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**The Symbiotic Existence of Interorganizational and Interpersonal  
Networks in Collaboration**

A thesis

submitted in fulfillment

of the requirements for the degree

of

**Doctor of Philosophy**

at

**The University of Waikato**

by

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THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

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# **Abstract**

## **The Symbiotic Existence of Interorganizational and Interpersonal**

### **Networks in Collaboration**

Most traditional theories adopted to explain collaboration in interorganizational relationships (IOR) have failed to adequately address the micro and macro dynamics of the phenomenon. Collaboration theory developed within the mainstream of public administration research views leveraging structure, processes, and people as the key to successful collaboration. Yet, the applicability of the theory's principles and abstractions in the private sector remains unexplored. Social network theory also presumes that IOR arise out of ongoing interaction at both micro and macro levels. However, the field is fragmented, with the interpersonal and interorganizational networks being studied separately. Thus, an opportunity exists to combine collaboration theory with social network perspective and to view interorganizational collaboration from a multilevel lens.

An exploratory case study methodology informed by an interpretivist epistemological stance was used to address this gap. An egocentric network of a third party logistics company that covers six relationships provided a rich context for the study.

The study finding expands our understanding of the distinction between the two types of networks: the interorganizational and the interpersonal and their corresponding elements - which are the structural and processual ties and the workflow and commercial friendship ties respectively. By proposing a new conceptualization — 'a symbiotic existence' to explain the interdependent nature of these four elements, the study goes beyond the traditional micro and macro divide to consider the multiplexity of networks in IOR. The major practical implication of this study is that the decision makers should pay attention to the changes in both micro and macro elements and their knock-on effects to ensure a symbiosis of the four elements for collaborative synergies. Practitioners' attention should also centre significantly on the effects of interpersonal networks on collaboration and how mechanisms at macro level could be set effectively to benefit from the emerging community of practices within the collaboration.

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# Chapter 1

## Introduction

### 1.1 Research background

This research is motivated by the collaborative challenges encountered in interorganizational relationships (IOR). An increasing number of organizations are collaborating to access resources and capabilities from their external linkages (Dyer & Singh, 1998). As a result, the multidivisional organizations that prevailed in the 20th century are readily transforming into more flexible and leaner forms of organizations (Snow, Miles, & Coleman, 1992). Collaborative relationships are deemed to bring superior order-winning performance for both parties (Dyer & Singh, 1998; Mason, Lalwani, & Boughton, 2007).

Despite this growing interest in collaborative relationships, it is observed that approximately 60 percent of such relationships fail within a short period (Ospina & Saz-Carranza, 2010). In the logistics arena itself, 70 percent of the alliances are terminated (Crujssen, Dullaert, & Fleuren, 2007). More than half of them are ended within just 5 years, forcing the companies to take the previously outsourced function back in-house (Sankaran et al., 2002). Thus, it is apparent that in spite of the many obvious advantages, ‘collaboration’ between organizations still seems challenging (Ellinger, Keller, & Hansen, 2006; Fawcett, Fawcett, Watson, & Magnan, 2012; Razzaque & Sheng, 1998; Sandberg, 2007).

## **1.2 Research gap and the research questions**

Collaboration is recognized as inherently a multilevel phenomenon (e.g., Zaheer et al., 2010). However, the theories that explain IOR (e.g., transaction cost theory, the resource-based view, the relational view) have failed to explore its micro (individual level) and macro (organizational level) dynamics fully (Bernardes, 2010; Fawcett et al., 2012; Skjoett-Larsen, 1999).

The theory of collaboration developed within the mainstream of public administration research (e.g., Gajda, 2004; Huxham, 2003), in contrary, addresses the micro and macro elements of interorganizational collaboration in great depth. It views leveraging structure, processes, and people as the key to successful collaboration (Gajda, 2004; Vangen & Huxham, 2003b; Huxham & Vangen, 2000). Hence, the theory holds much promise in terms of the growing concerns in IOR with collaboration. Yet, the applicability of its principles and abstractions in the private sector remains unexplored (Huxham, 2003).

Social network theory also presumes that IOR arises in the context of relationships manifested at both micro and macro levels, and unfolds through ongoing interaction. It has thus gained recognition as a theory that can be applied to explain interorganizational collaboration (Brass, Galaskiewicz, Greve, & Tsai 2004; Carter, Ellram, & Tate, 2007; Gilgor & Autry, 2012; Lazzarini et al., 2001; Skjoett-Larsen, 1999; Zaheer et al., 2010). However, due to the field's fragmentation, the perspective still suffers from becoming a standalone theory of interorganizational collaboration,

with two approaches (i.e., micro and macro approaches) existing in the study of IOR (Betts & Stouder, 2004; Carpenter, Li, & Jiang, 2012; Kilduff & Brass, 2010).

Adopting a micro approach, one stream of research regards network actors as individuals and presumes that IOR are embedded in networks of individual relationships (Granovetter, 1985; Ingram & Roberts, 2000; Uzzi, 1996; Uzzi, 1997; Uzzi & Lancaster, 2003; Weigl, Hartmann, Jahns, & Darkow, 2008). This approach disregards the macro dynamics of IOR. The second stream regards network actors as organizations and presumes that IOR are embedded in networks of organizational relationships, thus adopting a macro approach (Ahuja, 2000; Galaskiewicz, 2011; Gnyawali & Madhavan, 2001; Powell, 1990; Rowley, Behrens, & Krackhardt, 2000). This approach disregards the micro dynamics of IOR.

So far “research on the connection between micro and macro perspectives is scarce, and the subject is virtually neglected” (Bögenhold, 2013, p. 293). As a result, further research is needed to link the micro and macro approaches of the network theory in order to gain a complete understanding of IOR. The present study is thus motivated to explore the three elements: structure, processes, and people presented in collaboration theory from a social network perspective, and to develop a new theoretical conceptualization of how both micro- and macro elements can be combined when studying interorganizational collaboration. The study accordingly intends to answer the following questions:

*Q1) How do organizational level interactions affect collaboration between firms?*

*Q2) How do personal level interactions affect collaboration between firms?*

*Q3) How do interorganizational and interpersonal interactions coevolve in collaboration?*

### **1.3 Scope and boundaries of the research**

As IOR are a complex domain of activities, the scope of this research is limited to the following:

a) The study investigates only one focal firm's selected set of partnerships.

As the study intends to focus on the interorganizational and interpersonal ties in operational detail, it is limited to only six partnerships of the egocentric network under study.

b) It investigates only the relational embeddedness in IOR.

An exploration of the tie content, rather than the structural characteristics of ties, is critical to understanding the emergence of multiplex networks in IOR (Ferriani, Fonti, & Corrado, 2013). Indirect ties are thus beyond the scope of this research.

- c) The study focuses on the micro and macro behavioural complexities in ongoing collaborations only.

IOR go through a life-cycle of start-up, growth, and maturity phases. Interactions during the negotiations, commitment, and the formation stages are beyond the scope of this study.

- d) It engages in an interpretive inductive process and does not intend to do a social network analysis of data.

The intention of the study is to understand the multiplexities of the two types of ties, so a phenomenological approach was used throughout data collection and analysis.

## **1.4 Methodology**

Although current literature discusses the prevalence of interorganizational (referred to as formal) and interpersonal (referred to as informal) networks in IOR, they have not so far been explored in the context of collaboration. An inductive approach with an interpretivist epistemological stance was, therefore, adopted to elucidate the desired insight and depth which the researcher is seeking through the perspectives of managers in the context of collaboration. The study was purposely confined to a single case with embedded design/units of analysis, as the researcher intended to focus on the phenomenon in operational detail.

The study is based on a third-party logistic provider operating in Sri Lanka and six of its partners: i.e., three customers and three suppliers. Data collection methods consisted of:

- (a) Forty-two open-ended interviews targeting the boundary spanners at all levels in both the focal firm and its partners.
- (b) Five weeks of observation in the focal firm and its partners.
- (c) A review of partnership documents such as the contracts.
- (d) A review of publically available secondary data sources (i.e., newspaper articles, trade magazines, company brochures, and company websites).

Data gathering and analysis were conducted simultaneously in two stages, and inductive reasoning was employed throughout to elucidate the thoughts and experiences of managers in the context of an ongoing collaboration (Schwandt, 2001). The first phase of collecting and analyzing data was conducted on site. The researcher positioned herself within the study to discuss values that shape the textural description openly and to include her interpretation in conjunction with the participants' interpretations throughout the process (Creswell, 2007). In the second phase, as suggested by Yin (2003), case descriptions were developed, and the subsequent analysis process followed a general contour which Creswell (2007) identified as a data analysis spiral.

## 1.5 Research Contributions

- At present, the theory of collaboration is confined to the public sector and is in need of a robust empirical grounding in a commercial setting. This research will potentially contribute to the theory by addressing the micro and macro dynamics of collaboration in the private sector.
- The study attempts to address predominantly the multilevel challenges and opportunities that exist in the field of social networks in IOR. It intends to make three significant contributions to the social network field in IOR:
  1. It carries out a synthesized review of social network research in the micro (individual) and macro (organizational) levels of IOR.
  2. It attempts to arrive at a unified social network theory of interorganizational collaboration.
  3. The empirical work on social networks in IOR has continued to focus on single firms (Choi & Wu, 2009). Thus, by focusing on the egocentric network of a logistics service provider that covers three of its suppliers and three customers, this study intends to make a significant contribution to interorganizational social network research.
- One important practical implication of this study is that it draws the decision makers' attention to the changes that occur in both micro and macro elements and their repercussions. It will potentially help them to realize that, though set

at the beginning, the governance structure and processes need alterations at subsequent stages to ensure the effectiveness of the collaboration. Moreover, the attention of practitioners is also brought to the significance of personal relationships within the partnerships. It could lead to further understanding of how friendships developed between the boundary spanners, unless carefully monitored, may bring negative consequences. The development of these informal hierarchies, both across and within organizations, has drastically affected the partnerships' functionality. The study also demonstrates the significance of boundary spanners at operational level and the danger of maintaining tall organizational structures in collaboration.

## **1.6 Structure of the thesis**

The remainder of the thesis consists of 11 chapters and is structured as follows:

**Chapter 2:** Provides an overview of the existing literature on collaboration and social network theories in IOR and arrives at the initial research question: How do interorganizational and interpersonal level interactions coevolve in collaboration? Based on the question, several key constructs, in other words priori codes, that set the theoretical boundaries of the study, were identified.

**Chapter 3:** This chapter provides the methodological approach of the study. First, it focuses on the philosophical assumptions and the theoretical perspective that positioned the research within an interpretivist research paradigm. Then, it provides the

justifications for using a qualitative-based case study methodology. It also looks at the research design, research quality considerations, data collection, and analysis methods within the discussion.

**Chapter 4:** The chapter provides a rationale for selecting the research context — the third-party logistic industry — by highlighting the value of maintaining long-term collaborative relationships in that particular service industry. It then looks at Sri Lanka and its current sociocultural and economic environment with respect to the industry. Finally, the chapter introduces the selected logistics company along with its six relationships identified for the study. It defines the focal company as the ‘Ego’, and classifies its six relationships under the three subunits: Labor, FMCG, and Apparel.

**Chapters 5-8:** Chapters 5-8 provide detailed descriptions of the case — the egocentric network. Chapters 5-7 discuss and analyze these subunits independently based on the priori constructs identified in the initial literature review, and the new constructs that emerged from the study. Chapter 8 revisits the egocentric network that was introduced in chapter 4, in order to explore the wider network ramifications of the individual subunits previously analyzed in the focal firm.

**Chapter 10:** This chapter first delivers the findings under the priori constructs identified in the initial literature review and the new constructs which emerged during the analyses. Second, it develops a conceptual framework based on the new findings to depict how the interpersonal and interorganizational networks coevolve in collaboration.

*Chapter 11:* This chapter concludes the thesis by highlighting the findings, theoretical and managerial implications, limitations of the study, and future research directions.

## **1.7 Summary**

This research was motivated by the collaborative challenges encountered in IOR. It intends to explore structure, processes, and people presented in collaboration theory from a social network perspective and to develop a new theoretical conceptualization of how these micro and macro elements can be combined when studying interorganizational collaboration.

The study adopts an inductive approach with a phenomenological focus to elicit understanding of the collaboration challenges encountered by the participants from their perspectives. It explores six collaborative relationships of a third-party logistic provider operating in Sri Lanka. The study brings a number of significant contributions to the fields of collaboration, social networks, and logistics.

The next chapter lays a theoretical foundation for the rest of the study by engaging in a comprehensive review of the two theories: collaboration and social networks in an interorganizational context.

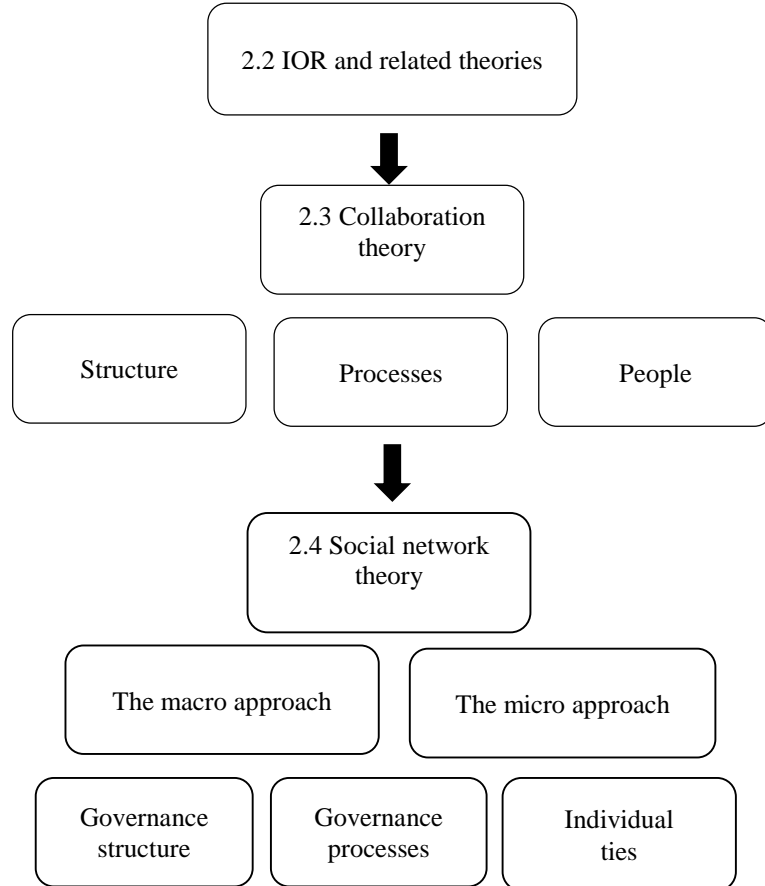
# Chapter 2

## Literature Review

### 2.1 Introduction

This chapter discusses literature on collaboration and social network theories in the context of IOR. It unfolds with an introduction to IOR and moves on to critically reviewing the two theories. The chapter is organized as follows:

Figure 2.1: Chapter outline<sup>1</sup>



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<sup>1</sup> A large portion of the following content is symmetrical to the journal paper which is currently under 'revise and resubmit' stage in the *International Journal of Management Reviews (IJMR)*.

## 2.2 IOR and related theories

The unprecedented growth of alliances (Barringer & Harrison, 2000; Duysters, De Man, & Wildeman, 1999; Gulati, 1998; Ring & Van de Ven, 1994) has attracted much scholarly attention on ‘why’ firms enter into relationships with other firms. For instance, economists have stressed transaction cost advantages in forming IOR (e.g., Jarillo, 1988; Williamson, 1991). Organization theorists, on the other hand, have viewed the reasons for forming interfirm linkages as:

- firm’s strategic needs such as when facing contingencies (e.g., Alter & Hage, 1993),
- owning inimitable resources (e.g., Barney, 2001),
- managing dependencies (e.g., Pfeffer & Salancik, 2003), and
- maintaining parity with competitors ( e.g., Garcia-Pont & Nohria, 2002).

Network theorists, in contrary, have identified, network positioning, prior ties, and their structural characteristics as key to forming IOR (Gulati, 1995b; Gulati & Gargiulo, 1999; Walker, Kogut, & Shan, 1997).

The magnitude of alliance failure (Park & Ungson, 2001; Spekman, Isabella, MacAvoy, & Forbes, 1996) experienced in the last couple of decades has, however, started to divert scholarly interest from alliance formation to effectively managing them (Barringer & Harrison, 2000; Sivadas & Dwyer, 2000). Many (e.g., Boddy, Macbeth, & Wagner, 2000; Ospina & Saz-Carranza, 2010) have admitted that ensuring collaboration in ongoing relationships is harder than forming them.

A number of theories have been used to explain how IOR can be effectively managed (see Barringer & Harrison, 2000; Oliver & Ebers, 1998; Van Alstyne, 1997 for reviews). However, none of them has so far been successful in explaining the phenomenon fully (Bernardes, 2010; Fawcett et al., 2012; Mena, Humphries, & Wilding, 2009; Skjoett-Larsen, 1999; Spekman, 1998).

The resource-based view (Barney, 1991), for instance, focuses on building inimitable resources within the firm (Castanias & Helfat, 1991), thus limiting its analysis to an internal perspective of collaboration (Skjoett-Larsen, 1999). Although more contemporary work (e.g., Ahuja, 2000; Ireland, Hitt, & Vaidyanath, 2002; Parkhe, Wasserman, & Ralston, 2006) on the theory acknowledge the possibility of sourcing inimitable resources through alliances (Ireland et al., 2002), this body of work carries a macro perspective and does not address the micro behavioral complexities involved in such relationships.

Transaction cost theory (Williamson, 1981), in contrast, emerged originally as a framework for explaining governance mechanisms in IOR (Poppo & Zenger, 2002). Scholars in this discipline view organizations as economic actors who are characteristically opportunistic, and the theory focuses on finding the most efficient governance structures that yield the highest economic value in transactions. The consequences of trusting behavior in designing such governance mechanisms are thus largely overlooked in their frameworks (Bernardes, 2010; Ring & Van de Ven, 1992; Skjoett-Larsen, 1999).

Dyer and Singh's (1998) theory, on the other hand, carries a relational perspective to IOR. They argue that critical resources existing outside firm boundaries could be spanned through routines and processes idiosyncratic to the exchange relationship. The relational view identifies such exchange relationships as collaborative and observes that supernormal profits in alliances called 'relational rents' only become possible as the interorganizational relationship moves towards a more collaborative state. The theory also identifies both informal safeguards (such as goodwill, trust, or reputation) and formal safeguards (such as financial hostages) as essential components of the governance system in such a relationship. Although the relational view has succeeded in setting the tone for distinguishing collaborative relationships from many other IOR, it has failed to fully address the micro level complexities involved in the informal safeguards.

Collaboration theory, by contrast, is wholly dedicated to managing collaborative relationships and addresses both the micro and macro dynamics of the phenomenon to a great degree. The theory explains a collaborative relationship as socially construed and unstructured by nature (Phillips, Lawrence, & Hardy, 2000). Effective leveraging of structure, processes, and people are thus observed as the key to successful collaboration (Gajda, 2004; Huxham & Vangen, 2000; Vangen & Huxham, 2003b). Though collaboration theory brings much promise to the growing concerns in IOR, it has been primarily developed within the mainstream of public administration research (Gajda, 2004; Huxham, 2003). Hence, the applicability of the theory's principles and abstractions within the private sector remains unexplored (Huxham, 2003).

Similar to collaboration theory, the social network perspective holds up a multilevel lens to the study of IOR (Galaskiewicz, 2011; Zaheer et al., 2010). It presumes that IOR arise in the context of relationships manifested at both micro and macro levels, and unfold through ongoing interaction. It has thus gained recognition as a theory that can be fruitfully applied to explain interorganizational collaboration (Brass et al., 2004; Carter et al., 2007; Gilgor & Autry, 2012; Lazzarini et al., 2001; Skjoett-Larsen, 1999; Zaheer et al., 2010).

The growth in network research in IOR is considered as “part of a general shift, beginning in the second half of the 20th century, away from individualist, essentialist and atomistic explanations toward more relational, contextual and systemic understandings” (Borgatti & Foster 2003, p. 991). However, the perspective continues to suffer from becoming a standalone theory of interorganizational collaboration, due to the field’s fragmentation, with two approaches existing to the study of IOR (Betts & Stouder, 2004; Carpenter et al., 2012; Kilduff & Brass, 2010).

Adopting a micro approach, one stream of research regards network actors as individuals and presumes that IOR are embedded in networks of individual relationships (Granovetter, 1985; Ingram & Roberts, 2000; Uzzi, 1996; Uzzi, 1997; Uzzi & Lancaster, 2003; Weigl et al., 2008). This approach disregards the macro dynamics of IOR. The other stream regards network actors as organizations and presumes that IOR are embedded in networks of organizational relationships, thus adopting a macro approach (Ahuja, 2000; Galaskiewicz, 2011; Gnyawali & Madhavan,

2001; Powell, 1990; Rowley et al., 2000). This approach disregards the micro dynamics of IOR.

So far “research on the connection between micro and macro perspectives is scarce, and the subject is virtually neglected” (Bögenhold, 2013, p. 293). As a result, further research is needed to link the micro and macro approaches of the network theory for a complete understanding of IOR (Borgatti & Li, 2009; Carpenter et al., 2012; Inkpen & Currall, 2004; Ma, Yao, & Xi, 2009; Phelps et al., 2012).

The study thus intends to explore the essential components of a collaborative relationship i.e., the structure, processes, and people presented in collaboration theory from a social network perspective with the intention of developing a unified social network theory of interorganizational collaboration. Accordingly, the review first explores collaboration theory with a specific focus on the three elements: structure, processes, and people. An exploration of the micro and macro approaches to social network theory in IOR (see Figure 2.1) is then undertaken to uncover the relational characteristics of the three elements.

### **2.3 IOR and Collaboration Theory**

Since the new millennium, a considerable body of literature on ‘collaboration’ has been accumulated in a broad range of disciplines, research paradigms, and theoretical perspectives (Huxham, 2003). However, the term ‘collaboration’ remains elusive (Gajda, 2004).

The literature commonly refers to interorganizational collaboration as a process through which two or more entities come together to enhance the performance and the capabilities of each (Camarinha-Matos, Afsarmanesh, Galeano, & Molina, 2009; Ferguson, 2004). So the many definitions given for the term have increasingly used features such as common objectives, mutual engagement, complementary capabilities, mutual trust, shared risks and rewards, and joint identity in the relationship (Fawcett, Magnan, & Williams, 2004; Kampstra, Ashayeri, & Gattorna, 2006; McCarter & Northcraft, 2007; Spekman, 1998).

Phillips et al.'s (2000) definition of collaboration, however, carries a novel perspective on the phenomenon. They identify collaboration as “a cooperative relationship among the organizations that relies on neither market nor hierarchical mechanisms of control” (p. 24). Markets and hierarchies are highly institutionalized modes of governing IOR. Collaborative approaches, on the other hand, deal entirely with negotiations that enable organizations to overcome the unstructured nature of collaborative relationships (Phillips et al., 2000). The degree of collaboration between firms accordingly varies across a continuum of low to high integration (Gajda, 2004; Hogue, 1993; Peterson, 1991), with the highest level being identified as one that requires a high degree of social control based on trust (Hogue, 1993).

Highly collaborative relationships focus on new collective value referred to as a new whole (Mandell & Keast, 2009). The relational power of such partnerships emphasizes trust, reciprocity, and mutuality that enables the integration of previously dispersed and

even competitive entities to become collective ventures (Mandell & Keast, 2009). Partners of those relations are diverse and display a high level of interdependency.

Collaborative advantage in these relationships reflects the synergies gained, along with a very high level of satisfaction between the parties (Thomas, 1992), while collaborative inertia, is encountered when there is an inability or failure to gain desired benefits from the relationship. Although a vast number of known impediments are being related to the complex nature of human beings (e.g., Powell, 1990; Spekman, 1998), Gajda, (2004) and more recently Fawcett et al., (2012), asserted that the forces resisting collaboration may well exist anywhere within people, structure and the processes of the relationship. Collaboration theory thus focuses on steering the three elements of structure, processes, and people for collaborative advantage (Gajda, 2004; Vangen & Huxham, 2003b).

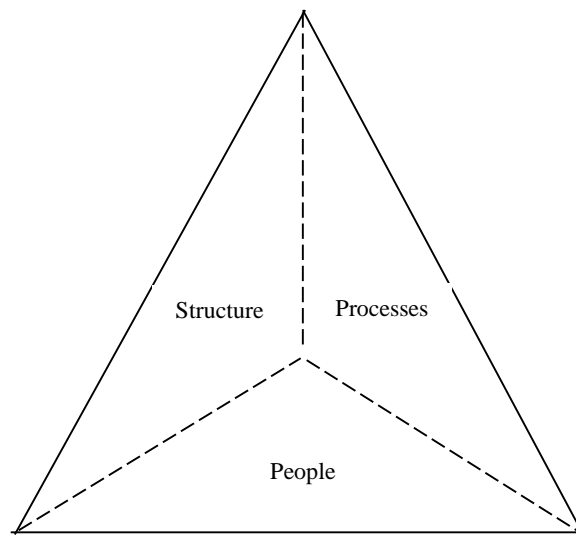
### **2.3.1 The structure, processes, and people in collaboration**

Huxham and Vangen (2000) claimed that agendas are created and driven forward through the structure, processes, and participants. Accordingly, the theory of collaboration identifies these elements holistically as ‘collaborative leadership media’ (Vangen & Huxham, 2003a) (see the pyramid in Figure 2.2).

“Structure is a key driver of the way agendas are shaped and implemented” (Huxham & Vangen, 2000, p. 1166). The control and reporting mechanisms mirror the collaborators prescribed interactions through structuring of boards of directors and

other management personnel, deciding the content of equity agreements, contracts, and joint development agreements, as well as through the execution of operational integration (Spekman, 1998). According to Huxham and Vangen (2000), structures “emerge out of the practical reality of the tasks that they tackle” (Huxham & Vangen, 2000, p. 1167). As such, it is a complex medium of control where members may well be unaware of the complexity through which they are working or the way that control is shaping their activities (Huxham & Vangen, 2000).

Figure 2.2: The three elements: Structures, processes, and people that form the collaborative leadership pyramid



Huxham and Vangen (2000) further identified processes as an equally significant tool in shaping and implementing collaborations (see figure 2.2). Processes can be instruments, such as committees, workshops, seminars, telephone, fax, and e-mail use, through which collaboration’s communications take place (Huxham & Vangen, 2000). They moreover claimed that both structure and processes are interlinked. While

structure influences process, processes influence the emerging structures (Huxham & Vangen, 2000). Nevertheless, given the significance of structures and processes in shaping and implementing the direction of the collaboration, Huxham and Vangen (2000) expressed their concern about the fact that these are often predetermined by the founders rather than by the collaboration itself.

In their subsequent work on leadership media Huxham and Vangen (2003b) highlighted the equal significance of the ‘participants’ in collaboration (see pyramid in Figure 2.2). They affirmed that the leadership activities in collaboration are undertaken by participants whose main role is to organize the activities of a collaborative venture.

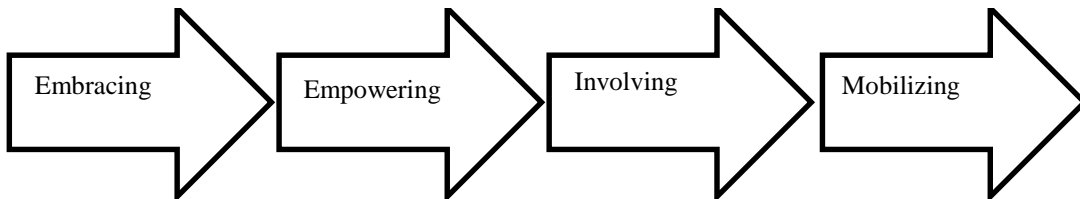
Consequent work on collaboration theory (e.g., Gajda, 2004; Silvia & McGuire, 2009) has also stressed the significant role of ‘participants’ in collaboration. Scholars have noted the significance of understanding the actual competencies, tasks, and behaviors of those individuals who ease interaction and moving the relationship in a positive direction (Silvia & McGuire, 2009). Individuals who are personally committed to the initiative and have the drive, the political savvy, and connections to oversee the undertaking through to its completion are critical to success (Carter et al., 2007).

### ***2.3.1.1 Stages in collaboration***

In their action research, Vangen and Huxham (2003b) further discovered that collaboration is a process which is largely facilitative and progressive and one which moves through four main stages (see Figure 2.3). They explained how the structures

and processes are formed and reformed on a continuing basis through individual actions as the collaboration progresses through these stages.

Figure 2.3: Stages of the development of a collaborative relationship



Source: Vangen and Huxham, 2003, p. 66

In the phase of embracing, it is vital to get the ‘right’ members involved in the collaboration. Thereafter, efforts need to be directed at facilitating the involvement of individuals and organizations to move the collaboration forward (Vangen & Huxham, 2003b). Secondly, it is necessary to ensure that proper infrastructure (structures and processes) is in place for the people and organizations to participate so that communication can continue to flow effectively. Thirdly, activities should be directed towards managing the inequality between principal and subsidiary members through the building of trust. Finally, the most challenging task is to inspire individuals and whole organizations by being sensitive to the aims and aspirations of all involved in the collaboration (Vangen & Huxham, 2003b).

Silvia and McGuire (2009) identified four types of ‘grouped behavior’ manifest in collaboration; they are: activation, framing, mobilization, and synthesizing. Activation is involved with finding the right participants and other resources needed for

collaboration. Framing is then involved with arranging and integrating the structure of the collaboration. Thirdly, in mobilizing, leaders work to ensure network participants' and external stakeholders' support for processes; and, in publicizing, they establish and maintain the collaboration's legitimacy.

As shown in the chapter outline in Figure 2.1, the above review first explored the literature on collaboration theory. It focused particularly on the role of the three elements: structure, processes, and people in collaboration. The next section reviews the literature on social network theory. In particular, it focuses on the social networks manifested at micro and macro levels with the intention of investigating the relational characteristics of the three elements — structure, processes, and people — presented in collaboration theory.

## **2.4 IOR and the Social Network Perspective**

### **2.4.1 The review method**

An initial scoping review of the literature on IOR and networks revealed that network literature relating to IOR has developed largely in silos, according to the interest of researchers. One category of work observed networks as 'a logic of organization' (Betts & Stouder, 2004), with other examples being, network organizations and collaborative relationships such as joint ventures, strategic alliances, and consortia (e.g., Gulati, 1995b). The other major category of work has adopted an analytic perspective to networks. Such work has focused on personal and organizational networks in IOR.

All in all, it became clear that social network literature in the interorganizational context was limited, and so, in order to gain a broader understanding of the three elements: structure, processes, and people discussed under collaboration theory from a social network perspective, the search was extended to social network research in the intraorganizational context. The organizing framework shown in Figure 2.4 was accordingly developed to synthesize the body of network literature.

Figure 2.4: Literature review framework

		<b>Context</b>	
		Intra-organizational	Inter-organizational
Unit of analysis	Personal Networks	<ul style="list-style-type: none"> <li>• Workflow ties/instrumental ties</li> <li>• Friendship ties/primary ties</li> <li>• Communication ties</li> <li>• Advice ties</li> </ul> e.g. Krackhardt and Porter, 1986	<ul style="list-style-type: none"> <li>• Workflow ties</li> <li>• Friendship ties</li> <li>• Communication ties</li> <li>• Advice ties</li> </ul> e.g. Gilgor and Autry, 2012
	Organisational Networks	<ul style="list-style-type: none"> <li>• Formal networks</li> <li>• Informal networks</li> <li>• Structure</li> <li>• Processes</li> <li>• Routines</li> </ul> e.g. Gulati and Puranam, 2009	<ul style="list-style-type: none"> <li>• Governance via formal and informal networks</li> <li>• Alliances</li> <li>• Network organizations</li> <li>• Organizational ties</li> <li>• Governance structure/processes</li> </ul> e.g. Zaheer and Venkatraman, 1995

## 2.4.2 Social network perspective

The conceptual roots of the social network perspective stem from the sociology literature that explores structure and the impact of ‘social relations’ between and among individuals (e.g., social groups, cliques, status, dominance, social exchange, reciprocity, influence) (Lavie, 2006). Hence, the perspective was originally defined as “the study of the interconnectedness” of social actors (Bloor & Wood, 2006, p. 157). Quatman and Chelladurai (2008) claimed that:

(1) ontologically, the perspective views the social world through a unique lens, i.e., the relational properties present between and among social actors,

(2) epistemologically, it sees the social world as one that can be understood by studying the relational components of phenomena, and

(3) methodologically, it offers unique tools to measure and analyze how the relational properties of a system affect a phenomenon being studied. The term ‘social network’ accordingly refers to ‘a set of nodes (individuals) and relationships that connect them’ (Fombrun, 1982).

In organizational theory, Tichy, Tushman, and Fombrun’s (1979) work is often cited as the original management study to dialog the social network approach in an organizational context. Tichy et al. (1979) saw organizations as social groupings where relatively stable patterns of interactions evolve over time. The basic premise of social network theory in organizational research is that the “actors are embedded within

networks of interconnected relationships that provide opportunities for and constraints on behavior” (Brass et al., 2004, p. 795). Hence, the study of social networks in organizations differs fundamentally from many traditional perspectives in organizational studies that examine individuals in isolation when attempting to examine the many relations among individuals (Brass et al., 2004).

To date, the macro organizational theory has fully embraced the perspective (Galaskiewicz, 2011). Borgatti and Foster’s (2003) review identifies a variety of organizational settings, with the network associated concepts, being applied in many traditional areas such as leadership, power, staff turnover, job satisfaction, job performance, entrepreneurship, stakeholder relations, knowledge utilization, innovation, profit maximization, and vertical integration.

More recently, the approach has also been extended to an ‘interorganizational context’ (e.g., Brass et al., 2004; Kilduff & Brass, 2010; Zaheer et al., 2010) with a focus on the relationships that prevail among organizations as opposed to individuals. Scholars in the IOR stream presume that collaboration between firms arises fundamentally in the context of relationships and unfolds through ongoing interactions (Carter et al., 2007; Galaskiewicz, 2011; Gilgor & Autry, 2012; Zaheer et al., 2010). By arguing that organizations access resources and capabilities through networks of interorganizational relationships, they strongly critique theories that have “assumed an atomistic notion of firms evaluating alternative courses of action and does [do] not take into account the actions of other firms or the relationships in which they themselves are already embedded” (Gulati, 1998, p. 296).

Table 2.1 reflects that network scholars have explored IOR from different perspectives. By discussing the strength of the ties or the closeness of the two firms, Granovetter (1985) and Uzzi 1996 have focused on the relational embeddedness in IOR. On the other hand, scholars such as Burt (1992) and Coleman (1988), have focused on the structural embeddedness in IOR by discussing the patterns of ties (structural holes and closures) and their consequences on the relationships. In contrast, the work of Jarillo (1988) and Powell (1990), has looked at networks as ‘a logic of organization’ and discussed network organizations.

Table 2.1: Significant contributions to social network theory in IOR research

<b>Phenomenon under study</b>	<b>Focus</b>	<b>Primary contributors</b>
Weak and strong ties	the strength of the organizational and personal relationships	Granovetter, 1973
Embeddedness	all economic behavior is necessarily embedded in a larger social context	Granovetter, 1985; Uzzi, 1996
Structural holes	fewer ties among their partners to ensure the availability of non-redundant information	Burt, 1992
Structural equivalence	equivalent firms in a network develop similarities in characteristics and outcomes, due to their similar social environments	Burt, 1987
Cohesion	the identifiable regions of a network that are particularly cohesive	Coleman, 1986
Network density	the number of ties among a set of firms and social capital that discusses the value of social relations for productive benefits	Burt, 1992, 1997; Coleman, 1988, 1990
Centrality measures	network positions, closeness, and status that discusses the importance of a firm due to its structural position in the network as a whole	Bonacich, 1987; Freeman, 1979
Network organizations and Organizational networks	organizational forms characterized by repetitive exchanges among semiautonomous organizations that rely on trust and embedded social relationships	Jarillo, 1988; Powell, 1990

Source: Abridged from Borgatti (2003) and Jones et al. (1997)

The table moreover reveals how the application of the theory has been mostly limited to analyzing data about organizations rather than to understanding them (see e.g., centrality measures, network density, structural equivalence shown in the table). Hence the theory's ability to explore the many relational dynamics in IOR, such as why certain interactions occur while others do not, is yet to be appreciated (Parkhe et al., 2006).

#### ***2.4.2.1 The principle of social embeddedness in network perspective***

The principle of social embeddedness in networks was first introduced to organizational theory by Granovetter (1985; 1992) and, subsequently, by Uzzi (1996; 1997). They saw how the contextual influence of social networks acts as the central mechanism through which networks provide participants with resources and structural benefits. Embeddedness exists where a social relationship is not primarily economically motivated, but rather grounded in either personal relationships with a history of interactions or social capital (Uzzi, 1997).

Accordingly, the principle presumes that individuals “are inseparable from the transactional contexts within which they are embedded” (Emirbayer, 1997, p. 287). Exchange across organizational boundaries occurs not with complete strangers (based merely on price and quality), but with known parties (Balkundi & Kilduff, 2005; Dore, 1983; Powell, 1990). Individuals who act on behalf of the organizations enter into trusting relationships which are developed, cemented, and strengthened over time (Krackhardt, 1992). Many social network studies on IOR have, therefore, applied micro

theories of behavior to organizations by using organizations as the units of analysis (Galaskiewicz, 2011).

***a) Relational embeddedness in IOR***

Granovetter (1985) affirmed that social embeddedness may arise out of both the relational characteristics of the ties (i.e., relational embeddedness) and the structure or patterning of such ties (i.e., structural embeddedness).

Relational embeddedness focuses on ‘what flows through’ the ties or, in other words, the relational characteristics of the ties. Examining the content of a tie allows researchers to gauge the degree of cohesion in terms of closeness and reciprocity in collaborative relationships (Bernardes, 2010; Burt, 1987). Hence, unlike structural embeddedness that explores the structural characteristics of many organizations linked together, relational embeddedness considers dyads (two organizations) as the unit of analysis that better permits the understanding of relational characteristics in IOR (Zaheer, McEvily, & Perrone 1998; Zaheer et al., 2010).

According to Gulati, Nohria, and Zaheer (2000), the strength of what flows through a tie refers to the tie modalities that can either be cooperative or opportunistic, strong or weak, multiplex or single. Tie strength is generally characterized by the amount of time, emotional intensity, intimacy, and the reciprocity involved in the personal relationships (Granovetter, 1973).

Table 2.2 displays that strong ties reflect intense, emotionally laden, and reciprocal interpersonal relationships that require time and energy to create and maintain (Granovetter, 1973). Weak ties, on the other hand, are associated with acquaintances; here social obligations are minimal and short-term, and in such a context interaction would occur through formal negotiations (Galaskiewicz, 2011). Weigl et al. (2008), for instance, found that strong ties are associated with trust-based interactions, while weak ties are associated with distant and nonreciprocal contacts, while some (e.g., Coleman, 1988; Uzzi, 1997) have presumed that strong personal ties between individual executives promote a normative environment of trust and reciprocity for cooperation.

Table 2.2: Characteristics of strong and weak ties

<b>Tie characteristics</b>	<b>Strong ties</b>	<b>Weak ties</b>
Time	Require time and energy to form — long term	Do not require time and energy to form — short term
Emotional intensity	Emotionally laden and trust based	Non-emotional and non-trust based
Intimacy	With known parties and informal	With acquaintances and formal
Reciprocity	Reciprocal	Non-reciprocal
Nature	Collaborative	Opportunistic

Distinguishing ‘trust’ from tie strength, Levin and Cross (2002) affirmed that having a close working relationship with someone may not necessarily mean that the person is trusted. Tie strength portrays the involuntary dependency of a worker in terms of the frequency of interaction (e.g., number of meetings, number of e-mails per day), while trust consists of an affective component that reflects the alleviation of fear that one's

exchange partner will act opportunistically (Bradach & Eccles, 1989). As such, cooperative behavior that implies the exchange or combination of resources may exist only in trustworthy relationships (Tsai & Ghoshal, 1998).

Abundance of trustworthy ties may, however, result in a relational overembeddedness that develops relatively isolated cliques, restricting access to novel information from outside and, hence, leads to interorganizational inertia (Mitchell & Singh, 1996). Hence, weak ties, characterized by distant and infrequent relationships that are casual, less intimate and sharing, and nonreciprocal in nature (Granovetter, 1973; Haythornthwaite, 2005), may be equally significant in interorganizational performance. For instance, Gulati et al. (2000), claimed that “the nature of the relationships themselves could be either collaborative or opportunistic, setting the tone for the form of interactions among the players in the industry as either benign or rivalrous” (p. 206).

***b) Structural embeddedness in IOR***

Structural embeddedness reflects the ‘social control’ or structural constraints on activity (Wellman, 1998) in an interorganizational context. The principle presumes that the economic action does not take place in a barren social setting but rather in the ‘social structure’ of ties within which these ties are embedded (e.g., Granovetter, 1985; Gulati, 1998). The notion of structural embeddedness, therefore, shifts the frame of reference from the dyad to the triad and to the whole network, and in so doing goes beyond the immediate ties of firms (Gulati, 1998).

Literature on structural embeddedness provides two useful yet conflicting viewpoints, i.e., network closure vs. structural holes, to explain effective cooperation in IOR (see Table 2.3). According to Gargiulo and Benassi (1998):

Both network closure and structural hole theory view reciprocity as the mechanism that turns relationships into the assets that define social capital. Both approaches also coincide in viewing cohesive relations as amplifiers of reciprocity. They differ, however, on their assessment of the effects of amplified reciprocity on social action. (p. 5)

According to Table 2.3, network closure theory (Coleman, 1988) promotes a high level of trust and the evolution of self-enforcing informal collaborative mechanisms (Dyer & Singh, 1998) while the novel ideas and new information that flow through is less valued. Structural hole theory (Burt, 1992), on the other hand, promotes the flow of new ideas and information through occupying advantages positions in the network (Gargiulo & Benassi, 1998) while the relational capital is less valued. Nevertheless, empirical investigation to date supports both the network closure (e.g., Ahuja, 2000; Walker et al., 1997) and the structural hole arguments (e.g., Zaheer & McEvily, 1999).

Table 2.3: Network closures vs. structural holes

<b>Characteristics</b>	<b>Network closure theory</b>	<b>Structural hole theory</b>
Nature of ties	Cohesive ties with trust and reciprocity	Advantages ties with no trust and no reciprocity
Level of collaboration	High	Low
Governance	Informal	Formal
Reciprocity	Reciprocal	Nonreciprocal
Nature	Collaborative	Opportunistic

As explained at the beginning, the intention of this review is to view the essential components of a collaborative relationship, i.e., structure, process, and people presented in collaboration theory from a social network perspective, and not to explore the principles and abstracts of the network theory fully. Therefore the review next moves on to discussing the micro and macro approaches in network theory, in order to understand the relational characteristics of the three elements examined in collaboration theory.

### **2.4.3 The micro and macro approaches of social network perspective**

As discussed in the previous section, the principle of ‘social embeddedness’ views IOR as a ‘macro’ phenomenon emerging out of the ‘micro’ decisions of organizations. The notion, accordingly, turns into a “common label for approaches that attempt to deal with the interplay of individual and corporate actors in a dynamic and joint process” (Bögenhold, 2013, p. 300) in IOR. However, a careful review of the work in the fields of IOR reveals that the two levels of networks — individual and organizational — are being studied discretely (Betts & Stouder, 2004; Borgatti & Foster, 2003; Carpenter, Li, & Jiang, 2012; Galaskiewicz, 2011; Kilduff & Brass, 2010; Oliver & Ebers, 1998; Smith-Doerr & Powell, 2003).

Table 2.4 identifies that one stream of research studies networks at the individual level, thus using a micro approach to IOR and that stream presumes that IOR are embedded in interpersonal networks (IP networks). The other stream, by contrast, studies networks at the organizational level, thus taking a macro approach to IOR and

presuming that IOR are embedded in interorganizational networks (IO networks). Some work in this stream (e.g., Mehra, Dixon, Brass, & Robertson, 2006; Uzzi, 1997), however, has adopted the upper echelon theory to consider the ties of ‘top executives’ as organizational level interactions in IOR.

Table 2.4: Classification of social network research on IOR

<b>Perspective</b>	<b>Nature of IOR</b>	<b>Focus</b>	<b>Key contributors</b>
Micro	Embedded in interpersonal relationships	Effects of individual networks	Geletkanycz and Hambrick, 1997; Gilgor and Autry, 2012; Granovetter, 1985; Ingram and Roberts, 2000; Peng and Luo, 2000; Seabright, Levinthal, and Fichman, 1992; Uzzi, 1996, 1997, 1999; Uzzi and Lancaster, 2003; Westphal, Boivie, Chng, and Han, 2006
Macro	Embedded in interorganizational relationships	Effects of organizational networks	Ahuja, 2000; Beckman, Haunschild, and Phillips, 2004; Gnyawali and Madhavan, 2001; Gulati, 1995b, 1998; Gulati and Gargiulo, 1999; Gulati, Lavie, and Madhavan, 2011; Rowley, Behrens, and Krackhardt, 2000; Ritter, 2004; Shipilov, 2006; Zaheer, Gözübüyük and Milanov, 2010; Zaheer, Gulati, and Nohria, 2000

Literature further reveals that by employing a high value on economic parameters, the macro approach has failed to recognize how lack of trust in the face of economic controls leads to the creation of opportunistic behavior in relationships (Gulati, 1995a). The dotted lines connecting the two organizational levels in Figure 2.5 depict the

approach's focus on macro parameters such as synergetic cooperation and value creation. Scholars in this stream presume that different exchange conditions, such as uncertainty, asset specificity, and frequency (Jones, Hesterly, & Borgatti, 1997), have resulted in creating different forms of IOR (Powell, 1990; Provan, Fish, & Sydow, 2007).

On the contrary, by placing a high value on social parameters, the micro domain overlooks how such factors may encourage individuals to suspend judgment of others, with the result that they more frequently give them the benefit of the doubt and second chances (Hoetker, 2005; Langfred, 2004; Luo, 2002; Poppo & Zenger, 2002; Williamson, 1991). The dotted lines connecting the two personal levels in Figure 2.6 reflect that this approach sees the success of IOR as dependent on trust, reciprocity, information sharing, and knowledge creation.

Figure 2.5: Embedded organizational and individual networks in IOR

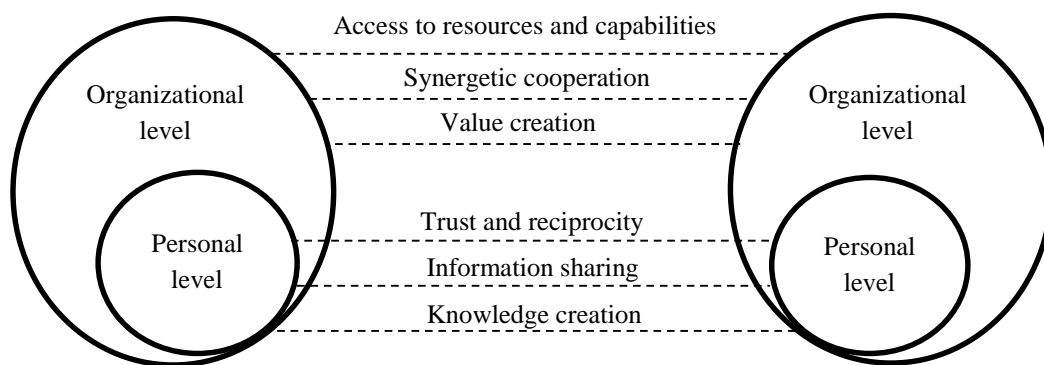


Table 2.5 provides a summary of the two approaches. It shows that while the micro approach has adopted a behavioural lens to the study of IOR, the macro approach has adopted a strategic lens.

Table 2.5: The micro and macro approaches to IOR

<b>Attribute</b>	<b>Micro approach</b>	<b>Macro approach</b>
Lens	Behavioral	Strategic
Unit of analysis	Personal networks	Organizational networks
Alliances	Embedded in personal networks	Embedded in impersonal networks
Modelling approach	Mapping personal ties	Governance structures
Collaboration	Micro dynamics	Macro dynamics
Duration	Continuous	Discrete

As shown in the table, the micro approach presumes that relationships among organizations are formed by individuals who act on behalf of their organization. The focus on embedded personal networks depicts that the approach has been more concerned with the micro dynamics in IOR.

The table also reveals that the macro approach, on the other hand, considers organizations as economic actors that possess the ability to make independent decisions in their own best interests (Child, 1997; Kim, Choi, Yan, & Dooley, 2011). The focus on the embedded impersonal networks, or, in other words, the organizational networks, depicts that the approach has been more concerned with the macro dynamics in IOR. This distinction between the two viewpoints is much evident in the work of Heide and Wathne (2006) where they stated:

in branches of the new institutional economics literature decision makers' assumed principle of action is utility maximization sometimes to the point of "self-interest seeking with guile" [...] In contrast sociology literature has been overly critical of such an "under socialized" view of exchange, arguing that relationship behaviour follows from rules or "heuristics". (p. 90)

Next, the review explores literature on the macro approach in social network theory, with the intention of understanding the behavior of structure and processes in collaboration.

#### ***2.4.3.1 The macro approach to IOR***

The primary focus of the macro approach has been on gaining synergetic benefits through alternative organizational configurations (Van Alstyne, 1997). Different perspectives on IO networks are thus apparent in the literature (see Table 2.6). These are:

- IO networks as forms of co-operation among organizations, such as joint ventures, strategic alliances, collaborations, and consortia (e.g., Gerlach & Lincoln, 1992),
- IO networks as unique forms of governance. For instance, by applying a structural perspective, economists (Oxley, 1997; Williamson, 1991) view IO networks as formal governance mechanisms, while sociologists (Ring & Van de Ven, 1994; Uzzi, 1997) take a relational perspective, viewing IO networks as informally governed (Faems, Janssens, Madhok, & Van Looy, 2008).

- IO networks as a ‘network metaphor’: a form of economic organization separate from markets and hierarchies (e.g., Baker, 1992; Powell, 1990; Smith-Doerr & Powell, 2003).

Table 2.6: Different perspectives of IO networks

<b>Authors</b>	<b>Term</b>	<b>Definition</b>
Alter and Hage, 1993	Interorganizational networks	Unbounded or bounded clusters of organizations that, by definition, are nonhierarchical collectives of legally separate units
Dubini and Aldrich, 1991	Networks	Patterned relationships among individuals, groups, and organizations
Gerlach and Lincoln, 1992	Alliance capitalism	Strategic, long-term relationships across a broad spectrum of markets
Granovetter, 1994, 1995	Business groups	Collections of firms bound together in some formal and/or informal ways by an intermediate level of binding
Larson, 1992	Network organizational forms	Long-term recurrent exchanges that create interdependencies resting on the entangling of obligations, expectations, reputations, and mutual interests
Miles and Snow, 1986, 1992	Network organizations	Clusters of firms or specialized units coordinated by market mechanisms
Powell, 1990	Network forms of organization	Lateral or horizontal patterns of exchange, independent flows of resources, reciprocal lines of communication

Source: Jones et al. (1997, p. 915)

*a) IO networks as network organizations*

Network organizations are categorized as distinct organizational forms that prevail among semiautonomous organizations (Borgatti & Foster, 2003). Formal contracts may exist in such organizations. However, the terms are not specified in those contracts hence the contracted task would require many others to work closely together, with each adjusting to the evolving conditions (Jones et al., 1997). Podolny and Page (1998) accordingly defined network organizations as: “any collection of actors that pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange” (p. 59).

The European and Scandinavian work on network organizations initiated in the mid-1970s is considered groundbreaking as a result of the substantial work carried out by the International Marketing and Purchasing (IMP) (Cravens, Piercy, & Shipp, 1996). The efforts of the IMP eventually led to ‘the study of network organizations’ assuming the character of a ‘school’ or an ‘approach’ (Grandori & Soda, 1995).

It was in the 1980s, however, that the ‘age of the network’ (Snow, Miles, & Coleman, 1992) or the ‘network paradigm’ (Cravens, Shipp, & Cravens, 1994) was demarcated, with the emergence of this new organizational form. American literature on the new phenomenon was subsequently brought into the limelight in the early 1990s by scholars such as Thorelli (1986), Achrol (1991), and Cravens et al. (1996). Scholarly attention on the new form of organization at that era was considerable (Achrol, 1996).

*b) IO networks as a form of governance*

Studies that have particularly attempted to understand governance in IOR have used different theoretical lenses to understand the phenomenon. These include:

- The transaction cost theory (Hennart & Reddy, 1997),
- Principal-agent theory (Reuer & Miller, 1997),
- Institutional theory (Grandori & Soda, 1995), and
- The relational view (Dyer & Singh, 1998).

In the early stages of network governance research, empirical studies had continued in the tradition of transaction cost economics. The emerging trend tactlessly overlooked the fact that IOR are often embedded in a rich and influential social context (Gulati, 1998), thus devaluing the social mechanisms such as trust that may prevail in such relationships (Gulati, 1995a).

Much of the consequent contribution has, therefore, emphasized the significance of trust in IOR. For instance, some scholars (e.g., Dyer & Singh, 1998; Poppo & Zenger, 2002; Powell, 1990; Ring & Van de Ven, 1994; Uzzi, 1997) have discovered that the existence of formal contracts signals distrust and encourages opportunistic behavior in collaboration. In the strategic management literature (Dyer & Singh, 1998; Gulati, 1995a; Larson, 1992; Macaulay, 1963) the informal governance mechanisms associated with trust are often identified as ‘self-enforcing relational contracts’ or

social controls (Larson, 1992) capable of replacing the economic controls resulting from the formal contractual agreements.

