LAPPEENRANTA-LAHTI UNIVERSITY OF TECHNOLOGY LUT

School of Business and Management

Master's Programme in Supply Management (MSM)

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SUPPLY CHAIN COLLABORATION USING THIRD PARTY LOGISTICS PROVIDERS AS A TOOL FOR ENHANCING VALUE CREATION

Masters Thesis 2022

Examiners: 1st Supervisor: Professor Veli Matti Virolainen

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ABSTRACT

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Degree programme: Business Administration

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Master's thesis

2022

75 pages, 7 figures, 4 tables and 1 appendice

Examiners: Professor Veli Matti Virolainen and Dr. Sirpa Multaharju

Keywords: Supply Chain Collaboration, Third Party Logistics, Value Creation.

Supply chain collaboration (SCC) has gained momentum in today's global market place as it has proved to be a valuable source of competitive advantage through the value created within the supply chain for the supply chain partners and end consumers. The purpose of this thesis is to study how value is created through supply chain collaboration with third party logistics providers (3PL). The aim is to get a better understanding of the concept of supply chain collaboration, its benefits, risks and key elements, as well as its connection to value creation through 3PL providers.

The empirical part of the thesis is conducted by interviewing logistics professionals in one of the leading global 3PL providers. The main findings show that value does not occur in isolation and supply chain collaboration is the main catalyst in the value creation process. For effective value creation, supply chain partners must strive to achieve collaboration elements such as open communication, trust, transparency and a change in mind set to aim for a long-term win-win relationship.

ACKNOWLEDGEMENTS

It has been quite a journey, I must admit. From accepting my study place in the summer of 2019 to packing my bags in the fall of same year moving from Tampere, a city I had called home for the last 8 years, then moving again from Lappeenranta to England to complete my Erasmus masters internship. Now my study journey is nearing its completion and am on course to graduate on time.

First and foremost, I would like to thank my amazing small family, my wife and my four year old son, who have supported me immensely through my studies and even moved with me to England, I will always value and cherish your sacrifice. I would like to thank my classmates at LUT for their support through the numerous team assignments and group projects. Special thanks to my campus best friend, study buddy, and partner in crime Benjamin Stolk, my man! We really made our time at LUT worthwhile.

I would like to thank all my colleagues at my current work place who took part in my interviewing process for the empirical part of this thesis. Your support is highly appreciated and you made my thesis writing very meaningful. I look forward to engaging with you even more after my graduation. I would like to thank all my MSM professors and particularly my two supervisors who guided me during the thesis writing process and bestowed trust upon me with their confidence in my ability to swiftly see my thesis to completion.

Lastly, I would like to thank me. I thank me for doing all this hard work, I want to thank me for never giving up and always staying grounded, I want to thank me for embracing the opportunity given by LUT and making the very best out of it, I want to thank me for always being ME.

Thank you for taking your time to read my work.

Yeovil, Somerset. 2022

Joel Gitau

Table of contents

1. INTRODUCTION 1
1.1 Research question and objectives 2
1.2 Conceptual Framework 2
1.3 Defining Key Concepts 3
1.4 Limitations 5
1.5 Structure of the study 5
2. SUPPLY CHAIN COLLABORATION AND 3PL 7
2.1 Supply chain collaboration 7
2.1.1 Key elements of supply chain collaboration 9
2.1.2 Benefits of supply chain collaboration 12
2.1.3 Risks of supply chain collaboration 14
2.2 Third Party Logistics (3PL) 15
2.2.1 3PL provider's business model 16
2.2.2 Types of 3PL providers based on operating strategy 18
2.2.3 Third party logistics performance measurement 19
3. VALUE AND VALUE CO-CREATION 21
3.1 Value creation in supply chains 21
3.2 Value co-creation through 3PL's 23
3.2.1 3PL resource commitment and performance 26
3.2.2 3PL collaboration and innovation 26
3.2.3 3PL Innovation and performance 27
4. METHODOLOGY 29
4.1 Data collection method 29
4.2 Data Analysis 30
4.3 Validity and reliability 31
5. EMPIRICAL RESEARCH 33
5.1 Empirical Findings 35
5.1.1 Current relationship with supply chain partner 35
5.1.2 Reaching out to a collaborative relationship 36
5.1.3 Crucial elements in collaborative relationship 38
5.1.4 Encountered SCC challenges 40
5.1.5 3PL providers and SCC 42

5.1.6 Interpretation of value 43
5.1.7 Value creation aim 44
5.1.8 Important elements in value creation 46
5.1.9 Value measurement metrics 47
5.1.10 Barriers inhibiting value creation 49
5.1.11 Value creation, SCC, and competitive advantage 50
6. DISCUSSION AND CONCLUSION 53
6.1 Discussion of results and answering research question 53
6.2 Answering the research questions 59
6.3 Conclusion 63
6.4 Avenues for further research 66
REFERENCE 67

FIGURES

Figure 1: Conceptual framework

Figure 2: Structure of the thesis

Figure 3: Supply chain collaboration opportunities (Lapide, 1991)

Figure 4: Supply chain collaboration elements framework (Matopoulos et al., 2007)

Figure 5: 3PL Providers business model (Adopted from Marchet et al., 2017)

Figure 6: Potential forms of value creation in supply chains (Adopted from Hughes, 2008)

Figure 7: Conceptual model of 3PL collaboration-resource commitment-innovation relationship (Adopted from Sinkovics et al., 2018)

TABLES

Table 1: Benefits of collaboration based on collaboration activities (Matopoulos et al., 2007)

Table 2: Factors enabling value creation (multiple literature)

Table 3: Barriers to value creation in supply chain collaboration

Table 4: Comparison of theoretical background to empirical findings

APPENDICES

Appendix 1. Interview Questions

1. INTRODUCTION

We are living in a world where global markets continue to experience exponential growth in efficiency, which has in turn resulted to competition shifting from happening between individual business organizations to entire supply chains (Sahay, 2003). Ványi (2012) describes a supply chain as a series of value adding processes that flow across many firms creating products and services that are aimed at fulfilling the needs of end customers. The growth in efficiency has characterized supply chain environment with increased customer responsiveness and advancement in information and communication technology (ICT). In this regard, companies within the supply chain have no choice than to continuously re-engineer themselves to optimize their efficiency levels in order to satisfy customer expectations, as well as systematically identifying, then capitalizing on avenues to co-create value with their suppliers (Soosay, Hyland & Ferrer, 2008; Hughes, 2008). This reality has dawned on many companies who have come to the realization that they need to look beyond their organizational boundaries in order to tap into resources and capabilities that if utilized properly can create exceptional value. Dyer and Singh (2008, p. 660) have highlighted that because of the transformation happening in the supply chain landscape, organizations are now placing a premium on collaboration as a source of competitive advantage.

Collaboration within the supply chain can be seen to take the form of partnerships. A partnership is a tailored business relationship based on mutual trust, transparency, shared risks and rewards that result in achieving competitive advantage that enable higher business performance than would be achieved operating individually. (Douglas, Margaret, and John 1996). Lalonde and masters (1994) observed that supply chain partners are two or more firms within a supply chain entering into long-term agreement. The supply chain partners are involved in the purchasing, production, storage and distribution of goods and services to end customers (Harland, 1996). In a quest to gain competitive advantage, companies especially multinationals have turned to third party logistics providers (3PL) in a collaborative effort to create value within the supply chain. The ability of a 3PL to integrate logistics services with the aim of helping its customers to manage efficiently their entire distribution system

and co-create value underpins the 3PL's core competitive advantage (Wang & Sang, 2005, p. 433). 3PL providers play a pivotal role within the supply chain in enhancing supply chain collaboration and performance as they connect different players within the supply chain like suppliers, retailers and manufacturers through product movement and logistical information flow (Zhang, 2015).

This study will shine the spotlight on supply chain collaboration (SCC) with an emphasis on how 3PL providers can help cement the bonds of collaboration through shared value co-creation with their supply chain partners. This collaboration can greatly enhance the competitive advantage of the supply chain and indeed its performance. Theoretical contribution of this study is to gain understanding of supply chain collaboration and value creation from the perspective of the supply chain partner who in this case is the 3PL provider.

1.1 Research question and objectives

The main research question of the thesis is

1. How can supply chain collaboration enhance value creation?

Sub –research questions

1. What are the key elements of supply chain collaboration?
2. What is the value achieved through 3PL supply chain collaboration?
3. What Channels can 3PL providers' utilize to enhance supply chain collaboration?

1.2 Conceptual Framework

The conceptual framework of the thesis is presented in figure 1 below. This conceptual framework is connected to the main research question, "How can supply chain collaboration enhance value creation", and the three sub research questions 1) what are the key elements of supply chain collaboration? 2) What is the value achieved through 3PL SCC? 3) What are the ways in which 3PL can enhance value creation in SCC? All these questions are highlighted in the yellow filled boxes. The left hand side of the framework shows 3PL as a

vital part of supply chain collaboration. Several other parties are involved in supply chain collaboration but will be left out with the sole aim of staying in scope of this study.

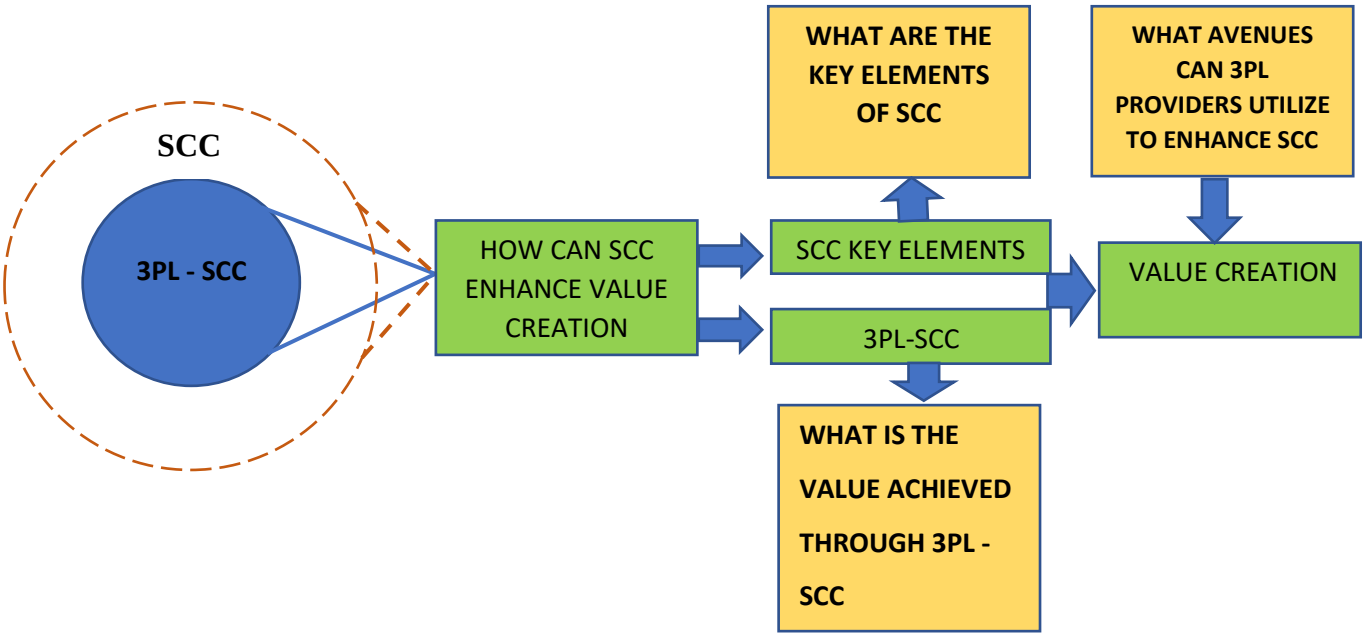

Figure 1 conceptual framework

1.3 Defining Key Concepts

The Key concepts that this thesis will cover are Supply chain collaboration, Value co-creation and third party logistics.

Baah, Acquah, and Ofori (2021) have described Supply chain collaboration as the process where supply chain members develop longstanding relationships in order to work together towards common goals and objectives, in doing so they take up the commitment of sharing

resources, information as well as risks. It is important to note that in addition to collaboration being the catalyst for effective and efficient supply chain management, it is regarded as the core capability that leads to a sustained competitive advantage in our contemporary global economy (Bunchuen, Sadler, and Shee, 2017). The main purpose of supply chain collaboration is for supply chain members to enhance their ability to administer their internal and external operations in order to achieve efficiency and effectiveness in the movement of goods, services, information and decisions (Baah et al. 2021)

Combing through several literature many authors seem to have a similar viewpoint on the definition of value co-creation, this entails the process of resource sharing and integrating practices through a joint problem definition, problem solving and interaction of supply chain actors to realize improved capabilities and competitive advantage (Gronross and voima, 2013; Laud and Karpen, 2017; Prahalad and Ramaswamy, 2004). This concept is grounded on the assumption that the main business abilities are not present in the value chain but at the point of interaction between the collaborating partners. Based on the stated notion we can view value co-creation as joint collaborative activities by parties involved in direct interactions, aiming to contribute to the value that is realized for both or more parties (Gronroos, 2012). Value creation can't happen in isolation collaboration is a key enabler (Lindgreen and Wynstra, 2005) therefore it's critical for an organizational to realize that it is not possible to add value without gathering or combining resources that go beyond the entity itself (Prahalad and Ramaswamy, 2004)

Skjoett-Larsen (2000) defines third party logistics as:

"The process that involves the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process."

1.4 Limitations

This study will take the approach of analysing already existing academic literature, theories, author observation and participation, a combination of all these approaches will then be reflected on the empirical data gathered. The study contains several limitations whose acknowledgement is paramount in drawing up the scope. The empirical data will been gathered from one of the leading global 3PL providers with a significant market share and capabilities. The study findings limits generalization across the 3PL industry, as it might not necessary reflect on varied companies such as SME's and start-ups, due to the possibility of having limited influence, their market position, ownership structure and bargaining power to be able to control the nature of the collaboration relationship. Furthermore, the empirical data will be gathered from one single company and the findings reflect the viewpoint of the company only.

1.5 Structure of the study

As seen in figure 2 below, the thesis starts with the introduction part where the background of the study is presented. The research question and study objectives are discussed further on, followed by definition of the key concepts and an illustration of the conceptual framework encompassing this study. To stay in scope the limitations of this study are set out consequently. The second chapter introduces the main theory of supply chain collaboration, broken down into smaller sub sections for more detailed analysis. Third party logistics theory is covered in this chapter as well and its relationship to supply chain collaboration. The third chapter presents an important theory of value co-creation, its connection to supply chain collaboration and third party logistics.

The empirical parts of this thesis commence on chapter four where the research methodology is introduced and covers sub topics of data collection method, data analysis , validity and reliability. To further dive into the empirical part, chapter five covers the discussion surrounding the empirical results in relation to the theoretical literature presented earlier on. To conclude the thesis chapter six will house the discussion of research results in relation to the research question with the aim of answering the research question of this

study, based on this discussion a conclusion is drawn up and avenues for future research are highlighted.

