

The Dependency of Buyer to Forge Trust with Supplier for Further Collaboration: The Role of Relational Governance

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Abstract

Both contractual and relational governance are equally important tools to govern inter-firm relationship. Yet how dependency of the buyer can build trust to govern collaboration with suppliers to overcome economic challenges has not been fully explored. In response to the shortfall, this study uses a survey of 175 alliances between construction firms and material suppliers in Nepal. Structural equation modelling (SEM) was conducted to test the proposed hypotheses. The findings indicate that despite the presence of proper legal system in Nepal yet the parties in inter-firm exchange prefer relational trust to efficiently manage their relationship and pursue further collaboration. The findings also suggest that the relational trust serves as mediating variable between perceived dependency and exchange of information that would result long term collaboration between buyer and supplier.

Keywords: Buyer and Supplier, Perceived Dependency, Relational Governance, Contractual Governance, Collaboration, Trust, and Inter-organizational Relationship.

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ความพึงพอใจของผู้ซื้อในการสร้างความไว้วางใจกับคู่ค้าผู้จัดหา เพื่อความร่วมมือในอนาคต: บทบาทของการกำกับดูแลเชิงความสัมพันธ์

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บทคัดย่อ

การกำกับดูแลความสัมพันธ์ระหว่างองค์กรด้วยกลไกเชิงสัญญา (Contractual Governance) และกลไกเชิงความสัมพันธ์ (Relational Governance) ล้วนเป็นเครื่องมือสำคัญในการบริหารความร่วมมือระหว่างองค์กร อย่างไรก็ตาม บทบาทของการพึงพิงกันของผู้ซื้อในการสร้างความไว้วางใจเพื่อกำกับดูแลความร่วมมือกับผู้จัดหาในการเผชิญกับความท้าทายทางเศรษฐกิจยังไม่ได้รับการศึกษาอย่างเพียงพอ เพื่อตอบสนองต่อช่องว่างทางองค์ความรู้ การศึกษาครั้งนี้ใช้ข้อมูลจากการสำรวจความร่วมมือทางธุรกิจจำนวน 175 คู่ความสัมพันธ์ระหว่างบริษัทก่อสร้างและผู้จัดหาวัสดุก่อสร้างในประเทศเนปาล โดยใช้การวิเคราะห์แบบจำลองสมการโครงสร้าง (Structural Equation Modelling: SEM) เพื่อทดสอบสมมติฐานการวิจัย

ผลการศึกษาพบว่า แม้ประเทศเนปาลจะมีระบบกฎหมายที่เหมาะสมรองรับการดำเนินธุรกรรมระหว่างองค์กร แต่คู่สัญญายังคงให้ความสำคัญกับความไว้วางใจเชิงความสัมพันธ์ในการบริหารความสัมพันธ์และส่งเสริมความร่วมมือระหว่างกันอย่างมีประสิทธิภาพ นอกจากนี้ ผลการศึกษายังชี้ให้เห็นว่า ความไว้วางใจเชิงความสัมพันธ์มีบทบาทเป็นตัวแปรส่งผ่านระหว่างการรับรู้ถึงการพึงพิงกันของคู่ค้าและการแลกเปลี่ยนข้อมูล ซึ่งนำไปสู่ความร่วมมือระยะยาวระหว่างผู้ซื้อและผู้จัดหา

คำสำคัญ: ผู้ซื้อและผู้จัดหา, การรับรู้ถึงการพึงพิงกัน, การกำกับดูแลเชิงความสัมพันธ์, การกำกับดูแลเชิงสัญญา, ความร่วมมือ, ความไว้วางใจ, ความสัมพันธ์ระหว่างองค์กร

