in different countries*

(Source: Koh, 2018)

The above figure indicates that the business the customers of Australia and the Philippines felt strongly about the responsibility of business to safeguard the environment with 58% and 63% respectively. The consumers of Singapore are in third place with 56% and this percentage proves that half of the population of Singapore prefers sustainable retailers. Thus, it can be rightly stated that that the selection of the topic about Sustainability in the SCM in terms of the retail industry referring to Singapore can be highly appropriate. This is because the current research study to cover one of the most vital and concerned topics in this study and demonstrate effective discussion on it to make the following research highly valuable for others.

1.4 Collection of data

In order to conduct the research both primary and secondary aspects of data have been collected. This is conducted for providing a reliable approach to the study. The use of both data can help to increase the reliability of the study. Thus, the data has been collected. For the primary aspect of data, interviews have been conducted. The interview process has taken lots of time, but it increases the validity of the research by providing authentic indicative points-to analysis. The interview process is highly effective as this technique enables the respondents to share their viewpoints and opinions freely and the researcher to gain more ideas from the participants related to subject matter. The interview of 5 managers from the retail sectors of Singapore was conducted. It helps to get authentic information about the contemporary market of Singapore. Thus, it is

significant to enhance the scope of business in a significant manner. It even helps to detect their issues, challenge, and lack of approach in establishing sustainable SCM. Thus, primary data collection with the process of the interview has been conducted to achieve research objectives. Secondary research has been collected from the news articles, websites, and authentic journals of reputed publishers and authors. It provides the research with a more significant approach through which a proper development of the research process can be achieved. It also increases the dimension of knowledge-based analysis within the research by addressing each dimension and gaps within the cooperative study. Thus, the primary and secondary notions of data have been collected to provide authentic and reliable information about the research topic.

1.5 Analysis of data

Data analysis is considered a highly important part of the research that analyses the collected data through different techniques. In the concerning research, two different techniques of data analysis have been used to analyze two different types of data such as primary qualitative data as well as secondary qualitative data, which are thematic analysis and empirical analysis. To analyze primary qualitative data collected through the interview program, a thematic analysis has been used in this study. On the other hand, to analyze the secondary qualitative data, which is case study based, collected from several secondary sources. The thematic technique of data analysis refers to the process of analyzing text-based qualitative data, for instance, interview transcript and much more. In the following study, this technique has been used to analyze and describe the responses of the participants who participated in the interview program of the study. On the contrary, the empirical technique of data analysis refers to the process of analyzing collected real-life data, results, and matrices. In the concerning study, this technique has been used to analyze several real-life case studies of different companies to illustrate the benefits of sustainable supply chain management in the retail industry of Singapore.

1.6 Aim of the research

The research aims to examine sustainable initiatives in retail supply chains in the Singapore region. In this research, the researcher aims at analysing the demands and requirements of marketing departments ensuring the right negotiations with the suppliers. The researcher aims at

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gaining a major understanding of the importance and necessity of sustainability in the retail sector. It is considered a significant collection of administrative practices, which relies on the impact of the environment and each of the stages in cross value chain specifically for the products as well as the multidisciplinary point of view on the product life cycle. The study focuses on sustaining the retail sector with the help of supply chain management. The activities of the environment are considered by the organization in making proper decisions rather than focusing on the problems related to governmental regulations and social pressures. The negative influence of the environments needs to be analysed by the retail industry's organizations. In this industry, the overall chain consists of their responsibilities including the suppliers, consumers, distributors, and partners.

1.7 Research objectives

The primary objectives of the following research study that are instrumental in the effective progress of the study are the following:

- To identify the need for SSCM in the retail industry of Singapore
- To recognize different benefits and limitations of SSCM in the Singapore retail sector
- To analyse different concepts and models associated with the SSCM applied in Singapore's retail sector
- To evaluate the key success factors for approaching SSCM in the retail market of Singapore

1.8 Research questions

The potential questions of the following study based on which the entire study is focused are the following:

Q1. Why Singapore must introduce sustainability in the supply chain of business?

Q2. How the sustainability aspect is benefiting the retail sector of Singapore?

Q3. What are the key concepts and theories associated with the application of SSCM in the Singapore retail market?

Q4. What are the major success factors for approaching SSCM in Singapore retail market?

1.9 Significance of the research

The concerned research is based on gaining an understanding of the benefits SSCM is offering to the retail sector of Singapore. The concerned research also provides an understanding of the application and concept of SSCM in the retail sector, which helps in demonstrating the new trends and factors, which drive Singapore's retail industry to adopt a sustainable approach. In this

term, referring to the retail market of Singapore for discussing the application of SSCM along with their benefits and limitations can be regarded as highly appropriate. The research has major significance as the retail sector of Singapore hugely contributes to the country's economy and is making the concerned country a viable place to reside and travel. In recent times, the consumers of the country have become majorly conscious about the implementation of sustainability aspects in the brands. Moreover, as the retail sector is regarded as the largest sector that operates its business along with multiple stakeholders for multiple purposes and possesses strong supply chains, it can be stated that conducting the current research on the SSCM in the retail market of Singapore can be highly appropriate (Aliet *al.* 2017).

1.10 Structure of the dissertation

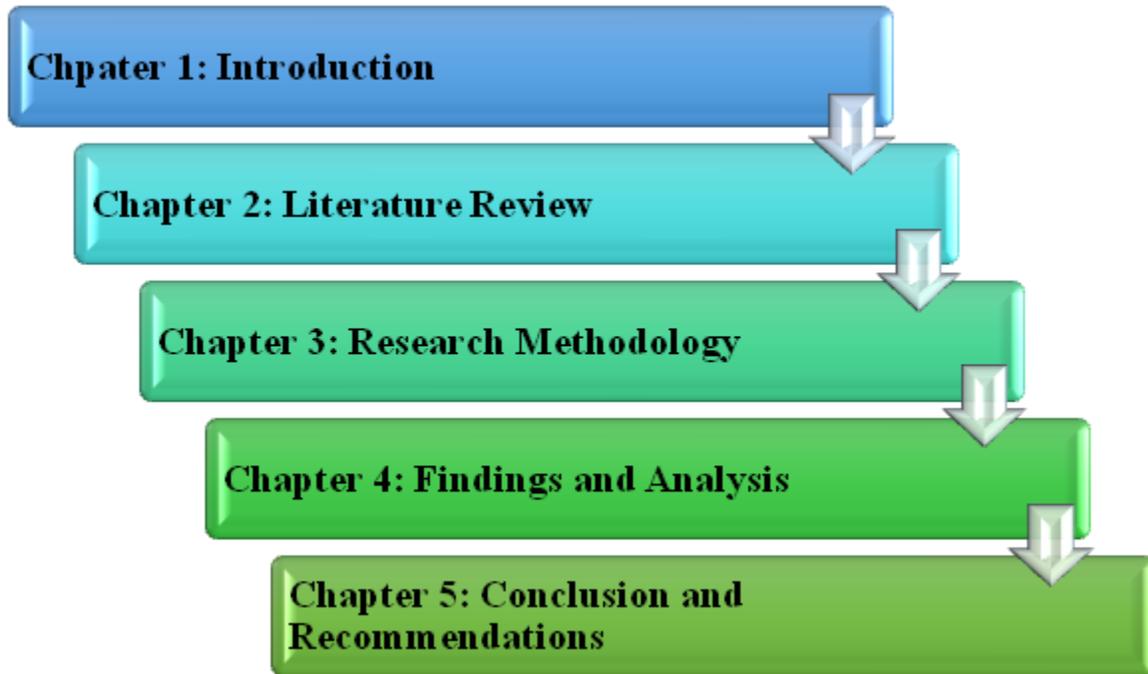


Figure 3: *Structure of the Dissertation*

(Source: Created by the learner)

1.11 Summary

Sustainability is the most concerned topic to discuss in the current era for ensuring a positive and healthy impact on the environment. In this concerned research, major emphasis has been given to the sustainability aspect of the retail sector of Singapore. The retail industry found to have a higher impact on the environment in different areas from acquiring materials, manufacturing, packaging as well as the distribution of goods. Thus, it has become majorly

important and necessary for the brands to introduce sustainability in the supply chain. Proper management of SSCM has become necessary for organizations as in recent times the consumers prefer sustainable brands. For this reason, conducting the following research in the SSCM in the retail industry can be regarded as beneficial and valuable. Thus, referring to the retail market of Singapore this will increase the discussion validity largely.

Chapter 2: Literature Review

2.1. Introduction

In this research, the SSCM (Sustainable Supply Chain Management) aspect of Singapore's retail sector has been discussed. The retail sector of Singapore majorly contributes to the country's economy. The retail industry of the concerned country is considered one of the productive and largest sectors, which majorly involves in marketing and selling of goods with the help of multiple channels of distribution for intensifying profitability and financial gain. In this chapter, several aspects of SCM have been discussed with major emphasis. The particular chapter sheds light on the aspect of SSCM in the retail business environment of Singapore. The concerned chapter will provide an overview of the basic concepts of SCM and discussed the consumer buying behaviors and competitive advantage associated with SCM. New trends and technology integration in the field of SCM have been discussed in the concerned comprehensively. The literature also discussed the importance of consumers as a key driver of SSCM. *Greenwashing* considered a major aspect of the supply chain and in this particular chapter, the key drivers of greenwashing and aspects of reverse *greenwashing* have been discussed (Rueda, Garrett & Lambin, 2017). The entire chapter is based on gaining an understanding of the basic aspects of SCM and its importance in the retail sector.

2.2. Definition of Core terminology

Supply Chain Management

In the competitive market of the retail industry in Singapore, it can be determined that the supply chain is regarded as the major activity of every company. It has been evident that in recent times the retail sector of the concerned country is majorly introducing sustainability in the supply chain owing to consumers' preference for purchasing from sustainable brands. It helps in delivering the products from the manufacturer to that of the final consumers. As commented by Salama (2017) it provides the middle persons who are responsible for delivering the products

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starting from the manufacturers and to the people who will be consuming it. It is focused on the chronological order where the products of the companies are transported from suppliers to that of the wholesalers. Then it is delivered to the retailers and then to the final consumers. An appropriate structure is maintained within the industry in which management plays a vital role. The overall selling structure needs to be maintained accordingly (Wen, Choi & Chung, 2019).

The SCM can be effective when the business organization's strategic alignment is involved in the process by recognizing the market values and economy along with the achievement of competitive advantage from all the relevant competitors of the market. According to Ayers & Odegaard (2017), supply chain management plays a pivotal role in each of the organizations whether it is large or small business. The SCM has useful effectiveness for improving and developing the consumer services directly. It is being done when the products of the company are correct and rightful. These correct maintenance of quantity, quality, and prices of the products demanded by the consumers need to be provided to them for satisfying their respective requirements. It can be regarded as a beneficial aspect for the retail industry as it is helpful towards the storage and movement of the raw materials along with the process attached to the work of finished goods and inventory. As proposed by Gupta and Gupta (2019) it generates value into the industry by developing its efficiencies within the centre of the distribution along with optimizes the network for enhancing the levels of the services. It also helps in lowering the costs of the products and increases the time of the delivery as soon as possible (Saber *et al.* 2019). The retail industry of Singapore is considered to have major importance is hugely contributing to the economy of the country. Thus, it is considered necessary for the retail organizations to introduce sustainability in the business, as this will help in increasing productivity by eco-friendly activities. The organizations in the recent times are recognizing and appreciating the requirement to act on sustainability and SSCM has become a major part of the long-term strategy requirements ecosystem approach, holistic thinking, focused execution, and organizational ambition (Topp-Becker & Ellis, 2017). It has become necessary for organizations to align stability with long-term strategies. Blending sustainability with the core business process and activities can affect the entire business processes and can influence the process of decision making of the organizations. This majorly helps the organization in the development of sustainability policies. In Singapore, the retail sector has major importance in the concerned country and hugely contributing to the development of the entire economy of a country (Koberg, & Longoni, 2019).

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The sustainability policies can majorly help the organizations in infusing necessary strategies which to build a strong and effective relationship between the producers and the customers. In recent times, customers have become majorly aware of sustainability. They are willing to buy products from the organizations who are manufacturing goods considering the health of the environment. Sustainability is majorly helping the organizations as well as the environment and the new aged customers. According to Liu *et al.* (2020), the major aim of SSCM is to make the ecosystem engaging, and thus with the proper implementation of suitable strategies the organizations are becoming aware and majorly responsible towards the well-being of the environment, communities, and the employees. It has become imperative for organizations belonging to the retail sector to look at the opportunities and challenges with the lens which is involving communities, governments, peers, and stakeholders working together to realize awareness, developed resources, and systematic changes (Tseng *et al.* 2019).

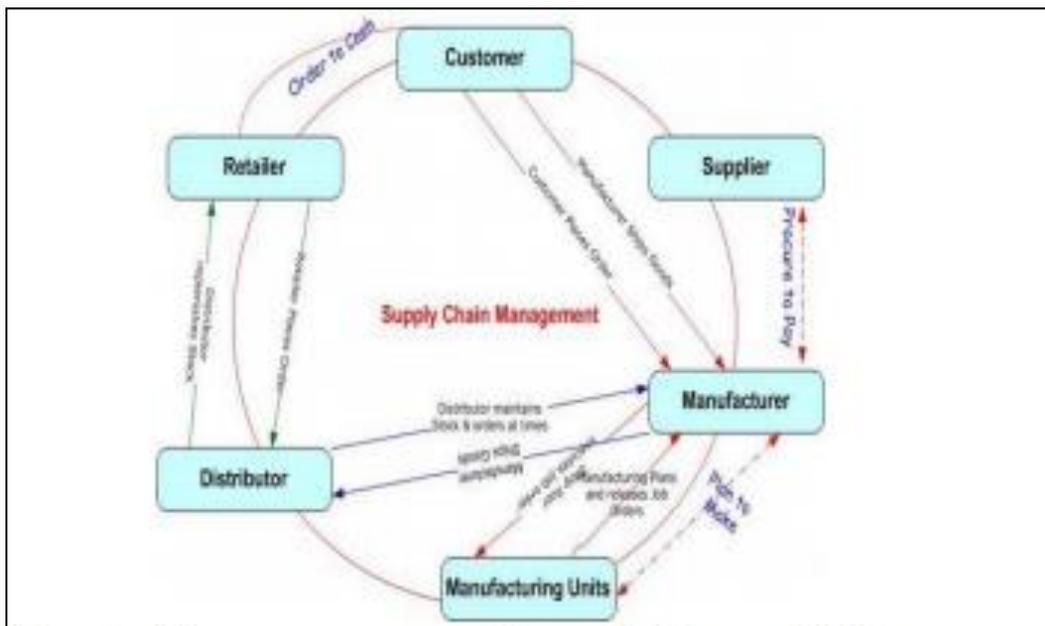


Figure 4: SCM Process

Source: (Naidoo & Gasparatos, 2018)

Sustainability in the retail industry is much appropriate for fulfilling the requirements of the existing generation without harming the capabilities. Sustainability is focused on three major pillars, which include economic, social as well as environmental. It is helpful in the creation of the financial value with that of the social value by protecting the environment within the supply chain management and business organization. The establishment of the ethics and the values altogether

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across the organization is for sustainable development in the industry. It makes the environment more green, efficient, and flexible with IT by aligning it with the strategies of business organizations (Madani&Rasti-Barzoki, 2017). This helps in attaining sustainable development by making the organizations measure all the factors and can protect the network against the risks of the social as well as environmental threats. The industry is further found to be ensuring that the products of the company will put a positive impact on both the environment and people of the society. It enhances the modes of transportation, delivery of the raw materials, supplier's practices, eventual disposals along with the usage of the products by the consumers. In the retail sector, sustainability is considered to have a major influence especially in the recent competitive era of retailing. In the view of Kalyar, Shoukat & Shafique (2019) Sustainability in the present times has taken the front seat in the retail business environment. SCM is majorly important in Singapore as the retail sector of the concerned country is contributing hugely to the entire economy of the country. Rapidly evolving social and environmental challenges have made it necessary for organizations to incorporate sustainability in SCM and other business practices. Sustainability majorly influences the parameters of the Triple Bottom Line linked to the environment, economy, and society (Kot, 2018).