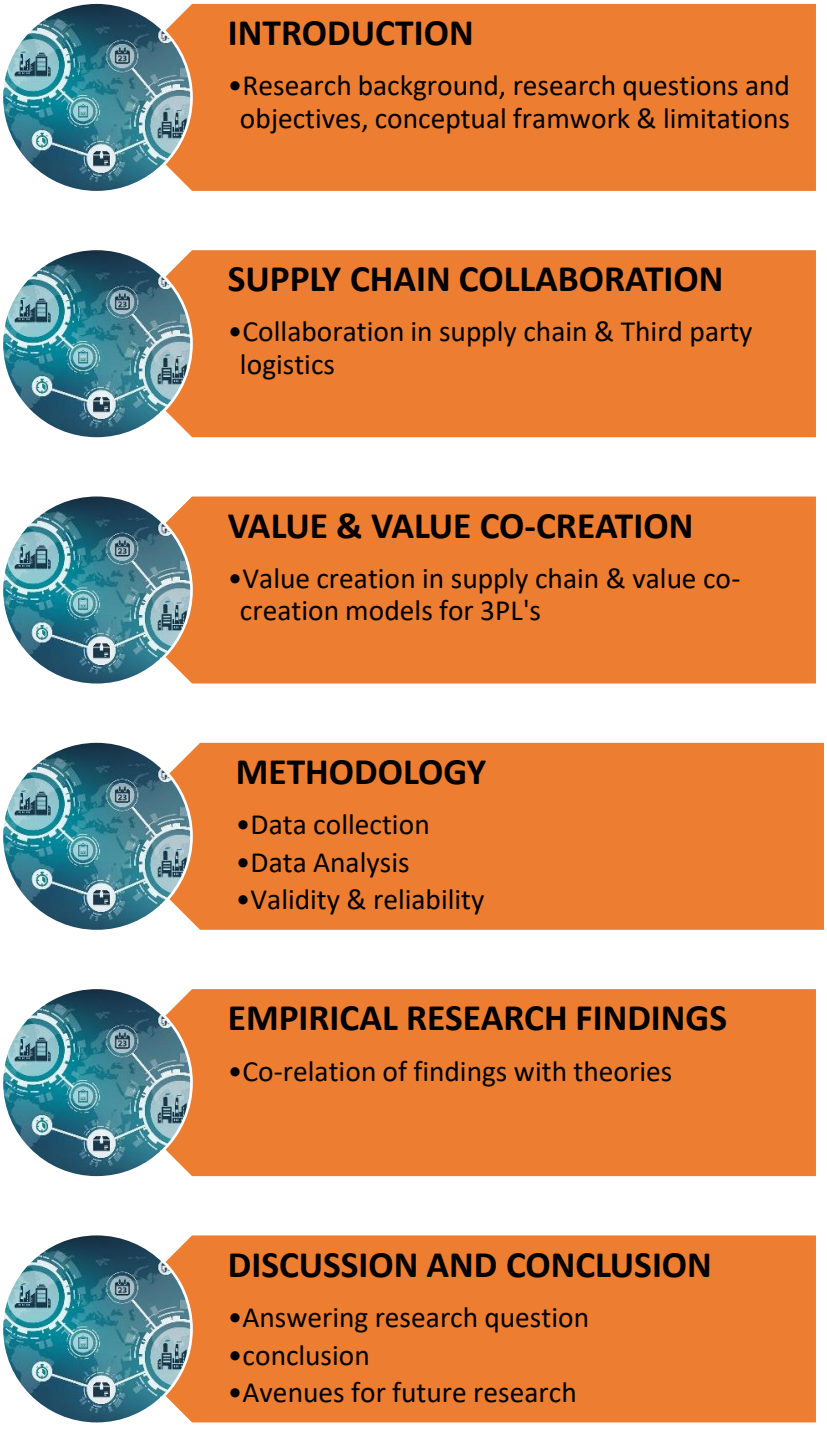

Figure 2. Structure of the thesis

2. SUPPLY CHAIN COLLABORATION AND 3PL

Collaboration is the process where two or more organizations work together to achieve shared goals. It is worth noting that collaboration is not synonymous to cooperation as it goes beyond the intersection of common goals to encompass the determination to reach identical objectives through sharing knowledge, learning, and building consensus. (Chuck, 2021) This chapter examines the different aspects of supply chain collaboration and the third party logistics as a vital facet in this collaboration.

2.1 Supply chain collaboration

Autry (2013) has identified supply chain collaboration as one of the leading game changing trends that will highly influence the nature of future supply chains. The foundation upon which supply chain collaboration lays on is characterized by the integration of supply chain partners who agree to share responsibilities, have common goals and are continuously involved in sharing information regarding collective planning, management, execution and performance measurement with the sole aim of achieving a synchronized supply chain. (Barrat and Oliviera, 2001 ; Bowersox, 2000) Supply chain partners encompass both the market side of the supply chain involving retailers, wholesalers and distributors, as well as the supply side including suppliers, vendors and logistics providers. (Ryu, So, and Koo, 2009)

Supply chain collaboration is one of the highly regarded topics of research today as it has been deemed a paramount factor in influencing and maintaining the competitive advantage of a supply chain (Barratt, 2004, p. 31). The global market is experiencing radical changes in customer behaviour, and expectations that has consequently intensified competition. Therefore, numerous companies within the global and local markets are seeking to coordinate cross-firm activities and engage reciprocally in the long-term to produce superior performance (Anderson and Narus, 1990, p. 95). As stated by Fawcett, Watson, and Magnan

(2012) the key driving forces that stimulate firms to seek for supply chain collaboration are establishing a global reach, being able to secure a strategic position within the supply chain, the need to build a winning team and improvement of financial standing. Based on the driving forces very few individual companies can actually claim to possess all the necessary capabilities and resources to effectively and sustainably compete on a global scale, hence collaboration dictates the competitiveness of a supply chain by giving access to these non-marketable capabilities. Despite Supply chain collaboration, being the driving force behind effective and value creating supply chains Crum and Palmatier (2004) have suggested that there is a widespread belief that few firms have truly capitalized on the potential value of collaboration. Companies may have supply chain collaboration has part of their organization value structure but research has suggested minimal engagement to the level of integration that collaboration suggests in Fawcett and Magnan (2004).

Lapide, (1991) identified three types of supply chain collaborative opportunities which have been illustrated in Figure 3 below. The first supply chain collaborative opportunity is between supplier and manufacturer which can lead to benefits such as new product development, capacity planning and order fulfilment. The second type of collaboration is between manufactures and customer, this type of collaboration aims at jointly understanding demand at the point of consumption as customer requirements are met efficiently. The third supply chain collaborative opportunity with third party logistic providers is very important and relevant to this study. It is evident the important role 3PL providers play within the supply chain in connecting all the partners involved in the collaboration. Collaboration with 3PL can offer benefits of having a distribution centre where productive use of facilities, equipment and labour can be optimised.

In a nutshell, the fundamental rationale of supply chain collaboration is a firm can secure higher performance and value than it would achieve operating individually, hence the firm cannot successfully compete by itself (Lambert, Emmelhainz, and Gardner, 1999).

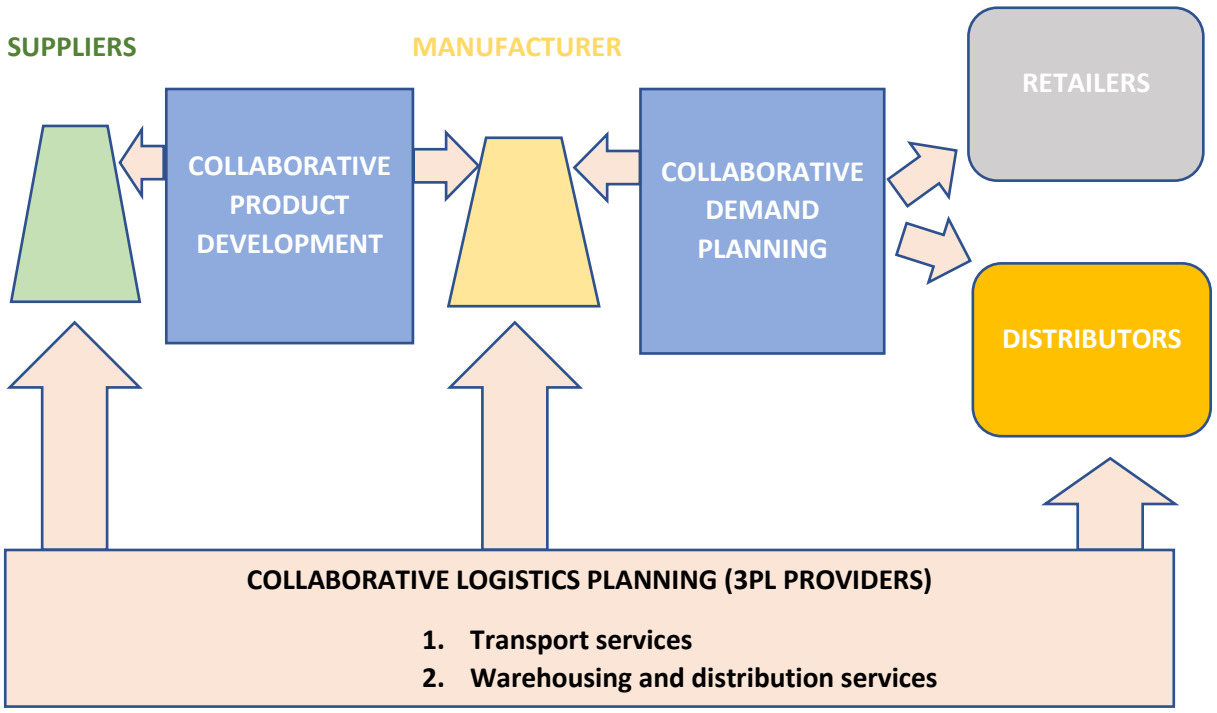

Figure 3. Supply chain collaboration opportunities (Lapide, 1991)

2.1.1 Key elements of supply chain collaboration

Matopoulos, Vlachopoulou, Manthou, and Monos (2007) have identified supply chain collaboration framework, which details various key elements within SCC. As seen in figure 4, this framework contains two pillars in which SCC elements root from. The two pillars deal with the design and government of supply chain activities and establishment and maintenance of supply chain relationships.

The first framework pillar, which is concerned with design and government of supply chain activities, has three elements. The first element relates to the decision of choosing the right supply chain partner to collaborate with, not all parties within the supply chain are a business fit to collaborate with hence a selection becomes necessary based on expectations, perceived benefits and challenges. After selecting the right partner to collaborate with, the second element comes to play where the collaborating parties must decide on the activities they will collaborate on. This dictates the width of the collaboration highlighting the chosen activities

that will require common level of involvement and close relationship (Sahay 2003). The third element involves identifying the level at which the collaboration will happen. In this third element, collaboration can occur in three different levels namely strategic, tactical or operational. It is important to decide on the level at which collaboration will happen, as it rarely happens across the three levels. This decision to have a distinction of the level at which collaboration will happen constitutes the depth of the collaboration (Fawcett and Magnan 2002; Stevens 1989).

The intensity of the collaboration is dictated by the combination of these three elements, the more the depth of collaboration from operational to tactical up to strategic and the more the width from just simple collaboration to complex collaboration in areas such as product development, the more intense the collaboration is defined. On the sideline of this pillar, there is an important side element, which involves selection of the appropriate technology and technique to enable information exchange. This is important as not all collaborators have adequate technological infrastructure.

The second pillar contains the less tangible but very important elements that define supply chain collaboration relationships. Barratt and Oliveira (2001) have citied the critical elements found under this pillar to be mutuality of benefits, risks and reward sharing. It is very important for the collaborating parties to pay extra attention to striking a balance between risks and reward sharing as this acts as a guide to closer collaboration. Other elements that are crucial to the collaboration are trust power and dependence. If there's a huge dependency on one of the party then this means one party will have an upper hand over the other, Kumar (1996) identified power has the single most deterrent of trust which highly affects the effectiveness of the supply chain collaboration. The interaction of these elements determines the intensity of the collaboration.

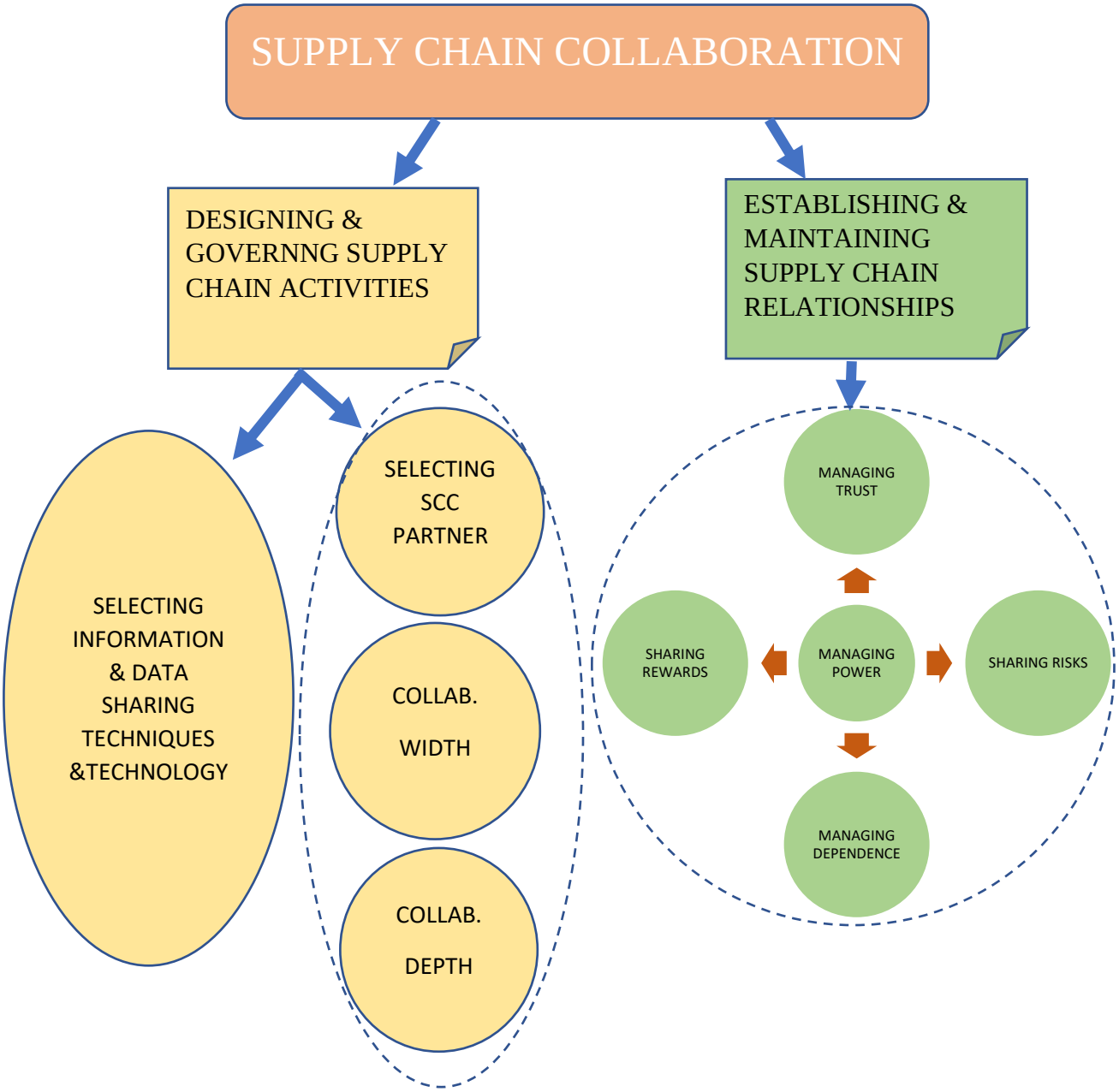

Figure 4. Supply chain collaboration elements framework (Matopoulos et al. 2007)

It is worth noting Barratt (2004) has identified that for a supply chain collaboration to be sustainable there are several strategic elements that must be included. These strategic elements include, resources and commitment, the participants of the collaboration must be ready to commit substantial amounts of resources especially in the initial stages of the collaboration and as well as on the long term as the collaboration is rolled out across various activities and initiatives. Intra-organisational support, Ireland and Bruce (2000) dissect organisational support into initial and ongoing senior management support and support from other business functional units. The level of intra-organisational support highly influences the degree of process alignment and ultimately determines how successful the supply chain collaboration will end up. Lastly, demonstrating business case, the business case for the collaboration must be developed with urgency in order to build support and commitment from senior management (Ireland and Bruce, 2000).

