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## Article

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## Article

# Creating Valuable Relationships with Third-Party Logistics (3PL) Providers: A Multiple-Case Study

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**Abstract:** *Background:* Logistics service outsourcing in recent years has influenced the evolution of third-party logistics (3PL) providers across the globe. The study explored the evolving services of 3PLs and relational factors that influence the relationship with their customers. *Methods:* Qualitative research and multiple case studies from four different industries were used. Semi-structured interviews were adopted. *Results:* The findings show that aside from logistics and warehousing the customer expects 3PLs to create value through more decision-making responsibilities, such as managing the customer's relationship with 3PLs, and customised services that will make them competitive. Furthermore, the results showed that to achieve relationship performance, trust must be collaborative from the start, which increases information sharing and leads to an improved relationship performance. *Conclusions:* Consistent performance increases commitments from both partners. Implications, limitations and future research suggestions are provided.

**Keywords:** third-party logistics; supply chain; value creation; business relationships; decision making; case study



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## 1. Introduction

Global trade, increased competition, and the desire for improved logistics efficiency have necessitated firms to re-examine their competitive strategies [1]. One business process that has become critical in modern business strategy is logistics operations. The increasing awareness by firms that a competitive advantage does not only come from product offerings but also through the upgrade of the delivery system has been critical in the evolution of logistics from its old supporting role to a more strategic role in recent years [2,3]. Logistics outsourcing has become important globally, and one initiative that has been efficient at allowing firms to focus on their core competencies is the outsourcing of logistics services to third-party logistics providers (3PLs) [4]. The significant asset requirements of logistics activities have given 3PLs the potential to save substantial costs from their clients, hence making cost-savings the primary motivation for logistics outsourcing [5,6].

Before the 1980s, firms started outsourcing transportation and warehousing to logistics providers at arm's length mostly for operational cost benefits. However, the services that have been outsourced to 3PLs in the past two decades have broadened beyond transportation and warehousing due to the increased demand for advanced supply chain solutions and value-added services from customers [7,8]. The logistics industry has been through three distinct phases since then [2,9]: Phase I dates to the 1980s with the emergence of logistics service providers offering transportation and warehousing solutions. Phase II commenced in the early 1990s when most networked players managing parcels and express services, such as DHL, leveraged their global networks and expedited their freight experience to enter the industry. Phase III started in the late 1990s and continues today, when many players have entered the industry from professional areas such as information

technology (IT) and management consultancy. In the last decade, logistics service providers face increased challenges. The recent COVID-19 pandemic has placed enormous pressures on logistics providers to offer last-mile home deliveries, especially during lockdown periods [10,11]; transportation workers are deemed as key-workers and often face shortages, as experienced in the travel, maritime and freight industries [12]; geopolitical tensions and wars place enormous pressure on providing effective and efficient logistics services, having already impacting the price of these services [13].

The demand for global networks and advanced IT has led to an unprecedented growth in 3PL services in recent years as these logistics providers try to take advantage of increased global opportunities [7]. According to various reports, the global 3PL market industry gained over USD 1T in revenue, growing strongly due to e-commerce rising, especially after the COVID-19 pandemic [2]. 3PLs have therefore invested in IT solutions, systems and processes, specialised offerings, and innovations to create a competitive edge [3,5,14].

Relationship management has been central to the success of 3PL-client relationships as they play two critical roles in managing their customer relationships: focusing on efficient supply chain solutions and managing their innovative services [15]. For 3PLs, this has made them assume a leadership role in supply chains. The relationship allows 3PLs and their clients to create synergies through collaboration, allowing their network partners to exploit their core competencies and enjoy greater benefits [16]. Such relationship developments require the co-utilization of resources, the creation of specific knowledge, innovation and the sharing of critical information within the relationship [17].

Many relational factors influence the relationship development within the supply chain [6]. Trust plays a significant role in the development of these synergies [18]. Trust improves collaboration among partners and increases information sharing through the interface of systems that enhance value creation, leading to increased commitments [4,19]. Effective collaboration in the dyadic relationship is made possible through the sharing of large amounts of information within the supply chain as this provides visibility and improves planning and distribution [20–22]. The degree of interdependence between the 3PL and the client determines the source of power within the relationship [23]. Inter-firm power is omnipresent in everyday business and has the potential to halt the maturity of the relationship by preventing the win-win integration process if not managed properly [18,24].

All these elements are critical in assessing the collaborative relationship that delivers the most value in the supply chain. It has, therefore, become more important to collaborate with partners to leverage their networks and core competencies if the firm wants to compete globally. As a result, companies now outsource their non-core activities to 3PLs for value services which ensure efficiency and cost benefits. However, there is the risk of trust and power which influences how much sensitive information is shared within the relationship. How the shared information leads to innovations and how the relationship develops relative to trust are critical issues that need to be considered for a successful relationship. Hence, this study aims to fill this gap by conducting multiple case studies of managers of 3PLs and customer relationships. For this research, customers, clients, or shippers will be used interchangeably to mean users of 3PL.

Earlier studies have tried to assess the evolving activities of 3PL but have had difficulty settling on a consistent definition of how their activities have developed over time in creating value for customers in the modern world [6,25]. The literature reviews have attempted to categorise value-creating activities, but they are still challenged as logistics providers try to continuously invest in technology to enhance and distinguish their services for customers. It is however critical that logistics providers form a collaborative relationship with their clients to enable them to offer personalised services that will make them competitive, and this relationship must be built on trust to allow mutual benefits [26]. Handfield and Bechtel [27] found that specific asset investment by the supplier leads to an increase in customer trust in the relationship. This, according to the results demonstrates the supplier's commitment to the relationship and therefore establishes the basis of a more harmonious relationship. Though they argue that contractual understanding can

facilitate the development of trust, they did not assess how the relationship unfolds and how trust influences the relationship to be more collaborative. Therefore, they advised future researchers to focus on how the buyer–supplier relationship unfolds relative to the level of trust. Yeung, Zhou [7] also encouraged future researchers to consider providing more insights on how the 3PL–client relationships develop.

Fawcett, Wallin [28] started their study on the premise of how managers and companies use their IT investment to drive better supply chain performance. Their study found that a company's willingness to share information leads to improved performance. However, they assert that IT investments are not the panacea to all competitive and performance problems. As investments in information-sharing technologies, culture and collaboration continue to evolve, Fawcett et al. (2011) advised that future research should focus on how information in dynamic collaboration is used to increase competitive dimensions, such as innovations, aside from productivity and customer satisfaction.

As discussed above, these authors have highlighted the need for further research and analysis. This study, therefore, desires to respond to this appeal and help to answer the following research questions:

- How 3PL providers support their customers in value creation;
- How 3PL–client relationships develop and the relative level of trust;
- How does information sharing in a dyadic collaboration help in supply chain innovations?

The first research question seeks to explore how the changing demands of customers influence the kind of services provided by 3PLs. It will, therefore, help us to understand how these services contribute to creating value for customers in recent years. 3PLs can best support their customers when they understand the expectations of the customer. For this reason, the second research question aims to assess how these relationships develop and how trust influences the relationship. The third research question will, therefore, explore how information sharing within the relationship helps in increasing innovation for the customer.