Sustainable Supply Chain Management (SSCM)

The sustainability concept has been introduced to several fields including technology, supply chain, and management (Carter & Rogers, 2008). In recent times, the organizations in the retail sector are establishing different environmental strategies to improve both business operations and the environment. In recent times SSCM is considered one of the most influential and effective strategies implemented by the organizations belonging to the retail sector of Singapore. The Government of the concerned country has implemented and developed sustainable and integrated business policies by adopting WOG (Whole-of-Government) (SUSTAINABLE DEVELOPMENT GOALS, 2018). SSCM is regarded as an important strategy, which is supporting and the organizations in the retail sector in improving overall performance. As commented by Salama (2017) Sustainability is majorly important for both the organizations and the environment. The term sustainability refers to the integration of economic, environmental, and social responsibilities and the organizations are using this strategy for disciplined operations and management. Sustainability is hugely defined as the development, which fulfilled the requirements of the present without compromising the ability of future generations to fulfil their needs. SSCM

ensures that the basic needs of humans are fulfilled and assures the conservation of non-renewable resources (Min, Zacharia & Smith, 2019). Several organizations in the retail sector are implementing sustainable supply chain networks to gain the benefits of brand reputations, risk magnet, competitive advantage, and cost reduction. Reporting and regulatory requirements are essential for the organizations to provide further benefits to the retail organizations by forcing them to adopt necessary sustainable measures. To set up a sustainable ecosystem, organizations require dedicated and collaborative efforts. It mandates the stakeholders to gain an understanding of the necessity and importance of a sustainable supply chain and then helps them in working cohesively towards gaining regularity in the practices of the supply chain (Dubey *et al.* 2017).

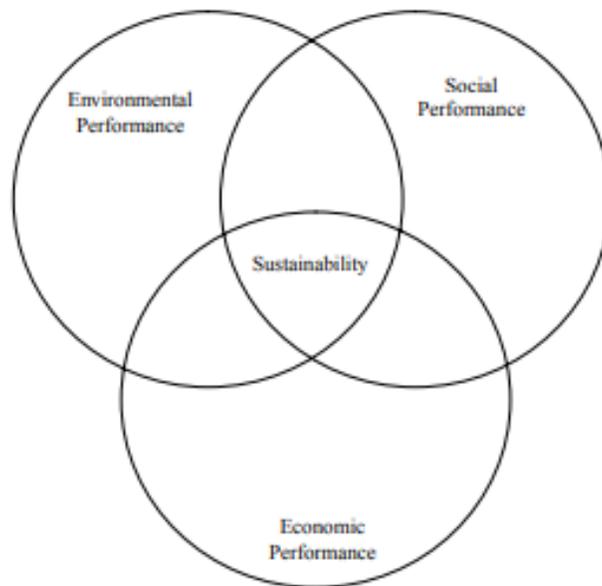


Figure 5: *A framework of SSCM*

Source: (Min, Zacharia & Smith, 2019)

Consumer Buying Behaviour

The social orientation of an organization reflects a concern on the consumers' wellbeing and long-term interests. The organizations having social orientation can recognize the conflicting criteria of requirement satisfaction of the consumers, interests of the public, and the major criteria of profits of the organization. The consumers play a huge and important role in the implementation of SSCM. There is a major relationship between the perception and role of the consumers and participation in the SSCM (Naidoo & Gasparatos, 2018). In the retail sector, the buying pattern of consumers influences the productivity and sustainability of the business environment. The

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participation of the consumers and their buying pattern influenced positively customers' trust and self-brand connection prospectively. The buying behaviours of the consumers possess a positive relation to the trust and self-brand connection of the customers. It has been evident that over the last few years consumer consumption of services and goods has increased tremendously in Singapore (ET Retail, 2020).

The purchasing behaviours of the customers can be gnarly predicted though the intention of purchasing however it has to understand that buying intention does not always lead to buying behaviours. Unanticipated factors can change and interface behaviours of the consumers. As opined by Mamdouh, Kadry & El Ahmady (2018) it has been evident that time the consumers perceive the component of the sustainability of SCM the consumers then reinforce the connection of self-brand and these results in buying behaviours (Mariadosset *al.* 2016). In case the consumers identify that SCM practices are hampering sustainability then the buying intention of the consumers decreased. Practicing environmentally sustainable supply chain management in the retail sector of Singapore positively influences the buying intention of the consumers. It has been evident that there have been several barriers, facilities, and prevalent motives influencing the buying decision making towards sustained products of the consumers (Ramya & Ali, 2016).

Stakeholder Pressure

It has been evident that the pressure of the stakeholders hugely influences the sustainability of the supply chain. On SSCM, the pressure of the stakeholders can result in the adoption of objectives do sustainability, implementation of practices of sustainability, and awareness of sustainability. There are different types of stakeholders influencing SSCM in a different individual manner. As opined by Fredendall, Letmathe & Uebe-Emden (2016) these different types of stakeholders are considered less of more influential depending on whether the issue of sustainability is social or environmental. The impact of stakeholders is considered to possess a multidimensional concept, which the organization in the retail sector is required to use to describe the effects of an organization on its respective stakeholders. SSCM positively contributes to an organization's reputation thus, the organizations must counter the impression of the pressure of the stakeholders as the only key driver of sustainable SCM. Both SSCM and stakeholder pressure contribute hugely to a firm's sustainability performance. Thus, the managers of SCM will be able to perceive major benefits from SSCM other than the risk reduction from reputational damage with the help of stakeholder activism. *DCS (Abstract Dynamic capabilities)* are regarded as hugely

important for the organization involved in retailing to gain a competitive edge in the supply chain and dynamic environment of business, where social and environmental aspects are regarded as SSCM (Meixell&Luoma, 2015). The pressure of the stakeholders majorly influences the overall performance of SSCM, which is the outcome of the interplay of practices of SSCM and DCs. In retail organizations, the major stakeholders are Distributors, Suppliers, distributors, and manufacturers. The stakeholders are considered majorly important for gaining competitive advantages and in the process of establishing an effective business environment (Popadynets Shults & Barna, 2017).

2.3. Sustainable Supply Chain Management (SSCM)

Basic concepts of SSCM

In recent times, the retail sector of Singapore is not only concerned with the profit gained by the organizations. It has become the responsibility of the organizations to give back something to the society and environment. It has become a major responsibility of the retail organizations to minimize and mitigate the negative aspects of business affecting the environment massively. SCM is considered as the network management of interconnected organizations that are involved in the provision of services and products to end consumers (Helmig, Spraul & Ingenhoff, 2016). The organizations have major responsibility for their suppliers' behaviours on several issues including health, pollution, safety, and child labour. In recent years, there has been evident increasing interest in addressing SSCM. SCM is incorporated into a sustainability-related triple bottom line. As commented by Salama (2017) An organization practicing SCM is sustainable are responsible for the social and environment, the performance of its respective suppliers. SCM can be regarded as the pursuit of sustainability objectives with the help of the supply and purchasing process, incorporating environmental, economic, and social elements. A set of concepts has been incorporated by SSCM such as green or environmental SCM where the organizations are willing to minimize and mitigate the negative impact of the environment present in the supply chain. It majorly includes the consideration of environmental, economic, and social issues and ensures that goods are ethically sourced along the supply chain (Berning& Venter, 2015). SCM can include purchasing from suppliers who are local for providing support to the regeneration of the local economy

Influence of SSCM

Benefits of Sustainable Supply Chain Management in Singapore's Retail Sector

SCM has is considered hugely influential for the organizations belonging to the retail sector. This involves increasing the efficiency of the firms with the help of using technology and capabilities of external and internal suppliers by creating a supply chain that is seamlessly coordinated. These results in the transfer of competition of inter-firm perspectives to first performed and competition related to the supply chain. In recent times SCM has become proactive environmentally and influencing functioning realtor to purchase facilitating reuse, resource reduction, and recycling (Mariadosset *al.* 2016). The organization with the help of implementation of SSCM has been able to understand the crucial role played by the suppliers in the implementation of responsible social and environmental practices. As commented by Salama (2017) the suppliers of an organization are considered as hugely sensitive towards offering increased efficiency and protecting the buyers' intangible assets. Sustainable development is considered an influential process with the help of which the investment direction, resource exploitation, orientation of technological development is made consistent by the organizations. SSCM is hugely based on the triple bottom line of environmental, economic, and social goals. SSCM hugely suggests the organization that there are multiple external constituents to become the drivers of SSPs and SPPs. These constituents are hugely influencing an organization's buying activities, which are environmentally sustainable including the competitors, governmental agencies, and customers. Supply chains in the present times have majorly evolved into a worldwide-interconnected demand and supply network with significant interdependencies. Collaboration thus becomes majorly essential for the organizations as this helps the organizations in integrating SSCM. SSCM is helping organizations in improving their production, distribution, and manufacturing processes. In this present competitive era of the retail market, the organizations with the proper and effective sustainability strategies can gain competitive advantage and technological integration and these are helping in increasing and improving operational efficiency and quality of the products (Wijethilake & Lama, 2019).

Competitive Advantage

In the current business environment, it has become hugely important for organizations to gain a competitive advantage for increasing profitability and to remain in the global race. In this process, the role of SSCM is huge. In the current business scenario, SSCM has been regarded as the major source of gaining a competitive edge as efficient supply chain management helps in saving cost and helps in synergizing the important components of the supply chain, which offers greater profitability to the retail organizations. Sustainability has become

Benefits of Sustainable Supply Chain Management in Singapore's Retail Sector

majorly important in the retail market and this is considered as one of the core considerations for retail supply chains in Singapore. As commented by Salama (2017) in today's complex business environment, sustainability in the supply chain has been majorly recognized by retail organizations as the key source of differentiation, and competitive advantage. The organizations thus are striving for a powerful and effective supply chain that will allow the organizations to get the products to market efficiently, economically faster than their competitors. The organizations are implementing effective and comprehensive strategies of sustainability in their supply chain to gain success in the long run and to achieve competitive advantage. In recent times, the leaders of business are hugely dependent on SSCM for increasing the bottom line as well as the top line. Organizations must implement a robust and strong level of service agreements to meet the requirement of both the consumers and the environment. It has been evident that in recent times several organizations are gaining a competitive advantage with the help of leveraging accurate and effective management of SSCM (Anantadjaya, 2009). The organizations to gain a competitive advantage with the implementation of effective SSCM required taking care of the important business aspects and needing to become environmentally and socially responsible. This will help the organizations in the proper implementation of SSCM by understanding the buying patterns of the consumers. Thus, SSCM is considered one of the major key drivers for retail organizations in the process of gaining a competitive edge (Mathivathanan, Kannan & Haq, 2018).

Technological Integration

Supply chain technology integration is allowing the organizations to isolate problems in the new and existing systems at the time of testing and this is responsible for boosting the visibility of the supply chain. In the current era of retailing, the consumers are provided with advanced options of shopping through m-commerce and e-commerce and this has made the SCM a crucial area of the business concern. Technological integration is considered a major benefit, which the retail organizations are gaining from the implementation of the accurate and effective introduction of sustainability to their supply chain (Kot, 2018). This is considered hugely difficult for the manufacturing organizations, which are mostly dependent on the partners of the supply chain for the delivery of products. Suppliers, distributors, and manufacturers are considered the major stakeholders of retail organizations. In recent times with the integration of advanced technology, the pattern of business and consumer preferences is rapidly changing. The organizations need to

use information technology in the SCM as this helps in improving accountability and visibility. As proposed by Gupta and Gupta (2019) with the proper integration of, advanced technology the organizations will be able to develop adaptable processes of the business. IT will help the organizations in the proper and effective implementation of SSCM by increasing and improving collaboration between supply chain partners (Iovino, D'Emidio&Modica, 2020).

2.4. Consumer Buying Behavior

Influence of consumers in SSCM

The participation of the consumers is considered the customers' time, knowledge input, resources, and efforts related to the delivery and production of products. Thus, the participation of the consumers in the SSCM can be considered as the consumers investing time, effort, knowledge, and resources into an organization's economic, social, and environmental SSCM activities. In previous years, the consumers were regarded as not influence SCM however, in recent times, sustainability has become a major key factor in the organization's SCM, and this has put the consumers in an influential position in the organizations' practice of the supply chain (Parkhi *et al.* 2015). In the present times, with the help of advanced technology the consumers are provided with each detail of the products and the organizations. This way the organizations have gained huge influence over the management of the supply chain. In recent times, most of the e-commerce is hugely business-to-business and this is affecting the expectations of the consumers (Saber *et al.* 2019).

Consumer as a driver of SSCM

The consumers are considered the key driver of SSCM. The requirements and preferences of the customers affect the decisions of the suppliers. In recent times active participation, perception, and buying patterns of the consumers are hugely affecting the SSCM are a necessity for the organization to analyse in the process of achieving integrated SSCM. In recent times, retail organizations are forced to introduce changes in their operations because of the changing pattern of the consumers (Mariados *et al.* 2016). The purchasing intention of the consumers is considered hugely important in the process of implementing SSCM. The major aim of sustainability is to improve the level of customer satisfaction by offering them sustainable goods and services. The consumers are in the central position in the retail sector. Thus, to gain profitability and to gain a competitive edge the organizations need to make their supply chain sustainable. The organizations are in the process of gaining competitive advantage need to give importance to the consumers. The

preferences, requirements, and buying patterns of the consumers are hugely affecting the implementation of integrated SSCM in the retail sector. In the retail sector, the consumers are the key pillar on which the success of the entire business is dependent (Koberg, & Longoni, 2019).