*c) Elements of an IO network*

Provan et al. (2007) affirmed that irrespective of the different terms used in the study of IO networks, they characteristically represent the common theme that relationships lead to connectedness, collective action, and reciprocity. As explained previously, in network theory a 'tie' is considered as the basic building block of a social network, and its content defines the nature of the particular interaction. So, it is quite possible for a researcher to investigate 'network ties' without being concerned with a network form of organization or governance when studying IO networks (Betts & Stouder, 2004). Accordingly, an IO network can be identified as a long-term collaborative relationship between two organizations (dyad) in which the two actors retain control over their own resources but jointly decide on their use through negotiations (Brass et al., 2004).

Unlike a firm's internal resources, most significant resources lie outside firm boundaries (Dyer & Singh 1998). Organizational actors, therefore, engage in the process of value creation by purposely creating contractual links with other organizations to utilize network resources (Gulati & Gargiulo, 1999). IO networks would, therefore, be the primary dyadic connection that reflects the contractual structuring of the relationship with an economic orientation (Ness & Haugland, 2005). According to Gulati and Singh (1998, p. 785), in addition to formalizing transactions,

the link designates roles for the partners and includes the following hierarchical components:

- A command structure
- Authority systems
- Incentive systems
- Standard operating procedures
- Dispute resolution procedures
- Nonmarket pricing systems.

The IO network, therefore, contains ‘relations’ based on the dyad’s prescribed governance structure (including vertical and horizontal linkages) and processes (Zaheer & Venkatraman, 1995).

### ***Governance structure and processes***

Structure reflects the ‘division of labor’ that leads to task positions and their interdependencies (Brass, 1984). According to Lincoln (1979), structure portrays the configuration of positions and the instrumental relations among them. The governance structure of an IO network accordingly reflects the interfirm framework within which exchange takes place. It is established through the organization of relations among members through formalized roles (Gulati & Singh, 1998).

Once the overall objectives of the partnership are delineated, they will be partitioned into manageable, specialized jobs. The dyad’s governance structure would reflect how the parties have allocated these jobs, or, in other words the roles to subunits, in order

to achieve coordination among them. Therefore, governance structures are presumed to be predictable, regular, and to involve explicit information transfers, and codified rules, procedures, and regulations required for collaboration through task divisions, authority relations, and reporting relationships (Ansell & Gash, 2007; Emerson, Nabatchi, & Balogh, 2011). The conception of structure as networks, therefore, stresses the predetermined interactions among organizational members and subunits (Shrader, Lincoln, & Hoffman, 1989).

Governance processes are recognized as the workflows “customized in line with the requirements of the exchange partner” (Zaheer & Venkatraman, 1995, p. 337). Zaheer and Venkatraman (1995) claimed that, while parts of the processes are built into the structure at inception, most of them evolve with the underlying exchanges in the real world. The very few other network scholars who have discussed processes identify them as an element of the governance structure (e.g., Gulati & Singh 1998). Thus, no precise definition for processes is apparent in the interorganizational network literature.

Highlighting the importance of setting procedural controls at the start of a relationship, identified as Phase 1, Ness and Haugland (2005) affirmed that “the administrative procedures [...] represented a guarantee for procedural justice. This was very important in Phase 1, as relational norms and trust were at low levels” (p. 1235). Rather than as a formal structure, processes act as the ‘bridging mechanisms’ that result in higher boundary-spanning activities across organizations (Cousins, Handfield, Lawson, & Petersen, 2006). Accordingly, processes can be well identified as the ‘codified

behavior' of the relationship (Pentland & Feldman, 2005) that shifts the focus from what a structure is, to how it is accomplished (Feldman, 2000).

The literature (Gulati, 1995b, 1998; Milward & Provan, 2006; Poppo & Zenger, 2002) recognizes that structures and processes exert a significant influence on the pattern and content of relations among organizations. However, it has failed to address how the two effectively coevolve in collaboration. For instance, although Zaheer and Venkatraman's (1995) work on relational governance affirms that both the structural and processual ties are embedded in IO networks, an explanation as to how the two influence each other was not apparent.

The review next moves on to exploring literature on the micro approach in social network theory, with the intention of understanding the behaviour of people in collaboration.

#### ***2.4.3.2 The micro approach to IOR***

Unlike the macro approach where scholars are interested in understanding how and why organizations create external links, the micro approach has focused on the nature of interpersonal links between organizations (Betts & Stouder, 2004). Scholars in this domain view people as key organizational linkages or connectors in IOR (Taylor & Helfat, 2009). For instance, Rosenkopf and Schleicher (2008) argued that a firm does not communicate as a unitary actor; rather, it is individual managers and employees

belonging to a given firm who do so. Attention should thus be paid to the study of interorganizational networks spanned by individual managers.

According to Ettliger (2003), interpersonal interactions occur across formal organizations such as firms as well as informal organizations. Although strategic use is made of more formalized communication mechanisms, interpersonal communication processes are seen as most central (Mandell & Keast, 2009) to the development and evolution of IOR (Boddy et. al., 2000). Analysis, therefore, cannot be fixed at a particular unit; rather, it is fluid and moves between the two units: organizational and individual. This fluidity “permits the analysis of interpersonal interaction, in contrast to more conventional approaches that focus on interorganizational relations” (Ettliger, 2003, p. 166).

***a) Individuals in the development of IOR***

Research has highlighted the significant involvement of interpersonal relations particularly in the development of IOR (Gulati & Gargiulo, 1999; Rosenkopf & Schleicher, 2008). Arguably, firms meet only if individual employees of these firms meet (Rosenkopf & Schleicher, 2008). “The creation of networks of firms is based on individuals searching for useful contacts and creating the proper basis for organizational networking” (Jolink & Dankbaar, 2010, p. 1437). Rosenkopf and Schleicher (2008) claimed that more formal relations such as the formation of alliances which are explicit and contractual are primed by informal interactions of top-level managers. In a similar vein, Boddy et al. (2000) explained how parties negotiate

commitments for future actions through formal, role interactions and informal, personal interactions when developing cooperative relationships.

***b) Individuals in the evolution of IOR***

It is observed that beneath the formalities of contractual agreements informal interpersonal relationships often emerge across organizational boundaries in a context of collaboration (Gulati & Gargiulo 1999). These relationships facilitate the active exchange of information and trust necessary for interorganizational coordination. Jones et al. (1997) referred to interfirm coordination as one that is characterized by organic or informal social systems as opposed to bureaucratic structures within firms and formal contractual relationships between them.

Though formal contracts are necessary, they have little effect on maintaining the relationship between trading partners (Spekman, 1998). For instance, Cross, Borgatti, and Parker (2002) showed how informal relationships among employees reflect the way things happen in an organization rather than relationships established by position within the formal structure (Cross et al., 2002). Little has, however, been explored concerning the role of individual employees in collaboration between firms (Jolink & Dankbaar, 2010).

***c) Significance of the boundary-spanning roles in IOR***

Unlike an ordinary employee, a boundary spanner is simultaneously exposed to the competing expectations of his own and the partner organization (Kahn, Wolfe, Quinn,

Snoek, & Rosenthal, 1964). The role of a boundary spanner is thus vital for courting, nurturing, and developing the evolving IOR (Hutt, Stafford, Walker, & Reingen, 2000; Spekman et al., 1996). For instance, Friedman and Podolny (1992) claimed that “the boundary spanner provides the vehicle for communications and dispute resolution” (p. 45) in partnerships. Aldrich and Herker (1977) referred to this role as the effortful interaction with outside parties, focused on conveying influence and representing interests of their own firm in the relationship, while Grandori and Soda (1995) referred to it as the linking pin.

Much of the emerging work in collaboration (e.g., Gulati, 1995a; Spekman et al., 1996; Zaheer et al., 1998) has associated trust with the role of boundary spanners. Trust is a ‘psychological state’ that stimulates positive expectations of reciprocal behavior (Hutt et al., 2000) and, therefore, is a distinguishing characteristic of a personal relationship in IOR (Uzzi, 1997). Boundary spanners create a web of social ties that are capable of conveying influence and representing perceptions, expectations, and ideas from each side to the other (Friedman & Podolny, 1992). These personal relationships emerge across organizational boundaries, and facilitate the active exchange of information and the production of trust. Such interorganizational trust, nurtured through effective emotional connections of the boundary spanners, is essential to fostering co-operation between firms (Perrone, Zaheer, & McEvily, 2003; Zaheer McEvily, & Perrone, 1998).

#### *d) Elements of an IP network*

Using social network analysis methods (a tool used to study the interconnectedness of individuals) scholars in the micro domain have striven to unveil the nature of these individual ties in collaboration (Betts & Stouder, 2004). Reviews (e.g., Betts & Stouder, 2004) show a number of such IO networks explored in strategic alliances to be:

- Communication ties (Carter et al., 2007; Gilgor & Autry 2012 ; Mintzberg, 1979),
- Friendship and workflow ties (Ibarra & Andrews, 1993; Lincoln & Miller, 1979), and
- Help and advice ties (Krackhardt & Porter, 1986).

In the light of this development, workflow and friendship ties have gained significant attention in the IOR network literature (e.g., Gilgor & Autry, 2012; Hallen, 1992; Mehra, Kilduff, & Brass, 2001; Turnbull, 1979). Turnbull (1979), and more recently Hallen (1992), claimed that a dyad's IP network consists of both workflow and friendship ties, although the two reflect the different nature of exchange relationships i.e., the economic and social (Ferriani et al., 2013).

According Ferriani et al. (2013), while the workflow ties reflect the economic nature of IP networks, the friendship ties reflect the social nature in them. This distinction between the two types of ties was empirically validated recently by Gilgor and Autry (2012). They demonstrated how workflow ties could be replaced by their economic or social equivalent (in the sociological sense) without any disruption, while none of the

friendship ties could be substituted without an emotional or cognitive loss (see Table 2.7 for a comparison between the two types of ties).

Table 2.7: Workflow ties vs. friendship ties

	<b>Workflow ties</b>	<b>Friendship ties</b>
Type	Instrumental (focused on substance or task)	Expressive (emotion-based, intrinsic)
Interaction	Involuntary	Voluntary
Communications	Formal (role related)	Informal (non-role related)
Motivation	Reciprocal orientation	Communal orientation
Reason for development	Economics	Intimate social connections
Nature	Impersonal	Personal

Source: Abridged from Gilgor and Autry (2012)

### *Workflow and friendship ties*

As shown in Table 2.7, workflow ties arise in the course of performing assigned work roles and, hence, relate directly to the prescribed objectives of the task. In other words, workflow ties operate on an economic exchange logic (Ferriani et al., 2013). This effect of the prescribed objectives in the structure on workflow ties was first brought up by Lincoln and Miller (1979) and much later by Soda and Zaheer (2012). Soda and Zaheer (2012) identified the nature of “the workflow tie and the content flowing through as a composition of asymmetric, one-way flows [...] based on relatively clear goals measured along relatively objective criteria” (p. 757).

The table moreover depicts that, though executed by individuals, the structural rigidity associated with the workflow ties has created a more explicit, impersonal, and

functionally specific nature in them (Böröcz & Southworth, 1998). A tie based primarily on a formal position is, therefore, more unlikely to be maintained after the individual shifts positions, or is likely to be of limited value if maintained (Podolny & Baron, 1997).

Friendship ties, by contrast, arise from interpersonal attraction and emotions that primarily influence the personal rather than the task-related sphere of social action (Blau, 1955; Gibbons, 2004; Gouldner, 1954; Lincoln & McBride, 1985) and operate on a social exchange logic (Ferriani et al., 2013). Friendship ties accordingly “represent more discretion in the choice of friends than they have in the choice of with whom to interact to accomplish the work” (Mehra et al., 2001, p. 130). Compared to workflow ties that flow from formal position-to-position (Gonzalez, Claro, & Palmatier, 2014), friendship ties flow from person-to-person on a tacit and voluntary basis (Gonzalez et al., 2014) and continue to provide value even after the individual has shifted positions (Podolny & Baron, 1997).

The two types of ties can hence be categorized along Chen and Krauskopf’s (2013) formal to informal networks and instrumental to expressive tie continua. While formal networks refer to officially defined relationships across organizational boundaries, informal networks refer to unrestricted patterns of relations (Ibarra & Andrews, 1993). As a result, the formal networks of boundary spanners relate to instrumental ties that include exchanges of job-related resources, information, and expertise, whereas informal networks relate to their expressive ties and, therefore, involve the exchange of friendship, trust, and socioemotional support (Ibarra & Andrews, 1993).

Apart from describing the nature of the two types of ties, a number of studies have also documented a significant overlap in them (Allen & Cohen, 1969; Brass, 1984; Ibarra, 1992; Mehra et al., 2006; Rank, 2008). For example, Mehra et al. (2006) claimed that although these two ties are conceptually distinguishable, it is difficult to untangle them in practice. Ferriani et al. (2013) states that the “two distinct logics relate to tie content – the social interaction and the economic exchange logics – are at play in the formation of multiplex ties” (p. 10). In a similar vein, Kilduff and Brass (2010) noted “one type of tie may be appropriated for a different type of use—a friendship tie might be used to secure a financial loan” (p. 342). Grayson’s (2007) empirical study revealed that relationships can be both intrinsically and instrumentally oriented, though they are defined in contrast with each other. Yet, little is so far known about the trade-offs the boundary spanners make in combining instrumentality and affect in their work relationships (Casciaro & Lobo, 2008).

As explained at the beginning, the intention of this review was to identify the essential elements of a collaborative relationship at both the micro and macro levels and, to explore their coevolution in collaboration. Accordingly, as shown in the chapter outline in Figure 2.1, the review first explored literature on collaboration theory and identified that the three elements: structure, processes, and people should be leveraged effectively for the success of collaboration. The review then turned to exploring literature on social network theory in IOR with the intention of deriving the relational characteristics of the three elements. In the following section, the review draws on the cross-level effects

of organizational and individual networks, in order to gain a more comprehensive understanding of how the two types of networks coevolve in IOR.

#### ***2.4.3.3 The coevolution of IO and IP networks***

Network literature on IOR presents IP networks as informal governance mechanisms of an interorganizational relationship that emerge through social processes (Dyer & Singh, 1998; Zaheer et al., 1998; Zaheer & Venkatraman, 1995). IO networks, on the other hand, are explained as the frame of interfirm exchanges (Gulati, 1995a; Llewellyn, 1931) or the formal coordination and control of the same relationship (Grandori & Soda, 1995; Gulati & Singh, 1998; Langfred, 2004).

This distinction between the two types of networks is clearly evident in Table 2.8. As shown in the table, psychological factors such as trust and intimacy are more pertinent at the individual-level relationships than at the organizational-level relationships (Rowley et al., 2000). Table 2.8 also indicates that while IO networks are inclined to facilitate market related transactions, IP networks do not behave in the same way. For instance, in their treatment of social capital, Adler and Kwon (2002) demonstrated that while market relations facilitate the transfer of network resources between two organizations, social relations channel only favors and gifts and, therefore, cannot fully describe the economic benefits that organizations derive from their IO networks.

Table 2.8: Characteristics of IO and IP networks

	<b>IO network</b>	<b>IP network</b>
Origin	Role-based formal processes	Non-role-based informal social processes
Control	Through coordinated efforts	Through uncoordinated voluntary efforts
Motivation	Economic factors	Psychological factors
Inclination	Facilitation of market related transactions	Facilitation of nonmarket related personal favours
Nature of the underlying relationship	Impersonal and discrete	Personal and continuous

The distinguishing characteristic of the two networks also becomes apparent when studying the nature of the underlying relationships. For example, in the IP networks, once two actors are connected, they cannot later be ‘unconnected’ (Fei, Hamilton, & Wang, 1992), even though the nature, strength, or content of their relationship may vary (Earley, 1997; Luo, 2000). On the other hand, IO networks are deemed to possess finite time spans, with a contractual obligation to dissolve upon the completion of the agreed time, the accomplishment of cooperative goals, or the inability to follow agreed processes.

Introducing the concept ‘duality of social structure’ to organizational network research, Breiger (1974), however, affirmed that, while two people are connected through organizational linkages, the two organizations are simultaneously connected through people. Or, in other words, when two boundary-spanning individuals interact, they not only create an interpersonal link, but also represent and execute the organizational

demands of the organizations of which they are members (Galaskiewicz & Burt, 1991; Zaheer & Soda, 2009).

In light of this development, many authors (Borgatti & Li, 2009; Carpenter et al., 2012; Chetty & Agndal 2008; Inkpen & Currall, 2004; Ma, Yao, & Xi, 2009) have emphasised the significance of simultaneously studying IP and IO networks in IOR. For instance, Smith-Doerr and Powell (2003) noted when the examining lens is directed onto the “relationships among organizations, attention is directed much more at formal ties that connect organizations [...] with two categories often neglected — formal internal networks and informal external networks” (Smith-Doerr & Powell, 2003, p. 14).

Borgatti and Li’s (2009) recent work on social network analysis in a supply chain context displays how both hard and soft aspects of a supply chain relationship reflect the presence of ties among actors as collective entities and ties exerted through the personal relationships of their members in the same relationship. In a similar vein, Van den Bulte and Wuyts (2007) claimed that overlapping ties are capable of yielding greater synergies in collaboration because they represent stronger ties and offer more routes to build positive forces.

Indeed, while the organization’s ties are constrained by competitive market relations, they are also affected by their managers’ level of experience and of trust in potential contacts (Brass et al., 2004). A high level of trust ingrained in individual relationships, in conjunction with formalized mechanisms in organizational relationships, thus

ensures conformity to expectations at both interpersonal and interorganizational levels in collaboration (Handfield & Bechtel, 2002; Kanter, 1994; Lin, 2006; Macaulay, 1963; Vlaar, Van den Bosch, & Volberda, 2007).

Although the above work conveys the fact that network theory essentially involves the overlap between social ties and economic ties both within and across organizations (Kilduff & Brass, 2010), scholars have repeatedly failed to address this overlap explicitly. Even the most recent work that has attempted to explore network multiplexity has, unfortunately, employed a micro behavioral perspective (e.g., Ferriani et al., 2013), thus failing to address the macro dynamics of the phenomenon.

As a result, we know surprisingly little about how networks are affected both from below (by individual characteristics) and from above (by organizational characteristics) (Brass, 2004). For example, Phelps Heidl, and Wadhwa (2012) claimed that observations on how the micro level behaviors of interacting agents generate and change macro level outcomes, and how macro level outcomes feedback to power micro behavior is still rare. A synthesis is thus sought between conceptions of social and economic behavior by utilizing multilevel lenses for a more sophisticated understanding of IOR (Hitt, Beamish, Jackson & Mathieu, 2007).

*a) Effect of IO network on its IP network in collaboration*

The effect of structure and processes on individual behavior is not new to intraorganizational network literature. The subject was first discussed by

Roethlisberger and Dickson (1939) and more lately by Podolny and Baron (1997) who identified how “many important informal ties in organizations are a result of ego's and alter's (individual actors) positions within the organizational division of labor and are therefore only minimally controllable by the actors involved” (p. 690). The effect of macro elements on micro elements, in an interorganizational context was, however, brought first to the fore by Macaulay (1963).

Ring and Van de Ven's (1994) subsequent work on interorganizational corporation emphasizes the role of structure in forming workflow ties. They claimed “role formation enables individuals to serve as agents for their organizations” (p. 103). This effect of structure on workflow ties was empirically validated more recently in Ferriani et al. (2013). They showed how such workflow ties arise in the course of performing assigned work roles and how they are directly associated with the prescribed objectives of the task. As for the boundary-spanning workflow ties, some evidence in the IOR literature also reveals the effect of prescribed tasks or structure on forming friendships in the workplaces. For instance, Lincoln and Miller (1979) noted that official roles are capable of shaping individual friendships by locating them in physical space and at particular points in the workflow.

Similar to structure, the fact that processes too affect workflow ties is clearly evident in Roethlisberger and Dickson's (1939) work where they noted that “systems, rules, policies, and regulations of the company constitute the formal organization [. . .] which express what the relations of one person to another are supposed to be in order to achieve effectively the task of technical production” (p. 558). As with the boundary-

spanning workflow ties, there is much evidence in the literature that exemplifies how these processes lead to forming friendships in the workplaces. For instance, the work of Gulati and Puranam (2009) illustrates how workflow processes can be redirected by placing organizational boundaries between workers to discourage the continuance of the previous personal relationships those workers had.

Most of these studies (e.g., Gulati & Puranam, 2009), however, are still confined to an intraorganizational context, and their validity in an interorganizational setting is yet to be fully tested. Therefore, an opportunity still exists in the IOR domain “to explore cross-level relationships in the direction of higher to lower levels. The type of cross-level research we propose is to examine how interorganizational ties and networks influence [.....] individuals” (Phelps et al., 2012, p. 1153).

***b) Effect of IP network on IO network in collaboration***

The effect of the IP network on the IO network in the IOR literature was first suggested by Granovetter (1985) and much later by Uzzi (1997) who argued that the economic actions are embedded in ongoing social ties. Their work subsequently initiated a large body of literature (e.g., Ingram & Roberts, 2000; Larson, 1992; McDonald & Westphal, 2003; Saxenian, 1990) dedicated to exploring the effect of IP networks on IO networks in IOR. For instance, Ring and Van de Ven (1994) claimed that a major change in the dyad’s IP network is more likely to disrupt or sever its IO network in that “levels of flexibility and efficiency that may have existed in management of the cooperative IOR

are likely to be lost [...] when the vicious cycle dwindling personal trust has gone beyond a threshold level” (p. 104).

The positive effect of workflow ties in the IP network on the dyad’s structure and processes is clearly evident in Burkhardt and Brass’ (1990) work. They showed how in the event of a technology change, the individuals became uncomfortable with uncertainty and suddenly increased interaction with a number of different parties to interpret the change, a response resulting in a subsequent change in organizational structure and processes. As with workflow ties, many authors (e.g., Gulati, 1995a; Hutt et al., 2000; Ingram & Roberts, 2000) have observed how increased friendship ties in the IP network consequently shape a dyad’s functionality by easing communication, providing a shared interpretation of goals and performing norms across organizations. The subsequent interactions embedded in informal relationships (e.g., informal processes of negotiation) reconstruct and embody new governance structures for the collaboration (Ring & Van de Ven, 1994).

Although the positive effects of IP networks on a dyad’s IO network are many, Uzzi (2007) affirmed that, unless carefully monitored, the developing personal relationships may, conversely, bring negative effects on the IO network. According to Uzzi (1997), the embeddedness logic works only up to a point, and beyond that it creates negative results. The very friendship relations formed to facilitate commercial transactions may result in creating ‘feelings of obligation’ for the other, superseding the economic imperatives and this feeling may, therefore, stifle effective economic action. Uzzi showed how “overembedded networks can sometimes release intense negative

emotions of spite and revenge that trap firms in self-defeating cycles of behavior' (Uzzi, 1997, p. 59).

## **2.5 Defining the initial research question**

The literature review on collaboration theory identified interorganizational collaboration as a phenomenon that reflects high integration in terms of structural, processual, and social controls in the relationship (Gajda, 2004; Huxham, 2003). Hence, effectively leveraging interactions through structure, processes, and people is recognized as the key determinant of successful collaboration (Huxham, 2003).

The literature review on social network theory identified social networks in IOR as inherently a multilevel phenomenon (e.g., Ma et al., 2009). However, to date, not much work has attempted to employ a multilevel lens to comprehend the nature of social networks at micro and macro levels in IOR (Carpenter et al., 2012; Ferriani et al., 2013; Phelps et al., 2012).

A focus on governance structure, processes, and the actions of boundary-spanning individuals in collaboration theory thus provides a platform for viewing interorganizational collaboration through a social network lens. The main objective of this study is, therefore, to contribute to the development of organizational social network theory by exploring how interorganizational and interpersonal interactions can be fruitfully combined when studying interorganizational collaboration.

The research thus focuses on the following questions:

- (1) How do organizational level interactions affect collaboration between firms?

Collaboration theory clearly explains the significance of the macro elements: structure and processes in collaboration. According to the theory, they not only set the tone to the relationship, but also carry the collaboration forward (Huxham & Vangen, 2000). However, the argument is yet to be tested in a commercial setting. Apart from the work of Zaheer and Venkatraman (1995), network research too has not been extended to study governance structures and processes in IOR (Phelps et al., 2012). Consequently, a significant gap exists in our comprehension of the macro behavior in interorganizational collaboration.

- (2) How do personal level interactions affect collaboration between firms?

Collaboration theory identifies participants as those who lead the activities of a collaboration forward (Huxham & Vangen, 2003). The theory views successful collaboration as dependent on the positive personal interactions between the two organizations (Gadja, 2004). However, the argument is yet to be tested in a commercial setting. Although social network theory has identified different types of personal networks that prevail within organizations, the analysis has not been fully extended to an interorganizational context. As a result, a significant gap exists in terms of comprehending the micro behavior in interorganizational collaboration.

(3) How do interorganizational and interpersonal interactions coevolve in collaboration?

The collaborative leadership pyramid in Figure 2.2 exhibits that the three elements structure, process and people are interdependent, and that no one element, in isolation, can be used to explain collaboration singularly (Vangen & Huxham, 2003). While structure influences process, processes influence the emerging structures (Huxham & Vangen, 2000). At the same time, individual actions are guided by structure and processes, while structures and processes are formed and reformed through individual actions (Vangen & Huxham, 2003b). However, the argument is yet to be tested in a commercial setting. Social network theory in IOR on the other hand is fragmented with scholars studying the micro and macro levels in separate camps (Betts & Stouder, 2004; Carpenter et al., 2012). So the multilevel effects of networks are yet to be explored in collaborative relationships (Carter et al., 2007; Zaheer et al., 2010).

## **2.6 Summary**

This chapter draws upon the literature on collaboration theory and the social network perspective related to IOR in order to gain a richer understanding of how IOR are managed for successful collaboration. In summary, the review contributes to this thesis in the following ways:

- By critically reviewing the literature on collaboration theory, it signifies the relevance of applying the theory to not only the public sector but also to the private sector collaborative relationships.
- By identifying the value of structure, processes, and people in collaboration, the review lays the foundations upon which to further explore the three elements through a social network lens.
- By critically reviewing the application of the social network perspective to interorganizational collaboration, the review highlights the fact that, although defined as inherently a multilevel theory, the perspective is fragmented, into two extant viewpoints: the micro and macro.. The micro approach views IOR from an interpersonal level, whereas the macro approach views it from an interorganizational level.
- The review further identifies that the governance structure and processes form the IO networks in IOR, and that the workflow and friendship ties form the IP network. These four elements will provide the analytical focus and drive the collecting and analyzing of data later in the thesis.

The literature review provided some points of reference for collecting the empirical data for a typical inductive study. The next chapter focuses on developing the research design that will be used to investigate the identified research questions.

# **Chapter 3**

## **Methodology**

### **3.1 Introduction**

The social network perspective brings a unique lens to the study of interorganizational collaboration by focusing on the micro and macro dynamics of the phenomenon. However, the application of this perspective is still emerging and is in need of a robust theoretical grounding to establish itself as a distinct perspective for the study of IOR.

This chapter and its supporting appendices explain how this research is designed and conducted to explore the organizational and individual level interactions in IOR. Section 3.2 provides an outline (see Figure 3.1) of how and why the study has been positioned as a qualitative case study research in exploring interorganizational collaboration. Subsequent sections provide justification for each of the steps followed in the process.

### **3.2 Positioning the research**

In sociology the word ‘research’ is interpreted as rediscovering the social world to better understand why or how people behave (Marvasti, 2004). Crotty (1998) saw this act as a process that fundamentally consists of four distinct yet inherently interrelated elements. These are:

1. Epistemology – theory of knowledge embedded in the theoretical perspective and thereby in the methodology

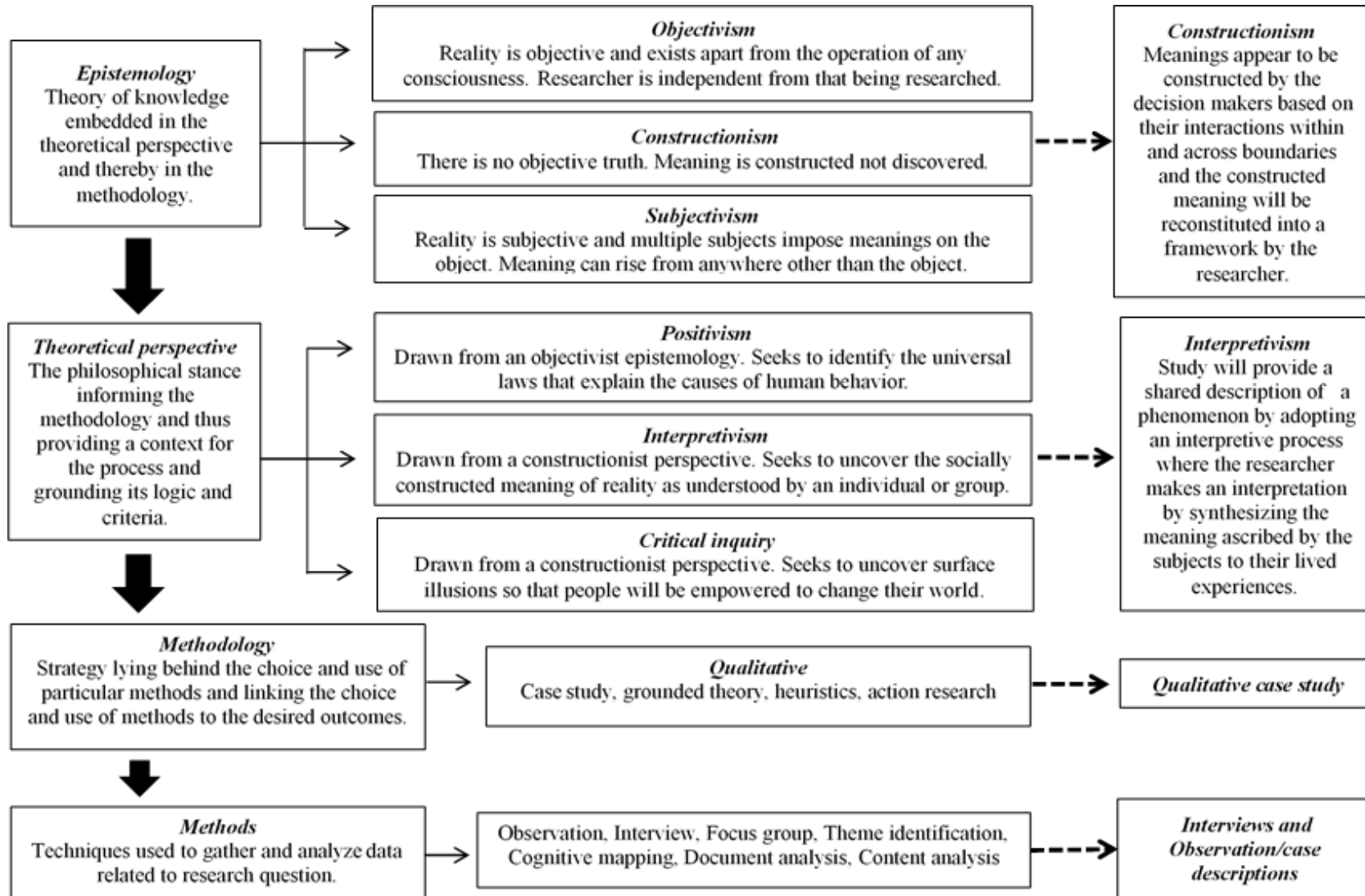
2. Theoretical perspective – the philosophical stance informing the methodology and thus providing a context for the process and grounding of logic and criteria
3. Methodology – the strategy lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes
4. Methods – the techniques used to gather and analyze data related to the research question or hypothesis.

Following Crotty (1998), this study adopted the sequence shown in Figure 3.1 in order to arrive at the epistemological stance, and, thereby, the theoretical perspective and the resultant methodology.

### **3.2.1 Epistemology**


The research design process begins with certain philosophical assumptions about the nature of human beings and their world or, in other words, ‘the social reality’. These assumptions are referred to as ontology (Burrell & Morgan, 1979). Ontological assumptions sit alongside the epistemologies. Epistemology is concerned with how one senses the world and communicates that understanding as knowledge to others (Frankel, Naslund, & Bolumole, 2005). Epistemologies, therefore, lay “the appropriate foundation for the study of society and its manifestation” (Bryman, 1984, p. 75). They express the ways in which one should conduct research and view data (Crotty, 1998).

Figure 3.1 The study's epistemological, theoretical, and methodological stance



Three of the key epistemologies presented in the literature are: objectivism, constructionism, and subjectivism (Crotty, 1998). According to Morgan and Smircich (1980), each view has evolved in reaction to the other. Hence, each implies different grounds for knowledge about the social world. Table 3.1, taken from Morgan and Smircich (1980), clearly depicts how the assumptions about the nature of what constitutes adequate knowledge change along the subjective—objective continuum.

Table 3.1: Network of primary assumptions characterizing the subjective—objective debate within social science

	<b>Subjectivist approaches to social science</b>			<b>Objectivist approaches to social science</b>		
						
<b>Core ontological assumptions</b>	Reality as a projection of human imagination	Reality as a social construction	Reality as a realm of symbolic discourse	Reality as a contextual field of information	Reality as a concrete process	Reality as a concrete structure
<b>Assumptions about human nature</b>	Man as pure spirit, consciousness, being	Man as a social constructor, the symbol creator	Man as an actor, the symbol user	Man as an information processor	Man as an adaptor	Man as a responder
<b>Basic epistemological stance</b>	To obtain phenomenological insight, revelation	To understand how social reality is created	To understand patterns of symbolic discourse	To map contexts	To study systems, process, change	To construct a positivist stance
<b>Research methods</b>	Exploration of pure subjectivity	Hermeneutics	Symbolic analysis	Contextual analysis of Gestalten	Historical analysis	Lab experiments, surveys

Source: Morgan and Smircich, (1980, p. 492)

*Objectivism* views social reality as a concrete structure composed of a network of determinate relationships between constituent parts (Morgan & Smircich, 1980). As

shown in Table 3.1, an objectivist researcher, therefore, tries to explain and predict the activities of the social world by identifying casual relationships and regularities found in the elements of the research, and attempts to remain as an ‘observer’ (Crotty, 1998). In the main, objectivism gives rise to a positivist stance, with an emphasis on the empirical analysis of concrete relationships in an external social world that is as real as the natural world (Morgan & Smircich, 1980).

*Subjectivism*, as shown in Table 3.1, views reality as a projection of individual imagination or, in other words, the ‘human consciousness’. It emphasizes the significance of understanding the processes through which human beings concretize their relationship to their world. Subjectivism fundamentally presumes ‘one’s mind is one’s world’ (Morgan & Smircich, 1980). Subjectivist researchers, therefore, take an ‘antipositivist’ epistemological stance to considering the world as relativistic, and involve themselves directly in the activities which are to be studied rather than being an ‘observer’ (Crotty, 1998).

*Constructionism*, being at an in-between point in the continuum, sees reality as a consciously constructed phenomenon (Marvasti, 2004). Similar to subjectivists, constructionists observe that reality comes into existence as a result of the human being’s constant engagement with the world, and that there is no objective truth to be discovered (Crotty, 1998). Yet, a constructionist researcher differs from a subjectivist researcher as he or she further believes that this reality is constructed by human consciousness. Individuals “impose themselves on their world to establish a realm of meaningful definition through the medium of language, labels, actions, and routines,

which constitute symbolic modes of being in the world. Social reality is embedded in the nature and use of these modes of symbolic action” (Morgan & Smircich, 1980, p. 494). Hence, no object can be sufficiently described in isolation from the conscious being experiencing it (Crotty, 1998).

*Epistemological stance of the study: Constructionism*

The objective of the study is to understand how interorganizational and interpersonal interactions affect collaboration. Given the constructs that the study is investigating, the process involved examining various aspects of relational processes at both organizational and individual levels. In order to accomplish this end, the researcher had to rely heavily on the opinions the study’s participants hold as a result of their experiences and their ongoing associations both within and across organizational boundaries. The participation process was, therefore, too complex to be defined and measured with standard instruments as in the positivist paradigm. Treating the participants’ perspectives as subjective was also not considered as an appropriate epistemological stance in this study, as the researcher intended to reconstitute the generated meanings to a theoretical framework.

As researchers we are conditioned by what we believe to be the way of attaining the truth. I personally believe that reality comes into existence when individuals establish a realm of meaningful definitions through the medium of language, labels, actions, and routines as they engage with the world. This belief is much inspired by my religion, Buddhism, which sees the apparent or the conventional truth as made up of

corporeality, mind (consciousness), and mental concomitant, and as expressed through conventional language, without which no communication will be possible. A constructionist view was thus adopted as the epistemological standpoint from which to explore the phenomenon.

### **3.2.2 Theoretical perspective**

Crotty (1998) distinguishes theoretical perspective from epistemology by interpreting it as ‘an approach to understanding and explaining the social world’. Accordingly, as shown in Figure 3.1 in the introduction, epistemology reflects the nature of the social world and, thereby, forms the basis for selecting the theoretical perspective. The theoretical perspective, on the other hand, brings in numerous assumptions of the human world in attempting to make sense of it. The most dominant theoretical orientations presented in the literature are positivism, interpretivism, and critical inquiry (Cavana, Delahaye, & Sekaran, 2001).

Table 3.2 illustrates how, rooted in the natural sciences, a *positivist* researcher aims to uncover universal laws that hold true across time and place (Hammersley, 1990). As such, positivist research is generally associated with deductive reasoning and employs quantitative methods of statistical analysis to facilitate the replicability of findings (Crotty, 1998). A positivist view is, therefore, considered to be associated with an objectivist epistemological stance (Cavana et al., 2001). *The interpretivist* researcher, on the other hand, assumes that reality is socially constructed and is interested in the lived experience of human beings and presenting them in the form of rich, complex

description. As shown in Table 3.2, the interpretivist sees the social world as on-going, and searches for deeper and fundamental meanings within social life. Hence, the researcher directly engages with the participants to break down and uncover socially constructed realities inductively in order to understand and explain human and social realism (Campbell & Wasco, 2000). Findings of the research can hence be seen as a creation of the process of interaction between the inquirer and the inquired (Guba, 1990). An interpretivist perspective is, therefore, considered to be naturally drawn from a constructionist epistemology (Cavana et al., 2001).

Table 3.2: The three alternative theoretical perspectives

	<b>Positivist</b>	<b>Critical</b>	<b>Interpretivist</b>
Aim	To discover universal laws that can be used to predict, explain, and control human activity	To uncover surface illusions so that people will be empowered to change their world	To uncover socially constructed meaning of reality as understood by an individual or group
Types of reasoning	Deductive	Deductive and inductive	Inductive
Research plan	Rigorous, linear and rigid, based on research hypothesis	The imperative for change guides the actions of the researcher.	Flexible, and follows the information provided by the research subject
Research methods and type(s) of analysis	Experiments, questionnaires and secondary data analysis	Field research; historical analysis; dialectical analysis	Participant observation; interviews; focus groups; conversational analysis
Quality of criteria	Internal and external validity; reliability and objectivity	Historical situatedness; erosion of ignorance and misapprehensions; action stimulus	Trustworthiness and authenticity

Source: Abridged from Cavana et al., (2001); Creswell, (2007); Gephart, (1999); Guba, (1990).

Table 3.2 also delineates that *critical inquiry* perspective too is drawn from a constructionist epistemology, hence it tries to uncover the myths and hidden meanings of the subject being studied. The researcher believes that there are multiple layers with the underlying meaning being situated behind the observable, surface reality (Cavana et al., 2001). It further presumes that human beings as being confronted by human situations, and that they are to take charge by intervening in the reality of such situations (Crotty, 1998). Critical inquiry accordingly focuses on empowering people to change their world (Cavana et al., 2001) and engages predominantly in action research.

***Theoretical perspective of the study: Interpretivism***

As discussed in the literature chapter, prior studies provide limited understanding of how interorganizational and interpersonal interactions affect collaboration. Moreover, the lack of in-depth knowledge of how the two may coevolve in daily collaborative efforts warrants substantial future research on the topic. Of the research that has been undertaken to date, the dominant lens has been positivism, with an emphasis on quantitative surveys as the main methods of analysis and data collection. Research that provides an in-depth investigation of the worldviews that sit behind the facts shared by the individuals in partnering organizations is, therefore, needed in the field to overcome the limited understanding of the topic.

Accordingly, the researcher was motivated to use an interpretivist perspective with a phenomenology focus to dig deep into the meanings ascribed by the subjects to their

lived experiences that emerged through a series of interviews in the case study setting (Van Manen, 1990). “The type of problem best suited for this form of research is one in which it is important to understand several individuals’ common or shared experiences of a phenomenon. It would be important to understand these common experiences in order to develop practices or policies or develop a deeper understanding about the features of the phenomenon” (Creswell, 2007, p. 60) Although the critical inquiry perspective is also based on a constructionist epistemology, this theoretical perspective was perceived to be inappropriate because it does not try to bring about any change.

As a researcher, I personally believe that reality comes into existence when individuals establish a realm of meaningful definitions. This philosophical stance inspired me to provide a shared description of the phenomenon — interorganizational collaboration — through the meanings derived by the subjects from their interactions with others within and across their organizational boundaries.

### **3.2.3 Methodology**

Bryman (1984) noted that methodologies are being elucidated “at an epistemological level, and an attempt is then made to establish a link between it and a technical level, which is the practice of social research” (p. 79). As such, these methodologies are often being influenced by several factors such as the nature of the research question, the nature of the phenomenon under study, the extent of control required over behavioral events, and the researcher’s philosophical stance (Yin, 1994).

A *quantitative* methodology is based broadly on the principles of a positivist perspective and, therefore, takes a deductive approach. It moves from theory to data and attempts to explain a causal relationship between variables (Saunders & Thornhill, 2003). *Qualitative* methodology, on the other hand, attempts to understand the complex and unpredictable behavior of human beings inductively (Bryman, 1984). It views the world as essentially relativistic and hence comprehensible through the lens of the individuals directly involved with the phenomenon (Denzin & Lincoln, 1994). As such, while quantitative inquiry starts from the need to test theory, qualitative inquiry attempts to develop theory (Ali & Birley, 1999).

Table 3.3 provides a clear picture of the inductive logic applied in qualitative inquiry. A qualitative researcher starts investigations with specific research questions in order to focus efforts and to provide a better grounding of construct measures. Unlike a quantitative researcher who opts for random sampling, the qualitative researcher relies on theoretical sampling to retain theoretical flexibility. He or she then uses multiple data collection methods to strengthen the grounding of theory by triangulating evidence. Unlike a positivist researcher who depends on measurement or frequency of phenomena, the qualitative researcher uses a range of techniques to describe, decode, and translate data in order to gain familiarity with the data and to generate theory.

Table 3.3: Inductive logic used in qualitative methodology

<b>Step</b>	<b>Activity</b>	<b>Reason</b>
Getting started	Definition of research question Possibly a priori constructs	Focuses efforts Provides better grounding of construct measures
Selecting samples	Theoretical, not random sampling	Retains theoretical flexibility
Crafting instruments and protocols	Multiple data collection methods	Strengthens grounding of theory by triangulation of evidence Synergistic view of evidence
Entering the field	Overlap of data collection and analysis, including field notes Flexible and opportunistic data collection methods	Speeds analyses and reveals helpful adjustments to data collection Allows investigators to take advantage of emergent themes and unique case features
Analyzing data	Use of divergent techniques to describe, decode and translate data	Gains familiarity with data and preliminary theory generation Forces investigators to look beyond initial impressions and see evidence thru multiple lenses
Enfolding literature	Comparison with conflicting literature Comparison with similar literature	Builds internal validity, raises theoretical level, and sharpens construct definitions Sharpens generalizability, improves construct definition, and raises theoretical level
Reaching closure	Theoretical saturation when possible	Ends process when marginal improvement becomes small

Source: Abridged from Eisenhardt, (1989)

***Methodological approach of the study: Qualitative***

The objective of the current research is to understand *how* interorganizational collaboration is fostered by interpersonal and interorganizational interactions of the partnering organizations. There is an extensive literature on the informal (interpersonal) and formal (interorganizational) governance in IOR, which allowed the formulation of a deductive research design. However, this body of work had not been applied in the context of collaboration, and the field suggests that it may not be entirely

appropriate. Kilduff and Brass (2010), for instance, claimed that little is known about the coevolving role of interpersonal and interorganizational networks and, hence, is yet to be grounded firmly on a robust theoretical foundation.

A quantitative methodology which tries to establish a causal relationship between variables was, thus, seen as inappropriate at this point. For this reason, an inductive approach that allows a closer examination (Shaw, 1999) of the opinions and experiences of managers in the context of collaboration using careful documentation and thoughtful analysis was used to derive a more holistic description of the phenomenon (Gephart Jr, 2004).

### ***3.2.3.1 Adoption of a qualitative case study methodology***

Case study has been identified as an appropriate choice of methodology for research adopting an interpretivist perspective as it facilitates deeper understanding of complex social phenomena (Walsham, 2006). Unlike other qualitative methodologies such as action research, grounded theory, and ethnography (Creswell, 2007), case studies are designed to focus on the subtleties presented within a single and/or multiple cases, enabling numerous levels of analysis (Yin, 2003). Thus, in organizational contexts, case study facilitates capturing holistic and meaningful characteristics of real-life events of not only individuals but also of small groups and organizational processes (Yin, 2003). Case studies have, therefore, been widely used in management studies and organization theory (Schell, 1992).

It is important to note that many of the characteristics of case studies presented by Yin (2003) are applicable to both positivist and interpretivist perspectives. Hence, if one seeks to use case studies as a qualitative inquiry, Yin (2003) recommends that careful consideration should be given to the following conditions:

- (a) The type of research questions
- (b) The nature of the phenomenon under study, i.e., contemporary or historical issues
- (c) The extent of control required over behavioral events.

#### ***The type of research question***

Case studies are most favorable when ‘how’ or ‘why’ questions are being asked (Rowley, 2002). The research question of the current study focuses on ‘how’, as opposed to ‘how many’ or ‘how much’ of, the interpersonal and interorganizational ties contribute to successful collaboration. Thus, by asking ‘how’ questions, the study attempts to unfold a rich understanding of interpersonal and interorganizational interactions in the context of collaboration.

#### ***The nature of the phenomenon under study***

Case study is an empirical inquiry of a contemporary phenomenon within its real-life context (Rowley, 2002). The ability to observe on-going events and interview people involved in those events directly, therefore, enables case study researchers to “test views directly in relation to phenomena as they unfold in practice” (Flyvbjerg, 2007,

p. 398). The present study involves exploring the relational processes in ongoing collaborations, and the researcher aims to observe and interview people who are currently confronted with collaborative issues. The focus of the study is, therefore, on contemporary as opposed to historical events.

### ***The extent of control required over behavioral events***

Case studies can be most favorable when behavior cannot be controlled (Rowley, 2002). Interorganizational and interpersonal relationships are complex social phenomena that emerge out of the partners' daily collaborative efforts and cannot be examined in controlled settings. An in-depth understanding of these relational processes may, therefore, be gained only by inquiring into the thoughts and experiences of managers in the context of collaboration, and over which the researcher has no control.

Exploratory case studies are more suited for new research areas for which existing theory seems inadequate (Eisenhardt, 1989). The field of supply chain and logistics management is relatively new. Hence, case studies are warranted to arrive at a robust theory to explain the relational dynamics of supply chain and logistics partnering (Carter et al., 2007; Dubois & Araujo, 2007; Frankel et al., 2005).

#### ***3.2.3.2 Designing the case(s)***

As in any other methodology, design is considered as the first and foremost step of a case study. According to Yin (2003), it is a logical plan set for reaching the questions

to answer. Hence, in arriving at the most appropriate research design, one should have a clear understanding of the research questions, and their propositions (Rowley, 2002).

*a) Defining the research question and its propositions*

Defining the initial research question, at least in broader terms, is vital when the researcher intends to build a theory using case studies (Eisenhardt, 1989). Mintzberg (1979), for instance, noted that “no matter how small our sample or what our interest, we have always tried to go into organizations with a well-defined focus — to collect specific kinds of data systematically” (p. 585).

Although ‘how’ and ‘why’ questions display an exploratory nature and do not lead to developing propositions, Yin (2003) affirmed that every exploration should still have a purpose in order to avoid becoming overwhelmed by the volume of data. Instead of propositions, this purpose should be clearly stated along with the criteria by which the exploration will be judged successful. Although drawn inductively, Eisenhardt (1989) claimed that it is reasonable for an exploratory study to specify some potentially important variables, with some reference to extant literature and have a ‘priori specification of constructs’ at the outset of the research process. However, Eisenhardt also affirmed that the researcher should strictly refrain from thinking about specific relationships between variables and theories as in the case of explanatory research.

Having a ‘priori specification of constructs’ is useful in shaping the original research design; furthermore, if these constructs were to prove to be important as the study progresses, the researcher would have a firmer empirical grounding for the emergent

theory (Ali & Birley, 1999). Accordingly, this study first engaged in an extensive literature review in the areas of social networks and collaboration and arrived at an initial set of constructs related to interorganizational and interpersonal interactions that primarily influenced the research design and interview questions.

***b) Opting for an embedded single case design***

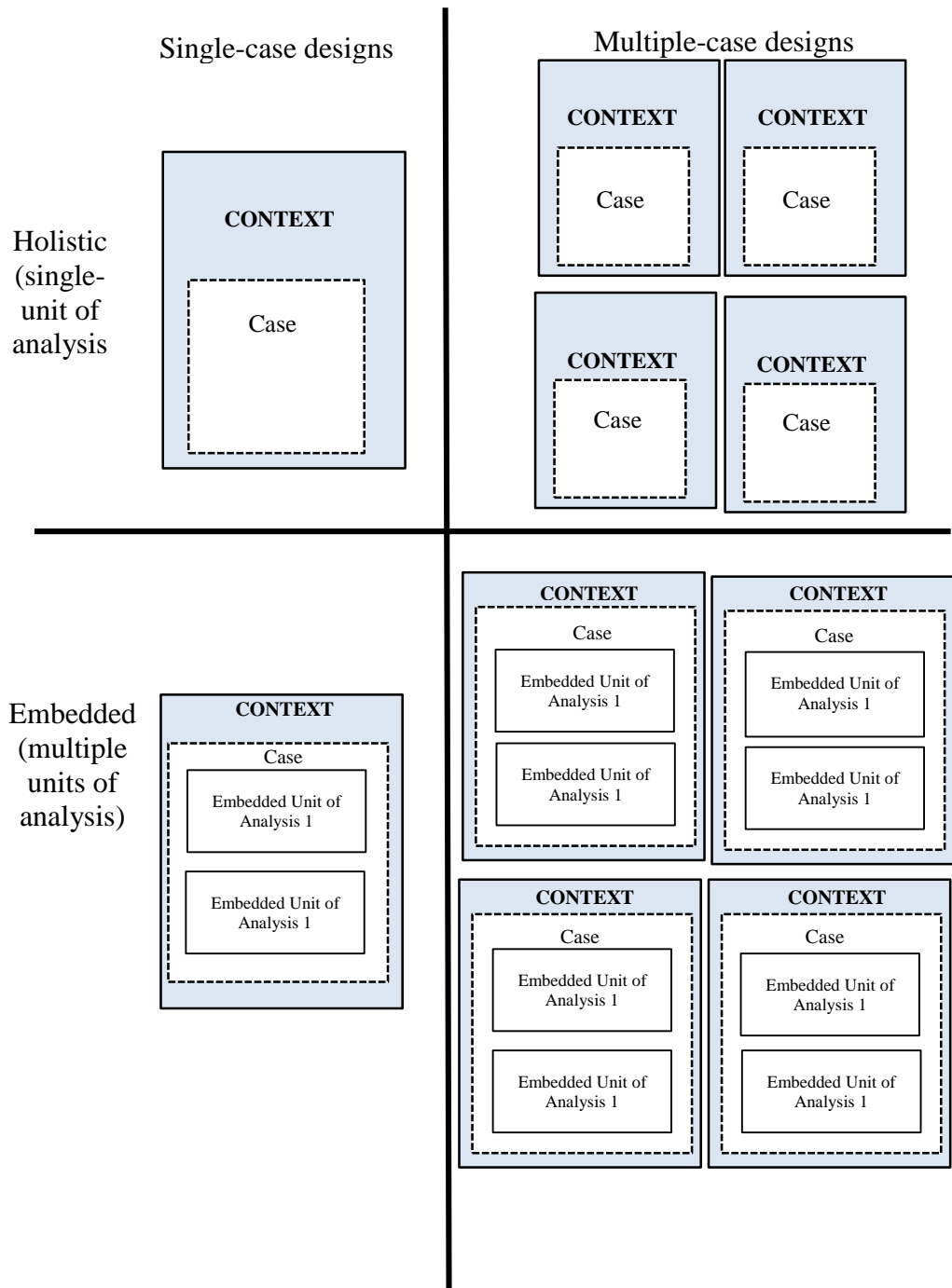
***Types of case study designs***

Figure 3.2 presents the four types of case study designs available to a researcher:

- (1) Single-case (holistic) designs
- (2) Single-case (embedded) designs
- (3) Multiple-case (holistic) designs
- (4) Multiple-case (embedded) designs.

All designs require an analysis of the contextual conditions in relation to the ‘case’ as the phenomenon and the context are entangled in real-life situations. As shown in Figure 3.2, both single and multiple designs may consist of either a single unit of analysis or multiple units of analysis depending on how the case is defined. While holistic designs are involved with a single unit of analysis, embedded designs are involved with multiple units (Meyer, 2001).