This study uncovers some important findings that have significant contributions. First, it shows that customers expect a real value creation from the 3PLs beyond cost savings, for example, improved visibility and customised products and services. However, these customer expectations for value creation give 3PLs the opportunity to become the catalyst and orchestrator of the customer's supply chain by providing strategic value to the customer's bottom line. Second, this study finds that there are three types of 3PL relationship: transactional, tactical, and strategic. A key role in defining 3PL relationships is trust: trust must be collaborative from the beginning of the relationship to allow customers to share critical information with the 3PL, invest in shared infrastructure, and commit themselves to the relationship. Information sharing is the significant factor in supply chain success in creating innovative services within the relationship. Customer dependability to the 3PL depends on how much revenue they generate for the specific 3PL. Third, the study demonstrates that outsourced services vary across companies, depending on the industry, i.e., dynamic industries demand quick reactions to the market and need a flexible supply chain, thus, they depend more on 3PLs for value creation apart from their transportation and warehousing functions.

The study is organised as follows: The second section presents the extensive literature review that was conducted. The first part assesses the service evolution of 3PLs. The 3PL–client relationship development and relational factors are then analysed. The third section focuses on the methodology that was used for the research. The fourth section presents the findings of the study. The fifth and last section illustrates the discussion, contribution, limitations, and conclusions of the study.

## 2. Literature Review

The first section assesses activities outsourced to 3PLs and their evolution using the global top 20 3PLs. Next, the study will focus on the relationships and relational factors influencing the 3PL–client relationship.

### 2.1. Services of 3PL Providers

The evolution of logistics outsourcing to external companies that were experienced in logistics management and the need for real-time information saw the emergence of 3PLs in the 1980s. The concept has been interpreted differently by different researchers since its inception [6], and the increase in complexities and diversity in 3PL activities has made it difficult for a consistent definition in the literature, considering the fast evolution [25]. The concept of 3PL was traditionally defined to mean the ‘arm’s length’ short-term outsourcing of transportation and warehousing activities [29]. Given its traditional activities, it was defined to involve the use of outside companies that were experienced in logistics to perform all aspects of the logistics activities or a part of the logistics process [30]. Zacharia, Sanders [1] affirm this notion that the historical core activities of 3PLs were to provide logistics services which were mostly transportation and warehousing. 3PLs, therefore, became the intermediaries between their client and their forwarders. 3PLs engaged in transportation activities such as air, ocean, road, and rail freight which involved both intermodal and multimodal transport. The warehousing solution includes dedicated and shared warehouses, cross-docking, as well as distribution across the globe. 3PLs differ from 4PLs in that they own their own means and assets, which requires a huge capital investment; as a result, 3PLs depend on creating value for their customers in order to achieve a desired return on their investment.

The increase in demand for advanced logistics and services, such as globalisation, reduced lead times, customised services, and management activities [15] has resulted in the change from the typical traditional activities to more advanced services from 3PLs. Concerning this study, 3PL is defined as activities that are carried out by logistics service providers on behalf of their customers and consist of the management and execution of transportation, warehousing, inventory, information related activities such as tracking and tracing, and other value-added activities, such as sub-assembly, the installation of products, product design and supply chain management [9]. To distinguish the activities of 3PL from the traditional ‘arm’s length’, van Laarhoven, Berglund [29] posit that the contract should include some level of managerial as well as analytical or design activities, and the length of the cooperation should be at least one year. The 3PL activities have been transformed to be more like process services than the traditional function-based logistics, and they are aimed at the integration and control of part of, or the entire process for the customer [31]. Through this integration, 3PLs form an alliance with their clients and the partnerships are mostly long term. The main benefits of outsourcing to 3PL are the economies of scale and scope, efficient operations through technology, an increased range of services, research and design, network benefits, faster learning, the fast implementation of new systems and restructuring of supply chains, reduced capital investment and smoother production [15]. Logistics outsourcing in recent times has, therefore, become part of the corporate strategy [3], and activities in a firm that has no resources or capability should be outsourced to 3PL to avoid capital investment in fixed assets and capabilities [7]. This allows firms to focus on their core competence and exploit new business opportunities.

Because of this, 3PL providers are investing in contemporary IT solutions, logistics optimisation and improving process quality, in addition to commercial offerings and exclusive innovations to be competitive. van Laarhoven, Berglund [29] asserted that transportation and warehousing are the most outsourced industries, despite increasing outsourcing demand for information-based and other value-added activities. It does suggest that, although shippers are much concerned about transportation and warehousing, they increasingly expect the 3PL to handle more value-added services to their offerings to ensure they are competitive.

### 2.2. 3PL-Client Relationship Development

With increased global competition, companies search for supply chain partners with unique complementary capabilities to create a unique collaborative relationship that allows them to generate unique processes and product innovation [18]. Logistics outsourcing has



gravitated toward the mutual benefit and long-term relationships that come with partners, and partners have therefore become part of the corporate strategy [7]. 3PL providers have most recently taken a more strategic role in the supply chain of their clients [32] and this has influenced the relationships and coordination in the 3PL-client partnership. Zacharia, Sanders [1] describe 3PLs as the modern orchestrators of supply chains that create and sustain a competitive advantage for their clients. They identified four main categories of relationships that shippers develop with 3PL providers:

- Non-strategic transactions: This involves the outsourcing of lowly critical tasks that are primarily transaction-oriented, standardised tasks and does not necessitate close vendor management;
- Contractual relationship: The scope of the outsourced task is slightly higher but the criticality of the function is still low, and the level of communication is moderate;
- Partnership: The outsourced function in this relationship is critical to the client but has a limited scope. The 3PL and client have enduring trust for each other, as well as a strong commitment to the relationship;
- Strategic relationship: This is the most comprehensive relationship as both the criticality and scope of the outsourced task are high. There are frequent interactions, significant trust, and commitment between the client and 3PL.

In the past two decades, many researchers have focused on this dyadic relationship between the buyer and supplier and classified these relationships into transactional and collaborative relationships [33]. Firms now seek to gain a competitive advantage through their supply chain by engaging in a more collaborative relationship with their 3PL.

Transactional relationships are those outsourced activities that are mostly contractual and are classified by limited activities or functions that are not critical to the firm [1,22]. According to Whipple, Lynch [33], the transactional relationship is an agreement between a buyer and seller where business is conducted from a particular period according to the terms of a standard contract. Transactional relationships are mostly short-term focused and so are not likely to provide performance improvements due to their short sightedness, which is focused on cost savings and does not help both firms to understand each other's processes for customised services [33]. They also posit that, due to the focus on price and the lack of long-term commitment, the transactional relationship encourages opportunistic behaviours from both parties which sub-optimises performance. However, this relationship which is mostly at 'arms-length' can be used for activities that are highly standardised and less critical to the firm to prevent them from investing resources to collaborate when there is little value to be created [34–36].

