The Influence of Inter-firm Investments on Dyadic Strategic Alliances in Supply Chains

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Abstract

"If you want to walk fast, walk alone. But if you want to walk far, walk together"- Rattan Tata

The purpose of this research is to provide insights about the influence dynamics of investments in an equity strategic alliance in supply chains. The investigation is focused on the influence of the inter-firm investments on a dyadic strategic alliance, and the relevant contribution towards achieving supply-chain management objective. Considering the research methodology, implications of inter-firm investments on the critical success factors of a strategic alliance are collected from eight companies in India and New Zealand, and synthesised to explain the overall influence on the strategic alliance; and the contribution to increase supply-chain surplus. In correspondence to the findings, study has explained how inter-firm investments can be used as strengthening tool for a strategic alliance; how it contributes to achieve supply-chain management objectives. Various creative implications/practices are highlighted to exploit an equity strategic alliance. By exploring the influence dynamics of investments in an equity strategic alliance, this study also corelates the subject to eliminating silo-mentality from the components of complete supply chain. Thus, neutralization/redistribution of negotiating power could be achieved in supply chains. However, this research is confined to New Zealand and India; capital companies; researcher's philosophical constraints; research approach and so the results are not inevitably generalizable in all settings. Also, the research excludes the barriers to enter equity strategic alliance, which open the doors for further research.

The conclusions encourage supply-chain participants to upgrade their strategic alliance with other participants to an equity strategic alliance. The analysis provides a solid background to consider making this decision and to broaden their perspective to external supply chain. The

results also enable the participants to consider implementing other creative practices to benefit from the upgraded alliance and increase overall supply-chain surplus. In terms of originality, empirical investigation of the relationships between the inter-firm investments, the strategic alliance, and the supply chain management objective, in this study, contributes to the Supply Chain Management knowledge. This study adds another dimension to the study of equity strategic alliances, that also unlocks the direction for future research.

Keywords- *Equity strategic alliance*, *Supply-chain surplus, Inter-firm investments*

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1 INTRODUCTION

1.1 Research Topic

The study of supply chain management evolution has led us to understand the importance of integration in supply chains across the boundaries of an enterprise. Supply chain inter-firm integrity ought to deliver various benefits like decreasing cost, increasing customer service, increasing inventory turns, improved demand forecasts which altogether serves to the attainment of supply chain management objectives (Johnson, 1999; Hines, Rich, Bicheno, Brunt, Taylor, Butterworth, and Sullivan, 1998; Lummus, Vokurka and Alber, 1998; Narasimhan and Jayaram, 1998). However, integrating two different businesses is not that simple even if it is a win-win deal due to a lack of trust and managerial ability (Lambert and Cooper, 2000). The issue has identified a number of collaboration techniques suitable for different business setups studied briefly by Kanda & Deshmukh (2008).

Analytically selected from various collaboration techniques, a strategic alliance is concluded as a good fit to serve the purpose of integration in supply chains (Hertz, 2001). Strategic alliance, when involves inter-firm investments, is more directed towards the attainment of the supply chain objective (Luo, 2008). Inter-firm investments can be theoretically categorized into three different cases in supply chains. The three different cases are examined in-depth in the research proposal. The examination has led to the requirement of a detailed analysis (research gap) of the above said three cases' influence on dyadic(involving two parties) strategic alliance relationships in supply chains. This requirement forms the basis of the research and discussed further in detail.

1.2 Research Objectives

The research begins with the identification and categorization of ongoing inter-firm investment practices in the three theoretical cases. Following which selection of research methodology is made and research is to take place with the following objectives:

- To analyse the influence of inter-firm investment on dyadic strategic alliance relationships.
- To relate the influence to the attainment of the supply chain objective.

1.3 Scope and Boundaries of the Research

For the sake of simplicity of the analysis, the top five contributing attributes of the strategic alliance's success are critically selected in the literature review and are identified as 'critical success factors' in the proposal. Hence, the scope of the research is limited to the study of the influence of the inter-firm investments on the key critical success factors of dyadic strategic alliance relationships in supply chains. From a philosophical point of view, the research is limited to the ontological and epistemological beliefs of the researcher. The research is bound to be completed in 9 months, from October 2019 to June 2020.

1.4 The Importance of the Research

The research is important for three reasons. Firstly, it contributes to the existing discipline knowledge of both supply chain management and inter-firm relationship management. Secondly, It assists organizational decision making on managing strategic alliance by adding insights into the inter-firm investments. The assistance is likely to improve organizational performance from managerial and shareholder point of view. Thirdly, conclusions are expected to <u>cool-off</u> buyer-supplier negotiation and re-distribute negotiating power <u>equally</u> throughout the supply chain which is gradually inclining towards the buyer side from past years due to customer focus. Redistribution of negotiating power is supposed to direct the focus of the supply chain participants to achieve the supply chain objective which barriers silo mentality. This redistribution will also oblige to stop the exploitation of the workers (generally from third world countries) working at very low unjustified wages at the beginning of supply chains or in between.

1.5 Research Method Overview

This research is qualitative research with the inductive approach. The research methodology aligns with constructivist and interpretivist position of ontology and epistemology respectively. The data collection methods selected for this research is interview and will be analysed by qualitative analysis methods. The researchers selected research method aligns with research questions and the researcher’s beliefs. The research will be conducted under ethical considerations and will be credible as far as the methods are considered.

1.6 Flow and Contents of the Remaining Chapters

The following chapters are logically aligned and integrated along with a critical analysis of the existing knowledge of the subject. The next chapter critically reviews the existing literature related to the research question and synthesizes it to justify the identified research gap. At its end, a conclusive conceptual model of the topics reviewed is presented. The discussion flows to the methodology chapter, where analysis of alternative research methodologies is done in the beginning and follows by a considered selection of one. After that, the research design is proposed, and the chapter is ended by with ethical aspects of this research.

Following research methodologies, the chapter of data analysis is presented to give an overview of the data gathered, and its synthesis to extract required information. The outcomes are explained in depth at chapter's end. The outcomes are further explained and related to literature review in the succeeding chapter-discussion. At the final chapter, the research concludes its finding and the discussion ends with the elaboration of the original contribution of the research.

2 LITERATURE REVIEW

2.1 Introduction

When the raw material is transformed into a consumable product, it goes through various processes that include: mining, manufacturing, packing, transport, and storage. The journey of raw material to the consumable products can be referred to as its supply chain. The supply chain is an umbrella term that includes the processes and the participant companies performing them. The management of this supply chain accounts for strategic coordination of the business functions and its participants in order to improve the long-term performance of the whole supply chain and its components. This management function of the business is regarded as supply chain management or SCM (Mentzer, DeWitt, Keebler, Min, Nix, Smith and Zacharia, 2001). Studies have shown that SCM is seen as a way to achieve competitive advantage these days and considered as the backbone of business organizations.

Since SCM is so important, the literature review aims to justify the identified research gap to be filled by undertaking research, through which value can be added to the existing knowledge. The approach to justification is a critical analysis of the previous literature on related topics. The route to the presentation of a research gap starts with identification and understanding of the supply chain management objectives. Following that strategic alliances are explored, and the meaning of investments is understood. Synthesis of the literature is performed along with the discussion of new related topics to provide flow and continuity. This results in the identification of research gaps and a conceptual model is presented for better understanding. The literature review ends with a short summary of key points.

2.2 Supply Chain Management Objective

Maximizing the generated overall value should be the SCM's objective (Chopra, Meindl & Kalra, 2012, p. 3). The keyword to address is 'overall' which does not limit itself to only the internal supply chain but rather considers the extended one. In other words, the supply chain should aim to increase the value generated (supply chain surplus) throughout the process from scratch to the consumable product. The supply chain surplus (generated value) is the cost incurred in fulfilling the demand (supply chain cost) subtracted from the amount that customer is willing to pay (Customer Value) (Chopra, Meindl & Kalra, 2012).

Supply Chain Surplus = Customer Value – Supply Chain Cost

Supply chain surplus (Fig. 2.1) is depicted in a pie chart where A, B, C, D, and E, are the firms constituting the supply chain. The overall size of the cake is the supply chain surplus of the supply chain and the pies represent the supply chain surplus of the participants. Due to individual ownership of the components in the supply chains, owners try to increase their share of the complete supply chain surplus. This silo mentality limits the expansion of the cake that creates a hurdle to meet supply chain management objectives (Chopra, Meindl & Kalra, 2012).

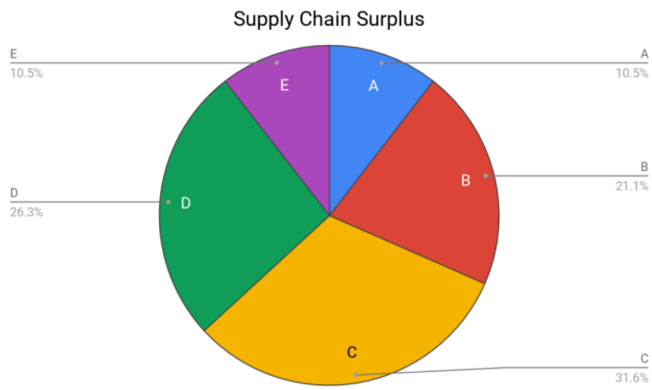


Figure 2.1: Supply Chain Surplus

In order to diminish the above-discussed silo-mentality, logistics as a core of supply chain management has evolved to externally integrated business functions (1990 onwards) with an objective of maximizing core competency that results in producing customer value and harmonious relations (Agarwal, 2013). Since external logistical integration increases customer value, it therefore supports the achievement of the SCM objective. This integration of the participants in the supply chain can be incited by a strategic alliance (Hertz, 2001). The definition of strategic alliance and how it promotes integration along with its characteristics is discussed in the following section.

2.3 Strategic Alliance/ Vertical Integration

Strategic alliances are synergetic managerial structures of two or more organizations that use assets and administrative arrangements of each other to enjoy benefits of a vertical integration (Inkpen, 2005). Strategic alliance in supply chains can be formed between two or more participants, although the research limits itself up to dyadic buyer-supplier relationships. Strategic alliance promotes integration between firms by optimizing management of information flow, material flow and cash flow in a supply chain in order to increase customer value and decrease supply chain cost (Contractor and Lorange, 1988; Gulati, 1998; Harrigan, 1986; Hennart, 1988, 1991; Inkpen, 1995a, 2000; Kogut, 1988; Osborn and Hagedoorn, 1997; Peterson, 2001). In other words, the strategic alliances should aim to increase the overall supply chain surplus (SCM objective).

Accounting benefits of a strategic alliance are needed to develop these relations in the recognized firms within the supply chains. However, these firms do not completely understand alliance management after implementation (Smith and Barclay, 1997). This often results in disputes and ultimately failure of the alliance. So, the identification of the success factors of the strategic alliance is a key component of this research.

Investigation of the critical success factors of the strategic alliance has concluded a determination of five factors. First, trust is essential for sharing critical information as there is interdependence between partners to satisfy common goals (Brouthers, Brouthers, and Wilkinson, 1995; Day, 1995; Spekman, Kamauff, and Myhr, 1998; Wilson, 1995; Whipple & Frankel, 2000). Secondly, motivation and resources are provided to alliance activists by senior management support (Spekman et al., 1998; Whipple & Frankel, 2000). Thirdly, a common and clear vision/goal is a must for an alliance to be successful (Spekman et al., 1998; Wilson, 1995; Whipple & Frankel, 2000). Fourthly, the partner must have the ability to meet performance expectations regarding the execution and evaluation of the strategic alliance goals (Day, 1995; Wilson, 1995; Whipple & Frankel, 2000). Fifthly, planning and working together in a result-oriented way is referred by a partner's compatibility which is critical to alliance's success (Brouthers et al., 1995;

Whipple & Frankel, 2000). Table 2.1 summarizes the critical success factors of the strategic alliance in the matrix form.

	Trust	**Senior Management Support**	**Clear Goals**	**Ability to meet Partners' Expectations**	**Partners' Compatibility**
Day (1995)	*			*	
Spekman et al (1998)	*	*	*		
Wilson (1995)	*		*	*	
Brouthers et al (1995)	*				*
Whipple & Frankel (2000)	*	*	*	*	*

Table 2.1: Critical success factors of strategic alliance

Apart from the above discussed critical success factors, various *collaboration tools* are used to strengthen the alliance, among which holding equity in a partner's firm is popular. Such strategic alliances are termed as equity strategic alliances or *keiretsu* in Japan. Another tool is the revenue sharing model in a strategic alliance where revenue is shared between partner firms from the revenue generated from end sales. Both the tools are critically analysed in the subsections of the next section that starts with an introduction of investment.