2.1.2 Benefits of supply chain collaboration

Without a doubt, there is huge array of benefits that come from supply chain collaboration, taking a macro level perspective of the supply chain the main benefits as highlighted by Sahay (2003) are cost reduction and general revenue growth. If we go further to analyse on a micro level based on the activities the collaboration is based upon then we can get a clear picture of the numerous benefits that come with collaboration. In table 1 below Matopoulos et al. 2007 lists of the most cited activities in literature that supply chain collaboration occurs and their perceived benefits.

Table 1. Benefits of collaboration based on collaboration activities (Matopoulos et al. 2007)

Supply Chain collaboration activities	Collaboration Benefits
Inventory management	➢ Lower stock holding ➢ Increased asset utilization
Order processing	➢ Increased responsiveness
Distribution	➢ Faster delivery ➢ Flexible delivery
Demand management	➢ More accurate forecasts ➢ Joint resolution of forecast expectations
Product design and development	➢ Faster new product development ➢ Knowledge sharing and increased innovation capacity ➢ Better quality as a result of design co-involvement
Manufacturing (planning)	➢ Minimise supply disruptions ➢ Increased product quality
Procurement	➢ Less time searching for new suppliers and tendering ➢ Easier management of a reduced supply base ➢ More stable prices
Sales	➢ Rapid access to markets ➢ Increased market share ➢ Improved promotional events
Customer service	➢ Improved lead times ➢ Improved product availability

Some common collaborative efforts benefits seen in multiple literature are efficiency, effectiveness, and profitability. Efficiency is a measure of how well resources are utilized while effectiveness refers to how well business goals are accomplished (Mentzer and Konrad, 1991). Efficiency and effectiveness have direct impact on profitability as they have an impact on cost reduction and streamlining supply chain processes.

2.1.3 Risks of supply chain collaboration

Krause (1999) states that despite the numerous benefits that come from supply chain collaboration, collaboration may not be appropriate for every business. It is very important to understand the risks or challenges that may arise from collaboration. The biggest risk to Supply chain collaboration is risk of failure (Dwyer, Schurr, and Oh, 1987). In cases where collaboration is not successful there might be significant loss of investment in money and other resources, time or abandonment of business plans. Exposure to competition is another risk of collaboration bearing in mind if there is a failure in collaboration the potential collaborating partner might become the partner of your competitor at some point in time. The issue of dependency also poses a significant risk and it is one of the most complex issue in business relationships. This risks arises when one of the collaborating partner is too a greater or lesser extent relied on the other partner across multiple business processes (Adam and Goldsmith, 1999). The risk of dependence often occurs where there is a combination of power in the case of a smaller company collaborating with a bigger one. Collaboration may have the risk of increasing operational complexity. This complexity is prone to happen at the front of technological integration. Many companies aiming for supply chain collaboration face immense difficulties in integrating their systems. This complexity in technological integration can ultimately lead to the termination of all collaboration efforts (Matopoulos et al. 2007)

2.2 Third Party Logistics (3PL)

Third party logistics also referred to contract logistics is a booming sector within the logistics service industry. According to report linker, (2021) 3PL industry is estimated at US $838.9 billion in year 2020, this is amid the global covid-19 crisis, and there is growth estimate projections that the industry will reach US $1.3 trillion by year 2026. Third paty logistics market in the US accounts for 24.68% of the global share which is estimated to account for US $ 222.1 Billion in year 2021.3PL industry in China is forecasted to reach US $328.4 Billion by year 2026. Other regional areas, which will experience significant growth in the 3PL industry, include, Japan and Canada each with a growth forecast of 5.5% and 6.2% respectively, in Europe, Germany is on a 6% growth forecast while the rest of the continent will achieve US $358.9 Billion by end of year 2026. The positive development of the sector is due to increased outsourcing activities because of intensified global competition. Firms are opting to concentrate their resources and capabilities towards their core activities that are crucial to their survival and leaving the rest to specialist firms (Bhatnagar, Sohal and Millen, 1999). 3PL providers can offer comprehensive solutions for enterprise supply chains in warehousing, distribution, inventory management, packaging and order fulfilment. Their expertise, technologies and best practises are able to integrate into existing business processes to fill the gaps within the supply chain and solve complex logistical challenges resulting in a more agile and responsive supply chain, which is a critical necessity in today's global market. Traditional transport and freight services can be fulfilled by large economies of scale but in the case of contract logistics services are more interaction oriented and focused on fulfilling individual customer requirements that require economies of scope. In general, the 3PL market is characterized by a vast amount of different players who greatly vary in terms of size, market position, geographic coverage and service offerings (Prockl, Pflaum and Kotzab, 2012).

In the context of this study, we will take the view of Bagchi and Virum (1996) where they defined third party logistics as a logistics alliance characterised by close and long-term relationship between a customer and a provider covering a wide array of logistics needs. In this case, the parties ideally consider themselves as partners who collaborate in understanding and defining the customer's logistics needs. The partners participate in

designing and developing logistics solutions and measuring performance. The goal of the relationship is to develop a win-win arrangement. Marchet, Melacini, Perotti, Sassi, and Tappia, (2017) suggest that based on their literature review resource based theory (RBT) and Transaction cost economics are the most widely adopted theories in justifying the need of outsourcing logistics and the value derived from 3PL providers. TCE is rooted on the belief that a firm's decision to outsource is rooted on its need to minimise the sum of its production and transaction costs. (Williamson, 1985) RBT on the other hand argues that 3PL providers enable supply chain partners to gain access to complementary resources that enhance competitive advantage. In this context, resources is a term used broadly to refer to not only tangible assets such as equipment, facilities, location, but also to intangible assets such as expertise, knowledge and organisational assets. (Zacharia, Sanders, and Nix, 2011) According to RBT certain resources fit better in certain organisations and its paramount that 3PL providers align their strategies coherently with their value propositions. The range of resources that can be exploited by 3PL provider should be examined carefully and identify the link between these resources and 3PL's model for creating value. (Hedman and Kalling, 2003)

2.2.1 3PL provider's business model

Marchet et al. (2017) identifies the key pillars of 3PL business model to be value proposition and value creation architecture. As seen from figure 5, the value proposition within a 3PL provider's business model revolves around competitive advantage provided by the 3PL and the perceived benefit gotten from a logistics outsourcing relationship (Prockl et al., 2012). The benefits achieved through a 3PL outsourcing relationship can be ascribed to the general objectives of outsourcing inherent in an outsourcing decision. These benefits include;

Increase in efficiency and/or reduction in operating costs .This is brought about by focusing on core competences through redirection of resources and reduction in invested capital as 3PL providers are able to offer the chance to convert fixed costs to variable costs avoiding the need to lock capital in expensive logistical related assets. (Bolumole, 2003). Secondly, increase in operational flexibility, 3PL providers are able to cope with rapid fluctuation in

demand, in addition, there is the aspect of strategic flexibility as 3PL providers are able to facilitate the redesigning of logistics networks to include things such as moving warehouses locations thereby giving access to international distribution networks. (Selviaridis and Spring, 2007). Additionally, acquisition of external competences, expertise and capabilities have been cited as among the key benefits for an outsourcing partnership. 3PL providers can develop greater knowledge and invest heavily in technology and training systems and given the chance for a long-term more collaborative partnership can also become more innovative than their counterparts possessing internal skills only. (Prockl et al., 2012). Lastly, service level improvements in regards to reduced customer lead times and higher quality of service is cited as another benefits accrued from 3PL outsourcing relationship (Selviaridis and Spring, 2007).

It is worth noting that 3PL providers should not aim at fully pursuing all the above mentioned competitive advantages simultaneously, a conflict in goal may arise for instance between providing the service level agreements at a minimal cost and introducing innovation or creating new business areas which always come at added costs. Therefore, it is important that the 3PL providers first choose the value proposition they will pursue and then select their value creation architecture accordingly. (Prockl et al., 2012) The value proposition offered by 3PL providers roots from accumulated competences, logistics expertise and capabilities, there must be consistency between the value proposition and value creation architecture. Various scholars have covered various operational strategies that are related to value creation architecture within the 3PL business models, for example, collaboration and partnership (Wang, Persson, and Huemer, 2016), continuous improvement (Wallenburg, 2009), and horizontal integration (Carbone and Stone, 2005).

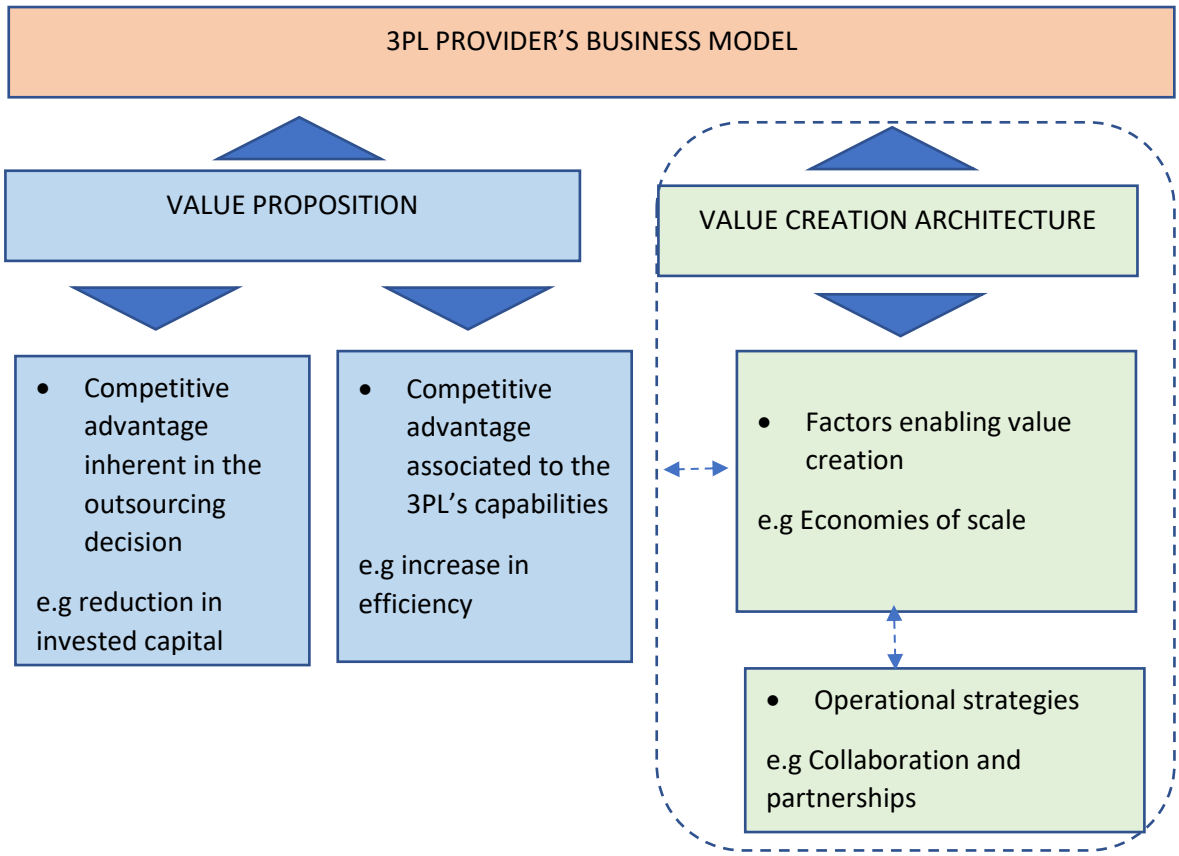

Figure 5. 3PL providers business model (adopted from Marchet et al., 2017)

2.2.2 Types of 3PL providers based on operating strategy

Based on research conducted by Marchet et al., (2017) three types of 3PL providers were identified, these are;

Volume-oriented 3PL providers – 3PL providers who fall under this type are characterised by their heavy investment in developing their operational planning abilities and forecasting planning tools, as they are a key part in building their competitive advantage and a prerequisite for achieving efficiency. 3PL providers in this category tend to concentrate on specific market segments enabling specialization and achievement of critical mass and cost structure.

Process-oriented 3PL providers – Process improvement through a continuous process of monitoring and benchmarking performance is the key characteristics of 3PL providers under this category. Aiming for supply chain synergies such as horizontal integration is also a feature of process oriented 3PL providers. Furthermore, the 3PL providers are keen in supporting initiatives that aim to involve their staff in company strategies, these initiatives are aimed at making their operational and management staff more proactive in developing and sharing new ideas on how existing processes can be improved or redesigned.

Innovation-oriented 3PL providers – The expertise built by their process re-engineering teams is vital in development of the 3PL providers' competitive advantage. The focus is mainly on continuous improvement, development of new processes for their customers and the transfer of best practises. The process of best practise transfer is usually structured, involving frequent meetings exploring several kinds of best practise and carrying out assessments on how these practises can be applied to other operational units. The main strategies pursued by these type of 3PL providers are shared information technology (IT) systems and partnerships or collaborative relationships. Collaboration and robust IT systems are seen as an important tool in managing their supply chain outsourcing relationships. In terms of staff initiatives, innovation oriented 3PL providers tend have staff and executive training initiatives aimed at developing technical and managerial skills that their supply chain partners would not be able to achieve by themselves.

2.2.3 Third party logistics performance measurement

Several scholars have stressed the importance of performance and management systems in ensuring a successful supply chain partnership. These systems facilitate the controlling of the partners performance, identifying areas where there is need for collaborative improvement and eventually increasing the business and financial performance of the supply chain partners. (Jayaram and Tan, 2010; Van Hoek, 2001) Huo, Ye, and Zhao, (2015) have stated that 3PL provider's performance measurement and management usually revolve around the designing of key performance indicators (KPI's) and the development of effective measurement methodologies. In line with this, various performance metrics are in place

when looking at 3PL outsourcing relationships covering operational areas such as order fulfilment rates, delivery timeliness, picking accuracy, inventory turns and cost savings (Sanchez, Harris, and Mason, 2015). Although a significant amount of literature tend to focus on the internal performance measures of the 3PL providers, majority also encompass supply chain partners measures and targets such as service levels improvement and cost reduction (Rajesh, Pugazhendhi, Ganesh, Ducq, and Lenny, 2012).