On the other hand, the collaborative relationship is driven by the fact that a firm can no longer gain a competitive advantage in isolation and should, therefore, inter-depend on partners, build long-term relationships, and cooperate with their supply chain partners [37]. Whipple, Lynch [33] defined the collaborative relationship as a long-term relationship where both client and service providers cooperate, share information, and plan together to improve performance for mutual benefit. This relationship allows firms to modify the business processes of partners and help to improve visibility, greater service levels, high customer service, increased flexibility, and shorter lead times [16]. The relationship also allows firms to be transparent with partners, combine their strengths, and share business risks and rewards to achieve a higher performance [19]. What distinguishes this relationship from others is how conflict management mechanisms are built into the relationship from inception and are modified over time throughout the relationship to cater for emerging contingencies [38]. It is therefore seen as the driving force behind effective supply chain management and hence considered as the essential core capability [22], though Min, Roath [37] believe only a few firms have truly capitalised on its potential. Daugherty, Richey [16] assert that competition is no longer between companies but between supply chains, hence companies must find ways to collaborate for the long haul if they want to survive, grow, and flourish.

### 2.3. Influence of Trust

Despite the numerous benefits of collaborative relationships, research shows that many firms are reluctant to build closer ties with their suppliers due to the risk of managing the tension of integrating activities, information, and processes [21]. Further, most company metrics are finance-focused which is a short-term mentality, so keeping an eye on the long term benefits is always difficult [18]. This gives rise to the challenge of managing the trade-off between trust and teamwork on one side and opportunism and self-serving behaviour on the other side. To manage this tension and work collaboratively with partners, they posit that firms need three categories of elements to transition from transactional to collaborative relationships: facilitating capabilities, drivers, and fundamental enablers.

The fundamental element of a productive collaborative relationship is trust [18] as it acts as the glue that holds the cooperative relationship together [21]. A higher level of trust within the supply chain helps to lower transaction costs and create economic value, reduces the fear of opportunism within the relationship and encourages partners to dedicate assets on behalf of others in the supply chain [16]. The long-term relationship only leads to better performance within the supply chain when it is characterised by trust and commitment from all partners [37]. Trust, therefore, becomes the cornerstone that moderates all the various elements that ensure a successful collaborative relationship. Trust and relationship commitment foster greater cooperation and reduce inter-organisational conflict, as well as decision making during uncertainty and ambiguity [39]. Though it does not directly contribute to the collaborative effort, without trust, the relationship cannot last. Fawcett, Jones [18] assert that trust is based on iterative experience and so develops over time within the relationship to become the catalyst for collaborative innovation. Not all relationship ends up being trusted for long-term partnership. Trust goes through four maturity stages (Stage 1: Limited trust, Stage 2: Transactional trust, Stage 3: Relational trust, and Stage 4: Collaborative trust) before reaching the peak. Fawcett, Jones [18] specify that to achieve collaborative trust, the partner must have the following: desired relationship intensity/time, deliver consistently positive outcomes and motivate necessary relational investments.

### 2.4. Influence of Information Technology

One of the essential tools in logistics integration within the collaborative relationship is the sharing of information along the supply chain, including logistics and strategic planning data [22]. It helps to provide partners with forward visibility and improve production planning, inventory management and distribution. Research has shown that supply chain leaders, such as Amazon and Wal-Mart use IT to enable supply chain business models that deliver significant performance improvements, such as lower cost, faster new product development, shorter lead time and enhanced supply chain agility [28,40]. Vaidyanathan [32] posits that global information flows moderate the four primary outsourced logistics to 3PL (warehousing, transportation, customer service and inventory management/logistics) through advanced IT systems [41]. However, many firms have failed to use IT to leverage the complementary competencies residing within their supply chain due to their focus on the technology itself instead of on the value-creation process [35]. Information technologies, such as Radio-Frequency Identification (RFID), Vendor Managed Inventory (VMI) and Electronic Data Interchanges (EDI), and shared databases enhance the effective collaboration within a network [42,43]. Information technologies, particularly the latest developments in Industry 4.0 technologies, such as big data analytics, cloud computing, and artificial intelligence improve the logistics efficiency within the supply chain by providing real-time information about product availability, inventory level, shipment status, and tracking and tracing information [17,44]. Most importantly, Paulraj and Chen [45] identify three critical functions of IT in the dyadic relationship:

- It facilitates collaborative planning through the sharing of information on demand forecasts and production schedules which are crucial to supply chain activities;
- It effectively coordinates customer demand information upstream within the chain;

- It eliminates non-value adding activities by avoiding congestion in different supply chain partner firms.

However, even though IT enables connectivity with partners in the relationship, investment in it does not guarantee pro-active information sharing among partners [46]. Depending on the level of trust and development of the culture of willingness to share information, firms remain hesitant to share more sensitive and strategic information with partners for fear of any potential opportunistic behaviour by partners [46]. Hence, to increase the value of IT linkages and information sharing culture, firms must commit resources to empower organisational mechanisms, such as senior management interactions and inter-organisational teams that are willing to share information [47].

### 2.5. Power Influence

It is proven that power has a significant influence on the critical factors that help to nurture relationships between firms, such as trust, commitment, compliance, conflict management and cooperation [24,48]. Considering that power may influence the inter-firm relationship which drives the supply chain, such power may in effect also be able to affect the performance of the dyadic relationship if it is not checked [24]. The source of a firm's power depends on the level at which its partners in the supply chain rely on them [20]. Relative dependence is, therefore, the difference between a firm's dependence on its partners and vice versa, and the resulting consequence of this dependence becomes the source of power [49]. Power dependence is mostly not balanced in the dyadic relationship between the buyer and seller, and this determines the value that is attached to the relationship by either party [50]. This, therefore, defines the source of influence and control that each partner has within the relationship. In the dyadic relationship, one firm mostly leverages the competencies and dynamic capabilities of its partners and therefore leads to more dependence on the partner. Hence, the most independent partner in the relationship dominates the exchange relationship [50], resulting in an interdependence asymmetry which defines the level of each party's dependence on the other [23]. Though a power imbalance within the relationship can lead to unproductive partnership [20], smaller customers can leverage the dynamic capabilities and networks of large 3PLs. Power asymmetry was also found to promote supply chain integration and serve as a catalyst for high-performance levels within the partnership [24]. Some dyadic relationships have symmetrical interdependence where both firms equally depend on each other and yield a balanced source of power. This is where both companies are highly influential and rely on each other's dynamic capability. Kumar, Scheer [23] suggest that dyadic relationships should include total interdependence to ensure the intensity of the relationship. Total interdependence is where both firms have invested in the relationship, leading to mutual trust and commitment and increasing the exit cost for both parties. Increased total interdependence in a balanced power relationship improves performance. This is due to a lower level of conflict because both partners will be affected should a break occur, especially when invested assets are specialised.

In summary, the literature review uncovers that (a) prior studies have examined various topics but value creation by 3PLs is under-researched; (b) it is unclear how trust, information sharing/technology, and power influences the 3PL-buying firm relationship performance.