2.4 Inter-firm Investments

Investing is bringing capital to initiate, to drive or to broaden a project. Purchasing a resource with an aim to increase its value over time is also investing. Generically, all the steps aimed to generate money or value can be referred to as 'investment' (www.investopedia.com, 2009). Thus, an equity strategic alliance is a typical example of inter-firm investment and examined in the first subsection. However, investment is not bound to traditional methods of buying equity. Selling goods at cost price in return for a share in the revenue generated from further sales in supply chains should also be regarded as an investment which happens in revenue sharing contract. Hence, essentially, revenue sharing contracts should also be regarded as a strategic alliance (long-term) that associates inter-firm investments. Such contracts have been studied in the second subsection of this section. On the other side, outsourcing the manufacturing unit is a key strategic decision for a company. Thus, it is suitable to refer to the relationship between a company and the firm, to which manufacturing is outsourced, as a strategic alliance. Generally, companies from developed countries outsource manufacturing to the companies in developing countries, due to low manufacturing cost in those developing countries. In addition to that, financial and managerial support from the outsourcing firm to the outsourced firm is a common practise. The third section is dedicated to further discuss this type of relationship.

Theoretically, there are three possibilities in which investments can take place in a dyadic relationship in the supply chain. First, when buyers and suppliers invest in each other's businesses. Second, when a supplier invests in the buyer's business. Third, when a buyer invests in the supplier's business. All three cases are explored in the fourth subsection and associated with ongoing practices.

2.4.1 Equity Strategic Alliance/ Keiretsu

To reiterate, equity strategic alliance is a special type of strategic alliance when a firm holds equity in its partner's firm. It usually involves both the partners to invest in each other. The noticeable benefits of equity strategic alliances from previous literature are: companies have access to assets, resources, and capacities (Barney, 1991; Kale & Purunam, 2004; Kogut & Zander, 1992; Teece, Pisano, and Shuen, 1997); participants have aligned interests (Gulati and Singh, 1998; Kale & Purunam, 2004; Pisano, 1990); and partners have better control and coordination between each other (Kale & Purunam, 2004; Tushman & Nadler, 1997). The point worth noting among the benefits is that inter-firm investment helped align partners' interests, which is one of the critical success factors (clear goals) of the strategic alliance and sharing resources/assets is also an indication of high trust. Similarly, the last benefit, 'better control and coordination' refers to the partner's compatibility (refer to table 2.1). One more example is analysed in the following section.

Keiretsu: Supply chain management concepts are also being practiced by the Japanese via keiretsu relationships. Keiretsu is a network of interconnected organizations, many of which hold equity interests. Thus, it is a typical example of an equity strategic alliance. However, when keiretsu is practiced in supply chains, it is referred to as supply keiretsu (Ellram & Cooper 1993). Toyota is perceived to have the biggest supply keiretsu in the world and has been crediting the technique for its success (McGuire & Dow, 2008). The other company that have supply keiretsu is Honda, which is also a successful company and Toyota's competitor. Outside of Japan, Virgin Group (UK) and Tata Group (India) also have such keiretsu, both of which are highly successful companies at a global level. Keiretsu has often been considered as a key reason for Japan's tremendous success in global competition (Sakai, 1990; Faltermayer, 1992; McGuire & Dow, 2008). *Again, benefits of supply keiretsu related to the critical success factors of the strategic alliances identified in previous literature are: encourages co-ordination* (Dyer & Singh, 1998; McGuire & Dow, 2008; Tabeta & Rahman, 1999); and *managerial assistance* (McGuire & Dow, 2008). Table 2.2 summarizes the benefits of an equity strategic alliance / Keiretsu associated with critical success factors of an alliance found in previous studies.

	Trust	**Senior Management Support**	**Clear Goals**	**Ability to meet Partner's Expectations**	**Partner's Compatibility**
Kale & Purunam (2004)	*		*		*
Gulati and Singh (1998)			*		
Pisano (1990)			*		
Tushman & Nadler (1997)					*
McGuire & Dow (2008)		*			*
Dyer & Singh (1998)					*
Tabeta & Rahman (1999)					*
Barney (1991)	*				
Kogut & Zander (1992)	*				
Teece et al (1997)	*				

Table 2.2: Benefits of equity strategic alliance/Keiretsu found in previous literature linked with critical success factors

Since supply keiretsu is found in very successful strategic alliances, rationale connects inter-firm investments to the critical success factors of the strategic alliance. In addition to that, evidence found in the previous arguments has also supported the rationale. Though, as seen in table 2.2, previous studies lack dedication to the proposed direction for this research. This creates an opportunity for further investigation of the influence of investments on critical success factors. However, equity strategic alliance (and keiretsu) are one of the possible three theoretical cases, when buyer and supplier invest in each other.

2.4.2 Revenue Sharing (RS) Contract

Before discussing the successes of Revenue Sharing (RS) Contracts, it is important to understand the definition of RS Contracts and the reason to consider it as a strategic alliance. The RS Contract has been elaborated by Cachon & Lariviere (2005) as "given a single supplier and retailer it coordinates the supply chain and arbitrarily divides the resulting profits for essentially any reasonable revenue function. The supplier sells at a wholesale price below their production cost, but their participation in the retailer's revenue more than offsets the loss of sales." This definition, when compared with the definition of strategic alliance (Section 2.3), justifies the contract to be a strategic alliance using two arguments. First, assets should be used by a partner in a strategic alliance and in the case of an RS Contract, the supplier is indirectly allowing the buyer to use his/her assets by selling at a price below production cost. Secondly, RS Contracts and strategic alliances are both long term managerial collaborations. Hence, RS Contracts should be regarded as strategic where inter-firm investment takes place as discussed in the introduction of Section 2.4.

Considering RS Contracts, to be a strategic alliance involving investments, a few success examples are referred to show the influence of investment on success of a strategic alliance. In 1998, Blockbuster Inc. and Videotape rental stores were facing a demand related problem and came up with a solution of the revenue sharing model leading to a huge increase in their profits

(Altug & Ryzin, 2014; Cachon & Lariviere, 2001). In 2004, Bharti Airtel opted for a Revenue Sharing Contract with its equipment vendors to meet customer expansion rates of 100% a year and enjoyed unexpected success (Martinez-Jerez and Narayanan, 2007). Altug & Ryzin (2014) concludes that RS Contracts are highly successful in certain environments. However, one successful RS Contract case is sufficient to make one study of the influence of investments on critical success factors of a strategic alliance/RS Contract. Like Keiretsu, RS Contracts are also one type of three theoretical cases, when the seller invests in the buyer's business. In contrast to RS Contracts, in outsourced manufacturing, the buyer invests in the seller's business. This case is discussed in the following subsection.

2.4.3 Outsourced Manufacturing

Outsourcing is characterized as the acquisition of items or administrations from sources that are outside to the association (Lankford & Parsa, 1999). It is a key strategic decision for a company while designing the supply chain, to choose what value chain activity to outsource and what to perform inhouse (Kroes & Ghosh, 2010). Manufacturing activity is most commonly seen as outsourced activity in recent years. For example, Apple has been outsourcing the manufacturing of its products to Foxconn Technology Group, that is in China; a car at display in showroom in US is 63% manufactured outside the country (Hitt, Ireland & Hoskisson, 2017).

Since outsourcing manufacturing is a strategic decision, the relationship between the outsourcing firm and the manufacturing firm is accounted in a strategic alliance (Hitt et al., 2017). The outsourcing firm commonly seem to provide managerial and financial support when there is a gap between the manufacturing requirements and manufacturing capabilities in the manufacturing firm, provided the production firm lacks resources to bridge up. Thus, it is the case when the buyer invests in the supplier's business, that is the third and the last scenario of the three theoretical possibilities of inter-firm investments. The succeeding section sums up the previously introduced conceptual cases of inter-firm investments.

2.4.4 Three Theoretical Cases of Inter-firm Investments

To make a strategic alliance successful, critical success factors must be targeted by the associated collaboration tool if present. The collaboration tool being studied is inter-firm investments in this review. Inter-firm investment can theoretically take three directions in a dyadic buyer-supplier relationship as presented in the top half of Figure 2.2. First is (a) where a supplier invests in a buyer's business (example: Revenue Sharing Contract), second is (b) where a buyer invests in a supplier business (example: outsourced manufacturing) and third is (c) where a supplier and a buyer cross invest in each other's business (example: equity strategic alliance / Keiretsu).

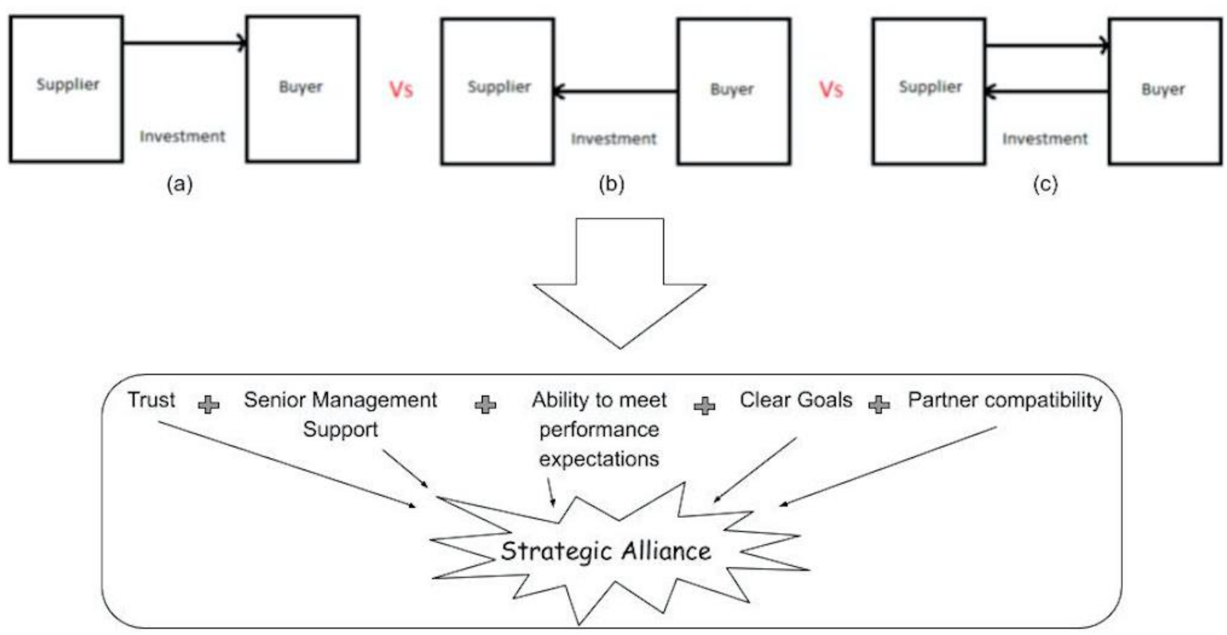


Figure 2.2: The three cases of inter-firm investments and their influence

The bottom half of the above figure represents five critical success factors leading to strengthening the strategic alliance. An arrow points downwards at the centre of the figure that links the top half and the bottom half of the figure. The arrow signifies the presence of influence of investments found/argued in the review on critical success factors of the strategic alliance. This connection which is presented by evidence and arguments in the literature review forms the basis of the research gap as discussed in the next section.

2.5 Research Gap

The identified research gap relates to critical factors of strategic alliance and inter-firm investments as a collaboration tool to strengthen the alliance which ultimately leads to increased supply chain surplus. The research gap is visually represented using Venn diagrams in Figure 2.3 on next page. The largest circle which encloses three other circles, is the broad topic area, i.e. supply chain management as it is where this research limits to. First of the three inner circles is the supply chain objective which directs the focus to increase in supply chain surplus (Section 2.2). The second circle of the inner circles is a strategic alliance that recalls critical success factors of a dyadic strategic alliance in supply chains. The last circle is inter-firm investments which represent three theoretical cases of inter-firm investments in supply chain relationships. The shaded area is mutual to all four circles and represents the influence of inter-firm investments in all three cases on critical success factors of a dyadic strategic alliance to increase supply chain surplus in supply chains (identified research gap).

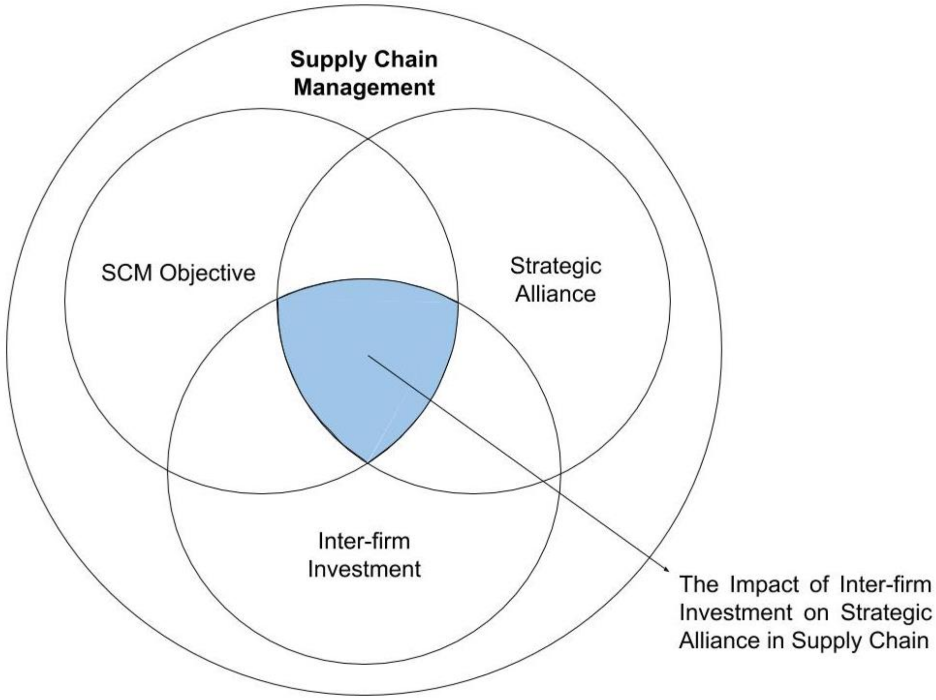


Figure 2.3: Research gap Venn diagram

2.6 Conceptual Model of Equity Strategic Alliance

Having found a research gap demands a conceptual model of the link between investment as a collaboration tool and critical success factors of a dyadic strategic alliance. Figure 2.4 fulfils the requirement of the conceptual model of an equity strategic alliance. The strategic alliance is depicted as a triangle pointing upwards as contributing to increasing supply chain surplus. The alliance is supported by five critical success factors as pillars. These factors/pillars are further immersed in a pool of inter-firm investments at the base for solidification. This model hypothesizes that inter-firm investment strengthens critical success factors that need to be figured out during this research. The next section sums up the literature review to get a generic view.