In addition to performance measurement metrics, Huo et al., (2015) highlighted the use of performance contracts used to monitor and incentivise the performance of 3PL providers. The contract plays a vital role in the process of allocating risks and gains related to performance and the negotiations of payment schemes that help in aligning the goals of the 3PL providers and their supply chain clients. Performance based contracts (PBCs) fall under this category of performance measurement. PBCs emphasizes incentives explicitly on performance, they tie payment of 3PL providers to well specified performance targets. (Logan, 2000) This in practise is achieved through a design of incentive fee like bonus, which is calculated as a percentage of the total service fee. (Doerr, Lewis, and Eaton, 2005) It is worth noting that for PBCs to be successful there must be clearly set out performance metrics, targets and capabilities to conduct performance measurements. (Forslund, 2012)

3. VALUE AND VALUE CO-CREATION

The concept of value as a standalone term has been discussed in numerous literature but still suffers from a multitude of competing perspectives and theoretical groundings. The only consensus between these literature is that value is a source of competitive advantage (Payne and Holt, 2001). Value has been defined as the process where a trade-off happens between benefits and sacrifices. (Walter, Ritter and Gemunden, 2001, p. 366). On the other hand state that value co-creation is the process by which mutual value is expanded together (Ramaswamy, 2011, p. 195). Normann and Ramirez, (1993) have expounded further on this concept by stating that value can't be created by a single firm operating in isolation instead value creation takes place when there's interaction and collaboration between supply chain partners in the business ecosystem. This view of value creation is central to this study as we consider the interaction between supply chain partners is at best the centre of value creation and in addition collaborative and dialogic processes culminating to co-creation are present (Lee, Olson, and Trimi, 2012).

3.1 Value creation in supply chains

There is relational and co-created values, which are created in a collaborative relationship that lays emphasis on both monetary value and intangible issues within a supply chain (Moller, 2006). Collaboration within the supply chain is the key enabler of value creation. Many companies within the supply chain that have succeeded have identified the requirement for a long term shift in culture that includes formalizing new ways of interacting with their supply chain partners and also systematically reviewing current business processes and policies in order to identify those that inhibit collaboration and value creation and take corrective measures. (Hughes, 2008)

Innovation, sustainability, legality and resilience are some of the key drivers of value creation within the supply chain according to PwC (2013).The supply chain partners must be able to continuously develop these capabilities for value creation to be realised. Furthermore, transparency, open communication, trust, empathy and a win-win orientation

all form elements key to value creation within the supply chain. As seen in figure 6 below, Hughes (2008) states value can be created in numerous forms within the supply chain as long as the main catalyst, which is collaboration, is present. In these framework the potential forms of value top line revenue, bottom line savings or both. The forms of value contributing to top line revenue are seen at the top section of the framework highlighted in yellow filled boxes. The ones that enable bottom line savings are depicted at the bottom section of the framework in green colour filled boxes, lastly, the forms of value that affect both ends of the framework are in the middle section highlighted in peach filled box. The dimension of value creation within supply chain can be categorised according to efficiency, effectiveness and network functions (Hughes, 2008).

Expanding the scope of interaction is important in creating value between supply chain partners, this expansion can promote shared product development, business processes reshaping for improved efficiency, aligning and sharing technological roadmaps all require active and continuous involvement of the various parts of the company such as Research and development and logistics. Another important factor in value creation is the assessment of the long-term goals of the supply chain partners, this will enable identification of the optimal time and means of leveraging the partners capabilities. In summary, companies within the supply chain can realize value creation through; firstly, close integration of operations such as coordinated decision-making, information sharing, processes integration. Secondly, making shared investment financially, effort and time. Lastly, being keen of the degree of risks involved in the collaboration effort. (Hughes, 2008)

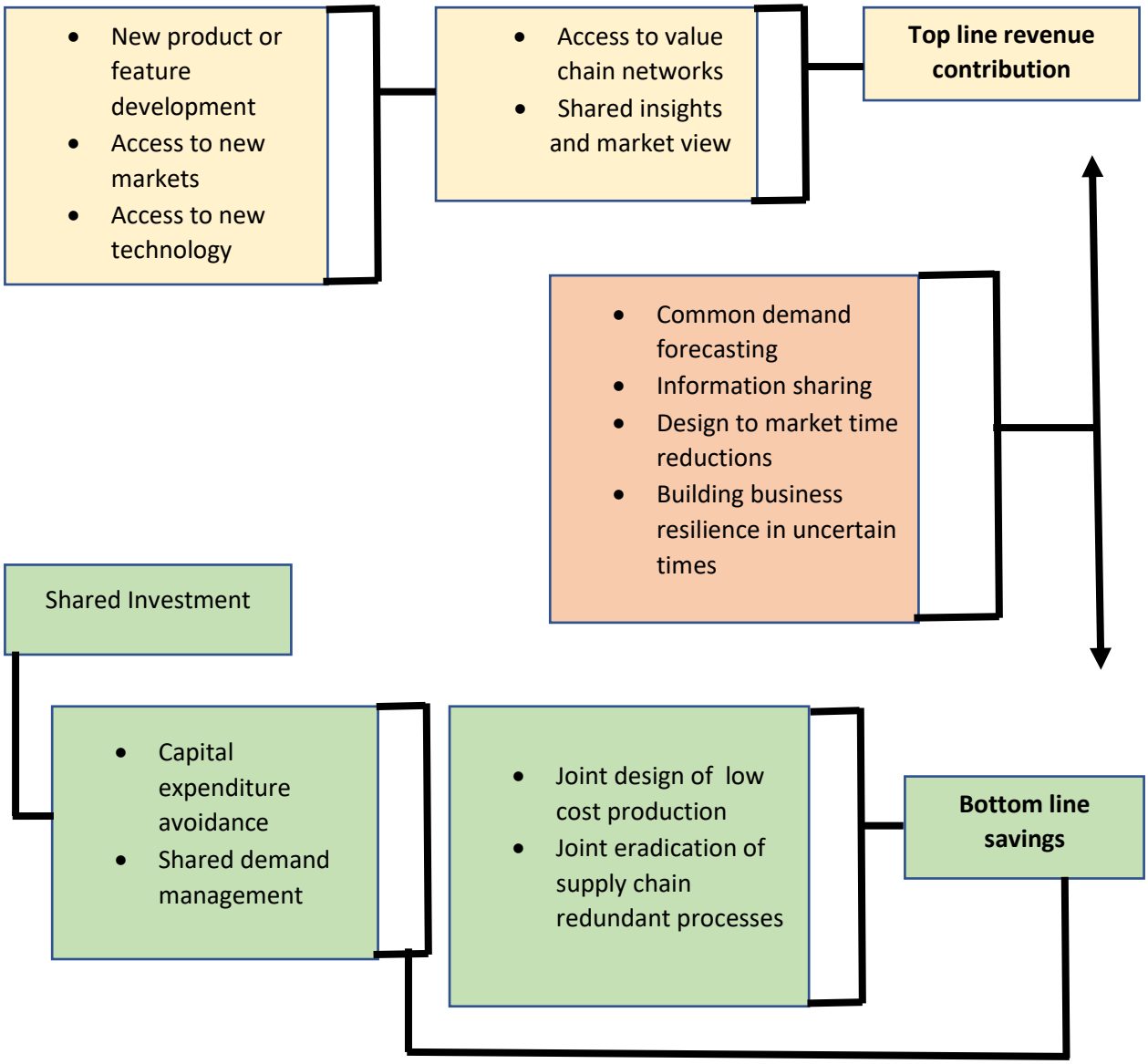

Figure 6. Potential forms of value creation in supply chain (modified from Hughes, 2008)

3.2 Value co-creation through 3PL's

In the contemporary complex global market environment, maintaining competitive advantage has become rather difficult and a determining factor of companies that succeed and those that fall by the wayside. One way of achieving and maintaining competitive advantage is through logistics. Logistics is a crucial factor in determining the success of supply chain operations as it is a unique subset of activities that span the boundaries between goods suppliers, service providers, and customers. Logistics plays a strategic role in a firm's

success of value creation. (Stank, Goldsby, Vickery and Savitskie, 2003) Vargo , Lusch, Archpru and He (2010) have stated that service dominant logic (SD-Logic) indicate that supply chain partners and customers co- create value by integrating resources and combing capabilities in their collaboration efforts. Logistics is a service characterized by service offerings that change frequently and provides a dynamic context that could potentially gain from S-D logic perspective. Effective use of logistics as a competitive lever requires the important analysis of the customer's understanding of the term service value in order to tailor deliver services that lead to value creation for the customer.

In the process of value co-creation, the resources and capabilities of the supply chain partners are merged which enables the development of new combinations of capabilities and resources which then results to development of something more valuable than the partners could have produced independently. (Sinkovics, Kuivalainen, and Roath, 2018). In the constellation of value creation, companies collaborating with 3PL providers contract their logistical operations and become value co-producing partners of the 3PL companies within the supply chain. 3PL supply chain partnerships facilitate the reduction of logistical operations and expenses that lie outside of the scope of the partners' core competences. In this way, 3PL logistical collaboration improves efficiency and profitability through provision of competitive differentiation through value co-creation. (Lambert et al., 1999) In addition, 3PL's have the ability to offer creative and innovative approaches for their supply chain partners hence increasing their distributive capabilities.

To understand how value co-creation occurs between 3PL's and their supply chain partners we can use the resource-based view (RBV) as the theoretical base for these partnerships and value co-creation theory as an approach for explaining the said partnerships. Value co-creation can be divided into two parts, co-production and value-in-use. (Ranjan and Read, 2016) Hugh and Mcloughlin (2012) state that co-production can be viewed as compiled of direct or indirect co-working with customers in areas such as, product development, co-production and co-promotion, Rajan and Read (2016) goes ahead to include knowledge sharing in this list of examples. In our case the customers are supply chain partners. On the other hand, value in use consists of value creating activities, which the supply chain partners

engage in through utilization of each other's resources without necessarily these partners being present. (Storbacka, Brodie, Böhmann, Maglio, and Nenonen, 2016, p. 3013) Both of these parts often occur in B2B environment. Using RBV and value co-creation theory as reference points this study further examines three activities, which fit the description of value creating activities, resource commitment, collaboration and innovation. Figure 7 below represents a conceptual model of these three activities. Resource commitment in the model is exhibited through information or/and asset sharing between the 3PL and its supply chain partner. Collaboration here depicts the 3PL working closely with its partners to create mutual benefiting outcomes for all parties. (Jap, 2001, p. 87) Lastly, innovation represents an orientation towards learning and the willingness to assimilate new ideas between the 3PL and its partners, in value co-creation all parties are part of the innovation process. This model engulfs the role collaboration plays as a mediator of 3PL's resource commitment and innovation as an important factor for the exploitation of 3PL's capabilities in the value creation ecosystem.

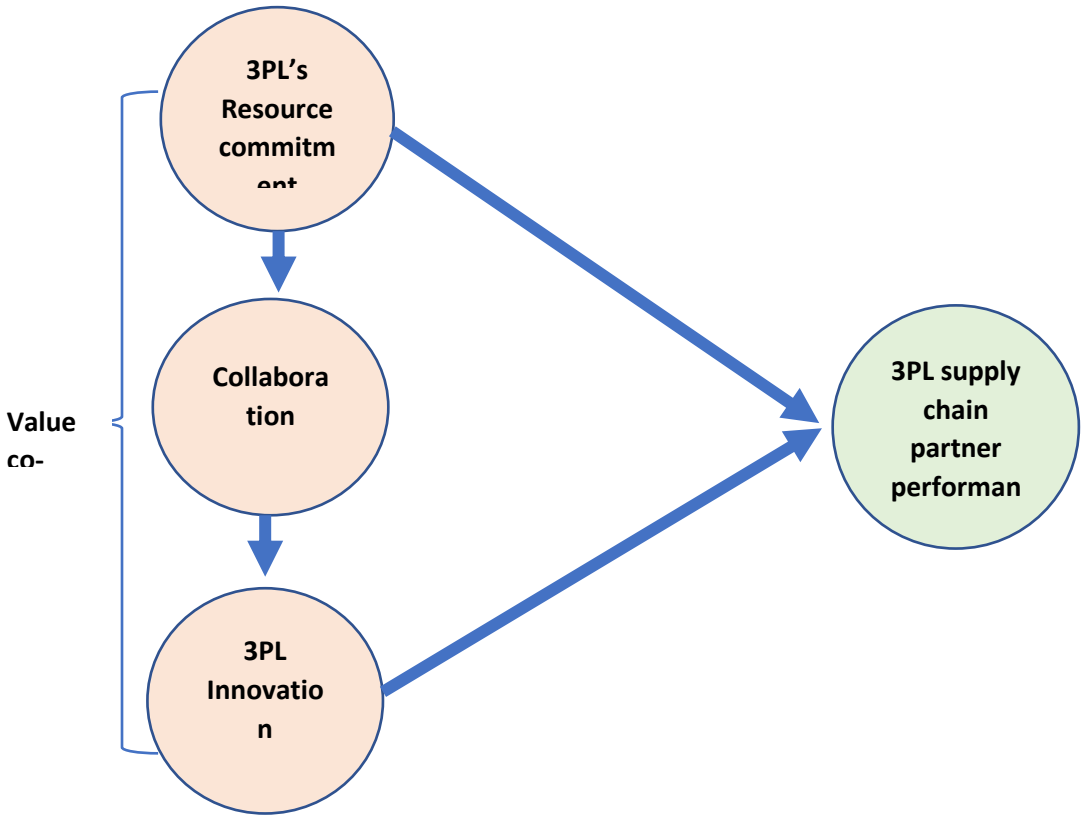

Figure 7. Conceptual model of 3PL collaboration-resource commitment- innovation relationship (adopted from Sinkovics et al., 2018)

3.2.1 3PL resource commitment and performance

Resource commitment is a vital factor in a value creation collaborative supply chain partnership. The various activities that occur between the 3PL and its supply chain partners in multiple engagement platforms form the resource integration patterns. (Storbacka et al. 2016) Wilson (1995) states that investing in resources such as human and capital specific to the partnership is a tangible indication of dedication towards the achievement of mutual interest. For value creation to occur the supply chain partners must be ready to intake their partner's input and make good use of it, resource integration is a seminal instrument in the process of value creation. (Storbacka et al. 2016)

3.2.2 3PL collaboration and innovation

Innovation is one of the elements that can enable value creation, innovation is the successful implementation of creative ideas within a firm, and these innovative ideas can be acquired through supply chain collaboration with partners such as 3PL providers. (Amabile, Conti, Coon, Lazenby, and Herron, 1996) Collaboration plays a key role in highlighting knowledge gaps between the supply chain partners, this shortcoming can be addressed through focused information sharing. Collaboration enables the partners to pool complementary strengths and resources. Saarijärvi, Kannan, and Kuusela, (2013) have indicated that areas such as new product and service development have given rise to value co-creation. Inputs from the supply chain partners can elevate co-production practises and create an enabling environment for innovation. A collaborative atmosphere of information sharing and learning between 3PL providers and their supply chain partners facilitates the core dimensions of value co-production, which are knowledge development and ultimately, creativity and innovation (Kohtamäki and Partanen, 2016). Service innovation occurs optimally where there is cooperation, hence 3PL collaboration is positively related to innovation

3.2.3 3PL Innovation and performance

Innovation reflects the ability of a 3PL to recognize and adopt resources, in order to successfully achieve the desired results for its value chain partners. In such the 3PL's innovation can serve as competitive advantage affecting positively its supply chain partner's performance. (Agarwal and Selen, 2009). An innovative 3PL enables value creation by enhancing its supply chain partner's operational skills and resource efficiency, which eventually contributes to operating level performance. In addition, during the collaboration process the 3PL is able to develop creative new ideas and practises that can differentiate the partners' strategic and operational approaches and lead to enhanced performance. These jointly developed processes and enhanced performance act as competitive advantage, which eventually acts as an avenue for generating higher profits. (Lorenzo and Lipparini, 1999) Collaboration acting as the core dimension in value co-creation, 3PL's innovation has positive influence on the performance of all the supply chain partners. 3PL providers play a complex yet vital mediating role in enabling value creation within the supply chain.