1. Introduction

In last several decades, a gamut of studies focusing on inter-firm relationship between buyers and suppliers have shown that the development of strong dyad ties with limited suppliers can lead to ultimate exchange performance, proper exchange of information, reduced transaction costs, transfer of knowledge, and value creation (Zhang, Li, & Huang, 2017; Drivers and Outcomes in International Marketing Channels, 2016; Poppo, Zhou, & Li, 2016; Griffith, Hoppner, Lee, & Schoenherr, 2017; Ju & Gao, 2017; Griffith & Zhao, 2015; Khan, Shenkar, & Lew, 2015). Firms enter inter-firm relationship with another firm to minimize their dependence on external environment (Pfeffer & Salancik, 2003; Hillman, Withers, & Collins, 2009). A repeated exchange ties with limited number of supplier foster exchange efficiency reducing opportunism (Williamson O. E., 1996), develops trust (Zaheer, McEvily, & Perrone, 1998), interorganizational routines (Dyer & Singh, 1998), and social connectedness between individuals and firms (Uzzi, 1999; Levinthal & Fichman, 1988). However, it is important that the inter-firm relationships between buyers and suppliers are managed efficiently (Griffith & Zhao, 2015; Barnes, Leonidou, Siu, & Leonidou, 2015; Johnston, Khalil, Jain, & Cheng, 2012; Seggie, 2012), as the inter-firm dyad along with advantages are exposed to opportunism and malfeasant behavior which can hinder exchange relationships (Barnes et al. 2015).

Contractual and relational governance are the two important governing mechanisms that have drawn the attention of scholars in the context of managing inter-firm relationships. These two governing mechanisms have been widely discussed to cope with opportunism and misunderstanding (Zhang, Li, & Huang, 2017; Wathne & Heide, 2000; Vlaar, Van Den Bosch, & Volberda, 2006). Contractual governance refers to reliance of formal written contract prior to entering exchange relationships. Resorting to transaction cost economy it advocates use of formal control to manage inter-firm exchange relationship (Williamson O. E., 1985), such as use of formal rules and procedures of collaboration to ensure accountability of exchange partners (Dahlstrom & Nygaard, 1999; Zhang, Li, & Huang, 2017). In contrast, relational governance emphasizes on relational aspects of economic transactions assuming all economic action characterized by social relation (Granovetter, 1985). This mode of governance favors informal, social interaction with an exchange partner to develop atmosphere to yield relational norms (Bello et al. 2010). In last several years, large body of research have contributed the efficacies of both contractual and relational governance in inter-firm relationship (Zhang, Li, & Huang, 2017; Ju & Gao, 2017; Griffith & Zhao, 2015; Poppo, Zhou, & Li, 2016). Some studies have argued that contractual governance facilitates relational governance (Abdi & Aulakh, 2017; Garbade et al. 2016; Tepic et al. 2011; Poppo & Zenger, 2002). Whereas others concluded that the choice of governance largely depend on level of asset specificity, property-based asset, opportunistic behavior, relational history, culture, risk, uncertainty, and power (Bonatto, de Resende, & Pontes, 2020; Mellewigt, Madhok, & Weibel, 2007; Reuer & Arino, 2007; Murray, 2001). However, few studies have examined the effect of dependency of buyer to forge trust as governing mechanism to manage inter-firm relationships. This is important because despite establishment of proper legal system in Nepal, yet parties in exchange relationship opt for relational governance rather than written contract. This is partly because of the lengthy procedure and high cost involved in court settlement. Also in certain context, it has been concluded that formal contract signal distrust and create breeding ground for opportunism (Cavusgil, Deligonul, & Zhang, 2004).

In response to these shortcomings and as research objectives, this study investigates two issues pertaining to inter-firm relationship and governance. First, drawing on inter-firm exchange governance literature, we advance buyer-supplier relationship literature (Poppo, Zhou, & Li, 2016; Zhang, Li, & Huang, 2017; Elfenbein & Zenger, 2017; Griffith & Zhao, 2015; Ju & Gao, 2017; Griffith, Hoppner, Lee, & Schoenherr, 2017) by developing and testing a model exhibiting how perceived dependency of a buyer can act as an antecedent condition to initiate inter-firm exchange with a supplier, building trust as governing mechanism to foster collaboration. Our findings suggest that the relationship between perceived dependency and information exchange is mediated by trust, and the relationship between perceived dependency and trust is mediated by frequency of communication between buyer and supplier.

Second, this work investigates the importance of efficiently governing inter-firm relationship, as such relationship can expose parties to opportunism and uncertainties. The result indicated that despite existence of proper legal system in Nepal to settle dispute between parties, yet parties in exchange relationship prefer to rely more on relational trust than on written contract. This is because in a network of buyers and suppliers, where economic action is characterized by social relation (Granovetter, 1985), trust, reputation, and prior ties govern such exchange relationship (Uzzi, 1997; Uzzi, 1999).