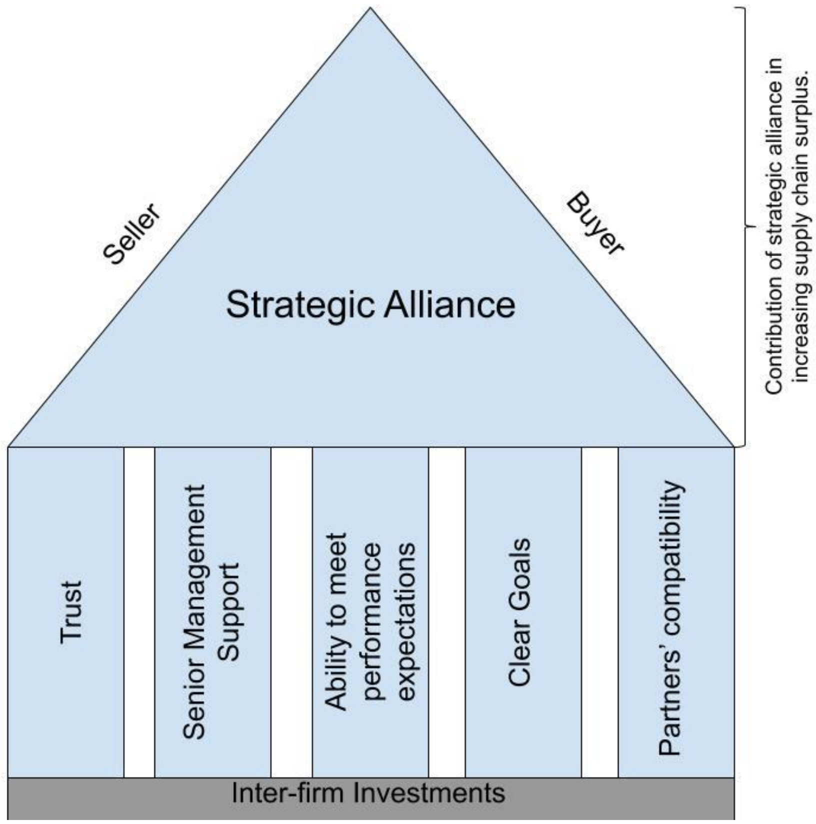


Figure 2.4: Conceptual model of an equity strategic alliance

2.7 Summary of Literature Review

The SCM objective is to increase the supply chain surplus. Strategic alliances in supply chains promote strategic fit to maximize value and minimize supply chain costs. The success of a strategic alliance depends on five factors identified as critical success factors. Inter-firm investments have been proven tool to promote strategic alliances. Equity driven strategic alliance (Keiretsu) is considered a key factor for the tremendous success of Japan in international trade. This success raises a need for inquiry about the relationship between investments and critical success factors of the strategic alliance. Revenue Sharing Contracts are also considered as an investment-driven strategic alliance. A seller invests in the buyer's business in RS Contract.

The three theoretical cases are possible according to inter-firm investment direction. The identified research gap is the influence of investments on the critical success factors of strategic alliance in all three possible cases. A conceptual model is presented to represent the possible relation between investments and critical factors. The discussion is now taken to another major aspect of this research that touches the planning part in the following chapter.

3 RESEARCH METHODOLOGY

Identification of the research gap in the literature review should ideally be followed by determining an appropriate research methodology to investigate this gap. The research methodologies presented in this chapter have a pattern. Initially, topics are critically analyzed and followed by their alignment with this research. The discussion starts with reiterating the research question in other representations to have a clear view followed by the analysis of research methodology which seemed important prior to selection of it. After that, focus redirects to the complete explanation of the research design in detail. The planned measurement technique and associated analysis are outlined following the research design. Ethical aspects are finally reviewed in the second to last section and the chapter ends with the determination of reliability and validity of the research methods in the critical review section.

3.1 Research Question

The research question is aligned with the research gap that is identified in the literature review (Section 2.5). Table 3.1 represents the same research gap in a matrix form where the critical success factors are put in five columns and three theoretical cases form three rows. Each cell represents a question. For example, the cell attributed to trust and buyer to seller investment case raises a question about how trust between both partners will be influenced by the inter-firm investment from buyer to seller in a dyadic strategic alliance in supply chains. There is 15 (5*3) such as blank cells that needed to be filled. As seen in the literature review (Section 2.4.1), some of these cells can be filled with prior research but with insignificant number of supporters. Thus, the researcher wants to study all the represented relationships while doing this particular piece of research.

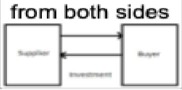
	Trust	Senior Management Support	Ability to meet performance expectations	Clear Goals	Partner Compatibility
Buyer to Seller 					
Seller to Buyer 					
X-Investments from both sides 					

Table 3.1: Research question

3.2 Ontological and Epistemological Perspectives

Ontology is a branch of philosophy that concerns the belief about reality. It studies the existence and the nature of reality (Grix, 2002). Reality is perceived as absolute by objectivists; and derivative of subjectiveness by constructivists. The former philosophical position is known as *objectivism* and the latter is referred to as *constructivism* (Bryman & Bell, 2015). Though business and management study deals with social factors, both, objectivism and constructivism perspectives are equally undertaken in business and management research. I believe that reality has unlimited dimensions subjective to the observer and the analysis. The identified research gap constraints itself to the critical success factors which are derived from research having a constructivist position. So, I choose constructivism as my ontological position.

Another philosophical aspect is *Epistemology,* which is a belief about what information can be regarded as knowledge. Grix, J (2002) concerns it with how an acceptable knowledge is acquired. Knowledge is a derivative of information which is further derived from data by proposing logic at both analyses (Ackoff, 1989). So, knowledge is a function of data and logic as well. Data can be quantitative and qualitative in nature, but logic has its basis on ontological beliefs. The results produced by applying different logic on the same data would reveal alternate dimensions/knowledge of reality.

The subjectiveness of the knowledge to logic resulted in alternatives to the research approach. The methods used in natural sciences to derive knowledge in any other discipline are supported by positivists and referred to *positivism.* They usually believe in the absoluteness of reality. On the contrary, the *interpretivism* point of view suggests using other investigation strategies than used in natural sciences while doing social science research (Bryman, 2001). For example, the philosophy discipline, which is being discussed, has developed without using methods of natural science. However, there was a time when natural science methods dominated the research in almost all disciplines but later argued by scholars investigating research methods of social sciences which raised the importance of interpretivism derived research in business and management studies. Since I believe in subjectiveness, I believe in interpretivism and would use research methods suitable for my investigation unconstrained by natural science methods.

Table 3.2 puts more light on positivism and interpretivism perspectives of epistemology. It is a comparative summary of both perspectives in terms of the aspects of the research approach. My research would require human interactions with meaningful and engaged subjects for the data collection whose perspectives should be concerned. Since the research gap will be filled by a theory to be induced, interpretivism is appropriate. In addition to that, the nature of the result would be a causal and interpretive understanding of an alliance. These arguments support my choice of interpretivism position.

	Positivism	**Interpretivism**
Basis	Natural Science	Human interactions
Approach to social science	Explanation and generation of human behaviour	Causal explanation and interpretive understanding of human behaviour
Subject matter	Nature	Social reality
The subject's action	Inanimate and unmotivated	Meaningful and engaged
Data collection	Observation, codification and measurement	Comprehended and perspective of the human subjects
Research and theory	Mostly Inductive	Strong inductive learning

Table 3.2: Epistemology (Bryman and Bell, 2015)

All in all, the research strategy is a combination of ontological views, epistemological perspectives, methodologies and methods which are guided by the researcher's beliefs and nature of the research question. The methodologies reviewed in the next section should ideally align with the research strategy.

3.3 Appraisal of Alternative Research Methodologies

Research can be inductive and deductive in approach. The inductive approach is undertaken to induce a theory and deductive approach to test a theory in alternative constraints.

The former is suited by qualitative methods of research and the latter is supported by quantitative methods of research (Bryman, 2001). Since the answers to my proposed research questions propose a linking theory that connects two already studied concepts (critical success factors and inter-firm investments), this research is regarded to be inductive in approach. Bryman and Bell (2015) represent the inductive approach as in Figure 3.1. The representation gives a generic view of the associated approach which starts with an inquiry, followed by empirical investigation and reflection and ends in a theory induction.

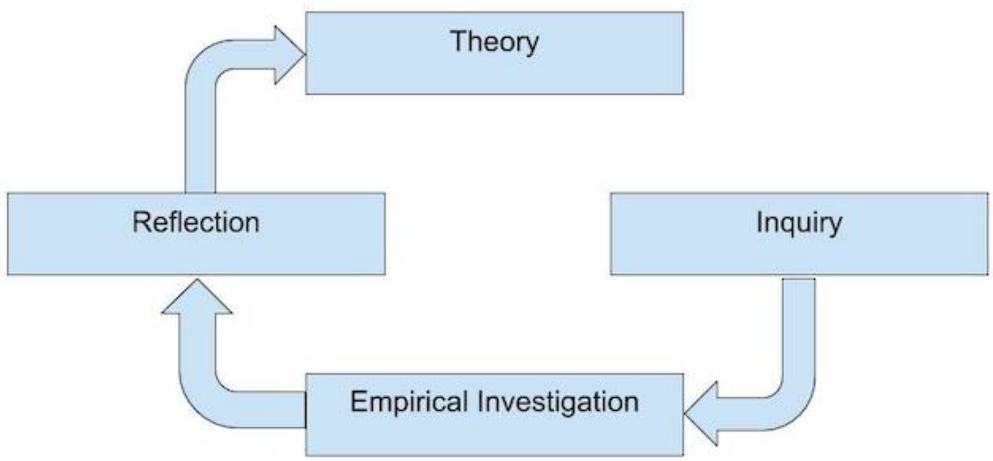


Figure 3.1: Inductive approach adopted by Bryman and Bell (2015)

For induction of theory, qualitative methods of research are appropriate which justify observation theoretically by studying individuals, groups, or case studies in depth. The approach is a homogeneous exploration that emphasizes on personal thoughts of the individuals being studied to induce a theory. It is aligned with constructivism (ontological) and interpretivism (epistemological) perspectives which are also my undertaken positions for this research. Qualitative methods commonly attribute to a spectrum of data assemblage and investigation methods that use calculated inspect and unrestricted and semi-organized conferences (Dudwick, Kuehnast, Jones and Woolcock, 2006). Thus, helps to establish more consequences via radical analysis. However, due to the lack of objectivity, verifying the results may be challenging. The qualitative approach also requires skilful interviewers and the interviewing process may be time-consuming (refer Figure 3.2).

Whereas for deduction of theory, quantitative methods of research are appropriate which forms a linear process from hypothesis to data collection, analysis, and results. The approach produces tangible results that are generalized to approve or disprove the hypothesis (Bryman, 2001). It instinctively attributes to regulated inquiries that are conducted to a person or a group, which are commonly analyzed by irregular inspect (Dudwick et al., 2006). The data is collected in the form of numbers and converted into a digital format to be read by a computer after careful record and verification of information by a quantitative researcher (Neuman, 2006). It is aligned with objectivism (ontological) and interpretivism (epistemological) perspective which contradicts my philosophical positions. However, the approach does not account for human perceptions and lacks a description of in-depth experience. Figure 3.2 summarizes the strengths and weaknesses of qualitative and quantitative methods which are elaborated in the discussion.