Figure 3.2: Basic types of designs for case studies

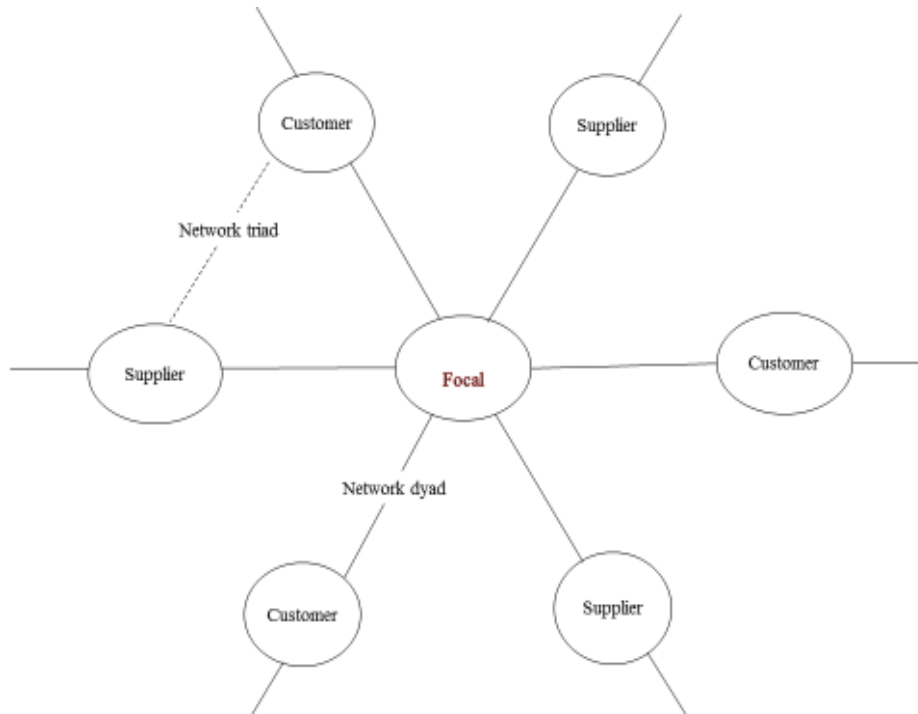


Source: Yin, (2003, p. 40)

The most distinguishing characteristic of the social network perspective is that it deviates from examining organizations as isolated cases to examining how organizations access resources and capabilities through their networks of interfirm relationships (Brass et al., 2004; Kilduff & Brass, 2010; Zaheer et al., 2010). It presumes that organizations are both empowered and constrained by their existing patterns of relationships (Zaheer et al., 2010). Accordingly, the view considers dyads (pairs) as opposed to individual organizations as the ‘case’ or the primary building block to understanding IOR.

Ironically, however, recent literature (e.g., Choi & Wu, 2009; Provan et al., 2007), argues that a dyadic case ignores the fundamental network theoretical insight i.e., that ‘actors and actor-to-actor relationships are likely to be influenced by the overall set of relationships’ (Mitchell, 1969). For instance, Wellman (1988) noted that when using a dyadic approach researchers still “disregard structural form, making an implicit bet that they can adequately analyze ties in structural isolation, without reference to the nature of other ties in the network or how they fit together” (p. 36). Thus, in order to gain a rich and in-depth understanding of the phenomenon, this study extended its scope beyond the primary relational context that a dyadic level study provides to encompass a series of dyadic and triadic relationships of a firm by selecting an egocentric network as the case to be investigated (see Figure 3.3).

Figure 3.3: The case of an egocentric network



As depicted in Figure 3.3, investigating an egocentric network essentially means employing a dual level of network analysis. It requires a simultaneous focus on the case – the ego network and its subunits (i.e., network dyads and triads) – and the aggregation of those subunits into the larger system (Hite & Hesterly, 2001). This simultaneous focus is necessary because changes in a firm’s egocentric network result from the aggregation of specific changes in the dyadic and triadic levels. According to Meyer (2001), “a holistic design examines the global nature of the phenomenon, whereas an embedded design also pays attention to subunit(s)” (p. 334).

The exercise accordingly requires much rigor in data collection and analysis at different levels. Therefore, the use of a single case with multiple subunits, as opposed to using multiple cases, was seen as being viable for the study. Gulati (2011) affirmed that studying the relational and structural aspects of networks individually will “only be meaningful if their effects are orthogonal”(Gulati et al., 2011, p. 210). Studying a whole network was thus considered as a challenge by the researcher. According to Flyvbjerg (2007), a single-case design is central to scientific development and the researcher would be able to generalize the findings on the basis of an individual case because it involves vigilant investigation of the case to reduce the chances of misrepresentation and to increase access required to collect evidence.

*c) Arriving at the unit(s) of analysis*

Theoretically grounded in a social network perspective, this study focuses on the patterns of relations between organizations rather than on the attributes of the actors. In order to understand the relational dynamics in collaboration, the researcher should look into the nature of the ‘the relationships’ between organizations. The initial literature review revealed that these relationships between organizations manifest at both organizational and individual levels. The purpose of this study is to tease out the multilevel challenges and opportunities that exist in the interorganizational social network field. Two units of analysis are employed for this study:

- i) The interorganizational networks (or the ties) that manifest the organizational level interactions, and
- ii) The interpersonal networks (or the ties) that manifest the individual level interactions.

*d) Selecting the most appropriate case*

There are two approaches to selecting case(s): random and theoretical sampling. While random sampling focuses on generalizing propositions about a population, theoretical sampling focuses on an in-depth exploration of constructs in different contexts. According to Eisenhardt (1989), theoretical sampling compared to random sampling is more germane to building theory using cases as it is more concerned with choosing cases to extend the emergent theory, or replicate it. Particularly for social network studies, it is important that the researcher purposely selects a sample that can derive “full data on the presence or absence of social relations among all, or at best, most of the members of a bounded population” (Quatman & Chelladurai, 2008, p. 348). If theoretical sampling is used for selecting a single study, the researcher should make sure to choose the case that is likely (all other things being equal) to yield the best data (Yin, 2003).

The main focus of the present study is to extend the social network theory by exploring the two types of social networks in collaboration: the interpersonal and the interorganizational. According to Quatman and Chelladurai (2008), “one of the major threats to the validity of any network study is a researcher’s determination of boundary

specification for the actors to be included in the analysis” (p. 348). In order to prevent any misrepresentation of the true underlying structure, the researcher purposely extended the case beyond a single firm to an egocentric network, thus covering a range of actors who may be relevant to the construct of interest. Theoretical sampling was also considered as more appropriate than random sampling for the following reasons:

(1) It was essential to choose a sector that displays greater relational dynamics. For this reason the researcher opted for the service industry rather than a manufacturing industry because “services are people intensive. They tend to be inseparable and perishable” (Brouthers & Brouthers, 2003, p. 1183). Hence, the behavioral uncertainties are high. The third-party logistics (TPL) industry, unlike the manufacturing industry, is deemed to operationalize the relational dynamics at their highest in trying to become more responsive to the demands of the many stakeholders it caters to (Razzaque & Sheng, 1998). This sector has been widely examined in social sciences from the perspective of interorganizational ties but rarely from the perspective of interpersonal ties (Pina-Stranger & Lazega, 2011).

(2) It was essential to choose a company with ample access to data, to interview people, to review documents or records, or to make observations in the field (Yin, 2003). For this reason the researcher approached a third-party logistics (3PL) company in Sri Lanka. Sri Lanka is the researcher’s home country so it was easy for her to gain people’s trust and confidence in her work.

(3) The company is a subsidiary of a conglomerate and is one of the key players in the Sri Lankan logistics industry. The company is responsible for catering to the outsourced needs of a wide range of multinationals and, as such, was significant enough for the study.

### **3.2.4 Methods**

Crotty (1998) defines 'methods' as "the techniques or procedures used to gather and analyse data related to some research question or hypothesis" (p. 3). While experimental research methods are usually linked with a positivist approach, qualitative research methods aim to provide richly descriptive reports of individuals' perceptions, attitudes, and beliefs, and hence are linked with a constructionist approach.

#### ***3.2.4.1 Gathering data***

One important feature of case study research as a qualitative inquiry is that it enables the researcher to gather evidence from multiple sources (Yin, 2003). The use of multiple sources or triangulation provides substantial evidence to support and confirm the findings by reducing principal informant biases, memory failure, and incomplete/inaccurate recalling of past events (Kumar, Stern, & Anderson, 1993) and, thereby, increases the credibility and the trustworthiness of a qualitative study (Bryman, 2012). Yin (2003) outlines six commonly used sources of data in a case study: interviews, documentation, archival records, direct observations, participant observation, and physical artefacts. The strengths and weaknesses of these sources are

delineated in Table 3.4. As the current study attempts to provide richly descriptive reports from individuals in collaborating organizations about their lived experiences in dealing with collaborative challenges, and thereby to inductively develop a framework for successful collaboration, data were primarily collected through in-depth interviews and direct observations.

Table 3.4: Six alternative forms of empirical data and their relative strengths and weaknesses

Sources of evidence	Strengths	Weaknesses
Interviews	Targeted — focuses directly on case study topic Insightful — provides perceived causal inferences	Bias due to poorly constructed questions Response bias Inaccuracies due to poor recall Reflexivity — interviewee gives what interviewer wants to hear
Documentation	Stable — can be reviewed repeatedly Unobstructive — not created as a result of the case study Exact — contains exact details of an event Broad coverage — long span of time, many events, many settings	Retreavability — can be low Biased selectivity Reporting bias Access — may be deliberately blocked
Archival records	[Same as above for documentation] Precise and quantitative	[Same as above for documentation] Accessibility due to privacy reasons
Direct observations	Reality — covers events in real time Contextual — covers context of events	Time-consuming Selectivity — unless broad coverage Reflexivity — may even proceed differently because it is being observed Cost — hours needed by human observers
Participant observations	[Same as above for direct observations] Insightful into personal behavior and motives	[Same as above for direct observation] Bias due to investigator's manipulation of events
Physical artifacts	Insight into cultural features Insightful into technical operations	Selectivity Availability

Source: Yin, (2003, p. 86)

### *a) Interviews*

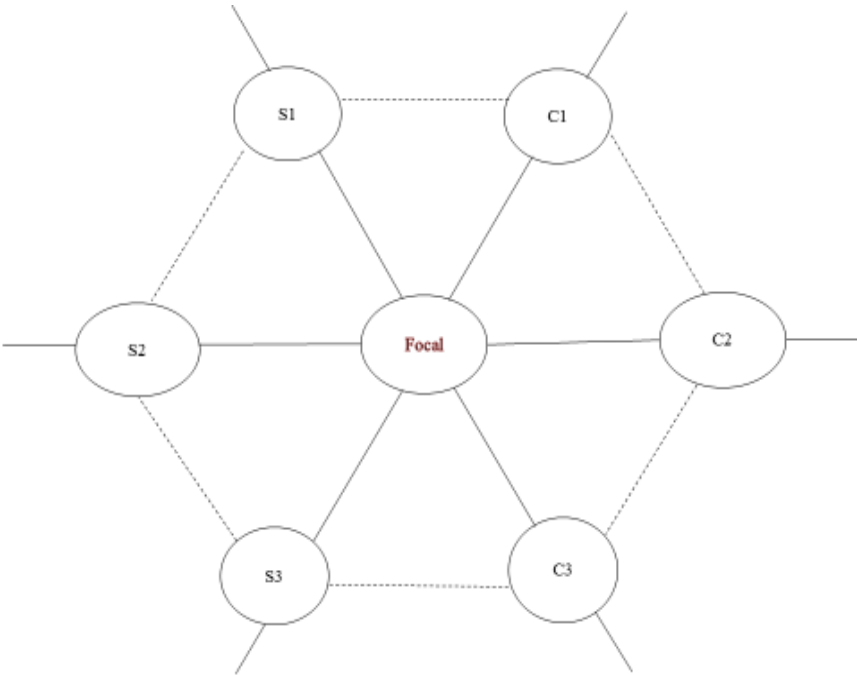
Qualitative interviews are unstructured by nature and display a greater interest in the interviewee's points of views (Bryman, 2012). By using qualitative interviews, the researcher would thus be able to obtain unique and complex information by developing a deeper rapport with the informants and aggregating multiple views from many persons on the same issue (Stake, 2010). Qualitative interviews are particularly useful in the following circumstances (Rowley, 2002):

- If the research is exploratory.
- If the meanings which respondents ascribe to various phenomena are sought.
- If establishing personal contact is needed.
- If there is a large number of complex questions to be answered.
- If the logic of questioning may need to be varied.

In general, there are three types of qualitative interviews: structured, open-ended, and semi structured (Berg & Lune, 2004). Structured interviews are formed to seek specific information, while open interviews come at the opposite end of the continuum. They are advantageous in situations where the direction of the interview is determined by the respondent's contribution (Richards, 2009). As the present study is driven by a phenomenological focus, that is, gathering information from the perspectives of the participants (Thompson, Locander, & Pollio, 1989), the interview guide presented in the Appendix 1 was used only as a frame of reference for the open-ended interviews utilized in this study.

An official e-mail was initially sent to the group director of the ego (central firm), clearly stating the purpose of the study and how it would benefit the company in return. The e-mail also stated how the researcher intended to collect information and set out the confidentiality rights of the interviewee with regard to information disclosure. Additionally the latter asked the director to select six of its partners — three customers and three suppliers (see Figure 3.4) — for the study, partners which he perceived as principal contributors to 3PL's success.

Figure 3.4: The egocentric network under study



The focal company in the figure is referred to as 3PL<sup>2</sup>. C1, C2, and C3 denote its three customers which are referred to as FMCG, Apparel, and Lubricant, while S1, S2, and S3 denote three suppliers. These are referred to as Labor, Trans-one and Trans-two in this thesis in accordance with their wish for anonymity. These names represent the industries in which the companies play a key role.

The director was keen to uncover the collaborative strengths of 3PL, particularly with regard to selected partners, and thus extended his fullest co-operation to the research. The initial discussion with the director lasted for more than 2 hours. On the following day, the researcher was able to have a second interview with 3PL's director in which he provided a comprehensive picture of how the firm is structured, its clientele, supplier base, and history.

He also provided a brief description of the selected customers and suppliers and the contact details for key personnel in those companies. The researcher was then introduced to these parties by the director, and the participant information sheet along with the consent form (Appendix 3) was sent to them via e-mail for their approval. The director's confidence in the researcher and the warm welcome received from 3PL's partners enabled the researcher to be exposed to the valuable experience of fully immersing herself in a truly interpretive exploration of the dynamics of interorganizational collaboration.

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<sup>2</sup> A company that provides logistics services to its customers is generally abbreviated to 3PL or TPL. However, in this case, 3PL refers to the focal company under study.)

All interviews initially began with a general overview of the research, and explanation of how the respective participants could help the researcher to gain further knowledge on the topic. Participants were then asked to introduce themselves, briefly covering their role and experience. The researcher then directed the interview to the particular relationship in which the participant is involved. From that point onwards the interviews followed a more phenomenological approach (Thompson et al., 1989). Subsequently, the participants' own factual experience with the partnering organizations, such as their involvement, understanding, and feelings toward the partnership, were stimulated by the discussions (Klein & Myers, 1999). This approach provided rich insights into both their experiences and events because they were able to recall incidents easily when there was a natural flow of ideas.

As the discussions unfolded participants identified several key '*incidents*' that had occurred during the past years of the relationships. Their retrospective accounts mostly revolved around these incidents and they helped the researcher immensely to be more focused on the topic and to avoid data overload and collecting unusable data (Leonard-Barton, 1990). All interviews were conducted face-to-face which allowed the researcher to pick up well on messages transferred through nonverbal channels such as physical gestures or facial expressions (Berg & Lune, 2004), as the participants contemplated the past incidents (see Table 3.5, Table 3.6, and Table 3.7 for interview summary).

In all instances participants were assured that the interview data would be stored securely and would be available only to the interviewee and the researcher. The whole

process of data collection was conducted in accordance with the guidelines provided by the University of Waikato’s “Ethical Conduct in Human Research and Related Activities Regulations 2008” (The University of Waikato, 2012). Maintaining strict confidentiality, giving the participants the right to withdraw from the study, and giving them the right to access and correct personal information were treated as essential ethical components of this study.

Table 3.5: Interview and observation summary – Customers

<b>Customer</b>	<b>Participants</b>	<b>Number of interviews</b>	<b>Interview hrs.</b>	<b>Observation hrs.</b>
FMCG	• Senior manager –Supply Chain	2	4	6 hrs. on 2 days (Mainly office environment)
	• Middle manager	1	1.5	
	• Operational manager	1	1.5	
Apparel	• Senior manager – Supply Chain	3	1	10 hrs. on 2 days (factory visit and work and office environment)
	• Middle manager	1	1	
	• Operational manager	2	1.5	
Lubricant	• Senior manager – Supply Chain	1	1	8 hrs. on 2 days (factory, work and office environment)
	• Middle manager – Logistics	1	1.5	
	• Middle manager – Production	2	1.5	

Table 3.6: Interview and observation summary – Suppliers

<b>Supplier</b>	<b>Participants</b>	<b>Number of interviews</b>	<b>Interview hrs.</b>	<b>Observation hrs.</b>
Trans-one	Owner	1	1.5	3 (office and work environment)
Trans-two	Owner	1	0.5	1 (work environment)
Labor	Owner	1	1	2 (office environment)

Table 3.7: Interview and observation summary – 3PL

Participant	Dealing with	Number of interviews	Interview hrs.	Observation hrs.
Director	All	2	4.5	3 hrs. (warehouse and value-added operations dedicated to FMCG). The researcher spent 2 weeks at 3PL's premises from morning to afternoon having informal chats with the staff, having meals with them, and observing the workflows and office environment.
General manager	All	2	3	
Senior manager – HR	All customers and labor suppliers	1	1.75	
Senior manager – Admin.	All customers and labor suppliers	1	1.5	
Senior manager – Transport	All customers and transport suppliers	2	1.5	
Senior manager – Operations	All	1	1.75	
Senior manager	FMCG	4	3	
Middle manager		3	3.5	
Middle manager1	Apparel	1	1.5	
Middle manager 2		1	1	
Operational manger1		1	0.75	
Operational manager 2		2	1.25	
Senior manager	Lubricant	1	1.75	
Middle manager		1	1.5	
Operational manager		2	1	

***b) Direct observations***

Observations are useful for explaining ‘what is going on’ in particular social situations, and they, thereby, heighten the researcher’s awareness of significant social processes (McDonald, 2005). Observation provides an opportunity to experience ‘for real’ the

emotions of those who are being researched. During the 5 weeks of engagement in the field, the researcher observed the boundary-spanning individuals in their natural work setting in order to understand how they work and collaborate with their counterparts (see Appendix 2 for observation protocol).

These observations enabled the researcher to gain unique insights into the day-to-day working practices through the emphasis on the direct study of contextualized actions (Klein & Myers, 1999; McDonald, 2005) (see Tables 3.5, 3.6 and 3.7 for the areas observed and the observation hours.). The researcher was also fortunate to observe a few incidents or events, such as a labor issue, which were ongoing at the time of the investigation. According to Ring and Van de Ven (1994),

Events are defined as critical incidents when parties engage in actions related to the development of their relationship. Thus, the use of an event as the unit of observation permits researchers to focus simultaneously on both organizational and individual units of analysis (p. 112).

***c) Other sources of evidence***

Documentation plays an explicit role in case study research as it substantiates and augments evidence from other sources. Thus, if appraised critically, it also provides clues worthy of investigation in terms of identifying new questions and inferences (Yin, 2003). Correct interpretation of such documents must, however be guided by a clear purpose in relation to the study if it is to yield the desired results. Documents and archival records examined in this study included:

- Organizational charts
- Job descriptions
- Process manuals
- Contractual agreements
- Annual reports
- Press releases
- E-mail correspondences, especially in the aftermath of meetings held to discuss current issues
- Articles appearing in mass media
- Internal presentations.

Although interviews were used as the primary source of evidence, these additional sources also contributed to heightening the researcher's understanding of the topic.

#### ***3.2.4.2 Assessing the quality of data***

There has been a debate in the literature concerning the measures to be applied to the conduct and evaluation of qualitative research as the criteria suggested seem more germane to positivist research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). For instance, Yin's (2003) criteria for assessing quality in case study research delineated in Table 3.8 are directly relevant to positivist studies. However, the issue of construct and external validity remains relevant to exploratory case studies.

Table 3.8: Criteria for assessing quality in case study research and their relevance to qualitative type research

<b>Criteria</b>	<b>Definition</b>	<b>Applicability to qualitative type research</b>
Construct validity	Identifying correct operational measures for the concepts being studied	By using multiple sources of evidence and triangulating them
Internal validity	Establishing a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships	Not applicable to qualitative studies
External validity	Defining the domain to which a study's findings can be generalized	Not applicable to qualitative studies
Reliability	Demonstrating that the operations of the study – such as the data collection procedures – can be repeated to produce the same results	By maintaining a case study database that contained field and diary notes, interview transcripts, documents, tabular materials, and textural descriptions related to the study

***a) Construct validity***

In line with Table 3.8, the researcher triangulated the findings from multiple sources of evidence from interviews, documentation, and observation notes in order to establish construct validity (credibility). For instance, she triangulated interviews with archival data to challenge interviewees' memories, and cross-checked their ex-post data and perceptions with the document trail of the partnership.

Retrospective reports are possibly prone to the danger of respondents having a tendency to filter out events that do not fit or that render their story less coherent (Poole, Van de Ven, Dooley, & Holmes, 2000). Bearing this possibility in mind, participant accounts were further verified by probing the ‘incidents’ from multiple informants from both the buyer’s and supplier’s sides (Cardinal, Sitkin, & Long, 2004).

Materials from the files of each of the partner companies and e-mail correspondences (that some participants willingly shared) reflected their own private analyses and debates, particularly those accrued in the aftermath of ‘incidents’. This information thus allowed tracking down of the ‘hidden agendas’ and nondiscussible positions of the partners, and were useful in recreating the managers’ ‘temporal and contextual frame of reference’ (Van de Ven, 1992).

In addition to meeting the key informants from time to time and discussing what the researcher had learnt so far, a draft case study report was sent to the participants for their comments and approval. These techniques further ensured a good correspondence between the findings and the perspectives and experiences of the participants.

The study was much inspired by ‘source triangulation’ (Denzin, 1978). This technique refers to also considering the researcher as ‘an instrument’ in order to increase the validity of data. The researcher had discussions with key informants intermittently to recap on the story so far, and a report of the findings was later sent to the participants for their comments and approval to ensure a good alignment between the findings and the perspectives and experiences of the participants.

***b) External validity***

The study did not intend to establish external validity using replication logic as it focused on a single case study. However, the contextual uniqueness and the significance of the interorganizational relational process provided rich accounts of features of the phenomenon under study, which rendered the case itself into a form of generalization (Walsham, 2006).

***c) Reliability***

The goal of reliability is to minimize the errors and biases in the study (Yin, 2003). In order to establish reliability, the researcher developed a case study database that contains field and diary notes, interview transcripts, documents, tabular materials, and textural descriptions related to the study. A chain of evidence was also maintained throughout the study.

***d) Conducting a trial study***

Before the research design was finalized, a trial study was also conducted to test the feasibility, reliability, and validity of the proposed study design. A logistic service provider operating in New Zealand was selected for this purpose. The company is one of the largest in New Zealand. It offers a range of services including end-to-end supply chain solutions covering road, rail, and coastal transport options, container management, warehousing, and distribution services to a wide set of customers.

The first phase of the project involved three in-depth interviews with the CEO of the company. The CEO was an expert in the logistic field with more than 25 years of experience. His experience and knowledge of the industry significantly enhanced the researcher's first-hand information on the many aspects of logistic alliances. The researcher was thus able to improve the wording and the order of the questions in the interview protocol.

The subsequent discussions held with two strategic level and four operational level managers sharpened the researcher's interview skills. She learned how to change the interview approach depending on the interviewee and to successfully steer the discussion to stimulate the respondents' opinions on the subject. As the researcher was allowed to spend 3 full working days in the company, she was able to gain quality experience in observation methods. This experience significantly helped her to refine the observation protocol. Most significantly, the researcher realized that focusing solely on single companies when assessing collaborative challenges is misleading as you hear only one side of the story and so the framework should, in effect, be extended to dyads.

#### ***3.2.4.3 Analyzing data***

In qualitative research, authenticity rather than reliability is considered more important (Guba & Lincoln, 1989). The most important goal of analyzing qualitative research is to treat evidence fairly in order to produce compelling analytic conclusions and hence it differs from quantitative research (Yin, 2003). The epistemological stance

accordingly plays a foundational role in how qualitative data are analyzed. Marvasti (2004) affirmed that, as the data are analyzed, the researcher explicitly or implicitly applies his or her own way of seeing the world, that is:

objectivism assumes that information about the social world could be analyzed to reveal a reality or social structure beyond the data itself, whereas constructivism approaches data analysis as a way of showing how the data, text, or talk is organized and created through social interaction. (p. 83)

As discussed earlier, this study stems from a constructivist epistemology that inherently informs an interpretivist perspective to analyzing data. Moreover, ontologically, social network analysis observes that social networks are dynamic in nature and continually changing (Quatman & Chelladurai, 2008). An inductive reasoning to elucidate the thoughts and experiences of managers in the context of ongoing collaboration (Schwandt, 2001) was thus identified as crucial to arriving at a coherent theory. The analysis was conducted in two stages as follows.

***a) The first phase of analysis***

Eisenhardt (1989) argued that the salient feature of research to build theory from case studies is the recurrent overlap of data analysis with data collection. On a similar note, Morse et al. (2002) mentioned that “strategies for ensuring rigour must be built into the qualitative research process per se. These strategies include investigator responsiveness, methodological coherence, theoretical sampling and sample adequacy, an active analytic stance, and saturation” (p. 9). Especially, when conducting a single case study with multiple subunits as in the present research, it is the researcher’s

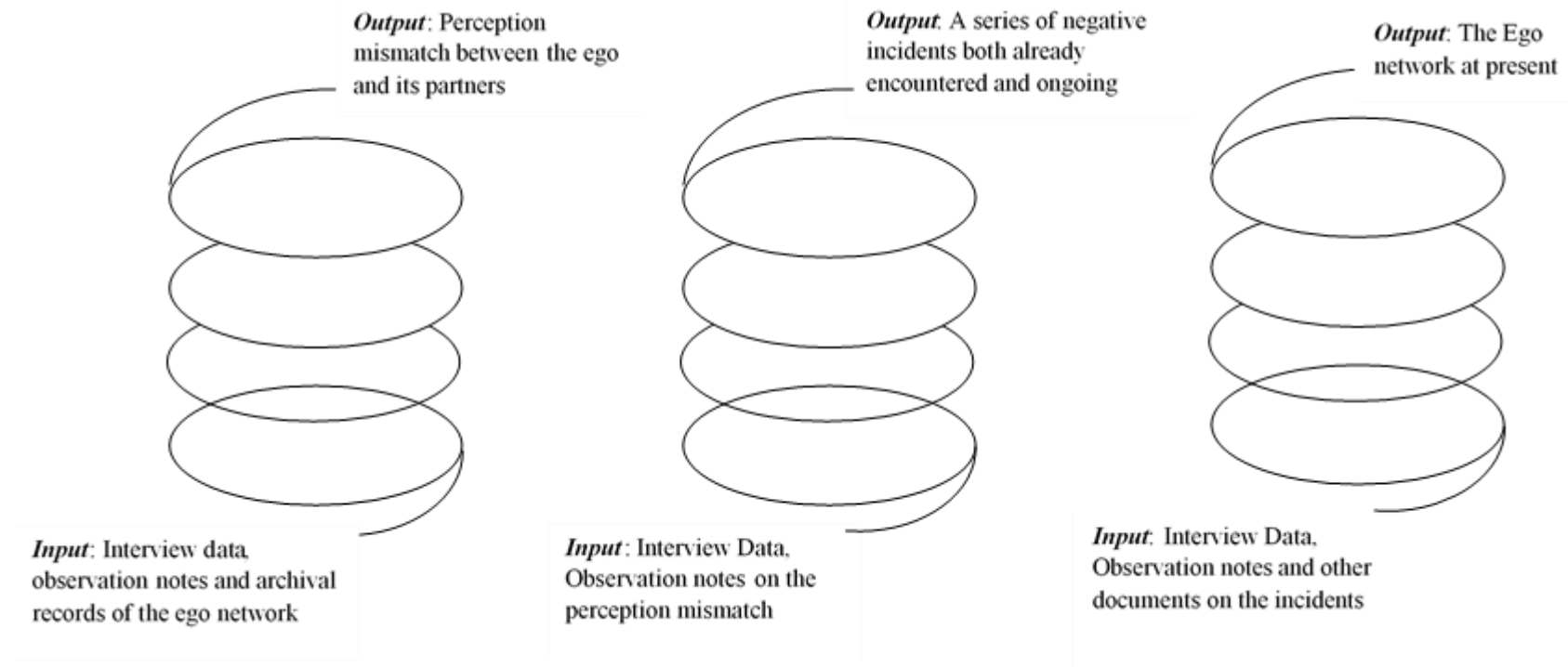
challenge to make sure that data gathering and analysis are conducted concurrently (Yin, 2003), in this case on both the subunits (network dyads) and the aggregation of the units (the larger egocentric network).

The whole process of simultaneously collecting and analyzing data required the researcher to position herself within the study to discuss openly values that shape the textural description and include her own interpretation in conjunction with the interpretations of the participants throughout the process (Creswell, 2007). The value of having the researcher involved in the process of collecting and analyzing data was much emphasized by Walsham (2006).

According to Walsham, an outside researcher conducts the study mainly through formal interviews and hence is unable to be involved directly in action or to provide significant feedback to the participants. An involved researcher, on the other hand, is able to link closely with the participants, issues, and data, as the respondents see the researcher as one who tries to make a valid contribution to the field site itself, rather than as one who merely takes the data away and writes it up solely for the literature. Hence, the metaphor for the relationship between the researcher and the data is one of an evolving relationship that matures naturally. After all, Geertz (1973) claimed that in an interpretive study “what we call our data are really our own constructions of other people’s constructions of what they and their compatriots are up to (p. 9).

The first phase of the simultaneous data collection and analysis process that the researcher went through is illustrated in Figure 3.5.

Figure 3.5: The reflective cycles that the researcher went through in the first phase of analysis



As shown in the figure, the first reflective cycle in Figure 3.5, upon gaining a brief yet overall understanding of how 3PL performs, the researcher decided to access 3PL's partners to gain an overall understanding of the firm's egocentric network. The first insight was her realization that the ego's self-perception of its network was not the image held by its partners. This mismatch of perceptions much inspired the second reflective cycle shown in the figure to the extent that exploring it became the leading question in the following interviews with the ego's key personnel.

The inquiring mind of the researcher ultimately helped form an interview process (data collection and analysis) unique to the study and that included simultaneous focus on the case by questioning the ego and its partners back and forth. This process helped the researcher vastly in gaining a deep familiarity with the world she is investigating. The evidence she gathered in terms of past 'incidents' fostered a productive dialog with 3PL's employees as they contemplated them. Moreover, the researcher's judgments on these 'incidents' led her to search for additional evidence by talking to the personnel directly dealing with 3PL at the operational level in addition to those functioning at the strategic level (see the third reflective cycle in Figure 3.5).

This whole process of interviewing was conducted consecutively throughout 5 weeks with the intention of keeping the informants engaged in the developing dialog. As shown in Figure 3.5, parallel with these interviews, informal observations were carried out by visiting the manufacturing sites, storage and warehouse facilities, production flows, and office and work environments. Field notes taken during these visits significantly facilitated the process of simultaneous data gathering and analysis as they

were able to drive an ongoing stream-of-conscious commentary about what was happening in the research (Van Maanen, 2011).

During the 5 weeks of engagement in the field, the researcher maintained a diary in which she jotted down queries, links, sketches, people she needed to talk to, and questions that needed to be asked. She also noted her impressions on the developing story around 3PL as these were fresh in her mind. This practice allowed her to react to the emerging situation and not screen out things that might later seem important. This activity thus gave her the ability to gather much information that might be useful in the future. The practice of noting things also pushed her reflective thinking further by her asking of questions such as “What am I learning?”

***b) The second phase of analysis***

Yin, 2003 suggests four general strategies for analyzing data. These are:

- (1) Relying on theoretical propositions
- (2) Developing a case description
- (3) Using both qualitative and quantitative data, and
- (4) Examining rival explanations

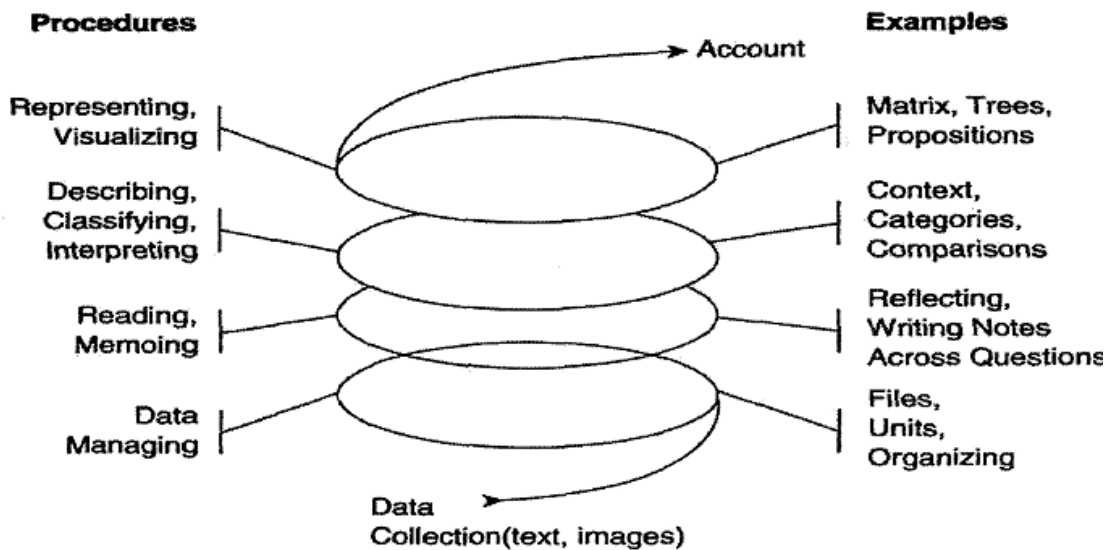
According to Yin (2003), the strategy of relying on theoretical propositions facilitates mainly deductive reasoning as it directs the researcher to follow the previously identified propositions in analyzing data. The strategy to develop a case description, on the other hand, directs the researcher to write descriptive notes on the findings as

chapters, with these chapters then enabling the researcher to arrive at a meaningful framework. The third strategy of using both qualitative and quantitative data is most relevant when the researcher deals with a substantial amount of quantitative data. The fourth — examining rival explanations — specifically relates to studies where the researcher tries to test rival explanations or, in other words, contrasting perspectives.

As described earlier, this study is inspired by a phenomenological interpretive process where the researcher is keen to understand several individuals' common or shared experiences of the phenomenon (Creswell, 2007). Therefore, developing case descriptions was identified as the most relevant method of arriving at a conceptual framework that explains the role of interpersonal and interorganizational interactions in collaboration.

The analysis process followed a general contour which Creswell (2007) identified as a data analysis spiral (see Figure 3.6). However, the analysis was heavily inspired by a phenomenological focus e.g., writing descriptions of 'what' the respondents in the study experienced with the phenomenon (textural descriptions), and 'how' the experience happened (structural descriptions), and writing a composite description of the phenomenon including both the textural and structural descriptions (Moustakas, 1994).

Figure 3.6: Creswell's analysis spiral



Source: Creswell, (2007)

The first loop of the spiral in Figure 3.6 began with organizing the transcribed data, field notes, archival records, and other documents into six computer folders dedicated for the six partnerships under study. Separate files under these folders were maintained, with each containing material (primarily the interview transcripts and field notes) related to the key incidents that unfolded in the first phase of the study. The method of categorizing data into incidents is fully endorsed by Ring and Van de Ven (1994) who claim:

Data on the occurrence of each event could be entered into a qualitative computer database, and at a minimum it should include the date, actor, action, outcome (if observable), and data source. A chronological recording of these events as they occur over time becomes the “raw” database. (p. 112)

In the second loop of the spiral in Figure 3.6, the researcher converted these materials into a story of what happened in these incidents (textual descriptions). In this phase, the researcher read and re-read the entire transcripts several times and immersed herself in the details trying to get a sense of how these incidents arose and unfolded (structural descriptions). In the third loop of the spiral, the stories were reconstructed (combining textual and structural descriptions) in relation to the key constructs or priori codes identified in the initial literature review: i.e., governance structure, processes, workflow ties, and friendship ties. Although ‘a priori codes’ (Eisenhardt, 1989) or, in other words, a ‘prefigured’ coding scheme was used in this analysis, the researcher was open to additional codes emerging during the analysis (Creswell, 2007). This initial coding process accordingly involved moving from the third loop in the spiral to the describing, classifying, and interpreting loop.

In the final loop of the spiral in Figure 3.6, composite descriptions (Moustakas, 1994) pertaining to each partnership were formed. Additionally, visual images of the background to the incidents in the form of network diagrams were drawn, because visually inspecting the data for meaningful patterns provides significant insights in social network studies (Quatman & Chelladurai, 2008).

### **3.3 A critique of the chosen methodology**

The validity and resultant value of any research is dependent on the accuracy and precision of the method followed. Although the researcher believes that the chosen methodology enables an in-depth understanding of the relational dynamics in

collaborations, she also acknowledges some potential shortcomings in the method adopted, particularly in the following areas:

(1) Selection of cases

The researcher notes that single cases are limited in generalizability and have several information-processing biases (Eisenhardt, 1989).

(2) Sampling time

Time sets an important reference for what changes can be seen and how those changes are explained (Pettigrew, 1990). The researcher acknowledges that a longitudinal study would have been ideal in exploring the relational dynamics in collaboration.

(3) The number of relationships under study

The researcher acknowledges that, in choosing the number of relationships to study, she was restricted by time and her own capacity.

(4) Selection of and choices regarding data collection procedures, interviews, documents, and observation

The researcher notes that limited observations were carried out, particularly in the partnering organizations, due to issues around obtaining access, time, and resource constraints. Furthermore, the researcher did not gain access to all the documents that she asked for.

### **3.4 Summary**

The purpose of this chapter was to develop an appropriate research methodology to explore how interorganizational and interpersonal interactions affect collaboration.

Influenced by the researcher's strong belief on how knowledge is created, a constructionist view was adopted as the epistemological stance from which to explore the phenomenon. The researcher believes that meanings appear to be constructed by the decision makers based on their interactions within and across boundaries. The researcher's intention is thus to reconstitute the constructed meanings into a framework. By adopting an interpretive process, the researcher intends to make interpretations by synthesizing the meanings ascribed by the subjects to their lived experiences and provide a shared description of the phenomenon. A qualitative case study methodology that allows a closer examination of the opinions and experiences of managers in the context of collaboration using careful documentation and thoughtful analysis was thus used to derive a more holistic description of the phenomenon.

As it is an interpretive piece of research the researcher is constructing it within a context where the individuals are reacting to the situations that they are faced with. The next chapter that focuses on the research context is thus particularly important for the researcher to understand the broader setting to start collecting empirical data and to draw meaning.

# **Chapter 4**

## **Research Context**

### **4.1 Introduction**

As explained in the previous chapter, it was essential to choose a sector that displays a high magnitude of relational dynamics in order to grasp the nature of collaboration in IOR. The third-party logistics industry, unlike the manufacturing industry, is deemed to operationalize the relational dynamics at their highest in trying to become more responsive to the demands of the many stakeholders it caters to (Razzaque & Sheng, 1998). Third-party logistics relationships have been widely examined in the social sciences at the macro level using quantitative-based methodologies. The relational dynamics that emerge at the micro level have, however, rarely been explored (Pina-Stranger & Lazega, 2011).

This chapter first introduces the basic terminology and the drivers unique to the logistics sector. The next section focuses on the context, Sri Lanka, and moves on to exploring the country's logistics industry as a whole and the specifics of the selected company.

### **4.2 The Logistics Function**

From its background in military and then its business use, 'logistics' has gained significant attention recently (Lummus, Krumwiede, & Vokurka, 2001). In business terms, the function principally relates to the movement of goods, services, and

information (Lummus et al., 2001). However, contemporary definitions of logistics are broad. They extend beyond the scope of mere physical distribution (Lummus et al., 2001) to providing boundary-spanning demand and supply coordinating capabilities with a view to maximizing customer value and minimizing total cost (Lummus et al., 2001; Panayides & So, 2005; Razzaque & Sheng, 1998).

Currently, the most commonly used definition for the function is offered by the Council of Logistics Management. They define logistics as that part of the supply chain process that plans, implements, and controls the forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements (Kanda & Deshmukh, 2008; Stefansson, 2006).

Logistics activities (such as transportation, distribution, warehousing, inventory management, order processing, and material handling), known as back-room functions, have accordingly gained strategic significance in recent years (Razzaque & Sheng, 1998). For instance, many (Mason, Lalwani, & Boughton, 2007; Panayides & So, 2005; Vasiliauskas & Jakubauskas, 2007) have emphasized the use of logistics capabilities for competitive advantage. Razzaque and Sheng (1998) in their literature review identified a number of possible reasons for logistics to gain strategic significance, such as:

- The need to be more responsive to customer service and market demand
- The large commitment of capital involved in logistics

- The boundary-spanning role of the logistics function that facilitates cross-functional efforts towards integration.

### **4.3 The Third-party Logistics Industry**

Although the advantages of the logistics function are many, it is recognized that developing and implementing advanced logistical systems in-house involves high costs and commitment (Razzaque & Sheng, 1998; Trunick, 1989). As a result, many companies tend to focus on their core competencies and outsource their logistics function to third-party specialists for greater efficiencies (Candler, 1994; Marasco, 2008; Sankaran, Mun, & Charman, 2002). At first, these logistics relationships were usually ‘arm's length’ relationships with a minimum of information interchange (Skjoett-Larsen, 2000). However, they have changed steadily over the recent past to managing all or part of the client’s logistics operations (Marasco, 2008).

To date, the increasing interest in logistics outsourcing has brought the third-party logistics industry to the growth phase of its lifecycle in many countries (Sankaran et al., 2002). The term ‘third party’ refers to outside parties who provide functions not provided by the firm (Ellram & Cooper, 1990; Marasco, 2008). Third-party logistics (TPL) is thus identified as “a process whereby the shipper and the third parties enter into an agreement for specific services at specific costs over some identifiable time horizon” (La Londe & Cooper, 1989, p. 5). A third-party service provider is a company that provides multiple logistics services for its customers (Stefansson, 2006). TPL providers possess expertise and experience that otherwise would be difficult to acquire, or costly to have in-house (Razzaque & Sheng, 1998).

Measurement of the quality of service of a TPL provider is based on the clients' perception of the quality of the service in terms of timeliness, responsiveness, accuracy, customer service, flexibility (Panayides & So, 2005). According to Razzaque and Sheng (1998), TPL providers are continually involved in benchmarking themselves against their counterparts in order to achieve excellence in delivering customer value. Consequently, with the contract logistics firms as their partners, companies will evidently gain competitive advantage through superior performance.

#### **4.3.1 Third-party logistics partnerships**

The literature defines a logistics partnership as a relationship between two entities in the logistical channel that involves sharing of rewards and risks over a predetermined time horizon (Ellram & Cooper, 1990). However, the contemporary definitions of a logistics partnership tend to vary drastically in scope (Skjoett-Larsen, 2000). For instance, Lambert, Emmelhainz, and Gardner (1996) affirmed that a business partnership in logistics can rightly be viewed as “a tailored business relationship based on mutual trust, openness, shared risk and rewards that leads to business performance greater than would be achieved by the firms individually” (p. 2).

A range of logistic relationships, from simple outsourcing to strategic alliances such as joint ventures, networks, consortia, alliances, trade associations, and interlock directories, are thus apparent in the literature (Stefansson, 2006).

While most traditional TPL partnerships are performed on a transaction-by-transaction basis, the contemporary TPL partnerships contain more collaborative features such as:

- Information sharing (e.g., Bowersox, 1990)
- Communication and commitment ((e.g., Razzaque & Sheng, 1998)
- Interdependence (e.g., Razzaque & Sheng, 1998),
- Organizational, cultural, and managerial compatibility (e.g., Ellram & Cooper, 1990)
- Synergetic benefits (e.g., Bowersox, 1990)
- Shared risks and rewards (e.g., Gentry, 1993).

#### **4.3.2 Collaboration in logistics partnerships**

Collaboration has been extensively studied in the literature for different business contexts, with many definitions available to describe the phenomenon (Audy, Lehoux, D'Amours, & Rönnqvist, 2012). According to Stefansson (2006), collaboration, particularly in logistics, is a process of decision-making among the two interdependent entities: the shipper and the logistics service provider (LSP). However, a unified definition of logistics collaboration is still lacking (Cruijssen, Dullaert, & Fleuren, 2007).

Table 4.1 outlines the typical strengths and weaknesses identified in logistics relationships. Research on alliance success in the field shows collaboration as an emerging new opportunity for superior order-winning performance for both parties in a logistics relationship (Mason et al., 2007). Research on alliance failure, on the other hand, identifies the numerous impediments in such relationships (see Table 4.1).

Table 4.1: Strengths and weaknesses of logistics relationships

<b>Factors identified</b>	
Strengths	<ul style="list-style-type: none"> <li>• Bringing effectiveness and efficiency</li> <li>• Increasing market share</li> <li>• Enhancing capacities</li> <li>• Reducing inventory costs and the negativities associated with bullwhip effect</li> </ul>
Weaknesses	<ul style="list-style-type: none"> <li>• Loss of control to third party</li> <li>• Lack of technology, unreliability, and inability of the providers to respond to changing requirements</li> <li>• Difficulty of changing providers</li> <li>• The buyer's lack of trust</li> <li>• The LSP's lack of commitment to the relationship</li> </ul>

Source: Abridged from Cruijssen et al., (2007); Fawcett et al., (2012); Razzaque and Sheng, (1998).

An analysis of the literature on alliance failure reveals that the transition from transactional purchasing arrangements to true collaborative relationships in the logistics sector is still new (Razzaque & Sheng, 1998; Sandberg, 2007). For example, out of the 100 companies that have attempted to introduce supply chain partnering, less than 50 percent had been successful in implementing and maintaining the alliance (Boddy et al., 1998). In the logistics arena, 70 percent of logistics alliances fail for one reason or another (Cruijssen et al., 2007), while 55 per cent of them are terminated within 5 years, forcing the companies to take previously outsourced functions back in-house (Sankaran et al., 2002).

Sandberg (2007) broadly categorized the barriers to logistics collaboration under two key factors: the technology and the human. A stream of research is investigating the macro factors (e.g., Tajima, 2007; Subramani, 2004) including advanced technology

for improved collaboration. Another stream is emerging (e.g., Boddy et. al., 2000; Gilgor & Autry, 2012; Kanda & Deshmukh, 2008; Kwon & Suh, 2004; Sahay, 2003) that investigates the microdynamic in collaboration. However, no extensive inquiry into the relational dimensions of the human impediments has yet emerged (Bernardes, 2010; Marasco, 2008).

The present study's research questions place emphasis on the micro and macro dynamics of collaboration in IOR and, therefore, are of much use in addressing the gap that exists in the logistics literature. Specifically, the study focuses on the role of boundary spanners in six collaborative relationships with a logistics service provider who offers a wide range of services from warehousing and distribution to end-to-end supply chain solutions to customers from different industries. Additionally, the study intends to explore how macro elements, such as organizational processes, influence the behavior of people and how people's behavior subsequently forms and re-forms the organizational processes.

#### **4.4 The Context: Sri Lanka**

Sri Lanka is the home of 21million people, with Sinhalese making up over 74.9 percent of the population. The Sri Lanka Tamils make up 11.2 percent of the total population and live predominantly in the north-east of the island and form the largest minority group. Sri Lankan Moors are the third largest ethnic group in Sri Lanka. They comprise 9.23percent of the country's total population (Department of Census and Statistics – Sri Lanka, 2012).

According to ancient records, the first king of Sri Lanka, an Indo-Aryan migrant from northern India, settled on the island in 543 BC with a cohort of 700. This Sri Lankan dynasty spanned a period of 2359 years and lasted until the country became part of the British Empire in 1815 (De Silva, 1981).

A narrow stretch of sea separates southern India from the island nation of Sri Lanka. However, with the introduction of Buddhism in 250 BC, the country's civilization evolved not as a mere variant of an Indian prototype but as something culturally diverse, distinctive, and autonomous (De Silva, 1981). The rituals, practices, and philosophical principles of Theravada Buddhism have remained foremost in almost every aspect of daily life. The people's beliefs, customs, and their character transformed significantly as the religion became an integral part of the culture (Gombrich & Obeyesekere, 1998).

Even yet Buddhism is the state religion in Sri Lanka and is practiced by the majority of the Sinhalese population (Marecek, 1998). The cultural values and traditions which flourished with the religion still persist. For instance, a majority of the people continue to regard and respect the five qualities of a lay person taught in Buddhism: i.e., he has faith; he is virtuous; he is not superstitious; he believes in action (*kamma*) and not in luck or omen; he does not seek outside (of the Order) for those worthy of support and does not attend there first. A spirit of selfless service is one of the main qualities of a Buddhist. He "desires the good and welfare of the world. He loves all beings as a mother loves her only child" (Narada Maha Thera, 1998, p. 575). So the people's actions are enriched with virtues such as sharing joy with others, enjoying giving

according to their ability, and guarding their deeds and words. Jones (1997) identified Sri Lanka as one of the most religious countries in the world.

The influence of the religion is also apparent in the business sector, and the research questions of the study were much informed by the respondents' religious beliefs. For example, interviewees referred to the phrase 'what goes around comes around' in several instances to indicate their belief on how *karma* works; 'whatever behavior someone indulges in is likely to affect them in return'. The phrase was used mostly to show the consequences of negative action.

#### **4.4.1 The business culture in Sri Lanka**

The rapid transformation of economic and commercial activities in the last three decades has resulted in the country having a dynamic business culture. The development policies and the strategies of post-independence governments have also contributed significantly to the country's present state (Chandrakumara & Sparrow, 2004).

Chandrakumara and Sparrow (2004) noted that, although Sri Lankans display many Asian traits, their behavior significantly differs in business management. Sri Lankan managers value Western management philosophies highly and have combined Asian traits with many Western practices. For example, Nanayakkara (1993) found that Sri Lankan managers maintain power distance and individualistic cultural traits in business, although they exhibit collective traits in family and social life. According to Nanayakkara (1992), this trend of adopting Western management practices evolved

from the British system prior to Sri Lanka's political independence. Chandrakumara and Sparrow (2004) identified the following work and value orientations as highly recognized by modern-day Sri Lankan managers:

- Planned and open career
- Empowering system
- Qualifications and performance-based reward system
- Generic functional perspective of job person fit, and
- Job-related competence and rewards.

Furthermore, since the early 1980s a vast number of multinational and global companies have invested in Sri Lanka. According to Chandrakumara and Sparrow (2004), these companies have brought their cultures into the country. The existence of such companies within the national culture has also created much diversity in business practices. At the same time, globalization has built enormous pressure on Sri Lankan companies to change certain cultural values and be more flexible in order to compete successfully (Vishnath, 1997).

The case investigated in this study presents an example of such a diverse business culture in Sri Lanka and the continuous efforts made to align local business practices with global ones. Although the focal company is a local establishment, it deals with numerous multinationals and strives hard to align its systems, processes, and people with those of its clients. The case also draws on the tension related to work practices as the cultures interact or, in some instances, when they collide. However, it is not

intend to carry out a deeper analysis of the cultural influences on individual and organizational behavior as it is beyond the scope of the study.

#### **4.4.2 Human resources in Sri Lanka**

Sri Lanka is one of the first developing countries to identify the value of investing in human resources (Chandrakumara & Sparrow, 2004). The country has achieved human development outcomes more consistent with those of high-income countries. For instance, Central Bank of Sri Lanka revealed 95.6 percent literacy rate for Sri Lankan people in 2012 (CBSL, 2013). As a result, the country presently possesses a well-developed human resource base.

Sri Lanka is also one of the foremost Asian countries that strive to promote gender equality. It has encouraged women's participation in the workforce by offering a range of jobs for them (Wickramasinghe & Karunaratne, 2009). According to the Department of Census and Statistics (2005), 22 percent of the employed females in the total workforce have obtained educational qualifications of General Certificate (Advanced Level) or above, while only 13 percent of their male counterparts have achieved such high qualifications. The increasing number of educated women entering the economically active workforce is thus identified as a significant factor in the Sri Lankan economy (Wickramasinghe & Karunaratne, 2009).

The gender equality and the presence of more qualified women in the workforce were most apparent in the case investigated. In particular, the research question: How do interpersonal interactions affect collaboration? was significantly informed by the

mixed gender make-up of the workforce. For example, in one of the relationships studied, all the key positions were held by women. The researcher observed that emotional and gender differences played a part in the communication problems that were evident in some of the ‘incidents’ dealt with in the study.

#### **4.4.3 Sri Lankan economy and the logistics sector**

At the time of regaining independence in 1948, the country was primarily dependent on an agricultural-based economy (Wickramasinghe & Karunaratne, 2009). However, Sri Lanka’s economy rapidly expanded in the 1980s, with the country embracing an open economic policy. This resulted in a massive growth in the nation’s import and export sectors. Food items, electronics, and intermediary goods were imported, while quality finished goods in value-added form, such as rubber and fiber, were exported in large quantities (SLFFA, 2015). New export opportunities were also opened up for Sri Lankan tea, best known as ‘Ceylon tea’, and garments were manufactured under internationally recognized brand names.