## 3. Methods

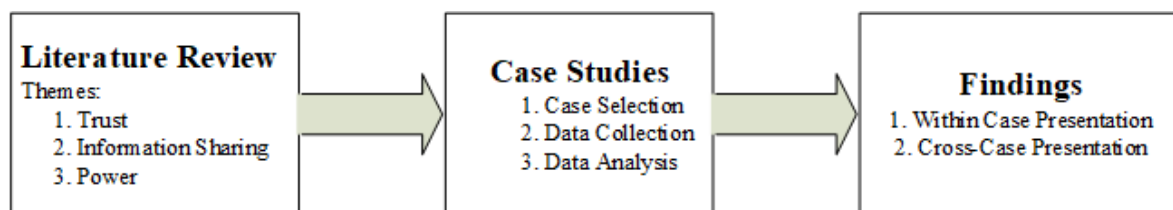
Creating value with 3PL is fundamentally based on relationships and the decisions that are made by their clients which are mostly dependent on relational factors, such as trust and the technology of the 3PL. Again, supply chain activities involve interactions with partners with different interests and perceptions, and so the interpretation of this reality may be subjective [51]. To understand the richness of each phenomenon, it was best to study individual cases and not generalise, as the value expectations, industries and experiences of participants were different. Ontologically, social constructionism was assumed for the research. As respondent views were sought for their decisions, these social actors created meaning and realities through their interactions which were relevant



for the research. Epistemologically, the truth was gathered through understanding how realities were experienced in each case. Assessing each relationship involved different perceptions and how the various social actors influenced decisions. Axiologically, studying the social interactions of participants allowed the influence of both the researcher and the respondent's beliefs and values to come into play during the process.

### 3.1. Research Design

A multiple case study research design was used for the study to increase the richness of the findings. Yin [52] argues that multiple case studies, i.e., using more than one single case study, make the evidence more compelling and robust and the results start the theoretical replication. This design was chosen to allow the researcher to compare the cases with each other and to offer contrasting experiences that influenced the decisions in each case. Figure 1 presents the process of the research methodology.



**Figure 1.** Research method process.

The research questions required an in-depth exploration of each case, hence, the exploratory study was conducted. As indicated by Cooper and Schindler [53], the exploratory method is useful in developing concepts clearly, establishing priorities and developing operational theories. The qualitative research approach was used to understand the different meanings that supply chain managers place on their experiences, interpretations, and motivations. Below are the techniques that were applied:

The purposive sampling technique was adopted for the study. This method was chosen to give the researcher the arbitrary judgement to interview only experienced managers who were knowledgeable about the research questions. According to Matthews and Ross [54], this method is used for small samples and allows researchers to understand and interpret the experiences and perceptions of respondents. Some elements of convenience sampling were also used. Due to the unpredictability of having access to participants, the researcher chose to source information from managers who availed themselves to be interviewed. The selection criteria were as follows:

- Supply chain manager with either a 3PL or shipper;
- Experience in managing relationships, logistics and value services;
- Willingness to share information.

Qualitative methods require the investigator to employ in-depth data collections involving multiple sources of information, such as interviews, observations, and documents [51]. The first step consisted of an extensive literature review, searching for articles and reports that were relevant to the purpose of this research. The search was limited to academic peer-reviewed journals, industry reports and company services. It is noted that the company and industry reports are not reviewed. The keywords that were used in the search were different based on the two parts of the literature. The first part used search words such as 3PL, third-party logistics providers, logistics service providers and other relevant descriptors. For the second part, the search words were: collaboration, transactional, trust, IT, information sharing, power, and other related descriptors.

Each journal and report were reviewed to exclude those that were not related to the topic. In the end, a critical analysis was conducted to isolate the major topics in 3PL-client relationships. The literature was then categorised into subheadings with the emerging concepts.

An in-depth interview was used for data collection to allow a wide variety of information to be gathered. A semi-structured interview approach was adopted to allow for a thorough understanding of the respondents. As noted by Bernard and Ryan [55], that respondents are asked quite related questions in semi-structured interviews makes it possible to compare the responses across interviews. Before the interview, the respondents were briefed about the research objectives and their rights. The respondents gave their written consent and their permission was sought to record the interview. The interviews were subsequently transcribed and analysed.

### 3.2. Case Study

A case study is an empirical inquiry that investigates a contemporary phenomenon within its natural contexts and deliberately discovers the contextual conditions that are believed to be pertinent to the study [52]. Creswell [51], underlined the importance of researchers identifying cases clearly with boundaries to provide an in-depth analysis. The review of the previous literature helped in defining the boundary and followed the boundary guidelines set out by Creswell [51] regarding time, the information needed and processes.

The unit of analysis focused on supply chain managers with 3PLs and customers of 3PLs. The participants were chosen based on the critical roles that they play in their respective companies. In-depth interview participants are chosen not because their opinions on the topic are representative, but because their experiences and specialities will reflect the full scope of the issues that are being investigated [53]. Though Yin [52] recommends six types of information to collect during case studies, the participants' geographical locations permitted the researcher to focus on documents, interviews, and participant observation through Skype.

To build a good case, a thorough understanding of the case companies was conducted. As recommended by Yin [52], the literature and knowledge of their business process helped to develop insightful questions that were relevant to the topic. The participant's details are presented in Table 1. For purposes of confidentiality, the actual names have been withheld in this study.

**Table 1.** Respondents' profile.

Title	Company	Specialities
Head of Supply Chain	Customer A	Reengineering of supply chain structure and processes, Customer care, Inventory management, 3PL liaison
Supply Chain Manager	Customer B	Operations Management, Supply Chain Integration, Optimisation and Sustainability
Regional Supply Chain Manager	3PL C	Business Process Modelling, Process Optimisation, Supply Chain Management, Inventory Management, Six Sigma
Operations Manager	3PL D	Supply Chain Warehousing and logistics management, transportation, customer and supplier management, Quality Assurance

The interview's focus was to understand how 3PLs create value to support their customers and how these relationships are influenced by relational factors, such as trust, power, and information sharing. To accomplish this objective, an interview protocol that was adapted from the guidelines of Creswell [51] was used. Related questions were posed to participants, but the follow-up questions varied depending on the clarifications that the researcher sought to make. Each interview lasted between 38 and 48 min. The customers were asked to describe their supply chain management, the 3PLs used and the services outsourced, as well as relationships and other relational factors. The 3PLs were also asked to explain how they manage supply chains, the services provided and other relational factors.

The next section presents the findings from the cases selected.

#### 4. Findings

This section presents the findings of the study. The first section analyses the cases using the key themes. Next, the relationship performance and comparative analysis of the cases using the themes are discussed.

##### 4.1. Users of 3PL

###### 4.1.1. Customer A

Customer A is a global company in the pharmaceutical industry focused on developing innovative medicine and diagnostic tests for patients across major disease areas.

The company's distribution is centralised and internally managed, including warehousing and inventory management. All transportation services are outsourced to 3PLs. Due to the delicate nature of their business, all product innovation and research developments are handled internally without collaboration. The 3PL is expected to create value by meeting the expected lead times and offering flexible delivery options. The company controls their supply chain through its partner's code of conduct which stipulates the guidelines for its network partners.