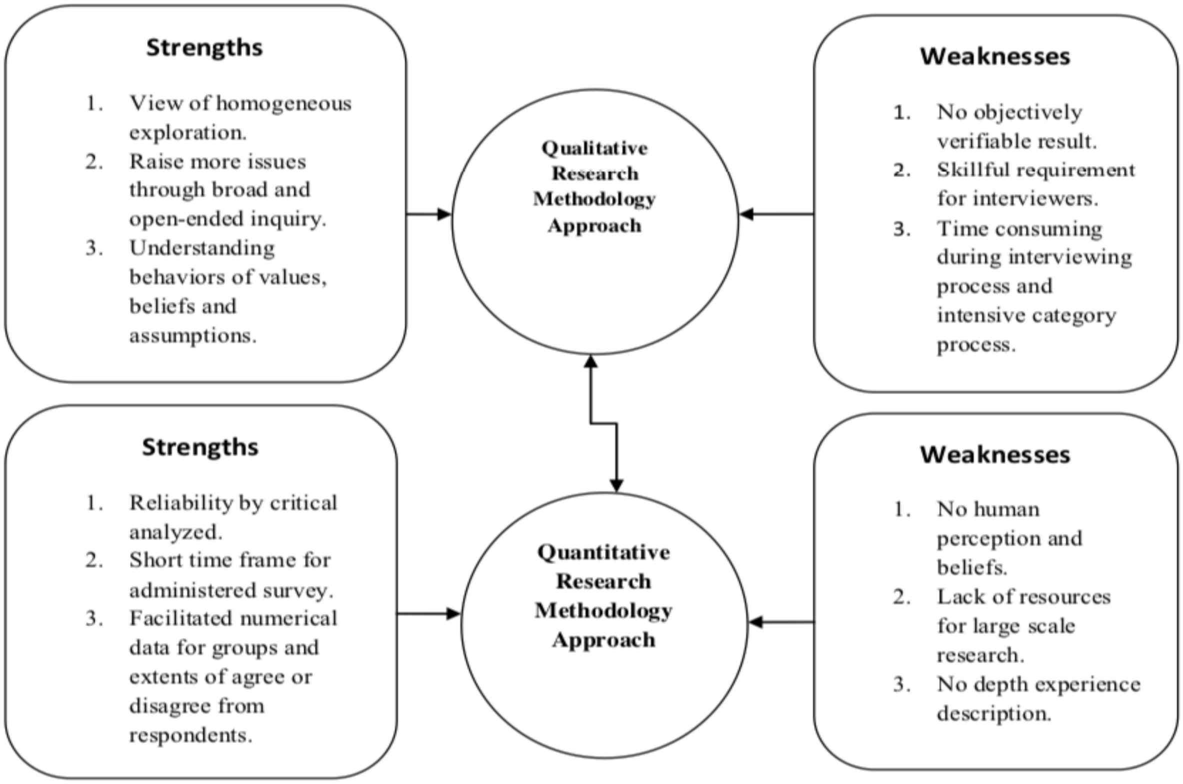


Figure 3.2: Strengths and weaknesses of quantitative and qualitative approaches (Choy, 2014)

The research methods are not limited to qualitative and quantitative methods, but mixed methods are also in practice. The results of business-like models are studied by mixed methods by combining qualitative and quantitative methods within distinct aspects of the analysis technique (Tashakkori & Teddlie, 2008). Data are integrated during interpretation by qualitative analysis generally followed by quantitative analysis. Induction and verification of results are infused in such projects. The mixed-method approach is comparatively straightforward due to clear, different phases and simpler to portray than coexisting strategies. Although, it is very sluggish when both approaches are equally prioritized and considered (Terrell, 2012). My research has a time constraint of nine months and qualitative analysis demands a significantly large amount of quantitative data which restricts me to consider mixed methods for my research. The next section summarizes selected research methodology.

3.4 Selection of Research Methodology

To reiterate, the research question concerns the influence of inter-firm investments on the critical success factors of the strategic alliance (refer 3.1). A critical analysis of philosophical perspectives and the alternative research methods have already been conducted in the 3.2 and 3.4 subsections respectively. Along with the analysis, my selection along with the rationale had also been embedded in that discussion. Table 3.3 summarizes my selection of research methodology.

	Undertaken	Rationale
Ontology	Constructivism	• Personal belief; • Critical success factors derived from constructivism position.
Epistemology	Interpretivism	• Personal belief; • Social reality; • Aligns with my ontological position.
Theory and Research	Inductive	• Research induces linking theory.
Methods	Qualitative	• Soft data; • Aligns with the inductive approach; • Aligns with my philosophical position.

Table 3.3: Selected research methodology

3.5 The Research Design

The research design acts as a blueprint for the collection, measurement, and analysis of data. This section is divided into three subsections in order to elaborate on the research design of this research. The first subsection outlines the research design considerations and my selection along with the rationale for selection. The second subsection focuses on the explanation of the data collection process for this research. The third subsection proposes the plan for measurements and associated analysis for this research.

3.5.1 The Research Design Considerations

Keeping the research methodology and research objective in mind, descriptors of a research design are explained and considered from the options for this research. Table 3.4 categorizes a design of research into eight descriptors. From the viewpoint of the research objective, research can be formal or exploratory. A formal study is to verify a hypothesis or answer research questions. The exploratory study concerns the development of hypothesis/questions for future research. This research is clearly formal as it tends to answer the posed research questions. Selected options are highlighted by an underline in the Table 3.4.

Among methods of data collection, monitoring and communication are the options. Monitoring refers to the observation of activities and communication refers to collecting data from the subjects via interviews or emails. The qualitative approach demands human interactions. So, communication is preferred over monitoring.

Category	**Options**		Rationale
Question crystallization	<u>Formal</u>	Exploratory	The research objective is to answer the research question
Data collection	Monitoring	<u>Communication</u>	The qualitative approach demands human interaction.
Control of variables	Experiment	<u>Ex post facto</u>	Constraints of the research question
Purpose	Descriptive	<u>Causal</u>	Relationships of variables
Time	<u>Cross-sectional</u>	Longitudinal	Time constraint
Scope	<u>Case</u>	Statistical Study	Qualitative study
Research Environment	<u>Field</u>	Laboratory	No mathematical models for intangible variables
Participants	<u>Routine</u>	Modified	The effects of investments are visible in the long term

Table 3.4: Research design considerations (adapted from: Blumberg, Cooper & Schindler 2008)

With reference to the power of a researcher to manipulate the variables under supervision, experimental and ex post facto are the options. In an experimental condition, the researcher has control over variables. Research can only report the ongoing/past position in ex post facto condition. This research chooses ex post facto due to constraints by the nature of the research question (strategic).

The purpose of research can be descriptive or causal in nature depending on research objectives. Descriptive study concerns with finding each and every possible information. However, the causal study deals with relationships of variables. Certainly, this research is causal as relationships of variables are to be examined.

According to the time dimension, research can be carried out at once referred to cross-sectional study or observations can be repeated over to monitor change referred to as longitudinal study. This research would be a cross-sectional study due to the time constraint of 9 months. In addition to that, the influence of investment is supposed to take place over the long term.

From the topical scope of view, statistical studies are breadth-oriented studies which are suitable quantitative studies. They emphasize on testing a hypothesis quantitatively. Whereas case studies are depth-oriented studies and are suitable for qualitative studies. They depend upon a complete textual analysis of some number of case studies. This research would use case studies as of its qualitative nature of study.

The data can be extracted either from a real and unmanipulated environment or from laboratories where conditions are controlled via simulations. Simulations are often used in research associated with operations. This research would be conducted on real or field conditions as critical success factors of the strategic alliance are intangible and cannot be converted to mathematical models.

The perception of participants can influence the results of the study. The environment can be actual or modified. Ideally, participants should not deviate from their routines when they figure out that research is being conducted, especially when actual routine is desired. The researcher would be careful about the participant's perception to maintain the actual routine to collect data as the effects of investment are visible in the long term.

3.5.2 Data Collection Approach

This research will rely on primary data from the original sources because secondary data, which should concern the research question, is not significantly present. Primary data also aligns with the qualitative and inductive nature of this research as human attitudes, motivations or behaviour cannot be gauged from secondary data (Ghauri and Gronhaug, 2005). The demerit of primary data collection is the involvement of cost and time. To protect the reliability and influence of the primary data, proper procedures and analysis methods need to be utilized (Ghauri and Gronhaug, 2005).

To align with the research methodology, the interview is the selected form of communication. The interview will be unstructured to explore the data on common understandings, motivations, attitudes, and feelings of the people which suit my interpretive epistemological belief (Arksey and Knight, 1999; Bryman and Bell, 2015). Interviewees will be carefully selected to get insights into the influence of investments on critical success factors and their constructs will be understood. The maintenance of the confidentiality of the information will be the researcher's responsibility and will be taken care of.

The interview process shall be started with an explanation of research objectives and interviewees' rights to participate or withdraw at any time as depicted in Table 3.5. The permission will be taken to record the conversation followed by explaining the research process and confidentiality. The interview will be conducted by carefully listening about the main theme to the respondent until the silence to extract all possible information. The interview will be conducted with complete sincerity and will end up by follow up questions and summing up the main points by the interviewer.

5min	Introduction	Explanation of research objectives; interviewee rights
5-7min	Context	Role; Responsibility; Permissions
30-40min	Body	Main themes
5-10min	Summary	Follow up questions; Summing up

Table 3.5: The interview process

3.5.3 Planned Measurement Technique and Associated Analysis

After the collection of qualitative data through interviews, the data will firstly be categorized as per requirement which is empirical level. Following that the data will be operationalized by describing the connection of observations and thoughts about the data and working ideas which forms the basis of conceptual definition and constructs which is depicted in Figure 3.3 (Neuman, 2006). The operationalized data will further be conceptualized to constructs by redefining the working ideas and concepts. The researcher will, at last, theorize the relationship between two constructs. This is an indicative measurement process that aligns the undertaken research methodology.

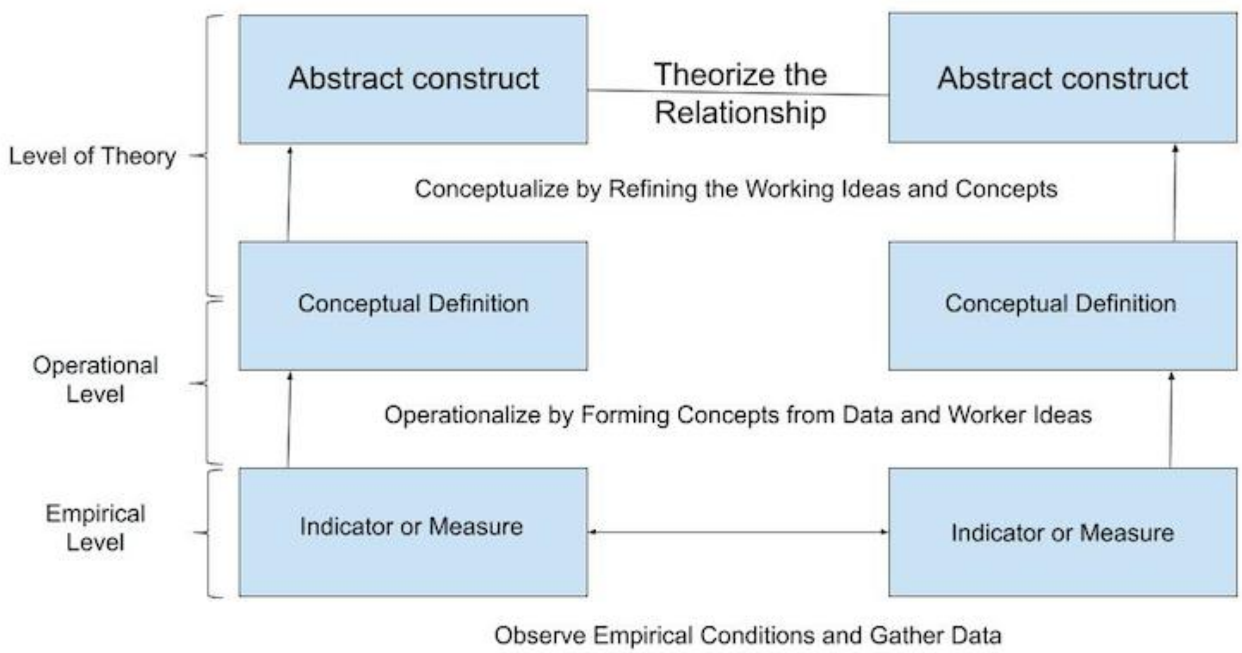


Figure 3.3: Indicative measurement process adapted from Neuman (2006)

The qualitative data analysis process is not a fixed linear approach but includes interrelation and simultaneous happening of data collection, data analysis, and report writing. Creswell (2007) represents the approach by a data analysis spiral as in Figure 3.4. The spiral acts as a complex machine where collected data is input and output is an account. The process includes management, reading, memo notation, description, classification, interpretation, representation and visualization of the data. Due to the qualitative nature of this research, the researcher will analyse the data using the above explained technique.