The remainder of the article is organized as follows: First, we briefly explain the theoretical background in constructing our conceptual model. We then present the series of hypotheses derived from the conceptual model. The hypotheses are then tested with a survey of Nepalese construction companies (buyers in this context) reporting on their exchange relationship with their primary supplier (both domestic and international). We present the result followed by a discussion of theoretical contribution and managerial implications. Finally, we discuss the research limitations and direction for future research.

2. Theoretical Background

Perceived dependency and relational governance

Both contractual and relational governance are equally important in managing inter-firm relationship. Indeed, contractual governance facilitates relational governance (Abdi & Aulakh, 2017; Garbade et al. 2016; Tepic et al. 2011; Poppo & Zenger, 2002). However, some studies have attributed level of asset specificity, property-based asset, opportunistic behavior, relational history, culture, risk, uncertainty, and power (Bonatto, de Resende, & Pontes, 2020; Mellewigt, Madhok, & Weibel, 2007; Reuer & Arino, 2007; Murray, 2001) in determining the choice of governance. In the context of buyer and supplier relationship, it is important to note that most studies have considered resource based-view, a resource within the firm, through which firms create competitive advantage, and hence form alliance (Skarmeeas, Zeriti, & Baltas, 2016; Poppo, Zhou, & Li, 2016; Khan, Shenkar, & Lew, 2015; Griffith, Hoppner, Lee, & Schoenherr, 2017; Griffith & Zhao, 2015; Elfenbein & Zenger, 2017). However, firm enter inter-firm relationship with supplier not only because of the resources within the firm but also to have access to resources which they cannot solely create. In a network, buyer can rely on one supplier for uninterrupted supply of resources, and therefore are highly dependent (Stern,

Ansary , & Coughlan , 1996). Hence, perceived dependency, in this context, is the extent to which the buyers are dependent on the supplier for supply of resources (Skinner, Donnelly Jr, & Ivancevich, 1987). The over dependence of buyer on supplier can lead to power asymmetry in an exchange relationship, where supplier can exert great deal of pressure on buyer, however in a network where the buyer is linked to association and has number of years in business, and market share, such influence from supplier can dramatically decrease (Skinner, Donnelly Jr, & Ivancevich, 1987). Hence, we argue that the extent of dependency of a buyer can lead to relational governance in exchange relationship.

Relational governance mechanism

In inter-firm governance literature, relational governance mechanisms refer rules and informal norms characterized by trust where partners in exchange relationship rely on them to make crucial decision (Garbade , Omta, & Fortuin, 2016). It stems from the values, and social norms developed through interactions in social relationship (Granovetter, 1985; Poppo & Zenger, 2002). This aspect of governance emphasizes self-enforcing safeguards through social interaction and control in order to curb opportunism (Dekker, 2004). Opportunism involves behaviors such as cheating, hiding or distorting information, reneging on both tacit and stated commitments, and unwilling to fulfill obligations both intentionally and unintentionally (Jap & Anderson , 2003). Although up front written contract drawn between buyers and supplier may assume all possibilities (Klien, 1980), however ability to draft such complete contract is limited due to bounded rationality of the parties in exchange relationship (Dekker, 2004; Gulati & Singh, 1998; Williamson O. E., 1985). Hence, where written contract fails to accommodate all possibilities of opportunism, such gap is filled by relational trust. Trust is regarded as the alternative mode of governance, a key concept of relational governance (Tepic, Omta, Trienekens, & Fortuin, 2011).

Trust is defined as a confidence or positive expectation displayed by a parties toward each other's behavior, and willingness to expose oneself to the risk and vulnerability associated with interdependence in an exchange relationship (Bhattacharya , Devinney , & Pillutla , 1998; Das & Teng, 1998; Hagen & Choe, 1998; Jones & George, 1998). As formal governance is associated with high cost, trust is an alternative mode of governance which is less costly and less formal (Gulati & Nickerson , 2008). As buyer becomes aware of uncertainty ahead, the choice of supplier is more likely based on accumulated trust of prior relationships (Hoetker, 2005). Such trust generated from prior relationship can alleviates fear of sharing valuable information, creating favorable ground for sharing information and coordination (Krishnan , Martin, & Nooderhaven, 2006). Additionally, trust act as significant factor in enhancing the impact of contextual factors on both governing mechanism and exchange performance (Bonatto, de Resende, & Pontes, 2020). It is a crucial governing mechanism of relational governance having strong association with exchange performance (Ferguson , Paulin, & Bergeron , 2005).