Expansion in international trade led to the development of the freight forwarding and logistics industry in Sri Lanka. However, the industry’s growth was haphazard, indicating that a clear direction was much required. Accordingly, in 1981, the Sri Lanka Logistics and Freight Forwarders Association (SLFFA) was officially inaugurated to ensure that the freight forwarders operate according to international standards. To date, its membership is made up of 90 leading industry players and it is recognized as the

apex body, with an effective national voice, representing the freight forwarding industry (SLFFA, 2015).

At present, the freight forwarding and logistics industry and Sri Lankan economy as a whole have been identified as an emerging market (see, for example, Agility, (2014); World Bank, (2014)). The economy recorded a growth rate of 7.7 percent in real terms during the first half of 2014 and is projected to grow at a rate of around 8 percent in 2015 (Department of Census and Statistics- Sri Lanka, 2014). This growth rate places the country ahead of its many South Asian counterparts including India, Bangladesh, and Pakistan. Sri Lanka is thus considered as “the gateway to South Asia” by many investors (Chandrakumara & Sparrow, 2004). The country has attracted investments from logistics companies (e.g., DHL; GAC group), air cargo carriers, shipping lines, and freight forwarders. The Central Bank of Sri Lanka predicts that both public and private investments will expand further and the emerging sectors are projected to increase the growth potential of the country.

Situated in a geographically advantageous position, the country considers itself a potential global hub in the supply chain, and every endeavor is made to support the efficient functioning of the logistics industry (Asian Tribune, n.d.). For instance, major development projects are now underway to connect the ports, airports, markets, consumers, and producers. The government has intervened significantly in the planning of transport modes, locating of warehousing, and influencing of the distribution functions in the supply chain process. Moreover, the government greatly assists the private sector logistics industry by engaging in the modernization of freight handling

through improved information communication technologies, cargo handling equipment, and specialized vehicles (Asian Tribune, n. d.). Improving physical and social infrastructure is projected to enhance the productivity of the economy further, resulting in sustainable and inclusive growth.

#### **4.5 Focal company: 3PL**

3PL is a local establishment. It commenced operations as a business diversification of its mother company. For over a hundred years, 3PL's mother company had been rapidly diversifying its business operations. Presently, the conglomerate has invested in a broad range of sectors including transportation, agriculture, plantations, textiles, construction materials, fiber, consumer, leisure, and aviation.

In early 2000, after realizing the high potential for value addition through its warehousing activities, the conglomerate formed 3PL dedicated to its transportation and logistics activities. Presently, 3PL owns over 15 sites and holds more than 30 accounts. For the past 10 years, its clientele has grown rapidly and the company holds exclusive agreements with several leading multinationals, including 'FMCG', 'Lubricant' and 'Apparel'. 3PL is recognized as one of most renowned and premier logistics providers in the country.

3PL offers a diverse range of services from warehousing to transportation and provides comprehensive logistics solutions to its customers, and identifies itself as 'a specialist third-party logistics solutions provider'. Table 4.2 offers a list of services offered by

the firm, and the customers the services are offered to in the network, that the researcher is investigating.

Table 4.2: Third-party logistics services provided by 3PL to its customers

<b>Services offered</b>	<b>Rank with reference to value creation</b>	<b>Customers in the network the services are offered to</b>
Warehouse and inventory management	Highest	A main service offered to FMCG
Transport and distribution	Second highest	A main service offered to Apparel
Value-added services	Third highest	A main service offered to FMCG
Production line logistics management	Fourth highest	A main service offered to Lubricant

According to Table 4.2, due to its half a century exposure to the warehousing business under the mother company, 3PL continues to consider its warehouse and inventory management activities as the core product and invests in them heavily. Transport and distribution management is recognized as the second core product of the company, with a fleet of cargo-specialized vehicles, and load and route planning systems. It handles both specific primary and secondary transportation requirements ranging from inbound containerized cargo to island-wide redistribution.

Table 4.2 moreover explains that value-added services are offered as the third product to its customers with a view to becoming an ‘end-to-end integrator’ for logistics services to its clients. The services include, but are not limited to, packaging, stretch wrapping, palletizing, labeling, sticking, and price marking. Production line logistics management, being the fourth core product, is offered using outsourced labor at

external locations and client-owned facilities. 3PL subcontracts labor and deploys its staff to manage the operations, with the highest levels of quality as approved and specified by the clients themselves.

#### **4.6 The evolution of a single company to an egocentric network**

In the mid 1990s, three of the conglomerate's staff were assigned to conduct a feasibility study for the operation of third-party logistics services in Sri Lanka. They had the opportunity to visit several countries where the TPL industry was well established. The three travelled extensively to countries in the Far East, in Europe, and in the US to model those countries' processes.

Their observations and discussions on warehouse and transport operations became invaluable inputs to the designing of a world-class warehouse facility. These foreign visits made them realize the existing market potential in Sri Lanka. The need to be involved in value-adding to the customer's supply chain had until then been virtually untouched. This realization was the tipping point for 3PL.

In just 5 months after its inception, 3PL won the bid to manage the operations of one of the largest retailers in the country. However, this involvement ended, becoming one of the major failures in 3PL's history:

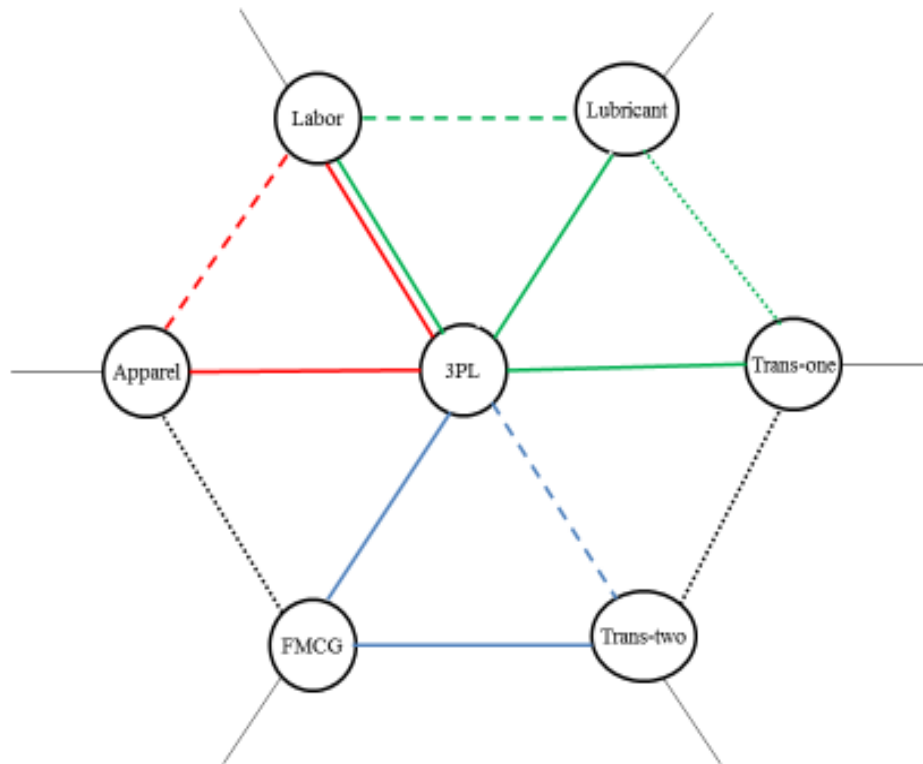
“There was nothing easy at that time [...] we did not have the capacity to handle such a huge operation. And that's where we messed up. We had only 16 employees, and they had to work overnight. By mid-November, we had to scale

up to over 200-odd employees to handle the operation. At that time, the customer had 200-odd outlets categorized as A, B, C. They wanted us to flood those outlets before 31st of December with a full inventory. It was a huge task [in] which we incurred much sweat, lot of money and losses [.....] and we had to do a lot of damage controlling ‘til 2005-6” (Senior manager - 3PL).

Although starting off with a failure, 3PL took it head-on. As a result, it was successful in subsequently securing two of the retailer’s key customers: ‘Lubricant’ in 2003, and ‘FMCG’ in 2006 (see Figure 4.1). Lubricant was 3PL’s first multinational. FMCG is one of the biggest contracts in the market, so the fact that 3PL was catering to FMCG, subsequently led many other customers to rely on 3PL for their services.

Catering to Lubricant’s needs was different and new to 3PL. 3PL was offered a contract to handle line logistics (plant and the packaging lines) and to move the lubricant company’s cargo between the company’s storage terminal and facility. This task required the continuous engagement of 40 workers in Lubricant’s manufacturing site. The work involved unskilled labor, and 3PL decided to outsource labor for its clients’ production line operations. Accordingly, as shown in Figure 4.1 ‘Labor’ was approached by 3PL and contracted to supply the lubricant company’s production line labor requirements. The dotted line connecting Labor and Lubricant in the figure exemplifies Labor’s obligation to serve Lubricant under the contract.

Figure 4.1: 3PL and its six partners selected for the study



3PL initiated its operations with a warehouse facility and it did not own any fleet. As illustrated in Figure 4.1, Trans-one was, therefore, approached to cater for Lubricant’s distribution needs. The dotted line connecting Trans-one and Labor in the figure represents Trans-one’s obligation to serve Lubricant. However, this service was not bestowed on Trans-one by 3PL with a proper contract. As a result, when the personnel in 3PL changed, they brought in new transport contractors. At present, Lubricant’s transport needs are met by a much more ‘affordable’ service provider, while Trans-one remains a back-up supplier.

Three years later, 3PL approached FMCG (see Figure 4.1) and won the bid to cater to its inbound and outbound logistics operations. These included warehousing and transporting all raw materials, packaging material, and finished goods, and value-added services. However, with regard to transportation, FMCG maintained a registered set of suppliers, and 3PL's responsibility was to utilize their services for FMCG operations. Trans-two was catering to 3PL's general transport requirements at that time. FMCG was seeking new transporters for their operations, and Trans-two was introduced to FMCG by 3PL and is now working as a dedicated supplier to FMCG operations. The lines connecting Trans-two and FMCG in Figure 4.1 depict Trans-two's obligation to serve FMCG.

In 2009, 'Apparel' decided to outsource its previously in-house logistics function to 3PL (see Figure 4.1). Apparel was 3PL's first customer from the textile industry. Apparel's unskilled labor requirements are contracted to 3PL's long-term partner, 'Labor'. The dotted lines connecting Labor and Apparel depict Labor's contractual obligation to serve Apparel.

The success of 3PL has been its approach to developing its human resource and the company presently consists of a team of experts in the logistics industry. Though locally owned, having a professional team has been one of the main reasons why 3PL could outperform its global competitors in winning the contracts particularly with Lubricant and FMCG:

“There are many TPL providers in the region who are globally reputed. However, just because they have been successful in certain geographies, it does not mean that they will be good across the world. The company as a brand may be good, but then finally it is the people in that company who will be delivering value to the businesses. So when we go for RFQs (request for quotation) we make it a point to assess the personnel who are going to run our operation in the company” (Senior manager - FMCG).

Lubricant, being a multinational in the oil and gas industry, also never thought that it could find a party capable of responding to its safety requirements. However, 3PL staff were successful in promptly responding to Lubricant’s needs. Nevertheless, as more multinational competitors entered the market, 3PL has started to improve its systems and processes. For instance, the company is striving to deliver synergies to its customers through consolidation (several small deliveries of different customers being collated and transported together for security and cost efficiencies) and is testing the feasibility of introducing a transport management system (TMS) for these consolidation services.

Transport consolidation, however, is new to Sri Lanka, and many customers are still reluctant to share space and information. The fact that transport is still offered at a very low rate has also made the customers more complacent about having dedicated transport suppliers:

“When the transport is costly people will be ready for consolidation and it’s absurd that they are not prepared to share. It is possible to share, but you have to compromise your delivery time. We may not be able to deliver at the time that you want. You might have to depend on our timing. But they are not ready to do that (Senior Manager - 3PL).

After a series of discussions, 3PL has managed to convince some of its key customers including FMCG and Apparel of the synergies that they could gain by consolidating, and is presently working on a model with them. As illustrated in Figure 4.1, this endeavor will indirectly connect the two customers and the transport suppliers in the future.

### *The ego-network and its subunits*

Figure 4.1 reflects how 3PL’s identity has been transformed gradually from a single company to an egocentric network as it started to form relationships with outside parties. The Figure and the description followed further depicts of three main subunits functioning within the ego network: two triads involved with Lubricant operations, one triad involved with FMCG operations, and another triad involved with Apparel operations. The study identifies these three subunits as: Lubricant (in green), FMCG (in blue), and Apparel (in red). It then attempts to carryout a dual level of network analysis with a simultaneous focus on both the subunits and the ego network in order to gain a comprehensive understanding on the relational dynamics in IOR.

## 4.7 Summary

The main purpose of this chapter was to provide an overview of the context in which the study is based upon, as a clear understanding of the context is much important for the researcher to collect and draw meaning from empirical data.

In the first section, the chapter introduced some key logistics terminology and highlighted the significance of exploring relational dynamics in the logistics sector partnerships in order to get a broader understanding of how collaborations could be fruitfully managed.

The chapter then focused on Sri Lanka and the country's business culture. The section particularly emphasized the influence of the Buddhist teachings on the country's culture and the business environment particularly in relation to trust and reciprocation. It also showed how Sri Lankan managers have embraced Western philosophies with more multinationals investing in the country.

In the following section, the chapter displayed how a single company, 3PL, grew to become an egocentric network with more and more partners depending on its services. Figure 4.1 and the description of it clearly revealed three main subunits functioning within the ego network: two triads involved with Lubricant operations, one triad involved with FMCG operations and another triad involved with Apparel operations. The study identifies the three subunits with Lubricant being shown in green, FMCG, in blue, and Apparel, in red. Next chapter centers on the subunit-Lubricant, and carries out an in-depth investigation of the particular unit.

# Chapter 5

## Subunit: Lubricant

### 5.1 Introduction

This chapter focuses on one of the subunits in the egocentric network of 3PL. As shown in Figure 5.1, the subunit ‘Lubricant’ consists of two primary relationships<sup>3</sup>: (1) a triadic relationship formed between 3PL, Lubricant, and-Labor (2) a dyadic relationship formed between 3PL and Tran-one.

The chapter looks at how these relationships evolved to their present state, with an explicit focus on their interorganizational and interpersonal ties. The chapter also emphasizes on some of the critical events that the partners have faced in the relationships, in order to grasp the relational dynamics involved in collaboration. The storyline was pieced together as the researcher compiled her field notes from observations, contractual documents, and interview accounts<sup>4</sup>.

Section 5.5 analyzes the findings of the first subunit — Lubricant — by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration? The analysis is done systematically, taking into consideration the

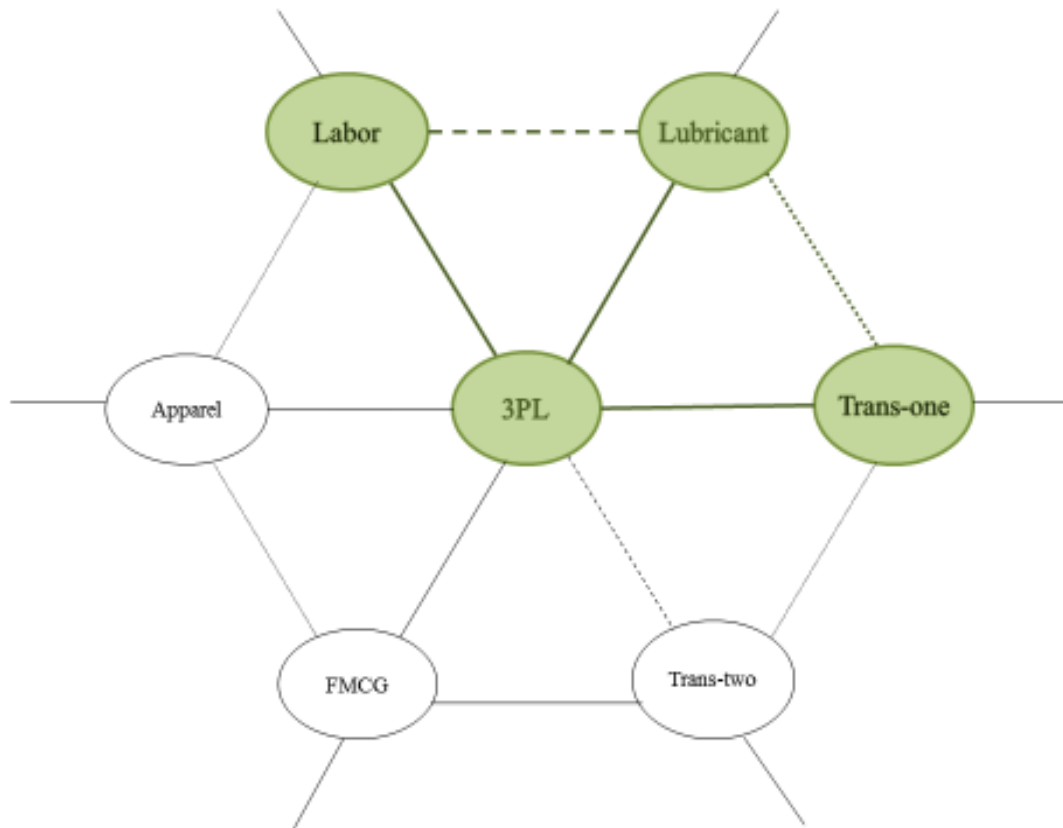
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<sup>3</sup> A large portion of the following content is symmetrical to the published conference full paper; Ekanayake, S; Childerhouse, P; Sun, P (2014), A network perspective of supply chain collaboration, *19th International Symposium on Logistics (ISL2014)*. This paper was shortlisted for consideration for publication in a special ISL conference section in an issue of the *International Journal of Logistics Management (IJLM)*.

<sup>4</sup> The personal names used are changed to maintain the anonymity of the respondents.

constructs identified in the initial literature review and the new constructs that emerged from the particular findings.

Figure 5.1: The triadic (3PL-Lubricant-Trans one) and the dyadic (3PL –Trans one) relationships investigated under the subunit-Lubricant



## 5.2 Lubricant

Lubricant was originally a government-owned organization. Nearly 20 years ago, in 1992, the government sold 51 percent of its shares to a multinational organization. The complete transformation of the lubricant company from a government-owned to a

privately-owned entity resulted in many structural changes with hundreds of its employees being made redundant under the policy of outsourcing.

From day one, Lubricant started identifying and outsourcing all its noncore activities to third parties. There was much internal resistance to this change as many of the employees became redundant. Most of them were, however, offered voluntary termination packages, which some accepted, and some did not. By the end of the transformation, the original 320 full-time employees had been reduced to 80, with all the company's activities outsourced except for production.

The learning curve Lubricant had to go through in outsourcing its activities was steep. For instance, the party to which Lubricant's clearing activity was outsourced did not deliver in line with Lubricant's expectations. Although Lubricant values maintaining long-term relationships, it had to terminate the contract after many rounds of unsuccessful efforts to get the party to perform.

### **5.3 The triadic relationship: 3PL, Lubricant, and Labor**

Under the outsourcing policy, Lubricant identified logistics as 'one big piece' worth outsourcing. As a result, the company's logistics function which had been handled in-house was outsourced to 3PL. The contract to handle Lubricant's plant and packaging lines and to move its cargo was awarded to 3PL through a tender. While Lubricant's logistics division is responsible for overseeing 3PL's warehousing and distribution activities, its production division is responsible for managing 3PL's plant and packaging line operations.

In terms of line logistics, 3PL is responsible for the quality of Lubricant's production line. Its responsibility is to hire production line operators, to train them, and to provide knowledge, expertise, and guidance in order to meet the customer's production line needs. As shown in Figure 5.1, 3PL in turn has subcontracted its workforce requirements for its client's production line operations to Labor, thus forming a triadic relationship between the three entities. Labor operates in the manpower industry and hires the required workforce on behalf of 3PL. Labor does the first screening of new workers, and 3PL does the second before they are sent to Lubricant.

### **5.3.1 The past and present triadic relationship**

#### ***5.3.1.1 Setting up the infrastructure***

##### ***(a) 3PL and Lubricant***

3PL and Lubricant entered into their relationship in early 2000 with the signing of a comprehensive agreement. The agreement contains a set of service-level requirements, and KPIs with regard to Lubricant operations. At the same time, there are penalty clauses that are open to revision as and when needed. Both parties evaluate these KPIs monthly at review meetings. These meetings are the forum for discussing the relationship's progress. At the meetings, Lubricant gets an opportunity to provide feedback on 3PL's performance, while 3PL gets a chance to accept or to justify its performance and to provide feedback on Lubricant's shortcomings:

“We have regular review meetings and monthly or quarterly meetings with all our service providers. That is the forum for us to discuss all our problems and improvements that we are expecting (Senior manager-Lubricant).

Lubricant’s performance monitoring is firm and rigid. It monitors all KPIs on a daily and monthly basis. When a gap appears, Lubricant provides prompt feedback and expects the supplier to take corrective actions immediately:

“Let’s take absenteeism. The tolerance level for labor turnover in the contract is 10%. If it had been more than that, then we inquire. We discuss and try to come out with a solution together because we always value a win-win situation. If 3PL makes a reasonable request for let’s say 2 weeks to respond to our query, we allow them that. If it does not happen after 2 weeks, then we will take steps against them” (Senior manager-Lubricant).

The KPI’s agreed should thus be met, and no flexibility is usually allowed. For example, for transportation the following KPI is set: Four trucks to be provided per day out of which two trucks should arrive before 7.30 a.m. Lubricant monitors this KPI and at the end of the month it produces a report that shows how many trucks have arrived before 7.30. If 3PL has repeatedly failed to send a truck within the specified time schedules, this failure will be raised as a concern at the next meeting. Although not often encouraged, the third parties are also usually allowed to suggest any changes to the KPIs if they are not attainable:

“When we feel that certain KPIs should be revised, we discuss it immediately with the client. For instance, take a KPI of 100% for loading accuracy. We start performing the task. After about 6 months, we realize that loading accuracy cannot be maintained at 100 percent. This may be due to let’s say the client's drawbacks, such as sending overloads or system is not updated in time. We then immediately discuss it with them and come to a collective decision that only 95 percent of accuracy is reachable” (Senior manager-3PL).

Lubricant by nature is a process-driven company. The employees’ responsibility is, therefore, to understand the processes, and to follow them accordingly. The process of making a cup of tea with exact measures of sugar and milk, which demonstrated Lubricant’s process rigidity, was a fascinating observation made by the researcher. It is compulsory at Lubricant that when a new employee comes in, he or she must first spend considerable time learning the processes and then engage in the task under the supervision of an experienced team:

“Our processes are carefully designed and well laid. The entire business is evolved around them. There will be no exceptions or deviation to it [...] it could be operational, safety practices, or anything for that matter, Lubricant has an identified process for it” (Senior manager-Lubricant).

Even the third parties working for Lubricant are required to abide by the same rules. So, at the outset, Lubricant employed a dedicated person to educate 3PL staff and the outsourced workers on its processes. Adapting to such rigid processes was a challenge

to 3PL. The personnel at Lubricant did not believe that 3PL could respond in particular to its safety needs. Being in the oil and gas industry, Lubricant was much concerned about safety. 3PL, however, responded positively to Lubricant's needs by effectively learning their safety rules. So the client was much impressed with the supplier's capacity from the beginning:

“At the time of starting this activity 3PL did not have much knowledge about the industry, or the processes followed. But they positively accepted it; they took it as a learning point for them. I think they later implemented certain processes of ours in other accounts too” (Senior manager-Lubricant).

Although not often practiced, Lubricant does consider making amendments to its processes for the betterment of the operations:

“Recently we introduced a loss prevention system [...]. That is a behavioral-based system where we observe the people and correct their behavior. That is a unique way of preventing losses. We engage in near loss reporting and root-cause analysis. Say, if it was found out from the root-cause analysis that [a] particular incident was due to a personal factor, then we need to engage immediately in correcting the behavior of that person. All supervisors of both parties are accountable to correct those behaviors” (Senior manager-Lubricant).

Lubricant's processes are designed and set by its mother company. Therefore, changing a process at Lubricant is a difficult and time-consuming task. An online change to a process, for instance, takes 1 month, while 3 to 6 months are taken to make the procedural amendments officially and do the documentation.

All Lubricant processes are aligned with its KPIs, and Lubricant engages in continuously correcting the behavior of its people as well as the 3PL team towards achieving its KPIs through operational excellence. It uses 'tailgate meetings' to communicate the weaknesses daily. Every morning the first meeting is conducted with its team (a production meeting) and then with the 3PL and the outsourced workers. However, these meetings have not been steady over the 9 years of the relationship. At some times, processes have been strictly monitored and adhered to, while on other occasions monitoring has become much more lenient:

"I do agree that when you try to get things done by people you need to set the proper systems, processes, instructions, and SOPs in place. But making sure that those are properly followed is more important than setting them. You need to engage in a lot of observations and monitoring for that. But there was a time that they did not talk about processes at all. Then again, they started stressing on some processes. Then there was nothing at all again. But, since recently, they have seriously started working on the processes" (Senior manager-3PL).

***(b) 3PL and Labor***

As pointed out in Figure 5.1, 3PL has subcontracted its workforce requirements for Lubricant's production line operations to Labor. The agreement between 3PL and Labor with regard to line logistics at Lubricant is that Labor ensures a head count of 42 daily at Lubricant's production site by 7.30 a.m.

Every aspect relating to manpower, including the training needs, is spelled out in Lubricant's contract with 3PL. It is 3PL's responsibility to manage the production line workforce at Lubricant. Lubricant is a high process-oriented organization, so a new worker has to initially go through comprehensive training on handling the production line operations before he is assigned to the task. As such, high labor turnover at Lubricant not only results in recurring cost on training, but also in production defects:

“When a new worker comes in he is assigned to a particular point in the production line, and the next day he is assigned to another, to cover up the work of someone who left. So he never gets a chance to master one task” (Operational manager-3PL)

3PL has, accordingly, imposed strict operating clauses on Labor about the retention of workers at Lubricant and has identified worker retention as one of the KPIs. In order to meet the KPI, Labor has recruited supervisors to coordinate labor requirements with 3PL's operational managers working at the sites. The two parties, 3PL and Labor, meet monthly to discuss the issues related to manpower. At the meetings, Labor is represented by its owner and the labor supervisors. 3PL is represented by its senior

manager in charge of human resources and operational managers working on the client's sites.

Labor also maintains boarding facilities for workers to ensure attendance at the site and it has recruited agents from many rural areas and set up branches for recruiting workers in those areas. Despite all these efforts, absenteeism in line logistics at Lubricant is a recurring concern for all parties:

“Lubricant was very settled for the last 2 years. Now we are having the same issue with labor. It is a cycle. Every 1 year or 2 we have this thing coming. We have had worse times. I am not trying to justify, but it is a very tricky area, difficult to sort” (Senior manager-3PL).

### ***5.3.1.2 Emergence of social connections***

#### ***(a) 3PL and Lubricant***

Before outsourcing its noncore activities to third parties, Lubricant had a series of discussions and awareness programs with its employees to explain the value of outsourcing. As a result, 3PL's staff were warmly welcomed by Lubricant employees from the start:

“We had some training programs and awareness sessions for our employees and explained [to] them why we go through this restructuring process. We made them realize that with privatization, we will no longer be the monopolist, so we should get ready for competition” (Senior manager-Lubricant).

Interpersonal relationships between the two parties were thus well established at the beginning. However, the strong relationships built initially were disrupted and, unfortunately, affected the operations negatively when some the key personnel of both parties resigned, and some were promoted. For instance, Lubricant was previously managed by a senior and a well-renowned figure in the industry, while the new head was previously responsible for the production line operations. With the resigning of the former, the latter was promoted to that position and now no longer handles operations. The lengthy relationship that the 3PL personnel have had with this person, however, still make them revert to consulting him rather than the new production manager about production matters:

“The transition of the former production manager to the head of Lubricant occurred 3 years back. However, we have not been able to accept him as the head yet, because of the close friendships we’ve had with him before as the production manager. We worked so closely with him. But, we see the danger of that and have put a ‘mental note’ in ourselves that he is the head friend” (Senior manager -3PL).

In the same way, at 3PL, the human resource manager left the company, and the new manager handles labor issues differently. He prefers to communicate through e-mails rather than personal meetings, and places a high value on standardising tasks via processes. Labor contractors, however, are not accustomed to using modern technology, so his way of dealing with the labor contractors has not helped to resolve matters at the operational end:

“George used to make somehow sure the workers are available. He was such a dominating character that the labor suppliers had been blackguarded by him many times. But, Alexander relies heavily on processes. By the time they set the process, Lubricant [’s] account would be lost” (Operational manager-3PL).

There have moreover been a series of structural changes in both parties from time to time. These changes have been so rapid that the employees have had no breathing space to get accustomed to them. For instance, 3PL has recently begun to operate on a functional structure. The structure assigns responsibility for labor at Lubricant to both its human resource manager and the senior manager operations. Unfortunately, this structural change at 3PL’s end has not been clearly communicated to Lubricant’s production manager. As a result, Lubricant’s production manager continues to make worker-related complaints to the operations manager at 3PL. However, these complaints have been transferred internally to the human resource manager of 3PL without the Lubricant production manager’s knowledge:

“Someone from the HR division at 3PL met me once and we had a lengthy discussion about what is going on. We discussed 14 items. After about 8 weeks, I received an e-mail from him. In that, he had assigned the responsibility of the 14 items to different departments, such as administrations, operations, H’s and so on. Well, I do not want to work with different departments. We have the contract with 3PL. So I want results from 3PL” (Senior manager-Lubricant).

Parallel to these structural changes, Lubricant has also recently undergone a series of processual changes and the personnel on both sides are still confused about certain processes that are now in place. For instance, the Lubricant staff have to go through a 3PL supervisor if they wish to give feedback to contracted workers. However, Lubricant supervisors and the middle managers get directly involved with the production line operators. They believe that it is their responsibility to monitor and give feedback to them. Their interference has now become a primary concern to 3PL personnel on site:

“The production manager is not at all concerned about the value of experienced workers. If he sees a small mistake such as let's say not wearing a safety helmet, he immediately asks us to take him out of the line. He is only concerned with the safety processes at Lubricant. But for us, taking an experienced worker out is a serious decision” (Operational manager-3PL).

As for the management of contract labor, several other essential aspects related to the sourcing of manpower, such as the selection process, are still not clear. As a result, many administrative issues have arisen between the two parties and this situation has created much inefficiency in Lubricant's production line:

“We had a problem with the vacancy for a qualified forklift driver. It took almost 3 months to get the right person. We had to remind them daily of our requirement and had to interview 25 people to select the right one. Only the twenty-sixth guy was the right one. I think they should have done the screening before sending them to us. Well, now it is fulfilled, but the person has not obtained a competency certificate. It is 3PL's responsibility to make sure that has got one (Senior manager-Lubricant).

These drawbacks have resulted in many operational defaults and inefficiencies and have reflected badly on 3PL's operational staff at the Lubricant site:

“My management is asking me how an operation that ran smoothly for 9 years came to face problems. They should understand that the customer needs, and the way they handle business, have also changed. We no longer have the freedom to do anything new. They have imposed procedures for every single step in the production, which was not the case earlier” (Operational manager-3PL).

***(b) 3PL and Labor***

Labor's owner knew several 3PL personnel, including some senior managers, personally long before he entered into the contract with 3PL:

“Lester (a senior manager at 3PL) was my schoolmate; he was junior to me. That relationship helped to build up this business” (Owner-Labor).

When it comes to the terms of the contract and daily operations, Labor is however required to deal with 3PL's human resource manager and not with any of his colleagues. As a result, despite the associations he has had with 3PL's key managers, Labor strives hard to retain its position in 3PL's manpower supplier list:

“If we perform well only the continuation of our contract with 3PL is assured” (Owner-Labor).

At operational level, Labor's supervisors are required to communicate directly with 3PL's operational managers at customer sites to ensure the right labor count. Labor supervisors, however, have often been lethargic and have not performed to the expectation of 3PL personnel on site. Consequently, tension is developing between the two parties:

“In a worker issue, we first contact the manpower supervisor. He has to look into the worker's leave, overtime, and so on and decide which person's to be sent on leave and when. He does not seem to do the job right. On several

occasions now, he had passed the blame to us. I don't think Ray (owner of Labor) is aware of any of these things" (Operational manager on site-3PL).

3PL's Human resource manager had intervened to bridge the communication gap between the two parties by making it mandatory for the manpower supervisors to attend Lubricant account meetings. However, the manager has observed that the supervisors are refraining from attending them:

"I found that account heads and the supervisors are having an enormous gap. So to bridge this gap, I formally requested the manpower supervisors to attend the meetings of the relevant account. So their engagement is high. But I have noticed that they are not reporting to these meetings" (Senior manager-3PL).

### **5.3.2 The issues faced**

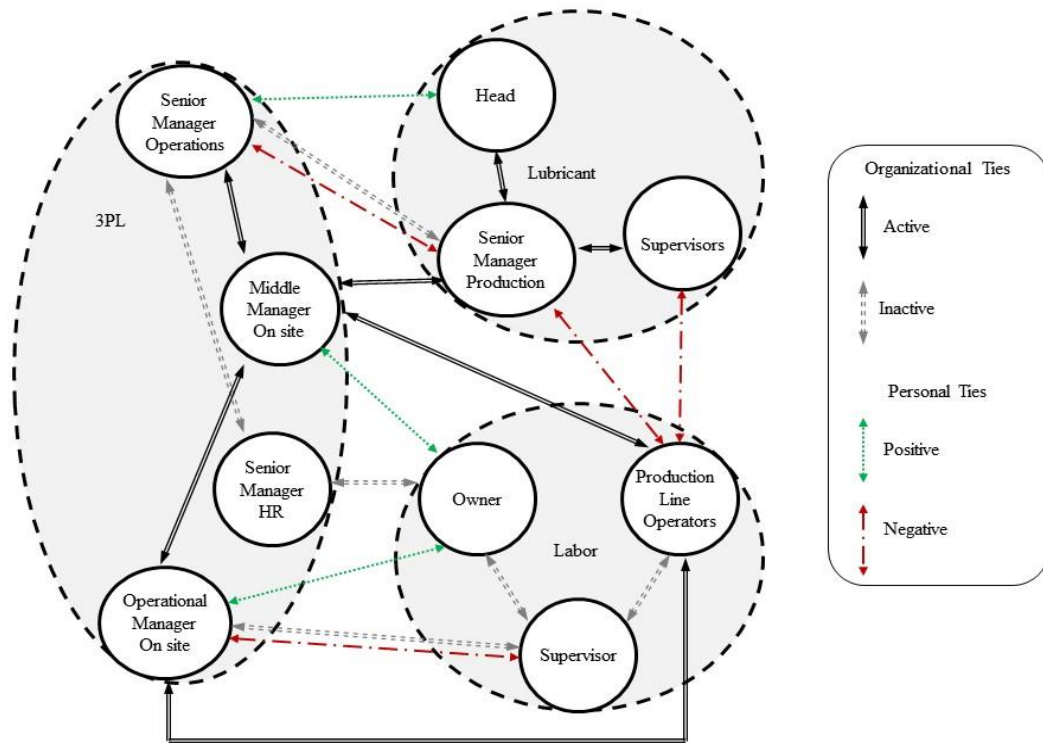
#### ***Labor issue***

At the time of the research investigation, the parties were once again facing serious issues with contract labor. 3PL had, at that time, failed to maintain a headcount of 42 at Lubricant for 3 months and the shortfall had become a primary concern for the Lubricant production manager whose performance has mainly been affected by the developing situation. He believes that the only solution at hand is to impose severe penalties on 3PL for nonconformity:

“If we are to continue with 3PL, I seriously think that we should develop different KPIs to monitor their performance. At the moment, we are not using penalty -type [of] KPIs for labor. If we introduce penalties then they will work to the mark. Otherwise, this partnership will not be a viable one for us” (Senior manager-Lubricant).

Lubricant’s rigid processes have also contributed to the issue dramatically. The company expects strict adherence to processes. The researcher was able to observe how the production line operators’ every movement is repeatedly corrected by Lubricant’s supervisors. This rigidity and the undue interference of Lubricant staff have resulted in many newcomers leaving within a short period. The developing scenario is reflected by the red arrows connecting the production line operators and Lubricant staff in Figure 5.2.

Figure 5.2<sup>5</sup>: Organizational and personal ties inferred at the time of the labor issue



Source: Ekanayake, Childerhouse, and Sun, (2014)

Figure 5.2, moreover, displays the interpersonal tensions developed between the two parties. According to the figure, while many organizational ties have been inactive, a number of personal relationships have emerged over and above the formal ties, and they have negatively contributed to the issue. For instance, there is developing friction at the strategic level between the senior manager-operations at 3PL and the senior

<sup>5</sup> Information on organizational ties in the diagram was mainly drawn from the process maps and organizational structures, while information on personal ties was drawn from the participant accounts.

manager-production at Lubricant. 3PL's operations manager dislikes Lubricant's newly appointed production manager, so much so that he skips communications with the production manager and directly discusses the issue with Lubricant's head:

“For the past 2 weeks I have been calling Victor (Head, Lubricant) in the morning to get his feedback on the labor count around 10, 10.30, and then I call him again in the afternoon to see how the operations were” (Senior manager-3PL).

The inactive formal tie between 3PL's operational manager working at the Lubricant site and the labor supervisor is also reflected in the figure. Although labor supervisors are appointed to strengthen communication between 3PL and labor for an efficient supply of workers, the frictions developed between the two personnel have virtually ended communication between them.

#### **5.4 The dyadic relationship: 3PL and Trans-one**

Initially, 3PL specialized in warehouse services. Within a very short time, however, it realized that warehousing and transportation are two entwined services and it decided to offer transport coupled with its warehousing services. A manager was appointed to assess the transport market and identify the right suppliers to subcontract the service to.

The transport industry at that time was highly fragmented and immature, so it was a very difficult task to find a reliable supplier. Having seen Trans-one's vehicles operating in the area, the manager contacted the owner, and Trans-one became 3PL's first transport contractor offering services to Lubricant, 3PL's first multinational customer.

Trans-one is a private limited company operating in the transport industry. The entity was established as a sole proprietorship 15 years ago. As the business grew, its owner, Steve, converted Trans-one into a limited liability company with Steve, his wife, and two others appointed as directors. Unlike many other transport contractors, Steve is a businessman with a vision. Both Steve and his wife are engineers by profession and had worked in several public- and private-sector organizations for many years before setting up their own business.

Trans-one operates with 30 vehicles out of which 15 are its own and 15 hired. Its staff consists of 60 drivers and helpers. Its clientele consists of 45 customers with a number of key corporate customers including 3PL. Steve values professionalism and strives to maintain it at its highest. As a result, in addition to the training provided to his crew by customers, Steve brings in resource people from outside and conducts in-house training sessions using them semiannually. Trans-one is recognized as one of the key players in the industry.

## **5.4.1 The past and present relationship**

### ***5.4.1.1 Managing Trans-one***

During the first 5 years Trans-one succeeded in building a solid relationship with its customer, 3PL, and the two parties progressed together successfully:

“3PL is successful in the transport industry because of us. In 2002, they were a small company and did not have a single transport contractor. We were small too at that time, and we grew together” (Owner-Trans one).

Arnold, the key personnel at 3PL who dealt with Trans-one from the beginning and Steve became very close friends within a very short time. At one time, 3PL lost one of its key customers to whom Trans-one was providing services. The competitor who won the customer approached Trans-one to see if it would agree to join it so that Trans-one could continue to serve the client. Arnold had entreated Steve not to join the competitor as 3PL would then lose all chances of winning the customer back. Because of the strong friendship Steve had with Arnold, Steve rejected the offer and remained with 3PL.

As time passed, 3PL’s clientele grew, so it decided to maintain a transport supplier base by entering into long-term contracts with them. A transport manager was also appointed to manage the supplier base and a set of KPIs were identified to evaluate their performance. When allocating transport needs to the suppliers the manager checks if the supplier meets certain criteria, including the cost. As such, though Arnold picked

Trans-one as his first preference when allocating 3PL's transportation needs, he is not able to do so with the new system.

#### **5.4.2 The issues faced**

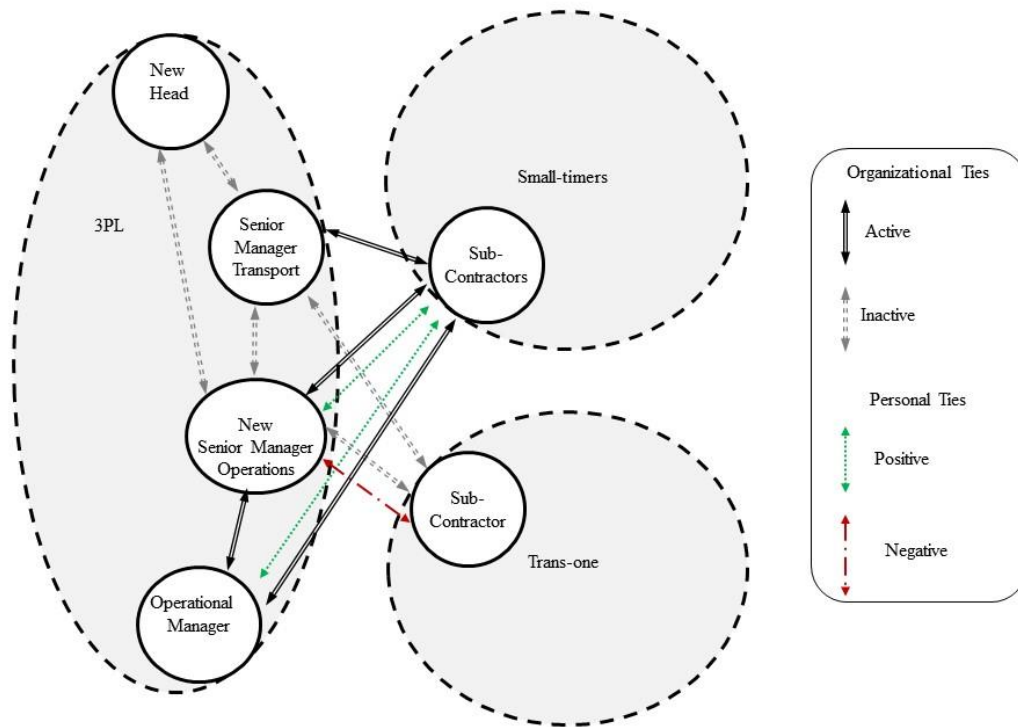
##### *A forgotten supplier*

Two years ago, Arnold left 3PL and, at the same time, the senior manager who had headed 3PL from its inception was also promoted to become a director of its mother company. As a result, a couple of new senior managers were recruited to occupy those positions. Figure 5.3 illustrates how these changes in personnel became Trans-one's downfall.

The new manager who took over Arnold's responsibilities introduced his set of suppliers with whom he preferred to work (see the active organizational ties between the new manager and small timers in the figure) and the new head was completely unaware of the bond between Trans-one and 3PL, and Trans-one suddenly became 'a forgotten supplier':

“We have the capacity to meet 3PL's total transport requirement. But we don't get business as we used to. Those days I have supplied 20-60 lorries per day, but now it has come down to 2-3 transport requirements per week” (Owner-Trans-one).

Figure 5.3<sup>6</sup>: Organizational and personal ties inferred at the time of the forgotten supplier issue



Being a corporate supplier with the capacity to serve multiple transport needs, Trans-one is indeed a much better supplier compared to the small-timers that 3PL is maintaining (see Figure 5.3). However, its superior service comes at a price which cannot match that of its competitors. Due to its fragmentation in the market, transport

<sup>6</sup> Information on organizational ties in the diagram was mainly drawn from the process maps and organizational structures, while information on personal ties was drawn from the participant accounts.

as a whole is considered a commodity by 3PL's customers and, hence, they are not willing to pay anything more for 'a superior' service. Trans-one has thus become the least preferred choice of 3PL's new management when negotiating the transportation service with its customers (see the inactive organizational ties between 3PL managers and Trans-one in the figure):

“We can't afford Trans-one's rates because our clients always expect the best quality transport service at the lowest price possible” (Senior manager-3PL).

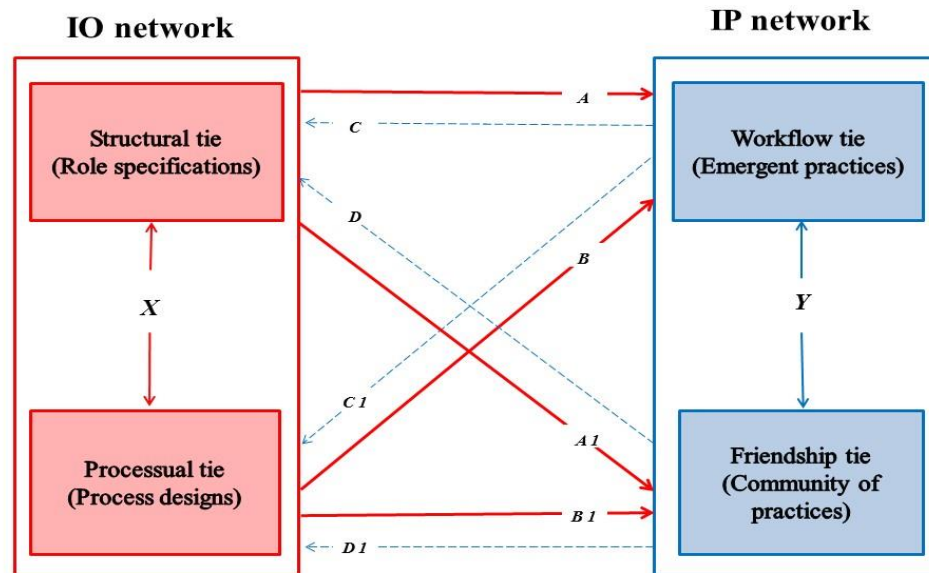
Trans-one is ready to negotiate its prices. However, 3PL's new manager does not offer an opportunity to do so. The negative personal tie between the new manager and Trans-one in figure 5.3 reflects this friction between the two. As a result, 3PL is now on the verge of losing its long-term relationship with this prestigious supplier:

“The first head at 3PL was a superb manager. We could negotiate our payments with him at any time. His door was always open to anyone. That link is no more there, and we can't get across to the top with our complaints. So the new management doesn't know about us. The people who are there now don't expect a transport contractor to be like us. They prefer to work with small-timers. If a 3PL's competitor approaches me again, as they did once, I will not think twice of leaving 3PL” (Owner-Trans-one).

## 5.5 Analysis

This section analyzes the findings of the first subunit — Lubricant by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration? The analysis is done systematically, considering the constructs identified in the initial literature review and the new constructs that emerged from the empirical findings. Figure 5.4 attempts to portray a reasonable representation of what the researcher could draw from the subunit — Lubricant in relation to the data. The figure is used throughout the analysis to show the insights gained in respect of the interactions, and the individual arrows in the figure are explained subsequently.

Figure 5.4: A graphical representation of the relational dynamics of subunit — Lubricant drawn from the base data



### **5.5.1 The interorganizational network**

Data reveal that the first step in setting up the infrastructure for the relationships was the signing-off of a detailed agreement. The drawing up of these agreements was driven by predominantly economic motives. For instance, all contracts involved detailed descriptions of how the objectives of the partnership should be achieved in both operational and financial terms:

“We have clearly laid down our service level requirements in the agreement. It is a clear-cut one. They have to deliver those service levels in terms of operational and financial matrices” (Senior manager-Lubricant).

In addition to stating the partnership’s objectives in financial matrixes, the document contained a detailed set of KPIs directed towards achieving these goals:

“KPI is the measurement of performance. Now say for transport activity, we have told them, we need four trucks per day. Moreover, out of these four trucks, two trucks should come before 7.30 in the morning, and we monitor that. If trucks have not come within that specified scheduled time, they will not be paid. You should meet these KPIs. Then only we can ensure that you are paid. So we monitor all these KPIs on a monthly basis and daily basis and whenever there is a gap, we expect them to take corrective actions immediately” (Senior manager-Lubricant).

Especially in the relationship between 3PL and Lubricant, achieving the KPIs is viewed as significant to the partnership's success, and, as a result, performance monitoring is done on a regular basis.

#### 5.5.1.1 Governance structure

It was observed that, in the agreements, the objectives and the associated KPIs were further delineated to manageable, specialized tasks. All tasks were then allocated to the partnership's subunits in such a way that coordination among them is achieved. As shown in the first red box under IO network in Figure 5.4, these deconstructed tasks and coordinating activities reflected the partnerships' structured interactions or the governance structure. Significantly, it was apparent that, although not often done, the partnerships allow changes to these KPIs for the betterment of the operations (see Table 5.1 for evidence).

Table 5.1: Subsequent changes made in the KPIs and tasks of the relationships

Relationship	Evidence – Changes to initial KPIs/tasks
3PL and Lubricant	<ul style="list-style-type: none"> <li>Let's say after about 6 months we realize that loading accuracy cannot be maintained at 100% due to say [...] system [errors], we immediately discuss with them and come to a collective decision that only 95 percent of accuracy is reachable.</li> </ul>
3PL and Labor	<ul style="list-style-type: none"> <li>In order to meet the new KPI, Labor has recruited supervisors to coordinate labor requirements with 3PL's operational managers working at the sites.</li> </ul>
3PL and Trans-one	<ul style="list-style-type: none"> <li>As time passed, with the increase in its clientele, 3PL also increased its number of transport contractors and [...] a new transport manager was appointed to manage the supplier base with a set of identified KPIs.</li> </ul>

### *5.5.1.2 Governance processes*

Similar to having a detailed set of precise tasks, a set of processes that explained how the tasks should be performed was also present in the agreements. The second red box under IO network in Figure 5.4 represents the processes designed in line with the partnerships' agreed tasks across the partnering organizations. Particularly at Lubricant, these processes are identified as the 'rules or the law' of performing which all parties including 3PL and outsourced workers should adhere to:

“Processes at Lubricant are well laid and rolled out in each and every operating location. There are no exceptions or deviations to it, and the entire business is evolved around them” (Senior manager-Lubricant).

As for the prescribed tasks, the partnerships allow changes to processes to improve the operations. For instance, Lubricant values operational excellence via advanced processes and, as a result, although not often done, the partnership allows changes to these (see Table 5.2 for evidence).

Table 5.2: Subsequent changes made in the processes of the relationships

Relationship	Evidence – Changes made to processes
3PL and Lubricant	<ul style="list-style-type: none"> <li>• <i>Recently we introduced a loss prevention system [...] where all supervisors, including the ones from 3PL, are accountable to correct behaviors of the workers.</i></li> </ul>
3PL and Labor	<ul style="list-style-type: none"> <li>• <i>Getting to know that manpower supervisors, account heads, and the workers are having an enormous gap, 3PL's human resource manager recently set up a forum where the parties can get everything resolved as all the responsible parties are now required to attend it.</i></li> </ul>
3PL and Trans-one	<ul style="list-style-type: none"> <li>• <i>When allocating 3PL's transportation needs, Arnold was able to convince its management that Trans-one was his first preference. . However, now the process is that, before allocating the service to the supplier, the manager has to check if the supplier meets certain criteria, including the cost.</i></li> </ul>

### 5.5.1.3 *The interwoven nature of structure and processes*

The partnerships' processes were seen to be aligned with the agreed tasks, and hence one affects the other:

“processes are the steps to perform the prescribed tasks” (Senior manager-Lubricant).

Path ‘X’ that connects the structural and processual ties in the IO network in Figure 5.4 illustrates this interrelationship between the structured task and processes. It was also apparent that the partners have not paid significant attention to the interdependence of the two and, as a result, friction has been mounting. For instance, the labor supervisors

have been appointed to strengthen communication between 3PL and Labor so as to ensure an efficient supply of workers. However, this new task has not been complemented by changes in existing processes in relation to the management of labor. Consequently, the role has not been performed in such a way as to meet those expectations.

### **5.5.2 The interpersonal network**

The act of performing the prescribed tasks and processes established in the relationship's IO network has resulted in a subsequent creation of an IP network. For instance, once the total performance was signed off as per the agreement, it was converted into clear tasks explaining every detail of it and the processes that should be followed in executing the tasks.

In the relationship between 3PL and Labor, some personnel of both parties knew each other before, and that relationship had resulted in the two sides meeting. However, after initiation of the agreement, the structured interactions led to the forming of a new IP network altogether, with Labor having to interact with different personnel at 3PL.

#### **5.5.2.1 Workflow ties**

The interviews confirmed that the governance structure and processes have largely contributed to forming the boundary spanners' workflow relationships. For example, specific KPIs of the partnership were directly linked to the boundary-spanning roles, while their actions were heavily governed by partner-specific processes. The first blue

colored box under IP network in Figure 5.4 reflects these workflow ties between the organizations.

Though associated with much structural rigidity, it was surprisingly revealed that the workflow ties in practice carry a considerable amount of flexibility which, at times, has affected the collaboration negatively and, at times, positively. For instance, in the issue of labor, although there are no structural or processual ties that link 3PL's operations manager to Lubricant's head (see Figure 5.2), it was observed that the two communicate intensively to resolve the issue. Their interactions, however, have negatively affected the situation. On the other hand, the interpersonal tie that emerged between 3PL's operational manager on site and the owner of Labor, although not facilitated with a structural tie (see Figure 5.2), has significantly helped to settle the issue. Unfortunately, the parties have not recognized the value of this emerging relationship.