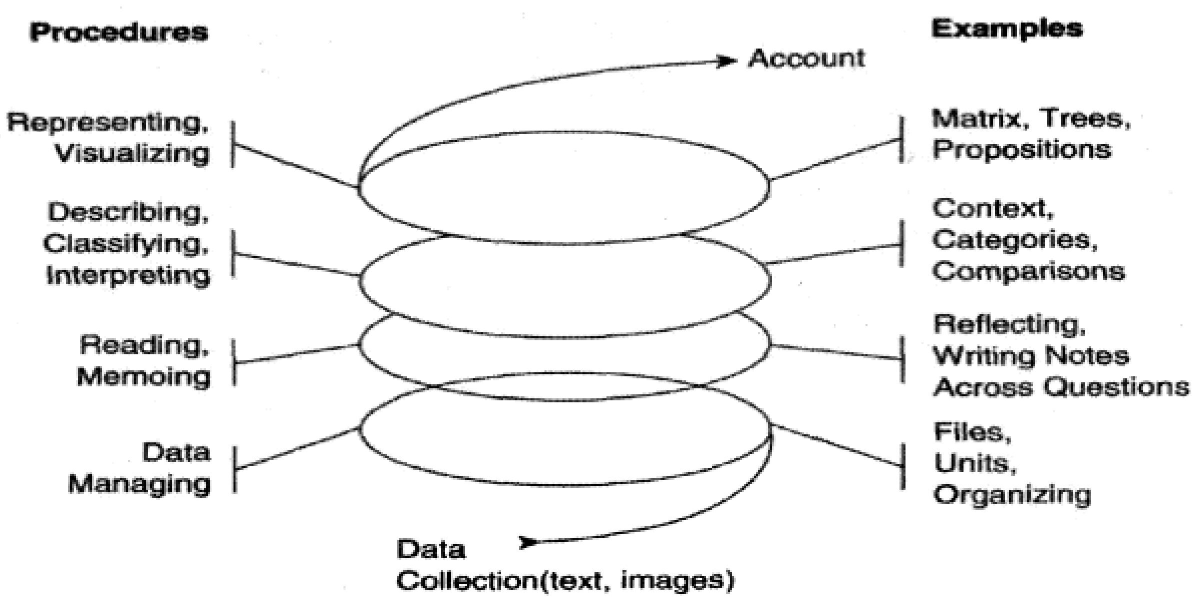


Figure 3.4: The data analysis spiral adapted from Creswell (2007)

3.6 Ethical Considerations

Since this research involves interaction with individuals and organizations, their prevention from any potential harm from research acts is the researcher's responsibility. This demands ethical behaviours that provide guidance for choices of morals while interacting with others (Cooper & Schindler, 2008). They are applicable to all parties involved in this research. Massey University's

Code of Ethical Conduct for Research, Teaching, and Evaluations Involving Human Participants guides these ethical treatments (Massey University, 2017), which involves the following considerations:

Respect for persons: All the participants of this research will be treated with respect regardless of their contribution. Respect will be the attitude of the researcher even when anyone decides to withdraw in between.

Minimization of harm: Harm may be physical or psychological damage. Psychological damage includes harm to anyone's dignity, reputation, or relationships (Massey University, 2017). The researcher strives to minimize any harm by identifying any potential stress that might take place during the interview session and discussing it with the research supervisor. The interview design and questions will be verified by the supervisor before their application.

Informed and voluntary consent: The individuals or organizations will be well informed about research objectives and methods with the invitation to participate. A separate section in the interview design is dedicated to explaining research objectives and methods to the interviewee along with the explanation of the rights to participate or withdraw anytime.

Respect for privacy and confidentiality: The data collected from respondents will be coded to ensure their privacy so that information of source remains hidden. The final step after the completion of data analysis would be to delete all interview records to guarantee confidentiality. Special care will also be taken about the security of the data while its management.

Avoidance of unnecessary deception: The researcher will ensure that the participant is clear about research objectives and methods before proceeding to his/her consent without any deception.

Avoidance of conflict of interest: At the current position, no potential conflict of interest is foreseen. If the emergence of conflict of interest is witnessed during research, the researcher will attempt to resolve/ avoid under the guidance of the supervisor.

Social and cultural sensitivity: The research objectives and data collection methods do not account for sensitivity to any society or culture.

Justice: The research aims to add value to the academic knowledge of the subject so that participants can also find its practical use. Thus, the research is likely to benefit all participants fairly.

3.7 Critical Review of the Chosen Research Methodology

All researchers strive for credibility, truthfulness, and believability in their findings. Research is perceived dependable when it is reliable and valid. However, perfect reliability and validity are not achievable practically. Reliability means consistency and validity means truthfulness (Neuman, 2006). These terms are usually associated with the quantitative approach and have rare use of the terms in the qualitative measurement approach (Neuman, 2006). Apart from the alignment of the selected research methodology and the proposed research design which supports the reliability and validity (or authenticity) of this research, some key aspects concerned with both the terms are explained in the following discussion.

Reliability: The relationship between qualitative data and researchers are believed to mature over time as it should be an evolving process (Neuman, 2006). This research will take data from various sources. These arguments make this research reliable, but my selected interpretive position does not support quantitative-positivist concepts of replication, equivalence, and subpopulation reliability. I believe such fixed standards used in natural sciences limit the growth of knowledge about the diverse social world.

Validity: For a qualitative researcher having a constructivism epistemological belief, there is no single truth but multiple dimensions of reality. Thus, validity is challenged by qualitative researchers and <u>authenticity</u> (being truthful) is opted for their research (Neuman, 2006). Authenticity accounts for fair, honest, and unbiased understanding from the viewpoint of the analyst (Neuman 2006). The authenticity of this research depends on the analysis of the accumulated data. Arguments used to the interpretation of the data should make a tight fit with the current understanding of the social world to increase the authenticity of this research.

4 DATA ANALYSIS

4.1 Introduction

Literature review and research methodology laid foundation to this research by giving its objective and plan. This chapter elaborates the execution/operational side of the research and can be regarded as core of the research report. The sections in this chapter are systematically ordered to make it understandable at ease. The chapter begins with giving an overview of the collected data that has details about participants general information, information about their company, their industry, and their country. The next section summarizes the empirical data as per the requirement of the research. Following that, the original data is synthesized according to appropriate methodology by using scientific measurement tools to extract quality information. At the end of the chapter, the extracted information/findings are explained and aligned to the objectives of the research.

4.2 Overview of Data Collected and Sample Coverage

4.2.1 Participant's Information

The data collection for this research had given an opportunity to interrogate 33 professionals. Also, to save time, to avoid distance travel, to minimize the expenses and to utilize the technology, the interview process was commenced through video conferencing. The selection of the participants was a critical decision and has involved specialists from supply chain, logistics, operations, and finance functions. Synthesis of responses to these fully completed questionnaires forms the basis of analysis and discussion presented in this chapter.

The duties of the participants varied from top management of supply chain and finance covering strategic level to middle management including planners, analysts and specialists covering tactical level and operations. Executive management constitutes about half of the participants those are Managers (46%) and Directors (9%) from Customer Relationship Management (CRM), Procurement, Finance, Logistics, Operations, Supply Chain Management, Supplier Relationship Management (SRM), Value Chain Management (refer Figure 4.1 and Table 4.1). They have been directly involved in the strategic decision-making and alliance management, which also covers the influence of cross-firm investments on the critical success factors of the alliance. The response from this wide range of experts provides essential input for the objected research. The titles of the participants have been grouped in Figure 4.1.

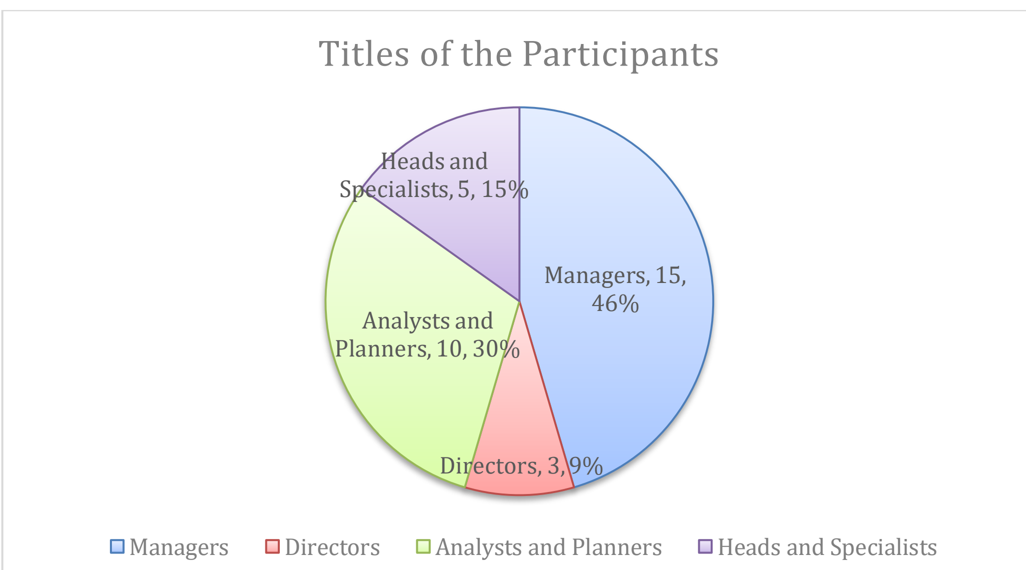


Figure 4.1: Title groups of the participants.

The remaining half of the participants constitute tactical and operational level management that includes Planners/ Analysts (30%) and Heads/ Specialists (15%) from Forecasting, Procurement, Operations Management, Inventory Management, Production Management and Supply Chain Management (refer Figure 4.1 and Table 4.1). These professionals have been continuously working in the domain of organizations strategy and with their organization's strategic partner. This group of participants added great value for the research input as verifiers of the response from the top management and helped providing insights of ground reality as well. Table 4.1 refers to the list of the participants along with their titles for summarization.

Title	**Total**
Business Analyst	2
Chief finance Officer	1
Customer Relationship Manager	4
Demand Chain Analyst	1
Director of Procurement	1
Finance Director	1
Finance Manager	1
Head of Procurement	2
Head of Operations	2
Inventory Planner	1
Logistics Manager	3
Operations Manager	1
Production Planner	2
Senior Procurement Analyst	1
Supply Chain Director	1
Supply Chain Manager	3
Supply Chain Planner	2
Supply Chain Strategist	1
Supplier Relationship Manager	2
Value Chain Manager	1
	33

Table 4.1: The list of participant's titles.

4.2.2 The Business Nature of the Companies

The inquiry about the role of participant's company in its corresponding supply chain led to the classification of the nature of their business in four different segments i.e. manufacturing, service, distribution (or wholesale) and retail. 10 (30%) of the participants reported their company to be engaged in manufacturing business. 4 (12%) provide services to other components of the supply chain. 11 (34%) works in Distribution Center or Wholesale business. Rest 8 (24%) identified themselves as retailers according to the activities of their businesses. The segmentation has been picturized in Figure 4.2 for the ease of reference.

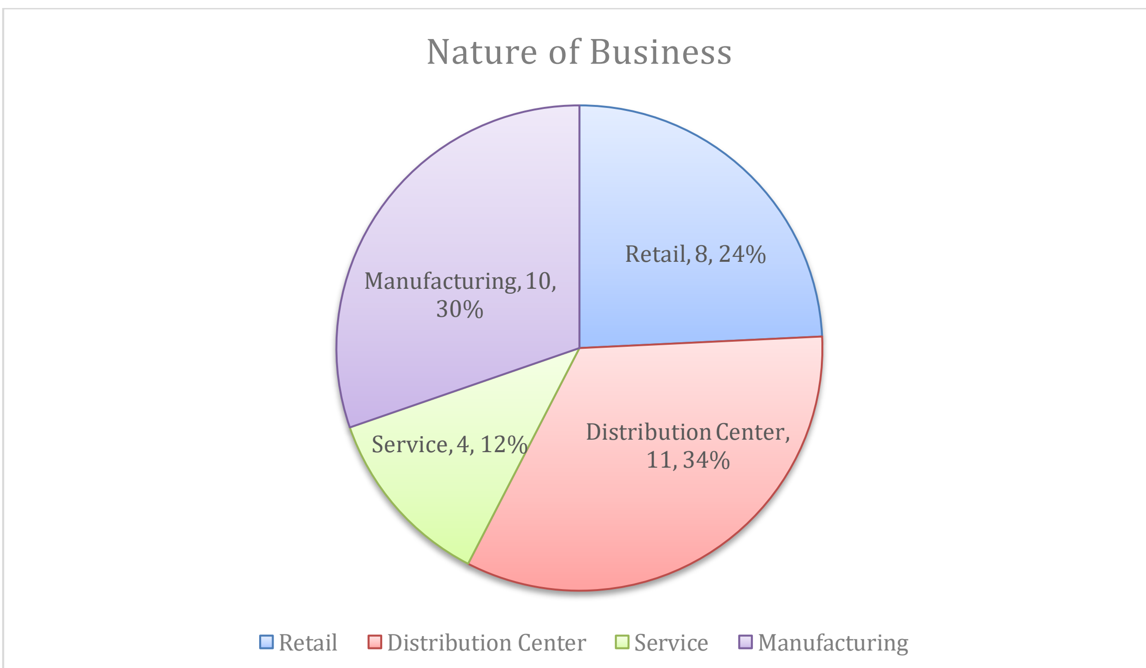


Figure 4.2: Nature of businesses

A supply chain involves a number of businesses to functions. These business play minor or major roles in different supply chains, irrelevant to the size of their businesses. All the segments (manufacturing, service, wholesale, and retail) discussed above are considered major components of a supply chain. The synthesis of the collected data from these components provides concreteness to the results of this supply chain-oriented research and hence increases reliability.