##### Value Creation

Value creation was identified to be a major factor for a company to gain market share and continuous success. It is important to create this value with 3PLs who have the expertise in managing certain processes of value creation. In a competitive industry, it is important to engage the services of 3PLs to handle inbound and outbound logistics. Specializing in transportation and warehousing solutions allows 3PLs to exploit the economies of scope and scale across multiple customers, thereby broadening the opportunities for reduced cost, optimising supply chain flexibility, and pro-active decision making, among others. They also help to monitor and efficiently manage the Key Performance Indicators (KPIs) of partners with just a single contract. Customers leverage the global networks of 3PLs and contribute to reducing their investments in logistics services. As 3PLs deal with a range of customers across multiple industries, their customers leverage the expert and tacit knowledge of their professionals in creating value for the end customer. The manager, for instance, noted: *'Sometimes the 3PL has an account in its network that has a service that may help the value of our product, but we did not know or did not even think about. This can be known through your 3PL'*.

Though 3PLs are essential partners in creating value for the customer, it is important to consider the size of the 3PL, the added services provided and their sustainability. Further, the firm needs to consider whether they need a standardised service for cost savings or flexible services for increased options. The manager rightly noted: *'We look at what the 3PL can offer on top of our products and how flexible they can be with varied delivery options'*.

##### Relationship Performance

The manager emphasised the importance of relationship development with 3PLs in the partnership success. The relationship does not develop over time but must start as a collaborative partnership. A collaborative relationship ensures the performance of the contract with the 3PL and ensures that the critical information that is needed for the contract execution is shared. A collaborative relationship also enables the partners to benefit from the pro-active management of issues and helps to identify future solutions for customers. The 3PL model requires a sequence of plans and activities that need to be executed within specific periods to create value and therefore must collaborate with the 3PL from the start to ensure that these expectations are achieved. The manager noted: *'I believe dealing with 3PLs should be based on collaboration from the start and cannot afford to start from transactional. For me, I start with collaboration and it is continuous as collaboration. You should not decide to outsource if you cannot collaborate from the start to take the maximum value from them'*. In

logistics management, time and volumes make a stark difference. Hence, collaboration allows the customer to commit more volumes and improves visibility which is rewarded with cost reductions even though the 3PL may be offering service flexibility.

#### Trust and Information Sharing

A 3PL-client relationship can start from collaboration when they start by trusting themselves. The customer must fully trust the 3PL from the onset of the contract on their promise to perform high standard services. The trust, however, reduces with unsatisfactory events during the contract. The executive noted: *'3PL-client relationship works like marriage, without trust it will be a nightmare. So, I learn to believe others right from the start and start losing trust based on unsatisfactory performance'*.

Without trust, there is the tendency of competing with partners instead of partnering whenever there are mistakes within the supply chain. Outsourcing to 3PL involves investment in the partnership from both parties with a long-term focus. It will, therefore, be difficult to invest in a relationship that is not trusted from the start. The interviewee noted: *'Working with 3PLs needs infrastructure to help them have an interface with your systems. Building a complicated SAP system, to allow real time information share can take between 3–6 months, depending on resources allocated to it. It also has significant cost implications and to do this, you need to collaborate from the start'*.

Collaboration that is based on trust also facilitates the easy sharing of information among partners. Regular contacts and performance meetings are required in a collaborative relationship to understand the changing expectations and agreed metrics in the contracts. Information sharing is critical in creating value with 3PLs. Transparency of information within the partnership is the only way that can help in creating innovative value-added services to make the company competitive. The manager noted: *'All information affecting the 3PLs operation must be shared otherwise, it's like asking someone to perform a task without telling them the background and the final objective, it will inevitably lead to a disaster'*. Though every contract with 3PLs has a confidentiality clause to avert potential risk, disclosure of relevant information that is necessary for the contract is a prerequisite to creating innovative value services. IT has improved the information sharing process among partners through the monitoring and analysis of data by both parties with applications such as Business Warehouse in SAP which allows partners to generate real-time reports.

#### Power Influence

Power is one of the relational factors that has great influence on the 3PL-client relationship. Power imbalance creates problems in the relationship, especially when the 3PL is larger than the customer and is not critical to the 3PLs business. Larger 3PLs give more attention and flexibility to key accounts that can influence their bottom-line profit. This may, therefore, affect the relationship and flexible options for the customer as they would not receive the full attention of the 3PL. Maintaining a power balance with the 3PL offers a significant level of influence which is suitable for innovative services. The executive noted: *'If the 3PL is too big and has many accounts and you are not one of the big ones, it will not work. They give attention to the accounts that are critical to their business more than you. I ensure my company have a right comparable size with the 3PL'*. However, the relative power that is yielded by partners should not always be the focus because the relevance of the 3PL in the industry is also important. However, power balance and imbalance play a role in the relationship success; the customer's commercial strategy, objectives, the phase of the business life cycle and the services that are required should be the focus during decision making.

#### 4.1.2. Customer B

Customer B is a manufacturing company that is focused on affordable farm equipment in North America and Oceania. The company's inventory and warehousing are managed internally. The company operate fully on Just-In-Time, hence, inventory is based on production schedules and customer orders. Both inbound and outbound logistics are outsourced

to 3PLs to benefit from reduced cost regarding inbound logistics and increased delivery options, and reduced lead time (48 h) regarding outbound logistics. All innovations, value-added services, after-sales services, maintenance and repairs are carried out internally. Three 3PLs are used for their global transportation due to the weight constraints of their cargoes. The supply chain is controlled internally.

### Value Creation

Consistently creating value for the customer is the sure way of remaining ahead of the competition. The nature of the industry determines which processes of the supply chain are outsourced to 3PLs. Customers can manage most of the value creation in their supply chain when their market does not require quick reactions, has little demand fluctuation and does not require increased flexibility. The manager noted: *'Our industry is not dynamic. If we sell farm equipment to a customer, we are almost confident we will not sell to the same customer for about two years because of the equipment's life expectancy'*.

It is important for manufacturing companies to outsource both inbound and outbound logistics to 3PLs to leverage their advanced transportation and increased network capabilities. The standardization of services by 3PLs helps through reduced costs for the company's inbound logistics, as well as increased delivery options, quick transit, and lead time to customers. The interviewee noted: *'Our focus for using 3PL for our inbound logistics is to benefit from reduced cost because our customers are cost-sensitive whereas for outbound logistics is delivery options and reduced lead time. If we pass 2% of our lower cost to customers, we can boost sales by 10%'*. 3PLs help to streamline the customer's cash flow and enable easy monitoring and simplified contract management. However, 3PLs selection should be based on their sustainability because the reduced cost cannot offset lost sales.

### Relationship Performance

The 3PL-client relationship develops from a transactional to a more collaborative nature when they meet the expectations and KPIs that are defined in the contract. As a sense of commitment and high standard is established, the customer is more likely to increase the volume of business as a sign of trust in the 3PL. The relationship automatically becomes collaborative when this sense of loyalty is developed between the partners. A collaborative relationship enables the company to share strategic plans with 3PLs which ultimately enhances cost savings and finds quick solutions to problems. For instance, the manager noted: *'Due to the varied locations of our customers, together with the 3PLs identified 25 hottest spots across the region to ensure we can deliver to our customers within 48 has promised'*.