Factors affecting consumer buying behaviours

It has been evident that customers' participation, expectations, and interests are playing a crucial role in the proper implementation of SCM of the organizations in the retail sector (Harms & Klewitz, 2013). On the other hand, the buying behaviours of consumers are hugely affected by several factors. They are:

- *Psychological or internal factors*

Several psychological factors are influencing the purchasing behaviours of consumers. The most prominent are perception and motivation. Motivation is responsible for the urge for which the consumers seek satisfaction through the purchasing of a specific product.

- *Cultural factors*

It has been evident that the behaviours of human beings are the outcomes of the learning process, for instance, an individual grows up learning multiple perceptions, values behaviours patterns, and preferences. The major cultural factors affecting the buying intention of the consumers include subculture, social class, and culture (Krishna, 2011).

- *Social factors*

Human beings are considered social animals. Thus, people living in society hugely affect the behaviours pattern of the consumers and dislikes and likes. The consumers before purchasing a product seek confirmation from the people around them. The social factors, which are majorly influencing the buying intention of the customers, areas reference group, family and status, and roles.

- *Personal factors*

The buying behaviours of customers is hugely influenced by personal factors. The major personal factors are occupation, income, age, and lifestyle of the consumers.

- *Economic factors*

Economic factors majorly influenced the purchasing behaviours of the customers. Economic factors affecting the behaviours of the consumers are such as income expectations, consumer credit, family income, personal income, savings, and liquid assets possessed by the consumers.

Consumer perception of SSCM

There is a major relationship between the participation and perception of the consumers and sustainable SCM. The perception of consumers plays an important role in the integration of SSCM in the retail sector. Consumers' perception hugely contributes to the SSCM practices, buying intention, the willingness of paying a price premium, trust, and self-brand connection. The perception of the consumers has a positive impact on the implementation of effective SSCM in the retail organizations of Singapore (Shen, 2014). It has been evident that in recent times the consumers considered the histories of the supply chain at the time deciding to purchase a product. Customers' perception of Sustainable SCM and their active participation are offering organizations with improved and enhanced operational excellence and financial outcomes.

2.5 Sustainable Food Supply Chain

Basic Concepts of Food Industry

In Singapore's supply chain management system, the core concepts of the food industry can be considered as the major and significant industry of the nation. It plays a pivotal role in enhancing public health, food security, nutrition, and social development. In this industry, the supply chain system faces the main concern as the issues related to health, product quality, and sanitation. According to Schmuck, Matthes&Naderer (2018) sustainable food supply chain involves promoting sustainable food choices in the industry for both environment and health of the people. This particular industry of Singapore is engaged with various diverse activities including food supply, harvesting, production, packaging, distribution, consumption, transportation as well as disposal (Kot, 2018).

The supply chain sustainability of the food supplies focuses on the creation, protection, and growth of the long-term environmental, economic and social value for relatively all the stakeholders who are involved in bringing products in the market. Various components are present in the food industry are as follows:

- **Agriculture-** It can be regarded as the procedure of producing feed, food, and fibre along with other desired products. It focuses on crop farming, fish farming, and livestock raising.
- **Food processing-** The agricultural products are found to be perishable and seasonal which engages in the procedure of transforming raw materials into marketable food products.

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- **Food Distribution-** The distribution of the food products gets involved in the processes of transporting, marketing, and storing of the food products that supply finally to the consumers.
- **Regulation-** The food production and supply require certain regulations for ensuring its safety and quality.
- **Financial Services-** This component includes insurance as well as the credit facilities to facilitate food distribution and production.
- **Research & Development-** The industry of the food sector obtains huge potentiality towards research and development to understand the behaviour of the consumers.
- **Marketing-** Marketing can be stated as the primary vehicle to promote information regarding the food.

The analysis of Singapore's food industry consists of the capability of misleading advertising regarding the environmental features of these food products. Greenwashing involves the activities that provide false statements about the industry of using eco-friendly products.

Effects of Greenwashing

The greenwashing in the sustainable food supply chain of Singapore's food industry seems to be defining the false information that is being spread in the industry regarding the usage of environmentally friendly products in the market. It leads towards making the consumers affected by the use of greenwashing techniques. It is mainly used in the advertisements in which it becomes easier for the companies to spread such misleading information in the market. It shows that the companies are reducing the harmful greenhouse gases however it is the opposite. The effects of the greenwashing lie in claiming the act of making it a moderate variable with which the two major aspects interacted significantly. Delmas & Burbano (2011) stated that the two aspects of the variables are stated as environmental concerns along with environmental knowledge. The effect is mainly put on the consumers through the evaluation of the advertisements in brands by obtaining dependency on the consumer's features along with the message transferred in the market with the use of the advertisements. In Singapore, the organizations in the retail sector are hugely collaborating with the local government to implement new and innovative ideas for introducing sustainability in business. Greenwashing is considered one of the major ways to introduce sustainability by manufacturing eco-friendly products. In the analysis of the previous research, it is being identified that the deceptive green advertisements employ vague content rather than false

claims (Shen, 2014). It is focused on the previous studies in which the advertisements used to show concerns about the environments. However, the verbal claims that the market hears about the brand is found to be misleading in nature. It exploits the genuine concern of the consumers regarding the environment that further creates problems including limiting the ability of the consumers for making the decisions environmentally friendly. It also generates confusion along with scepticism to all the products that promote green credentials by making it genuinely environmental.

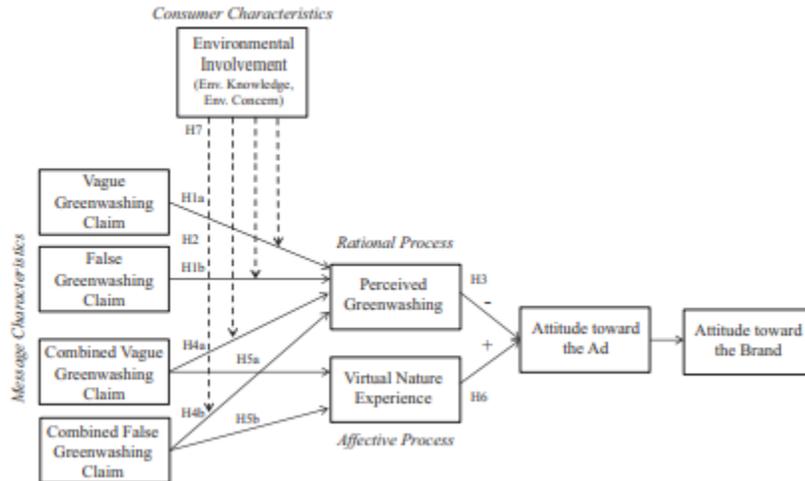


Figure 6: Effects of Greenwashing

(Source: Torelli, Balluchi&Lazzini, 2020)

Drivers of Greenwashing

From the last decade, the expansion of the capital and consumer markets related to the green products, firms along with the services has increased more rapidly. The emergence of greenwashing can be stated as the act of misleading all the customers based on the practices of environmentally friendly within the brands and the companies of the nation. As proposed by Gupta and Gupta (2019) the performance of the environmental firm is stated as fixed along with it focuses on the communication system, of the firms. There are several drivers of greenwashing, which can be stated in the following:

- **Non-market external drivers**

The non-market-based external drivers are involved with the law as well as the uncertain regulatory environment in which the regulation of the greenwashing is analysed. These regulations are enforceable and limited in the context of the firm’s point of view. According to De Jong, Harkink& Barth (2018), the greenwashing activity of the firm can be stated as the subject of federal

regulation which is the product or the services advertising falling under section 5 of the Federal Trade Commission (FTC) Act. This regulation shows the establishment of criminal liability when the violation is found to be committed with the intension of misleading or defraud. The retail organizations of Singapore need to follow and maintain the regulations of the above-mentioned act at the time handling any issues related to the intension of defrauding and misleading (Koberg, & Longoni, 2019).

In the limited formal regulation of the greenwashing uncertainty regarding the enforcement is common. It is detected that the lack of international consistency of the related regulation in which the NGOs, activist groups, and media play an important role in monitoring the form of greenwashing. The NGO-led and Activist campaigns put against the greenwashing firms can found to have a wide reach instead of the informational websites (Marquis, Toffel& Zhou, 2016). The media provide a challenge of public exposure regarding the greenwashing that detects the brown firms from the viewpoint of positive communication about the performance of the environment.

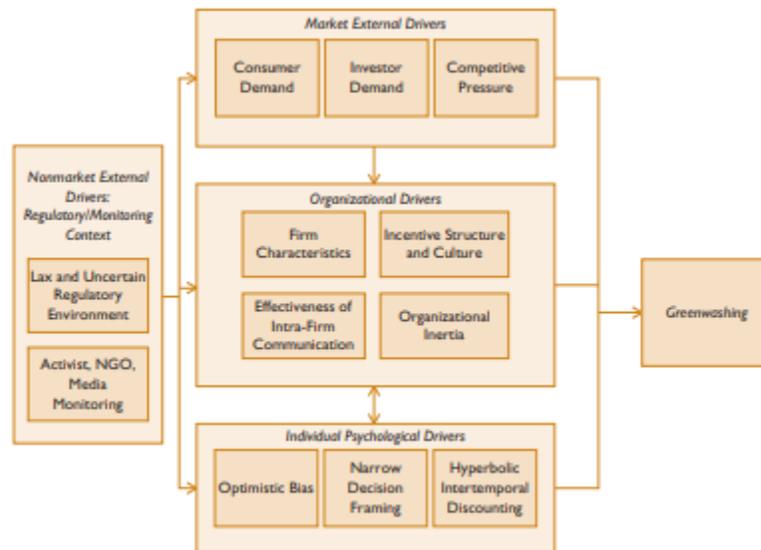


Figure 7: Drivers of Greenwashing

(Source: Alons, 2017)

Market External Drivers

Market external drivers include the investor demands; consumer demands along with the competitive pressures which are found to be critical in understanding. The brown firms are found to be facing huge pressures from the investors along with the consumers for appearing as

environmentally friendly. One of the critical paths of the market environment is regarded as the competitive landscape in which the brown firms are found to be facing the decision whether to be communicated positively about the environmental performances or not. As the retail market of the concerned country is considered to be the hub of retailing thus the demand and pressure of the external stakeholders is huge on the organizations. The demands and changing preferences of the consumers, competition, and demand of the investors are hugely affecting the sustainability aspect of business (Menidjel, Bilgihan&Benhabib, 2020). The organizations require introducing sustainability in the business at the same time not interrupting production and supply. The greenwashing regulations along with the uncertain enforcements of the related regulation influencers interact with the external level drivers of the market.

Organizational level Drivers

The organizational level drivers include the components as incentive structure, firm characteristics along with the ethical climate. It also involves the firm-level characteristics such as profitability, lifecycle, industry, size, and resources (Barth, Ulvenblad &Ulvenblad, 2017). These factors influence the whole strategies that are available in the firm and the cost, as well as the benefits, are gets associated with the firm.

The incentive structure along with the ethical climate shows the firm's incentive structure along with the ethical climate, which can be the determinants of the company's ethical behaviour. On the other hand, unethical behaviour is stated as behaviour, which puts harmful effects on others. Greenwashing is regarded as unethical behaviour, which is more likely to be performed within the brown firms (Gatti, Seele& Rademacher, 2019).

The organizational inertia is regarded as the strong persistent related to the existing form as well as function which hampers and underlies the strategic changes.

Individual-Level Psychological Drivers

Individuals along with the leaders play an important role in defining the behaviour of the firm with different psychological intensions. The individuals or the leader's psychological based decision can be stated as the narrow framing. It tends towards making decisions in the isolation. It also leads towards obtaining uncertain or imperfect information which can further hamper the decision-making conditions (Braga Junior *et al.* 2019). The enforcement of the uncertain

greenwashing regulation along with standardization put a greater effect on the decisions of the individuals.

Reverse Greenwashing

The greenwashing term determines the misleading of positive claims about the aspects of the products which are termed to be eco-friendly. It engages in covering up of the energy efficiency, amount of wastes along with the materials used in the product. The reverse greenwashing is the false or the misleading claims regarding the environmental impact which is negative however it is based on the product of the competitors. It is significantly based on comparative marketing by utilizing inferior and superior products (Honka, Hortaçsu & Vitorino, 2017). A legal action that focuses on the severe outcomes of following strict advertisements has accurate information in it. It states that the detrimental usage of claim and images need to be stopped immediately. The firms or companies need to be more careful regarding the claims put on the competitor's products. Thus, it further provides a high benefit to the consumers of the food industry of Singapore.

2.6. Consumer Awareness

In every purchasing decision of the consumers, it is being analysed that the sustainable alternatives along with the green alternatives are offered to the consumers of the market. Consumer's awareness is raised in the process of greenwashing because these consumers do not know that the products are eco-friendly or not. Based on the concept of Buerke *et al.* 2017 confusion lies in the green and sustainable products which are promised by the companies that are truly sustainable or environment reliable or not. It has occurred due to the emergence of the greenwashing that Singapore food firms use to mislead consumers. The companies mainly mislead their consumers by encouraging consumers through these advertisements to mislead them eventually. In recent times the consumers of Singapore have become highly conscious and aware of the aspect of sustainability implemented by famous brands and organizations. The buying patterns of the consumers are going through major changes and they have become majorly drawn towards purchasing sustainable products. The consumers are hugely willing to buy and consumer food products, which are eco-friendly and sustainable (Gatti, Seele & Rademacher, 2019). Singapore welcomes a huge number of tourists each year and this affects the buying patterns and

cost of the products. The country needs to introduce sustainability in the products as this will help in increasing the number of tourists and will help in making the environment clean and sustainable to the visitors (Kot, 2018).

The consumer's awareness is significant in the SSCM to make the consumers obtain knowledge about green products. The advertising needs to be avoided by the consumers by analysing and understanding the ads that the companies reflect in the media. Consumers do buy and choose the products as well as the company that shows greenwashed advertisements in the market. It is being analysed that if the consumers that are unable to identify the ads as greenwashed can be stated to be having lower intention in the purchasing power. However, the attitudes are found to be positive when they do not detect any kind of deception towards green-based advertisements. According to Mokhtar *et al.* (2019) consumers in the industry are defined to be sceptical however when they are aware of it then greenwashing will be harder to get into it. It is not recommended as a worthwhile strategy for the companies as the consumers are not intended for purchase after they are affected. It can be done when the companies consist of genuine interest in protecting the whole environment that is further found to increase the purchases of the consumers. It is also detected that greenwashing has a positive impact on the performance that is environment perceived within the organization. However, the negative impact shows the perceived integrity of the communication system that is supported by companies with the consumers significantly.