#### ***5.5.2.2 Friendship ties***

Almost all friendships (or hostilities) were nurtured within the boundaries of the work roles and manifested an emotional debt that holds the respective individuals together (see the second blue box under IP network in Figure 5.4). These friendships were, however, constrained by business-specific needs and did not reflect any intense emotional connection. This state is clearly evident in the following two quotes:

“First you should clearly understand why you need to have a relationship with a particular person. Otherwise, you will be just asking for trouble. You should not develop unwanted relationships for unwanted things” (Senior manager-3PL).

“A relationship in our terms is the understanding of your customer’s situation. Now say that I know his or her situation at that moment, so by being within my boundaries, if I say that I cannot do this ‘cos I am not authorized, that person will be affected. Instead, if I say that I am not authorized to do it, but let me check with my superior, that shows some consideration for his situation. ‘Cos losing his relationship is far too costly for us. The relationships we make are what keeps the business going” (Senior manager-3PL).

While these friendships have sometimes helped to ease tensions (e.g., the relationship between the operational manager and the owner of labor in Figure 5.2), they have sometimes worsened them (e.g., friendship between the senior manager operations of 3PL and the head of Lubricant in the same figure). Furthermore, while 3PL sees building personal relationships as vital for operations, Lubricant predominantly depends on processes:

“If you have a clear process in place, you don’t need to go after anybody”  
(Middle manager-Lubricant).

### *5.5.2.3 The interwoven nature of workflow and friendship ties*

The workflow and friendship ties are interwoven in boundary-spanning relationships and do not function independently. Path ‘Y’ that connects the workflow tie and friendship tie in the IP network in Figure 5.4 illustrates the interwoven nature of these two ties. There are many examples in the subunit that show how the workflows are still directed at people who have been promoted or transferred because of the strong friendships the individuals had in their earlier position.

For example, when the researcher was having tea with a particular senior manager who was promoted to his current position 2 years back, she noted that he got several phone calls from colleagues with whom he used to work in his previous position. One of them, in fact, reported an incident to him that ought actually to have been reported to the manager who now holds the senior manager’s previous position. To the researcher’s astonishment, the senior manager advised his colleague on the matter, without directing him to the right person. Accordingly, the development of an informal hierarchy within 3PL was sensed by the researcher.

In the same way, it was observed that no matter how well the workflows are structured, in the absence of personal closeness, they will not be directed at the correct personnel. For example, in Figure 5.2, the organizational ties between 3PL’s senior manager-operations and Lubricant’s senior manager-production is inactive due to the hostilities (shown by red arrow) developed between the two.

These scenarios also reflect the fact that unless the boundary spanners make a conscious effort to manage the workflow and friendship ties, the absence of one negatively affects the other. For instance, in the first example, had the senior manager of 3PL clearly communicated to his colleague that he, the senior manager was no longer responsible for such issues, their workflows would not have been affected. In the second example, had 3PL's operations manager made a conscious effort to instigate a friendship with Lubricant's production manager, his work would have been eased.

### **5.5.3 The interwoven nature of IO and IP networks**

Description clearly reveals that the IO and IP networks are interdependent, and that one alone is not sufficient to sustain the partnerships. For instance, it was observed that the IO network has provided a forum to enable the dyad's IP network to emerge, while the subsequent IP network has in turn represented the IO network in collaborative efforts. Table 5.3 draws on examples of the interdependent nature of the two networks in the subunit-Lubricant.

Table 5.3: Examples to the interdependent nature of IO and IP networks

Effect	Evidence
IP network on IO network	<ul style="list-style-type: none"> <li>• 3PL as a company has a set of values and business practices which are recognized. However, it is from Bob (Senior manager-3PL) whom we expect to deliver our objectives. So if Bob and his team fail to perform, 3PL will not be our business partner in the longer run (Senior manager-Lubricant).</li> <li>• I, by myself will be recognized as Mike. But whatever the request I make, I make it on behalf of the company. So at the end of the day directly or indirectly I represent my company (Operational manager-3PL).</li> </ul>
IO network on IP network	<ul style="list-style-type: none"> <li>• If proper SOPs are not in place for each and every scenario, you don't have an ownership for what you do and you come out with [a] hundred excuses. So you must implement proper SOPs and sign off with relevant people [...] we have a PMS (performance monitoring system). We strongly monitor the performance and we give feedback. We change roles if the person is not capable of performing that role (Senior manager-3PL).</li> <li>• Basically the procedures are the rules. Now the rules are the law [...] Processes give guidelines and steps to perform our tasks (Middle manager-Lubricant).</li> </ul>

**5.5.3.1 The effect of structure and processes on the workflow and friendship ties**

The effect of structure on the boundary-spanning workflow ties (see path ‘A’ in Figure 5.4) was evident throughout the discussions as the participants explained how specific KPIs are directly linked with boundary-spanning roles:

“Once we sign off the total performance as for the agreement, it is converted into clear tasks explaining every detail of the whole process. Individual

performance KPIs are set according to these tasks, and monthly performance reports are evaluated at the beginning of every month to see if they have achieved those” (Senior manager- 3PL).

As for the workflow ties, structured tasks have profoundly influenced the emergence of workplace friendships (see path ‘A1’ in Figure 5.4). For instance, the former production manager who is now the head of Lubricant and the 3PL personnel initially started interaction as a result of their work roles. These formal interactions have, however, been transformed into a more personal relationship over time, and have significantly facilitated their roles. One particular middle manager thus explained these friendships as role-bound:

“Personal relationships are important for the business relationship to function. We [You] need to maintain a good relationship with your service providers because when you want to get the things done from them, the closeness we have built with them really matters. Maintaining that friendly environment is especially important when we have to communicate to them that we are not satisfied with their performance and discuss matters seriously” (Middle manager-Lubricant).

How processes have influenced their performance (see path ‘B’ in Figure 5.4) was much emphasized by both the operational and senior managers. For instance, the following quote exemplifies the rigid enforcement of processes on the boundary spanners workflows:

“I think work is much easier with processes and procedures because it gives more guidelines and clear steps to follow. Even if you have to make a decision, there are guidelines and criterion [sic] that you have to look into. So if you follow the criteria it’s easy to make decisions and there will be no ad hoc decisions made” (Middle manager-Lubricant).

As in the case of workflow ties, it was also apparent that processes play a fundamental role in directing the boundary-spanning friendship ties (see path ‘B1’ in Figure 5.4). This effect of processes on friendship ties was much evident in the relationship between 3PL’s former manager responsible for transport operations and the owner of Trans-one. The duo depended on each other heavily in executing 3PL’s transport process at the beginning. This dependence eventually brought the two so close that Trans-one did not want to leave 3PL for another customer.

### ***5.5.3.2 The effect of workflow and commercial friendship ties on the structure and processes***

The effect of boundary-spanning workflow ties on structured relations (see path ‘C’ in Figure 5.4) was evident in the labor issue. For instance, the manager responsible for labor at 3PL showed in his interview how hard it was to get the labor supervisors to perform their role instead of following their own agenda:

“Whenever [the] Lubricant account is having a meeting, labor supervisors are expected to attend it. We have given them a chart with all the dates of meetings

highlighted. I realized that these people are not attending the meetings” (Middle manager-3P).

Workflow ties have also profoundly influenced the partnership’s processes (see path ‘C1’ in Figure 5.4). For example, although not in the process, the production manager and his subordinates at Lubricant often correct the behavior of workers, thus interfering with the 3PL personnel’s job:

“Lubricant guys are obsessed with rules. They want to make sure that they are followed to the dot. So they get involved with the production line operators. This has made the fellows so frustrated” (Operations manager-3PL).

This negative influence is shown by the red arrows between the two actors in Figure 5.2 drawn in relation to the labor issue.

As in the case of workflow ties, there is evidence of the fact that boundary-spanning friendships have also affected the structured tasks (see path ‘D’ in Figure 5.4). For example, in the labor issue, the developing friendships between 3PL personnel on site and the labor contractor shown in Figure 5.2 have significantly facilitated the 3PL personnel’s task:

“Now we don’t wait for the labor supervisor. If a worker is absent, we call Ray (Owner-Labor), and he sends one immediately” (Operational manager-3PL).

The friendship between the operations manager of 3PL and the head of Lubricant shown in the figure has, however, adversely affected the operation manager's formal interactions with Lubricant's production manager:

“No, I don't meet the production manager. I always deal with the top” (Senior manager, operations-3PL).

Not only the structured tasks, but also the processes have been significantly affected by these friendships (see path 'D1' in Figure 5.4). For instance, although the process of managing labor is directed at Lubricant's production manager, the operations manager at 3PL communicates with the head of Lubricant, thus affecting the process badly:

“For the past 2 weeks I have been calling Victor in the morning around 10, 10.30 to get his feedback on the labor count and then I call him again in the afternoon to see how the operations were” (Senior manager-3PL).

Table 5.4 clearly reflects how this interdependent nature of the four elements structural, processual, workflow, and friendship ties shown in Figure 5.4 has resulted in the IO networks often being affected by a change in the IP networks, and vice versa, thus displaying a clear knock-on effect of each on the other (see Table 5.4).

Table 5.4: The knock-on effects of the IO and IP networks

<b>Knock-on effect of the deviations</b>	<b>Evidence</b>
A deviation to IP network on the IO network	<ul style="list-style-type: none"> <li>• At operational level, [the newly appointed] labor supervisors are required to deal directly with 3PL’s operational managers at customer sites. However, it is not happening so....</li> <li>• The senior manager operations at 3PL dislikes the production manager at Lubricant so much that the former skips communications with the latter and directly discusses the prevailing issue with the latter’s superior.</li> <li>• The human resource manager at 3PL has left the company and the new manager is handling labor issues in a different style to the former[...] His way of dealing with labor contractors has not so far helped to resolve the matters at the operational level.</li> </ul>
A deviation to IO network on the IP network	<ul style="list-style-type: none"> <li>• 3PL is operating on a functional structure since recently, [...] unfortunately the production manager at Lubricant has not been clearly communicated of this change. So he makes worker-related complaints to the manager, operations that are internally passed to the manager, human resources without the Lubricant’s production manager’s knowledge.</li> <li>• The head of Lubricant has previously been responsible for the production line operations and was promoted to the new position recently. The many years’ relationship that the 3PL personnel has had with him still make them revert to him for production matters instead to the new production manager.</li> </ul>

## 5.6 Summary

Lubricant was 3PL’s first multinational customer. For over 9 years now, 3PL has been handling Lubricant’s line logistics by outsourcing unskilled day workers from Labor. Unlike other operations, a fixed number of operators is essential for line logistics to start production. From time to time, and for a number of reasons, the parties have found

it difficult to retain workers at Lubricant. As with Labor, 3PL outsourced the transport requirements of Lubricant to Trans-one. However, as the clientele grew, 3PL increased its number of transport suppliers and Trans-one has now become 'unaffordable' to 3PL's customers.

The analysis revealed of two types of networks: the IO network and the IP network that provide a meaningful way of explaining collaboration. Figure 5.4 demonstrates that while the IO network consists of the partnership's governance structure and processes, the IP network consists of the boundary-spanners' workflow and friendship ties. Empirical data also provide evidence of the interwoven nature of the IO and IP network and their elements.

The network diagrams (Figures 5.2 and 5.3) depict that most of the structured interactions or in other words the IO networks that were in place originally have become inactive and some personal interactions have emerged over and beyond those structured relations. These developments have sometimes eased the issues and sometimes exacerbated them. Paths A, B, A1 and B1 in Figure 5.4 However reflects that in the subunit, the influence of structural and processual ties on the partnerships' IP networks had been much greater than the effect of these emerging IP networks on the IO networks. For instance, Lubricant, being a process oriented company continuously strives to ensure that the tasks are performed according to the set processes and the development of any informal practices are strictly monitored.

The particular subunit also indicates some behavioral and cultural factors unique to the lubricant and oil industry, while 3PL's desire to serve Lubricant within Lubricant's strict doctrine shows the adaptable nature of the service industry. By discussing how people found ways to achieve goals despite the rules set upon them, the subunit also displays an emerging community of practice among the employees.

As explained in the methodology chapter, investigating an egocentric network requires a thorough focus on each of its subunits, as the changes in a firm's egocentric network result from the aggregation of specific changes in the dyadic and triadic levels. The next chapter thus moves on to investigating another subunit of 3PL's ego network: The FMCG.

# Chapter 6

## Subunit: FMCG

### 6.1 Introduction

This chapter focuses on the subunit-FMCG in the egocentric network of 3PL. As shown in Figure 6.1, the subunit ‘FMCG’ consists of two primary relationships<sup>7</sup>: (1) a dyadic relationship formed between 3PL and FMCG (2) a dyadic relationship formed between 3PL and Trans-two.

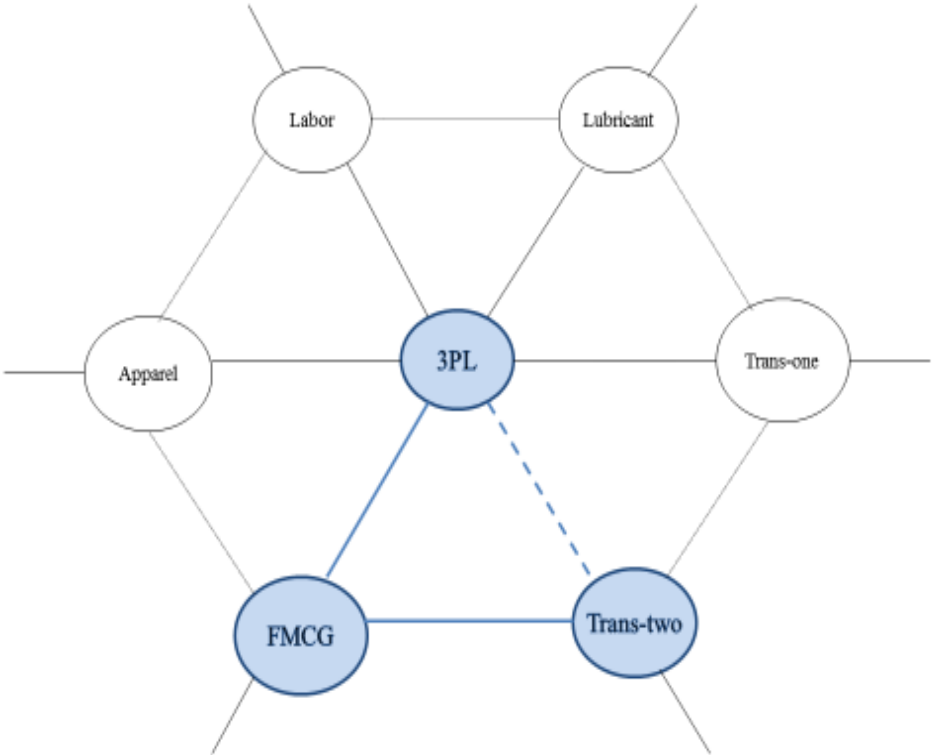
As in the previous case, the chapter looks at how these relationships evolved to their present state with an explicit focus on their interorganizational and interpersonal ties. The chapter also focuses on some of the critical events that the partners have faced in the relationships, in order to understand the relational dynamics involved in collaboration.

Section 6.5 analyzes the findings of the sub unit – Lubricant by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration?

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<sup>7</sup> A large portion of the following content is symmetrical to the published Conference Full Paper; Ekanayake, S; Childerhouse, P; Sun, P (2014), A network perspective of supply chain collaboration, *19th International Symposium on Logistics (ISL2014)* and the Journal paper under review in the *International Journal of Logistics Management (IJLM)* (special Issue)

Figure 6.1: The two dyadic relationships (3PL-FMCG & 3PL-Trans two) investigated under the subunit – FMCG



## 6.2 FMCG

FMCG is a multinational operating in the fast-moving consumer goods industry with local manufacturing facilities. It started operations in Sri Lanka nearly 75 years ago and to date is the market leader for many consumer brands. In the late 1990s, FMCG identified logistics as one of its noncore activities and decided to outsource the function.

Although FMCG values building long-term relationships with its suppliers, it was evident that the company had changed its logistics service providers from time to time. At one time, it terminated a four-year logistics relationship primarily because the chief executive officer of that particular company moved. On another occasion, it terminated the relationship because that party had failed to yield collaborative synergies FMCG was expecting to gain:

“If you feel that you can get more value by scanning around the market I don't see any wrong in shifting. It is like a marriage. In a marriage, of course, you do not want to try out so many times but there are instances where the marriage may not work. So we had to take a call even after 7years of partnership with them; we said that now you've been with us for a long time we need to reevaluate so we are going to float a tender” (Senior manager-FMCG).

On both occasions, however, FMCG experienced the risk of losing its customers and, hence, is perfectly aware of the consequences of such decisions:

“Lot of customers got disappointed. Our customer case fill time is normally 89-90 percent; during the transition it fell down to 30 percent” (Senior manager-FMCG).

### **6.3 The dyadic relationship: 3PL and FMCG**

In 2006, 3PL came together with FMCG for the first time when it won the tender to offer warehouse facilities to store the customer's overflow requirements. However,

within a year, as a result of its increased interactions with FMCG, 3PL was successful in winning the RFQ to handle its end-to-end supply chain operation related to logistics. Currently, 3PL's role is to ensure that the products are available on time in full. 3PL services to FMCG include warehousing, transporting, packaging of goods, and providing value-added services (VAS).

### **6.3.1 The past and present dyadic relationship**

#### ***6.3.1.1 Setting up the infrastructure between 3PL and FMCG***

Though two third-party logistics providers had been managing FMCG's logistics function since the late 1990s, it was evident that FMCG had failed to gain synergies through those relationships, mainly because it was naïve about logistics outsourcing and, as a result, did not exercise many formal controlling mechanisms over the relationships.

When entering into the agreement with the current supplier, FMCG made sure that the foundation for the partnership was properly laid with all controls intact. For instance, the contract clearly communicates FMCG's vision to the supplier, the key priorities, long-term sourcing strategy, and its expectations from the logistic partner in terms of key deliverables. The agreement consisted of specific KPIs along with a penalty system for nonconformity.

A sound monitoring system was also established to monitor the partnership's performance. This system involved daily reviews at operational level and weekly,

monthly, and fortnightly reviews at strategic level to make sure the KPIs are met and the partnership is on the track:

“The two heads of the department in the two companies review the performance quarterly. Additionally, there are monthly, weekly, and daily reviews done at the sites. My logistics manager or the junior manager goes to these sites and does the review again. They look at it at a more granular level, such as looking into the nonconformance, the misses, the deviations, or the stock accuracy issues such as the cycle count. For specific issues, we have a checklist where we look at it and review. Basically, we review all the KPIs” (Senior manager-FMCG).

As the relationship evolved the initial framework within which the partnership originally operated had however been altered and many of the monitoring mechanisms had become dysfunctional. For instance, thinking back over how successful the regulatory framework had been, a senior manager of FMCG admitted that previously mandatory monitoring mechanisms had become inactive to a large extent:

“We had a monthly meeting and I realized that prereads are not sent 2 days ahead and these guys are not prepared [.....] we get them to come and present to our board once a quarter. Well, now it doesn’t happen once a quarter [.....] it happens like in bi-annual sessions now [.....] previously agreed circle meetings have become dysfunctional and not happening effectively [.....] meetings are held depending on the need [.....] actually up until last year we had a quarterly

review with the board [.....] last year we had lots of issues with our factory location and all that and we really didn't have this quarterly review [. ....] last December we had the review after about 6, 7 months” (Senior manager-FMCG).

Respondents admitted that these formal meetings have been replaced by ‘on the spot informal discussions’. Although a senior manager of FMCG saw this trend as customary when a relationship is evolving, she also confessed that the absence of formal meetings, particularly at the strategic level, has badly affected the relationship:

“When ‘the supplier’ was small it had more time for us. Its top managers used to meet us at least once a month to check how things are. When you do that on a regular basis only, you will understand where the partnership stands, the new opportunities coming your way, the pain points and especially whether the customer is happy with you. But now it has become so big that the top level has lost sight of the existing customers” [.....] I think the time has come to revamp the relationship with a new KPIs set”. (Senior manager-FMCG).

Any party interested in becoming FMCG’s logistics partner had to abide by its specific safety and quality guidelines. For instance, 3PL had to abide by FMCG’s storage guidelines which contained specific requirements such as where, and where not, certain products could be stored. With regard to transport, guidelines such as how a lorry inspection should be carried out before the stocks are loaded had been spelled out clearly. Being an ISO certified company, this requirement, however, was not a concern

to 3PL as it has throughout striven to ensure that its SOPs (standard operating procedures) are in line with those of its customers including FMCG.

The researcher, nevertheless, observed that many of these processes are informally handled in daily operations. For instance, when spending time at 3PL's warehouse, she heard the operations manager agreeing in a phone call with his counterpart at the customer end to dispatch certain goods. When questioned about the consequences of such decisions, the manager replied that:

“The nature of the business is such that you can't have written things everywhere. You have to take quick decisions but at the same time you should know that you are responsible for your actions” (Senior manager, operations-3PL).

Such practices have resulted in the parties making amendments to the initial processes at subsequent stages, in order to align them with the emerging workflows. Unfortunately, amending processes has not been a continuous exercise, so the current workflows differ considerably from the structured interactions. For instance, at the time of the investigation, the parties were in the process of automating some critical operations which had been done manually over the years. Evidence revealed that the new system has negatively affected operational level workflows as the current practices are very different from those documented:

“The processes we used to follow have been changed with SAP. So the staff are still getting used to it [sic]. Let's take a delivery done through a third party.

Earlier, if the buyer wanted to increase the target load, this month they could do so with a manual order. But now if they try to do so the whole process will get affected” (Senior manager-3PL).

Last year, after realizing that some of the old processes were no longer in practice and not appropriate in the current business environment, both parties spent a considerable amount of time altering them. The revisions were especially conducted in consultation with the operational-level boundary spanners:

“We sat together, and had lengthy discussions about what is needed and what is not. There had been times where we have argued in [sic] particular ways of doing things. Let's say for lead-times, people challenged that the current SOP of keeping a five-day buffer is too much. Then have argued back with the advantages of keeping a five-day stock. Likewise for all the processes we have asked the questions: “Do you actually require it or not?” Then we have justified and finalized the new workflow processes” (Operational manager-FMCG).

### ***6.3.1.2 Emergence of social connections between 3PL and FMCG***

Securing a corporate giant’s account in 2007 was a massive achievement for 3PL. Taking over the operations from a party which had handled FMCG’s logistics operations for 7 years was, nevertheless, a challenge to 3PL’s personnel. During the transition, they had to work for a month with the employees of the previous TPL provider, and had to endure a series of unpleasant incidents with them. However, from the very beginning of the new contract, FMCG’s personnel provided their fullest co-

operation to 3PL staff, as the parties had known each other since the time when 3PL had started to handle FMCG's overflow requirements:

“Actually with the supplier I had close relationships before. When we started off the operation, David (the present chairman of the supplier) gave me his mobile number, and said, ‘Gabriel (director SC of the buyer), if you ever have a problem you just call me.’ That is the kind of confidence they gave us at the beginning” (Senior manager-FMCG).

The personal relationships eased many tensions that occurred during the transition. For instance, one of 3PL's middle managers who was based at FMCG's premises at that time had worked hard to ensure that the operations were smoothly running. He had met FMCG's key personnel every morning to find out the most prevalent issues as at that day and had worked to rectify them immediately:

“We felt like somebody is looking after our interest, because we had lots of issues during the transition and at that time we needed somebody to collate all these and attend [to] them to close the loop. He did a fantastic job in that, and when he was about to be transferred to another account, I intervened and got him to look after FMCG's account permanently” (Senior manager-FMCG).

Over the years, as in the case of the previous subunit —Lubricant, some key personnel changed. This change in personnel subsequently caused many issues in the relationship. For example, FMCG's former logistics manager had his own way of handling 3PL and had hardly ever updated his superior on 3PL's performance. Suddenly he was

transferred, and his superior was clueless about 3PL operations. The e-mails the logistics manager's superior had sent to 3PL personnel soon after the transition, which the superior willingly shared with the researcher, clearly revealed of her lack of awareness of many developments at that time.

The other primary reason why the personal relationships in the particular subunit were affected was the issue of 'non-compliance' that often resulted in heated debates between the parties. When there was damage or a loss, the customer saw the supplier's failure to conform to process as the cause:

“You need to make sure that it is signed off [...] they should adhere to the protocols without literally taking the word. There are no exceptions” (Senior manager-FMCG).

The supplier, on the other hand, had argued that 'nonconformity' was initiated at the customer's end. As the boundary-spanning individuals of the two parties drew closer, FMCG's personnel had become very complacent with those at the supplier end. This complacency resulted in FMCG employees making ad hoc demands which the supplier's employees found hard to meet without circumventing the relevant processes:

“When it comes to MNC (Multinational companies), they have procedures and SOP but it does not mean that they follow them, neither have they known about them. Had they known, they would never make such ad hoc orders. Only when something goes wrong they take the SOP, read it and try to find out whom to be blamed [sic]” (Middle manager-3PL).

Nevertheless, the customer had been so strong that the supplier had won in only a few instances. In the aftermath of these disappointing meetings, the supplier's personnel became more and more cautious about dealing with unexpected circumstances which has, in turn, become a concern to the customer:

“There were some instances where they really tried to do things to the letter or to the book saying they will not budge from that. See, as a customer, we will always be demanding. Modern trade customers are like that. They will ask you to send the lorries before seven o' clock and then they say they need it [sic] tomorrow. That will be the nature of [the] customer. So, the supplier must make sure to understand the problem proactively and ensure that those needs are met in a more reasonable manner” (Senior manager - FMCG).

Despite all their arguments the friendships have been revitalized and the partners continue to carry on:

“In the last 2 years we had lots of debates, and many penalties were passed on to them. Having said that, when you have a good relationship, you can always come back and say yes there was a mistake, I will not repeat it” (Senior manager-FMCG).

### 6.3.2 The issues faced

#### *Fungi issue*

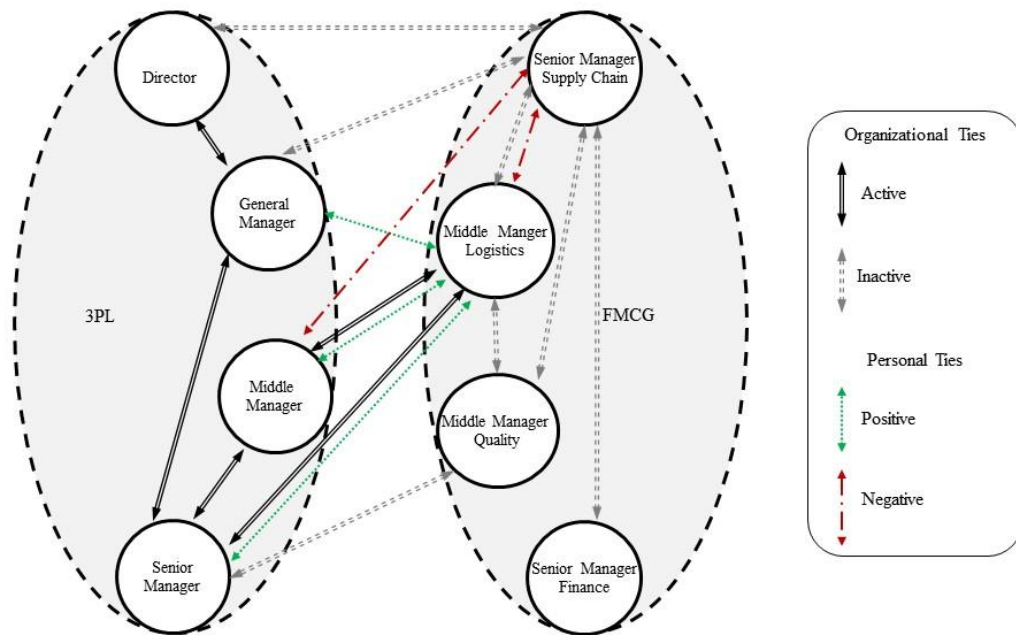
In warehouse operations, FMCG issues quality assurance clearances for all 3PL's warehouses. In one particular incident, the stock of soap stored in one of the warehouses became infected with fungi. With the intention of recovering the stock, FMCG's middle manager immediately requested the supplier to clean and repack the soap at any cost. Later, it was realized that the particular manager was not authorized to make such a decision without consulting his superior:

“We didn't know that Richard (logistics manager) is not authorized to make such a decision. It all happened so suddenly based on trust. We started cleaning the soap immediately without discussing the rate as we knew that otherwise the buyer would face an 880 million rupee loss. Finally, for the cleaning job there was a bill of around 16 million rupees that the buyer refused to accept” (Middle manager-3PL).

As presented by the green arrows in Figure 6.2, at that time, FMCG's logistics manager had very strong personal relationships with the key personnel in 3PL. As a result, the particular manager was able to handle the third-party operations smoothly. He had rarely sought advice from his superior. However, his superior was not happy with the logistics manager taking decisions without consulting her. As a result, friction was developing between the two. This friction is reflected by the red arrow connecting FMCG's logistics manager and his superior in Figure 6.2:

“I think Richard (logistics manager) was much more involved with us than Gabriel (logistics manager’s superior) and he did not update Gabriel on anything, which we neither did” (Middle manager-3PL).

Figure 6.2: Organizational and personal ties inferred at the time of the fungi issue



3PL personnel’s lack of communication with others at FMCG (see the inactive organizational ties indicated by the black dotted arrows in the figure) that prevailed at that time also contributed to the issue. However, after a series of intense investigations, it was found that FMCG personnel had not checked the quality guidelines of the warehouse before storing soap. Moreover, in a subsequent event, the logistics manager had gone beyond his authority in instructing the cleaning of the stock. As a result, the

logistics manager was reprimanded, and the cleaning cost was reimbursed to the supplier.

### *Transport issue*

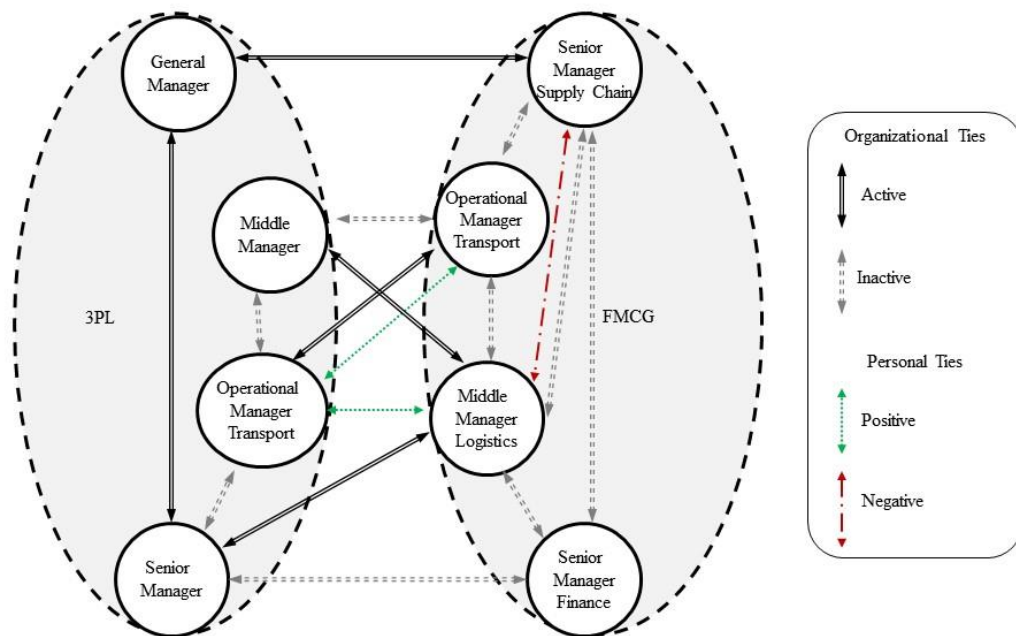
The transport issue was the second major incident that occurred in the parties' six-year relationship. In transport operations, FMCG maintains transporters, while 3PL manages them. To become a registered transporter, one has to obtain approval from FMCG's operational manager-transport. The standard operating procedure for payments is that 3PL's operational manager-transport signs and hands in the invoices to FMCG's transport manager.

In one particular incident, FMCG's transport manager was desperately seeking additional fleet for a project that was running short of vehicles. Due to the close friendship 3PL's operational manager-transport had with FMCG's transport manager (see green arrow connecting the two, in Figure 6.3), the former had volunteered to supply two of his father-in-law's vehicles for the project. Though using employees' own vehicles for operations is prohibited by law, the mutual understanding between the two led FMCG's transport manager to register the two vehicles under the name of 3PL's operational manager's father-in-law. Although the two vehicles were later withdrawn from the operations, 3PL's operational manager had continued to send bogus bills to FMCG for payments:

“Our people had trusted this fellow so much that they had never thought the bills would be bogus. He had been able to build such a rapport with them that

our logistics manager had not even bothered to cross-check the invoices with the system. If he had checked, he would have easily found out that such a trip was not given. We actually moved that logistics manager out on account of gross negligence. His job was to do that. We even did an independent inquiry to see if the two were linked in this” (Senior manager-FMCG).

Figure 6.3: Organizational and personal ties inferred at the time of the transport issue



The participant accounts also reflected that formal communications were lacking within FMCG at the time of the incident (see black dotted arrows drawn within FMCG connecting FMCG personnel in Figure 6.3). Most significantly, the above quote reveals that, as in the previous issue, FMCG’s logistics manager had not performed under the

supervision of his superior (see black and red dotted arrows connecting the two in the figure). As a result, his supervisor was unaware of the situation. Consequently, the logistics manager was finally removed from his position, and a set of new procedures was introduced to the relationship's transport function. The new SOP for payments is that 3PL's middle manager signs all the transport bills, and on the buyer's side, all personnel from the transport manager to the senior manager of finance verify signatures before approval.

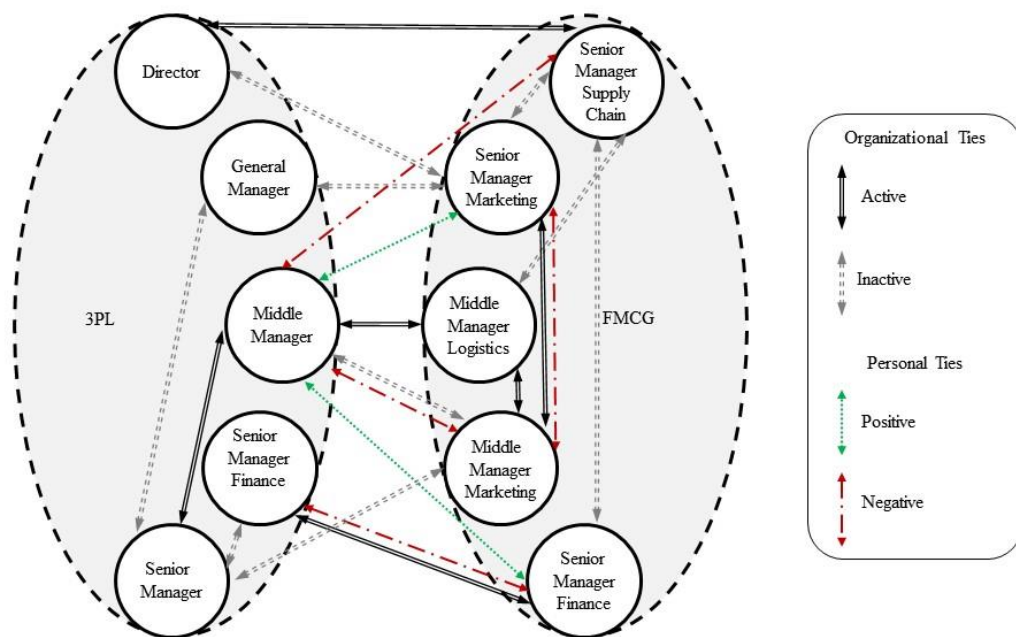
### *Rates issue*

The rates issue is the most recent incident that the partners have faced. For VAS (value-added services), FMCG is 3PL's sole customer. VAS had been successful in gaining huge revenues for the company. 3PL's middle manager responsible for FMCG's VAS operations claimed that he could turn around this Rs. 300000 per month revenue operation to some 5-6 million rupees a month in a short period. He had managed to increase the profit margin by paying the workers on piece rate and charging overhead costs on the site to the buyer. Some key personnel at FMCG were, however, not at all content with the middle manager's attitude (see the red dotted lines directed at the middle manager of 3PL in Figure 6.4):

“We have clearly told them that when you have a bigger business you should not try to make money in one area. For the ‘VAS total cost structure’, they have added security, electricity, and rates. Well, that is a cost they will incur anyway; either they do our business or not. This small guy who is handling VAS is trying

to maximize his stake. People at the lower level will not get a helicopter view of the total operation. Someone at a higher level will have to start looking at it holistically and take a coherent approach to pull the strings together and say, “are we adding value as [a] company to this customer?” (Senior manager-FMCG).

Figure 6.4: Organizational and personal ties inferred at the time of the rates issue



Source: Ekanayake, Childerhouse, and Sun, (2014)

The sustained concerns were finally emerged into the open when 3PL’s middle manager quoted an unexpectedly high price for a job that they had been awarded 3 years consecutively. For trade promotions, FMCG’s middle manager-marketing

informs the supplier's middle manager of specific requirements, and based on the requirements, 3PL's manager quotes a price to FMCG's marketing manager. In this particular situation, 3PL's manager had asked for a higher price than normal for the job, which, according to him, had 'involved some new additions'. FMCG's marketing manager was not ready to compromise as she had already budgeted the cost based on the previous year's rates.

The middle manager-marketing's influence was so high with the buyer that the buyer's supply chain division was finally asked to call for quotations for the job. However, before going for the tender the supplier was offered a final round of discussion on price, a meeting which the supplier's middle manager avoided deliberately:

“I told my management that I will not be attending the discussion because all these days I had been negotiating with them and when they see my face they see [it] as expensive. Let our marketing guys do the negotiation and if the price needs to be adjusted, we will do so. Unfortunately, the person who was supposed to be at the meeting had got sick. I thought my heads are taking care of it but see none of us have gone” (Middle manager-3PL).

The quote also reflects that communication within 3PL was severely lacking at the time of the incident. It also demonstrates that over the particular event, the middle manager had dealt with FMCG alone. The inactive formal ties between the key personnel of the two organizations at the time are clearly reflected in Figure 6.4.

Finally, the job was offered to another party. The consequences of the customer's decision were very high for 3PL. It had to lay off quite a number of its VAS employees who subsequently joined 'the competitor' (new supplier to FMCG), and 3PL incurred a huge loss on idling resources:

“It was never a decision to give it to an outsider and get a lower rate. Every brand manager was happy with us; they knew our quality was good, and they knew that we deliver our promises. But we had a problem with this particular lady who happened to be the brand manager of that product” (Middle manager-3PL).

FMCG could not however sustain a relationship with the new party and was back with 3PL after a year. The incident still lingers, as each party recalls it as 'a lesson' learned by its counterpart; “the new party failed to deliver because those rates were far too below [sic] and now the buyer has realized that shifting partners is not a sustainable solution” (Senior manager-3PL), “since the supplier came down on the price a part of the business was given back to them” (Senior manager-FMCG).

#### **6.4 The dyadic relationship: 3PL and Trans-two**

Initially, 3PL positioned itself as a specialist warehouse provider. Transportation was low-priced mainly due to the fragmentation of the market, and 3PL did not perceive it as a lucrative business. As a result, it maintained a few small-timers including Trans-two to fulfill its customers' transport requirements.

Trans-two is a transport contractor which owns seven lorries. Its owner had entered the transport industry just 4 years previously, with one lorry serving 3PL's ad hoc transport needs. The contractor was first introduced to 3PL by one of 3PL's personnel who knew him. Within a very short time, the owner was able to win the trust of 3PL personnel.

With FMCG becoming one of its customers, 3PL was offered the service of managing FMCG's fleet. At that time, FMCG had very few transporters and was looking for new suppliers for its intershuttle services. 3PL introduced Trans-two to FMCG as one of the most reliable contractors with whom 3PL would like to work.

#### **6.4.1 The past and present relationship**

##### ***6.4.1.1 Managing Trans-two***

Trans-two is registered under FMCG's supplier list and is primarily responsible for fulfilling FMCG's intershuttle needs (see Figure 6.1). According to the contract, Trans-two is required to maintain a fleet with the right vehicle conditions, qualified drivers, and crew. It is also required to meet all expenses with regard to vehicle breakdown, hold-ups, and other damage that may happen to the goods in transit due to driver negligence.

3PL assigns all FMCG's transport suppliers work. 3PL's operational manager-transport is responsible for identifying and allocating FMCG's transport needs to the suppliers. The manager is also responsible for ensuring that the requirements are met on time and in full. From the very first day that Trans-two was introduced to 3PL, the

owner worked very closely with the 3PL personnel and became one of its most loyal suppliers:

“I am not like other guys who do their job just for money. I am always grateful to 3PL for bringing me up to this level. I keep my phone switched on twenty-four-seven. Sometimes Tim (operational manager-transport) calls me in the middle of the night and asks for a lorry urgently. I have gone by myself with the lorry ‘cos you can’t find drivers at that time of the night” (Owner-Trans two).

As a result, although Trans-two is new to FMCG, it gets priority over the other four suppliers registered for intershuttle needs when 3PL’s transport coordinator is allocating jobs.

#### **6.4.2 The issues faced**

##### ***Vehicle hold-ups***

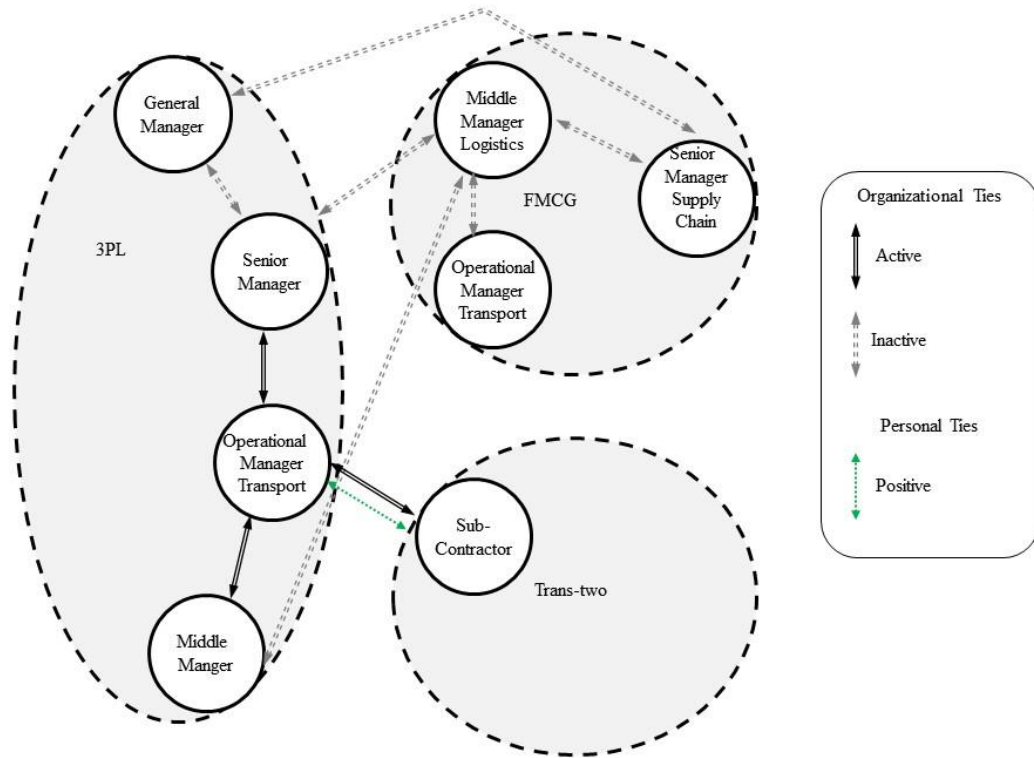
Up until 2013, 3PL and FMCG did not share the warehouse management system (WMS), so the distribution center picking happened manually. In 2014, the parties decided to make the process WMS-enabled. The ordering and acknowledgment of the receipt of goods are now done electronically. This was a massive change for the partners to undergo, and the researcher was thus fortunate to experience a classic situation of organizational change in the case.

The researcher felt the tension mounting as the employees of both parties struggled to keep pace with the automation process. The whole environment was affected by the change. Instead of engaging in the daily activities, everyone was calling here and there asking for clarifications and verifying details:

“We were used to doing things differently. And now certain things have changed. So the staff is still getting used to it. So they require clarifications”  
(Senior manager-3PL).

Although the new system was introduced with a brief ‘shut-down period’ in which no payments or transactions were made, many issues still prevailed with the process. As a result, it was observed that many organizational ties related to daily work had been inactive to a large extent (see black dotted lines connecting the partners in Figure 6.5).

Figure 6.5: Organizational and personal ties inferred at the time of the hold-up vehicle issue



Especially, the delays and errors in uploading the information to the system resulted in dozens of lorries being held up for several days at the FMCG distribution centers. When a lorry goes to a loading point, it has to remain there ‘til the loading is done. The waiting sometimes takes more time than anticipated. FMCG’s agreement with the transport suppliers is that the transporter bears hold-up costs. However, in this case the reason for the hold-up was due to the system change. The transporters had not been given any assurance that the costs would be reimbursed.

Being in the middle, 3PL strove to continue operations according to schedule (see the black arrow connecting 3PL's transport manager and Trans-two in the figure). It failed to obtain Trans-two's services, as its lorries were being held up for 4 days at that time:

“We loaded the lorries last Friday and now it is Tuesday and still they are not unloaded. My drivers and the crew can't leave the lorries unattended. They had been on the road with the lorries day and night for 4 days now. Well, I have to pay for them, and on top of that I can't take any new jobs 'cos all my vehicles are held up” (Owner-Trans two)

In addition, FMCG's logistics manager had been sent abroad for training, and no one had yet been appointed to handle the case. Even though 3PL's transport coordinator intervened to arrange a meeting on behalf of the transporters to discuss the issue with FMCG, he failed to identify any party responsible at FMCG's end:

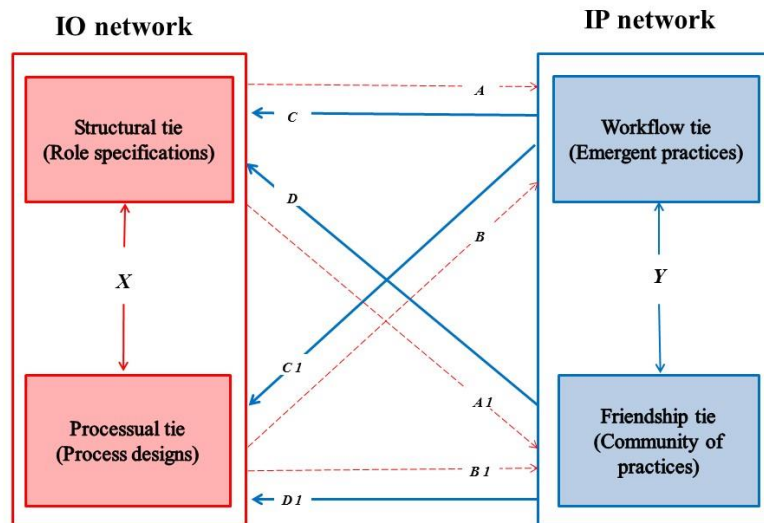
“When there is a change lot of issues will be there. So if you don't have somebody who will collate all the issues and report, you will never be able to close the loop. When there's an issue you don't leave it in the open for a long time because then there will be more people jumping on the same bandwagon and making it a bigger problem. So if you know what is happening you proactively understand those issues before that actually happens, then you are a winner” (Senior manager-FMCG).

## 6.5 Analysis

This section analyzes the findings of the second subunit — FMCG by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration? The analysis is done systematically and considers the priori constructs identified in the initial literature review and the new constructs that emerged from the empirical findings.

Figure 6.6 below is used to signify a reasonable representation of what the researcher could interpret from the data. The figure is used throughout the analysis to show the insights gained in respect of the interactions, and the individual arrows in the figure are explained subsequently.

Figure 6.6: A graphical representation of the relational dynamics of subunit — FMCG drawn from the base data



### **6.5.1 The interorganizational network**

As in the case of Lubricant, analysis reveals that the first step of setting up the infrastructure of the relationship was the signing-off on a detailed agreement. The agreement was predominantly driven by economic motives and involved detailed descriptions of how the goals of the partnership should be achieved in operational and financial matrices. In addition to stating the partnership's objectives, the document contained a detailed set of KPIs directed towards achieving these objectives:

“We have a governance mechanism as well as the processes in place. Our contract refers to all these documents; it is a very detailed one, and it also includes the KPIs and a penalty system. We monitor them and have a monthly meeting with them to give feedback” (Senior manager-FMCG).

Moreover, achieving the KPIs is viewed as significant to the partnership's success, and as a result, performance monitoring is done on a regular basis. The initial contract, therefore, reflected the partnership's IO network.

#### ***6.5.1.1 Governance structure***

It was found that the objectives and the associated KPIs were further delineated in the agreement to manageable, specialized tasks. All tasks had been then allocated to the partnership's subunits in such a way that coordination was achieved among them. As displayed in the first red box under IO network in Figure 6.6, these decomposed tasks and coordinating activities reflected the partnerships' structured interactions or the

governance structure. Though not often done, the partnership has allowed changes to these KPIs for the betterment of the operations (see Table 6.1 for evidence).

#### ***6.5.1.2 Governance processes***

Similar to having a detailed set of precise tasks, processes maps that explained the steps for performing them were also present in the agreements. The second red box under IO network in Figure 6.6 represents the processes designed in line with the partnerships' agreed tasks across the partnering organizations.

As for the prescribed tasks, the partnerships allow changes to processes to improve operations. For instance, FMCG values operational excellence via processes and as such is open to any changes suggested to them (see Table 6.2 for evidence):

“From day one we have clearly communicated to them that this is how we do the operation and that they have to align with it. But as a customer, I have also told them that if you say this is not the right way to do [something], then I have no problem in changing my guidelines as long as you bring me some expertise. But, of course, the change should be within the framework that we've agreed upon” (Senior manager-FMCG).

Table 6.1: Subsequent changes made in the KPIs and tasks of the relationships

Relationship	Evidence – Changes to initial KPIs/tasks
3PL and FMCG	<ul style="list-style-type: none"> <li>• <i>At the beginning of every year we have a joint workshop to explain to 3PL what the priorities are and then we have a look back at the previous year to see what are the things that have worked well and what are the things that have not and, based on that, we plan out the jobs to be done for the current year (Senior manager-FMCG).</i></li> <li>• <i>We recently felt that both companies should be aligned towards one vision. We called it Vision one-zero; ‘work to one vision but work for zero defects’. Like that, there are a few other KPIs that we have identified such as zero variances, zero quality defects, and zero failures (Senior manager-FMCG).</i></li> <li>• <i>Now we see that our vision is a bit outdated, so we want to now revamp that and relaunch KPIs and the rest of the things so we can move forward in a different way (Senior manager-FMCG).</i></li> </ul>

### 6.5.1.3 *The interwoven nature of structure and processes*

Analysis revealed that the partnership’s processes are aligned with the KPI-related tasks, and hence one affects the other. Path ‘X’ that connects the structural and processual ties in the IO network in Figure 6.6 depicts this interrelationship between the structured task and processes. It also seemed that the partners have not paid significant attention to the interdependence of the structured tasks and processes, and as a result, friction has developed from time to time. For instance, in the hold-up vehicle issue, it is the responsibility of 3PL’s operational manager to coordinate matters between the transporters and FMCG. However, a specific process that aligns with the

coordinator's task is not clearly set. As a result, no one at FMCG responded to the coordinator's appeal to call a meeting.

### **6.5.2 The interpersonal network**

The act of performing the prescribed tasks and processes established in the relationship's IO network has resulted in a subsequent creation of an IP network unique to the relationship. For instance although the boundary-spanning personnel of both parties knew each other from the beginning as they had worked together when 3PL was handling FMCG's overflow requirements, with the establishment of the current agreement, a whole set of new interactions has emerged as the boundary spanners occupy their new roles and execute different processes. In the relationship between 3PL and Trans-two, however, all personal interactions remained the same even after Trans-two joined FMCG as the IO network between the two parties remained the same.

Table 6.2: Subsequent changes made in the processes of the relationships

Relationship	Evidence – Changes made to processes
3PL and FMCG	<ul style="list-style-type: none"> <li>• <i>If you take the wooden pallets, our requirement was to have 46K pallets. But we introduced a low-cost palette; it was 1/3 of the normal cost and managed to reduce the requirement by half. That was a major change we did to a process (Middle manager-3PL).</i></li> <li>• <i>After the transport incident they made changes to the process. Now from our end we have appointed Smith to sign all the transport bills and from their side, from the transport manager to senior manager, the bills should be verified before signing (Middle maanger-3PL).</i></li> <li>• <i>The earlier issue with VAS was that there were no set guidelines, no set parameters on what 3PL needs to deliver, what FMCG needs to give, and what is the agreed norm of working. Basically there was nothing, so anyone could just say you didn't do this, you didn't do that. But now there is a set of clear guidelines say, for instance, this is the lead time, or if you are binding two items together this is what you will get (Senior manager-FMCG).</i></li> </ul>

### 6.5.2.1 Workflow ties

The governance structure and processes have largely contributed to forming the boundary spanner’s workflow ties. For example, specific KPIs of the partnership were linked with the boundary spanners’ performance KPIs. The boundary-spanning roles were heavily governed by partner- specific processes. A robust monitoring system was in place to monitor performance. After providing comprehensive training on their tasks and relevant processes, the personnel of both parties were asked to sign off on their respective duties. The first blue colored box under IP network in Figure 6.6 replicates these workflow ties between the organizations.