4.2.3 Industry and Nation of the Companies

The interview request for the intended data collection was sent to multiple companies in multiple countries. However, based on the responses received, the research has limited itself to India and New Zealand only. Furthermore, the data could be collected from 8 companies that are involved in 6 different industries which include Agriculture, Fast Moving Consumer Goods (FMCG), Textiles, Information and Communication Technology (ICT), Auto Components and Cement. This good range of industries helps in generalization of the findings. Table 4.2 summarizes the nature of the 8 companies and their associated number of respondents (from previous section) along with the industry and country they belong to.

Country	**Industry**	**Nature of Business**	**Respondents**
India	Agriculture	Distribution	4
		Manufacturing	5
	FMCG	Retail	4
		Distribution	4
	Textiles	Retail	4
	ICT	Service	4
New Zealand	Auto Components	Distribution	3
India	Cement	Manufacturing	5
Total	**6**	**8**	**33**

Table 4.2: Industries, nature of businesses and associated respondents

4.2.4 Investment Case and Size of the Companies

To reiterate, this research aims to analyse only those companies which have strategic alliances within their supply chain and have direct or indirect investment in their alliance partner's businesses. The direction of the investment in a dyadic strategic alliance has been categorized in three cases i.e. cross investment that is Buyer to Supplier and Supplier to Buyer (S $\leftrightarrow$ B), Supplier investing in Buyer's business (S $\rightarrow$ B) and Buyer investing in Supplier's business (S $\leftarrow$ B). The data gathered for this research is from the companies that have satisfied the qualification to fit in either of these three cases. Four of the eight companies qualify to have cross investments in their strategic partner's business. Similarly, two of the eight companies have invested in their customer's business (Buyer), and the rest two have invested in their supplier's business.

The overview of the data sources presented till now in this chapter is summarized in the Table 4.3 on the next page. It is essential to note that the data sources are a good fit for the objective of this research. Additionally, the data collection has been conducted so as to align with the proposed research methodology. This sample coverage provides a good mix of various major supply chain components in multiple industries and locations which further provides reliability and completeness to this research. However, the respondent companies are found to be relatively new to their competition and are small cap companies. These companies have deployed this strategy of strategic alliance along with investments as an experiment to compete and increase their market share. Thus, analysis of small cap companies acts as limitation to this research.

Investment Case	Country	Industry	Nature of Business	Number of Respondents
S ↔ B	India	Agriculture	Distribution	4
			Manufacturing	5
		FMCG	Retail	4
			Distribution	4
S → B		Textiles	Retail	4
		ICT	Service	4
S ← B	New Zealand	Auto Components	Distribution	3
	India	Cement	Manufacturing	5
Total	**2**	**6**	**8**	**33**

Table 4.3: Summary of the data source

4.3 Summary of the Empirical Data

After getting the general information of the respondents, it is critical to highlight the original data required for further synthesis to accomplish the research objectives. This section constitutes three sub-sections. The first section aims to know more about the setup of the respondent companies. The second section outlines the responses recorded in reference to the implications of inter-firm investments on five critical success factors of strategic alliance. The third section is dedicated to explore other implications of the investments.

4.3.1 Mode of Inter-firm Investments

As found in the literature review, the investment can be made directly or indirectly into one's partner company through multiple modes. To investigate the preferred mode of investment by the respondent's company, the participants were asked about how inter-firm investments have been made. It was found that six of the eight companies hold equity interests from their strategic partner and thus, accounted in equity strategic alliance (refer Section 2.4.1). Whereas the remaining two companies have agreed to share a portion of their revenue with their partner that is based on a Revenue Sharing model (refer Section 2.4.2). Figure 4.3 shows the chosen mode of investment by respondent companies.

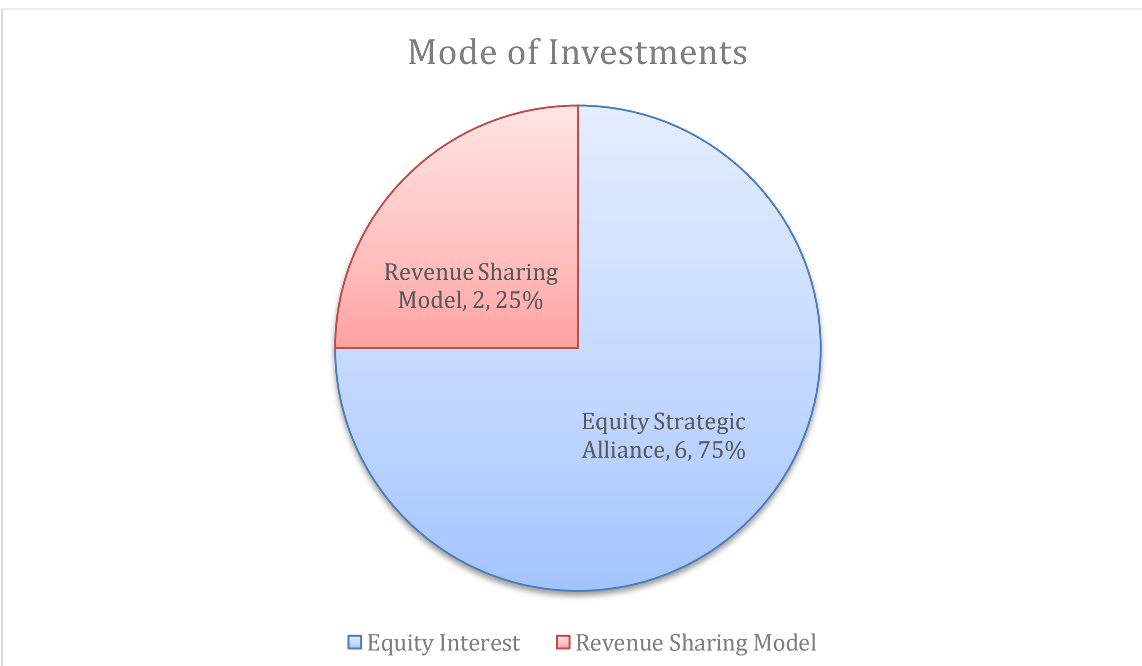


Figure 4.3: Mode of Investments by respondent companies

In addition to knowing about the modes of investments, the evolution of the status quo was important to understand. Therefore, the participants from the companies were asked the same. They were given three choices as investments were followed by strategic alliance, the strategic alliance was followed by investments and the investments were made along with the strategic alliance. The participants from five of the eight companies reported that investments were followed by the strategic alliance to further strengthen the alliance. In contrast to that, the participants from the remaining three of the eight companies reported Inter-firm Investments were the condition for the strategic alliance because they or their partner company chose to adopt a revenue sharing model. These responses helped the researcher to understand the purpose of companies behind making Inter-firm investments.

It was hypothesized that the inter-firm investments would influence the working environment in the investor company and the investee company. To verify this assumption with the respondents, the same question was asked with three choices as investor, investee, or both. It was surprising to know that all of the participants have chosen investee. This implicates that the direction of investment in a dyadic strategic alliance in supply chains is not important. It is major finding of this research that working environment in only investee company witnesses any change by inter-firm investments. The next section is dedicated to identifying those implications in the investee company.

4.3.2 Influence on the Five Critical Drivers of Strategic Alliance

As found in the literature review, the studies have concluded that a strategic alliance has five critical success factors and investments act as a tool to strengthen the strategic alliance. Therefore, the implications of investment that ultimately contributes to strengthening of strategic alliance are assumed to be found in the five critical success factors. Also, the findings discussed in previous section indicates that those implications are recorded in the investee company only. Thus, the participants were explained about critical factors and then enquired to list down those changes concerned with alliance activities in critical success areas that are seen after investments were made. After collecting all the responses, the final list was again sent to the participants to select all the responses they agree to. It was done because there was a possibility that they might have observed the implication but forget to record it on the list when asked first time. Below are the final and screened responses by participants against implications of the inter-firm investments on five critical success factors of the strategic alliance.

- **Trust – Has investee's trust in investor firm changed?**

There is a total of seven reflections on trust level recorded by the participants at their workplace. Firstly, twenty-nine out of thirty-three members have been straightforwardly offering their data to their alliance partner. Though (second), just eighteen consented to have conversations on their issues with the speculator firm. Thirdly, twenty-three members are resolved to keep their attitude professional and stable towards investor firm. In this manner, making their conduct progressively unsurprising towards the speculator firm. Fourth, the aims or intentions are unmistakably revealed in discussions with the partner firm by twenty-one respondents. Fifth, seventeen participants reported that the promises that are made to the partner are kept and fulfilled by investee firm. Sixthly, the investee firm also keeps the confidentiality of critical information by the investor firm according to twenty-six members. Seventh, investee firm is always involved in alliance decision-making as observed by thirty-two participants. Table 4.4 summarizes the list of the recorded trust benefits of the inter-firm investments on the strategic alliance.

Area of Improvements	**# of agreements**
Information is shared with investor firm	29/33
Problems are discussed with investor firm	18/33
Behaviour of investee firm is predictable by investor firm	23/33
Motives are communicated by investee to investor firm	21/33
Promises are kept by investee	17/33
Confidentiality of critical information is kept by investee	26/33
Involvement of investee in alliance decision-making	32/33
Total	**166/231**

Table 4.4: Implications on inter-firm investments on trust factor

- **Compatibility of the partner- Has compatibility of investee to investor firm increased?**

There is a total of seven observations in respect to compatibility of the strategic partner recorded by the respondents at their workplace. Firstly, fourteen of thirty-three participants found their companies had undergone philosophical changes in operations to match the operational philosophy of the alliance partner. Whereas (second), only five had witnessed efforts to make management style in their companies similar to the partner's firm. Thirdly, twenty-five considered the employees of the alliance partner as their team members. Fourth, nineteen found themselves cooperating on strategic issues with the partner firm. Though (fifth), only sixteen found themselves cooperating on operational issues with the alliance partner. Sixth, twenty-eight agreed to have commitment on responding to improvement solutions. Seventh, twenty-one are flexible towards special requests from the partner's firm. Table 4.5 lists all the recorded implications of the inter-firm investments that concerns compatibility of the partner.

Area of Improvements	**# of agreements**
Operational philosophies are made similar to partner firm	14/33
Management styles are made similar to partner firm	5/33
Working as a team with partner firm	25/33
Cooperation on strategic issues with partner firm	19/33
Cooperation on operational issues with partner firm	16/33
Responsiveness towards improvement solutions	28/33
Flexibility towards special requests from partner's firm	21/33
Total	**128/231**

Table 4.5: Implications on inter-firm investments on compatibility of the partner

- **Senior Management Support- Is support from top management increased in Investee firm?**

There is a total of five observations associated with senior management support recorded by participants at their workplace. Firstly, fifteen of thirty-three respondents observed that top management of investee firm takes high interest in resolving strategic issues. Secondly, the senior management show even more concern in resolving operational issues as witnessed by twenty-seven interviewees. Thirdly, thirty-one reported that senior management also has been supporting ongoing projects. Fourthly, fourteen reported that focus on continuous improvement projects by senior management has improved in their firm. Fifthly, focus of senior management on joint research projects has also significantly gained in their company as recognized by seven participants. Table 4.6 summarizes the implications of inter-firm investments on senior management support.

Area of Improvements	**# of agreements**
Strategic issues are quickly resolved by senior management of investee	15/33
Operational issues are quickly resolved by senior management of investee	27/33
Ongoing projects are supported by senior management of investee	31/33
Focus on continuous improvement projects by senior management of investee	14/33
Focus on joint research projects by senior management of investee	7/33
Total	**94/165**

Table 4.6: Implications of inter-firm investments on senior management support

- **Clear Goals- have investee firm's goals become clearer?**

There is only a total of four observations linked with clear goals recorded by the interviewees at their workplace. Firstly, twelve of the thirty-three respondents reported that alliance strategic goals are set and reviewed regularly in their companies. Secondly, twenty-one participants agreed that alliance operational goals are also set and reviewed regularly. Thirdly, there has been serious efforts to align individual tactical objectives to alliance tactical objectives as noticed by nineteen interviewees. Fourth, ten found that the alliance goals have also been reviewed for the alignment to the goals of the investee's firm. Table 4.7 summarizes the list of the observed implications of inter-firm investments on the clarity of goals of the alliance and the individual firms.

Area of Improvements	# of agreements
Alliance strategic goals are set and reviewed regularly	12/33
Alliance operational goals are set and reviewed regularly	21/33
Individual tactical objectives are aligned to alliance tactical objectives	19/33
Alliance goals are aligned to goals of investee's firm	10/33
Total	**62/132**

Table 4.7: Implications on inter-firm investments on clear goals

- **Ability to meet performance expectations- Has performance improved in investee firm?**

There is only a total of three implications that could be observed in the domain of the ability to meet performance expectations as recorded by the participants. Firstly, seventeen of the thirty-three respondents witnessed that the targets are agreed with the alliance partner at their firms. Secondly, the alliance targets are met and reviewed as seen by seven interviewees at their workplace. Thirdly, nineteen of the respondents noticed that individual targets are also met and reviewed frequently. The above discussed implications agreed by the participants are summarized in Table 4.8.