In addition to the above value creating activities, several scholars have identified four factors that a 3PL can create value through. These factors are economies of scale/scope, learning economies, ability to introduce innovation and flow management capabilities. These factors are discussed further in table 2 below as well as main references highlighted.

Table 2 Factors enabling value creation – multiple literature

Factors enabling value creation	Description	Main references
Economies of Scale (ES)	➢ Increased handled volumes can lead to reduction in prices of the product/services offered or increased productivity.	Prockl et al., (2012) Hertz and Alfredsson (2003)
Learning economies	➢ Service unit costs can be reduced through increase in knowledge. The reduction can be related to such factors as development in IT interfaces or expertise gained over time.	Prockl et al., (2012) Hertz and Alfredsson (2003) Alexander and Young (1996
Ability to introduce Innovation	➢ If the 3PL is actively engage in process re-engineering or assessment of innovative solutions then this can facilitate innovation	Prockl et al., (2012) Alexander and Young (1996)
Flow Management Capabilities (FMC)	➢ 3PL providers can develop FMC in higher conceptual logistics skills for planning and controlling logistics operations attained through higher skills and volumes.	Hertz and Alfredsson (2003) Persson and Virum (2001)

4. METHODOLOGY

This chapter presents the methodology used during the empirical part of the thesis. Areas such as how primary data was collected and analysed are highlighted too. This thesis employs qualitative research method with a single case study. Patton (2010) state that qualitative research applies naturalistic approach that seeks to comprehend phenomena in context-specific settings, this can be in a real world setting where the researcher does not try to manipulate the phenomenon of interest. A broad definition of qualitative research is any research whose findings are not based on statistical procedures or any other given methods of quantification (Strauss and Corbin, 1990). The findings of qualitative research are arrived at through the natural unfolding of the phenomenon of interest in a real world context (Patton, 2010). In qualitative research, case study is defined as an exploration of a contemporary phenomenon within its real life context bounded by a specific time and place, this needs various robust resources of evidence. (Creswell 1998 and Yin 2002, ref. Eriksson and Kovalainen, 2008, p. 115-136) In this study, the robust resources used for the case study are 3PL professionals. The case study gives room for the researcher to get rich tales and capture individual experiences while still sticking with the pre-planned constructs. (Eriksson and Kovalainen, 2008, p. 115-136)

4.1 Data collection method

The primary data collection method of this thesis was administered via semi-structured thematic interview. This gave the author a chance to tap into depth knowledge of the interviewees based on their vast industry experience covering the themes under research. Kahkonen, (2011) has mentioned that interviews enable the carried out research to be based on insightful background along with consequence and reason explanations of research questions, which cannot simply be answered by a positive or negative response, this in turn offers a chance for the researcher to gain a deeper understanding of the research topic. Questions contained in a semi-structured thematic interview are identical for all the interviewees and are answered openly. It is worth noting that in thematic interviews, the

themes of the interview are determined in advance but the form and order of the questions vary by interviewee (Nahid, 2003). The targeted interviewees were 3PL professionals who work in senior to intermediate management positions and are heavily involved in the themes covered by this study during the course of their duty. Using thematic interviews with these professionals allowed their experience to be discussed freely and highlight features of their experience in the 3PL industry that would otherwise been missed by ready –made alternatives. This also provided the interviewer a chance to ask more specific or follow up questions based on the answers of the interviewees. As earlier stated in the limitations section of this thesis, data was gathered from one single 3PL with significant market share, however the interviewees have varied work experience in other 3PL's which are much smaller therefore they bring important insight and comparison of how the themes under research vary or are similar in big and small sized 3PL providers. In the course of their career, the interviewees have worked with clients from various industries such as retail, FMCG etc. This also enriched the research content as the research themes could easily be investigated from the different viewpoints. Even though some of the interviewees worked on different contracts, they were all coordinated by the main 3PL provider, which meant harmonized operation structure and strategy in regards to the research themes.

4.2 Data Analysis

The data analysis on this study was done through content analysis as stated earlier on. Klenke, (2016) has described content analysis as a family of procedures, which are used for the study of contents of written or transcribed texts, which enables the researcher to include large amounts of textual information and systematically identify its properties such as frequencies of the most frequently used key words. The source of data could be from interviews, open-ended questions, observations, focus groups and any occurrence of communicative language such as books, articles, newspaper, interview transcripts and non-texted based sources such as TV segments, photography and materials captured from visual or performing arts. (Klenke, 2016)

To analyse text using content analysis, the empirical data is transformed to primary resource in which the text must be coded. To enable to summarize data further, the codes are broken

down into smaller manageable code categories. This process is referred to as case record and coding.(Eriksson and Kovalainen, 2008, p. 115-136) To ensure dependability, the interview recordings were transcribed shortly after the interviews were conducted, afterwards a construct and summary of each interview was done to identify various research themes. The data obtained was then arranged in coded themes stored in an excel spreadsheet. In addition, all the codes are further broken down to an essential structure containing the main research themes. The interviewees were coded based on their current roles and years of experience within third party logistics. Content analysis can be used inductively or deductively, the former involves the process of moving from specific to general and used in instances where there are no previous studies focusing on the phenomenon under research, while the latter moves from the general to specific. Klenke (2016) has gone further to observe that deductive content analysis is used to retest existing data in a new context, testing categories, concepts, models, or hypotheses, additionally, it is usually based on earlier work such as theories, models, mind maps, and literature reviews.

4.3 Validity and reliability

To be able to understand validity and reliability it is important to give definitions of these terms as given by numerous qualitative researchers from different perspectives. (Joppe, 2000 ref. Nahid, 2003) defines reliability as the extent to which research results are consistent over time. If the results of the study can be reproduced under similar methodology, then the research instrument is considered reliable. The main concept in this definition is the notion of replicability or repeatability of research results or observations.

On the other hand, validity encompasses the truthfulness of the research and if the research instrument has hit the bull's eye of the research object. Validity is generally determined through asking series of questions whose answers are sought after in the research of others (Joppe, 2000 ref. Nahid, 2003). Patton (2010) states that validity and reliability are two factors any qualitative researcher should pay attention to while in the process of designing a study, analysing results and judging the quality of the research study. To ensure validity and reliability examination of trustworthiness is critical in establishing good quality research work, Seale (1999) observes, "trustworthiness of a research report lies at the heart of issues

conventionally discussed as validity and reliability.” In this study, consistency was an important factor as it aimed for no change in setting and environment for the interviewees during the period of primary data collection, to ensure this happened the interviews were all carried out in a span of 3 weeks. A list of the interview questions was despatched in advance via Email to the interviewees to give them time to reflect on the themes covered and prepare their responses if need be.

5. EMPIRICAL RESEARCH

The results obtained from the interviews are discussed in this section of the thesis. The obtained data is categorized based on the three core themes of this thesis, which are supply chain collaboration, value creation and third party logistics. To better conduct the analysis, each interview question is discussed at length incorporating the responses and viewpoints of the various interviewees.

The empirical data was obtained through interviewing 3PL professionals working at one of the global leading third party logistics company. Due to the sensitive nature of the contract the interviewees were working in at the time of the interview, anonymity has been applied, this fact was communicated well in advance to the target interviewees while sending the invitation to participate in the interview. Putting together the pool of interviewees was relatively easy as I was an employee of the target company and interacted with the professionals on a regular basis. 13 interviewees were approached through word of mouth and email, based on their role and experience working in the 3PL industry.10 of the total approached were responsive and participated in the research. 5 out of the 10 interviewees work in separate contracts but under the same 3PL company, this enabled a more holistic and diverse approach to the research topic. Table 3 provides a list of the interviewees, their role and 3PL experience in years. The interviews were conducted between mid-January to end of January 2022. Some of the interviews were carried out via zoom calling platform due to geographical barrier. Most of the interviews were conducted face to face. The interviews took place in England hence the default language was English. The interviews lasted on average of 40 minutes and covered 16 questions covering the main themes of this study, which are supply chain collaboration, third party logistics, and value creation. A general theme was included too, in order to get background information of the interviewees. To be able to ease the process of data analysis and drawing up the conclusion, the interviews were audio recorded and later transcribed. The data then was categorised and analysed with the initial aim of finding patterns and differences in the interview responses.

Table 3. List of interviewees

Professional interviewee number	Current role title	3PL experience in years	3PL contract industries experience
1	Site Operations manager	18 years	• Aviation • Manufacturing • Fast moving consumer goods (FMCG)
2	Team leader	7 years	• Manufacturing • Retail
3	Process manager	15 years	• Aviation • Pharmaceutical
4	Process manager	25 years	• FMCG • Manufacturing • Retail
5	Governance manager	10 years	• Defence • Aviation • Government
6	Operations support manager	20 years	• Aviation • Pharmaceutical
7	Warehouse operations manger	11 years	• FMCG • Aviation
8	Continuous improvement manager	13 years	• Pharmaceutical • Construction • Aviation
9	Team leader	8 years	• Aviation • Retail
10	National contract logistics manager	29 years	• Aviation • Pharmaceutical • manufacturing

5.1 Empirical Findings

In this section the results of the interviews conducted in the course of collecting empirical data are discussed in more details.

5.1.1 Current relationship with supply chain partner

The interviewees all came to a unanimous response, which described the importance of the relationship with the supply chain partner. The relationship with the supply chain partner was described as crucial for both parties especially in the wake of the global pandemic, which elevated the importance of having close business relationships in order to tackle the challenges brought about by the pandemic with a unified front. Interviewee 2 mentioned, "*The current relationship with our partner is very close and aimed at continuous improvement which means there is constant knowledge sharing around innovative projects and a long-term relationship mind-set based on mutual development. For instance, last year we signed a 10-year contract extension with our key supply chain partner and within this period, we will undertake major logistics projects together with each party committing resources such as finances and human capital into these shared projects*." Another aspect that came to light that highly dictates the nature of the relationship is the contract in place between the supply chain partners. Interviewees 5 stated that, "*the contract in place paves way for how deep or shallow our relationship will be. The statement of work highlights the business areas, which we will work together for mutual development. The nature of the contract is also highly influenced by the kind of people especially top management involved in running the contract operations, because these are the people who have the power to initiate and push for more close working relationship*."

Even though interviewee 6 stated that the current relationship is healthy, there was still room for improvement in certain aspects of the relationship. This sentiment was echoed by interviewee 1 who noted that given the huge market dominance of the supply chain partners in their respective industries tend to pose a challenge as they are used to thriving on their own terms hence making compromises in their operations to better enhance the relationship

is often an uphill task. Interviewee 4 and 8 noted the relationship with the supply chain partner was on a good level, it has been elevated even further by the changes brought about by the pandemic. Interviewee 4 stated, Covid-19 pandemic has posed significant challenges for global supply chains, with introduction of multiple national lockdowns and travel restrictions this slowed down or even temporarily halted the flow of raw materials and finished goods. These disruptions in the supply chain exposed some vulnerabilities and in some cases magnified supply chain problems that were already in existence. Therefore close supply chain relationships have enjoyed the spot light and the crucial role they play in maintaining smooth movements of the cogs that rotate the wheels of supply chain.

5.1.2 Reaching out to a collaborative relationship

Out of the total number of interviewees, 6 of them expressed that they have in the past aimed for a collaborative relationship within their department. The rest did not aim for a collaborative relationship based on various factors. Interviewee 9 stated that collaboration requires a change of mindset. This view is evident in interviewee's 7 reason for lack of aiming for a more collaborative relationship due to having spent much of their career practising zero sum business relationship, old habits die hard. Interviewee 9 elaborates that, "*the global logistics market is changing rapidly and we cannot continue doing things in the old fashioned way. To keep up with the change 3PL providers must change their mindset and truly view their customers as supply chain partners and collaboration has to happen in as much contractual areas as possible. 3PL collaboration with key supply chain partners is vital for product and business development*." Collaborative relationships are as well influenced by the motivation and capability of the parties involved as denoted by interviewee 7

Interviewee 2 gave a detailed account of how they strive for a more collaborative relationship with the supply chain partner. In their areas of responsibility, they have come up with structured processes to enhance collaboration. These processes include regular departmental meetings with the client. Interviewee 2 describe the inter-departmental processes as follows, "we hold quarterly meeting with the supply chain partner where we have key personnel from both sides participating. The goal is to conduct an analysis of current situation in terms of operations and puts our heads together to forge the way forward and identify common future

goals. From a 3PL perspective we compile data and conduct analysis of market conditions and possible future trends, the client also shares also shares vital information about their industry hence this creates an environment suitable for creating a deep collaborative relationship." Interview 2 mentioned that even though these quarterly meetings may seem very basic at first glance, they are a vital catalyst in establishing long term and strategic collaborative relationship. The main point of having collaborative relationship is for mutual development and in these meetings development ideas crop up which are then analysed from both ends and eventually the most viable ideas based on common agreement are then escalated to senior management for approval.

The development ideas fostered in these collaborative meetings may range from a just do it (JDI) which is something that does not really need any escalation, to ideas, which are transformed into short or long-term projects. Among the 4 interviewees who didn't aim for a collaborative relationship two of them sited the nature of the contract or industry their supply chain partner was in limited the development of a collaborative relationship. One of the interviewees stated that a collaborative relationship best works in industries where the market is ongoing constant changes, and it would be risky to go on a lone venture. Therefore, the need for collaboration, but in cases of industries like military logistics and defence the process of collaboration is very bureaucratic and characterised by immense data and information protection, making it very hard to have a two-way knowledge-sharing avenue, which is fundamental in collaborative relationship. Therefore, 3PL providers who have their supply chain partners in these sort of industries just stick to the bare minimum in terms of supply chain collaboration.

All the interviewees who had initiated collaborative efforts with their supply chain partners came to a unanimous decision that cost reduction in supply chain processes was the biggest result achieved. The cost reductions were attained mainly through the process of continuous improvement. Interviewee 5 who mainly deals with production logistics stated that, "*through collaboration we have improved significantly our just in time delivery parts required in the production line. This is very important in our operations as it forms a vital Key performance indicator in our contract with the client. Achieving this result ensures the seamless running*

of our client's production processes, and whenever there is a hick up proper communication channels are in place to ensure both sides are aware of the problem and talk the issue together." Interviewee 4 mentioned that to hasten the process of collaboration it is important for 3PL providers to have in place collaboration structures, in as much levels as possible in their operations with supply chain partners. These structures should be void of complexity, and proper communication channels, which outline the key benefits around collaboration and the aim of the collaborative structures, should be to build and maintain long-term relationship with the supply chain partner as well as formulating development ideas that will bring most mutual value.