When compared to the case of Lubricant, these workflow ties displayed a significantly high level of flexibility. For instance, almost all the incidents discussed in the FMCG subunit demonstrated a deviation in workflow ties from the structured interactions. In the fungi issue, the logistics manager went well beyond his authority and instructed 3PL to clean the soap (see Figure 6.2). In the transport issue, the middle manager of FMCG registered two vehicles owned by the father-in-law of a 3PL manager, thus violating the law. In the rates issue, the middle manager of 3PL continued to negotiate the rate without consulting his superiors (see Figure 6.4). However, in the help-up vehicle issue, though it was not mandatory for the transport coordinator to intervene and arrange a meeting between FMCG and transporters as there was no process in place for that, his interference did help ease the tensions developing at the transporters' end. Unfortunately, the parties do not seem to recognize the value of such emerging relationships.

#### **6.5.2.2 *Friendship ties***

Almost all friendships (or hostilities) are nurtured within the boundaries of the work roles and manifest an emotional debt that holds the respective individuals together (see the second blue box under IP network in Figure 6.6). These friendships were constrained by business-specific needs and did not reflect any intense emotional connection:

“At the end of the day it is the performance KPIs that matter and not how you achieved them. So, it is your responsibility to work effectively with others to get things done. For that, you should be able to develop some sort of a connection with them. This will only be developed if you are willing to stretch your limits to help those who are working with you. Let’s say we needed to replenish some stocks urgently, and then my duty would be to coordinate the delivery with the third party where D plays a significant role. D will only stretch himself to meet this urgent requirement, perhaps by even sidestepping the process, because of the mutual understanding we have developed over the years by helping each other” (Operational manager-FMCG).

While these friendships have helped the operations to run smoothly, they have also affected performance negatively. For example, in both the fungi issue and the transport issue, the relevant boundary spanners’ personal relationships significantly facilitated the operations, until those very relationships crossed the line (see Figures 6.2 and 6.3).

### ***6.5.2.3 The interwoven nature of workflow and friendship ties***

It was apparent that the workflow and friendship ties are interwoven in boundary-spanning relationships and do not function independently. Path ‘Y’ that connects the workflow and friendship ties in the IP network in Figure 6.6 portrays the interwoven nature of these two ties. As in the case of subunit — Lubricant, the description offers examples where workflows were still directed at particular individuals even after they had left their positions (promoted or transferred) because of the strong friendships

developed. For instance, the general manager of 3PL has now been promoted to the position of a director. Yet, the senior manager handling the supply chain at FMCG still continues to contact him when there are issues:

“If I feel that something is going wrong, I immediately pick up the phone and call Bob” (Senior manager-FMCG).

In the same way, it was observed that in the absence of personal closeness, no matter how well the workflows are structured, they will not be directed at the expected personnel:

“The thing is Gabriel (Senior manager-FMCG) has no control over their finance, they don’t interact. It is us who communicate that link. Honestly, that is the case [...] David (former Logistics manager-FMCG) was the person who was handling everything and the relationship between David and Gabriel was not that good. Gabriel didn’t know what was happening” (Middle manager-3PL).

These scenarios indicate that, unless the boundary spanners make a conscious effort to manage the workflow and friendship ties, the absence of one tie negatively affects the other. For instance, if the middle manager handling VAS had made a conscious effort to ease the friction he had with his counterparts at FMCG, the rates issue would not have arisen in the first place.

### 6.5.3 The interwoven nature of IO and IP networks

Description clearly reveals that the IO and IP networks are interdependent, and one alone is not sufficient to sustain the partnerships. For instance, it was observed that while the IO network has provided the forum for the dyad’s IP network to emerge, the subsequent IP network has in turn represented the IO network in collaborative efforts. Table 6.3 draws on examples of the interdependent nature of the two networks in the subunit – FMCG.

Table 6.3: Examples of the interdependent nature of IO and IP networks

Effect	Evidence
IP network on IO network	<ul style="list-style-type: none"> <li>• The company as a brand may be good, but then finally it is the people in that company who will be delivering value to the business. So when we go for RFQs we make it a point to assess the people who are going to run our operations in that company (Senior manager-FMCG).</li> <li>• I am the person who is having the relationship with Gabriel (Senior manager-FMCG). So it is my commitment that she sees as the supplier’s commitment (Middle manager-3PL).</li> </ul>
IO network on IP network	<ul style="list-style-type: none"> <li>• It is the process map that acts as the interfacing document between you and the customer. However, at both ends, it is a person who executes the process map (Senior manager-3PL).</li> <li>• It is a must that everyone knows what area of the process map that he or she is working on. For instance, if some damage happens, he should be able to refer to the process map as most of the ways of how things should be handled is documented there. Basically, he has to then be able to execute the process map. Of course, the process maps have different authorities and exceptions. He can take exceptions, but he has to get approval from his seniors (Senior manager-3PL).</li> </ul>

### ***6.5.3.1 The effect of structure and processes on the workflow and friendship ties***

The effect of structure on the boundary-spanning workflow ties (see path ‘A’ in Figure 6.6) was evident throughout the discussions as the participants explained how specific KPIs are directly linked with boundary-spanning roles:

“The top management has many things to be concerned of [sic], and will not go down into the operational level, and that is why we are here. What the top management has to make sure [of] is that at the end of the day we have achieved all KPIs or the numbers. How it should be achieved is in our hands” (Operational manager-FMCG).

As for the workflow ties, the structured tasks have also influenced the emergence of workplace friendships (see path ‘A1’ in Figure 6.6). The quote below from a middle manager clearly explains how workflow friendships are instigated as a result of their work roles:

“Susan has been replaced to QA (quality assurance) and Daniel was brought in, and Nile who was looking at the site was brought in from transport. Daniel, the previous logistics manager is also moving to India, and he will be replaced by Soma, an Indian coming in. So, all three guys at FMCG are new. You have to start building a rapport with them from scratch” (Middle manager-3PL).

How processes have influenced their work (see path ‘B’ in Figure 6.6) was much discussed by both the operational and senior managers. For instance, the following

quotes show the way processes are imposed strictly on the boundary spanners and direct their workflow ties to a considerable extent:

“If I don't have the SOP or if I don't know what my process would be, then I will not do my job right. It would be like I am in the dark [...] SOPs direct you or empower you to work with others to achieve the KPIs. Let's say I have a process where I require a particular manager of 3PL to perform his task to proceed with mine. So if that task has not been met, then based on the SOP, I can influence the particular person to attend [to] it immediately as, through the process, I can foresee the risk of not doing it” (Operational manager-FMCG).

“When I first joined, I realized that there is an issue with the SOPs. They were in English and people did not understand them. Without understanding the process, how can they perform? So I translated all the processes into Sinhala and displayed [them] everywhere. Then I had a one-to one-discussion to see whether they understood them and got them to sign off, so no one could thereafter say that I did not know” (Senior manager-3PL).

Processes have also played a fundamental role in directing the boundary-spanning friendship ties (see path ‘B1’ in Figure 6.6). For instance, an operational manager at FMCG explained how a process led him from a close association with his counterpart at 3PL:

“As the process owner, my duty is to coordinate the end-to end-delivery of promotional goods with the third party where Dave performs a significant part of it. If he delays his task, it will directly affect me. Dave will only be concerned of [sic] that and do the job in time because of the mutual understanding we have developed over the years by helping each other” (Operational manager-FMCG).

### ***6.5.3.2 The effect of workflow and commercial friendship ties on the structure and processes***

The manner in which the boundary-spanning workflow ties have influenced the structured relations (see path ‘C’ in Figure 6.6) became apparent when the participants claimed that lots of tasks are being informally handled:

Rebecca (middle manager-FMCG) says George we need this promotion and we need to do it somehow, but no material, no structure in the system, no PO. Still we do it. There are so many process and procedures, but that is not what is working (Middle manager-3PL).

The workflow ties have also profoundly influenced the partnership’s processes (see path ‘C1’ in Figure 6.6). For instance, during the trial period of automating the processes, the parties realized that, in practice, some of the SOPs were not being followed, and some were being altered, and some new processes were visible. So they have changed the processes in line with the current workflow ties of the boundary spanners.

As in the case of workflow ties, the boundary-spanning friendships also reflect a directly influence on the structured tasks (see path ‘D’ in Figure 6.6). The rates issue provides a classic example to how friendships affect the boundary-spanning roles, at times facilitating and, at times, hindering them (see the red arrows directed at the middle manager 3PL in Figure 6.4):

“Our people took much longer than we expected for the job as it had some new additions. So we went with a sample and explained it to her. But she was not willing to compromise [...] It was personal and had nothing to do with business [...] she didn’t like me directly discussing prices with Ronald (Head, marketing-FMCG). She was taking it personally and was not ready to talk. It was not only me. I also asked Rebeca (Middle manager-FMCG) to speak to her [...] she didn’t like others at FMCG being so close to us. I honestly felt that she was one person that I could not beat” (Middle manager-3PL).

These friendships have not only affected structure but also the processes (see ‘D1’ in Figure 7.5). For instance, in the transport issue, despite knowing that family members’ vehicles cannot be registered for business purposes, the two boundary spanners did so, and that affected the partnership negatively. On the other hand, the long-held friendship between the transport coordinator of 3PL and Trans-one’s owner has facilitated the coordinator’s process significantly.

Table 6.4 reveals how this interdependent nature of the four elements — structural, processual, workflow and friendship ties shown in Figure 6.6 — has resulted in the IO

networks often being affected by a change in the IP networks, and vice versa, displaying a clear knock-on effect on each other.

Table 6.4: The knock-on effects of the IO and IP networks

<b>Knock-on effects of the deviations</b>	<b>Evidence</b>
A deviation to IP network on the IO network	<ul style="list-style-type: none"> <li>• It was identified in the fungi issue that FMCG’s personnel had not checked the quality guidelines of the warehouse before instructing storage of the soap, and in a subsequent event the logistics manager had deviated from his assigned work role in deciding to clean the stock immediately.....</li> <li>• In the transport issue, the participant accounts reflected that formal communications were lacking within FMCG at the time of the incident [...] FMCG’s logistics manager had not performed under the supervision of his superior....</li> </ul>
A deviation to IO network on the IP network	<ul style="list-style-type: none"> <li>• At the time of investigation, parties were in the process of automating the old, and some new, processes. Evidence revealed that the new system has negatively affected operational level workflows as the current practices are far different to what is documented...</li> <li>• In the vehicle hold-up issue, FMCG’s logistics manager had been sent abroad for training in part way through the transition, and no one was subsequently appointed responsible for taking over his duties while the new manager settled in.</li> </ul>

## 6.6 Summary

FMCG is one of 3PL's biggest customers. For 6 years now, 3PL has been handling FMCG's total logistics operation. From time to time, for a number of reasons, the parties have faced serious incidents. Trans-two had been a loyal supplier of 3PL for many years. As a result, Trans-two was assigned to FMCG's intershuttle services by 3PL.

As in the case of Lubricant, the prevalence of the two types of networks: the IO network and the IP network in the FMCG subunit provided a useful mechanism to explain the interactions in collaboration. Figure 5.4 demonstrates that while the IO network consists of the partnership's governance structure and processes, the IP network consists of the boundary-spanners' workflow and friendship ties. Empirical data also provide evidence of the interwoven nature of the IO and IP network and their elements.

Network diagrams of the incidents (see Figures 6.2, 6.3, 6.4, and 6.5) depict that most of the structured interactions that were put in place at the beginning of the relationship between 3PL and FMCG had become inactive and that some personal interactions had emerged over and beyond those structured relations. These developments have sometimes eased the issues and sometimes worsened them. Paths C, D, C1 and D1 in Figure 6.6 clearly reflects how unlike in the subunit-Lubricant, in FMCG, the effect of these emerging workflow and friendship ties of the partnerships' IP networks on the IO networks has been greater than the effect of the IO network on the IP network. For

instance, the many issues that have occurred in the relationship have been due to the boundary spanning individuals of both parties circumventing the guidelines.

Additionally, this subunit provides further validation of the adaptable nature of the service industry. Companies who take on outsourced tasks need to do more to fit the scenarios in which they find themselves and not simply push their rules, their practices on others. This finding is an interesting aspect of service delivery.

Compared to subunit –Lubricant, FMCG displays a faster pace of change in the relationships. For instance, changes in work practices have happened more readily with FMCG than with Lubricant. Change in work practices clearly reflects the emergence of a community of practice at the operational level, and the way in which it fits together with the wider macro goals.

The incidents discussed under the subunit – FMCG displayed an element of trust that has gone beyond the ordinary commercial- based friendships and the severe consequences of breaching it. The rates issue, moreover, reflects how 3PL's knowledge power has made FMCG more dependent on it.

In the next chapter, another cycle of empirical data will be drawn to further explore the role of interorganizational and interpersonal interactions in collaboration.

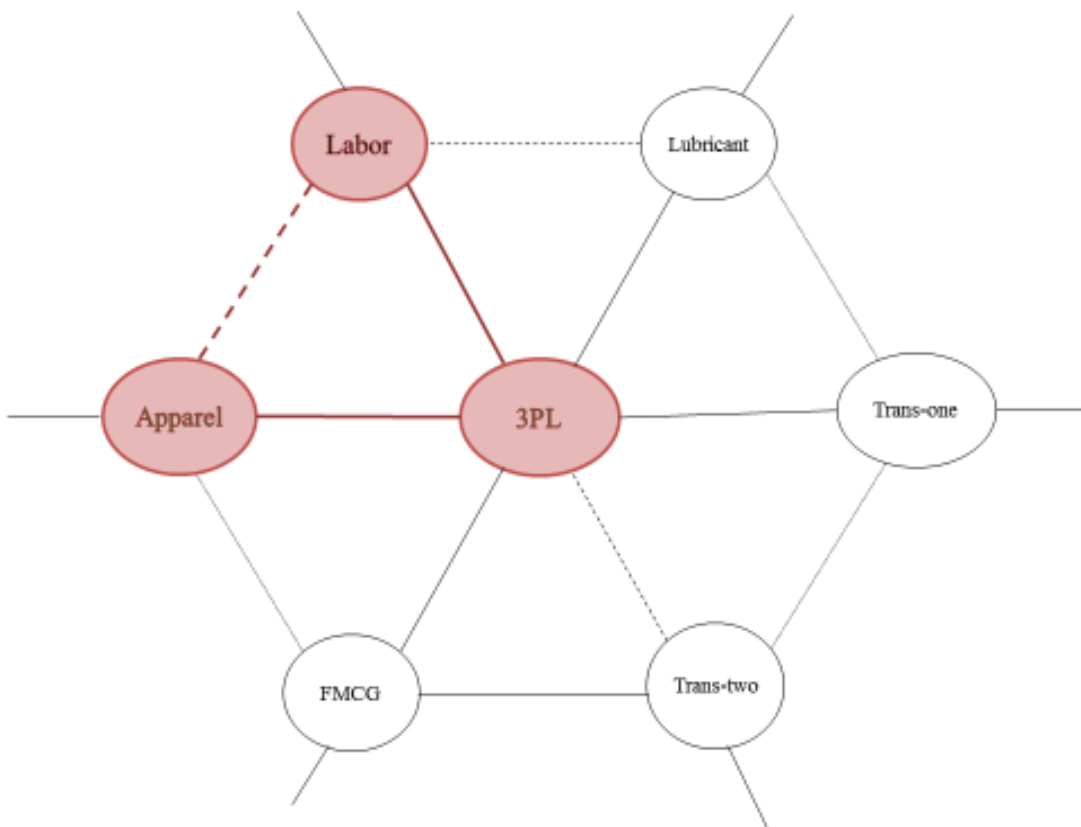
# Chapter 7

## Subunit: Apparel

### 7.1 Introduction

This chapter focuses on the third subunit in the egocentric network of 3PL. As shown in Figure 7.1, the subunit ‘Apparel’ consists of two primary relationships: (1) a dyadic relationship formed between 3PL and Apparel (2) a dyadic relationship formed between 3PL and Labor.

Figure 7.1: The two dyadic relationships (3PL-Apparel & 3PL-Labor) investigated under the subunit – Apparel



As in the previous two cases, the chapter looks at how these relationships evolved to their present state with an explicit focus on their interorganizational and interpersonal ties. The chapter also focuses on some of the critical events that the partners have faced in the relationships, in order to interpret the relational dynamics involved in collaboration.

Section 7.5 analyses the findings of the subunit — Apparel by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration?

## **7.2 Apparel**

Apparel is a multinational company operating in the garment industry. Its commercial activities in Sri Lanka began in the early 2000s with the setting up a state-of-the-art fabric manufacturing facility, and with its logistics function operating in house. As was the case with the company's other functions, Apparel's logistics team was also assigned specific KPIs. The team throughout that time achieved all the KPIs effectively. However, Kith, the manager who had headed the entire supply chain at Apparel from its inception, believed that outsourcing the function would bring greater cost efficiencies and he tried to convince Apparel's top management of that fact. His perseverance was finally rewarded and in the ninth year of its business Apparel decided to outsource its logistics function to a third-party specialist and to focus entirely on fabric manufacturing.

The decision resulted in a massive restructuring. Apparel had a well-designed plan to absorb the old staff into the production function, without affecting the operations:

“Our primary intention was to absorb the entire logistic team to the production and we never wanted anyone to leave. So we had first to eliminate their fear of losing jobs. We talked to them and made them aware that this was needed and that we are doing this for the betterment of the company. These discussions happened at awareness programs and also at informal gatherings” (Senior manager-Apparel).

In the beginning, however, Kith was facing an enormous challenge convincing Apparel’s stakeholders, especially the merchandisers, of the scheme’s viability:

“Actually we had our own logistics manager and had a good team. He had been working in that position for a long time. But it all changed when Kith and his team introduced this concept of logistics outsourcing for cost efficiencies” (Middle manager-Apparel).

### **7.3 The dyadic relationship: 3PL and Apparel**

3PL was one of the leading logistics service providers in the country at the time when Apparel was searching for a logistics partner. Apparel approached 3PL and invited the company to study its operations and to propose a cost-minimization model. Though 3PL did not possess any experience in the apparel industry, it readily accepted the invitation and sent two of its staff to the Apparel site for 3 months to study its activities.

Logistics at Apparel handles millions of metres of fabric 24-7. The production of material starts immediately with an order, and it is the logistic team that delivers the final material to the customer's production line on time and in full. Consequently, if the logistics team fails to deliver the fabric on time, the customer's production line gets delayed or comes to a standstill. The two 3PL personnel had to learn the operation from scratch before arriving at the proposed model. In 2009, the job was offered to 3PL, and a team of 3PL employees along with 40 outsourced workers from Labor initially got down to work alongside Apparel's old logistics staff for 1 month.

### **7.3.1 The past and present dyadic relationship**

#### ***7.3.1.1 Setting up the infrastructure between 3PL and Apparel***

Each and every activity in relation to Apparel's operation is clearly documented in the contract. These activities are based purely on the KPIs and penalty clauses that are linked directly to 3PL's payments. The partners believed that, if the parties could maintain these KPIs, the operations would never go wrong. For instance, partners had KPIs for the inventory, the customer service level, on time delivery, the time lines for bookings for delivery, and even for checking the cleanliness of the vehicle. However, in the beginning, the two parties agreed to maintain a reasonable level of tolerance until 3PL gained experience in the operation:

“They were new to this operation and we did not want to see that it is a failure. So in the beginning we did not expect any financial benefits for us. We got them to match whatever the cost we had at that time as an entering strategy and develop gradually” (Senior manager-Apparel).

During this period, if the parties identified that the KPIs set initially could be refined for efficiency, they would take steps to revise them accordingly. Moreover, whenever they saw a grey area they also made it a point to fix KPIs relevant to that area. For instance, customer detention (vehicle fleet left at the client’s premises whilst they unload) was not identified as an uncontrollable factor in the initial contract. When the parties commenced operations, they realized that when the fabric is sent to the customers, they do not unload it in time, which is beyond the control of 3PL. So they changed certain KPIs related to unloading.

A reliable monitoring and controlling system was put in place to ensure that the operational activities are carried out in accordance with the main KPIs. So, 3PL’s performance was monitored rigidly on a daily basis. Regular meetings were held primarily at operational level, and monthly meetings at strategic level. In addition, the parties conducted performance review meetings every 3 months:

“We have regular meetings on a daily basis with operational-level staff to monitor performance. Scott (Middle manager-Apparel) is looking after that. He also has a meeting with the key account manager every month. And we have review meetings every 3 months” (Senior manager-Apparel).

It however became evident that as the operations progressed the monitoring was not being done properly. For instance, the daily operational meetings and monthly reviews were functioning poorly with very few attendees:

“We decided to have a monthly review of operations with the middle-level managers of both parties just to make sure that Ashly (Middle manager-3PL based at 3PL office) is present for that. He did come for the first few meetings but after that we did not see him there. Well, their operational level cadre is very corporative. But the executive cadre and beyond are inaccessible” (Middle manager-Apparel).

Since the KPIs are directly related to the operational activities, the parties have recognized that developing a process route is essential to efficiently performing those activities. As a result, they have together identified and developed processes for each and every step in the operation:

“The service provider should understand the culture and the processes of its customer’s first. They cannot just apply their practices and rules here. If the processes are not compatible, they should gradually combine those and synergize. If they try to straightaway use whatever the practices or procedures they had, then the resistance comes from the customer” (Senior manager-Apparel).

Each process was accordingly drawn by looking at it from many aspects such as, from the systems side, the financial aspect, in addition to work-wise, and responsibility-wise.

The processes were transparent, and they were developed mainly to make sure the operations run smoothly and to evaluate the performance adequately.

Apparel firmly believes that as long as proper authority levels and processes are set, there is no need for a hierarchy. Consequently, it has empowered its employees and 3PL personnel to suggest changes to processes or to introduce new ones if they consider that doing so would bring better results:

“If you feel that you need to change the process because it acts as a barrier to your performance, you are free to do so. Processes are open to change for the betterment. If you do not have the freedom to change the process, you will not feel the ownership of it. Without ownership, nothing will happen” (Senior manager-Apparel).

#### ***7.3.1.2 Emergence of social connections between 3PL and Apparel***

The entire responsibility for proving the viability of Apparel’s decision to outsource its successfully operating logistics function rested on Kith’s shoulders:

“It was entirely my decision to go ahead to with it ” (Head, supply chain-Apparel).

The third-party logistics provider which Apparel decided to partner with had many individuals whom Kith knew personally:

“I started my career at Hawks (3PL’s mother company). Most of them are from my school mates, and some were in my class. I had the confidence in their capability and capacity. And I could convince the management of their abilities. (Head, supply chain-Apparel).

Within a very short period after commencing operations 3PL realized that the task was much more complicated than it had expected:

“The first 3 months was a nightmare. The pressure that came from their internal divisions was so bad. They were not at all considerate of what we were going through. I can remember that in the first 3 months, we even worked ‘til 2 in the morning” (Middle manager-3PL).

Apparel’s internal divisions were not ready to accept 3PL as part of their team. As such, despite all the confidence Kith had on 3PL, it, unfortunately, failed to deliver the expected standards, so the two parties had to spend a considerable amount of time and effort bridging this gap to make the operations run smoothly:

“We talked to our people and also got them to mix with 3PL’s staff by allowing them to use the same facilities that our people are using such as the cafeteria, the washroom. So after some time our people did not feel any difference” (Senior manager-Apparel).

Kith relied heavily on controls to ensure that operations were running smoothly. In line with this approach, Scott, Kith’s subordinate’s primary duty was to monitor 3PL’s

performance. Scott is a firm character, and he raised every single mistake 3PL made with the company and reprimanded it. Scott's firmness made 3PL personnel very frustrated and demotivated, and the developing situation became a cause of great concern to some of the merchandisers at Apparel whose performance largely depend on 3PL's promptness:

“It is true that as the customer, we will always be demanding. But at the same time we should remember that we depend on them too. If there is a delay in sending an order, we should be flexible enough [to] look at things from 3PL's end too. But Scott is so much, so adamant, and he will never do so” (Middle manager-Apparel).

As the pressures mounted, Kith and his team however got tougher on 3PL:

“Kith is a fighting character and he always works with numbers. He would go to any extent to convince [sic] the viability of his decision to the management. I can't even imagine how things would be in his absence. ...if he leaves, there will be a huge vacuum created. (Middle manager-Apparel).

Adam, a middle manager of 3PL who conducted the initial feasibility study, was in charge of 3PL operations and was based at Apparel's warehouse. He was a young graduate with a strong yet, quiet personality — just the type of person 3PL needed to take the enormous pressure that came from its customer at that time:

“Adam was there at the beginning. He was the one who had to take up all the pressure. He always got hammered for every mistake his staff did. I appreciate his way of handling things. He is a quiet person. But bravely took up all the challenges and did whatever possible to solve the issues” (Senior manager-Apparel).

Adam was well aware that many of the cost inefficiencies that Kith and his team were trying to eliminate by imposing controls over 3PL actually originated from the end customer — Apparel. For instance, the process of delivery is such that, when a delivery is to be made on one day, the purchase order for that should be raised the day before, or at least by 12 noon on the delivery day. However, in practice, Apparel’s merchandising team often places the orders after 12 noon. Moreover, Apparel’s marketing team delays its sales target ‘til the end of the month and then tries to meet it in the last few days by raising special delivery orders with 3PL. This practice results in Apparel paying more to 3PL on delivery. Similarly, there are many production delays at the factory that are ultimately passed to 3PL’s warehousing team:

“When a third party comes into the operations, it is natural that all other departments try to exploit the situation by passing all their mistakes to it. For instance, all the delays are passed from the internal departments and finally come to the warehouse, which we are responsible for” (Adam, Middle manager-3PL).

Adam tried to convince Kith that, if 3PL were to perform to expectation, he should first identify the issues that prevail in Apparel’s internal divisions. Kith was offended and

stopped communicating with Adam. To bridge the communication gap, 3PL decided to appoint a second manager, Dave, whom Kith knew personally, at the Apparel site:

“I was also appointed to work at Apparel because there were some customer relation issues. I know Kith well. We were school mates and had done lots of things together then. So the management decided to have me there to ease the matters” (Middle manager-3PL).

In the meantime, Apparel went through another major structural change. Its commercial division (under which supply chain operations were functioning) was merged with marketing and, as a result, Kith lost his direct authority over logistics. The head of this newly formed division, Rod, is a marketing professional, and logistics was no longer considered a primary function at Apparel:

“Rod always gives priority to marketing. Let’s say that an urgent delivery request is made by a merchandiser due to his delay in placing an order in time. Those days Kith used to hold such orders ‘til he evaluates the feasibility of doing it urgently by looking at things like overtime payments, manpower resource allocations, and so on. Now it does not happen so” (Middle manager-3PL).

### **7.3.2 The issues faced**

#### *Trust issue*

The first serious issue of the three-year-old relationship occurred in the third month the partnership as follows. Fabrics produced in the factory are first sent through an inspection machine which is under the control of Apparel's quality team. Once all the required information is uploaded to the system, the inspected stock is physically transferred to the finished goods division, which is under the control of 3PL staff. Before accepting the goods, 3PL checks the system to verify the amount of fabric transferred matches with its physical count.

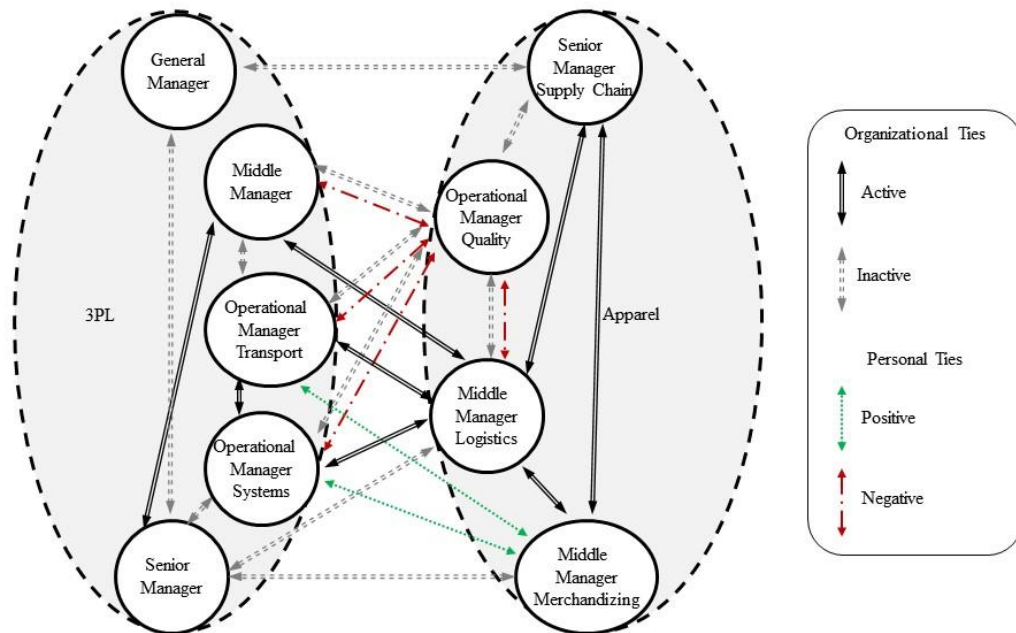
At one time in this process the system showed that some new material but which the 3PL had not received physically in the warehouse, had been transferred. There was concern over whether the quality team in charge of inspection had sent the consignment to the warehouse, and, if so, who would be responsible for the missing goods. According to the agreement, Apparel's quality team is responsible for the stock until it is uploaded to the system. 3PL's staff are responsible for receiving the goods at the warehouse and distributing them. So, according to the contract, no party was accountable for goods in transit from the quality division to the warehouse.

As explained earlier, many of Apparel's internal divisions, including the quality unit, were not initially ready to accept 3PL as part of Apparel:

“The first 3 months was a nightmare. The pressure that came from their internal divisions was so bad” (Middle manager-3PL).

Hence, as displayed in Figure 7.2, the organizational formal ties between Apparel’s quality team and 3PL’s warehouse team were completely inactive. The two parties were virtually not on speaking terms.

Figure 7.2: Organizational and personal ties inferred at the time of the trust issue



The red arrows connecting the two sides in the figure show the negative emotions that prevailed at the time. Apparel’s quality team blamed 3PL for the loss. 3PL, however, was not prepared to accept blame. The friction between the two parties ultimately

developed to such an extent that they put up a locked gate to separate off the quality division from the warehouse at all times in order to make sure that goods would not be misplaced:

“Good, if they do not trust each other this is the best thing to do” (Kith, Senior manager-Apparel)).

Later, at Kith’s instigation, an intermediate location for the goods to be transferred to was set up. The new process, therefore, is to move all inspected goods to the intermediate location called 20/50; 20/50 is the quality team’s responsibility. From there, the stock is transferred within 3 hours to another location called 20/60, so that both the system and physical stock are updated. From that point onwards, it is 3PL’s responsibility to transfer the goods to the warehouse.

The trust issue nevertheless did not end. After some time Apparel’s quality team personnel complained that their stocks were being held up because 3PL’s personnel were not transferring the goods that were in the intermediate location to their warehouse. Kith again intervened and included both the 3PL operators and Apparel’s quality inspectors in the daily operations meeting. The meeting starts at 8.45 in the morning and a member of each department has to be present to address the daily concerns related to the process:

“Now the person who handles returns, samples, system picking in 3PL and a member of our quality team review the previous day[‘s] operations before starting work. The quality team member has to update with the intermediate unit stock number at the meeting” (Senior manager-Apparel).

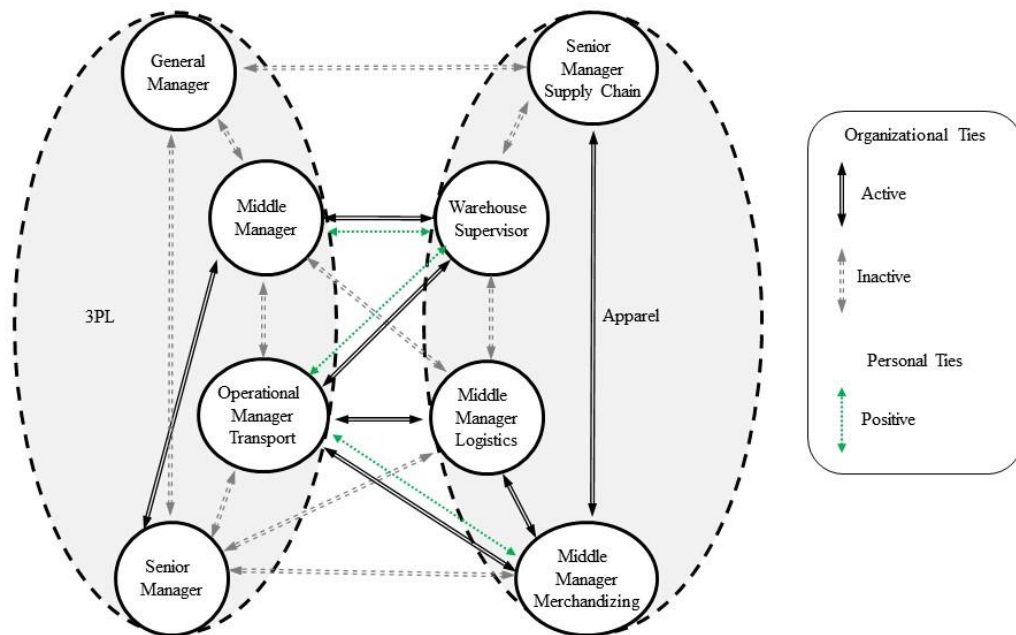
### *Queen B issue*

At the end of the second year of their relationship the parties faced another critical issue related to operations. According to the agreement, 3PL is responsible for managing Apparel’s warehouse and distribution activities only. Although the Queen B operation was handled entirely by a separate party, it was linked with Apparel’s distribution system, so 3PL and that party were sharing Apparel’s central warehouse.

Two parties sharing one facility had been a concern of Kith’s for a long time, so he decided to hand over Queen B operations to 3PL. However, this was not done through a formal agreement. Thus, as displayed in Figure 7.3, no formal organizational ties related to Queen B were set at the beginning:

“The Queen B operation was never in our contract” (Adam, Middle manger-3PL).

Figure 7.3: Organizational and personal ties inferred at the time of the Queen B issue



Operations at Queen B were very different from those that 3PL had been handling at Apparel. It was a massive operation with cargo moving out every 24 hours. In the beginning, the 3PL team used manual documents for the operation, and no information was put into the system:

“We had enormous faith in our cargo dispatching procedure. Not a single lorry could be sent out of the zone without the signature of the BOI officers. There was a supervisor appointed to this operation by Apparel. The signing of documentation for dispatching could only be done by myself and this particular supervisor” (Adam, Middle manager-3PL).

That particular supervisor had been at Apparel for a long time and was well-known as one of the most reliable. Hence, the two parties operated purely on the basis of their personal relations (see green arrows connecting the two sides in Figure 7.3).

In most occasions, the supervisor had volunteered to do the night shifts and was responsible for signing the documents for goods dispatched at night. Later, it was found that this person had stolen stock during that time using forged documents:

“Nobody knew that this was happening. I have close relationships with the transporters and their drivers. So, one day a driver mentioned to me that there is something going on at ‘Queen B’. Then I started to investigate and found out that a huge stock of garments was missing. He could easily do this ‘cos he has had many years of experience in Apparel operations and knew in and out [sic] of the inventory” (Adam-Middle manager-3PL).

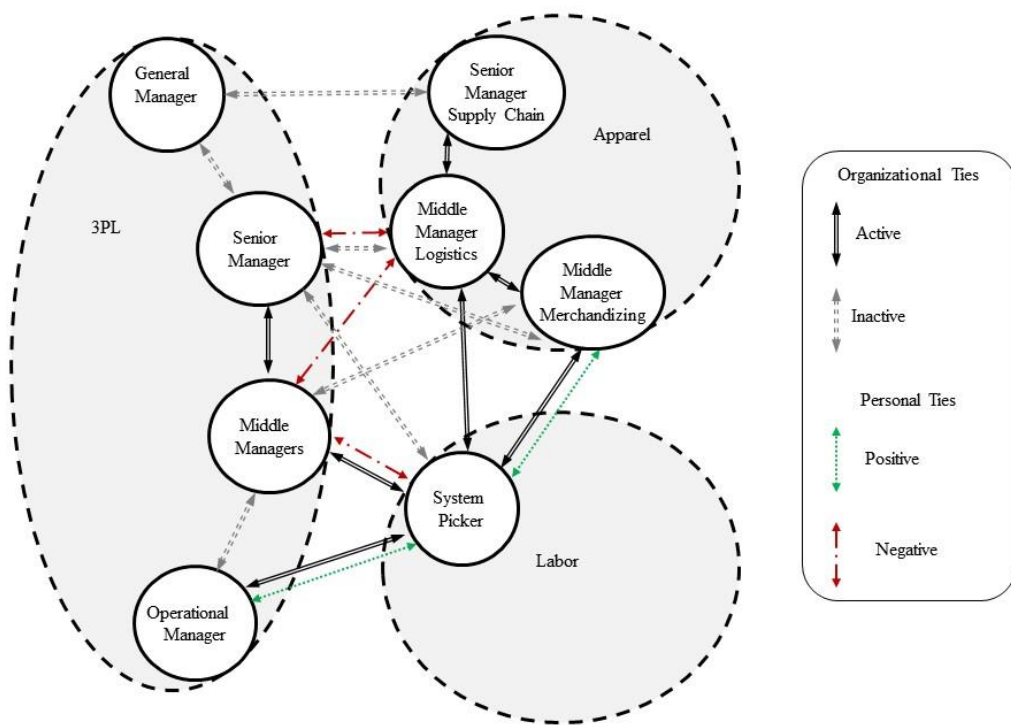
After the incident, Apparel’s management stopped all manual documentation, and the partners decided to incorporate Queen B operations into the agreement, with a clear process map identified for the activity.

### *Communication issue*

The issue of communication was ongoing even at the time of this investigation. As depicted in Figure 7.4, the 3PL personnel responsible for Apparel operations are:

- A senior manager, based in 3PL’s head office, in charge of overall operations and,
- two middle managers, located in Apparel’s warehouse, in charge of daily operations, and
- an operational manager, based in Apparel’s warehouse, in charge of day-to-day operations.

Figure 7.4: Organizational and personal ties currently displayed within the subunit — Apparel



While the three on site participate in regular operational meetings, a monthly meeting is set at Apparel’s premises to discuss strategic matters with 3PL’s senior manager.

However, these meetings have become dysfunctional mainly due to the 3PL senior manager's absence from them:

“I think for the last 3 years I have rarely spoken to Allan (senior manager-3PL). He doesn't come for our meetings. Well, you cannot operate remotely like that, can you?” (Scott, Middle manager-Apparel).

The inactive organizational ties originating from 3PL's middle managers on site in the figure show that, to Apparel, even 3PL's middle management is not of much help:

“Unfortunately the middle management's support lacks [sic] for improvements. They only strive to achieve the delivery target and do damage-controlling. They do not go the extra mile to upgrade the process, or to build healthy relationships with others” (Middle manager-Apparel).

The two personnel who handle virtually all the operations at Apparel are Kesh, 3PL's operational manager, and Rovin, a system picker outsourced from Labor (see Figure 7.4). Although the two perform well, they are frustrated as none of their grievances reach the top:

“They say that Adam and Dave (middle managers-3PL) never get involved in the operations, but in the end they get all the credit. I personally think that 3PL management should look into this seriously. Because if Kesh and Rowin leave[s], the whole Apparel operation will come to a standstill” (Middle manager-Apparel).

The red arrows aimed at the two 3PL middle managers in the figure reflect these developing tensions between the parties. As a result, Apparel, is now concerned that 3PL's commitment to it is low, and it is not gaining the expected synergies from the relationship:

“When Apparel was managing this operation, it did it with only 20 people. Now I think 3PL has employed around 35 or 40 outsourced workers here. The productivity against the head count is not enough” (Senior manager-Apparel).

Although it values a long-term relationship with its logistics partner, Apparel now feels that if another third-party logistics provider offers to deliver more synergies that Apparel would not think twice about leaving 3PL. None of this information goes beyond the senior manager who is in charge of Apparel, and the top management is unaware of the developing threat.

#### **7.4 The dyadic relationship: 3PL and Labor**

When entering into a third-party logistics agreement, the parties negotiate the labor requirements and their cost. Depending on the nature of the operation, these needs vary from providing unskilled labor, such as for line logistics, to providing specialized skills, such as forklift drivers and system pickers. Once the type of labor and the cost are decided, the customer agrees to pay a fixed management fee to the logistics provider for supplying the service. It is then the logistics provider's responsibility to source the right people from the most appropriate labor suppliers to work at its customers' sites:

“Now the trend is outsourcing. It is a good thing. We can focus on our core business if we have chosen the right partner. But at the same time, you have to be careful of having outsourced workers operating in your premises. For example, whoever is recruited by 3PL as a contract employee represents 3PL as long as he wears a 3PL t-shirt. If he is not skilled enough or smart enough, or is not fitting with 3PL’s culture, it will damage 3PL’s name” (Senior manager-Apparel).

It is thus critical that 3PL maintains a selected number of reliable and quality labor suppliers. However, the labor industry in Sri Lanka is casual and politicized, so the cost of labor is very low. As a result, supplying manpower has become a never-ending challenge for 3PL:

“It is very difficult to attract and retain trained people ‘cos as I told you at the beginning itself, cost matters. We have signed the agreement with our customer one year back, saying that, okay 450 will be the daily pay for these people taking the cost of living index on that day. So we have to fix to that” (Senior manager-3PL).

Labor has been operating in the manpower industry since 2007 and has been one of 3PL’s loyal suppliers for 5 years now. Before commencing his own business, Ray, the owner of Labor had worked in a company where 3PL used to provide services. As a result, Ray had the opportunity to meet a number of key personnel at 3PL. Moreover,

some of these people had also been his schoolmates. Despite these relationships, Labor continues to compete with 15 other service providers to secure its position:

“Most of them are my friends. But, I am dealing [with] HR people. So you have to prove [to] them your viability. Compared to others, I am financially strong, and I continue to expand my capacity. For instance, I established subagents in a lot of rural areas, to pump workers. I would say that it is an 80 percent perfect system for recruitment and selection” (Owner-Labor).

#### **7.4.1 The past and present relationship**

##### ***7.4.1.1 Managing Labor***

Labor provides ‘raw’ labor to its customer 3PL. 3PL is then responsible for providing the required training for the recruits. Labor conducts the first screening of new personnel. This screening process is based on certain basic criteria such as qualifications, age, and appearance. Labor’s customer 3PL then does the second screening, before the workforce is absorbed into the operation. Labor is paid a fixed fee of 10 percent by 3PL for recruiting people.

Unlike in other sites such as Lubricant where unskilled workers are hired to perform standardized operations, at Apparel most of the critical operations are performed by the outsourced personnel. As such, Labor provides skilled workers to Apparel:

“The primary concern is that the outsourced labor handles some of the key positions. So the skill level required is very high. Like in a production line, we cannot afford to have a new face daily. We must try and retain them” (Senior manager-3PL).

#### **7.4.2 The issues faced**

##### *An indispensable outsourced worker*

As displayed earlier in Figure 7.4, Apparel’s warehouse picking system is entirely handled by Rovin, an outsourced skilled worker from Labor. He has been at Apparel since the beginning of the partnership and has now become indispensable to the continuity of Apparel’s logistics operations:

“Rovin is the number one systems guy. Most of the times we even depend on him for our own IT issues. He has an excellent knowledge on SAP because he had earlier worked for a company that uses SAP” (Senior manager-Apparel).

Rovin has however become so frustrated with the work overload and low salary that he is planning to leave the company. Apparel’s day shift starts at 7.30 a.m. and ends at 7.30 p.m. If an urgent order is received before the day ends, 3PL staff is required to stay back and work overtime. Unfortunately, at Apparel, as explained in an earlier situation, late orders are a typical scenario. As such, Rovin and Kesh are often asked by their superiors to stay back. Yet no recognition is made of their commitment, as 3PL’s top management is completely unaware of these situations. Figure 7.4,

demonstrates how 3PL's communication links to the top are blocked by its middle management:

“We have requested many things from the management through Adam and Dave (middle managers-3PL), such as a salary increment, a training program. But we didn't get any. I doubt that the company even knows we exist” (Rowin-3PL).

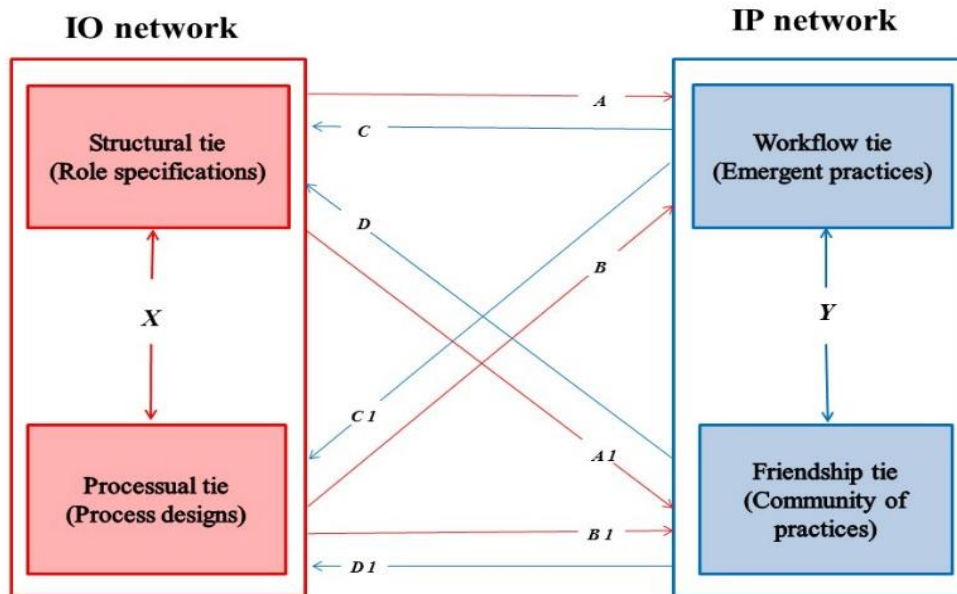
Since the issue was current, the researcher took it as an opportunity to verify data. So she met 3PL's general manager, and to her astonishment discovered that the manager had been in the dark about the developing frustrations.

## **7.5 Analysis**

This section analyzes the findings of the last subunit — Apparel by linking them to the research question: How do interpersonal and interorganizational networks coevolve in collaboration?

As in the previous two occasions, Figure 7.5 attempts to present a reasonable depiction of the findings the researcher could draw from Apparel in relation to the data. The figure is used throughout the analysis to show the insights gained in respect of the interactions, and the individual arrows in the figure are explained subsequently.

Figure 7.5: A graphical representation of the relational dynamics of subunit — Apparel drawn from the base data



### 7.5.1 The interorganizational network

Setting up the IO network was similar to the previous two cases. The first step has been the signing-off a detailed agreement that was predominantly driven by economic motives:

“We got them to study all our destination customers’ delivery patterns and to come up with a proposal to minimize cost. So everything was documented in the contract. The operation is purely based on the KPIs. There are some penalty clauses directly linked with payments” (Senior manager-Apparel).

Meeting operational KPIs is moreover viewed as significant to the success of the partnership. So a detailed description of how they should be met and the monitoring of performance were clearly stated in the agreement. The initial contract, therefore, reflected the partnership's IO network.

#### ***7.5.1.1 Governance structure***

It was identified that the objectives and the associated KPIs were further delineated to manageable, specialized tasks in the agreement. All tasks were then allocated to the partnership's subunits in such a way as to achieve coordination among them:

“KPIs cover everything: the inventory, the customer service level, OTD, then the timelines for bookings and delivery. So if one maintains those KPIs, nothing can go wrong” (Senior manager-Apparel).

As shown in the first red box under IO network in Figure 7.5, these separated tasks and coordinating activities reflected the partnerships' structured interactions or the governance structure. Significantly, unlike in the earlier two cases, the Apparel partnership encourages changes to these KPIs for the improvement of the operations (See Table 7.1 for more evidence):

“Any team is permitted to set 5 KPIs which, of course, should be aligned with the main KPIs. When you do that the team gets the ownership of the KPI which they will work together to achieve” (Senior manager-Apparel).

Table 7.1: Subsequent changes made in the KPIs and tasks of the relationship

Relationship	Evidence – Changes to initial KPIs/tasks
3PL and Apparel	<ul style="list-style-type: none"> <li>• <i>We first entered into our initial agreement with Apparel in 2010 based on the surface study. Things have changed a lot since then. The agreement was first signed for 3 years. We will be completing 3 years this year. We are now in the process of documenting all the suggested changes to KPIs (Middle manager-3PL).</i></li> <li>• <i>Apparel went through another major structural change with its commercial division (under which supply chain operations were functioning) being merged with the marketing, and as a result, Kith losing his direct authority over logistics....</i></li> <li>• <i>Moreover, whenever they saw a grey area they also made it a point to fix [the] relevant KPIs to that. For instance, customer detention was not identified as an uncontrollable factor in the initial contract. When the parties commenced operations, they realized that when the fabric is sent to the customer, they don't unload it in time, which is beyond the control of 3PL. So they changed certain KPIs related to unloading.....</i></li> <li>• <i>Adam tried to convince Kith that if 3PL is to perform to the expectations, that he should first identify the issues that prevail in Apparel's internal divisions. Kith was offended and stopped communicating with Adam. To bridge the communication gap, 3PL decided to appoint a second manager, Dave....</i></li> </ul>

### *7.5.1.2 Governance processes*

Similar to having a detailed set of definite tasks, processes maps that explained the steps in performing them were present in the agreements. Especially as in the case of subunit — Lubricant, Apparel’s partners believe that developing a process route is a prerequisite to the operational activities:

“At the beginning we had to do much thinking and planning. It was in the agreement that we should have a process route. We identified processes for each and every step in the operation. This was done to make sure that we have a proper mechanism to ensure a smooth flow of operations and to evaluate their performance. We decided on the processes together. They had their own processes and we tried to incorporate them as well to ours. And now we have a very transparent process” (Middle manager-Apparel).

The second red box under IO network in Figure 7.5 depicts the processes designed in line with the partnership’s agreed tasks across the partnering organizations. The middle manager’s quote reveals the parties’ commitment to review processes in order to improve operations (see Table 7.2 for more evidence):

“Still we continue to identify issues and introduce processes” (Middle manager-Apparel).

Table 7.2: Subsequent changes made in the processes of the relationship

Relationship	Evidence – Changes made to Processes
3PL and FMCG	<ul style="list-style-type: none"> <li>• <i>In the trust issue, the new process [for transferring goods] was to transfer all inspected goods to the intermediate location called 20/50, which was the quality team’s responsibility. From there, the stock is transferred to another location called 20/60 within 3 hours, so that both the system and physical stock are updated. From that point onwards, it would be 3PL’s responsibility to transfer the goods to the warehouse....</i></li> <li>• <i>Apparel’s quality team personnel complained that their stocks are held up because 3PL’s personnel are not transferring the goods in the intermediate location to theirs. So, Kith decided to include both the 3PL operations team and Apparel’s quality team in the daily operation meeting that starts at 8.45, where a member of each department has to be present to address the daily concerns of the process....</i></li> <li>• <i>Apparel management stopped all manual documents and the partners decided to incorporate the Queen B operation into the agreement with a clear process map for the activity....</i></li> </ul>

### 7.5.1.3 *The interwoven nature of structure and processes*

Analysis revealed that the partnership’s processes are aligned with the KPI related tasks, and hence one affects the other:

“KPIs cover everything: the inventory, customer service level, the timelines for bookings and delivery. We have a set processes for achieving these KPIs. For instance, to check the cleanliness of the vehicle, there is a procedure and so on.

All these are documented, and there are ways to cross-check them as well”  
(Senior manager-Apparel).

Path ‘X’ that connects the structural and processual ties in the IO network in Figure 7.5 exemplifies this interrelationship between the structured task and processes. However, it seems that the partners have failed to pay significant attention to this interdependence and, as a result, friction has developed from time to time. For instance, in the Queen B issue, the two parties had not initially have KPIs and related processes in place for that operation. Hence, no party could be identified as responsible for the loss.

### **7.5.2 The interpersonal network**

The boundary-spanning individuals in the Apparel subunit had personal relationships long before they entered into the partnership agreements. For instance, in the relationship between Apparel and 3PL, Kith, head of supply chain at Apparel, already knew many of the key personnel at 3PL. Similarly, in the relationship between 3PL and Labor, Ray, the owner of Labor knew some 3PL personnel long before entering into the agreement with 3PL. However, since the inception of the agreements, a whole set of new interactions has emerged as the boundary spanners occupy their new roles and execute different processes. For instance, Kith deals primarily with 3PL’s middle management, while Ray deals with 3PL’s human resource manager.

### **7.5.2.1 Workflow ties**

The governance structure and processes have contributed significantly to forming the boundary spanner's workflow ties. Specific KPIs of the partnership were linked with the boundary spanners' performance KPIs. A sound monitoring system existed to review conformity with expectations, as the boundary-spanning roles were heavily governed by partner-specific processes. The first blue colored box under IP network in Figure 7.5 illustrates these workflow ties between the organizations.

Though associated with structural rigidity, it was observed that the workflow ties in practice carry a significant amount of flexibility which has sometimes affected the collaboration negatively and sometimes positively. For instance, in the communication issue, although the senior manager in charge of the Apparel operations is required to visit the site on a regular basis, these visits are not happening (see Figure 7.4). However, in the indispensable outsourced worker issue, the outsourced worker attending to Apparel's IT-related matters (which are not his responsibility) has helped to ease the developing tensions between the two parties. It was, nevertheless, clear that the parties have, unfortunately, ignored these developing practices.