Area of Improvements	# of agreements
Targets are agreed with alliance partner	17/33
Alliance targets are met and reviewed	7/33
Individual targets are met and reviewed	19/33
Total	**43/99**

Table 4.8: Implications on inter-firm investments on the ability to meet performance expectations.

4.3.3 Other Influences of Investments

The first objective of this research is to find the influence of investment on strategic alliance. It can be accomplished by analysing the responses related to implications of the investments on the critical success factors of a strategic alliance. However, the second objective of the research is finding how this status quo helps to attain the ultimate supply chain management objective i.e. increasing supply chain surplus (Section 2.2). Thus, to dig deeper into this, the participants were asked about the other observed implications of inter-firm investments on the investee company. They were given open ended questions to list all other implications which have been observed by them and the final list was circulated among them to verify as was done to find implications on critical success factors.

For the above discussed agenda, a total of eight implications constituted the list for other influences of the inter-firm investments. Firstly, the investments enabled cooling off trade negotiations between alliance partners and that is observed by twenty-nine of thirty-three interviewees. Secondly, twenty-six agreed that investor firm always give preference to investee firm among other suppliers/customers for the business. Thirdly, eleven admitted that investor firm employees sometimes act like the boss. Though, this negative impact could be eliminated by cross investments as discussed with the participants. Fourthly, sixteen found that investor firms commonly share their resources with the investee firm. Fifth, a creative use of the alliance is marketing of the investee company by investor firm which is highlighted by nine respondents. Sixth, seven participants reported that some casual employees are hired to work in both companies depending on requirements. Seventh, another creative way is joint procurement by alliance partner for common services/products in bulk as seen by fourteen interviewees. Eighth, twenty-two respondents witnessed reputational benefits for the investee firm due to strong support from the investor firm. Table 4.9 lists all other observed implications of investments along with number of agreements.

`Other Implications	# of agreements
Negotiation between investor and investee procurement cooled off	29/33
Investee firm is given preference among other suppliers/customers	26/33
Sometimes investor firm employees act like boss (negative)	11/33
Resources of investor firm are shared with investee firm	16/33
Investor firm helps in marketing	9/33
Same casual employees work in both companies depending on requirements	7/33
Common services/products are procured together with alliance partner in bulk	14/33
Reputation of investee firm is increased due to strong support from investor firm	22/33

Table 4.9: Random implications of inter-firm investments

The above discussed implications not only useful to understand the implications of the inter-firm investments but also light up the creativity of the alliance partners to exploit an equity strategic alliance. In other words, it helps to explore how can equity alliance partners work together in different ways to add value or decrease cost in the supply chains. The next section is devoted to synthesizing the empirical data using appropriate methods and extract the desired information at the end.

4.4 Syntheses of Qualitative Data

4.4.1 Measurement Technique and Scale

The measurement technique used in this research is aligned to research methodology. To measure the degree of change in five critical success factors, the total number of agreements are converted into percentage agreements by dividing it by maximum potential agreements and multiplying by one hundred. These percentage of agreements are then compared with a scale to measure the degree of influence of the investments on those critical success factors. Table 4.10 represents the measuring scale to which percentage of agreements are compared.

Percentage of agreements	Degree of influence
0%	No influence
1% - 30%	Low
31% - 50%	Moderate
50% - 70%	High
>70%	Very High

Table 4.10: The measuring scale

4.4.2 Implementation of the Measurement Technique

Following the measurement technique, this section dedicates to implementation of it on the empirical data collected in reference to critical success factors. To investigate the degree of influence on trust by investments, respondents were asked to list all the observed implications on the trust of investments. The responses were merged together to form a final list of implications.

The final list was sent back to the respondents to check their agreements on the arguments presented on the list. The number of agreements were added and resulted in 166. Whereas, if each participant would agree to all the arguments the result would be 231 which is referred to the maximum potential number of agreements in the case of trust. Now, the total number of agreements (166) is divided by maximum potential number of arguments (231) and multiplied by one hundred to get the percentage of agreements (166*100/231) i.e. 72%. At last, 72% is compared with the measuring scale and associated degree of influence is declared which is high. Finally, it can be asserted from the synthesis of the data for this research that the inter-firm investments have high influence on trust. Similarly, degree of influence of investments on compatibility of partner and senior management support is found moderate. Also, clear goals and ability to meet partner expectations are less influenced by investments. Table 4.11 summarizes the synthesis and resultant degree of influence associated to each critical success factor.

Critical Success Factor	# of agreements	% of agreements	Degree of Influence
Trust	166/231	72%	High
Compatibility of Partner	128/231	55%	Moderate
Senior Management Support	94/165	57%	Moderate
Clear Goals	62/132	47%	Low
Ability to meet performance expectations	43/99	43%	Low
Total	**493/858**	**57%**	**Moderate**

Table 4.11: Degree of influence on critical success factors by inter-firm investments

The first objective of the research is to evaluate the overall impact of the inter-firm investments on strategic alliance. To achieve this conclusion, the measurement technique is again applied to aggregated total number of agreements and resulted in moderate degree of influence (Table 4.11). Thus, it is concluded that inter-firm investments have moderate influence on the strategic alliance in a dyadic supplier-buyer relationship. It should also be noted that this influence is positive as all the implications participants observed are positive in nature. This conclusion aligns itself to the conceptual model and previous literature which reflects that inter-firm investments act as tool to strengthen a strategic alliance.

4.5 The Explanation of Major Findings

The preceding section aimed to meet the first objective of this research. Whereas this section is dedicated to explaining how inter-firm investments can assist to achieve supply chain managements objective that is also the second objective of this research. To reiterate, the objective of supply chain management is to increase supply chain surplus. The supply chain surplus can be increased either by increasing overall customer value or by decreasing overall supply chain cost as supply chain surplus is difference between these two. It has already been discussed in the literature review that strategic alliance contributes to increasing supply chain surplus. Though, it is now to investigate how implications of investments can contribute to the same since, they strengthen strategic alliance.

To understand the above discussed impact, all the implications relevant to the inter-firm investments are grouped in three sets according to their function. The first set includes those influences of inter-firm investments that helps in increasing customer value. The second set considers implications which contributes to decreasing supply chain costs. All the implications related to good management/planning are constituents of the third set because they meet both purposes i.e. increasing customer value and decreasing supply chain cost. Figure 4.4 illustrates the grouping of the implications that help in increasing supply chain surplus and hence contribute to SCM objective.

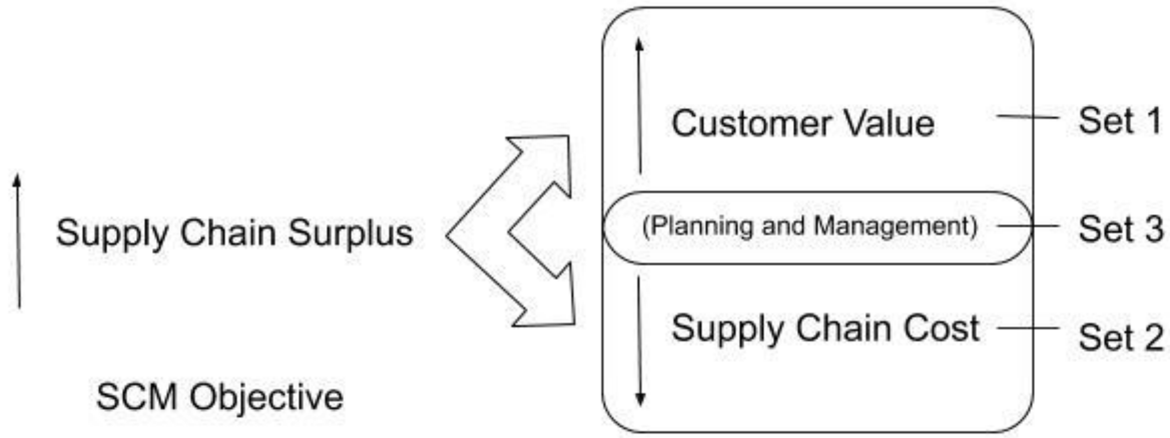


Figure 4.4: Three sets of implications of investments contributing to SCM objective

- Set 1: Customer value is the price that the customer is willing to pay for the product or service. Since each customer has its own valuation of the product or service, the customer value used here reflects an average customer value. Also, customer's evaluation criteria of a product/service vary significantly with the range of product/service. Therefore, customer value in this analysis is limited to the value added by supply chain practices only which includes quality, availability, traceability, and customer service. As per input from participants, the following implications are explained to result in customer value increment.

1. Information sharing between firms is increased after inter-firm investments taken place. Due to information sharing, demand and supply planning is improved which assist to create good supply and demand balance. Therefore product/service is available at the right time, in right quantity and at right location. Hence, customer value is increased.

2. Flexibility or responsiveness towards special request from partner's firm leads to customized quality, on demand availability and better customer service at the consumer end. Hence, customer value is increased.

3. It leads to right quantity when operational targets are met and reviewed from senior management. Thus, it increases availability and customer value also.

4. When strategic partners' firm is given preference for business among other suppliers/buyers, it leads to better quality and quantity which ultimately increase customer value. The investee firm is always preferred by investor firm for business to maximize their return on investments.

5. Strategic alliance and investment by partner reflect a high level of confidence in the investee business and results in reputational benefits. Reputation of business has direct impact on perceived quality by customers. Therefore, customer value increases as brand value does.

- Set 2: Supply chain cost constitutes all costs associated to procurement, production, warehousing, transport, and managerial activity. In simpler words, it is the cost of making finished product from raw materials and delivering it at the required place. The following implications, as per response from participants, would conclude to decrease supply chain costs.

  1. Sharing of resources for temporary use by partner firm would eliminate rental costs from them supply chain. Thus, it decreases supply chain cost.

  2. Trust between alliance partners would avoid duplication of some activities like quality control and inventory control. Hence, cost associated with these activities are saved and supply chain cost is decreased.

  3. Some casual alliance workers are hired and scheduled to work in both companies according the requirement. Therefore, cost of recruiting temporary workers repeatedly is eliminated. This reduces supply chain cost.

  4. It is commonly found in procurement functions that purchasing volume is inversely proportional to purchasing price. In other words, procuring in bulk would decrease cost per unit. Respondent alliance partners for this research have been reported to procure some common (used in both companies) products/services together to increase the volume so that supply chain cost is reduced.

- Set 3: Some other implications help in both reducing supply chain cost and increasing customer value as well. Improved or supported planning and management can be considered in this set. Based on the interview response and its synthesis, the following influences constitutes set 3.

  1. A business decision is made considering all the functions and other stakeholders of the business. In a normal business environment, buyers/suppliers are often left out of the decision-making process. However, in this study buyer/supplier is an investor and strategic partner which a key stakeholder for the investee firm. Therefore, the partner is involved in business decision-making in investee firm. Hence, better decisions are made and often ends in increasing customer value or reducing supply chain cost or both.

  2. Based on experience and intelligence, improvement solutions are suggested by investor to investee firm. Though, suggestions would only remain on emails/paper if not analyzed. Investments have made investees more responsive to those solutions which is also concerned with the betterment of the supply chain function. This increases supply chain surplus.

  3. Focus by senior management on continuous improvement projects has been improved in investee firms. It is a possibility that the project concerns with increasing supply chain surplus.

4. Marketing aims to increase sales. Growth in sales induces growth in production volumes which might direct towards economies of scale. Achieving economies of scale indicates optimum use of resources and hence, minimum cost per unit for the finished product. Therefore, if marketing is supported by an alliance partner, this would result in decreasing supply chain cost. Also, marketing improves perceived quality and customer value.

As explained in the introducing paragraph of this section, the second objective of this research is to investigate how inter-firm investments assist in achieving supply chain objective. The investigation has been successfully completed in the above discussion using rigorous and appropriate synthesis as proposed in research methodology chapter. The finding in the discussion has been found closely consistent with the previous literature on the topic. Thus, the second objective of the research is accomplished. The succeeding chapter further discusses outcomes of the research.

5 DISCUSSION

After the data analysis, it is important to further discuss the outcomes of the research in relevance to the literature review. This chapter constructively aims to do so in five sections. The first section explores the conceptual model of the equity strategic alliance by refining it in accordance with the findings from the previous chapter. The academic value is added by this research and how it corelates to the previous literature is explained in the second section. Whereas the business value of the research by recommending managerial applications of the outcomes to the corporate world is highlighted in the third section. In contrast, the fourth section is dedicated to the critique of this research by exploring direction, strengths, and weaknesses of the research. The last section adds suggestions for the peers by outlining the scope of further investigation to this research.

5.1 Review of Conceptual Model in Light of Data

The conceptual model of an equity strategic alliance from the literature review has a triangle facing upwards along with five pillars supporting this from a foundation of investment (refer Figure 2.4). The triangle represents a strategic alliance between a buyer and a supplier, and its height depicts the contribution of strategic alliance in increasing supply chain surplus. The pillars, supporting the triangle's base, are the critical success factors of a strategic alliance found in the previous literature. To make the setup exclusive for equity strategic alliance, the five critical success factors are further submerged in the pool or foundation of inter-firm investments. The inter-firm investments are hypothesized to strengthen the pillars (research objective 1) and ultimately raise the height of the triangle (research objective 2).