5.1.3 Crucial elements in collaborative relationship

Transparency and trust were among the main elements identified by multiple interviewees as the most important elements in a collaborative relationship. Significant amount of interviewees also mentioned information sharing, while interviewee 5 identified respect as also an important element in collaboration. Interviewee 5 emphasised that with respect other elements of collaboration like open and transparent communication are improve, "*Respect between the supply chain partners opens the door for open and transparent communication. When the relationship is experiencing challenges, these challenges can be discussed openly even in situations where the topic of discussion might be sensitive to the other partner. It's in discussing this uncomfortable topics and challenges that depends the collaboration, otherwise if the opposite is the case then that partnership is doomed to fail."* Interviewee 10 mentioned feedback as an element key in transparent communication. Stating that, "*the supply chain partners should be in a position to openly give feedback to each other, this feedback can be aimed at areas of improvement or praise for job well done,"*

Interviewee 1 and 3 who work on the same site and contract highlighted information sharing as a key element for a successful collaborative relationship. Interviewee 1 stated, "*A collaborative relationship should be about sharing information as possible which allows knowledge transfer between the supply chain partners which ultimately incubates innovation and more efforts towards product and processes development*." These sentiments were echoed by interviewee 3, "as much knowledge as possible should be shared, this creates a

mindset of developing together as well as facing challenges together. Interviewee 10 mentioned early involvement in process development as another element for a successful collaborative relationship. The interviewee mentioned the need for the supply partners to have key personnel from both sides working hand in hand during development of new processes, to avoid situations where one party develops a process, which necessarily is not compatible with the operations of the other party. It is paramount to cooperate in such developments to ensure success and efficient utilization of resources.

Interviewee 6 talked about the process of building trust, stating that, "*we are aware of the fact that regardless how important information sharing is, not all information can be shared at the beginning of the supply chain collaboration relationship. Trust building can commence from understanding each other's company culture, this then lays a firm foundation on which a collaborative relationship can be established upon. Trust building comes with putting in a lot of effort in developing together, facing challenges together and avoiding the blame game when things go south."* Interviewee 8 who is keen on continuous improvement stated that a structured measurement process as important element of collaboration. The measurement processes should cover all areas under collaboration. This measurement enables the supply chain partners to have a clear view of the areas where the collaboration is working and areas where development is needed. These measurements should be categorized based on the frequency they are conducted with the most crucial measurements conducted on a daily basis and analysed by the supply chain partners together ideally on a monthly basis. Interviewee 8 expressed the need of having these measurement process automated, *"it would be ideal to have these measurement processes automated, it would even be better if this automation worked on a real-time basis. This would enhance the decision making process and of course reduce the level of manual work, which reduces human error creating room for more accurate and reliable information."*

Interviewee 10 who has vast experience in 3PL collaboration mentioned an element, which is often overlooked but very important, expectation management. Interviewee 10 stated that at the beginning of the collaborative relationship is crucial for the parties involved to set out and go through expectations and these expectations should be reviewed throughout the

relationship. The expectations should not only cover the operational level but also on management level as well. When all the parties involved have, a clear picture of what is expected of them then the collaborative relationship will run smoothly without any major glitches. Managing expectations also ensures that all the stakeholders read from the same page, creating an avenue to establish long-term collaborative relationship. These expectations should be communicated, and accessed in all levels of the organisation. Often it is the case where only top management has access to this information.

5.1.4 Encountered SCC challenges

Collaboration might seem like a straightforward concept on paper but when the rubber hits the road then the challenges of this process start to manifest. The 6 interviewees who had mentioned that they have aimed for a collaborative relationship gave quite similar response regarding the challenges they have faced. A majority of the interviewees picked out stakeholder engagement has one of the biggest challenge. If the stakeholders do not really comprehend the importance of the collaboration, or what they stand to gain from these efforts then that possess a very huge challenge. Interviewee 1 stated, "*It's very important to have all stakeholders on all levels actively engaged in the collaboration process, this will built a feeling of commitment and they will be more willing to get involved. In order to overcome this challenge clear and transparent communication channels must be established reaching out to all relevant stakeholders."*

Interviewee 4 mentioned the need for organizational internal alignment with collaboration processes being perused. Roles and responsibilities should be clearly marked so that all the relevant stakeholders are aware of what is expected of them to achieve overall success of the collaboration. There should be a clear internal framework to aid the collaboration process. Interviewee 4 stated, "*When we started our collaborative relationship process we didn't have a clear framework of how the different departments were going to get involved. The practicalities were ambiguous, this lead to some sort of confusion and communication breakdown between our supply chain partner and us. We overcame this challenge by having a round table meeting with our supply chain partner and laid down proper framework so that the involved people knew clearly what their role and scope of responsibility was."*

Interviewee 10 and 6 both highlighted incompatibility in company cultures as a major challenge to collaboration. Company culture can highly influence the company strategy and collaboration may not be entirely compatible with the strategies in place. Interviewee 10 added that before embarking on any collaboration relationship a deep analysis of the supply chain partners organization cultures must be put under a microscope. Organizational cultures tend to even be more important than a country culture. Without a proper compatibility analysis of the supply chain partners' organizational cultures, this will pave way for a challenging time ahead and the ultimate failure of the relationship. Interviewee 6 stated that they did not face this challenge because due diligence was done on their side before initiating the collaborative relationship which turned out very successful.

All the interviewees picked out lack of long-term commitment has a huge challenge. Interviewee 5 stated, "*Collaboration is based on long term commitment, in situation where one of the supply chain partner is hesitant to commit in the long run then this greatly undermines the success of the relationship*." A collaborative relationship will initially start on the basic level of contractual agreement then grows more as the supply chain partner's dive deep into their cooperation. When one of the supply chain partners is not showing enough commitment to long-term collaboration then the relationship stagnates on contractual agreement level, just serving the basic needs of the agreement. This lack of long-term commitment can also be a factor of the type of contract initially signed between the supply chain partners. Interviewee 3 mentioned, "*This challenge is rooted in having traditional and outdated contracts which do not serve the existing contemporary global market which is characterised by constant changes and developments. The contracts should be highly flexible to accommodate the changes brought by shifting market trends*." Interviewee 10 who also cited the type of contract as a major constraint to developing collaborative relationship supported this statement. "*The contract in place need to consider that in the logistics industry, the market grows suddenly and might exert pressure on businesses, therefore the supply chain partners should be willing to be adoptive to such situations which can be reflected in the kind of contract in place*." stated interviewee 10. Interviewee 3 mentioned that when it comes to long-term commitment the supply chain partners should be ready to invest heavily in the collaborative relationship. This can prove

to be a challenge especially in the 3PL industry where investment run into millions of dollars therefore commitment from the supply chain partners is of outmost importance.

5.1.5 3PL providers and SCC

All the interviewees agreed that being in a collaborative relationship within the supply chain is very beneficial for 3PL providers. The interviewees expressed various ways 3PL providers can better place themselves in order to exploit collaboration within the supply chain. Interviewee 6 stated that as much as cost is a major factor in 3PL collaboration it is not the main defining factor that enables 3PL to fully exploit SCC opportunities. Interviewee 6 stated, "*Many 3PL providers get occupied with costing issues when engaging in a collaborative relationship and forget other aspects. For a 3PL provider to get the best of a supply chain collaboration they must consider their suitability with the supply chain partner's organization culture and operations."* As interviewee 10 observed, some of the 3PL providers the interviewee has worked for had to make adjustments in their organisation culture to align with their supply chain partners. Interviewee 10 said that it is important to have aligned values, ethics, and responsibilities. If the supply chain partners do not a cultural alignment then their collaboration efforts will be futile.

Interviewee 4 observed 3PL providers need to have the ability to offer customized solutions to their supply chain partners. Due to the nature of global competitiveness in the 3PL industry, to ensure a successful relationship within the supply chain, 3PL provides should be in a position resource-wise to personalize their offerings to cater to their various supply chain partners. This translates to making significant investment in their company infrastructure. This echoes interviewee 1's statement, "*to fully exploit opportunities within the supply chain collaboration arrangement, 3PL providers have to invest heavily in their capabilities and resources to be better placed in the market as the 3PL of choice for multiple supply chain partners."* On the backdrop of investing in capabilities, numerous interviewees mentioned investing heavily on modern IT systems. It is important that the 3PL providers have in place an IT system that can allow seamless exchange of information and flow of data between themselves and their supply chain partners. The IT system was mentioned as a critical factor in enabling visibility among the supply chain partners. Interviewee 5 stated, *"A robust IT*

system is part and parcel of a company's infrastructure, IT compatibility should be what 3PL providers invest in first and foremost before seeking supply chain collaboration. IT system dictate the responsiveness of 3PL providers when called to action."

Personnel capabilities was another issue brought forward by interviewee 6 who stated that, the 3PL has to invest in equipping its personnel with the necessary skills to undertake the various challenges that come with supply chain collaborative relationships. Interviewee 8 noted that in the contemporary global supply chains continuous improvement has taken centre stage to combat the high costs within the industry. A 3PL seeking to enter into a SCC relationship should have in place continuous improvement structures that are well functioning internally. It is very important to have measurement metrics of their continuous improvements initiatives that should be document on a regular. These can be used when seeking established supply chain partners as a selling point for the 3PL provider.

5.1.6 Interpretation of value

The interviewees' interpretation of value was highly influenced by their scope of responsibility. However, they all agreed that value is created at various levels of the organization in various forms. Value can be interpreted differently in everyday organizational activities, interviewee 7 whose operations fall entirely within the warehouse, value interpretation revolved around efficient processes in inventory management, on time deliveries, improved safety among others. Interviewee 1 was mainly concerned with maintaining budgets, which is highly important in operation management. Interviewee 10 highlighted that value should not be interpreted only on the basis of cost reduction. Interviewee 10 stated that, *"Value should not only be viewed in the lenses of decreasing all-inclusive costs of production or operations, rather, it should be interpreted also on the basis of any extra activities conducted with the supply chain partner, of which a premium can be charged."* Interviewee 3 stated that value in his area of operation could be interpreted as simplifying processes that in turn make it easier to manage any projects, expedite problem identification and solving as well as promoting process innovation

Interviewee 6 said that value is all about customer satisfaction, stating that, "*Customers are the backbone of every business venture, within the 3PL industry value stems from increased customer satisfaction and engagement. An organization should aim to satisfy their customer need as quickly as possible. Shortening this value chain increases the competitive advantage of a firm."* On the back of this view interviewee 3 stated that value means eliminating the mismatch between what customers want and what the supply chain partners have available to provide. Integration of demand based processes and supply based ones can ensure value creation and this can primarily be based on knowledge sharing. When the supply chain partners decide to invest in an integrated demand and supply chain processes then customer satisfaction is easily achieved through shared and application of real time customer demands and supply constraints. This ensures prioritization and fulfilment of customer needs.

Interviewee 8 interpreted value based on how efficient the supply chain collaborative relationship is at identifying and eliminating wastes activities. Within the 3PL industry waste elimination should be focused in processes such as those involving receiving, storing, and distributing inputs, activities which transform inputs to outputs which are used to satisfy customer needs and activities which involving delivering products to customers as well as processes involving maintenance of the products after selling them to customers. When as much waste is eliminated from this processes then a 3PL provider can highly achieve value.

5.1.7 Value creation aim

Interviewee 10, 6, and 4 had a similar outlook at the main aim of value creation as achieving more together than what we could do by ourselves. Interviewee 6 stated, "*Value creation should occur mutually to ensure the establishment of a long-tern collaborative relation with the supply chain partners. In cases where the contrary is the case, then collaboration is not being implemented on a satisfactory level."* Interviewee 1 stated the aim of value creation is to enhance critical areas of the business such as, customer satisfaction, better quality, improved and efficient production processes and when all these have been achieved, the collaborating supply chain partners achieve overall cost reductions in their operations.

Cost reduction in supply chain process driven by continuous improvement especially in technology was top ranked aim gained by 3PL providers in collaborative supply chain relationship via value creation. Majority of the interviewees agreed that when initiating a collaborative relationship cost reduction was the major focus, if this was achieved then value gained from the relationship was perceived to be great. Interviewee 1 said that performance improvement in their core operations was the most significant value gained through supply chain collaboration. Interviewee 1 stated that, "*we have experienced significant improvement in performance of our core processes like in time delivery to production lines and inventory management in the main warehouses. These core processes are of great priority to us because they directly influence our relationship with our supply chain partner. It is important for us and our partners that we have all processes running smoothly, and with outmost performance."* Interviewee 6 highlighted that the kind of value they aim for in a supply chain collaborative relationship is sustained growth and profitability in the long-term. This can only be achieved when there is a strong supply chain collaboration that offers avenues for development of a continuous stream of high quality products and services that cater to the unique requirements of the supply chain partners and eventually to the end consumer.

Interviewee 4 said that the value they aim to create is developing the ability to mobilise resources and effectively match them with existing customer needs and opportunities, to accomplish this then they invest heavily on the capabilities of the personnel as well as driving up the employee motivation to seek more collaboration areas with the supply chain partners. Interviewee 8 mentioned that product and process innovation is the kind of value they seek out of supply chin collaboration. In the information age that companies are operating in, value can be created using innovative ways of doing business and product offerings. This was echoed by interviewee 2 who said they aim for leveraging emerging technologies by applying them in their existing processes in efforts to drive up efficiency levels, which in turn yield value for all the supply chain partners. Interviewee 3 mentioned that what they aim for in value creation is the establishment of a win-win partnership with the supply chain partners. This win-win type of relationship is a great incubation for extensive value creation whose benefits the employees, customers and end user consumers, enjoy. The value that comes from win-win partnership elevate a firm's standing in the global market place, this

has impact on their competitive advantage. Additionally, interviewee 5 said that having a sustained competitive advantage over other established 3PL providers is the main value they aim to create. This sustained competitive advantage is achieved through access to resources from supply chain partners. These resources are used in business operations pertaining to innovation, cooperation and knowledge transfer.

5.1.8 Important elements in value creation

All the interviewees agreed that collaboration is the single most important element in value creation and should be aimed at as many levels of the organization as possible. As such, collaboration does not happen in isolation, there are important catalyst that propel collaboration success. Interviewee 7 and 3 stated trust as the most important element in value creation, with trust it is easy to establish deep collaborative relationship, which in turns forms a great foundation for value creation. Interviewee 3 said, "*Trust is a significant element in value creation, with trust supply chain partners are able to develop together through initiatives such as information sharing which facilitates knowledge transfer."* Interview 10 added that with trust among the supply chain partners formulation of common strategies is easily achieved which enables the supply chain partners to gain competitive advantage within their respective markets. Trust building process is slow but should be kept steady by continuous collaborative efforts by the supply chain partners, stated interviewee 6.

In line with trust, interviewee 1 highlighted transparency as a very important element in value creation and establishing a meaningful collaborative relationship with supply chain partners. To enable value creation, interviewee 1 stated that it is all about investing in visibility within the supply chain alongside the supply chain partners. Interviewee 1 stated, "*Visibility enables the supply chain partners to exchange more timely data that is facilitated by supply chain connectivity. The data flow between the supply chain partners equips the partners with capabilities of collaborating and creating value more effectively, as well as resolving any problems within a short period.*" Interviewee 8 mentioned that data availability of accurate data plays an important role in value creation, stating, "*A collaborative supply chain relationship that is driven by accurate and timely data greatly improves supply chain operations while minimizing any chances of disruptions. This is possible because visibility*

within the supply chain enables the supply chain partners to recognize any problems well in advance and take the necessary counter measures, hence, eliminating any chance of these issues erupting into full blown and expensive crises."