2.7. Theoretical framework

The relevant theories, which can be used for supporting the SSCM concerning the consumer's behaviour, can be stated in the following theories:

Knowledge-based theory

The knowledge-based theory emerges with the rapid growth of the services through knowledge. The sustainability within the forms needs to be focused on developing knowledge or information regarding the environment-friendly nature (Valtakoski, 2017). It is important to understand the consumers and the industry for the firm before emerging the products through maintaining sustainability. The environmentally friendly-based products are only offered in the industry when it is analysed that the need and demand for it is higher among the consumers. The knowledge about the firm and the consumers helps the companies to enhance the quality as per the requirements of the consumers. According to Low & Ho (2016), knowledge does not only reflect

the marketing information, or the data related to the industry. However, the knowledge can be focused on the regulations and the legislations of the nations that the firms are required to follow for maintaining a legal aspiration within the industry. It begins with the primary intangible resource, which is the competency of the people. The conversion of the knowledge by the people of different forms through both internally and externally during the time can engage the managers involved in designing the new products. The knowledge regarding the industry and the regulations that support sustainability through the concern of the environment can increase the range of consumer relationships by creating a high range of brand awareness in the industry. In the case of consumers, they are also required to keep a high amount of knowledge about the company, industry and the greenwashing system to avoid misleading and exploitation (Shmelev&Shmeleva, 2019). By keeping the appropriate amount of knowledge, the consumers can be able to identify the true intentions of the firms and its products offered to them. It helps in developing consumer awareness in the food industry of Singapore relatively to lower down the negative influence of greenwashing. This concerned theory will help in making the entire retail sector of the concerned country sustainable and more productive.

Behavioural decision theory

The behavioural decision theory states the decisions of both the consumers and the individuals who are engaged in the SSCM of Singapore's food industry. It shows the narrow decision framing that makes it optimistic bias in nature. The leaders or the individuals can drive down the decision-making procedure within the context of making the greenwashing process using the advertisements. As proposed by Gupta and Gupta (2019) it can suggest that the firms can wither provide a positive or negative impact through the use of greenwashing advertisements. It can change the decision-making power by misleading the consumers to buy a product that promises to provide environment-friendly textures however it is not. On the other hand, the consumer's behaviours get changed suddenly which also creates a major impact on the firms of the industry (Beach &Lipshitz, 2017). It relatively changes the patterns and the offerings of the companies by following up the consumer's behaviours in a more minute way. The changing behaviour of the firms also get influenced by the regulation of the nations that whether express positive or negative aspects for maintaining sustainability inside the products of the companies (Good, 2019). In the brown firm, the managers and the employees are engaged in communicating with the positive aspiration for the performances related to the concern for the environment. The psychological

tendencies that the managers and the leaders of the firms utilize in the firm to make the company along with products more sustainable in nature so that the greenwashing can impact positively on the minds and behaviours of the consumers. The efficiency of the firms and the psychological tendencies tend towards changing the decisions from the perception of consumers' behaviours. This concerned theory is majorly effective to understand the changes in purchasing patterns of the consumers. It has been evident that in recent times the retailing industry of Singapore is going through major changes thus it is essential for the retail sector to understand the preferences and demands of the new aged consumers. In this process, *Behavioural decision theory* will help in understanding the buying intention and purchasing pattern of the consumers.

2.8. Literature Gap

In the previous studies of the critical literature relies on the environmental sustainability of the food industry in Singapore. Other than that, several researchers have significantly determined the eco-friendly products that the companies or the firms offer to the consumers in the market. In this particular study, it significantly detects the effects and the core concept of the greenwashing in the food industry. With comparison to the previous studies, it can be stated that the sustainable supply chain management system in the industry was not being identified. The entire research is majorly based on understanding the benefits the retail industry of Singapore is gaining from the implementation of SSCM. In this research, the whole study detects the consumer's behaviour with regards to the SSCM to identify its negative and positive impact put on the consumer's behaviours.

Chapter 3: Conceptual framework

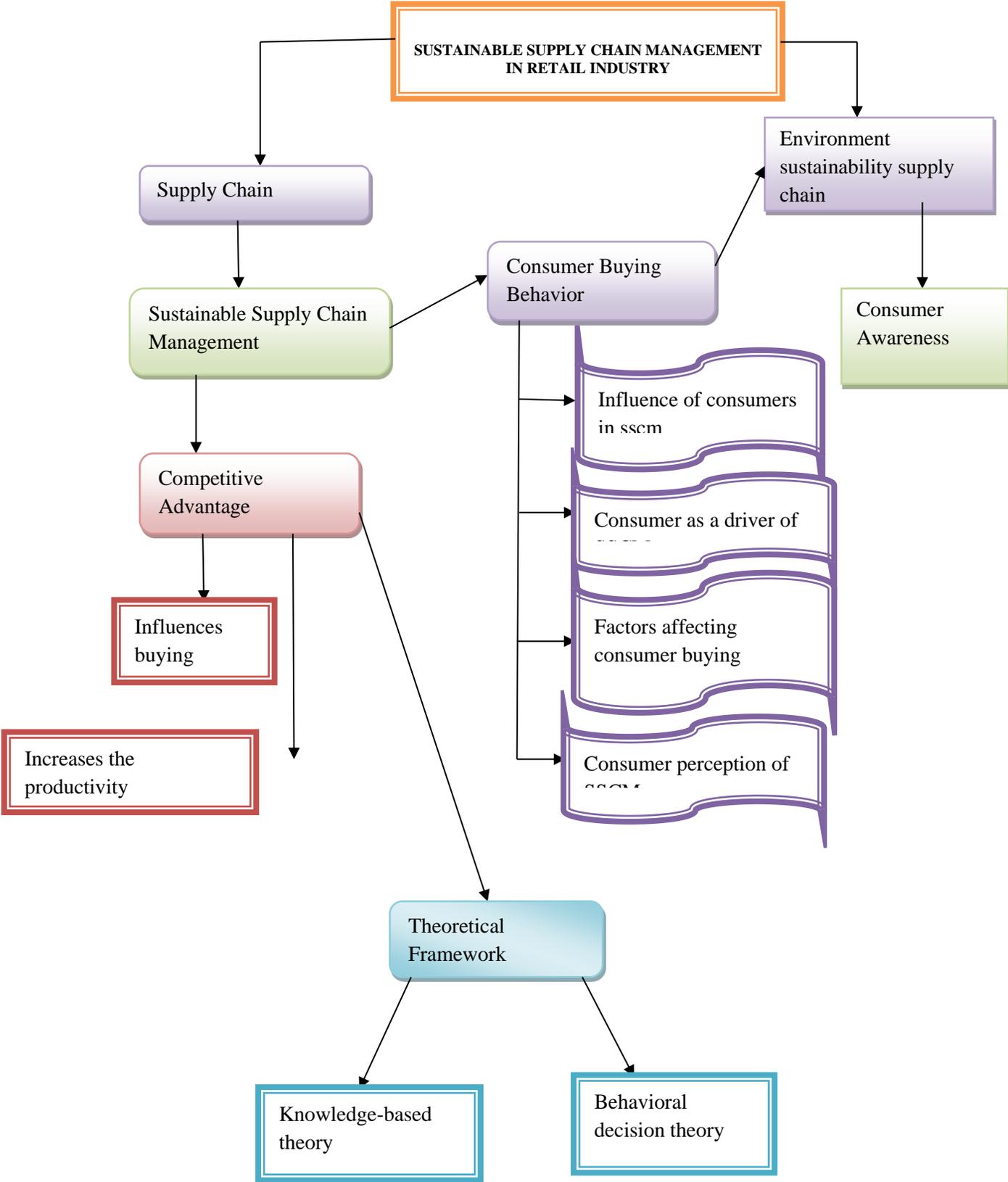


Figure 8: Conceptual Framework

(Source: Created by the learner)

The conceptual framework plays an essential role in the classification of the models as well as theories for analyzing the topic in a specific manner. With the help of these models as well as theories, it will be helpful for the researcher to discuss the sustainable supply chain management in the retail industry that will be beneficial to gain the knowledge related to the behavior of the consumer. In the view of Kalyar, Shoukat & Shafique (2019) the sustainable supply chain management in the retail industry can be considered as an essential factor as it helps to increase the satisfaction of the consumer along with the competitiveness. An integral role has been played by supply chain management in the retail industry for the attainment of success regarding firms. Effectively operating a supply chain allows the firms to deliver the products quickly to the ultimate user at a lower cost.

Sustainable supply chain management also plays a significant role to achieve a competitive advantage among the competitors in the competitive market. It helps to add the financial advantages regarding the efficiencies related to the resources as well as energies. The sustainable supply chain can be considered as an effective factor for the creation of competitive advantage across the globe. As opined by Mamdouh, Kadry & El Ahmady (2018) it has been observed that the competitive advantage can be able to enhance productivity along with influencing the intentions of the buyers in an effective manner. The theoretical framework of this study has been broadly divided into two types by the researcher such as behavioral-decision theory and knowledge-based theory. Information is significant for measuring the performance related to the supply chain management of the retail industry as it helps to offer the basis on which the managers of the supply chain make effective decisions. On the other side, the behavioral decision theory also plays an integral role in allowing the retail industry to reduce the cost of production as well as purchasing (Liu *et al.* 2017).

The buying behavior of the consumers can be considered as the actions that have been taken into consideration by the customers before purchasing the services and products. The buying behavior of consumers plays a significant role in influencing consumers in sustainable supply chain management. The consumer buying behaviors gradually acts as the driver of sustainable supply chain management. Beliefs, learning, motivation as well as perception are the four significant psychological factors that affect the buying behavior of the consumer. It has also been

analyzed that the level of motivation also engaged in affecting the buying behavior of consumers. As opined by Fredendall, Letmathe & Uebe-Emden (2016) the perception of the consumer refers to the awareness of the consumer along with their opinions as well as impressions related to the brands and products of the retail industry. The perception can be shaped by sustainable supply chain management with the help of multiple variables that involves indirect and direct interaction with the offerings of the retail industry. The environment sustainable supply chain of the retail industry can be able to increase the awareness related to the consumer. The increase in the awareness of the consumer can be able to influence the ethnocentrism of the consumer along with the loyalty of the consumer (Qorri *et al.* 2018).

Chapter 4: Research Methodology

4.1 Introduction

The researcher has strived to frame a suitable methodology for the research in this chapter. For this purpose, the scholar has gathered relevant conceptual underpinning from the previous chapter. An appropriate methodology of research aims to implement research objectives for carrying out effective research examinations. SSCM is identified as an innovative approach to accelerate the retail business by incorporating success factors in terms of relevant supply chain and better performance in respective markets.

4.2 Research Onion

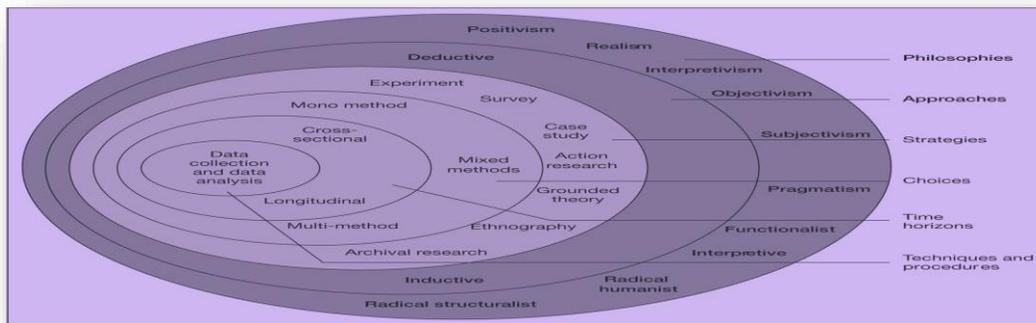


Figure 9: Research Onion

(Source: Saunders et al. 2009, p.52)

In order to achieve the suitable structure of the research approach, Saunder’s specification is important in terms of the dissertation lays and implementation of research objectives.

4.3 Research Philosophy

Positivism and interpretivism are considered as two segments of research philosophy. Positivism deals with research problems based on facts and truth whereas interpretivism deals with particular perceptions over specific objects or situations. Philosophy of positivism is supportive to implement logical analysis regarding the data collection and implementation of the actual intention of research problems by considering evidence and fact (Taylor, Bogdan, and DeVault, 2015).

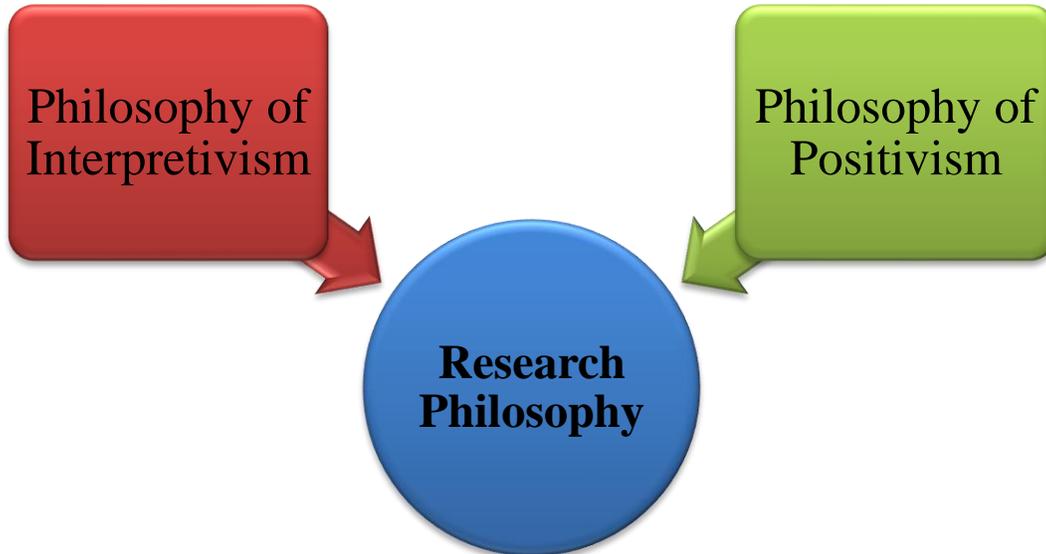


Figure 10: *Research Paradigm*

(Source: Creswell and Poth, 2017)

Justification

In this study, the scholar has opted for a positivist philosophy to implement critical analysis and logical investigation for the collected data and information. The sustainable approach towards the retail supply chain in the Singapore market can eliminate negative influences of business ambiance and enhance the responsibility factor of consumers' suppliers' partners and distributors. In this study, the scholar has conducted primary as well as a secondary method of data collection for gathering real-time data by following the knowledge and experience of previous scholars (Walliman, 2017). Enhancement of the product life cycle is an important aspect of SSCM therefore multidisciplinary action of higher sustainability is appreciable. Productivity and efficiency of the market through assertive distribution channels can accept multiple stakeholders towards the retail Industry for ensuring better performance. In comparison with interpretivism, positivism is quite appropriate for this study as it deals with logical reasoning from real-time data. Therefore, in this

study interpretivism philosophy has proved inefficient for detailed analysis of SSCM requirements of the retail industry.