### **7.5.2.2 Friendship ties**

Almost all friendships (or hostilities) are nurtured within the boundaries of the work roles and that they manifested an emotional debt that holds the respective individuals together (see the second blue box under IP network in Figure 7.5). These friendships

were constrained by business-specific needs and did not reflect any intense emotional connection:

“It is a give-and take-rule. They are helping me and at the same time they may need my help. However, striking a balance between friendship and my responsibilities is difficult. Once there was this incident where the 3PL guys have missed a particular delivery order. I intervened and somehow sorted the matter, but at the same time I made it clear to them that if the mistake repeats [sic] I will not take any more chances with my customers” (Middle manager-Apparel).

While these friendships have helped the operations to run smoothly, they have also affected performance negatively. For example, the positive personal relations between Apparel’s middle manager-merchandizing and the outsourced system picker (see the green arrows in Figure 7.4) have significantly facilitated the operations. However, in the Queen B issue, the trust placed on the warehouse supervisor (see the green arrows in Figure 7.3) ultimately resulted in severe damage to the relationship.

### ***7.5.2.3 The interwoven nature of workflow and friendship ties***

It was apparent that both the workflow and friendship ties are interwoven in boundary-spanning relationships and do not function independently. Path ‘Y’ that connects the workflow and friendship tie in the IP network in Figure 7.5 elucidates the interwoven nature of the two ties. As in the earlier two cases, there is evidence in this subunit that shows how the workflows ties persist even after the relevant individuals have been

promoted or transferred, because of the strong personal bonds between the individuals concerned. For instance, as a result of the recent structural change, Kith lost his direct control over warehouse operations. However, the researcher observed Kith frequently interacting with 3PL personnel on site. Later she learned that there is a huge communication gap between 3PL personnel and the new head of supply chain operations. The new manager is a marketing professional and is not interested in logistics. So, the 3PL personnel communicate with Kith and though not authorized to do so, Kith continues to advise them.

Similarly, in the absence of personal closeness, no matter how well the workflows are structured, they will not be effective. For instance, the recent arguments that took place between Adam (3PL's middle manager) and Kith over noncompliance to processes ultimately resulted in the duo stopping talking to each other. So, for the continuance of operations, 3PL had to appoint another manager.

These scenarios tell us that unless the boundary spanners make a conscious effort to manage the workflow and friendship ties, the absence of one negatively affects the other. For instance, if Kith and Adam could have resolved their hostility and continued to work together, the need to appoint another manager, Dave, would not have arisen.

### **7.5.3 The interwoven nature of IO and IP networks**

Description clearly reveals that the IO and IP networks are interdependent, and one alone is not sufficient to sustain the partnerships. For instance, it was observed that the IO network has allowed a forum for the dyad's IP network to emerge, while the

subsequent IP network has in turn represented the IO network in collaborative efforts. Table 7.3 draws on examples of the interdependent nature of the two networks in the subunit — Apparel.

Table 7.3: Examples of the interdependent nature of IO and IP networks

<b>Effect</b>	<b>Evidence</b>
IP network on IO network	<ul style="list-style-type: none"> <li>• What I feel is that if the process is carried out smoothly as planned, then we will not have jobs anymore. People are needed to make decisions (Middle manager-Apparel).</li> <li>• I see a contract as just a piece of paper like a letter. It is people who handle everything. I enter into a contract with you once I have an agreement only. That means once I agree I would like to put that in writing for future reference. But the important thing is that I get your agreement. You do that by showing your history. How you have done things in the past build[s] that confidence (Senior manager-3PL).</li> <li>• Any team is allowed to set 5 KPIs which of course should be aligned with the main KPIs. When you do that the team gets the ownership of the KPI which they will work together to achieve (Senior manager-Apparel).</li> </ul>
IO network on IP network	<ul style="list-style-type: none"> <li>• We have a PMS (performance monitoring system). We strongly monitor the performance and we give feedback. We change roles if the person is not capable of performing that role (Senior manager-3PL).</li> <li>• All performance evaluations are linked to the KPIs. Bonuses and other increments depend on that. So if you are not performing continuously, you will not get any bonuses [sic]. You are automatically discouraged to continue (Senior manager-Apparel).</li> </ul>

### *7.5.3.1 The effect of structure and processes on the workflow and friendship ties*

The effect of structure on the boundary-spanning workflow ties (see path 'A in Figure 7.5) was evident throughout the discussions as the participants explained how specific KPIs are directly linked with boundary-spanning roles:

“We strongly monitor the performance and we give feedback. We change roles if the person is not capable of performing that role” (Senior manager 3PL).

Structured tasks have also influenced the emergence of workplace friendships (see path 'A1 in Figure 7.5). For instance, the merchandizing manager of Apparel had initially developed interactions with the system picker of 3PL as a result of this work role. However, this relationship to date has evolved into a more personal one, where the system picker even shares his grievances with the manager. According to the merchandizer, this relationship has facilitated his task significantly.

The effect of processes on boundary-spanning performance (see path 'B' in Figure 7.5) was much evident in many of the interviews conducted with both the operational and senior managers. For instance, the following two quotes show how their workflow ties are profoundly influenced by the processes:

“We have identified processes for each and every step in the operation. So I believe that as long as you have proper authority levels and the right processes in place, there is no need of a hierarchy [...] without ownership nothing will happen. So if you don’t feel any ownership on the process it will be useless” (Senior manager-Apparel).

“Basically he or she has to execute the process map as most of the ways [how] things should be handled are documented there. For instance, if some damage occurs one should first refer to the process map. Of course, the process maps have different authorities and exceptions. One can take exceptions, provided he or she has obtained approval from the top” (Senior manager-3PL).

It was observed that processes also play a fundamental role in directing the boundary-spanning friendship ties (see path ‘B1 in Figure 7.5). For instance, in the Queen B issue the relationship 3PL’s site head built with the drivers while activating the transport process led him to track a delivery fraud.

### ***7.5.3.2 The effect of workflow and commercial friendship ties on the structure and processes***

The discussions had with some key personnel at Apparel clearly depicted the direct influence of boundary-spanning workflow ties on the structured relations (see path ‘C in Figure 7.5). For instance, one of them explained how they are being encouraged to suggest changes to structure when necessary:

“Any team is allowed to set 5 KPIs which, of course, should be aligned with the main KPIs. When you do that the team gets the ownership of the KPI which they will work together to achieve” (Senior manager-Apparel).

Workflow ties have also influenced profoundly the partnership’s processes (see path ‘C1 in Figure 7.5). For example, the process for delivery is such that when a delivery is to be made on a particular day, the purchase order for that delivery should be made on the day before or at least by 12 noon on the same day. However, in practice, Apparel’s merchandizing team often places the orders after 12 noon.

In contrast to the Lubricant and FMCG cases, Apparel believes that the best ways to perform something will be realized only through the challenges encountered in daily collaborative efforts. So the processes at Apparel are often open to change:

“I have told them that it’s not the process which matters, it’s the deliverables. If you start thinking differently today, then you need to change the process today to come up with a 5 or 10 percent improvement in the productivity. If you want a change in processes today, tell me I will do it today” (Senior manager-Apparel).

As with workflow ties, the boundary-spanning friendships have directly affected the structured tasks (see path ‘D in Figure 7.5). For instance, in the aftermath of the arguments Adam and Kith had, Dave was appointed to perform Adam’s role. In the interview with Dave, it was realized that the 3PL management had deliberately appointed him because of the friendship he and Kith had had before:

“I know Kith well. We were schoolmates and had done lots of things together then. So, the management decided to have me there to ease the matters” (Middle manager-3PL).

The boundary spanning friendships’ direct influence on processes (see path ‘D1 in Figure 7.5) is apparent in the trust issue where the hostility between Apparel’s quality team and 3PL personnel led a whole process to suffer, while in the Queen B issue the friendship tie between the site head and the driver led a process to recover.

Table 7.4 exemplifies how the interdependent nature of the four elements encompassed in the structural, processual, workflow, and friendship ties shown in Figure 7.5 have resulted in the IO networks being affected by a change in the IP networks, and the vice versa, displaying a clear knock-on effect on each other.

Table 7.4: The knock-on effects of the IO and IP networks

Knock-on effects of the deviations	Evidence
A deviation to IP network on the IO network	<ul style="list-style-type: none"> <li>• The process for delivery is such that, when a delivery is to be made on a particular day, the purchase order for that should be made the day before or at least by 12 noon on the same day. However, in practice, Apparel’s merchandizing team often places the orders after 12 noon. Moreover, Apparel’s marketing team often delays its sales target ‘til the end of the month and tries to cover it in the last few days by raising special delivery orders with 3PL that end up in Apparel paying more on delivery....</li> <li>• In the communication issue, while the three on site participate in daily operational meetings, a monthly meeting is set at Apparel’s premises to discuss strategic matters with 3PL’s senior manager. However, this meeting has been malfunctioned for some time and Apparel’s middle management is now concerned over the particular senior manager’s absence from the meetings....</li> </ul>
A deviation to IO network on the IP network	<ul style="list-style-type: none"> <li>• Fabrics produced in the factory are first sent through an inspection machine which is under the control of Apparel’s quality team. Once all the required information is uploaded to the system, the inspected stock is then physically transferred to the finished goods division which is under the control of 3PL staff [...] no party was accountable for the goods in transit from the quality division to the warehouse [...] later Kith intervened and set up an intermediate location for the goods to be transferred to from the inspection unit...now the quality team is responsible for transferring goods to the intermediate location.</li> <li>• After the Queen B incident, it was found out that the inactive organizational ties between Apparel’s logistics manager and the particular supervisor, as well as the ties between the former and 3PL’s middle management, had contributed immensely to the situation. Apparel management stopped all manual documents and the partners decided to incorporate the Queen B operation into the agreement with a clear process map for the activity.</li> </ul>

## 7.6 Summary

Apparel is 3PL's newest multinational. For nearly 3 years now, 3PL has been handling Apparel's transport and warehouse needs. From time to time, the parties have faced serious incidents for a number of reasons.

As in the previous two cases, the two types of networks: the IO network and the IP network provided a meaningful way to categorize the data and draw sense from them. Figure 7.5 portrays that the IO network consists of the partnership's governance structure and processes, while the IP network consists of the boundary-spanners' workflow and friendship ties. Empirical data also provide evidence of the interwoven nature of the IO and IP network and their elements.

The network diagrams (see Figures 7.2, 7.3, and 7.4) depict that most of the structured interactions or in other words the IO networks that were in place originally have become inactive and some personal interactions have emerged over and beyond those structured relations. These developments have sometimes eased the issues and sometimes exacerbated them. Significantly, compared to the previous two subunits, the figure demonstrates an equal effect of the partnership's IO network on the IP network and the vice versa. In Lubricant, the IO networks were dominating, while in FMCG the IP networks showed a significant effect on the partnerships' IO networks. However in Apparel, the parties are making a conscious effort to establish the right processes while facilitating any informal practices that would improve these processes.

Additionally, the findings on this subunit provide further insights to the nature of the service industry. Service organizations should be designed to be adaptable in order to fit their customers. This approach changes the way they design their processes and even the ways in which they interact with one another. Companies who take on outsourced tasks need to do more to fit the scenarios they find themselves in and not simply push their rules, their practices on others. This adaptability is an interesting aspect of service delivery.

Compared to the other two subunits, Apparel goes through a rapid cycle of incremental movements by encouraging its employees to change processes if they act as a barrier to their performance. Moreover, unlike Lubricant and FMCG, Apparel is prepared to listen to its service provider so they can both win. This behavior elucidates an element of maturity in the customer.

A simultaneous focus on the subunits and the ego network is necessary to draw a deeper understanding of interorganizational collaboration. Chapter 8 thus attempts to revisit the egocentric network and analyse how the aggregation of specific changes at each subunit has affected 3PL's ego network as a whole.

# Chapter 8

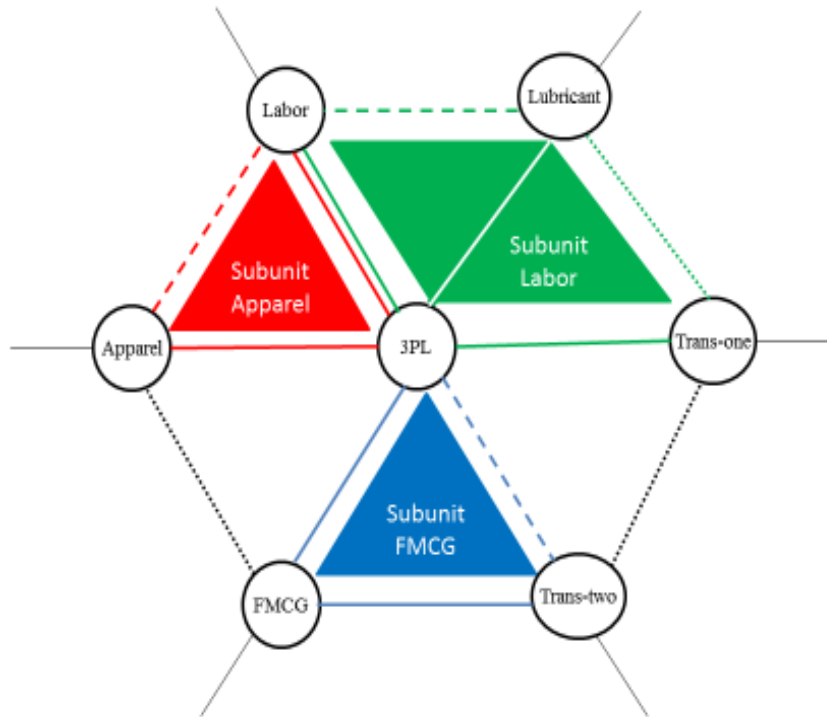
## Egocentric Network

### 8.1 Introduction

Looking into the dynamics of the many relationships surrounding the organization rather than at just one enables the researcher to gain a rich and in-depth understanding of the phenomenon (Ross Jr & Robertson, 2007). Hence, as portrayed in Figure 8.1, chapters 5-7 involved an in-depth exploration of the dyadic and triadic relationships with the three subunits — Labor, FMCG, and Apparel — that formed 3PL's egocentric network.

Methodology chapter signified a simultaneous focus on the subunits — and the ego network to understand the effect of the subunits on the egocentric network and the vice versa. Accordingly, this chapter focuses on the ego network at present to draw a deeper understanding of how interorganizational and interpersonal interactions coevolve in collaboration.

Figure 8.1: The egocentric network and its three subunits: Lubricant, FMCG, and Apparel



## 8.2 The interorganizational and interpersonal interactions of the ego-network

The unit descriptions in chapters 5, 6, and 7 and the analyses reveal that while 3PL's relationships with its three customers and suppliers are evolving, it continually faces the challenge of revitalizing them. The egocentric network in Figure 8.2 is drawn on the basis of the current issues faced by 3PL, and its network partners:

- The organizational and personal ties between Apparel, 3PL, and Labor in the figure are drawn on the basis of two current issues prevalent at Apparel:

- (1) the communication issue, and

- (2) the indispensable worker issue.

The boundary spanners directly involved with the two issues in the three firms are denoted by the red circles.

- The organizational and personal ties between FMCG, 3PL, and Trans-two in the figure are drawn on the basis of two issues prevalent at FMCG:

- (1) the most recent rates issue, and

- (2) the ongoing hold-up vehicle issue.

The boundary spanners directly involved with these two issues in the three firms are denoted by the blue circles.

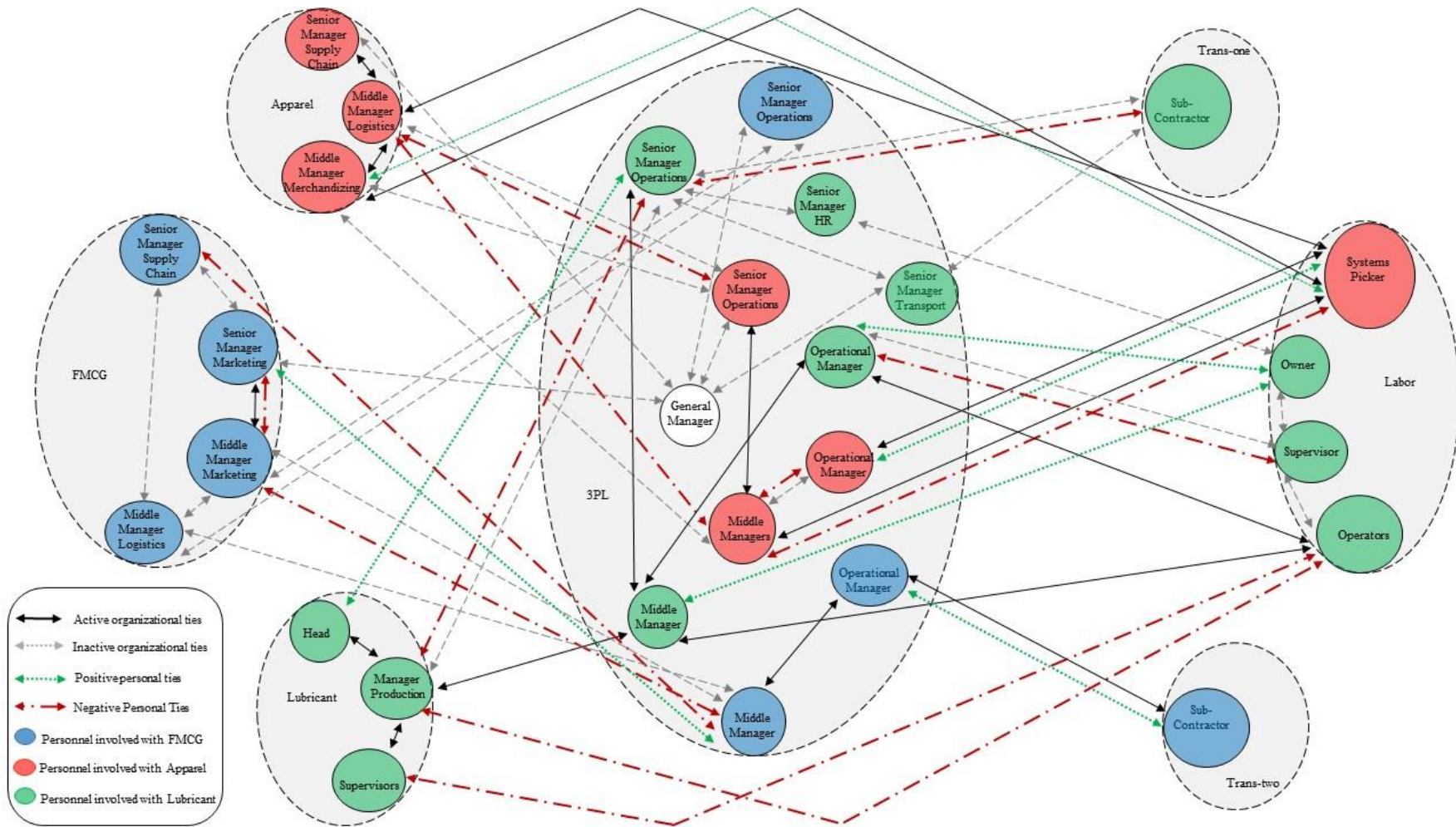
- The organizational and personal ties between Lubricant, 3PL, and Trans-one in the figure are drawn to indicate two current issues prevalent at Lubricant:

- (1) the labor issue, and

- (2) the forgotten supplier issue.

The boundary spanners directly involved with the two issues in the three firms are denoted by the green circles.

Figure 8.2: The current interpersonal and interorganizational interactions of the ego-network



It can be inferred from the diagram that, although the relationships are entered into as separate agreements, their activities are interlinked, and so the performance of one affects the other. For instance, while Lubricant which is one of 3PL's oldest customers awaits a permanent solution to the labor issue, at Apparel, which is its newest client, the operation is facing the threat of coming to a standstill, with an outsourced worker about to leave. In both situations, Labor is pressurized to react urgently as its performance is directly linked with retention of outsourced workers (see arrows pointing at labor from both Lubricant and Apparel ends directly as well as indirectly through 3PL).

The diagram demonstrates that over the years the organizational ties of the network partners have become dysfunctional (grey dotted arrows), and the personal ties have come to predominate (green and red dotted arrows):

“I would say the processes, if you go by the paperwork, what you have been given in the hard copies of it, you might see all those there. But no one seems to be following them (Senior manager-3PL).

The weakened organizational ties shown by the dotted grey arrows reflect the following dynamics in the IO networks:

- A structured task not complemented with a proper process e.g., the grey arrow between 3PL's middle manager and FMCG's middle manage-marketing

- A process not aligned with a definite task e.g., the grey arrow between 3PL's senior manager HR and owner of Labor
- Presence of both a definite task and a process, but not complemented with a rigid monitoring mechanism e.g., the gray arrow between 3PL's senior manager-operations and Lubricant's manager-production.

The weakened formal relationships are not only apparent between the network partners, but also within them. For instance, the figure reflects that 3PL's general manager has no regular formal communications with any of the key personnel at 3PL's customer and supplier interfaces, nor has he received formal information from his senior managers. 3PL's internal structure changed recently. The new structure assigns a senior manager from each support function (HR, finance, logistics solutions, and so on) to each customer account in parallel with having individual senior managers dedicated to those accounts:

“Earlier there wasn't a separate division for transport. We handled everything by ourselves. We used to contact the transporters directly. Not only that, even the manpower was recruited and looked after by us and [the] human resource division did not know anything that was going on in the site” (Middle manager-3PL).

The extent of authority and responsibility assigned by the new structure to the relevant managers still appears to be vague. As a result, in most circumstances the parties who deal with 3PL's boundary-spanning personnel, both within 3PL and its partners, are

often misled. For instance, some still believe that the responsibility for transport and labor issues lies with the personnel on site, while others believe that they are no longer responsible for those matters. 3PL's top management is unaware of these developing frustrations at the customer end:

“When they became bigger and bigger they lost control. It is important that they have a real hold of the ground situation. If you see many complaints in a particular site, you need to go, drill deeper, and understand what the case is”  
(Senior manager-FMCG).

It was noted in many interviews that commercial friendships are nurtured to facilitate the boundary-spanning workflow ties. The diagram however reveals that the personal relationships between network partners have hardly developed in the direction of the workflows ties. For instance, if the two: the boundary spanning workflow ties and the friendship ties were at interplay, the figure would have displayed many black straight arrows and green dotted arrows running in parallel. According to the figure, only in few instances the two have run parallel.

Among the personal relationships, the hostile ties are more prominent (red dotted arrows) than the positive ones (green dotted arrows). Negative emotions have contributed significantly to the incidents the partners face. In addition, the relational dynamics of middle management and the operational level compared to the strategic level were prominent in the issues. However, the partners have failed to pay prompt attention to these developments and to take the necessary actions to eliminate them.

Consequently, the issues still persist, and the situation has started to influence the partners' IO networks:

“3PL needs to develop relationship-based KPIs to strengthen the partnerships, or it may soon lose them. They should trace the number of complaints received from the customers per month. For that, they should recruit at least somebody only to go and meet customers. Then you will be able to understand: what are the new opportunities coming your way? What are the pain points? What are the areas customers are happy about? So you would be the independent person who would return and give that feedback to the business, and then you will start working on it before it becomes a bigger problem” (Senior manager-FMCG).

The next section looks at the critical incidents faced by the network partners to explore the cross-level effects in collaboration and to gain a deeper understanding of how the IO and IP and their corresponding elements coevolve in collaboration.

### **8.3 Coevolution of the interorganizational and interpersonal interactions**

The interdependent nature of IO and IP networks and their corresponding elements (structure, processes, workflow ties, and friendship ties) is clearly evident in the 10 incidents the network partners have faced. Table 8.1 outlines how a change in one or more of the four elements has created a domino effect on the other elements in the relationships.

Table 8.1: The state of the structural, processual, workflow, and commercial friendship ties at the time of the 10 incidents the network partners faced

Issue	Subunit	The Structural ties (A)	The Processual ties (B)	The Workflow ties (C)	The Friendship ties (D)	Action taken/should be taken to eliminate the issue (E)
Labor	Labor	Tasks clearly defined	Processes not set for certain key tasks	Not directed at the expected personnel	Both positive and negative emotions overrule the workflow ties	Processes should be clearly identified to all tasks and the structural, and processual ties should be enforced with a rigid monitoring mechanism.
The forgotten supplier	Labor	New tasks introduced  Tasks undertaken by new personnel	New processes introduced	Directed at other suppliers according to the new process	Not complemented with the workflow ties as the tasks are undertaken by new personnel	Criteria looked at under the new process have to be revised in such a manner as to incorporate the services of suppliers such as Trans-one.
Fungi	FMCG	Tasks clearly defined	Processes not clearly defined	Directed at the right personnel	Positive emotions overrule the workflow ties	Processes were redefined. The unhealthy friendships were eliminated with the relevant manager being transferred.
Transport	FMCG	Tasks clearly defined	Process not followed appropriately	Directed at the right personnel	Positive emotions overrule the workflow tie	Both structural and processual ties were redirected and the friendship ties were terminated due to the relevant supervisor being laid off.
Rates	FMCG	Tasks clearly defined	Processes not followed appropriately	Not directed not at the right personnel	Negative emotions overruling the workflow tie	Processual ties should be reinforced with a rigid monitoring mechanism to ensure that they are directed at the right parties.

<b>Issue</b>	<b>Subunit</b>	<b>The Structural ties (A)</b>	<b>The Processual ties (B)</b>	<b>The Workflow ties (C)</b>	<b>The Friendship ties (D)</b>	<b>Action taken/should be taken to eliminate the issue (E)</b>
Vehicle hold up	FMCG	Tasks clearly defined	Processes not clearly set	Not functioning	Not effective due to the absence of workflow ties	The structural and processual ties for the coordination of suppliers should be clearly identified.
Trust	Apparel	Tasks clearly defined	Processes not set for certain key tasks	Not functioning	Negative emotions overrule the workflow ties.	The processual ties were laid out with a rigid monitoring mechanism.
Queen B	Apparel	Tasks not clearly defined	Processes not set	Not functioning appropriately	Positive emotions overrule the workflow ties	The structural and processual ties were laid down with a rigid monitoring mechanism.
Communication	Apparel	Tasks not clearly defined	Processes clearly set	Not functioning appropriately	Not complemented with the workflow ties	Both the structural and processual ties should be reinforced with a rigid monitoring mechanism to ensure that the workflow and friendship ties are in line with them.
An indispensable outsourced worker	Apparel	Tasks not clearly defined	Processes not set	Not functioning appropriately	Negative emotions overrule the workflow ties.	Both the structural and processual ties should be appropriately set for the task of the particular worker.

Columns A, B, C, and D in the table show the state of the four ties: structural, processual, workflow, and friendship ties at the time of the incidents. Column E explains the steps the network partners have taken to eliminate certain issues and the possible solutions for the issues that still prevail. The colored cell in each incident depicts in which tie the proximate cause for the particular issue was triggered or, in other words, the point at which the domino effect began:

**1. *Labor issue***

One of the major causes identified for the labor issue is the failure to set an appropriate process for the labor supervisor's task. The supervisor was not directed to perform his role according to a precise process. This lack of a clear process has caused the corresponding workflow ties to emerge in all directions. As a result, the workflow ties were not appropriately complemented with the commercial friendships and so negative emotions began to arise and affect the structured tasks of many. Accordingly, the labor issue clearly depicts how a disparity in the processual tie created a domino effect on the structural, workflow, and commercial friendship ties.

**2. *The forgotten supplier***

Table 8.1 reflects introducing new tasks, and those tasks being assigned to new personnel as a major cause for the forgotten supplier issue. With the introduction of one new task, assigned to the manager-transportation, the processes were changed. In the new process, the criteria identified for selecting the transport suppliers according to the new process did not cover Trans-one, a

feasible supplier. So the workflows were not directed at Trans-one and, as a result, Trans-one had no opportunity to develop a commercial friendship with the new manager. Trans-one was, therefore, left out, and no one in 3PL realized its value. Accordingly, the forgotten supplier issue clearly depicts how a disparity in the structural tie created a domino effect on the processual, workflow, and commercial friendship ties.

### **3. *The fungi issue***

One of the major causes identified for the fungi issue according to Table 8.1 was not setting an appropriate process for the logistics manager's task. The role of the logistics manager was broadly defined but with no clear steps to follow. This omission led to the logistics manager taking many decisions without his supervisor's knowledge. As his workflow ties were well complemented with positive commercial friendships, his decision to clean the soap was promptly accepted. His action ultimately resulted in his tasks being negatively affected and the partners facing an enormous loss. Accordingly, the fungi issue clearly depicts how a disparity in the processual tie had a domino effect on the structural, workflow, and commercial friendship ties.

### **4. *Transport issue***

The detected cause for the transport issue in the table is the positive emotions of the boundary spanners overruling the workflow ties. Their tasks were well-defined, and the processes were set accordingly. However, a rigid monitoring

mechanism to ensure that those processes are appropriately followed was lacking. This failure led the boundary spanners to follow their emotions in making decisions. As a result, the structured tasks and processes were not performed appropriately and, as a consequence, the partners ended up bearing a serious loss. Thus, the transport issue clearly depicts how a disparity in the commercial friendship tie created a domino effect on the structural, processual, and workflow ties.

#### **5. *Rates issue***

The cause for the rates issue recognized in Table 8.1 is that the boundary spanners workflow ties were not directed at the right personnel. As regards the manager in charge of the VAS task, his role was well-defined, and the processes were set accordingly. However, his workflows were not directed at his counterpart but at the counterpart's superior. This workflow misalignment led to negative emotions overruling his structured workflows and his counterpart influencing her company to switch the supplier. His task was thus adversely affected, and 3PL lost the contract. Accordingly, the rates issue clearly depicts how a disparity in the workflow tie carried a domino effect in relation to the structural, processual, and commercial friendship ties.

#### **6. *The hold-up vehicle issue***

The cause for the held-up vehicle issue was the malfunctioning workflow ties. Even though the task of the transport coordinator was well-defined, his

workflows, especially in regard to the coordination of supplier meetings, were not explicitly set out. As a result, when FMCG's logistics manager was sent abroad, no one was assigned to handle the process. Neither the workflow nor the friendship ties were directed at any specific personnel. FMCG was thus completely in the dark about the developing situation with the transporters. Accordingly, the held-up vehicle issue clearly depicts how a disparity in the workflow tie had a knock-on effect on the structural, processual, and commercial friendship ties.

#### **7. *Trust issue***

Table 8.1 depicts the predominantly negative emotions of the boundary spanners as the root cause for the trust issue. The tasks were clearly defined; however, the processes for the tasks were not appropriately set. Nevertheless, the operations could have been performed if the boundary spanners' workflow ties had been complemented well by their commercial friendships. Due to the mounting negative emotions, the structured tasks and processes were not performed as expected, and the entire operation had to cease until a definite process for the operation was set. Accordingly, the trust issue clearly depicts how a disparity in the commercial friendship tie had a domino effect on the structural, processual, and workflow ties.

## 8. *Queen B*

The detected cause in Table 8.1 for the Queen B issue was that the task and the corresponding processes had not been adequately identified for the operation. Since the tasks and processes were not defined, no appropriate monitoring mechanism was in place. As a result, the positive emotions of the boundary spanners overruled their workflow ties. The undue trust placed on one individual guided all the workflow ties and, as a result, the entire operations were affected by the parties' having to bear an enormous loss. Accordingly, the Queen B issue clearly depicts how a disparity in the structural tie created a domino effect on the processual, workflow, and commercial friendship ties.

## 9. *Communication issue*

The cause identified for the communication issue was that the boundary-spanning workflow ties at the strategic level were not functioning properly. The tasks were well-defined, and the processes were accordingly set. However, a rigid monitoring mechanism to ensure that the processes are appropriately followed was lacking. This laxness led 3PL's senior manager to skip most of the strategic meetings on site, thus restricting the development of any positive commercial friendships with his counterparts. This behavior severely affected the structured tasks and the processes related to his role. Accordingly, the communication issue clearly depicts how a disparity in the workflow tie led to a domino effect on the structural, processual, and commercial friendship ties.

### *10. An indispensable outsourced worker*

Table 8.1 reflects that the prevailing negative emotions of the boundary spanners had caused the indispensable worker issue. Both tasks and processes related to the worker were not clearly defined. Still, the worker could have been motivated to stay if the middle manager's workflow ties with the outsourced worker had been strongly complemented with their commercial friendships. Due to the rising negative emotions, the worker is about to leave 3PL, and the operations at Apparel are at risk. Accordingly, the issue of an indispensable worker clearly depicts how a disparity in the commercial friendship tie led to a domino effect on the structural, processual, workflow, and commercial friendship ties.

Significantly, column E indicates that in only a few incidents (e.g., fungi issue, transport issue) have the network partners been successful in identifying these knock-on effects and made the appropriate changes to eliminate the issues.

At the same time, it is evident that the proximate cause for many issues lay within the workflow and commercial friendship ties that form the IP networks of the partners. Although there are instances where the partners have taken steps to eradicate certain unhealthy IP networks by reinforcing or making changes to the IO network (see column E under transport and trust issues), they have failed to do so in every case (e.g., the rates issue).

Except for 3PL and FMCG refining their processes by taking the emerging workflows into consideration, they have rarely adopted measures to recognize and duly formalize such good practices for the betterment of the partnerships' functionality. For instance, network partners could have paid attention to the developing communications between 3PL personnel on the Lubricant site and the labor contractor, and formalized the link as part of the solution to the issue. Similarly, the partners could have paid due attention to the indispensable outsourced worker issue and formalized the particular worker's role.

It was moreover evident that in the cases where the partners have intervened and made the corresponding amendments (see column E, Table 1), they have failed to monitor the changes thereafter. For instance, in the case of VAS in the FMCG subunit, although the contract for VAS was offered to 3PL at a later stage in the relationship, no guidelines or procedures were initially set. As a result, the operational staff of both parties faced many issues at the beginning:

“The earlier issue with VAS was that there were no set guidelines, no set parameters, on what 3PL needs to deliver, what FMCG needs to give, and what is the agreed norm of working. There was nothing, so anyone could just say you did not do this, you did not do that. So for me, see, it was not a very pleasant situation. For example, I promised our sales guy that on Monday I would give you 10,000 cases of Sunlight repacked with a Lux. 3PL guys tell me on Monday morning that they could not do it. So it was a huge mess at the beginning and one day they came and said, look we cannot handle the operation

anymore. However, now there is a set of clear guidelines; say, for instance, this is the lead time, if you are binding two items together this is what you will get” (Senior manager-FMCG).

Although the issue was fixed by identifying proper tasks and procedures, there was no evidence of subsequent monitoring of performance. As a result, the IP networks have substantially deviated from the set processes over time. This deviation was the cause of the rates issue. The absence of regular monitoring has, moreover, resulted in the boundary-spanning friendships reverting back to their old positions, overruling the structures and processes of the partnerships (e.g., Labor).

Although not considered under the direct purview of the study, it was apparent, that the interplay of the four elements varied with the number of years that partnerships had been functioning. As delineated in Table 8.2, the 3PL and Apparel partnership that is at the infant stage experiences a higher degree of variation in the four elements than do the other two partnerships. According to the table, in addition to their age, the degree of variations has changed because of several features prominent in the relationships.

Table 8.2: 3PL's customer partnerships and their key features

	<b>Lubricant</b>	<b>FMCG</b>	<b>Apparel</b>
Background to the relationship	The in-house function was outsourced to 3PL under the policy of 'outsourcing all noncore activities' (logistic team was laid off)	Has had two logistics partners before, but switched to 3PL for greater efficiencies	Had its logistic team before, but switched to 3PL for greater cost efficiencies (logistic team absorbed into production)
Number of years to the relationship	9 years	6 years	3 years
Renewal of the contract	Every 3 years	Every year	Every 3 years
Nature of the customer	Multinational	Multinational	Multinational (ownership recently changed to locally-owned)
<b>Nature of IO network</b>			
Governance structure	Tasks and related KPIs set at the beginning	Tasks and related KPIs set at the beginning	Tasks and related KPIs set at the beginning
Monitoring of tasks	Rigid	Lenient	Rigid
Changes to KIPs and tasks	Not often done	Not often done	Often done
Governance processes	Set at the beginning	Set at the beginning	Set at the beginning
Monitoring of processes	Rigid	Nil	Rigid
Changes to processes	Not often done	Not often done	Often done
<b>Nature of IP network</b>			
Workflow ties	Less flexible, as much restricted by processes rigidity	Flexible, as not much constrained by processes rigidity	Flexible, although attempts are made to restrict them
Friendship ties	Not many	Many	Not many
<b>Nature of issues faced</b>			
Nature of issues faced	Issues due to process rigidity, personnel changes and new processes/tasks	Issues due to non-process rigidity, informal friendships	Issues due to attempting process rigidity

The governance structures and processes of the three customers were set at the beginning of each partnering arrangement. Nevertheless, the monitoring of these tasks and processes has been much lenient in FMCG compared to in the other two relationships. So the boundary-spanning workflow ties in FMCG were not constrained as they were in the other two relationships. As a result, the commercial friendships and close personal interactions have mushroomed. However, the lack of changes made to structured tasks and processes in the FMCG relationship shown in Table 8.2 clearly indicates the partners' lack of awareness of the effect of these emerging interactions on the relationship. So a conscious exercise to recognize the emerging communities of practices and eliminate the unhealthy interactions was not present. A close examination reveals that these unregulated personal interactions have been the primary cause for most of the issues.

Lubricant, in contrast, has throughout had rigid monitoring mechanisms to ensure the set tasks and processes are strictly adhered to. This rigidity has discouraged the emergence of any commercial friendships and close personal interactions between the boundary-spanning individuals. The lack of changes made to structured tasks and processes in the Lubricant relationship shown in Table 8.2 clearly reveals the partners' desire for task specialization. Consequently, no conscious exercise to recognize any emerging communities of practices and personal relationships was undertaken. A close examination of the issues the subunit has faced reveals that this rigidity has significantly contributed to those issues.

Apparel, on the other hand, displays a mix of FMCG and Lubricant relationship features. Though it values monitoring the structured tasks and processes rigidly, it recognizes the importance of emerging communities of practices within the relationship. As a result, the table elucidates that changes to task and processes are often encouraged. This flexibility clearly depicts the partners' desire for continuous improvement. A close examination of the issues however reveals that the partners have still failed to arrive at the point of balance i.e., allowing communities of practices to develop while maintaining adherence to structured tasks and processes.

The Apparel relationship, moreover, reveals that in the initial phases the partners purposely allowed changes to the IO and IP network until a symbiosis of the four was arrived at. However, the FMCG relationship highlights that when the relationships mature, partners fail to pay much attention to the required changes and, as a result, the lack of symbiosis in the four elements continues to create issues.

## **8.4 Summary**

This chapter attempted to investigate further 3PL's egocentric network as a larger system in order to understand the role of interorganizational and interpersonal interactions in collaboration. It clearly reflected how the performance of one relationship in the network affects the other relationships, though all were entered into as separate agreements.

The chapter discussed how the organizational ties of the network partners have become dysfunctional, and that the personal ties have become dominant. The weakened formal relationships are not only apparent between the network partners, but also within them.

Section 8.3 focused attention on the interdependent nature of IO and IP networks and their corresponding elements (structure, processes, workflow ties, and friendship ties) by drawing attention to the the 10 critical incidents the network partners have faced. The discussion revealed how a change in one or more of the four elements has carried with it a domino effect which impacted the other elements in the relationships. It was, moreover, revealed that the partners have failed to pay attention to these effects.

Next chapter attempts to drawout the original contribution from the emperical data. This is done in relation to the primary research question of the study: How do interorganizational and interpersonal interactions coevolve in collaboration?

# **Chapter 9**

## **Discussion**

### **9.1 Introduction**

Chapters 5-7 provided individual unit descriptions and analyses. Chapter 8 looked at the aggregated effects of the three subunits on the whole network and the focal company — 3PL. The purpose of this chapter is to place the new findings in the context of previous research and identify the original contribution of the thesis. To that end, the chapter first discusses the findings under the priori constructs identified in the initial literature review and the new constructs that emerged during the analyses. Second, based on the new findings, it develops a conceptual framework to depict how the interpersonal and interorganizational networks coevolve in collaboration.

### **9.2 The interorganizational network**

In social network literature, various terms have been used to explain the relationships formed between organizations. Some have defined them as joint ventures, strategic alliances, while others have viewed them as distinct forms of governance (e.g., Hennart & Reddy 1997). Nevertheless, all these terms, commonly manifest a relationship that prevails at the macro level; it is an “outcome of an organizational process” (Borgatti & Foster 2003, p. 993).

A second network view to IOR that emerged in the recent past, however, observes them as a manifestation of relational contracts or, in other words, informal networks.

Researchers in this stream presume that interorganizational networks may well occur in the absence of formal contracts (e.g., Gulati, 1995). Building strongly on this notion, they argue that “a firm does not communicate as a unitary actor; rather, individual managers and employees belonging to a given firm exchange information” (Rosenkopf & Schleicher 2008, p. 426).

The empirical findings reveal that formal documentation and standardization had been required initially to establish the dyad’s IO network. For instance, in some cases, the affiliations of the individuals involved had very greatly helped the organizations to initiate the relationships. Yet, these personal interactions have been subsequently governed by the IO networks formed as the parties signed the contractual agreement.

These contractual agreements manifested an impersonal nature. They were predominantly driven by economic motives at the macro level, and involved detailed descriptions of how such ‘economic’ objective should be achieved with deliverables measured in financial terms. As such, in both the Labor and Apparel cases 3PL is facing the threat of losing its customer due to not achieving the KPIs, irrespective of the close personal relationships the top management share.

The agreements involved detailed explanations on ‘the management’ of the IOR. These terms have allowed the relationship to be legally recognized beyond the time span of the individuals involved in negotiating its functionality. For example, in the subunit — Labor, the head of supply chain who had signed the contract with 3PL and overseen

the third-party operations for 5 years left the company. However, his subordinate took over the responsibilities and the relationship between the two sides continued.

The need for formal control even in ‘relational agreements’ was apparent in the Queen B issue in the Apparel subunit. Queen B operations were offered to 3PL staff without a formal contract, so carrying out the operations was based on trust predominantly. Trust was, however, breached in a subsequent event. The study provides further evidence to how these ‘social contracts’ (Rowley et al., 2000) fail to persist when the key individuals in such relationships leave the organizations. For instance, in the issue of ‘the forgotten supplier’ in the subunit – Labor, the ‘social contract’ between Trans-one’s owner and the particular personnel at 3PL has prevented Trans-one’s joining a competitor of 3PL. However, that relationship was undermined when the particular manager left 3PL.

The above discussion accordingly leads to the following contribution:

The IO network in IOR represents the formal dyadic connection that reflects the initial contractual structuring of the relationship.

### **9.2.1 The governance structure**

Network literature views governance structure as a “framework within which cooperation between partners proceeds” (Gulati, 1995, p. 87). In collaboration theory, structure is identified as a “key driver of the way agendas are shaped and implemented” (Huxham & Vangen, 2000 p. 1166). It is a way of shaping the participants’ activities (Huxham & Vangen, 2000).

This study’s findings were strongly consistent with the literature. For instance, in the agreements the primary objectives were further delineated to manageable, specialized tasks allocated to the partnership’s subunits in such a way that coordination is achieved among them. Accordingly, the separate tasks and coordinating activities clearly reflected the partnership’s ‘structured’ interactions (Shrader et al., 1989).

It was also evident that the partners allow changes to these structures for the betterment of the operations (see Tables 5.1, 6.1, and 7.1 under the analysis section of all three subunits). The generative nature of structures was first explicitly highlighted by Gulati and Singh (1998). Gulati and Singh claimed “more complex and overlapping division of labor [.....] will entail continuing mutual adjustments to structure” (p. 785). However, none of the work to date has provided any empirical data to support their argument.

Accordingly, based on the empirical insights, the following two contributions are arrived at:

(1) The decomposed tasks and coordinating activities of the relationship outlined in the contractual agreement form the dyad's governance structure.

(2) Partners allow a considerable amount of change to the elements of the governance structure at subsequent stages in ongoing collaboration.

### **9.2.2 The governance processes**

Network literature on IOR has rarely explored the prevalence of processes in an interorganizational context. The studies that have discussed processes in an interorganizational context have identified it as 'joint action' that specifies and monitors individuals' behaviors within the framework of the governance structure (Pilbeam et al., 2012; Zaheer & Venkatraman, 1995). In other words, governance processes reflect "the degree a firm's workflows [...] customized in line with the requirements of the exchange partner" (Zaheer & Venkatraman 1995, p. 337).

Collaboration theory, on the other hand, distinguishes processes from structure and discusses three aspects that manifest in collaboration: the structure, processes, and participants (Huxham & Vangen, 2000). However, it does not provide a complete understanding of how such processes are formed.

Participants identified processes as 'the interfacing document' between the two parties. According to them, it is a detailed manuscript or a map that explains how each and every activity of the partnership is performed from A-Z. Processes thus clearly manifest a set of predetermined activities which the literature (e.g., Heide & John, 1990; Zollo,

2002) identifies as routinized or codified behavior of the relationship. In network terms, the governance processes of a dyad can hence be interpreted as the ‘processual tie’ that connects the two organizations.

It was also revealed that processes too are generative by their nature (see Table 5.2, 6.2, and 7.2 under the analysis section of all three subunits). This finding adds some much needed empirical evidence to support the seminal work of Zaheer and Venkatraman (1995). Zaheer and Venkatraman claimed that while part of the processes are built into the structure, another part of it is flexible. According to them, processes should be open to change in the face of the collaborative challenges that are often encountered in volatile environments. The evidence thus refutes the common view (e.g., Gulati & Singh, 1998) that processes are built in.

The study accordingly makes the following two contributions to network literature:

- (1) The steps to performing the tasks of the relationship reflect the dyad’s governance processes.
- (2) Partners allow a considerable amount of change to the governance processes at subsequent stages in ongoing collaboration.

### **9.2.3 The interwoven nature of structure and processes**

Interorganizational network research has rarely touched on the interwoven nature of structure and processes of an IO network (Zaheer & Venkatraman, 1995 being an exemption). Collaboration theory, however, signifies the fact that both structure and processes are interlinked. For instance, Huxham and Vangen (2000) claimed that while structure influences process, processes influence the emerging structures. The theory is still at an infant stage and does not possess any empirical validation for the argument in a commercial setting.

Descriptions clearly reveal that while the structure sets the tasks according to the partnership's objectives, processes manifest the ways and means of performing the tasks. Thus, it is apparent that in the absence of a defined task, no power is gained to execute a process. On the other hand, in the absence of a defined process, no task is performed to the expectations. This interplay between structured tasks and processes was clearly reflected in many of the incidents that revealed how the lack of one affected the other.

In the Labor issue (see Labor subunit) for example, the labor supervisor's role had not been properly complemented by a definite process in the first place. So the supervisor did not perform to the expectations of the task. Although 3PL's human resource manager did later identify a process for the supervisor (i.e., to join the Lubricant account meetings), the supervisor has refrained from attending them, and, as a result, the issue persists. The scenario exemplifies a lack of concern over maintaining a

symbiosis of the two: structured tasks and processes. Had the partners imposed strict performance monitoring mechanisms, the labor supervisor would have attended the meetings.

The partners' lack of interest in aligning processes to the structured tasks is also evident in the held-up vehicle issue (see FMCG subunit) that prevailed at the time of the investigation. Here, the partners had failed to realize that the particular process of coordinating meetings between transporters and FMCG was not explicitly linked to any boundary-spanning roles. This finding is unique to IOR network literature as none of the work to date has addressed the need for aligning a partnership's structured tasks with processes for effective collaboration.

Based on the above discussion the study arrives at the following contributions:

- (1) The governance structure and processes take an active, as opposed to a passive, role in daily collaborative efforts, and can, therefore, be viewed as the two relational elements that form a dyad's IO network.
- (2) In the IO network the structural and processual ties are interlinked, so a change in one affects the other.
- (3) For a stronger IO network in a dyadic relationship, the structural and processual ties should constantly be aligned. However, this alignment does not occur naturally, i.e., these ties need to be consciously managed to ensure that they are aligned.

### **9.3 The interpersonal network**

The literature presents IP networks as informal governance mechanisms that emerge through social processes (Dyer & Singh, 1998; Zaheer & Venkatraman, 1995; Zaheer et al., 1998). However, there is an ongoing debate as to when these social processes arise in an interorganizational relationship. Some (e.g., Gulati, 1995), for instance, argue that social connections lead to economic exchange. Others (e.g., Ring & Van de Ven, 1994) take the view that economic exchange leads to social connections (Ring & Van de Ven, 1994, p.103).

Indeed there are examples (e.g., Apparel) where certain key personnel of both parties have had prior affiliations and that those relationships have facilitated the search for potential partners and the initial negotiations. However, the nature of those affiliations has significantly changed since the inception of the formal agreement. With the establishment of the partnership's IO network, the relevant individuals have acted as agents for their organizations by carrying out the specialized tasks assigned to them. The evidence thus provides strong empirical evidence to support Ring and Van de Ven's (1994) argument that the IO network of a relationship leads to the formation of the social connections between the two organizations.

Accordingly the study arrives at the following contribution:

The IP network in IOR represents the cross-boundary social interactions of a dyadic relationship that emerged from its IO network.

### **9.3.1 The workflow ties**

Among the many IP networks explored in strategic alliances, workflow and friendship ties have gained significant attention in the recent past (e.g., Gilgor & Autry, 2012). Network literature takes the view that the IP network consists of both workflow and friendship ties, although the two reflect different aspects of an exchange relationship. Ferriani et al. (2013) identified that the workflow tie reflects the economic nature of the IP network, while the friendship tie reflects its social nature. In this sense, workflow ties arise in the course of performing assigned work roles and are directly associated with the prescribed objectives of the task.

Descriptions also revealed that workflow ties emerge out of the boundary spanners' performing their roles. However, the findings refute Böröcz and Southworth's (1998) argument that, though executed by individuals, the structural rigidity associated with workflow ties has a more explicit, impersonal, and functionally specific nature. Workflow ties, in practice, carried a significant amount of flexibility, which at times has affected the collaboration negatively and at times positively.

In the fungi issue (see FMCG subunit), for instance, though the logistics manager of FMCG was required to consult his superior before ordering 3PL to clean the soap, he did not do so. As a result, both parties had to bear an enormous loss. However, in the labor issue (see Lubricant subunit), it is not the responsibility of 3PL's site head to directly coordinate with the labor supplier to source workers. However, his attempt to do so significantly helped to ease the situation.

Empirical evidence accordingly leads to the following two contributions:

- (1) Workflow ties emerge between the boundary spanners as they perform their assigned roles in the IO network.
- (2) Workflow ties display a high degree of flexibility in ongoing collaboration.

### **9.3.2 The friendship ties**

Social network literature on IOR views friendship ties as informal relationships that arise from interpersonal attraction and emotions (Ferriani et al., 2013). According to the literature, they operate on social exchange logic and, hence, influence the personal rather than the task-related sphere of social action (Blau, 1955; Ferriani et al., 2013; Gibbons, 2004; Gouldner, 1954; Lincoln & McBride, 1985).

Collaboration theory takes the view that such personal connections are developed intentionally for the betterment of the collaboration. Therefore, it is important to understand the actual competencies, tasks, and behaviors of those who “facilitate

productive interaction and move the participants in the network toward effective resolution of a problem” (Silvia & McGuire, 2009, p. 35). However, the theory does not provide an in-depth discussion on how such personal relationships are nurtured.

Empirical analysis reveals that almost all friendships are nurtured within the boundaries of the work roles. Similar to forming workflow ties, governance structure and processes play a fundamental role in nurturing these friendships across organizations. This effect, whereby formal organizational positions play a part in forming friendships, was first identified by Lincoln and Miller (1979). They claimed that official roles are not only capable of shaping workflow relations of individuals but also their friendship relations by locating them in physical space and at particular points in the workflow. Their argument was, however, limited to an intraorganizational context. The finding thus provides both further validation for Lincoln and Miller’s argument and new empirical evidence in an interorganizational context.

Additionally, it was observed that these relationships are constrained by business-specific needs and, in contrast with ordinary friendships, they did not display any intense emotional or cognitive loss upon termination. According to the participants, it was rather an emotional debt that held the respective individuals together. Thus, the results strongly suggest that in the context of collaboration, instead being affect-based friendships, it is a unique style of friendship that emerges in performing the boundary-spanning roles.

Though this finding is new to network and collaboration literature, marketing scholars have identified these types of friendships as ‘commercial friendships’. According to them, commercial friendships unlike ordinary friendships are “circumscribed and bound by their context” and thus anchored in instrumental goals (Price & Arnould, 1999, p. 51). They are “the manifestation of workers’ natural tendency to introduce a logic of sentiments into the logic of cost and efficiency represented by formal organizational structures” (Casciaro & Lobo, 2008 p. 655).

It was moreover observed that, as in the case of workflow ties, commercial friendship ties carry a significant amount of flexibility in practice, which at times has affected the collaboration negatively and at times positively. For instance, in the transport issue (see FMCG subunit), the merging of the commercial friendships into more emotionally-bonded relationships negatively affected the operations. On the other hand, in the rates issue of the same subunit, commercial friendships that developed into hostile relationships adversely affected the operations. Nevertheless, in the subunit — Labor, the transformation of the commercial friendships into a more intimate relationship between Trans-one’s owner and the 3PL employee prevented the transporter from joining a 3PL competitor.

Based on the above findings, the following two contributions were arrived at:

- (1) Commercial friendship ties emerge out of the interaction of the boundary spanners whilst performing their assigned roles in the IO network.
- (2) Commercial friendship ties display a high level of flexibility in ongoing collaboration.