### Trust and Information Sharing

Trust in the 3PL-client relationship develops when both parties exhibit honesty and an open line of communication. Customers are more willing to be collaborative when the 3PL shows excellent communication and is honest about its core capabilities. Transparency helps to promote pro-activeness from the 3PL, ensuring all deliverables are met as planned. The interviewee noted: *'Normally when the 3PL see that we are transparent with them, they also make a positive step to be transparent with us'*. Information sharing within the relationship is essential as it is the best way to improve the company's competitiveness in the market. Critical information that is needed for each contract must be shared with the 3PL irrespective of the trust level. 3PLs can only create innovative services if they have the full information that is required, and this also improves the chances of the relationship's success. The manager highlighted: *'We tell supply chain partners our annual plans and expectations from the start of the contract. So, we make it clear and do not leave any room for interpretations, translation, or ambiguity from them'*. Within the collaborative relationship, firms tend to be opportunistic because of everyone's responsibility in protecting their company's interest. IT has improved information sharing, monitoring and reports that are shared with partners in real-time.



### Power Influence

The significance of the customer influences the 3PL. The customer's revenue contribution to the network determines their criticality to the 3PL. Critical customers automatically have power and influence within the network and gain more attention from the 3PL regarding service options, flexibility and innovative services. The interviewee noted: *'Over the years I spend \$2.5 m annually on freight, and this is spread across three 3PLs while the leader in the industry spends about \$3 m on freight and spread across nine 3PLs. So am more powerful and influential than my rival within this network'*. In the 3PL–client relationship, power is determined by the level of contribution made by the customer to the network, not company size. However, sometimes depending heavily on a specialised 3PL may relinquish this power and influence on the 3PL irrespective of the customer's contribution. The decision to form either a balanced or imbalanced relationship should, however, be based on the company's expectations and strategy.

### 4.2. Third-Party Logistics Providers

#### 4.2.1. 3PL C

3PL C is a global company offering services to customers in consumer packaging and branding; graphic displays; logistics; healthcare; inventory management; RFID tags; and many value-added services across industries. The company manages customer supply chains with two metrics regarding flexibility in service delivery and the availability of value services. Flexibility is related to the transportation options to both distributors and converters (businesses) and the availability of value-added services that are provided for customers. The customer's inbound logistics are managed with outsourced forwarders while the outbound logistics are managed from their warehouses and manufacturing facilities. Due to their global networks, inter-company branches manage the warehousing and other supply chain solutions for customers, while all customisation, packaging and manufacturing are managed at the regional level and transported to the respective branches.

### Value Creation

Developing quick supply chain solutions to meet customer expectations and needs has become the emerging role of 3PLs in modern times. The 3PL should have the capacity to make their customer's products flexible and develop options and specifications for their products/services to make them competitive in their respective industries. The manager noted: *'The customer expects you to develop quick value-added services for them. So, for us, if they tell us their problem, we quickly come back with different options and specifications customised for them to choose'*. 3PLs help customers in their logistics management by customising services such as labelling, graphics, palletizing, and others to improve their inbound logistics. In the competitive global markets, 3PLs assist customers to gain reduced costs through optimising the cargoes across various customers to ensure the high utilisation of trucks and containers. The global network of 3PLs benefits the customer by using their distribution centres for cross-docking and warehousing, including wider transportation networks. Due to the increasing demand for value-added services such as RFID tags and graphic displays, some 3PLs outsource the transportation to forwarders, but with full control and visibility, while they focus on creating more value services for customers.

### Relationship Performance

Customer relationships are developed on either transactional, tactical, or strategic levels, depending on the criticality of the customer and the product category that is outsourced to 3PL. More resources are allocated to develop relationships with customers that outsource products that affect the 3PL's bottom line. However, there are times when resources are spent on relationships to help develop the customer base for the future. The manager noted: *'We follow these differentiations, and the resources of the company are allocated based on them. If a customer deals in commodity products with you, you would not want to waste much time and resources on them'*. Collaboration is the only means by which the 3PL can understand the

customer's changing expectations. Collaboration also helps the 3PL to identify opportunities in value services that may be needed by the customer and to gain an understanding of the manufacturing and delivery lead times of their products. Total visibility in inventory and along the supply chain is one key feature that ensures the success of the supply chain management by the 3PL, and this can only be gained through collaboration.

#### Trust and Information Sharing

In the supply chain, trust is developed from the first contact and stems from the high level of service that is provided by the 3PL, as well as the brand and consistency in the service standards. The customer's decision to outsource to 3PL is based on this initial trust in their service history. However, this trust reduces if the service quality is not consistently high alongside other factors, such as competitive pricing and innovative services. Sharing information is critical to the success of the relationship, and this is the only way that the 3PL can understand the customer's business and develop innovative services. Sharing information promotes quality development in unique services to give the customer a competitive advantage. The manager noted: *'Quality development and innovation are run like a project together with customers through the information shared with us in the relationship'*. IT has improved information sharing among partners by creating a single interface among systems like ERP (Enterprise Resource Planning), where supply chain partners can share real-time information and reports.

#### Power Influence

Customers that contribute more revenue to the 3PL tend to enjoy certain priorities and have a certain influence on the relationship. Though the size of the customer matters, those who are in a strategic partnership with the 3PL and outsource highly differentiated products naturally yield a certain degree of influence and power. The manager noted: *'If you bring high revenue, you obviously have an impact on our business and hence will have some influence'*. The goal of every 3PL is to satisfy every customer request irrespective of the size or financial contribution, but in emergencies, adjustments are made to accommodate the requests of larger customers.

#### 4.2.2. 3PL D

3PL D is a globally known company that is ranked among the top 5 global 3PLs for 2016 by Armstrong and Associates, Inc. with a gross revenue of over USD 20B. They provide a wide range of supply chain solutions and specialised services for their customers in freight, warehousing, distribution, lead logistics partners and various industry solutions. The research focused on how one of its operational sites creates value for one of its key customers. The primary duty is to manage the co-pack and re-pack activities of its customers' manufacturing plant. As a result, they handle the co-pack and re-pack warehouse and all operations within it. They coordinate the customers' first-tier suppliers to ensure that the planned production and distribution from their second-tier suppliers are in line with their customer's production schedules. They also manage all relationships with other 3PLs that are used for transportation by their customer to ensure efficiency and that customs documentation is in line with all products shipped. Therefore, they serve as the orchestrator for their customer's inbound and outbound logistics to ensure smooth operations regarding quality raw materials and safe distribution routes.

#### Value Creation

Creating value and working together for continuous improvement to drive up efficiencies for the customer is the current requirement of 3PLs. The 3PL should be able to help their customers to plan effectively, manage their relationships, and improve process efficiencies. One of the key drivers that 3PLs help their customers to achieve is cost savings through the proper coordination and continuous improvement of their operational activities. 3PLs support their customers to have improved visibility along the supply chain with a simple

contract to manage. The global networks and expertise of 3PLs allow their customers to leverage professional advice on several services, such as customs clearance, freight insurance, and transportation routing services, among others. 3PLs also help customers create value by understanding the customer's challenges and devising specialised solutions to suit their needs. The manager noted: *'In terms of re-pack and co-pack we do it for only this customer, but as a company, we also have other high-end customers'*.