4.4 Research Design

Explanatory, exploratory, and descriptive are three types of design for research. The design of the research is selected based on the requirement and demand for research objectives and aims. Psychological aspects are considered in the exploratory method of design. In regard to explanatory design, the research focuses on the data instead of the logical analysis of negative and positive outcomes. On the other hand, the descriptive design is focused on the research question and objectives by considering its relevance and accuracy (Mayer, 2015). Apart from that this design also evaluates positive as well as negative dimensions of the result and data before presenting a detailed report. However, for a research paper with quantitative and qualitative analysis descriptive method is appropriate for implementing the objectives and aim.

Justification

As this dissertation deals with a specific set of objectives therefore the scholar has opted for descriptive design to evaluate the influence of SSCM within the retail industry and its progressive development. This study has also highlighted the formal and structured approach of research to provide extended scope for enriching the analysis regarding the retail market of SINGAPORE. Therefore, the selection of this design has supported the scholar to collect relevant and appropriate information for research objective (Singh, 2015). The most significant advantage of the descriptive method is assisting adequate support to the research for a huge volume of the population within a specific time span along with in-depth data. The interview process has been excellently established with the help of this design. It is identified that the incorporation of technological considerations can enhance the overall performance and productivity of the retail industry in the management of the supply chain. Additionally, marketing and sales volume has also enhanced with the implication of SSCM. In this context collection of appropriate data is essential to evaluate the overall specification and capability of the retail market. However, the use of descriptive design has supported the representation of the entire population and the collection of information from secondary sources.

4.5 Research Approach

The study incorporates sustainable supply chain activities and management in retail sectors in the SINGAPORE that compels sustainable practices in inbound and outbound logistics in the

industry. Distinctive research approaches such as deductive, abductive, and inductive provide influential procedures to progress the study with a planned approach. An inductive research approach deals with observation and overview of research subjects and information that can influence outcomes. The inductive approach accumulates findings as per the resemblance of information, patterns, and regularities of information relevance (Woiceshyn&Daellenbach, 2018). On the other hand, the abductive research approach integrates empirical information and surprising facts that may or may not hold relevance to the research topic or aim. However, the approach helps researchers to form a conclusion based on empirical understanding. The deductive research approach generates logical reasoning and a relevant overview of the information that can develop hypotheses. The developed hypothesis requires support from facts, relevant information, and research outcomes with logical representation. In this research study, the inductive approach has been adopted to perform independent observation of research subjects and secondary information.

Justification

The adopted inductive research approach helps the researcher to develop an independent understanding of SSCM in the retail chain in SINGAPORE. As the approach does not consider or progress based on the developed hypothesis, the researcher can develop innovative SSCM techniques and theories based on accumulated information and logical reasoning. Compared to the deductive approach, the inductive approach in the study can construct interconnection and potential influences of external factors on supply chain management and sustainability (Liu, 2016). As the study aims to develop effective models or concepts of sustainable SCM, the inductive approach can generalize observations and overview of recent trends and limitations in retail industries in the SINGAPORE to procure sustainable approaches in the supply chain. On the contrary, the approach can obtain an influential link and understanding between research findings and potential outcomes in the study.

4.6 Research Method

The method of research is segregated into primary and secondary research methods that help researchers for further information accumulation. The primary data collection method acquires relevant data from human participants in the form of interview questionnaires and secondary company case analysis. The primary method of information collection captures human perceptions, preferences, interests, and feelings as per the research topic and questions. Primary information gathering is considered the most relevant and reliable acquisition of data that can

provide insight into issues in SCM and sustainable practice implementations in SCM. On the other hand, the secondary data collection procedure involves the accumulation of journals, previous research works, newspaper articles, and scholarly articles, academic papers from trusted publications, governmental documents, company records, and statistical databases. The primary and secondary procedure of information acquisition can be qualitative and quantitative (Paradis *et al.* 2016). In this regard, the researcher has conducted primary data collection in form of interviews and secondary information accumulation from trusted and transparent information sources. The primary and secondary process to collect data can provide influential insight into relevant SCM implications and sustainable practices applicable in SCM in SINGAPORE.

Justification

In the research work, primary data collection provides human perception and preferences regarding SCM and sustainable practices that can improve supply chains in the SINGAPORE retail industries. Interview questions have been conducted with research participants to acquire relevant and reliable data regarding the potential application of SSCM, benefits, or limitations of SSCM and innovative improvement scopes in SCM processes that can integrate sustainable practices. Apart from that, secondary information can confirm such claims and perceptions from research participants that can further strengthen the research findings and outcomes. As the interview has been involved with several employees and workers in SINGAPORE retail chains, successful links, and interconnection between secondary and primary data has been observed in the study.

4.7 Sample Size and Population

Sustainable supply chain management in an organizational setting can be measured through an intensive evaluation of the literature and current evaluation using primary data. In this research primary data collection is secondary, thus it follows a qualitative process with interview conduction with five different company managers. It is a crucial area to construct a questionnaire for this interview, which can help with a proper understanding of the managerial perspective for supply chain effectiveness. The sample size for this research is considered 5 managers, as this can help create a diversified opinion regarding the company's supply chain. Interview participants need to be selected with a random sampling method from five different companies operating in this market. The sample size for secondary data is based on the availability of data in an academic journal and relevant research sources.

4.8 Data Collection Method and Technique

The data collection and analysis technique mentioned from the study derives the need for observation aspects and a selective focus for internal supply chain operations. The research process includes two different processes for this study, which are primary data collection and secondary data collection. Primary data collection for this study is based on qualitative data collection and analysis. It means interview conduction with the managers of five different companies and incorporation of the data in the research outcome can help understand primary findings (Nugrahani *et al.* 2020). Derivatives for this area with an intensive analysis with a pre-established interview question can help align with a clear approach for semi-structured interview online mode for an interview through video conference is the process selected in this study, which can help with time management and effective data recording with a visual reference. In the case of secondary data usage and linking it with the literature, primary questions need to focus on real-life implementation of former propositions. The future of the sustainable supply chain and outcome derived from the interview is aggregating towards a complete analytical reference. Open-ended interview conduction can lead to a clear understanding with a different range of questions for implementation of the former SCM and areas of improvement for the current operation area., Questions need to be constructed to achieve industry-level and organization-level data and instead of information from the person-focused area.

Secondary data collection for research can include different from Case study analysis, Evidence-based analysis, thematic analysis, and other aspects. The selection of proper secondary data collection and qualitative data analysis can intervene with journals, websites, news articles, and blogs, and business magazines. The search strategy used for the investigation of secondary data is linked with specified keywords and relevant papers on the topic, which are filtered with data and authenticity of the database source. It is necessary to include secondary sources that are peer-reviewed for a journal article, the company needs in an article or newspaper can be verified with detailed relevant search results. Keywords selected for this secondary search strategy are 'Supply chain operations and sustainability', 'Green supply chain', and others. Secondary data collected from the sources are used for an understanding of organizational arrangement regarding supply chain processing. To differentiate the data used from secondary data from the primary finding, retrieval from authentic sources.

4.9 Data Analysis

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The data analysis is the most critical part of the research. It uses logical techniques to describe the data along with various illustrations. It aims to fulfill the objectives of the qualitative data. The data gathered from secondary sources is analyzed with the help of different thematic aspects. Bar graph, chart as tables are used to express that data collected from various sources. Moreover, the study represents the various facts reading supply chains through statistical tools.

Justification

Data analysis examines the sustainability of supply chain management and operation. The retail industry is based on supply chain management and the qualitative data helps to analyze the challenges and factors. Moreover, the data analysis covers the content analysis along with statistical analysis (Zangirolamiet *al.* 2018). In addition to this conservational analysis is also performed in association with the data collected from participants of the interview. The outcome of the research along with the path description is analyzed in detail by the researcher. The study focuses on the analysis of qualitative data with the help of statistical methods. The SSCM needs to be analyzed in detail concerning the data collected for the interview. The statistical representation of data helps to realize the importance of sustainability in supply chain management.

4.10 Accessibility Issues

The qualitative data have been accessed with the informed consent of participants in the interview. In addition to this, the study focuses on accessing data through secondary sources like journal articles and websites. Various issues regarding the voluntary participation of participants have been observed. Participants rarely took out time for their schedule to take part in the interview. Apart from this, it took time to find relevant journal articles across a vast database. The data available on website and journal articles have been accessed and referenced accordingly. Moreover, the study has focused on gaining access to responses of participants through interviews. The SSCM in the retail industry requires better data for increasing sustainability. Apart from this, qualitative acquired for this study helps in analyzing the key factor responsible for sustainability. The issues found in accessing data can be minimized through proper implementation of the research strategy.

4.11 Ethical Consideration

In this study, ethical considerations have been taken like confidentiality and privacy. The privacy of participants in the interview was kept confidential and their responses were securely stored. In the process of data collection through the interview, none of the participants was harmed. Moreover, no participants were forced to take part in the interview. In addition to this, informed consent was taken prior to the interview. The participants took part in the interview voluntarily and their anonymity was maintained throughout the interview. The journal articles used in this study have been properly referenced. Moreover, integrity and honesty are maintained in the collection of data.

4.12 Reliability and Validity

The data collected from the interview and secondary sources was analyzed with the help of descriptive analysis. The case study analysis was used to represent the data in this study that helps to obtain accurate results. The study uses authentic sources for data collection that explains its validity. Moreover, it uses various data from different companies to represent that data in analytical form (Basias&Pollalis, 2018). The representation of data collected from interviews and secondary sources indicates that the study is reliable.

Justification

Sustainable supply chain management in retails requires authentic data for further operations. The interview and secondary sources provide authenticity and reliability in this study along with interpreting the sustainable approaches for supply chain management.

4.13 Research Limitations

The research is focused on using only the primary qualitative method along with the secondary research method. Due to this reason, the survey has not been conducted for which the relevant information from the consumers or the general people is limited in nature. In this regard, the data has been collected only from the professional point of view rather than obtaining data through the overall context. In this research time as well as the cost has also played a significant limitation. Some of the articles were found to be in the paid version for which those resources are not being analyzed. However, the time constraint of this research has limited the analysis for interviewing the managers only.

4.14 Timeline

A research timeline is used to determine the amount of time elapsed in each task and this can facilitate the research progress. In the case of a research methodology, the amount of time elapsed in the data collection and analysis is crucial s this needs proper arrangement of interview questions and interaction. In the case of a telephonic interview, time management and arrangement of resources are easier, and this is followed in this research to complete the entire process within 14-15 weeks. The research timeline starts with the selection of dissertation topics and finalized through the submission of the final dissertation paper.

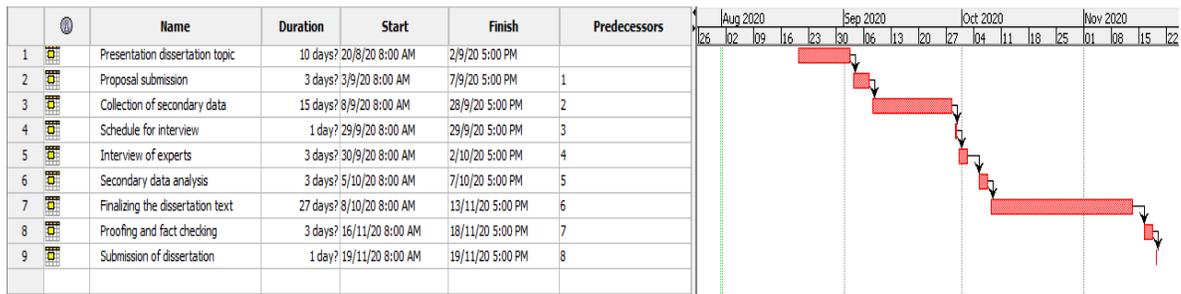


Figure 11: Research Timeline

(Source: Created by Researcher)

4.15 Summary

In this study, the methodology presents various data collection methods as well as philosophy used here. Positivism philosophy is used for completing the objectives of this research. The objectives of the study need to be fulfilled by accessing data through authentic sources and interviews. The interview provides the opportunity of accessing crucial data regarding the retail industry. Apart from this, it also presents an ethics consideration that has been undertaken for this study. The timeline is also presented along with accessibility and data analysis. The study is reliable and valid as per the data collected and represented through statistical representation. Moreover, the sample size and population for this study are present in the study.

Chapter 5: Findings and Analysis

5.1 Findings of Primary Qualitative Research: Interview

The qualitative analysis of the five managers collected from different retail companies in Singapore engages in determining the significant questions that have been asked by the researcher with the use of the online interview system. The online interview has been conducted because of the pandemic time of COVID-19 are faced by all the people of the region. Due to this reason, the interview had been conducted in the following way as follows:

Interview Questions	Company Managers	Responses
Q1. What is the reason for including supply chain management within the companies of specific regions? Does it provide any kind of competitive advantage?	1st Manager	<i>‘I have implemented sustainable supply chain management to analyze the baseline of the supplier’s performance. Yes, it has a positive role in achieving competitive advantage by enhancing the process of the suppliers’</i>
	2nd Manager	<i>‘The use of the sustainable supply chain management engages in concerning the capital flows along with cooperating with other companies. I don’t think it has any certain competitive advantage’</i>
	3rd Manager	<i>‘I implemented the sustainable supply chain management for managing the information and material flows within the companies. It has a major competitive advantage regarding the quality and price of the products’</i>

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	<p>4th Manager</p>	<p><i>‘I have used sustainable supply chain management for reducing carbon emissions. It increases. It has a highly competitive advantage because the consumers depend on the environmentally friendly procedures nowadays’</i></p>
	<p>5th Manager</p>	<p><i>‘The selection of the sustainable supply chain management procedure engages in conserving the natural resources by working up with the suppliers for reducing the reputational risks. It has a highly competitive impact on the business culture which increasingly attracts the attention of the consumers’</i></p>
<p>Q2. What are the different sustainable supply chain management strategies used for providing value to the suppliers, consumers, and stakeholders?</p>	<p>1st Manager</p>	<p><i>‘I think sustainable supply chain management is itself a strategy that influences the business through the use of different environmentally friendly processes’</i></p>
	<p>2nd Manager</p>	<p><i>‘For achieving the sustainable supply chain management, the most prominent strategy which I have used is the legal and ethical based strategies. The enhancement of the supply chain through’</i></p>

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	<p>3rd Manager</p>	<p><i>‘The strategy of obtaining high influential responsibility within the organizations that manage the sustainability starting from the supply chain to that of the final activity of the company. It further provides high value to the stakeholders, consumers as well as the suppliers’</i></p>
	<p>4th Manager</p>	<p><i>‘The strategy of the sustainable supply chain management is highly beneficial in implementing the ethical strategies within the overall retail industry so that the correct form of regulations can be maintained by each of the departments’</i></p>
	<p>5th Manager</p>	<p><i>‘There are indeed several core strategies like the legal attributes, ethical aspects along with the responsibilities which shows the sustainable supply chain management strategies, however sustainability within the supply chain system is a strategy that includes all these core aspects’</i></p>