### **9.3.3 The interwoven nature of workflow and commercial friendship ties**

Apart from describing the nature of the two types of ties in an IP network, interorganizational network research also documents a significant overlap in them (Allen & Cohen, 1969; Brass, 1984; Ibarra, 1992; Mehra et al., 2006; Rank, 2008). Most scholars (e.g., Beatty, Mayer, Coleman, Reynolds, & Lee, 1996; Frenzen & Davis, 1990; Haytko, 2004; Johnson & Selnes, 2004) have affirmed that this overlap of the two ties that are of different nature inherently carries positive effects on organizational performance. A few scholars (e.g., Grayson, 2007; Price & Arnould, 1999; Soda & Zaheer, 2012), however, have observed that the co-occurrence of workflow and friendship ties creates a potential conflict that affects performance negatively.

Empirical evidence reveal that in IP networks, it is the above-defined commercial friendships that coevolve with the workflow ties, and not the emotionally-driven affect-based friendships. It was, moreover, found out that once strengthened, the two do not naturally function individually. For instance, in the subunit — Labor, 3PL's senior manager's workflows were directed at Lubricant's former production manager even after he had been promoted to become the head of Lubricant due to the close personal relationship the two shared. In the same subunit, the new workflows between 3PL's senior manager and Lubricant's new production manager were much more distant due to the lack of personal closeness between them.

In all three subunits the boundary spanners are strongly motivated to keep a balance between their social and economic interests to ensure satisfactory performance. However the personnel have rarely paid attention to the significance of balancing their workflow and commercial friendship ties. As a result, they have all tended to face similar issues from time to time. For instance, in the transport issue (see FMCG subunit), had the transport manager of FMCG realized the consequences of violating workflows, the impulse to register his friends's vehicles would not have arisen. In the rates issue of the same subunit, had the 3PL middle manager handled the negotiations diplomatically, the rates issue would not have arisen.

Accordingly the study suggests that the ability to maintain a symbiosis in the workflow and friendship ties is a skilful ability of the boundary spanners and the study identifies this ability as the 'symbiotic capability'. Although a considerable number of works to date has duly recognized this balance, none of them has been successful in providing

strong empirical validation for it. For example, Ring and Van de Ven (1994) in their theoretical paper argued that “In dealing with uncertainties brought upon by their roles, prudence may require that the parties employ "life jackets" recognized by their organizations (e.g., formalized contracts, exogenous safeguards) in lieu of exclusive reliance on trust” (p. 96).

By affirming that the boundary spanners should pay attention to maintaining a balance between the two types of ties, the study refutes the following two contradictory arguments:

(1) overlap of the two ties that are of different nature inherently conveys ‘positive’ effects on organizational performance (e.g., Beatty et al., 1996; Frenzen & Davis, 1990; Haytko, 2004; Johnson & Selnes, 2004)

(2) overlap of the two ties that are of different nature inherently conveys ‘negative’ effects on organizational performance (e.g., Grayson, 2007; Price & Arnould, 1999; Soda & Zaheer, 2012).

By looking into the symbiosis in IP networks the study also supports building theory on multiplexity in network literature. Multiplexity in IP networks refers to a mere ‘trade-off’ between the instrumental interests and the social interests in personal relationships (Ferriani et al., 2013).

The discussion accordingly leads to the following contributions:

(1) Dyadic IP networks consist of both the workflow and commercial friendship ties.

(2) In the IP network the workflow and commercial friendship ties are interlinked, so a change in one affects the other.

(3) In a stronger IP network, in a dyadic relationship the workflow and commercial friendship ties exist in symbiosis.

(4) Maintaining this symbiosis in workflow and commercial friendship ties is a skilful ability of the boundary spanners.

#### **9.4 Coevolution of IO and IP networks**

Network literature affirms that a dyadic relationship, within which the organizational actors are embedded, essentially generates two types of networks. They are the IO network that reflects interorganizational collaboration, and the IP network that mirrors the individual relationships residing in the IO network (Ma et al., 2009). This argument is also compatible with collaboration theory that views the effective leveraging of structure, processes, and participants as essential for collaboration. In both fields, however, the scholars have failed to address the coexistence of micro and macro elements in IOR explicitly. Even the most recent work on the topic has, unfortunately,

employed a micro behavioral perspective (e.g., Ferriani et al., 2013), thus failing to address the macro dynamics of the phenomenon.

Almost all the partnerships in the 3PL study displayed the presence of an IO and IP network. The case also provided strong empirical validation for the interdependence of the two (see Tables 5.3, 6.3, and 7.3 in the analysis section of all three subunits)- a fact that has still not been validated in the network and collaboration fields.

#### **9.4.1 The effect of structural and processual ties on the workflow and commercial friendship ties**

Collaboration theory has not generated an in-depth understanding of the effects of macro level structures and processes on the participants' behavior. Even in the social network literature, with the exception of Ring and Van de Ven's (1994) theoretical paper, this effect has not been discussed in an interorganizational context.

Empirical findings across the subunits show that from the inception of the collaboration structure has been enforced on the boundary-spanning individuals, thus forming a somewhat 'regulated' base from which the workflow ties could emerge, so a change in task has a direct effect on the corresponding workflow ties. For instance, in the Labor issue (see subunit – Labor), introduction of labor supervisors diverted the 3PL site head's workflow ties from the labor manager of 3PL to Labor's supervisor.

Governance structure has also exerted a profound effect on the boundary-spanning commercial friendships. Consequently, any change in task affects the corresponding

commercial friendship ties. Subunit – FMCG, in particular, shows the efforts of the 3PL personnel to develop friendships with the new employees at their customer interface.

In the same way, it was observed that processes too have a direct effect on the boundary-spanning workflow and commercial friendship ties. So, a change in a process directly affects the way boundary spanners perform their tasks and the direction of their friendships. For instance, in the subunit – FMCG the employees were struggling to become accustomed with the new processes during the trial period of their introduction and in the aftermath of the trust issue in the same subunit, boundary-spanning workflows were diverted in a new direction with the introduction of a new process related to the internal transfer of material. Similarly, in the aftermath of the transport issue in the FMCG subunit, the boundary spanners had to redirect their friendships towards different personnel when the process for approving the transport bill was changed.

Thus, the study makes the following contribution to the literature:

Both structural and processual ties of a dyad's IO network exert a direct effect on the boundary-spanning workflow and commercial friendship ties.
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#### **9.4.2 The effect of workflow and commercial friendship ties on the structural and processual ties**

Collaboration theory has not been developed to the point where the effects of micro level workflow and friendship ties on the macro organizational behavior are understood in depth. However, the social network literature has recognized that the IP network of a dyad has a profound impact on its IO network in collaboration (e.g., Gulati, 1995a; Hutt et al., 2000; Ingram & Roberts, 2000; Larson, 1992; Saxenian, 1990; Uzzi, 1997). Nevertheless, the work has failed to distinguish the effect of workflow ties on the IO network from the effect of friendship ties on it.

The effect of boundary-spanning workflow ties on the structured relations was much evident throughout the observations. For instance, in the labor issue (see subunit — Labor), despite the labor supervisor's role involving direct communication with 3PL's operational managers, the supervisor skips all communications with 3PL personnel. Similarly, it was evident that the workflow ties have profoundly influenced the partnership's processes. For instance, during the trial period of automating the processes, the parties realized that some of the SOPs were not being practiced, that some were being altered, and that some new processes were becoming visible. As a result, they have changed the processes in line with the current workflow ties of the boundary spanners.

As in the case of workflow ties, there is evidence to show how the boundary-spanning friendships have affected the structured tasks. For instance, in the same issue the

developing friendships between 3PL's on-site personnel and the labor contractor aided the 3PL personnel's task enormously. However, the friendship between the senior manager of 3PL and the head of Lubricant has not only affected the 3PL manager's role but also the role of Lubricant's production manager. It was also evident that friendships have affected the processes as well. For instance, in the transport issue in the FMCG subunit, knowing that family members' vehicles cannot be registered for business purposes, the two boundary spanners did so, and that action affected the partnership negatively. On the other hand, the long-held friendship between the transport coordinator of 3PL and Trans-one's owner in the Labor subunit has facilitated the coordinator's process significantly.

The evidence accordingly leads to the following contribution:

Both workflow and commercial friendship ties of a dyad's IP network have a profound effect on the dyad's structural and processual ties.

*The interdependent nature of the four elements: structural, processual, workflow, and friendship ties*

The critical incidents discussed in chapter 8 clearly reveal how a change in one or more of the four elements has a knock-on effect on the other/(s) (see Table 8.1). However there are no evidence in the literature for both collaboration and social network theories

pertaining to the interdependent nature of these four elements (structural, processual, workflow and friendship ties). Thus, this finding is unique to both collaboration and network literature.

For instance, how a change in structure creates a knock-on effect on the other three elements is clearly evident in the forgotten supplier issue, while the subsequent knock-on effects of a change in processes on other elements is evident in the labor issue. Similarly, how a change instigated in workflow ties creates a knock-on effect on the others is evident in the rates issue, while how a change instigated in friendship ties has a domino effect on the other three is evident in the transport issue.

It was moreover observed that there had seldom been changes in the IO network, whereas changes in the IP network had occurred rapidly over the years. Results also reveal that the partners paid scant attention to these changes and their knock-on effects, and, therefore, the problems associated with them persisted. In those cases where they have intervened and made the corresponding amendments to rectify the issues, the partners have failed to monitor the changes subsequently. For instance, in the case of VAS in subunit –FMCG, no guidelines or procedures were initially set. As a result, the operational staff of both parties faced many issues at the early stage. Although the guidelines were introduced at a later stage, there was no evidence of the subsequent monitoring of the performance and, as a result, the IP networks have substantially deviated from the set processes over time. This deviation became the cause of the rates issue.

The absence of regular monitoring has also resulted in the boundary-spanning friendships reverting to their old positions, thus overruling the structures and processes of the partnerships (e.g., the labor issue). This particular finding provides further empirical validation for Gulati and Puranam (2009) who argue that, unlike structures and processes, personal relationships once formed are hard to change. Therefore, the embedded relationships of individuals who come to be associated with the roles and processes may persist. Gulati and Puranam (2009) tested this phenomenon in an intraorganizational context and none of the studies to date has empirically tested this idea in an interorganizational context. So the study provides maiden evidence to this fact in an interorganizational context.

The study also suggests that though structural and processual ties are often refined with the expectation of meeting the dyad's economic objectives via individual actions, the partners should be aware that the change may have a negative effect if not carefully monitored (e.g., labor issue). Designing such mechanisms may hence require the decision makers' careful and systematic attention to the concrete processes through which personal relationships emerge between transacting parties.

The overruling IP networks observed in many instances in all three subunits further provide strong empirical evidence for Uzzi's (1997) over-embeddedness argument. Uzzi affirms that the embeddedness logic works only up to a point, and that beyond that, it creates negative results. The influence of micro elements on macro elements can be overwhelming. The very friendship relations formed to facilitate commercial transactions may lead to creating reciprocal 'feelings of obligation', superseding the

economic imperatives, and this feeling of obligation may, therefore, stifle effective economic action. “Overembedded networks can sometimes release intense negative emotions of spite and revenge that trap firms in self-defeating cycles of behaviour” (Uzzi, 1997, p. 59). The need to make a conscious effort to regulate the emerging IP network in order to prevent any adverse effects on the IO network was also evident in Hutt et al.’s (2000) work. It demonstrated how formal processes begin to rule when trust in the interorganizational relationship erodes.

The evidence accordingly leads to the following contribution:

The four elements: structural and processual ties (that create the IO network) and friendship and workflow ties (that create the IP network) provide a meaning full way of explaining interorganizational collaboration, in other words, they make a good lens to make sense of the intricacies in collaboration.

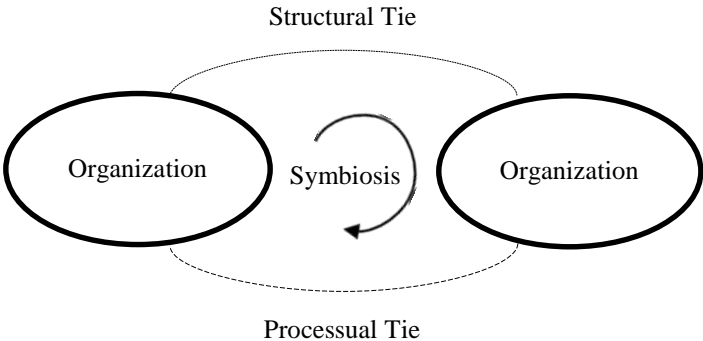
## **9.5 Development of a symbiotic IO and IP network model**

The primary research question of this study intended to identify how individual and organizational networks coevolve in collaboration by specifically focusing on the elements that form the two networks in ongoing collaborations. The case findings are synthesized into a conceptual model that looks at interorganizational collaboration through a social network lens.

The findings indicated that in a dyadic relationship, the interorganizational network (IO) exists at the macro level, while the interpersonal network (IP) exists at the micro level, and that the two coevolve in collaboration. In particular, it was observed that the IO network is organized by market transactions and consists of structural and processual ties, whilst its IP network consists of workflow and commercial friendship ties between the boundary-spanning employees.

The study affirms that the governance structure and processes take an active, as opposed to a passive, role in daily collaborative efforts. Structure and processes can, therefore, be viewed as two relational elements entwined in forming a dyad's IO network (see Figure 9.1). To establish a stronger IO network in a dyadic relationship, the two should constantly be in symbiosis. However, the study also affirms that this symbiosis does not occur naturally, but rather that decision makers need to be cognizant of the interplay between the two. When a change is made to the structure, processes should be adjusted accordingly, and vice versa; if not, the resultant gap will invariably create adverse consequences for the relationship.

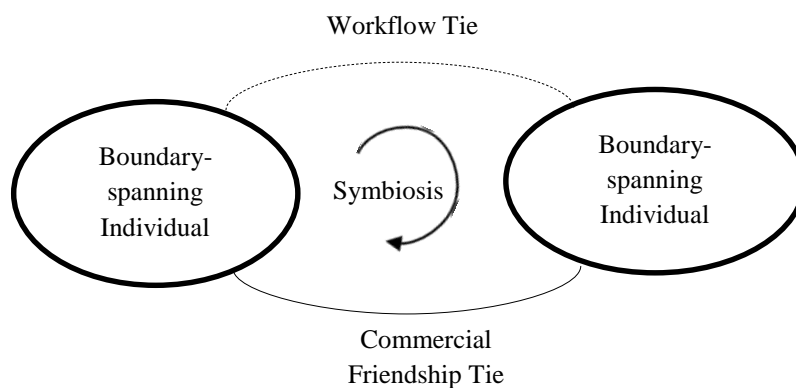
Figure 9.1: Symbiotic structural and processual ties in the IO network



The study also proposes that both the workflow and commercial friendship ties together form a dyad's IP network. It further affirms that in order to establish a stronger IP network these two should also be in symbiosis (see Figure 9.2).

This symbiosis does not occur naturally. The boundary-spanning individuals of the relationship should make a conscious effort to manage the interdependence; a skill that has to be nurtured by the boundary-spanning individuals in IOR. It identifies this skilful action of maintaining a symbiosis in workflow and friendship ties as the 'symbiotic capability'. Symbiotic capability may only arise out of the effective trade-offs the boundary spanners make between work and friendships when pursuing collaborative efforts.

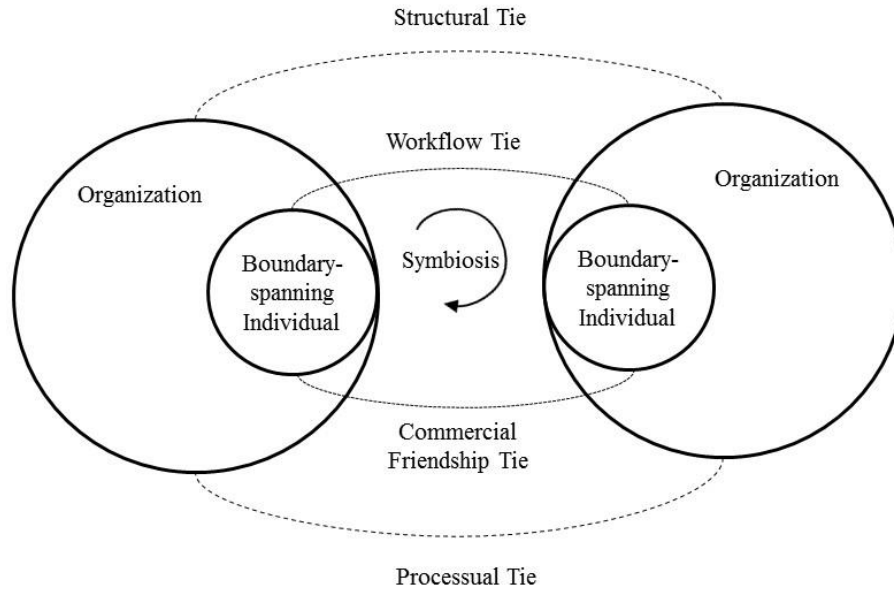
Figure 9.2: Symbiotic commercial friendship and workflow ties in the IP network



Finally, by introducing the term ‘symbiotic existence’ to interorganizational social network theory, the study proposes the framework shown in Figure 9.3. This framework carries the potential to develop a new theoretical conceptualization of how the two levels — the micro and the macro — and their corresponding elements can be combined when studying interorganizational collaboration.

The term ‘symbiotic existence’ is used to explain the interdependent nature of the four ties (i.e., structural, processual, workflow, and friendship). Being cognizant of the interdependence of the four, the partners may be able to examine the corresponding effects and duly rectify any negative outcomes with the aim of yielding greater benefits from its interpersonal and interorganizational networks. The conception of ‘symbiotic existence’ thus goes beyond the traditional micro and macro divide to consider the multiplexity of networks in IOR and also underscores the distinctive mechanisms that drive the performance effects of IOR.

Figure 9.3: Symbiotic IO and IP networks



### 9.5.1 Implications of the conceptual model

A gap remained to combine collaboration theory with social network theory fruitfully to view interorganizational collaboration from a novel perspective. In doing so, the study attempted to answer the following primary research question: How do interorganizational and interpersonal interactions coevolve in collaboration?

By applying a multilevel lens to the study of IOR (Hitt et al., 2007), the thesis arrived at a framework that explores the cross-level effect of networks in interorganizational

collaboration. The framework opens the way for understanding the micro and macro dynamics of IOR.

The model emphasizes some essential elements that are directly relevant to the study of interorganizational collaboration: the structural and processual ties (macro level) and the workflow and commercial friendship ties (micro level). These elements have not been discussed explicitly in the required depth in the interorganizational network literature. The current frameworks have failed to consider the interplay of these four ties that shape interorganizational performance, and have tended to muddle the mechanisms that drive IOR (e.g., Ferriani et al., 2013). The model arrived at discriminates between these conceptually separable elements of IO networks and IP networks and proposes a new conceptualization — ‘a symbiotic existence’ between the four elements for synergetic performance. The focus on a symbiosis of the four elements allows us to depart from the dominant distinction between macro and micro domains of networks.

The study also brings much insight to the field of logistics, the context within which the research is conducted. By employing a qualitative case study methodology, it addresses the ever-increasing need for logistics research to employ a subjective, cognitive perspective (i.e., case studies, observations) that can provide in-depth understanding of interorganizational collaboration (Frankel, Naslund, & Bolumole, 2005). The study further provides a novel approach to logistics research by extending the scope beyond a dyadic relationship to encompass the whole network of a logistic service provider. By focusing on the micro dynamics of the collaboration of six logistic

relationships, it facilitates a deeper understanding of the behavioral complexities that emerge through the interaction between the logistics partners which is an increasing concern in logistics research (e.g., Cruijssen, 2007; Marasco, 2008).

## **9.6 Limitations of the study**

Any study has its limitations, given the expertise, and the financial and time frame in which a PhD is conducted. This PhD was no exception and the following major limitations are acknowledged.

One major limitation of the study is the time spent in the field. It was observed that the interplay of the four elements varied with the number of years that partnerships had been functioning. For instance, 3PL and Apparel's partnership, which is still at the infant stage, experienced a higher degree of variation in the four elements when compared to the other subunits' partnerships with 3PL. Engaging in a longitudinal study would, therefore, have provided more insights into how the symbiosis might vary as the partnerships progressed into different stages of their life-cycle. More specifically, a longitudinal study would have provided an in-depth study on how the four elements of IO and IP networks coevolve and also what organizational and relational factors would promote and/or hinder their symbiotic existence.

The logistic firm selected for this study is based in Sri Lanka, where the industry is still at its late introduction stage. It is quite likely that the logistic strategies vary significantly in countries where the industry is already mature. Moreover, being an Asian country, Sri Lanka's culture and work ethics may differ considerably from those

of European or American countries. Cultural elements may exert a significant influence on the symbiotic logic. For instance, the values of boundary-spanning individuals in Asian countries, such as their commitment to friendships, may be different from those in other countries. The researcher based the study in Sri Lanka as it was where ample access was provided for data. Moreover, being a native of this country helped the researcher to fully understand the rich descriptions provided by the participants and their world views.

Being a single case was another major limitation of the study that greatly restricted its generalizability. If extended to at least three egocentric networks of the same industry, the study would have been in a stronger position to validate the model's applicability in the logistic industry. However, given the depth and breadth required, a single case was the only feasible study within the time allowed for the PhD.

## **9.7 Future research directions**

As we find our answers, we inevitably find that there are new questions that need to be investigated. The alternative and future avenues of research that may potentially overcome some of the earlier acknowledged limitations or further validate the contributions identified in this study are thus discussed next.

The study has focused on a single egocentric network in the logistic industry. If future research could extend the number of egocentric networks to at least three in the same industry, the findings would bring greater insights on the applicability of the model in the logistic industry. Conversely, future research could select manufacturing-based

egocentric networks to assess whether, as for the service industry, the symbiotic logic also applies to that sector.

Another direction for future research would be to see whether the symbiosis logic applies to indirect ties. Even though an egocentric network was selected, the study focused primarily on the dyadic and triadic relationships and not on the structural characteristics of the network. However, it was observed that the partners are not only linked directly to each other but also to a number of others indirectly. Both direct and indirect relationships produce a profound effect on the relationship's performance (Choi & Kim, 2008). Extending the study beyond an egocentric network would enable an understanding of the practical implications of maintaining the symbiotic existence of the two types of networks.

In this study, the attention is focused on the interorganizational structure of dyads. It is important to realize that the intraorganizational structures of the parties also play a significant role in collaboration (Gittell & Weiss, 2004). For instance, Phillips et al. (2000) noted that, while intraorganizational structures of the partners provide the context in which collaboration occurs, the interorganizational structure of the partnership sets the basic protocols and ground rules for collaboration. Thus, in order to ensure a coherent context for cooperative behavior, the interorganizational structure of the partnership needs to be defined at both the inter- and intraorganizational levels (Boddy et al., 2000).

Lack of internal collaboration depicted in almost all network diagrams of the issues clearly reveals that both 3PL's and its partners' intraorganizational structures are poorly aligned with their governance structures. Moreover, chapter 8 particularly highlights the inconsistency of 3PL's intraorganizational structure with its partnerships' governance structures, thus emphasising the significance of intraorganizational structures being aligned with the governance structures in collaboration. More research focused on this particular fact is, however, needed for stronger empirical validation.

Future research can also look into the capabilities of the organizational decision makers, as they are required to recognize when the four ties become ineffective and cognitively engage in reconstructing new structures and processes. So far, we know little on how actors' knowledge about routines shapes and is shaped by their activities in replicating organizational routines. Upper echelon theory (Hambrick & Mason 1984) suggests that organizational outcomes can be partially predicted by managerial characteristics. Research centering on the characteristics of entire top management teams is thus significant with regard to the knowledge on structures and processes that support the firm's performance. Organizational routine literature, on the other hand, views the actions of individual actors in the enactment of organizational routines as inherently a political process. For instance, Howard-Grenville (2005) identified that the actions and relative power of some individuals lead to changes in routines.

It is also interesting to explore the feasibility of changing processes, given the fact that it is a complex and time-consuming task. We know little about how these changes may

initially originate and become legitimized and disseminated across the partnering organizations and the role of individual agency in the process. Case descriptions revealed that the processes were set at the outset. However, at subsequent stages, changes to processes have varied drastically between the three customer partnerships. Lubricant and FMCG being huge multinationals did not entertain much change to processes as their mother company set them. Apparel's status, on the other hand, changed recently from a multinational to a locally-owned, and it possesses much freedom in changing processes. As a result, it empowers people to suggest changes.

Future research should also focus on the nature of the industry in which the dyad is operating when assessing the practicality of changing or implementing new processes (D'Aveni et al., 2010). On the one hand, some organizational routine scholars (e.g., Nelson & Winter, 1982) have questioned the feasibility of exact replication, as actual activities and performances will always vary in some industries. On the other hand, some (Wirtz et al., 2007) view replication as a way of responding to the changes in highly dynamic environments as value creation depends on the speed at which valuable practices are replicated. Descriptions provide evidence of the fact that changes in the IO network vary with the industry the dyad is operating in. For instance, it was evident that the oil industry in which Lubricant is operating is process-driven by nature. As a result, the processes are initially set according to the industry standards and individual actions are rigidly monitored to ensure conformity to those processes. FMCG, on the other hand, was operating in the fast moving goods industry. As a result, it was evident

that the partners found it hard to maintain strict adherence to its processes due to the changing nature of the industry.

Additionally, we have discussed how structure and processes account for individual action in collaboration. For instance, in subunit — Lubricant, processes rigidity has restricted friendships, while at subunit — FMCG, leniency has fostered friendships. It was also evident that the process rigidity at Lubricant has contributed vastly to the issues on site, while process leniency at FMCG has contributed greatly to the many issues at FMCG. More research is thus needed to investigate how and when relying on strong interpersonal networks becomes dysfunctional and, what steps should be taken in order to rectify any adverse consequences of relying on individual relations (Adobor, 2006).

This can be linked to exploring how the macro elements can be effectively used to nurture the emerging community of practices within the collaboration. Community of practices, in this thesis, refers to ‘the effortful accomplishments of people’ (Pentland & Rueter, 1994, p. 488) that carries the potential of being positively recognized and institutionalized at subsequent stages of the collaboration. Feldman (2000) affirmed that artefacts such as standard operating procedures, involve significant degrees of freedom in how routines are performed in practice. In other words they require actors’ sense-making and interpretation of the routine and the context (Balogun and Johnson 2004) and it is often seen that individuals’ mindful actions help to develop new understandings of how best the task should be performed (Feldman, 2000). For instance, it was evident from the descriptions that the workflow and friendship relations

at the operational level were far more dynamic and productive compared to those at the middle the middle and strategic levels. However, limited attention had been paid to institutionalizing these developing community of practices.

The proposed model also calls for quantitative approaches to investigate in-depth some of the intricacies that have started to expose themselves. Triangulating these results with more quantitative-type approaches would enable measurement of each of these constructs across a wider sample-set to see if there is a correlation between them. This effort is essential to see if the theory holds up in a generic way.

## **9.8 Summary**

The chapter has triangulated the empirical data with previous work by Borgatti and Li, (2009) and many others including Carpenter et al., (2012) and move forward the understanding of the social networks in collaboration. It identifies that the interorganizational network (IO) exists at the macro level, while the interpersonal network (IP) exists at micro level. By introducing the term ‘symbiotic existence’, the chapter further emphasises the interdependence of the four ties: structural and processual (that form the IO network) and workflow and friendship (that form the IP network) in collaboration.

Utilizing a multilevel lens to the study of IOR, the framework presented opens the way for understanding the distinction between the two types of networks while focusing on both the micro- and macro dynamics of IOR. The study also addresses certain other gaps prevalent in network literature. For example, there was a controversial argument

that relational contracts in the absence of any formal controls lead to successful collaboration (e.g., Gulati, 1995). The present study discovered that personal networks or, in other words, relational contracts cannot singularly explain IOR.

The study was, however, not exempt from limitations. Given the researcher's expertise, and the financial and time frame in which a PhD study has to be conducted, the thesis was limited to a single case, conducted in an Asian setting. Thus, some further approaches to overcome these limitations are also addressed.

The next chapter concludes the study with a summary of the main findings and discusses the research's theoretical and practical implications.

## Chapter 10

### Conclusions

#### 10.1 Introduction

Interorganizational collaboration is inherently a multilevel phenomenon (e.g., Zaheer et al., 2010). The theories applied (e.g., transaction cost theory, the resource-based view, the relational view) to explain collaboration have, however, failed to employ a multilevel lens (Bernardes, 2010; Fawcett et al., 2012; Skjoett-Larsen, 1999).

The theory of collaboration developed within the mainstream of public administration research (e.g., Gajda, 2004; Huxham, 2003) addresses the micro and macro elements of interorganizational collaboration in great depth. It views leveraging structure, processes, and people as the key to successful collaboration (Gajda, 2004; Huxham & Vangen, 2000; Vangen & Huxham, 2003b). Though the theory holds much promise with regard to the growing concerns about collaboration in IOR, the applicability of its principles and abstractions in the private sector remains unexplored (Huxham, 2003).

Social network theory has also flourished in recent years as a multilevel perspective to exploring IOR (Carpenter et al., 2012; Ferriani et al., 2013). However, the field is fragmented by two distinct views: the micro approach to IOR (study of networks at individual level) and the macro approach to IOR (study of networks at organizational level). Network scholars are thus critical that attention has not been paid to the fact that the embedding of networks is multiplex (e.g., Carpenter et al., 2012; Ferriani et al., 2013; Zaheer et al., 2010). So, the gap allowing the two theories to be combined

fruitfully and to view interorganizational collaboration from a novel lens remained. The study, accordingly, attempted to address the following questions:

*Q1) How do organizational level interactions affect collaboration between firms?*

*Q2) How do personal level interactions affect collaboration between firms?*

*Q3) How do interorganizational and interpersonal interactions coevolve in collaboration?*

The study purposely adopted a qualitative case study methodology as it enables researchers to focus on a particular phenomenon in operational detail (Yin, 2003). The exploratory nature of the questions, the limited knowledge about the topic, and the research context (logistic collaborations) demanded a methodology that uses a broader perspective at the beginning and progressively narrows down as the research advances. As such, an exploratory case study with an embedded design was used to generate as much insight as possible on the phenomenon.

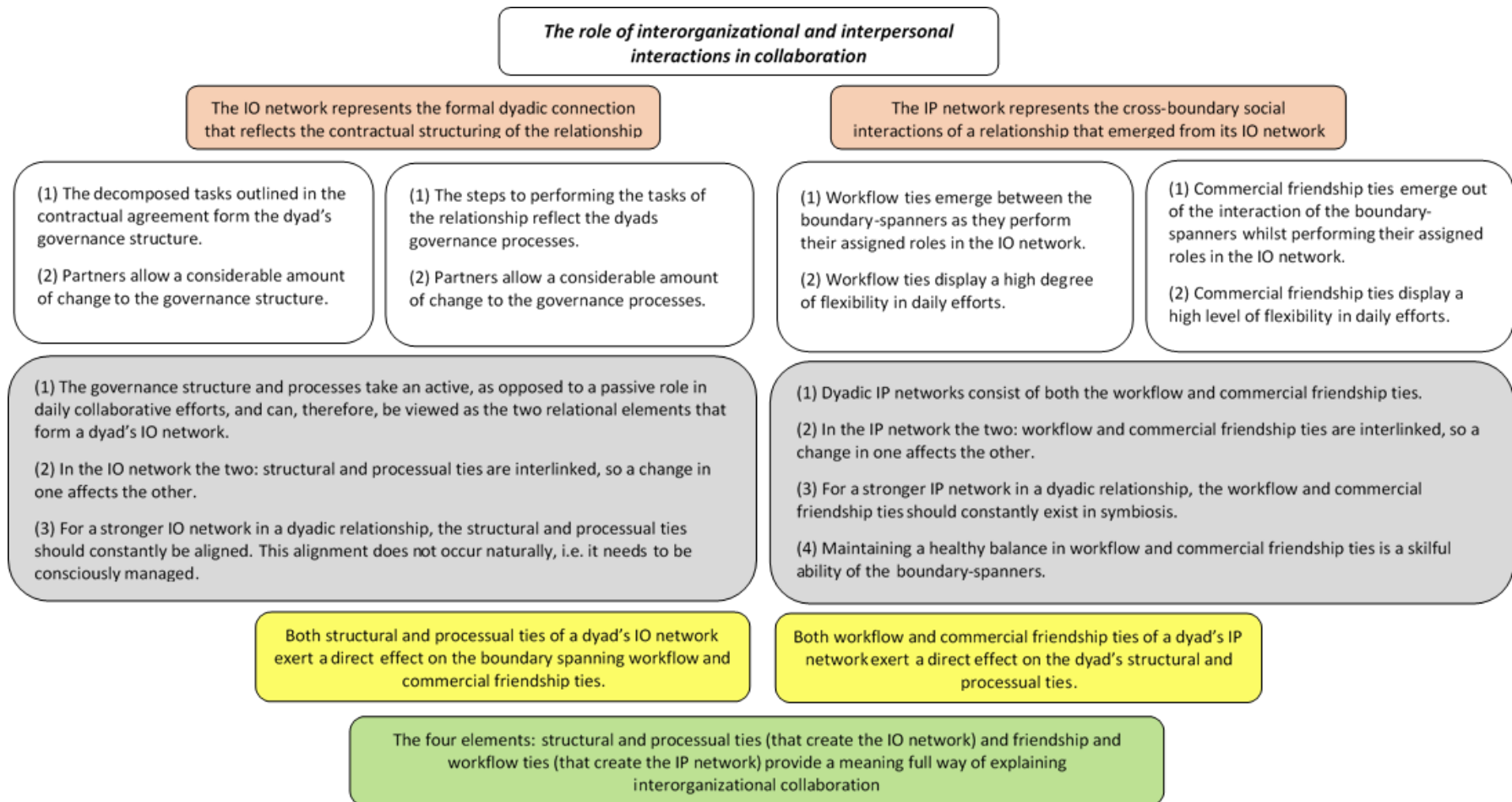
In order to gain a rich and in-depth understanding of the relational dynamics involved in collaboration, the scope of the study was extended beyond the dyadic level to a series of dyadic and triadic relationships of a firm by selecting an egocentric network as the case to be investigated. Investigating this egocentric network involved a simultaneous focus on the ego network and its subunits and required much rigor in data collection and analysis at different levels.

This thesis offers several significant contributions to the understanding of interorganizational and interpersonal interactions in collaboration. The next section provides a summary of the key findings, followed by the theoretical and practical implications of the study.

## **10.2 Findings of the research**

As shown in Figure 10.1, it was identified that the IO network represents the first and foremost formal dyadic connection that reflects the contractual structuring of a partnership. The decomposed tasks and coordinating activities of the relationship outlined in the contractual agreement manifest the dyad's governance structure. The detailed descriptions in the contractual agreement that clearly define how the decomposed tasks of the relationship should be performed, on the other hand, reflects the dyad's governance processes. Thus, it was apparent that the structure and processes are interlinked, so any change in one directly affects the other.

Figure 10.1: Research contributions



It was also observed that the governance structure and processes play an active as opposed to a passive role in daily collaborative efforts, and can, therefore, be viewed as two relational elements that form a dyad's IO network. To establish a stronger IO network, it was observed mandatory to maintain a symbiosis in the two.

As depicted in Figure 10.1, it was identified that the IP network of a dyad represents the cross-boundary social interactions of the relationship which result from its IO network. IP network consisted of both the workflow and friendship ties of the boundary spanners of the collaborating organizations. Significantly, it was discovered that a different form of a friendship termed 'the commercial friendships' existed with the workflow ties in the IP network and not the emotionally-driven affect-based friendships. These commercial friendships demonstrated a direct relationship to the boundary-spanning work roles and possesses.

It was moreover perceived that once strengthened, the workflow and commercial ties do not function individually. Both ties are in interplay. Moreover, the workflow and commercial friendship ties were flexible in nature. This flexibility has brought both negative and positive consequences to the relationships. The individual boundary spanners were thus found to make a conscious attempt to strike a healthy balance between the social and economic interest of their relationships in daily collaborative efforts. This ability to maintain a symbiosis in the workflow and commercial friendship ties is a skilful ability of the boundary spanners identified in the study as the 'symbiotic capability'.

As shown by the four yellow colored boxes in Figure 10.1, it was clearly identified that both the structural and processual ties of a dyad's IO network exercise a profound effect on the boundary-spanning workflow and commercial friendship ties in the IP network, while the workflow and commercial friendship ties in the IP network exert a profound effect on the structural and processual ties of a dyad's IO network. The development of an interorganizational relationship thus occurs through a combination of the four elements: structural ties, processual ties, commercial friendship ties and workflow ties. The partners should hence scan the corresponding effects and duly rectify any adverse outcomes to yield greater benefits from the IO and IP networks. Failure to do so will result in collaborative inertia in the long run.

### **10.3 Implications of the Research**

#### **10.3.1 Contribution to theory**

The framework presented in figure 9.3 opens the way for understanding the distinction between the interorganizational and interpersonal level interactions in collaboration. Particularly, by emphasizing some essential elements that are directly relevant to the study of collaboration, namely, the structural and processual ties (macro level), and the workflow and commercial friendship ties (micro level), the research contributes positively to the development of collaboration theory.

By proposing a unified social network theory of interorganizational collaboration, the study makes a crucial contribution to theory building in social network research. This is the first ever study in IOR social network research that discriminates between the

conceptually separable elements of IO networks and IP networks and proposes a new conceptualization — ‘a symbiotic existence’ — between the four elements for synergetic performance (see the box colored in green in figure 10.1). The focus on a symbiosis of the four elements allows for a departure from the dominant distinction between macro and micro domains of networks. Both domains have failed to consider the cross-level effect of networks that may shape interorganizational performance (Zaheer et al., 2010).

In addition to the above contribution, the study also addresses certain other gaps prevalent in network literature. For example, there was a controversial argument that relational contracts in the absence of any formal controls lead to successful collaboration (e.g., Gulati, 1995). However, to date no empirical validation has supported this argument. The present study discovered that personal networks or, in other words, relational contracts cannot singularly explain IOR. Formal documentation and standardization are primarily required to establish a relationship (see the two orange colored boxes in Figure 10.1). Documentation allows the relationship to be legally recognized beyond the time span of the individuals who are involved in negotiating its functionality.

The role of structure and processes in interorganizational performance is recognized in some research (e.g., Gulati, 1998; Milward & Provan, 2006). However, none of the work to date has addressed the coevolutionary effect of the two in collaboration. The suggested symbiotic existence of structure and processes in an IO network in this study

(see the grey colored box under IO network in Figure 10.1) thus brings unique insights to the interorganizational network field.

Network scholars have noted that understanding how IOR are successfully managed requires the study of horizontal processes and organizational structures (Barringer & Harrison 2000; Gulati, 1998). None of the studies to date has attempted to address this requirement. Insights on the generative nature of structural and processual ties of the IO network and the ongoing need for decision makers to be consciously aware of those changes are, therefore, significant contributions made to the network literature by this study.

Although the workflow ties and other personal ties such as communication and advice ties are discussed extensively in intraorganizational network literature, the IP network in IOR has so far received scant attention. Additionally, friendship ties were typically identified as affect-based relationships. The study revealed that in a collaboration context, instead of an affect-based friendship, it is a special type of friendship that exists with and complements workflow ties, and that these types of friendships specifically result from the boundary spanners' pursuing their work roles. So it was revealed that, as for workflow ties, structural and processual ties in the IO network have a direct effect on the boundary spanners' friendships — a finding so far unique to IOR network literature (see the grey colored box under IP network in Figure 10.1).

A number of studies have documented a significant overlap (e.g., Allen & Cohen, 1969; Brass, 1984; Ibarra, 1992; Mehra et al., 2006; Rank, 2008) in workflow and friendship

ties in interorganizational performance. None of the work, however, has addressed the coevolutionary effect of the two in collaboration. The suggested symbiotic capability of the boundary-spanning individuals in maintaining a healthy balance between the social and economic interests of their relationships thus brings new insights to the work on network multiplexity (e.g., Ferriani et al., 2013).

Besides, empirical work on social networks in IOR has continued to focus on single firms (e.g., Mattsson, 1985; Melin, 1989; Salmi & Möller, 1994). This focus has ignored the fact that organizations are interdependent rather than independent, and so the behavior of one affects the other. Quite a few studies (e.g., Larson, 1992) have thus extended their work to dyads and in so doing contributed vastly to the understanding of IOR. However, many (e.g., Choi & Wu, 2009; Provan et al., 2007) have been critical of this view pointing out that, ironically, a dyadic framework fails to fully comprehend the relational dynamics of interorganizational relationships as it ignores the fundamental network theoretical insight; i.e., actors and actor-to-actor relationships are likely to be influenced by the overall set of relationships (Provan et al., 2007). Yet, apart from the work of Choi (2009) who studied the behavior of a triadic relationship, none of the studies to date has attempted to explore the relational characteristics of a whole network (Provan et al., 2007). By focusing on the egocentric network of a logistics service provider that covers three of its suppliers and three customers, this study has made a significant breakthrough in interorganizational social network research.

### **10.3.2 Contribution to practice**

The major practical implication of this study is that the decision makers should pay attention to the changes in both micro and macro elements and their repercussions in order to ensure a symbiosis of the four elements for collaborative synergies. In particular, practitioners should realize that, even though the governance structure and processes are set at the beginning, certain alterations may be required at subsequent stages to safeguard the effectiveness of the collaboration. They should be prepared to make these changes when necessary. In particular, they should be aware that if a change is made to one area, i.e., to either the task in structure or the process, there is always a knock-on effect on the other. As a result, they should ensure that the particular knock-on effect is absorbed appropriately.

It was found from the study that despite having made an effort to make the necessary changes, the parties had not taken steps to monitor them thereafter. This shortcoming has a significant implication for practice because it indicates that, unless appropriate monitoring mechanisms are set, no change can be effectively made. As for the governance structure and processes, any structural changes made to the partners' intraorganizational structures, if not clearly communicated to the other party and conditioned through regular monitoring, will badly affect performance.

Though not addressed under the primary question of the study, it was revealed that the decision makers have not paid significant attention to the internal collaboration of the partnering organizations. Almost all the network diagrams depict the lack of internal

collaboration at the time of the critical issues. The study also calls the decision makers' attention to process leniency. It was evident that many issues at FMCG were an outcome of leniency in processes. The emerging issues at Apparel were also a result of the same leniency. However, it is important to realize that process rigidity too may bring adverse effects. Particularly, the third-party logistic providers should be flexible in adjusting themselves to the two scenarios (high/low process rigidity) that might prevail at the customer end. This adjustment may be possible if the third parties operate on a flat structure.

Practitioners' attention should also centre significantly on the IP networks of the partnerships. It was revealed from the study that these IP networks continually diverge from their initial status, thus bringing both negative and positive results to the relationships. However, the decision makers have, unfortunately, placed little value on these deviations. This oversight, as a result, has created many issues in the partnerships. They need to realize that the boundary spanners at operational level in particular play a critical role in collaboration.

They must also pay especial attention to the role of the middle management. It was revealed that the middle management restricts communication between the operational and the top levels rather than facilitating it. The third-party service providers should thus seriously question the need to maintain several middle layers in their hierarchy. It was discovered that 3PL's hierarchy has brought many unforeseen disadvantages. As such, allocating more responsibilities and authority to the boundary spanners at

operational level, while grooming them, will be more productive to the third-party logistic providers than maintaining several middle layers.

It should be significantly noted that the friendships developed between the boundary spanners, unless carefully monitored, may bring negative consequences. The informal hierarchies developed, both in organizations and across them, have drastically affected the partnerships' functionality. The development of such informal relationships is very much in evidence in almost all the network diagrams shown in the study.

Decision makers should regularly gauge these practices and take prompt action to recognize and institutionalize healthy relationships while eliminating malpractices. Consciously designing such structures is especially important in a 3PL context, where the boundary spanners placed in the customer sites may tend to go native. They may struggle to understand where the loyalty should lie, and therefore a certain amount of rotation of staff is probably advisable so that people maintain their loyalty to their own company rather than the customer that they are serving.

Most significantly, the decision makers should realize that, unlike the structures and processes, personal networks developed over time are hard to change or terminate. So the parties should strictly reinforce the processes and make the necessary transfers to/from those positions to avoid the risk of over-embeddedness.

### *Closing Comments*

Acquiring and sharing knowledge has been my philosophy in life. Hence, I embarked on an academic career, and pursued a doctorate.

The research journey was difficult, yet, rewarding. My personal and professional experiences as an academic, teacher, mentor, and leader equipped me with the initiative, passion, competency, and commitment necessary to succeed in my task.

During the four years of my study, I was able to build up many productive research relationships that undoubtedly would advance my work. Hence, I see this opportunity as just the beginning of a fruitful academic career.

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# Appendix 1

## Interview Guide

### **Interview 1: With the director of 3PL, the key informant of the customer and the key informant of the supplier**

#### **FOCAL COMPANY PROFILE**

I would like to know more about the following:

1. your background, orientation to the industry, and your role as the head of a Logistic company.
2. Nature of business/Industry (how do you explain the industry you are in?)
3. History of the company
4. The Structure
  - ❖ *Probing questions*
    - Number of employees
    - Reporting and decision-making mechanisms
    - The organizational chart
5. Systems and processes
  - ❖ *Probing questions*
    - What are your systems specifications and procedures in dealing with customers and supplier?
    - Have you mapped your current business processes?
    - To what extent do you think that the new systems (e.g.. TMS, Optimization etc.) would facilitate integration?

What processes have you implemented to streamline and integrate the demand for logistics services and procurement of the same?

How transparent are the rules/norms of operation with your customers to your employees and your partner's employees?

## **Interview 2: With the director of 3PL**

### **NATURE OF THE COLLABORATIVE STRUCTURE: THE CUSTOMER**

1. From your perspective how significant are logistics services to your customers?
2. Can you give an example of a "close" relationship and a "not close" relationship and an additional example of a relationship that might fall between the two extremes with your customers?

❖ ***Probing questions:***

Duratoon of contracts? Written/Verbal policies?

Transparency of the rules/norms of operation and information to your employees and your partner's employees?

Does the 80/20 rule apply here?

Does trust matter?

Does power matter?

3. How would you explain your working relationship with the customers mentioned above?

❖ ***Probing questions:***

Who are the key people you deal with in these organizations? (CEO, Strategic managers, consultants)

Are interactions formal or informal?

Are meetings formal or informal?

How frequent are the meetings held?

Where do these interactions mainly take place? (i.e., in the office or elsewhere)

To what extent have these interactions facilitated trust in your personal and business relationship?

What are the common issues faced with the customer?

How do your interactions with customers influence your interactions with suppliers?

4. I would like to learn about the most significant *collaborative incidents* you have encountered on your job. Please describe a successful collaborative experience that you ended up gaining a trusted relationship.....

❖ *Probing questions*

What barriers did you encounter as you worked on this initiative?

How were those barriers overcome?

How much of your long-term and short-term decision-making and day-to-day activities in this regard was affected by the existing systems and processes?

How often have you attempted to minimize such procedural barriers to sustaining the relationship?

Do you think that the right systems and processes are essential for successful collaboration?

To what extent did you use your informal networks in this regard?

Did your personal relationship strengthen the business relationship?

5. Please recall a difficult collaborative experience (when things did not go well, and you faced significant conflicts with your customer and where you were particularly frustrated).

❖ *Probing questions*

Who do you think was responsible? You /employees/the systems

How did you get to know of it? Did you get to know of it in time? At what point did you get involved?

What barriers (people and procedures) did you encounter as you intervened?

How were those barriers overcome? Did it go beyond the terms and conditions of the contract in solving the issue? Alternatively, do they still remain? (What did you want to do? What did you do?)

Did it reach any personal level? Alternatively, was it strictly official?

## **NATURE OF THE COLLABORATIVE STRUCTURE: THE SUPPLIER**

1. What is the number of total suppliers and the key suppliers?
2. What is your suppliers' nature of business? (Transportation, warehousing etc.)
3. How are duties, responsibilities and accountability assigned in relation to dealing with suppliers?
4. What main concerns do you have with your suppliers at present? How do you deal with them?
5. From your perspective how significant is 3PL your key suppliers in these segments?
6. Can you rate them in a partnership scale from strong to arm's length partnerships? Do your interactions vary significantly from one supplier to another? If so, on what basis?
7. Give some examples of a "close" relationship and a "not close" relationship and additional examples of relationships that might fall between the two extremes.

### **❖ *Probing questions***

Duration of contracts? Written/Verbal policies?

Transparency of the rules/norms of operation and information to your employees and your partner's employees?

Does the 80/20 rule apply?

Does trust matter?

Does power matter?

8. How would you explain your working relationship with the suppliers mentioned above?

❖ *Probing questions*

Who are the key people you deal with in these organizations? (CEO, Strategic managers, consultants)

Are interactions formal or informal?

Are meetings formal or informal?

How frequent are the meetings held?

Where do these interactions mainly take place? (i.e., in the office or elsewhere)

To what extent have these interactions facilitated trust in your personal and business relationship?

What are the common issues faced with the customer?

How do your interactions with suppliers influence your interactions with customers?

**Interview 3: With the identified participants in 3PL, customers and suppliers**

1. Could you please explain your position here and your responsibilities? (Probe as needed to understand the person's background, role and orientation).
2. To what extent do you think you understand the company's business model and your role in it?

❖ *Probing questions*

What steps has the company taken to orientate you in this role?

Are you open to your hierarchy perhaps the CEO? How quickly do you get to him?

Do you think your performance is measured in terms of the quality of your interactions with the customer?

3. How significant are the interpersonal interactions in long-term collaborative relationships?

❖ ***Probing questions***

What are the common concerns you have with regards to daily business operations?

How do you handle them? Do you get any help? If so, from whom?

Have there been instances where you have violated rules for the betterment of the operations? Have they been successful? How often has it happened and in what circumstances?

4. Please place your interactions with your customer/supplier clearly in your mind; Now, what is it like to work with them?

❖ ***Probing questions***

Who are the key people you deal with? (CEO, Strategic managers, consultants)

Are interactions formal or informal?

Are meetings formal or informal?

How frequent are the meetings held?

Where do these interactions mainly take place? (i.e., in office or elsewhere)

To what extent have these interactions facilitated trust in your personal and business relationship?

5. Can you think of any incidents, in particular, which occurred in the relationship?

6. Did you have a personal relationship with any of their managers with whom you interact?

(IF YES) What does that relationship mean to you?

❖ What, if any, impact does the personal relationship have on your business relationship?



## **Appendix 2**

### **Observation Protocol**

**Observe the task at hand- What? Interorganizational collaboration**

**How?**

**With whom?**

**Where?**

- a. Location, Layout, tools and technology used
- b. Working relationships (formal and informal)
- c. Frequency of interaction
- d. Modes of interactions
- e. Formal and informal communications
- f. Work process/procedure (structure) with the customers/suppliers

## Appendix 3

### *Participant Information Sheet*



1) What is the study about?

In catering the customer needs of highly volatile and competitive markets, 3PL firms need to repeatedly nurture their relationships with network partners. Hence, the leaders should consciously inspire such relationships for successful collaboration. The study investigates the activities of such leaders that form and drive network relationships for successful positioning in collaborative networks.

2) Who is carrying out the study?

The study is being conducted by Ms Samantha Ekanayake under the supervision of Prof. Paul Childerhouse and will primarily form the basis for the degree of Doctor of Philosophy at the University of Waikato. Ms Samantha Ekanayake can be contacted by email: [kcse1@waikato.ac.nz](mailto:kcse1@waikato.ac.nz) or by telephone: 8560396.

3) What does the study involve and how long will it take?

The study involves conducting informal interviews with the CEO and selected participants. These interviews will be held throughout a number of days dependent on the participants' work schedule. Total duration of the interviews for each participant is estimated to be 100 minutes, in five 20 minute sessions. During that time, it is also expected to carry out observations on the participants' behavior in day-to-day working environments.

A time limit of 60 days after final data collection has been set to intimate any change of opinion or alteration you may feel necessary. Such changes can be intimated through email or phone or alternatively you can request for personal discussion.

4) Can I withdraw from the study?

Being in this study is completely voluntary. You are not under any obligation to consent and if you do consent you can still withdraw at any time without affecting your relationship with the researcher or the University of Waikato. You may stop the interview at any time if you do not wish to continue. Then the audio record will be erased and the information provided will not be included in the study.

5) What will happen to the information collected?

All aspects of the study, including results, will be strictly confidential and only the researcher will have access to information on participants. The information will be used primarily for the PhD thesis and may be used for articles or presentations related to the study. Your identity will not be revealed in the research publication and pseudonyms will be used during the transcription process to maintain your privacy at all times. All

transcripts that relate directly to the thesis or associated articles will be retained indefinitely but only under absolute confidentiality. Tape recordings of the interviews will be wiped and notes that have not been used directly in the thesis will be destroyed. A report of the study may be submitted for publication, but individual participants or organizations will not be identifiable in such a report.

6) What if I require further information?

When you have read this information, Ms Samantha Ekanayake will discuss it with you further and clarify any concerns you may have. If you would like to know more at any stage, please feel free to contact Ms Samantha Ekanayake by sending email to [kcse1@waikato.ac.nz](mailto:kcse1@waikato.ac.nz) or calling Tel. 8560396

## *Consent Form for Participants*



### *Network Positioning and the Role of Leadership*

#### **Consent Form for Participants**

I have read the **Information Sheet for Participants** for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions in the study. I agree to provide information to the researchers under the conditions of confidentiality set out on the **Information Sheet**.

I agree to participate in this study under the conditions set out in the **Information Sheet** form.

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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