Exchange of information

As long-term relationship between buyer and supplier develops, the expectation of uninterrupted supply of goods and services also develops. Such exchanges between buyer and supplier also subsume sharing of information that are crucial for continuity of exchange relationship. The success of such relationship depends on the degree to which two parties are involved in design and production of components, exchange business and technical information, and coordination of decision, action and effort (Paulraj, Lado, & Chen, 2008). Proper information sharing can bring several benefits to both the parties, as they can maximizing potential opportunities, reducing transaction cost, lowering stock level, and improving cash flow (Lee, Whang, & Padmanabhan, 1998). As buyer-supplier relationship often resembles arm's-length ties (Cabigiosu & Camuffo, 2012), an atomistic relation between two parties, there is increasing evidence that how extensive sharing of information eliminates such vertical integration promoting cross-firm learning and problem solving (Helper, MacDuffie, & Sabel, 2000). Therefore, exchange of information in this context refers to the extent buyer shares information with supplier concerning their operation, projects, sales performance, and other information that are sensitive and crucial if leaked could deter their relationship (Howard & Squire, 2007; Cabigiosu & Camuffo, 2012).

Buyers' satisfaction

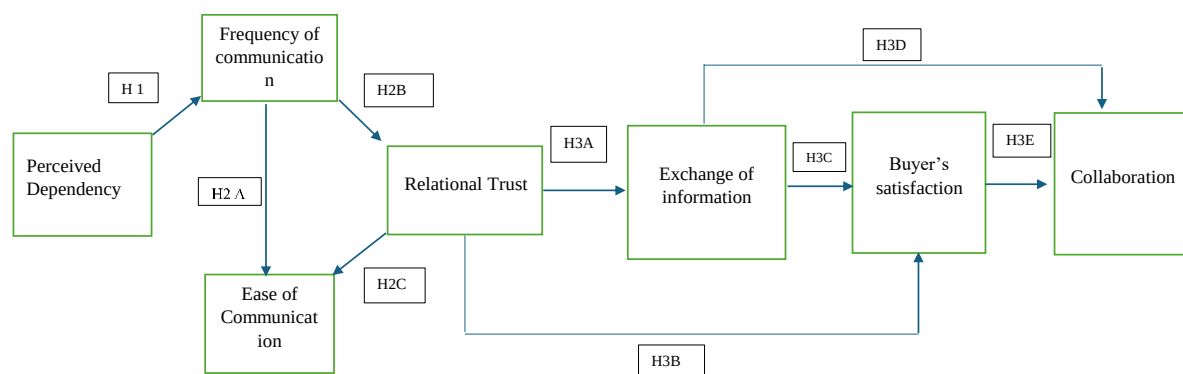
The main objective of this study is to show how perceived dependency of buyers initiate inter-firm exchange with their respective suppliers. Previous studies, in determining exchange performance have considered two dimensions: buyer perspective and supplier perspective (Cabigiosu & Camuffo, 2012; Ju & Gao, 2017; Chen, Paulraj, & Lado, 2004). For the purpose of this study, we adopt buyers' perspective as in many industries, it is the buyer that choose their supplier based on the quality of product and services, and the value they achieve in exchange relationship (Skarmeas, Zeriti, & Baltas, 2016; Ju & Gao, 2017; Zhang, Li, & Huang, 2017). Moreover, prior studies on exchange relationship have shown that research can be successfully conducted from single perspective in the relationship (Ju & Gao, 2017; Bello, Katsikeas, & Robson, 2010; Zhou & Xu, 2012). Hence, in this context, buyers' satisfaction refers to the extent to which the buyer is satisfied with supplier in terms of product and services, technology used in manufacturing, and the degree of flexibility offered (Cabigiosu & Camuffo, 2012).