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<p>Q3. What are the challenges that have been seen for the application of sustainable supply chain management?</p>	<p>1st Manager</p>	<p><i>‘Some of the challenges that limit down the sustainable supply chain management system within the organizations including supplier relationship, costs as well as risk management. However, I have used the sustainable supply chain management system for obtaining low tax rates imposed by the environmental initiatives’</i></p>
	<p>2nd Manager</p>	<p><i>‘The challenge that I have faced while using the traditional system, is that either company has improvised its strategy by including the use of sustainability system in the supply chains. This perhaps lowered down the profit rates in my company for which the environmental initiatives have been followed significantly by my company’</i></p>
	<p>3rd Manager</p>	<p><i>‘The use of the sustainability supply chain system is nothing because of helping the environment to recover eventually. In the recent analysis, we have found that the consumers are focused on achieving quality-based services within the market’</i></p>

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	<p>4th Manager</p>	<p><i>‘I am facing the challenge before as well as after the implementation of the sustainable supply chain system. In the earlier context, I used to face the problem of competition in the industry as competitive companies follow up on a sustainable process. After implementing the sustainable management some risks that I have faced are the increase in costs in the market’</i></p>
	<p>5th Manager</p>	<p><i>‘In the fast-changing markets of the retail industry, most of the companies have already used in the market. This has further created the problem of competition and consumer sustainability in the market for which I have chosen to implement this process. On the other hand, the risks that are being faced by the companies are improper asset return along with consumers who are not found to be ready for investing high prices on green products’</i></p>
<p>Q 4. Do you think social media plays a vital role in the supply chain management of the Singapore retail industry?</p>	<p>1st Manager</p>	<p><i>‘Considering the present scenario, I can say yes it can influence the SCM in Singapore retail industry’</i></p>

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	2nd Manager	<i>‘I cannot deny that social media is an important aspect of our retail marketing sector’</i>
	3rd Manager	<i>‘Generally recent marketing strategy of Singapore is completely social media-centric’</i>
	4th Manager	<i>‘Consideration related to social media and SCM is not new in Singapore and the retail sector has already started to implement such factors in business management. ’</i>
	5th Manager	<i>‘I believe that the concern may not be necessary as we are only focusing on the influence, we get from different marketing aspects right now. ’</i>

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<p>Q5. What are the technologies used in SCM currently to shape up the retail sectors of Singapore?</p>	<p>1st Manager</p>	<p><i>‘We are currently focusing on the inclusion of Artificial intelligence, advanced analytics, Internet of Things IoT’</i></p>
	<p>2nd Manager</p>	<p><i>‘Blockchain and Immersive technologies have managed to provide us enormous benefits regarding such aspects’</i></p>
	<p>3rd Manager</p>	<p><i>‘Considering the modern technological advancement adapted by our competition retail brand, we have introduced Robotic process automation to enhance our technology capabilities.’</i></p>
	<p>4th Manager</p>	<p><i>‘The management of network capabilities followed by better process enhancement has provided us huge advantages in the retail sector.’</i></p>

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	5th Manager	<i>‘We focused on implementing Blockchain and the Internet of Things (IoT). These helped us to enhance our business operation’</i>
Q6. Do you think that buyer behavior in the retail sector has managed to increase the organizational operation in this industry?	1st Manager	<i>‘The demands of buyers have always been profiting centric and we have to supply them with their requirements to sustain our growth in this market.’</i>
	2nd Manager	<i>‘Our business values have been developed with proper provision of value and our SCM has a huge influence regarding the assessment of buyer behavior.’</i>
	3rd Manager	<i>‘yes, it is the main aspects which I can justify considering our SCM and practices associated in our organization’</i>

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	4th Manager	<i>‘certainly, I am hopeful about the aspects in which we can incorporate our buyer behavior for sustaining in the competitive market’</i>
	5th Manager	<i>‘Buyers do influence to make our SCM more compact and usable. ’</i>
Q7. What are the primary influences you can observe while operating in the Retail based SCM?	1st Manager	<i>‘In our organization provision of developed value and offering services in terms of better competitive advantages are required as per my concern’</i>
	2nd Manager	<i>‘both Corporate Social Responsibility (CSR) and the evaluation of GSCM can have a broad influence in our market’</i>

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	3rd Manager	<i>‘From Microenvironmental consideration and generation of higher value in businesses, the SCM can have various influences of the business market environment’</i>
	4th Manager	<i>‘Customer expectation, brand value, consideration of supplier, stakeholder engagement acts as an influence in our SCM.’</i>
	5th Manager	<i>‘In retail, there can be numerous factors to develop a better and effective opportunity in environmental and economic growth aspects. We need to consider such aspects’</i>
Q8.Do you believe the Supply chain in a retail organization needs control and proper monitoring along with continuous development?	1st Manager	<i>‘Obviously! We have managed to influence our operation in various supply chain management aspects, and it requires control in each field’</i>

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	2nd Manager	<i>‘Economic goals shift in the business environment and the customization of business management can be focused on various aspects which we have to tackle as a business organization operating in the market.’</i>
	3rd Manager	<i>‘We monitor and control various supply chain-based activity for which our management and operation do not have to rely based on ultimate improvement.’</i>
	4th Manager	<i>‘We are certain about ensuring that our product and service offerings are incorporated with the better influence gathered from both managerial and business aspects’</i>
	5th Manager	<i>‘the control over supply chain management will be required to tackle valuable influences gathered and generated from the management perspective’</i>

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<p>Q9.why do you consider sustainability as important in SCM?</p>	<p>1st Manager</p>	<p><i>‘I think it saves national budget and fulfills the need of people in terms of managing the supply chain’</i></p>
	<p>2nd Manager</p>	<p><i>‘in the toughest organizational situation, this can be a lifesaver for the organization’</i></p>
	<p>3rd Manager</p>	<p><i>‘If SCM is not sustainable it will no longer be considered as an SCM.’</i></p>
	<p>4th Manager</p>	<p><i>‘Sustainability helps to conserve our natural resources. Nowadays the conservation of environmental resources has become one of the major trends which we want to include in our product delivery’</i></p>

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	5th Manager	<i>‘we ask our employees and other stakeholders to develop a better sustainable approach as we believe it is necessary’</i>
Q10. Why sustainable supply chain is important in marketing?	1st Manager	<i>‘inclusion of these tactics in marketing helps to save a lot of money’</i>
	2nd Manager	<i>‘This approach is healthier considering the brand reputation and offered services’</i>
	3rd Manager	<i>‘Well we cannot discuss our marketing strategies in the context of this but consider is important’</i>

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	4th Manager	<i>‘product lifecycle may include a range of quality consideration which we can simply manage for reducing the wastage in businesses using this approach’</i>
	5th Manager	<i>‘I do not know about the industry, but we have managed to gain our green certification and sustainability using this approach.’</i>
Q11.Do you believe the Supply chain in the retail organization in Singapore have more specific functionalities over other regions?	1st Manager	<i>‘Yes, our buyers are smart, and they know a bit of marketing concept and for which we have to offer them exactly the products they need’</i>
	2nd Manager	<i>‘Our SCM strategy helps us to develop an effective and valuable marketing position through which we can manage our business operations’</i>

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	3rd Manager	<i>‘Singapore is considered a hub of the retail sector in Southeast Asia’s strategy helps us to manage business sourcing, production, and recycling process which is important in Singapore’</i>
	4th Manager	<i>‘Currently, we are operating only in the Singapore market and we do not have experience with other places’</i>
	5th Manager	<i>‘yes, we have to maintain specific guidelines in Singapore regarding the practices of sustainability of SCM’</i>
Q12.In short, what will you consider KSF in the retail market of Singapore for including better SCM practices?	1st Manager	<i>‘external engagement can be considered as one of the major KSF of the retail industry’</i>

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	2nd Manager	<i>‘generating higher sales margin is KSF which I can consider in this aspect’</i>
	3rd Manager	<i>‘developing effective organizational culture can be one of the major aspects of development’</i>
	4th Manager	<i>‘energy and waste management’s influence present in the organization can provide better growth’</i>
	5th Manager	<i>‘it has become a major task for the organization belonging to the retail sector to address the aspect of sustainability in their business.’</i>

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<p>Q13.what is the barriers or limitation faced by your organization towards the development of such consideration in your organization?</p>	<p>1st Manager</p>	<p><i>'well our organization has been successful in building a relationship with its suppliers and customers on the ground of ongoing dialogue and transparency; however, they have individual foundations depending on the different target groups'</i></p>
	<p>2nd Manager</p>	<p><i>'Assessing the regulatory framework of the country can be one of the main challenging factors in the industry which can restrict our operations'</i></p>
	<p>3rd Manager</p>	<p><i>'We are currently facing issuers regarding the acceptability of this consideration in employee engagement. The larger portion of our employees is not trained enough for evolving towards such organizational changes. '</i></p>
	<p>4th Manager</p>	<p><i>'In Singapore, the listed organizations are needed to disclose the compliance and implementation of anti-corruption procedures and policies overseas and locally relating SCM this can be an issue regarding our organization'</i></p>

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	5th Manager	<i>‘The supply chain, production, logistics, and purchasing are the major areas of business that come under scrutiny from the shareholders, regulations, NGOs, public, and regulators. This can restrict our operation of a business’</i>
Q14. What do you consider as a primary strategy of your organization towards incorporating sustainability?	1st Manager	<i>‘The organization aimed at treating the customers with o best of their ability and this is helping the organization in offering the customers with quality and suitable goods for individual aspects of their lives’</i>
	2nd Manager	<i>‘Our organization has been successful in aligning the logistics, purchasing, and production processes, which has led the organization to a higher level of customer service and satisfaction’</i>
	3rd Manager	<i>‘The major suitability strategy of the organization is to maintain a relationship with the suppliers, which is based on transparency’</i>

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	4th Manager	<i>‘In order to build a strong and effective relationship with the suppliers, has followed major principles which include several specific and global policies including Corporate Social Responsibility, the Code of Conduct, Human rights, and the Code of Conduct for suppliers, manufacturers, and designers and sustainability policies for the environment’</i>
	5th Manager	<i>Currently, our ‘organizations operating a business in the concerned country thus required to align sustainability with their business practices and policies’</i>
Q15.what is the future possibility of using and developing SCM in the business industry of this country?	1st Manager	<i>‘organization’ future profitability along with environmental and social sustainability can be considered as one of the major aspects of development’</i>
	2nd Manager	<i>‘our future plan is to sustain the present system and grow according to requirements’</i>

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	3rd Manager	‘reduction of the usage of lighting before the closing of the stores and the escalators start functioning’
	4th Manager	<i>‘our future strategy includes the maintenance of high standards of food safety and ensuring hygiene at the stores’ premises’</i>
	5th Manager	<i>‘We consider the quality of the product in a particular food product at the supermarket stores is considered most influential, which determines the organization’s reputation’</i>

Table 1: Interview Transcript of Retail Company Managers

5.2 Analysis of Primary Qualitative Research

In the interview analysis that has been obtained from the five managers of Singapore’s reputed companies. In findings of the interview question which has been obtained from the use of the video call interview focuses on the reason for which the company managers are using sustainable supply chain management in the companies. From this analysis, it is being analyzed that the first manager states about the identification of the supplier’s performance baseline thoroughly. It puts a positive influence on the business organizations that minutely detect the

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supplier's performances. In the retail business, it is important to determine the performance of the supply chain system. It is helpful in achieving the effectiveness of sustainability within the whole industry. The second manager states that the use of the sustainability supply chain management gets involved in accessing capital flows along with cooperates with other companies. The analysis of the cooperation along with the capital influences both the supply chain and the companies positively. From the interview of the third manager, it is being recognized that the manager is highly concerned about the materials that they obtain from the supply chain. Due to this reason, from the third manager's point of view, sustainable supply chain management is required for managing the flow of the materials along with the information efficiently. The fourth manager stated that the decrease in carbon emission is the major motif of using such a system in the company. It directly put a positive impact on the environment along with people's health. The fifth manager's concern is dependent on the conservation of natural resources which is possible by working up with all the suppliers and will reduce the reputational risks as well. It also impacts positively on the company that faces low risk regarding the reputational issue. Other than that, almost every manager state that this technique has a highly competitive advantage in the industry. The analysis of the particular reason in using such a method in the company is of the retail industry can also be aligned with the use of the secondary data. According to Hardcastle (2016), SSCM is one of the core methods that help in enhancing the competition among the consumers after significantly analyzing the supplier's performances. It typically encourages the market to follow up on the environmental sustainability-related activities thoroughly. Though it provides a positive way to save the excessive carbon emissions however it helps in saving naturalness of nature. The use of the process encourages sustainability within the organization by taking some of the significant steps inside the companies.

A question that has been raised in the interview to gain the information from the managers is focused on determining the supply chain management strategies which further provides value to the consumers, stakeholders, and suppliers relatively. In this particular question, all five managers' responses have been collected from the interview. The first manager states that sustainability in supply chain management is only the major strategy of the organizations. It is highly impactful for all the organizations in the retail sector which can only compete with the use of the sustainability strategy. However, it is being analyzed that it influences the whole business along with the supply chain management eventually. It puts a positive impact on both business organizations and

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consumers significantly. The second manager exclaims that the ethical, as well as the legal-based strategic framework, are used as the strategies in the supply chain management system. It is highly effective in impacting the business along with the environment thoroughly. The third manager's statement is about the achievement of influential responsibility inside the organizations which manages the sustainability in the supply chain system to provide value to the consumers, stakeholders, and suppliers. This can be analyzed that the evaluation of the values from the responsibility strategy can negatively impact the business by increasing the cost of the sustainability strategies. The fourth manager states that the value provided to the stakeholders, suppliers, and consumers with the use of the ethical strategies put upon the organizations. It will impact positively the business with the use of the ethical regulations inside the organizations to maintain their supply chain performances strictly. The fifth manager also exclaims that there are different strategies in the sustainability of the supply chain management including responsibility, ethical aspects along with legal aspects significantly. On the other hand, this manager also exclaims that sustainability is itself a key strategy to enhance the practices of supply chain management in the company of the retail sector. It can be analyzed that all these strategies are highly effective for both the organizations and the consumers. It will provide a positive impact on the organizations that will be enhancing the quality of the activities. Other than that, the use of sustainable strategies can develop the conditions of the environment. However, the company can obtain a negative influence from the consumers as consumers would not spend much amount on sustainable products. The use of the secondary sources is well explaining about the supply chain management strategies imposed to raise the value among different stakeholders of the organization. According to Florecu *et al.* (2019), sustainability is the strategy that is being followed with the recommendations of the environmental initiatives. Other than that, several government policies are being issued from the regions that need to be analyzed significantly. This process helps the company as well as the environment to get recovered as soon as possible. However, retail companies obtain high growth in the market due to their reputation in the market.