#### Relationship Performance

Customer relationships can either be developed as transactional or collaborative. Though the most efficient partnership is collaborative, not all customers may want to collaborate, either because they outsource insignificant services or they may not have the resources to invest in a collaborative relationship. They may also not want to share information with the 3PL on their critical activities. Collaborating with the customer helps the 3PL to understand the customer's business and expectations, in order to develop innovative processes to meet them. The manager noted: *'If we do not collaborate to understand the customer's needs, we will very soon start to fall short of their expectations for us, and we will start losing their business'*. Innovative value, such as process efficiencies and cost savings can only be created when there is close collaboration in the relationship. However, collaborating with global customers sometimes delays decision making and involves a lot of people because of the decision-making hierarchy.

#### Trust and Information Sharing

Trust serves as the anchor for every collaborative relationship, and without it, it will be difficult to work together to create value as a 3PL. Openness, honesty and transparency are three critical elements in every relationship which help in the development of trust from the customer. The success of a collaborative relationship hinges on trust and an understanding of the customer, whereas maintaining constant communication assures the customer of the 3PL's loyalty to their business. Information sharing is critical to value creation within the relationship. However, the amount of delicate information that is shared with the 3PL is determined by the level of trust within the relationship. Sharing information allows the 3PL to understand the efficiencies within their processes and help to identify adjustments that are needed to create added value for the customer. Operational efficiencies and value services can only be created when the two parties are constantly working together and sharing information. The interviewee noted: *'We work hand in hand with the customer and attend their operational meetings. We are set up on their Warehouse Management System and all relevant IT systems to help us have direct access to real-time reports to help in our value creation activities'*. No matter how collaborative the relationship is, the customer will not share every piece of information with the 3PL. However, all information that is relevant to the contract, including projected plans and forecasts must be shared.

#### Power Influence

Customers mostly yield some level of power within the relationship irrespective of the relationship type simply because the 3PL works to meet the client's expectations to keep the contract. The 3PL can also yield power when they are specialised in a particular industry or service, and the customer is highly dependent on them. Customers, however, do not yield the same power and influence within the 3PLs network. Priorities are given to significant customers because their expectations are high and they demand more resources and planning. Clients who bring significant contracts automatically have some influence in the 3PLs network and can have adjustments made to accommodate their demands. The manager highlighted: *'No matter how neutral you want to be as 3PL, priority will be given to big customers. Investments are made only on big clients because of the potential long-term returns'*. However, there is no right or bad side to power in the relationship. It depends on the client's objective: either they want to enjoy lower costs or leverage on the 3PLs capabilities.

### 4.3. Comparative Analysis of Customers

Both customers confirmed the importance of leveraging the global networks of the 3PLs for their international distribution to their end customers (Table 2). Though the warehouse was managed internally by customer B because of their JIT (just in time) inventory strategy, they both indicated the importance of outsourcing both inbound and outbound logistics to 3PLs to benefit from cost savings, reduced lead time and flexible delivery options. The industry of both customers necessitated handling their value creation internally. Regarding relationships, though customer A believed that all relationships should be collaborative, customer B believed that relationships should start from a transactional point. However, they both agreed that the best strategy was to have a collaborative approach in the relationship, though customer B believed that this approach takes time. Again, though customer A believed that trust is built from the first contact with 3PL, customer B believed that trust develops over time based on the consistency of service and transparency. They both, however, believed that information sharing is critical to any innovative service and relationship success. Furthermore, Customer A thought that the size of the 3PL and the number of larger accounts in the 3PLs network determined the attention that is received as a customer, but customer B concluded that the customer's contribution to the 3PLs network determines the kind of attention and influence that is received from the 3PL.

**Table 2.** Comparative analysis of users of 3PLs.

Themes	Customer A	Customer B
<b>Value creation</b>		
International distribution	Leverage on 3PLs global networks and resources	Leverage on wide networks of 3PL
Warehouse outsourcing	3PLs have expertise in warehouse management	Managed in-house due to JIT strategy
Transportation outsourcing	Cost savings and delivery options from 3PL	Cost savings, delivery options and reduced lead time
Inbound/outbound logistics management by 3PL	Increased visibility, monitoring and managing KPIs	Increased visibility and monitoring
Control over value creation	Value created internally	Value created internally
3PL selection criteria	Sustainability, value-added services, and size	Reliability
Supply chain model	Supply chain managed internally	Supply chain managed internally
<b>Relationship performance</b>		
Relationship type with 3PL	Collaboration	Transaction and collaboration
Relationship development	Relationship starts with collaboration	Starts with transactional and developed into collaborative
Opportunities for collaborating	Pro-active management of issues and future solutions	Reliability in service
Strategy in relations with 3PL	All 3PLs are managed as collaboration	All 3PLs are managed as collaboration after a period
<b>Trust and information sharing</b>		
Trust influences relationship development	Trust built from first contact with 3PL	Trust develops over time with 3PL
Trust and relationship success	Trust is the anchor of the relationship	Meeting expectations and deadlines ensures success
Trust and information sharing	Trust facilitates easy information sharing	Information shared irrespective of trust level
Information sharing influences innovation	Needed for creation of value-added services	Improves relationship success

**Table 2.** *Cont.*

Themes	Customer A	Customer B
<b>Power influence</b>		
Size of company	The 3PL size determines the influence	Size does not determine influence
Power influence in relationship	The attention received based on customer power	Customer contribution to 3PL determine influence and attention
Power asymmetry or symmetry	Depends on customers' commercial strategy	Depends on the customer's expectations and strategy

#### 4.4. Analysis of 3PLs

Both 3PLs manage the supply chain of their customers through 3PL D managed wider relationships along the supply chain (Table 3). 3PL C outsourced transportation to forwarders to focus on value creation, whereas 3PL D performed all value-added activities themselves. However, both 3PLs create value together with their customers' thorough understanding of their processes. Regarding relationships, both 3PLs believed that customers should be segregated into transactional and collaborative, though 3PL C believed that some could be tactical. Again, 3PL C argued that the relationship is increased based on the significance of outsourced activities, whereas 3PL D thought that it depends on the needs of the customer. They both, however agreed that a collaborative relationship is the only type that helps the 3PL to understand the customer's expectations and changing demands. Furthermore, both 3PLs believed that trust is developed from the start of the contract and maintained with the consistency of service and transparency. They also both established that information sharing from customers is required for innovative services and processes. However, though 3PL C believed that all contract information must be shared with 3PLs, 3PL D thought that the level of trust determined the amount of information shared by the customer. Regarding power, both agreed that the revenue derived from the customer determined their source of power and the attention received from the 3PL.

**Table 3.** Comparative analysis of 3PL managers.

Themes	3PL C	3PL D
<b>Value creation</b>		
International distribution	Customers leverage our global networks for distribution	Coordinate customers transporters and suppliers
Outsourcing services	Outsource customers' transportation to forwarders	Performs all value-added services
Key activities	Value services, optimise trucks and container loads	Manage co-pack, repack activities for customer
Inbound logistics management	Manage them with forwarders	Manage customers' supply chain and transporters
Outbound logistics management	Manage them from controlled warehouses	Manage customers distribution relationships
Control over value creation	Value is created together with customer	Value is created together with the customer.
Value-added services	Quick solutions to all customers' expectations	Process efficiency and cost savings
Supply chain model	Manage customers' supply chain in terms of flexibility of service and availability of service	Manage all relationships within the customers' supply chain



Table 3. Cont.