Collaboration

Prior studies in inter-firm management have shown that collaboration, interdependence, and integration are the major determinants to forge cooperative relationship and remove organizational boundaries (Howard & Squire, 2007; Cabigiosu & Camuffo, 2012; Mitsuhashi & Greve, 2009; Paulraj, Lado, & Chen, 2008). Inter-organizational collaboration serves as a relational competency to enhance exchange performance in buyer-supplier relationship (Paulraj, Lado, & Chen, 2008). Organizations can foster collaboration through mechanisms such as structure, processes, and skills for bridging organizational and interpersonal difference

(Powell & DiMaggio, 2012). Indeed, the journey from atomistic, price focused, and non-relational short-hand ties to multidimensional, long-term, socially embedded, personal ties is only possible when there is an environment for collaboration between organizations. An inter-firm alliance is only possible when two or more organization see collaboration as beneficial, so both organizational goals and external opportunities jointly determine alliance formation (Mitsuhashi & Greve, 2009). These organizational goals include product innovation through intense communication and information sharing.

Figure 1: Conceptual framework



Hypotheses development

Perceived dependency and frequency of communication

Resource dependency theory (RDT) posits that organization in order to reduce their environmental dependency enter exchange relationship with a supplier (Pfeffer & Salancik, 2003; Hillman, Withers, & Collins, 2009). This argument is based on the assumption that very few organizations can create their own resources. However, such dependency on another organization for resources can create two challenges (Heide, 1994). First, such pursuit of gaining resources can lead to potential exploitation by the supplier (Heide, 1994; Zhong, Su, Peng, & Yang, 2017). Second, it creates uncertainty for organizations, given that resources that flow are not under the firm's control (Heide, 1994). Hence, in order to circumvent such challenges organizations, enter exchange relationship with their supplier with whom they have had prior transaction. Such, exchange relationship foster collaboration where organizations can bridge interpersonal and institutional differences (Howard & Squire, 2007). Organization often socializes with their supplier to create favorable environment for collaboration and long-term exchange relationship. Hence following hypothesis is proposed:

H1) Perceived dependency is positively associated with frequency of communication.

The role of socializing in developing relational trust

Previous research on exchange relationship between buyer and supplier have suggested that such exchange relationship is exposed to opportunism, malice, deceit, and other external threat (Barnes, Leonidou, Siu, & Leonidou, 2015; Elfenbein & Zenger, 2017; Griffith & Zhao, 2015; Ju & Gao, 2017). The upfront contract drawn between parties to foresee all possibilities and specify each party's obligation is incomplete, and rarely possible (Williamson O. E., 1975; Klien, 1980; Dekker, 2004; Gulati & Singh, 1998). This is because many activities that hinder exchange relationship are noncontractible (Hart, 1995). In order to, overcome unforeseen possibilities, organizations can either pursue vertical integration such as hierarchy (Williamson O. E., 1985) or opt for repeated transaction with one supplier (Elfenbein & Zenger, 2017).

According to the social embedded theory (SET), in the modern industrial society, all economic action is characterized by social relations (Granovetter, 1985). This embeddedness argument stresses that instead of pursuing economic gain through guile and opportunism, parties rely on personal relations and networks of such relations. Hence, exchange relationship is governed by mechanism such as social norms and unwritten rules based on trust (Garbade, Omta, & Fortuin, 2016). However, trust is not built overnight, it takes series of communication and historical successful transaction for one party to have complete trust on another. Trust, in economic action, develops from solid personal relation within a network preventing opportunistic behavior (Granovetter, 1985). Such enforcement of obligations, promises, and expectations developed through repeated communication and interaction facilitates norms of flexibility, solidarity, and information exchange (Poppo & Zenger, 2002). It has also been assumed that all misunderstanding relating to exchanges can be clarified through trust that is developed from higher frequency of communication (Garbade, Omta, & Fortuin, 2016). For buyers and suppliers to communicate freely and share information and knowledge it is important that there exists ease of communication, which is only possible when there is trust between them (Garbade, Omta, & Fortuin, 2016). Any staff from buyer's organization should be able to communicate freely via telephone, email, or face-to-face to concerned staff from supplier's organization. Therefore, it is hypothesized:

H2A) Frequency of communication is positively associated with ease-of-communication

H2B) Frequency of communication is positively associated with relational trust.