The third question of the interview transcript is based on the various challenges that are being faced by the companies before and after the implementation of the SSCM. It analyses the before and after-effects of the SSCM from the manager's point of view. In this regard, the first manager states that there are several risks which are associated with the use of sustainable supply chain management. The risks including risk management, costs along with the relationship with

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the suppliers are certain issues faced after implementing SSCM. Other than that, the manager also exclaims that the reason behind using the system for lowering down the tax rates imposed on the environmental damages. This provides both positive as well as a negative influence on the companies. The SSCM reduces the tax rates however increases the cost of implementing this type of system that is further imposed on the consumers. The second manager states that the use of the traditional system in the company was impacting the company negatively as the other competitive companies introduced such a system. On the other hand, the use of such a system in the company has decreased the rate of the profits for following up on environmental initiatives. It puts a positive impact on the company socially as it increases its reputation in the sector. The third manager exclaims that the SSCM is just helping the environment out from the sufferings. The challenge that this manager provides is different from all other managers. It is being analyzed that in the current market scope, most of the consumers are determined in buying products that are environment friendly in nature. It puts a positive impact on the reputation of the company while conducting business in the retail industry. The fourth manager of the retail company engages in stating both the before and after challenges of implementing SSCM inside the company. In this regard, it is being analyzed the company of the manager faces high competition in the market as other companies have already implemented the strategy to enhance the market position. However, the use of the SSCM by this manager faced the challenge of high cost in changing all the procedures of the supply chain system. This further increases the price of the products that are being bought up by consumers.

The fifth manager of the retail company states about the fast-changing market due to the use of the SSCM in the industry. This manager also states a similar challenge that the other competitive companies have used the process to provide a tough competition in the industry. After the implementation of SSCM, the manager exclaims that the use of such a system raises the problem of improper asset returns along with the customers who are not ready to pay extra for sustainability. As opined by Fredendall, Letmathe & Uebe-Emden (2016) it put a negative impact on the industry and the consumers. There is increasing interest in the name of conducting these major organization's businesses, which is considered a mandatory part of sustainability reporting to the Singapore Exchange, which will come into the huge effect in the year 2018. According to the data collected from various primary resources, the consumers of the company have not been retained due to such problems. The use of the secondary analysis shows that there are severe

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challenges that are being faced before as well as after the use of the SSCM. The most common is the quality and cost that are being faced by the companies after using the SSCM within the organization. According to Searcy (2016), the issue of the cost is being faced mainly by the consumers as they are the last stakeholders where the products will be sold. Even the quality services also get deteriorate after using such a process in the organization. It can be stated that the application of SSCM evolves in developing the traditional system significantly. The usefulness of the strategy to help the environment by cutting down the carbon emission and other severe energies affects the cost of that being faced by both the organizations and the consumers within the retail industry. In the view of Kalyar, Shoukat & Shafique (2019) it is also difficult for organizations to maintain each of the environmental regulations and the initiatives which encourage saving nature. However, it also determines the range of the supply chain's performances thoroughly within the sector. Thus, the use of the SSCM can be positive as well as negative influential in nature. In the context of the fourth question, it can be seen that the influence of social media can be considered as one of the major aspects. Managers have accepted these certain factors and supported the influence of social media. The various techniques used in the retail sectors have been considered as one of the major aspects. The use of several technologies such as Artificial intelligence, advanced analytics, Internet of Things IoT, Blockchain, Immersive technologies, and Robotic process automation is one of the major technologies used in this industry. Behavior in the retail sector has managed to increase the organizational operation in this industry can provide a significant impact. As commented by Salama (2017) demands of buyers, the business value in SCM and practices can create such consideration according to primary data. Primary data of the research have specified that the Supply chain in retail organizations needs control and proper monitoring along with continuous development. In the ninth question consideration of sustainability has been considered as important which helps to influence SCM. As mentioned by many organizations, Supply chains in a retail organization in Singapore have more specific functionalities over other regions. Key Success Factors in the retail market of Singapore may provide various influences in business operations as mentioned by many managers. The barriers or limitations faced by your organization towards the development of such consideration in your organization as mentioned by many managers the barriers or limitations faced by the organization towards the development of such consideration in your organization. Incorporating sustainability

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as a primary strategy of your organization and major suitability strategy has been developed in the organization.

Various other questions have been asked regarding the usability of sustainable supply chain management in the overall retail industry of Singapore. The question has been based on usability, dependency, Key Success Factors, and technology adapted in the industry. For instance, the responses collected from individual management authority have provided various Intel which can be used in the overall development of an organization. Responses gathered from various sources have evaluated that the organization is also maintaining a relationship with its suppliers with the help of establishing strategies partnership, which has helped the organization in attaining goals of sustainable development and helps in promoting and respecting Human rights. The powerful large organizations and their management team have created an environmental social and economic impact in both abroad and home countries. The development of better processes and progress generation has been also taken under consideration through which the overall aspects of the research have gained quality data.

Theme	Code	Frequency
Competitive Advantages	<i>Enhancing the process/ Offering better services/</i>	2
Proper engagement within work	<i>Engagement of capital flows/ Cooperation with other companies.</i>	3
Balancing environment	<i>Environmentally friendly processes/ Conserve our natural resources/ Environmental resources/ Product lifecycle/ Reducing the wastage</i>	3
Maintenance of legal and ethical framework	<i>Green certification/ Sustainability/ Develop effective and valuable marketing/ Managing</i>	5

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	<i>business operations/ Maintain specific guidelines/ Practices of sustainability</i>	
Stakeholder engagement	<i>External engagement/ KSF/ Building up relationship/ Transparency/ Suppliers’ relationship</i>	5
Risk Management	<i>Supplier relationship/ Cost/ Risk management/ Low tax rates/ Environmental initiatives/ Managing situation/ Lifesaver/ Issues of employee engagement/ Organizational changes</i>	3
Enhancement of future strategy	<i>Reduction of lighting prior/ Closing of the stores/ Maintenance of high standards of food/ Ensuring hygiene</i>	2

Table 2: Coding

Theme	Quotes	Quotes
Competitive Advantages	<i>“Yes, it has a positive role in achieving competitive advantage”</i>	<i>“provision of developed value and offering services in terms of better competitive advantages”</i>
Proper engagement within work	<i>“The use of the sustainable supply chain management engages in concerning the capital flows”</i>	<i>“cooperating with other companies”</i>

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Balancing environment	<i>“business through the use of different environmentally friendly processes”</i>	<i>“Sustainability helps to conserve our natural resources”</i>
Maintenance of legal and ethical framework	<i>“We have to maintain specific guidelines”</i>	<i>“strong and effective relationship with the suppliers”</i>
Stakeholder engagement	<i>“provides high value to the stakeholders”</i>	<i>“stakeholder engagement acts as an influence in our SCM”</i>
Risk Management	<i>“in the toughest organizational situation, this can be a lifesaver for the organization”</i>	<i>“issuers regarding the acceptability”</i>
Enhancement of future strategy	<i>“reduction of the usage of lighting prior to the closing of the stores”</i>	<i>“the escalators start functioning”</i>

Table 3: Themes

5.3 Thematic Analysis

5.3.1 Competitive Advantages

The proper notion SCM helps to develop the companies in achieving competitive advantages. Competitive advantages are important for developing products and sales. Thus, SCM in the retail sectors of Singapore helps to achieve sustainable competitive advantages within the competitive market. According to Sener *et al.* (2019), it helps to increase their capacity to conduct business in a significant manner. Thus, companies can be able to achieve sustainable development within the industry. For *example*, *Isetan* has successfully enhanced the aspect of SCM within the competitive market, which helps them to retain their integrity and knowledge.

5.3.2 Proper engagement within work

SCM helps to achieve proper engagement within the working culture through which the companies from the Singapore retail sector can be able to develop their internal management. As suggested by Kumar *et al.* (2016) proper management within a competitive industrial aspect is necessary for enhancing the business capacity, which is necessary for enhancing the business development knowledge and providing proper guidance for the development of organizational attributes. Thus, it is regarded as one of the most significant ways through which they can be able to enhance their business objectives.

5.3.3 Balancing environment

The organizations have maintained a proper balance within Singapore by increasing waste management procedure, recycling of unrequited instruments. In the view of Colicchia, Creazza & Dallari (2017), the companies have also improved the logistics to attract the customers for enhancing their product and services development. Thus, *SCM* has helped the companies in achieving a sustainable position in the competitive market field by maintaining a balance within the environment. The companies want green certification for increasing reliable relationship with customers. Thus, they are aiming to fulfill the demand of customers by providing them their necessary services and product requirements.

5.3.4 Maintenance of legal and ethical framework

The organizations have maintained sustainable ethics and responsibilities to guide their employees in a positive way. In addition, the companies have also maintained the proper notion of stakeholder management through which they can be able to enhance the development of their entire opportunity of business. *SCM* here helps the organizations in maintaining superior services. As suggested by Mandal *et al.* (2016) the companies are aiming to enhance the ethical code of conduct, CSR roles, and legal health and safety for their employees through which they can be able to enhance their successful installation of *SCM* in a significant manner. This maintenance of ethical guidelines helps the companies to achieve sustainable improvement in productivity and increasing the retention of employees.

5.3.5 Stakeholder engagement

Stakeholder engagement is one of the most significant traits, which has been achieved by the sustainable installation of SCM. Stakeholders such as both external and internal stakeholders are a significant part of an organization that belongs to the retail sectors of Singapore. Thus, the achievement of proper stakeholder management helps the retail organizations in enhancing the development of the entire business procedure. As opined by Teller *et al.* (2016) they can even guide and influence their internal stakeholders such as managers, employees, and other technical staff. On the other hand, through engagement with external stakeholders such as shareholders, investors, and board of directors the companies can be able to enhance the development of the proper business, which can be achieved through the implementation of SCM.

5.3.6 Risk Management

SCM helps to conduct proper risk management within the competitive industry of retail sectors. The risks are associated with the cost structure improvement, managing sales, earning revenues, making necessary decision-making processes, and development of resources. In the view of Colicchia, Creazza & Dallari (2017) SCM here helps to conduct a systematic process of making business management through which they can be able to enhance the entire business development of retail sectors, Retail sectors of Singapore can be able to enhance the competitive advantages within the competitive market. These are symbolic of the entire development of business procedures. The internal issues related to technology and machinery are also addressed through the development of SCM process in the retail sectors of Singapore

5.3.7 Enhancement of future strategy

The successful installation of SCM helps companies in developing their future decision-making process. Here the companies are aiming to develop the process of future decision-making strategies by proper evaluation of current stages. Even it helps them to monitor and control their current activities. As opined by Teller *et al.* (2016) through the initiation of these procedures, the companies can detect the increasing issues and provide necessary recommendations to reduce the issues. SCM helps the retail sector companies to evaluate the situation and enhance necessary strategies by managing internal activities of business accomplishment.

5.4 Secondary Analysis

The concerned research is majorly based on gaining an understanding of the *SSCM* (*Sustainable Supply chain management*) aspect in the retail sector of Singapore sustainability is considered the most influential and effective for business. *SSCM* majorly involves the integration of financial business aspects and the environment. The retail sector of Singapore is considered to majorly contributing to the overall economy if the concerned country. With the increasing population and tourists in the country is has become a major responsibility of the organizations to ensure sustainability in tiger business operations. For the secondary analysis, few case studies of retail companies who have introduced sustainability practices in their supply chain have been analyzed in this section of the research. The case studies taken into consideration are the case study of *Isetan*, Case study of *Zara Singapore*, a case study of *Henkel*.

Case study of Isetan

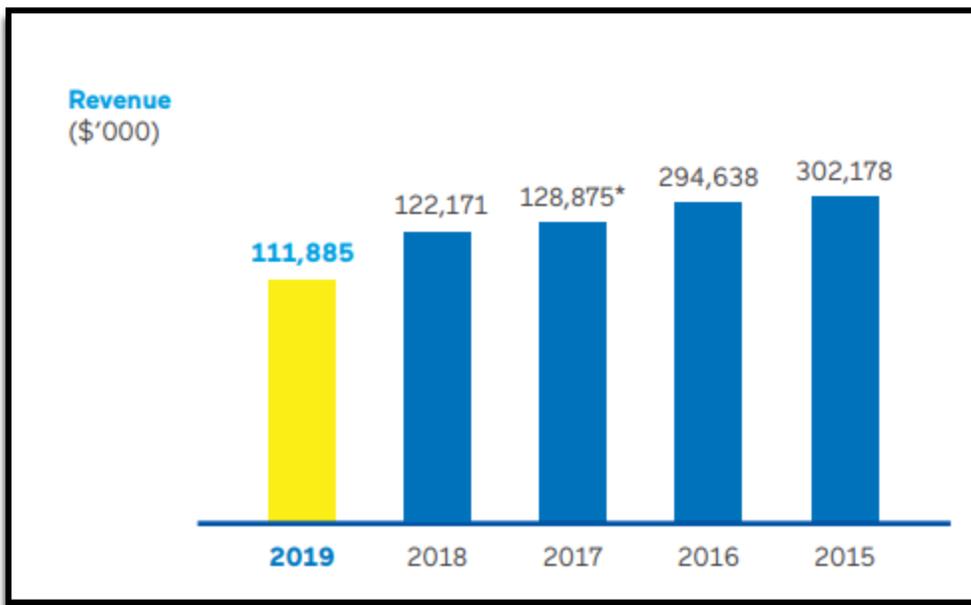


Figure 12: *Revenue of Isetan*

(Source: Isetan, 2019)

Isetan is a leading departmental store in Singapore, which is majorly known for its excellent commitment to the quality of products and health service staff. The organization offers industry-leading purchases that exemplify the best of retailing in Singapore. The organization has its headquartering in Japan and Singapore was the first place of internal expansion for the concerned company. It can be said from the above graph that the revenue margin of the company

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has gradually lowered from 2015 to 2019, which is \$302,178 to \$111,885. In recent times, it has been evident that the people of Singapore have become majorly aware of the suitability aspect of the retail sector. Thus, the organization in order to fulfill the requirements of the local consumers has introduced sustainable activities in their SCM. Responsible business practices and integrity are considered the core of business in Isetan.