According to interviewee 8, the key to achieving accurate data is for the supply chain partners to invest in a robust IT system. Having an IT system that allows for multiparty networks gives a complete visibility of the supply network. Establishing this kind of IT system eliminates the presence of siloed data and blind spots that come with current complicated point-to-point integration. Having such a multiparty network is a great foundation for real time data sharing and gives the supply chain partners full visibility of the supply chain on an end-to-end basis, additionally, this too is a critical element in ensuring oversight and accountability. Interviewee 10 sated that an important element in value creation is developing a total understanding of the various business aspects that are necessary for value co-creation. Interviewee 10 said, "*When you are engaged in a supply chain collaboration relationship, to create value, it is important to not only master operations optimisation but rather develop total business understanding in business areas such as talent management and data management."* Interviewee 6 supported this opinion by stating that in their supply chain relations they strive in understanding the value proposition of their supply chain partners and the reasons why it is important for them.

5.1.9 Value measurement metrics

Interviewee 1 observed that as the global market becomes more competitive and customers becoming more demanding for more value added services from 3PL providers, it becomes important for the 3PL providers to be able to measure the value they are creating alongside their supply chain partners in a manner that is meaningful and easily comprehendible by their supply chain partners. Failure to measure the value they are creating results in 3PL eroding their profitability as they may incur excess costs creating this value of which they may not be adequately compensated by their supply chain partner. According to interviewee 10 who has vast experience in third party logistics, value measurement is not well elaborated, as it should be. Many 3PL providers are not measuring and selling their value. It should be upon the 3PL to measure and translate the economic benefits of the value created to their

customer, in this case supply chain partners. When 3PL providers are able to translate this value economically then their supply chain partners will better understand the value being created and are more willing to pay any premiums the 3PL providers quotes. Interview 10 stated that, *"Customers, in our case our supply chain partners should be informed on a regular basis the value being created by their relationship with the 3PL provider, it's very easy that logistical services value can easily be ignored by top management especially in cases where the services are performing very well."* For this reason, it is paramount that 3PL providers are in a position to measure and report value created internally and externally within the supply chain.

Interviewee 10 and 1 had similar approach in measuring value. They brought about the metric of customer satisfaction. Interviewee 1 stated that, "*the management of 3PL should understand the crucial role customer satisfaction plays as it enables the 3PL management to align their supply chain services to their supply chain partner needs. Customer satisfaction is highly influenced by agreed service levels between the supply chain partners."* When 3PL providers create value, which enable higher service levels, this has direct influence on the supply chain partner's financial performance through reduced costs and higher profitability. On the flip side, these higher service levels mean increased costs for the 3PL. Hence, the need to measure this value created, and report it so as to justify any premium charged. Interviewee 10 reiterated this point by saying, while there are numerous ways to measure and report customer satisfaction, 3PL providers should aim to measure their customer satisfaction in relation to their main competitors or industry leads. Doing this can give them an avenue to spot opportunities to implement differentiation strategy.

Interviewee 10 went ahead to mention that 3PL providers can also use total cost analysis to measure and report the value they create for their supply chain partners. Interviewee 10 stated, "Total *cost analysis should aim at minimizing the overall costs of all operations covered under the service agreement with the supply chain partner. It is important to measure the total costs of s logistical services such as warehousing, distribution, inventory management, and information systems. The underpinning principle of this measurement metric is to cover of logistical costs rather than trying to reduce individual logistical*

components. Otherwise, a reduction of cost in one facet may have a negative correlation to another." Interviewee 1 stated that, in any given organization, logistical costs make up one of the major costs of doing business. Having a supply chain collaborative relationship with a 3PL enables firms to minimize their portion of logistical assets. Interviewee 1 also mentioned, *"Total cost analysis should illustrate to the supply chain partner the financial benefits associated with the 3PL's high service levels. Instead of mentioning to the supply chain partner that the 3PL provider compared to its competitors has better on time delivery, better fill rates and shorter lead times, 3PL management should strive to show how this superior performance translates in affecting inventory investment."* Interviewee 10 however noted that the ultimate goal should not be just reducing the costs of a single supply chain partner but rather aim at reducing the total costs of the supply chain. Interviewee 10 also went ahead to caution that using total cost analysis to measure value ignores any revenue implications.

5.1.10 Barriers inhibiting value creation

Within the supply chain context, value creation is highly dependent on collaboration as the single most important catalyst. It was not surprising to see the factors identified by the interviewees as being barriers to value creation were very closely related to those associated with collaboration. The top three barriers identified were, organizational culture compatibility, Trust and IT system suitability. Interviewees who identified organizational culture as a barrier pointed out to the challenges faced due to gaps in such things as reporting structures and team membership. These challenges greatly affected how the people in the partner organizations interacted with each other to create value together. When there is lack of compatibility between the supply chain partners then collaboration efforts are highly undermined which negatively affects value creation. The issue of compatibility also arose with IT systems, the interviewees mentioned that due to the complexity of the various activities performed by 3PL and their supply chain partners, proper flow of information should be ensured to facilitate value creation via knowledge transfer and innovation. Trust was indicated as the cement that keeps the bricks of collaboration together which enables a conducive environment for value creation. Table 3 below summarises the various responses from the interviewees.

Table 3. Barriers to value creation in supply chain collaboration

Interviewee	Barrier identified
• **Interviewee 1, 4 6, & 10**	• Organizational culture compatibility
• **Interviewee 1,3,4, & 10**	• Trust
• **All Interviewees**	• IT systems compatibility & Technological readiness
• **Interviewee 5,2, & 8**	• Resource and responsibilities sharing
• **Interviewee 1, 3,4 & 6**	• Top management support
• **Interviewee 2,3,6, & 5**	• Flexibility
• **Interviewee 2,5, & 9**	• Training

5.1.11 Value creation, SCC, and competitive advantage

The interviewees all agreed that for a 3PL company to gain competitive advantage, value creation through supply chain collaboration is a key ingredient. Interviewee 10 stated that the most successful firms in any given industry are those that have come to the realization that the sole aim of a firm should be to create value for themselves and various stakeholders. Interviewee 6 supported this viewpoint by saying, "*value creation and achieving competitive advantage are inextricably inter linked. The sooner any organisation makes its main purpose to create value for its customers, employees and investor's then competitive advantage in the market place is easily achieved."* Interviewee 6 added that to achieve a sustained competitive advantage value must be created for all the three groups simultaneously. The primary focus of any 3PL is to create value for its customers, in many cases 3PL customers tend to be other businesses within the supply chain. Interviewee 1 mentioned that value creation through supply chain collaboration could generate competitive advantage only when the supply chain partners invest heavily in their personnel. Interviewee 1 said, "*To achieved sustained competitive advantage, value creation efforts must be heavily directed*

towards the company employees by ensuring the right recruitment channels are in place, proper development and training programs and the employees are properly rewarded. This investing in employees is a great catalyst for creating value within the supply chain."

Interviewee 3 stated that competitive advantage is all about the customers perceiving the firm as outstanding compared to the competitors, when translated into financial sense this means a firm being able to generate profits in excess of the industry average. Interviewee 3 stated, "*For a firm like 3PL provider to emerge as an industry leader, it should focus on creating value for the supply chain partners via continuous collaborative efforts that lead to process and product innovations. The 3PL should also be always aware of their unique supply chain partner needs and respond to the needs with speed and precision."* Interviewee 3 supported the ideas of interviewee's 1 and 10 by adding that the value creation gotten from continuous process and product innovation can only be achieved if the supply chain partners tap on the talent, energy and commitment of their employees. Interviewee 8 and 4 both agreed on the fact that value creation through collaboration enhances competitive advantage but only when supply chain partners strive to sustain a long-term collaboration. Supply chain collaboration encourages long-term commitment in investments and other resources, which positively affects competitive advantage.

Interviewee 8 emphasised on investment on intangible assets especially in the contemporary global market. To be able to invest in intangible items firms must do away with traditional means of measurement which largely focus on financial aspects. Traditional means of reporting such as measuring how much a firm has reported in earnings annually goes against efforts of value creation through intangible assets such as employees training and development, because every scent used towards the training annual company earnings are eroded. Therefore, the key to achieving value creation within the supply chain is not to define the firm's goals so narrowly based mainly of financial status. Interviewee 10 acknowledged that a firm should be well aware of their competition because just like profitability, competition is a very important aspect of the company that should be monitored and managed successfully. However, it is very important for the firm not to be diverted from their main goal of value creation in order to gain competitive advantage. Interviewee 10

stated that," *when a firm goes into a collaborative partnership, beating the competition should not be made the goal, but it should be viewed as being part of the business environment that the firms operate and just as an element of the context the firm looks to create value"*

6. DISCUSSION AND CONCLUSION

In this final chapter of this thesis, discussions are made around the main themes of the study and empirical findings are compared against the theoretical background. The main and supporting research question are also answered in this chapter and to conclude future research avenues that can be explored are highlighted.

6.1 Discussion of results and answering research question

The main aim of this section is to mirror the main themes of the research to existing literature that has been used in the theoretical background of this study. The empirical findings were in large extent in agreement with existing literature on supply chain collaboration, third party logistics and supply chain value creation. A summary of the discussion, that focused on comparison of theoretical background to the empirical findings can be found in table 4 at the end of this section.

According to the literature review supply chain collaboration is based on the notion of supply chain integration where supply chain partners work together in pulling resources, sharing responsibilities, setting common goals and are continuously involved in processes of information sharing pertaining collective planning, management, execution, and performance measurement. (Barrat and Oliviera, 2001; Bowersox, 2000) The empirical findings pointed out that third party logistics providers engaged in supply chain collaboration were largely aiming for cost reduction in their supply chain processes, which is achieved through establishment of long-term working relationships with their supply chain partners. This is in line with what Matopoulos et al. 2007 indicated to be one of the key benefits of supply chain collaboration. Cost reduction is achieved when efficiency levels are greatly improved. Efficiency as stated by Mentzer and Konrad (1991) measures how well an organization utilizes its resources, the empirical findings support this notion, as the interviewees stated that supply chain collaboration aims at increasing efficiency in the operational processes, which positively influence profitability. In addition, Matopoulos et al. 2007 stated that Information sharing is one of the key element in establishing collaborative

relationship. The empirical findings identified ways in which the supply chain partners were involved in information sharing. This involved having structured intra-departmental meetings quarterly, in these meetings key personnel from the supply chain partners have a round table meeting and share vital information that enable the partners to make informed decisions which contribute to the mutual development of the partners. This collaborative approach on information sharing is one of the main catalyst of creating and maintaining long-term supply chain relations.

Various scholars have identified crucial elements that ensure the success of a supply chain collaborative relationship. According to the framework drawn up by Matopoulos et al. 2007 elements such as Trust, dependency, power relations, risks and reward sharing are all important elements that contribute to establishing and maintaining supply chain relationships. Along the same thinking line, the supply chain partners must come to a decision on the depth of collaboration based on a distinction between strategic, tactical or operational level of collaboration. (Fawcett and Magnan 2002; Stevens 1989). The empirical finding support this sentiments made by the scholars. Respect, which can be assigned to the element of managing power and dependency, was mentioned during the interview process as a key element in supply chain collaboration. Respect among the supply chain partners meant that there is room for open and transparent communication especially in respect to giving feedback on sensitive matters. This aspect of respect and open communication is also dictated by the dependency levels between the partners, Barratt and Oliveira (2001) stated that if there is too much dependency on one party then this shifts the power balance giving an upper hand to one of the supply chain partners. The observation by Barratt and Oliveira (2001) are confirmed in the empirical findings that addressed the issue of level of capabilities between the supply chain partners as an important factor to consider while seeking to engage in a supply chain collaborative relationship.

Dwyer, Schurr, and Oh (1987) identified risk of failure as a major deterrent to supply chain collaboration. However, this was not the case in the empirical findings. The empirical findings pointed to lack of stakeholder engagement as one of the major barriers to supply chain collaboration. However, the complexities that come with managing supply chain

collaborations as highlighted by Matopoulos et al. (2007) were also a concern identified by the empirical findings especially in cases where there is lack of compatibility in organizational culture.

The theoretical background identifies various aspects that enable a third party logistics provider to be valuable within a supply chain collaboration. Bolumole (2003) stated that high levels of operational flexibility is an important trait, this is echoed in the empirical findings, interviewees stated that a valuable 3PL provider within the supply chain should be able to offer customized solutions to their supply chain partners. Closely related to the concept of flexibility, interviewees stated that to achieve the flexibility needed within the supply chain, the 3PL provider must be ready to invest heavily especially in resource based capabilities. This is seen in the theoretical background where Prockl et al. (2012) emphasizes on building capabilities especially in the areas of technology and training systems. Utilization of continuous improvement structures was featured in the theoretical background as a valuable tool that 3PL providers can utilize to make themselves more valuable within the supply chain. Jayaram and Tan (2010) stated in their literature that these structure facilitate in identifying areas of collaboration that require improvement which ultimately increases business standing financially through better performance. This was in line with what interviwee 8 mentioned about having structured continuous improvement structures to increase efficiency in collaboration processes.

As Payne and Holt (2001) mentioned, value as a stand-alone concept is subject to various interpretation, this was the case in the empirical findings when the interviewees were asked to explain their interpretation of value. The empirical findings saw numerous interpretation of the concept of value which was highly influenced by the area of operations the interviewee was based. Regardless of the multitude of interpretation, there was consensus in the fact that collaboration was a key enabler of value creation as it was not possible for it to occur in isolation. Normann and Ramirez, (1993) stated that value cannot be created by a single firm operating in isolation instead value is created through collaboration and interaction of supply chain partners in the business ecosystem. Payne and Holt (2001) stated that the ultimate aim for value creation is achieving competitive advantage. This was reflected in the empirical

findings. The interviewees had similar outlook as to why they were aiming to create value, which was mainly driven from the highly competitive logistics market they were operating in, hence they needed to differentiate themselves by offering something more than just cost reduction to their supply chain partners. Value creation elements identified by PwC (2013) of innovation, sustainability, legality, and resilience were captured in the empirical findings. Innovation and sustainability was especially clear in the empirical findings when the interviewees indicated the importance of modern IT systems that facilitate exchange of data between the supply chain partners thereby enabling knowledge transfer and innovation

Matopoulos et al. (2007) identified some of the barriers that inhibit value creation to be closely related to those that inhibit collaboration as well. These barriers include issues such as company culture incompatibility, and complexity in management especially where there is varied IT system. The empirical findings pointed out to incompatibility in organisational structure that is highly influenced by the nature of the company culture in place. The interviewees also pointed out the importance of having IT systems that have equal measure of capabilities. One thing that the interviewees highlighted that was not seen in the theoretical part is Trust. In the empirical findings, trust or lack of trust was seen to be one of the major issues that prevent value creation. To counter this barrier, the interviewees mentioned of the structures in place to allow open communication and visibility in all processes in order to build trust between the supply chain partners. Value creation, collaboration and competitive advantage are all intertwined and support each other. The empirical findings supported the notion that was identified in the theoretical background. Just as Lorenzo and Lipparini, (1999) mentioned, making collaboration the core dimension in value creation for customers to increase performance and competitive advantage. It was pointed out in the empirical findings the importance of creating value for the customer who is the supply chain partner that trickles down to the end consumer, which then intern affects the competitive advantage of the supply chain partners positively.