As the conclusion of the process of data analysis, it has been found how critical success factors are being individually influenced by inter-firm investments in a relationship and how inter-firm investments can create opportunities to increase supply chain surplus. In more detail of the findings correlated with the critical success factors, trust factor is resulted in being highly influenced by the investments. Whereas senior management support and partner's compatibility have been recorded to be moderately impacted by the inter-firm investments. Also, investments are identified to have low influence on clarity of goals and ability to meet performance expectations in a strategic alliance. Overall, cross-investment is concluded to be a tool that has moderate degree of influence to enhance the contribution of strategic alliance towards increasing supply chain surplus.

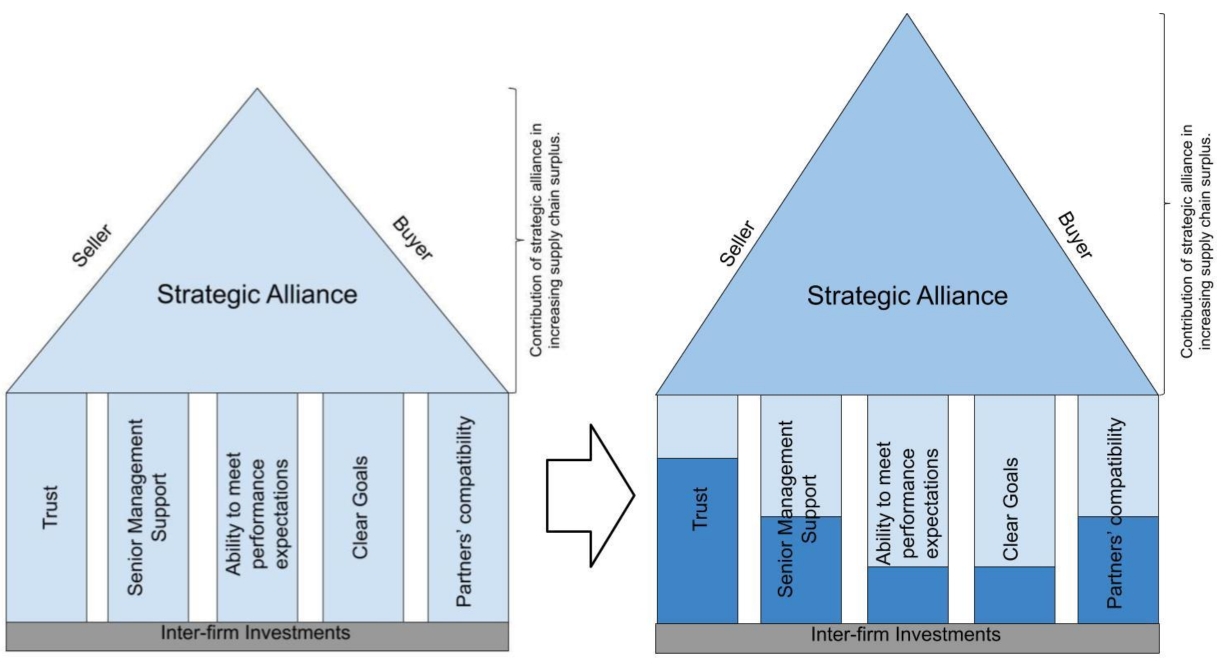


Figure 5.1: Concluded conceptual model of equity strategic alliance.

The figure 5.1 above, embeds the insights of the conclusions to the conceptual model of an equity strategic alliance. The critical success factors can be noticed to be solidified according to the degree of impact of the inter-firm investments. In addition to that, the height of the triangle, representing the contribution of strategic alliance in increasing supply chain surplus, is enhanced which is depicted as the result of solidification of the pillars. This version of the conceptual model demonstrates both the objectives of the results. The conceptual model is also highly insightful for the analysis of influence dynamics in an equity strategic alliance.

The above discussion and refined model achieved the aim of this section by embedding the results of this research in the conceptual model of an equity strategic alliance presented in the literature review. This section is also aligned to the research objectives as the resulted conceptual model gives a pictorial presentation of both the research objectives, i.e. the influence of inter-firm investments on a strategic alliance via its critical success factors, and the contribution of investments in achieving supply chain management objective via increasing supply chain surplus. However, the discussion is incomplete without correlating the results with previous literature. Thus, the next section targets to explain the objected relation and highlight the contribution of the findings to the academic world.

5.2 Correlation of Findings with Previous Literature

After elaborating the conceptual model in light of the data, it is now to correlate the findings with previous literature. Tracking back to the literature review, a strategic alliance was identified to add value in a supply chain. Equity strategic alliance was a special kind of strategic alliance where cross-investments are involved, and it has been credited for Japanese success by various literatures. However, there was insufficient literature to explain how inter-firm investments influence a strategic alliance which was identified as research gap. Therefore, to bridge the gap, a strategic alliance was thoroughly investigated to find its critical success factors. In previous literatures, some of the implications of inter-firm investment were highlighted in relation to those critical success factors of a strategic alliance. However, since the literature was not enough to bring clarity to the dynamics, this research was triggered. This research aimed to find the degree of influence of inter-firm investments on each of the critical success factors of a strategic alliance.

The above rationale is found to be justified from the findings of this research. The inter-firm investment, as a tool to strengthen the strategic alliance, has relevance with each of the identified top five critical success factors of a strategic alliance. Table 5.1 shows that this research has verified thirteen of the implications of inter-firm investments, found in previous literature, on four of the five critical success factors and has also explored the implications on one of them. Additionally, the findings of this research are backed with thorough synthesis of various implications that was lacked in previous studies.

	Trust	Senior Management Support	Clear Goals	Ability to meet Partner's Expectations	Partner's Compatibility
Kale & Purunam (2004)	*		*		*
Gulati and Singh (1998)			*		
Pisano (1990)			*		
Tushman & Nadler (1997)					*
McGuire & Dow (2008)		*			*
Dyer & Singh (1998)					*
Tabeta & Rahman (1999)					*
Barney (1991)	*				
Kogut & Zander (1992)	*				
Teece et al (1997)	*				
This Research	*	*	*	*	*

Table 5.1: Correlation of the findings with previous literature.

5.3 Managerial Implications

A typical supply chain involves several businesses to coordinate and function together. The studies of supply chain management have concluded that the components of a supply chain should focus on increasing overall supply chain surplus rather than focusing on individual profits. However, since each business has their own financial motives, it can create room for silo-mentality. This mentality has historically been slowly diminishing due to increased competition and improved business acumen. The strategic alliances in supply chains have contributed to bring companies together and work towards shared supply-chain management objectives. Though, the setup is still far away from ideal scenario according to the studies.

The businesses are encouraged to enhance the effectiveness of their strategic alliance by investing in their partner's business. In other words, a business should upgrade their strategic alliance to an equity strategic alliance. The findings of this research would help companies in the process of strategic decision-making. Moreover, this research has highlighted the ways in which partners can exploit their advanced relationship. From the results of the research, it is recommended that each component of a supply chain should invest in their next supply chain partner. This way, the overall profit gained will be shared, depending on the level of investments, among all components of the supply chain. Thus, silo-mentality could be eliminated, and all companies would work together towards maximizing supply chain surplus. Though, the research has found its value in both academic world and marketplace as well, it is essential to evaluate and critique the research which next section is dedicated to.

5.4 Critique of the Research

Having the findings of the research aligned with the conceptual model and previous studies, this section is dedicated to discussing other aspects of the research. This section is important to highlight weaknesses and strengths of the research so that its value could be understood and appreciated by the peers. As it can be noticed, the research question for this thesis was summarized into three cases according to the direction of the investments i.e. buyer to supplier, supplier to buyer and, cross-investments. However, the research flow had undergone through a shift towards studying the influence of the investments on investee firm only. The reason for that can be justified from the empirical data presented in the data analysis chapter. It was found in the interviews that being an investee or investor is more relevant to the influence of investments rather than being a supplier or buyer. Also, the influence of the investments is only seen in the investee firm.

The above discussed input was motivating enough to change the viewpoint of the researcher and research direction. The synthesis does not target the research question directly but gets to the core of the equity strategic alliance. Thus, the findings can be applied to the earlier discussed three investment cases. Therefore, the findings are in more generalized format and hence, are more valuable than predicted in the literature review. Also, since the investment would influence working culture of the investee firm, cross-investments are highly recommended to witness overall impact.

Considering the value of the research, it is also critical to note that the research has been commenced under the constrains of ontological and epistemological perspectives of the researcher. The researcher has constructivism and interpretivism philosophical beliefs. Thus, it is a limitation to the research. On the other hand, the data collection is limited to two countries only i.e. New Zealand and India which is also a limitation. Though, due to participation of thirty-three professionals from eight different companies, the research findings are reliable. Again, the research could find data from small and medium sizes companies, which is also a limitation.

Since the researcher does not believe in validity due to his epistemological belief, authenticity is opted. To make authenticity uncompromisable for this research, the data is primary that is collected from original sources and synthesis of the data remain unbiased from the researcher's views. Hence, from the discussion in this section, it is concluded that the research is reliable, authentic, and valuable to both academic and business world. The research has scope of further investigation which is discussed in the next section.

5.5 Further Research

The nature of research is ever growing that means there is always a scope of investigation in any field. The same analogy applies to this topic and this research. To add another dimension to this research, the following are the suggested areas that require research:

1. *Barriers to upgrade a strategic alliance to an equity strategic alliance*. The data collection for this research had seen limitations in the availability of the data sources as the equity strategic alliance is not commonly practiced. Despite having great potential to contribute to supply chain management, as seen in the findings, it is a rare relationship in the corporate world. So, there is an opportunity to investigate hurdles/barriers that companies encounter to engage in such alliance.

2. *Merits and demerits of modes of inter-firm investments.* The preferred mode of inter-firm investments found in the respondent companies is equity or RS model. Therefore, there is a scope of cross comparing both of these modes of investments. The investigation would result in merits and demerits of the modes that could add value to the business acumen in corporate world. For example, in a typical buyer-supplier relationship, the buyer has equity holding of supplier's business, and the supplier also wants to invest in buyer's business, but the supplier is confused weather he/she should buy equities or ask to share revenue from buyer's sales.

3. *Influence on the alliance of the degree of investments*. There is an opportunity to analyze the influence of the degree of investments. For example, company A holds 30% equity of company B, and another company C hold 5% equity of company D. It is a possibility, both A-B and C-D alliances encounter the same level of influence of the investments or A-B alliance is more influenced than C-D alliance. This requires further investigation.

6 CONCLUSION

Having the discussion about the value of the research, this chapter concludes the research in two sections. The first section briefly explains the answers to the research questions that were proposed in earlier chapters. The succeeding section is devoted to highlight the original contribution of the research.

6.1 Succinct Answers to Research Questions

This supply chain management research had two motives. The first objective is to investigate the influence of inter-firm investments on a strategic alliance. The second objective is to explain the contribution of those implications in achieving supply chain management objective. To achieve the first objective, the top five critical success factors of a strategic alliance are identified from previous literature. The influence of inter-firm investments is measured on those critical success factors individually. Consecutively, overall influence on the strategic alliance is measured. The overall influence of inter-firm investments on a strategic alliance is found to be moderate. This answers to the first research question.

To accomplish the second motive of the research, the supply chain management objective is concluded to maximize customer surplus and minimizing supply chain cost as identified in the previous literature. The list of the implications of inter-firm investments were gathered though interviews and their contribution were synthesized and explained (refer Section 4.5). The implications were grouped in three sets depending on their contribution in increasing customer surplus or decreasing supply chain cost or both. The analysis resulted in exploration of the contribution of investments to the supply chain objective, that helped answering the second question of the research.

6.2 Original Contribution

This research paper can be appreciated for its original contribution to the knowledge of supply chain management in five areas. Firstly, the measurement of influence of the inter-firm investments on a strategic alliance is more detailed in this research in comparison to previous studies. Secondly, the rationale to measure the overall influence on strategic alliance by analyzing the influence on its critical success factors is original in this topic. Thirdly, the collection of interesting implications of an equity strategic alliance is unique to this research papers. Fourthly, using primary data for the investigation from original sources makes the research authentic. Finally, the contents of the research paper have never been previously published to pursue any university degree/diploma.

The above arguments are significant enough to consider this paper original. However, this study would not have been possible without the contribution of previous literature in this topic. The researcher also appreciates the efforts of previous researchers for the study of supply chain management. This concludes the research work via adding another dimension to the knowledge of SCM.

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APPENDIX

Indicated Interview Questions

Questions
1. What is your name and job title?
2. What is the nature of business of your company?
3. What industry does your company belong to?
4. How has your company involved in an equity strategic alliance?
5. Who is influenced by inter-firm investments? Investee or Investor.
6. What implications of inter-firm investments are seen on trust level?
7. What implications of inter-firm investments are seen on partner's compatibility?
8. What implications of inter-firm investments are seen on clarity of goals?
9. What implications of inter-firm investments are seen on the ability to meet performance expectations?

10.	What implications of inter-firm investments are seen on senior management support?
11.	What other implications of inter-firm investments are seen at your workplace?
12.	How does these implications help in increasing customer value?
13.	How does these implications help in decreasing supply chain cost?