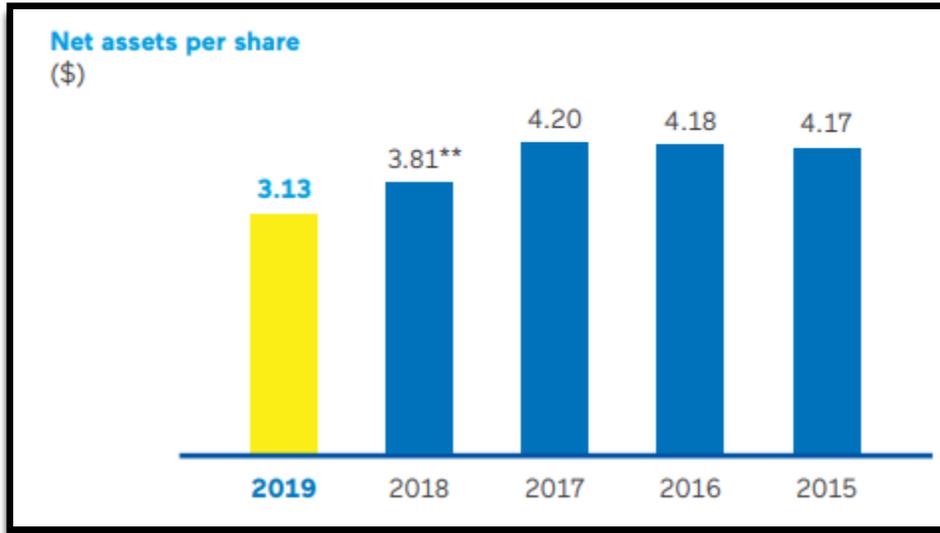


Figure 13: Net Asset per share of Isetan

(Source: Isetan, 2019)

The organization in recent times has become massively responsible towards the environment thus is taking several initiatives to minimize the carbon footprint. This has helped the organization in reducing operational costs and has helped the organization in gaining a sustainable competitive advantage. *SSCM* for the organization majorly involves integrating the financial and environmental viable practices into the complete lifecycle of the supply chain from design, product, packaging, transportation, manufacturing, material selection, consumption distribution, and warehousing. *Isetan* has implemented several strategies and practices for minimizing the rate of energy consumption by improving investment property and energy efficiency at the departmental stores. Due to the decreasing revenue margin, the amount of net asset per share has also decreased from \$4.17 to \$3.13 from 2015 to 2019. Major strategies implemented by the organization for making the supply chain sustainable such as: *Switching to LED lighting, at the store floor energy-saving practices, implementation of the system of energy conservation, and replacement of chillers with models that are energy efficient.* The organization over the years has replaced the traditional lighting with LED lights which energy sufficient.

Case study of Henkel Singapore Pte Ltd

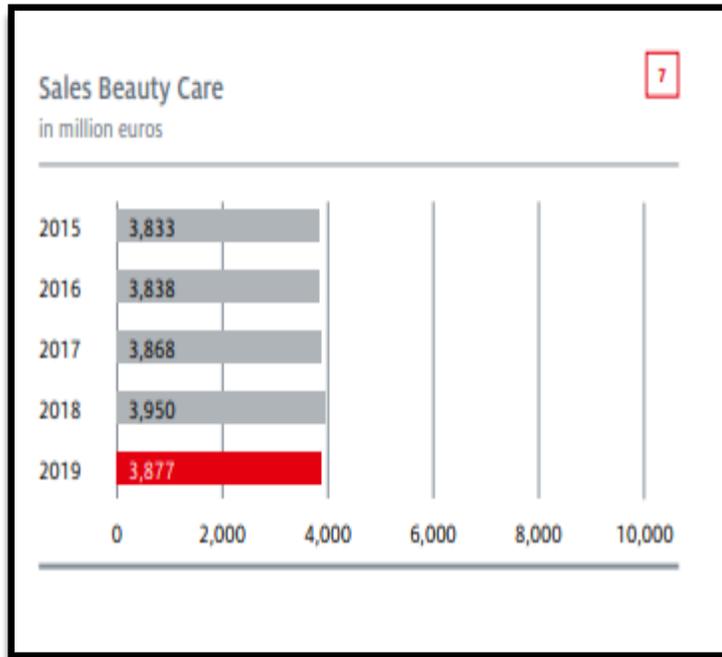


Figure 14: *Sales of Beauty Care of Henkel*

(Source: Henkel, 2019)

Henkel Singapore Pte Ltd is a successful chemical retailer in Singapore. The organization was founded in the years 1983. The business operations of the concerned organization majorly include the distribution of allied products and chemicals. The Global supply chain model has majorly influenced the organization. It has been found from the sales of beauty products that it has reduced from last year, which is 3,950 million to 3,877 million from 2018 to 2019. The organization with the help of following the sustainability aspects of the concerned model has successfully simplified and optimized its SCM.



Figure 15: Sales of Henkel

(Source: Henkel, 2019)

Henkel over the past years has applied five step-responsible supply chains for gaining sustainability in the products and its services, which majorly focused on multiple challenges. The first one was to ensure all the suppliers of the organization are maintaining the instituted sustainability standards of the organization and the other one was associated with the associate suppliers for continuously improving the standards of sustainability alongside the value chain. This can be done with the help of knowledge of transfer and continuation of education related to the process of resource efficiency, social and environmental, and optimization standards. The organization majorly times at close and healthy collaboration with its partners and suppliers. This majorly includes for the *Henkel* collaborating with partner organizations in the order set industry benchmark and associating with the suppliers for continuously improving the sustainability standards in the SCM. It has found that that the sales have increased from 19,899 million to 20,114 million from 2018 to 2019. For enhancing sustainability in the supply chain, Henkel has taken into account the initiative of 'Together for sustainability' (Supply Chain Asia, 2016).

Case study of Zara Singapore



Figure 16: Share Price Performance of Zara

(Source: Zara, 2018)

Zara Singapore is widely known for its sustainability practices globally. The organization is a successful Spanish fashion retailer. The company then expanded its business to Singapore. The people of Singapore have become highly aware of sustainability in the fashion industry. This is making the organization in recent times in implementing several strategies to practice consistent suitability in their manufacturing and designing of products and maintain the relationship with the stakeholders. The share price performance of the company is significantly increased from 2014 to 2019. The organization has been successfully integrated sustainable and innovative SCM. This has allowed the company to ensure traceability, all the standards related to safety, quality, and health. The requirements of the sustainability of the organization have been successfully incorporated throughout the integration of SCM. SSCM has contributed to the development of the standard of the effective relationship of co-responsibility with the suppliers and customers of Zara.

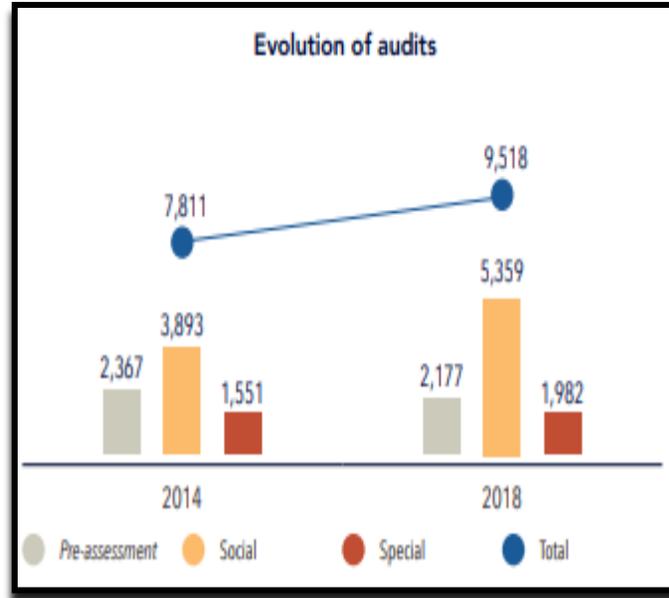


Figure 17: *Evolution of Audit of Zara*

(Source: Zara, 2018)

In the concerned country, this move is majorly helping the organizations to make a move towards major accountability, which is catering for the organization’s major opportunity in international retailing. This majorly needed changes in the practices and operations of the business and corporate culture. This for several organizations belonging to the retail, sector can help in the additional development of development and research. The evolution of audit is very much visible from the graph, which shows that socially it increased from 7,811 to 9,518. Thus, is acne be easily comprehensible that the introduction of sustainability aspects in the supply chain will help in paving way for the organizations to attain a holistic approach which will result in effective integration through the supply chain management and the value chain.

5.5 Integration of data

Theme	Primary data	Secondary data	
Competitive Advantages	Yes	Yes	Convergence
Proper engagement within work	Yes	Yes	Convergence

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Balancing environment	Yes	No	Dissonance
Maintenance of legal and ethical framework	Yes	Yes	Convergence
Stakeholder engagement	Yes	Yes	Convergence
Risk Management	Yes	Yes	Convergence
Enhancement of future strategy	Yes	No	Dissonance

Table 4: Thematic Analysis of primary and secondary data

Convergence if data shows while both the data have provided similar information. On the other hand, dissonance has shown while there is no similar data can be gained from the primary and secondary sources of data. In this research of the evaluation of the significance of SCM in the retail sectors of Singapore, both natures of data have been considered. The primary has been collected from the interview of 5 managers from the retail sectors of Singapore with 15 questions. On the other hand, secondary resources have been collected from the case study analysis of three companies from the retail industry of Singapore. Here the convergence and dissonance between the collectro9ve data can be observed significantly from the selected themes. Information related to the theme of competitive advantages, Maintenance of legal and ethical framework, Stakeholder engagement, Risk Management, and Proper engagement within work is showing the convergence of data between both primary and secondary sources of data. On the other hand, the themes related to maintaining Balance in the environment and the development of the future strategy has shown no convergence of data. This is because the data, which has been found from the primary data sources, cannot provide convergence details and information from the secondary source. Hence, these are considered dissonance, as there is a lack of information in the secondary source regarding these specific two themes.

Chapter 6: Conclusions and Recommendations

6.1 Conclusion

It has been analyzed from the chapter of introduction that sustainable chain supply management can be considered as an important factor for the retail industry. It has also been observed that proper management is necessary for the retail industry for conducting sustainable supply chain management to extract the necessary benefits that will be helpful for the industry to gain a competitive advantage in an effective manner. It has also been analyzed in the above study that retailing can be concerned as the major factor for the retail industry in Singapore that helps to make the country a viable place for the individuals to travel as well as reside. In the chapter of introduction, the researcher generally focuses on the sustainable supply chain management in the present environment of the company and is engaged in linking it with the retail industry of Singapore for properly demonstrating the study.

It has been observed from the chapter of the literature review that the retail industry in Singapore plays an effective role in making a higher contribution to the economy of the country. Various aspects related to sustainable supply chain management within the retail industry have also been discussed in the chapter of the literature review with significant emphasis. An overview related to sustainable supply chain management along with the discussion regarding the buying behaviors of the consumers as well as the competitive advantage among the competitors have generally been analyzed in the concerned chapter. It has been observed that the significant drivers related to the aspects of reverse greenwashing as well as greenwashing have been focused on an effective manner in the chapter of literature review. It has also been analyzed that the whole chapter of the literature review is engaged to gain an understanding related to the basic aspects regarding the supply chain management in the retail industry along with its importance to the retail sector.

The chapter of the conceptual framework analyses the classification of models as well as theories in an effective manner. It has been observed in this chapter that sustainable supply chain management plays a crucial role in the retail industry for increasing satisfaction related to the consumer along with increasing the competitiveness of the retail industry. In order to attain success, the firms must perform the operations of supply chain management in a significant manner. It has also been observed from this chapter that effective operation of the supply chain will be beneficial for the retail industry for making the delivery of the products quickly and at the cheaper cost to the ultimate user. The retail industry can also be able to achieve a competitive

advantage in the competitive market among the competitors significantly with the help of performing effective operations of the sustainable supply chain.

It has been analyzed from the chapter of the research and methodology that suitable methodology has been framed by the researcher for making significant research related to this chapter. It has been observed in this chapter that an appropriate methodology related to the aims of the research for the implementation of the objectives of the research have been utilized by the research in a specific manner to carry out the effective examinations for the research. The major limitation of this research has been seen as a lack of survey methodology due to this pandemic situation. It has been found in this chapter that sustainable supply chain management can be considered as an approach for innovations for accelerating the businesses related to the retail industry with the help of the incorporating success factors regarding effective supply chain along with the significant performance within the respective markets of the retail industry. It has also been observed in this chapter that the researcher utilizes interpretivism and positivism philosophy for conducting the process of research philosophy.

In the chapter of the Findings and Analysis, the primary qualitative and secondary analysis has been conducted by the researcher. The qualitative data analysis has been conducted with the use of the interview transcript which has been done with the help of an online video calling system. It is being observed that for the interview around five company managers have been chosen from different retail companies in Singapore. In this context, the sustainability of the supply chain management is highly recognized in the study. However, the secondary analysis is being conducted with the company case scenario. The case study of Isetan, Henkel, and Zara of Singapore respectively analyzed in this chapter.

6.2 Recommendation

It has been analyzed that various problems can be faced by the businesses in designing the model of the production that is essential to meet the demands of the consumers along with the impact on the environment. Businesses in the retail industry must develop certain strategies to overcome these problems for the attainment of competitive advantage among the competitors in the competitive market (Dubey *et al.* 2017). It is also necessary for the retail industry to focus on the severe problems related to the regulations of the government along with the social pressures. It is found to be important for the retail industry to analyze the negative influence related to the

environment that can be able to create hindrances for the businesses to attain success (Colicchia *et al.* 2017).

A proper amount of investment is necessary for the retail sectors to enhance product development in a significant manner. This higher investment can be achieved through the engagement of shareholders, investors, and sponsors. Hence, the management of stakeholders is necessary for enhancing their resources, which is required for the development of SCM in the retail sectors of Singapore. Also, a diversified workforce is required for the development of business. Diversified staff can help the organizations in achieving their competitive market objectives through which the companies can be able to enhance their production rate. They are also responsible for enhancing the quality of products, which is the primary concern for the consumers. Hence, companies need to enhance their retention of employees. Even necessary training also needs to provide to their workforce to enhance their development of marketing operations through the achievement of successful execution of SCM.

6.3 Limitations

The limitations, which have been faced by the researcher, are related to budget and time. Budget and time are the two most important factors to accomplish the research process. In order to conduct the research related to the importance of SCM in the retail Sectors of Singapore, time limitations and budget limitations have been initiated as one of the significant burdens in the way of fulfilling the research objectives. The researcher has taken lots of time to collect necessary data related to the case study of the company and in enhancing the process of research in a significant manner. It takes a long time for the researchers to address the research questions with meaningful instances. Hence, the constraint related to time is regarded as one of the significant limitations for the researcher to achieve a sustainable way of research. Also, the constraint related to budget has appeared in the way of searching necessary journals, news articles, and internal information to conduct the research process. Several websites and journals have required paid subscriptions, which cannot be conducted otherwise. Hence, the researcher has faced one of the most significant limitations to accomplish the research objectives related to the budget. Apart from this, the researcher has taken lots of time to conduct the interview process of four managers with 15 questions.

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