Table 4. Comparison of theoretical background to the empirical findings

Theoretical background	Empirical findings
• Supply chain collaboration is mainly based on the notion of partners pulling resources together, sharing responsibilities, and setting common goals. (Barrat and Oliviera, 2001; Bowersox, 2000)	• Supply chain collaboration with 3PL providers was mainly based around cost reduction in supply chain processes through establishment of long-term working relationship.
• One of the key benefits of supply chain collaboration is increased efficiency that drive down operational costs. (Matopoulos et al. 2007)	• 3PL supply chain collaboration increasing efficiency in the operational processes, which positively influence profitability.
• Information sharing is a crucial element in establishing collaborative relationship within a supply chain. (Matopoulos et al. 2007)	• In the case company, there was a structured intra-departmental meetings held quarterly, in these meetings vital information is shared among the partners that enable them to make informed decisions which contribute to mutual development
• Elements crucial to establishing and maintaining supply chain relationships are identified as trust, dependency, power relations, risks and reward sharing. (Matopoulos et al. 2007)	• Respect, which can be associated to power and dependency emerged as a crucial element in establishing and maintaining 3PL supply chain relationships. In order to avoid dependency investment in capabilities is paramount.
• Risk of failure identified as the main deterrent to engage in supply chain collaboration. (Dwyer, Schurr, and Oh ,1987)	• Lack of stakeholder engagement identified as the main barrier to supply chain collaboration

Complexities in managing supply chain relationships also identified as a barrier to establishing supply chain collaboration. (Matopoulos et al. 2007)	Complexities in managing the supply chain relationships also identified as a barrier to 3PL supply chain collaboration – especially where there is lack of compatibility in organizational culture. Trust was an additional element identified which was not in theoretical background
• High levels of operational flexibility are crucial in making a 3PL provider valuable within a supply chain collaborative relationship. (Bolumole 2003)	• A valuable 3PL provider should be able to offer customized solutions to their supply chain partners. This can be achieved through heavy investment in resource-based capabilities.
• Value as a stand-alone term is prone to various interpretation, but collaboration is its main enabler. (Payne and Holt 2001)	• The interviewees had a multitude of interpretation of the concept of value that was highly influenced by their area of operation with the logistics contract. But they all agreed collaboration is the main catalyst to value creation
• The ultimate aim of value creation is to gain competitive advantage and creating value for the end customers. (Payne and Holt 2001)	• The aim of value creation was also to gain competitive advantage in a highly competitive global logistics market. This was done through differentiation by offering something more than just cost reduction to their supply chain partners and end consumers

6.2 Answering the research questions

This study had one main research question and three supporting questions. To be in a position to answer these questions there was a need to be acquainted with the available literature that concerns the themes surrounding the research question. The research questions revolved around three themes, namely, supply chain collaboration, third party logistics and supply chain value creation. The empirical data collection was also segregated according to these research themes that ensured collection of adequate data to answer the research questions. A combination of analysing empirical data collected through interviewing professionals and existing literature, the research questions were answered.

To be able to get a comprehensive answer to the main research question, the supporting research questions are answered after the main research question.

How can supply chain collaboration enhance value creation?

It is very evident that the concepts of supply chain collaboration and value creation are highly intertwined. The greatest catalyst within a supply chain for value creation is collaboration. Forming collaborative relationship with supply chain partners is the key to value creation in today's highly competitive marketplace. As indicated by numerous scholars in the theoretical background as well as empirical findings, competition has shifted from individual firms to among supply chains. The more value a supply chain can create as a whole the more competitive advantage is achieved. In creating value, the supply chain partners come to an agreement to work together in integrating their capabilities in order to work towards common goals. This collaboration ensures supply chain partners have access to certain resources that enable them to achieve high levels of performance than they would have working alone. Through supply chain, collaboration value is created through knowledge sharing, joint development of products and processes as well as joint innovative efforts. Value creation within a supply chain can be perceived from various perspective such as securing strategic positions within the global marketplace, development of cutting edge technology which

drives efficiency levels high and improvement of financial standing through increased profitability for the supply chain partners.

To be able to create value through supply chain collaboration the supply chain partners must be ready to create a winning team based on a complete change of traditional mindset. This change of mindset in doing business is facilitated by elements such as open and transparent communication, trust, respect which is highly related to the concept of power balance, information sharing, joint investment in resources, performance and expectation management. Supply chain partners should be very much aware that as much as collaboration is excellent for value creation it could lead to complete failure if proper collaboration structures are not in place. According to the theoretical background and empirical findings one major obstacle that can cause collaboration and value, creation to fail is incompatibility of organizational cultures between the supply chain partners. Organizational culture is very crucial and plays an even important role in collaboration than a country culture, therefore, supply chain partners should be aware of this fact and be ready to mitigate its occurrence.

The supporting research questions are answered in the section below.

What are the key elements of supply chain collaboration?

Supply chain collaboration occurs when several supply chain partners decide to work together in achieving common goals and assisting each other achieve individuals' goals as well. The driving forces of supply chain collaboration are seen to be gaining strategic position within a global supply chain, produce superior performance through access of each other's resources, and improvement of financial standing. Some of the key elements that make up supply chain collaboration include, sharing risks and rewards, managing trust, managing dependence and power relations. Other crucial elements identified were information sharing techniques as well as careful selection of the areas to cover in the collaboration. Looking at the theoretical background and empirical findings, some of the

elements that gained prominence in both areas were, information sharing, trust, and open communication. Information sharing takes the centre stage, as this is a key enabler of other elements. When there is a follow of information between the supply chain partners this strengthens the bonds of the collaboration as trust building is elevated, when trust is established, then the supply chain partners are in a position to effectively have open communication even in matters that are deemed sensitive.

What is the value achieved through 3PL supply chain collaboration?

3PL providers play a strategic role within a supply chain in the quest for value creation. In today's global competitive market, logistics is a crucial factor in determining the success of a supply chain. As highlighted in the theoretical part of this paper, competition within the contemporary marketplace has shifted from among firms to among supply chains. 3PL supply chain collaboration creates the foundation for gaining high competitive advantage of the supply chain as a whole. The greatest value achieved through 3PL supply chain collaboration is integration of resources and capabilities that produce superior performance of the entire supply chain. Collaboration with 3PL providers helps to co-create value in ways such as increased in efficiency. This efficiency is achieved when the supply chain partners can redirect their resources to their co-competences. An increase in operational flexibility is another value achieved through 3PL collaboration. The supply chain partners are able to use 3PL providers to convert their fixed logistical costs to variable ones eliminating the need to lock capital in logistical related assets. The 3PL providers bring with them to the supply chain collaboration relationship logistical human resource competence, operational expertise and capabilities that greatly create value for all the supply chain partners involved in the collaboration. The end consumers of the supply chain benefit from this collaboration through reduced lead times and higher level of quality in the services and products that come from the supply chain.

What channels can 3PL providers' utilize to enhance supply chain collaboration?

Based on the theoretical background and empirical findings of this study, it is evident the crucial role 3PL providers play within a supply chain collaborative relationship. It is not lost on us that the 3PL industry itself experiences stiff competition and the top performing 3PL providers get a chance to form formidable supply chain collaborative relationships with their supply chain partners. For a 3PL provider to place itself in a position where it can fully exploit opportunities and benefits of supply chain collaboration it must take certain steps. One of the avenues identified is heavy investment in capabilities and resources. This was mentioned in the theoretical part of the study, afterwards affirmed by the responses of the interviewees. Investment in modern IT system was mentioned as one of the main avenues 3PL providers can utilize to enhance supply chain collaboration. A 3PL provider that has a modern and effective IT system will be able to seamless integrate its system to that of their supply chain partners facilitating the transfer of data and knowledge between the partners that in turn breeds innovation. Another avenue identified is 3PL providers focusing on specific market segments, for example, Aerospace or Pharmaceuticals. This focus enables the 3PL providers to specialize in these segments gaining competitive advantage through achievement of critical mass and cost structures that makes them a suitable supply chain partner for collaboration. Closely linked to capabilities investment is having a hunger for innovation. In today's global market, there is constant change especially in the technological front. 3PL providers that are always involved in continuous improvement efforts are able to develop new and improved processes for their supply chain partners. On the backdrop of innovation, 3PL providers should look into having well laid performance measurement structures to capture all their activities within the areas of collaboration. These performance measurements not only show how well the partnership is but also help in identifying areas that are in need of collaborative improvement that may lead to establishing deeper ties of collaboration within the supply chain.

In conclusion, it is not possible to create value in isolation, firms need to work together and have clear collaborative structures that outline the depth and width of their collaboration. The supply chain partners should be aware of the various avenues they can utilize to harness

each other's capabilities and create as much value as possible. Long-term commitment to collaborative relationship is paramount to ensure value creation. Integration of IT systems to allow for seamless information sharing and knowledge transfer should be invested upon. When proper collaborative structures are in place value can be created at various interaction areas within the supply chain at all levels of the organization.

6.3 Conclusion

The aim of this thesis was to study supply chain collaboration with third party logistics providers with the ultimate aim of value creation. The study explores the concept of supply chain collaboration to gain more understanding of its benefits, challenges, and the elements that facilitate successful supply chain collaboration. Within a supply chain, various actors can form collaborative relationships, in this study we focus on third party logistics providers as key supply chain partners who can help in supply chain value creation. Value creation within a supply chain can take many forms and cannot occur in isolation. This study explores the various forms value can be created collaborating with third party logistics providers. The study highlights the various elements that enable value creation between third party logistics providers and their supply chain partners, as well as looking into the barriers that inhibit value creation within the same context.

After conducting literature review of secondary data and conducting empirical research, some key findings came to light. Supply chain collaboration should not be confused for mere cooperation as it goes way beyond just setting common goals to encompassing a long-term commitment of reaching similar objectives, through heavy investment in mutual capabilities, information sharing, knowledge transfer, collective planning, management and execution of operational excellence standards, as well as sharing responsibilities and risks. The fundamental concept of supply chain collaboration is that it enables an organization to achieve higher performance and value creation than it would operating on its own.

In summary, for supply chain collaboration to be successful certain elements of collaboration need to be considered carefully as they dictate the success or failure of the collaborative

relationship. These elements can be divided into two categories, design and governance of the collaboration and establishing and maintain supply chain relationship. Under design and governance of the collaboration, the supply chain partners need to consider things like choosing the right partner. As seen from the empirical findings having the right supply chain partner with whom there is compatibility of organizational cultures is the single most important element. In addition, after choosing the right partner, the supply chain partners need to decide on which activities they would like to collaborate on and this outlines the width of the collaboration, lastly, the partners need to agree on the level at which collaboration will occur, this can be at operational, tactical or strategic levels, these levels outline the collaboration depth. The second category of establishing and maintaining collaborative relationships is mainly composed of less tangible but equally important elements that should not be ignored. These include things such as mutuality of benefits, trust, risk sharing and one of the most overlooked element is power and dependence. The supply chain partners should not have an extensive gap in power relations as this may give one party upper hand over the other and have a negative influence on the collaboration.

Another finding from this study shows that there are numerous benefits gotten from having a third party logistics provider as a supply chain partner. The third party logistics providers enable their supply chain partners to free up resources that would have otherwise been locked in logistical fixed assets. The supply chain partners of third party logistics providers also benefit from the logistical expertise of their partners and are able to cut costs and increase their levels of efficiency, which contributes to value creation. Third party logistics providers bring with them innovation processes due to their capabilities and expertise which positively influences their supply chain partners performance and profitability. As mentioned in the empirical findings, it is crucial that third party logistics providers invest heavily in their capabilities especially regarding Information systems in order to integrate their systems with the supply chain partners and facilitate the seamless flow of information and knowledge for value creation.

According to the findings of this study, value creation was seen as a direct contributor to gaining competitive advantage. In today's global market place characterized by stiff

competition, demanding customers and ever changing market trends, to survive, companies must always strive to create value for their supply chain partners, which trickles down to the end consumers. To rip the full benefits of value creation, it must occur at all levels of the organization. To achieve this, supply chain partners must invest in having their internal stakeholder engaged in the process of value creation. Particularly their employees, they need to understand why it is important to create value and why they stand to benefit from this process. Value creation was seen to occur where there was effective governance structures. Supply chain partners must come up with structures that facilitate value creation through shared responsibilities and performance measurement metrics. Some of the key drivers mentioned that drive value creation were innovation, resilience and legality, these drivers must always be developed by the supply chain partners for value creation to be realised. As mentioned earlier on, collaboration is the most important catalyst for value creation and the elements that encompass collaboration do also to value creation. Elements of open communication, transparency, trust, empathy and a mind-set of creating long-term win-win relationship are all very crucial to value creation.

The Covid-19 pandemic has come to underpin a fact that was there but not emphasized enough, that in today's world collaboration is the key to success. The pandemic highlighted this fact clearly as more and more companies came to work together to try to mitigate the challenges brought about by the global pandemic. No company can create value in isolation and this has been evident in recent past. Supply chains need to be flexible and resilient which can be achieved through supply chain collaboration. Value can be interpreted in different forms but the only consensus is that through collaboration value creation is possible and plays a significant role in elevating the competitive advantage of supply chain partners.

6.4 Avenues for further research

Suggestion for further research would be in line with in-depth exploration of how to implement collaborative supply chain relationships. Through theoretical studies, we have an understanding what makes up a good collaborative relationship and all the elements that ensure a successful collaborative relationship, success stories have been highlighted in the empirical findings of supply chain collaboration. However, during my literature review, there seems to be very few studies that focus on the implementation process given the complexity of collaboration in today's global marketplace. The biggest challenge highlighted tat hinder collaboration and value creation is alignment of organizational culture. As we have read in various studies, organizational culture can be altered to fit changing times, this would be a good insight when exploring collaboration implementation as it would give a leeway to companies struck by this challenge and are not able to engage in collaboration. With a proper insight into a systematic implementation process of collaboration within the supply chain, many companies will be able to venture into supply chain collaboration with confidence and equipped with the proper tools to create value.

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APPENDICES

Appendix 1. Interview questions

GENERAL QUESTIONS

a. What is your current role and department?
b. How long have you been in the current role?
c. How long have you been with the current company?
d. How many contracts have you worked in within this period?
e. Background in years within the 3PL industry?

SUPPLY CHAIN COLLABORATION

a. How would you describe the current relationship with the customer (manufacturer)?
b. Have you aimed for a collaborative relationship, and what results have you gotten?
c. What do you think are the most important elements of a collaborative relationship?
d. What kind of challenges have you had in relation to supply chain collaboration (SCC), and how did you overcome them?
e. What makes a good 3PL partner within the SCC?

3PL VALUE CREATION

a. What does value mean to you in relation to 3PL activities and collaboration?
b. What kind of value do you aim or would like to create through 3PL SCC?
c. What elements in the partnership/relationship with the supply chain partner do you think are most important for enhancing value creation?
d. What value can 3PL providers gain collaborating with supply chain partners? Has your company realised this value via collaboration?
e. Do you see any barriers in terms of value creation via SCC?
f. Do you think value creation through SCC has an impact on a company's competitive advantage? Please explain further if Yes.