H3C) Relational trust is positively associated with ease of communication.

The role of trust in developing collaboration

The success of buyer-supplier relationship depends on the extent to which they collaborate, integrate, and are interdependent to each other (Howard & Squire, 2007). Indeed, collaboration along with buyer's satisfaction is the key aspects of evaluating exchange performance. Hence, it is essential for organizations to build organizational structures that are favorable for collaboration (Powell & DiMaggio, 2012). One of the key aspects of organizational structures is information exchange. In this context, exchange of information refers to interaction between buyer and supplier concerning the operation, projects, sales performance, and other information relating to values and ethics.

As network serves as conduit for information sharing (Gulati, 1995), such freely sharing of information between buyer and supplier requires trust. Preexisting trust between parties enhances information sharing under any mode of governance (Gulati & Nickerson, 2008). Trust plays an essential role in an exchange relationship, such as both interpersonal and interorganizational level can strengthen an exchange dyad by reducing transactional cost, overcoming bounded rationality and information asymmetries, and reducing conflict (Zaheer, McEvily, & Perrone, 1998). Organizations are more likely to deal with the same organization from the past relations as it is assumed that the price of information is cheap, accurate, trustworthy, and it is expected that there lies no opportunistic behavior (Granovetter, 1985). Therefore, the performance of exchange relationship between buyer and supplier depends upon the amount of information exchanged between them (Cabigiosu & Camuffo, 2012; Bonatto, de Resende, & Pontes, 2020). Also trust, which is a governing mechanism of relational governance, has a strong association with exchange performance (Ferguson, Paulin, & Bergeron, 2005).

The key ingredients of effective exchange relationship are collaboration and interdependence (Howard & Squire, 2007). However, the effect of interdependence on exchange performance can only occur when it is characterized by the quality of information exchanged between buyer and suppliers (Gulati & Sytch, 2007). Inter-organizational communication serves as a relational competency to enhance exchange performance (Paulraj, Lado, & Chen, 2008). Therefore, the quality of information can lead to buyer's satisfaction, which is the key aspects of measuring exchange performance. Past studies on exchange dyad, have suggested that the relationship outcomes are based on how buyer perceives supplier's practices (Sa Vinhas, Heide, & Jap, 2012; Skarneas, Zeriti, & Baltas, 2016; Ju & Gao, 2017; Zhang, Li, & Huang, 2017). Hence, in this context, buyer's satisfaction refers to the extent to which buyer is satisfied with supplier in terms of product and services, technology used in manufacturing, and the degree of flexibility offered in exchange relationship. The degree of perceived satisfaction from buyers' perspective can lead to successful collaboration. As interdependence theory predicts that organizations enter exchange relationship to manage resource through cooperation (Pfeffer & Salancik, 2003), in the context of buyer-supplier relationship trusting a resourceful supplier can help buyer achieve goal such as product innovation. Therefore, it is hypothesized that:

H3A) Relational trust is positively associated with exchange of information

H3B) Relational trust is positively associated with buyer's satisfaction

H3C) Exchange of information is positively associated with buyer's satisfaction

H3D) Exchange of information is positively associated with collaboration

H3E) Buyer's satisfaction is positively associated with collaboration

3. Method

Data Collection

We collected data to test our hypotheses in Nepal. We chose construction industry in Nepal, as this industry makes substantial contribution to the nation's GDP, making average 30% of total government spending. This industry is categorized into four categories: 1) Class 'A'; 2) Class 'B'; 3) Class 'C'; and 4) Class 'D'. The classification is based on the capital, total number of projects completed, and number of qualified staff. The data collection was conducted in the year 2022 A.D from July to December. We received a great help from FCAN (Federation of Contractor's Association of Nepal). The person responsible was requested to provide the list of the members/companies in the association. The list constituted 270 construction companies out of which 143 were class "A" companies, 40 were class "B", 35 were class "C", and 52 were class "D". The unit of analysis is at a dyadic inter-organizational level. Out of the list of 270 companies, we managed to collect 175 responses, which can be considered an adequate sample size. We first developed an English version of the questionnaire and translated the survey to Nepali. An independent translator was consulted to ensure clarity and correctness of the wordings used in Nepali version (Hoskisson, Eden, Lau, & Wright, 2000; Mullen, 1995; Ju & Gao, 2017). Indeed, both versions were sent together as some respondents preferred English version to Nepali version.