Themes	3PL C	3PL D
<b>Relationship performance</b>		
Relationship type with customers	Transactional, tactical and strategic	Transactional and collaborative
Relationship development	Based on the significance of activities outsourced	Based on customers' needs
Opportunities for collaborating	Understand customer changing specifications and high visibility	Continuous improvement in cost and processes
Strategy in relations with customers	Collaboration	Collaboration
<b>Trust and information sharing</b>		
Trust influences relationship development	Trust developed from first contact	Trust is needed for all relationships.
Trust and relationship success	Consistency in high service and prices	Openness, honesty, and transparency
Trust and information sharing	Contract information shared with customers	The level of trust determines the type of information shared
Information sharing influences innovation	Required for innovative and customised services	Required for improvements and process efficiencies
<b>Power influence</b>		
Customer power source	Revenue derived from customer	Revenue or business from customer
3PL power source	Speciality and expertise	Speciality and expertise
Power Influence in relationship	More attention and priorities	Investments are made with customers

## 5. Discussion

The evolving role of 3PLs in creating value that was identified in the findings is coherent with the study of Langley [2], in which customers increasingly shifted more decision making powers to 3PLs to help create value for them aside from logistics and warehousing. It also fits well with Carbone and Stone [31] who found that value-creating 3PL activities have transformed into more process services that are aimed at the integration and control of either part of, or the entire process for the customer. From the findings, aside from logistics and warehousing, the customer expects the 3PL to create value in more decision-making responsibilities, such as customer's third-party relationship management to improve visibility to the client, as well as customised products and services that will make them competitive. 3PLs have therefore evolved to be the catalyst and orchestrator that provide added strategic value to their customer's bottom line.

The research also found that the main benefit of outsourcing to 3PLs are cost savings and customised solutions which were consistent with the study that was conducted by Hertz and Alfredsson [15]. However, these main benefits were found to be the initial goal which must be sustained by the 3PL with consistently high standard services and continuous improvement in process efficiencies. The customer, as found by Leuschner, Carter [6] expects the 3PL to have more customised services covering many services. The results showed 3PLs focusing more on the value-added services, such as customised supply chain solutions, including packaging, palletising, and RFID tags, among others, while they perform the transportation through carriers for optimisation.

Concerning 3PL–client relationship development, the findings were consistent with the four categories of relationships found by Zacharia, Sanders [1]; non-strategic transaction, contractual, partnership and strategic. However, the findings showed that these relationships are categorised into three categories: transactional, tactical, and strategic. Transactional relationships combined the first two categories that were suggested by the researchers. Transactional relationships, as hypothesised by Dyer and Singh [34], that should be used for standard activities and are less critical to the firm also found support

in this study. This is to prevent the firm from investing resources into a collaborative relationship when there is little value to create in the partnership.

The findings were not consistent with Fawcett, Jones [18] who found that trust goes through four maturity stages in the relationship: limited, transactional, relational, and collaborative. The findings suggest that trust must be collaborative from the start of the relationship to allow customers to share critical information with the 3PL, invest in shared infrastructure and increase commitment in the relationship. Spekman and Carraway [21] also considered trust as the essential factor that holds the collaborative relationship together and ensures a high relationship performance.

Information sharing was found to be the most significant factor in supply chain success in creating innovative services within the relationship. This was consistent with the first essential function of IT in the dyadic relationship, as described by Paulraj and Chen [45]. This allows the 3PL to understand the customer expectations entirely and facilitate collaborative planning and innovative designs to give their clients a competitive advantage in their industries. It also fits well with the findings of Sanders and Premus [22] who found that the success of every logistics integration is dependent on the level of information that is shared among partners.

Power influence was also included in the research. Caniëls and Gelderman [20] found that the firms' power within the relationship is dependent on the level of their partner's dependence upon them. The research, however, found that the firms' source of power and criticality to the 3PL depends on how much revenue they generate for the 3PL, as well as the 3PL's speciality.

However, though three of the respondents supported the findings of Maloni and Benton [24] that power asymmetry help promotes supply chain integration and catalyst for high performance, one did not. The finding revealed that power symmetry should be pursued to receive the required attention from 3PLs for innovative services. This was coherent with Kumar, Scheer [23], who found that increased total interdependence in a balanced power relationship improves performance within the partnership as there is lower conflict.

This section relates the findings of the study to the literature reviewed. Though most of the findings were coherent with previous studies, such as the evolving role of 3PLs and information sharing, some did not, such as relationship development with respect to trust and power. However, trust, collaboration, and information sharing happen to be the catalyst for high relationship performance, leading to an increased commitment from partners as demonstrated in the previous section.

### *5.1. Research Contribution*

This research has contributed in two main ways: first, the study demonstrated that outsourced services varied across companies depending on the nature of the industry. Dynamic industries demand quick reactions to the market and need flexibility in the supply chain, and they outsource more value creation activities aside from transportation and warehousing. However, outsourcing decisions are mostly based on the company's strategy, how they want to reflect quickly on their market and the changing demands of their industry. Though most firms outsource both transport and warehouse to 3PLs, the firm's inventory management strategy determines its decision to outsource warehousing. Secondly, the study provides a clear direction on how 3PL–client relationship performance is enhanced, leading to an increased commitment from partners. These relational factors regarding trust, collaboration, information sharing and power have a significant influence on the success of the relationship, and the more they are improved, the better the relationship's success. These findings are important to 3PLs, shippers and managers of business relationships. Lack of trust from the start of the relationship limits the relationship performance.

### 5.2. Conclusions

In an increasingly volatile and uncertain global environment it is more and more important for firms to collaborate with partners across the supply chain to leverage and complement their core competencies. As a result, 3PLs are becoming valuable partners that firms rely on and depend on for delivering value to their end customers. However, how 3PLs create value is not clear. Most research shows that firms outsource their non-core activities to 3PLs to reduce costs; however, increasingly, companies outsource activities to create value. In so doing, trust, information sharing and power become critical in managing the 3PL relationships. However, there is a risk in trusting 3PLs and handing over power to them; 3PLs may become powerful players and dominate, for example in innovation and important supply chain capabilities. Therefore, this study aims to fill this gap by conducting multiple case studies of managers of 3PLs and customer relationships.

This study shows that value creation has become a key competitive advantage for 3PLs. Further, information sharing is the most important factor in creating robust relationships: fostered by advanced technologies, information sharing allows fast responses and real-time or near-real-time distribution planning and control. However, trust is imperative in controlling the supply chain. Therefore, information sharing is not enough; 3PLs should become trustworthy partners; for example, by sharing infrastructure, commitment, and preferential treatment. The study finds that 3PL services vary depending on the industry, i.e., dynamic industries demand quick reactions to the market and require flexible supply chains, especially in the current uncertain business environment.

### 5.3. Limitations and Recommendations

The findings of this study have suggested some directions for future research, some stemming from the limitations of this study. The first limitation was the use of four cases which limits the study's richness, although it provided insights into the research questions. Increasing the cases across multiple industries will increase the richness and robustness of the findings, knowing that the industry type determines how many services are outsourced to 3PLs. The research did not interview the actual customers of the 3PLs, in order to juxtapose their responses with their 3PLs.

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