In this study, we collected data from contractors only (in this case 'buyers'). As in many previous studies, it has been proven that studies on inter-firm relationship can be successfully conducted with one side in the relationship (Bello, Katsikeas, & Robson, 2010; Zhou & Xu, 2012; Ju & Gao, 2017). Provided that the respondents are knowledgeable and has substantial experience in inter-firm relationship, such one-sided research is valid and can deliver meaningful insights (John & Reve, 1982). And since "organizations do not communicate; people do" (Paulraj, Lado, & Chen, 2008), it has been presumed that individual opinion on dyadic relationship issues will be a function of their organizational roles (Paulraj, Lado, & Chen, 2008; Ring & Van de Ven, 1994). Also individuals assuming key positions in their respective organizations are more informed concerning the various issues of inter-firm relationships (Paulraj, Lado, & Chen, 2008).

The survey was conducted in two phases. The first phase entailed the participation of business associates to assess the clarity, structure, length, and ease of use of questionnaires. We conducted pilot study with 10 prominent contractors. Respondents not only answered all the questions but also provided their insights, and comments concerning the design and structure of the questionnaire. Based on their comments and remarks we finalized the questionnaire. The second phase involved both visual and aural communication to improve response rate. Visual communication was conducted through emails using google forms, with an option for both English and Nepali versions. Those respondents who were not reachable through emails were personally handed questionnaires in their offices as well as in the corporate office of FCAN. The lower echelon staffs from FCAN agreed to help collect the responses from the contractors. Hence, the questionnaires were left in the office of FCAN as most contractors in the list often visited the office to attend meetings organized by association of FCAN. The staffs in FCAN collected majority of the responses in excuse of the meetings. The aural

communication focused on non-respondents, which involved follow-ups through telephone calls as a reminder which was structured to maximize the response rate (De Leeuw, 2005). The confirmed population of 270 required a sample size of 159 at a 95% confidence level and a 5% margin of error. Of the confirmed population of 270, 176 responses were received which exceeded the sample size of 159 (Table 1). A total of 7 responses were discarded due to incomplete information resulting in a net response of 169.

Table 1: Classification of collected data

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Class A	61	34.7	34.7	34.7
	2 Class B	28	15.9	15.9	50.6
	3 Class C	29	16.5	16.5	67.0
	4 Class D	58	33.0	33.0	100.0
	Total	176	100.0	100.0	

Measures

Perceived Dependency. We measured perceived dependency using Skinner et al.'s (1987) seven-item scale which assesses perceived dependency pertaining to (1) product delivery, (2) product supply, (3) product information, (4) price information, (5) field staff assistance, (6) financial assistance, (7) loan counseling, and (8) equipment supply. All eight items loaded onto a single factor (Cronbach's $\alpha = 0.85$)

Frequency of communication. We measured frequency of communication by adapting Garbade et al.'s (2016) seven-item scale, which operationalized frequency of communication pertaining to (1) telephone contact, (2) email contact, and (3) face-to-face contact. All three items successfully loaded onto a single factor (Cronbach's $\alpha = .609$). Values above .7 is acceptable; however, in this case, the alpha is just below .7. Since the items measuring this factor is less than 10, it is quite difficult to get the value above or equal to .70 (Pallant, 2007)

Relational trust. We measured relational trust using Garbade et al.'s (2016) seven-item scale, which evaluates relational trust pertaining to (1) promises kept by the supplier, (2) supplier makes no excessive request, (3) sincerity of supplier, (4) makes no decision that adversely affects the relationship, (5) makes decision that favors buyer's welfare, and (6) reliability of the supplier. All six items loaded onto a single factor (Cronbach's $\alpha = .83$)

Ease of communication. We operationalized ease of communication by adopting Garbade et al.'s (2016) seven-item scale, which measured ease of communication pertaining to (1) accessibility to supplier's organization, and (2) risk of leaking confidential information. All two items loaded onto a single factor (Cronbach's $\alpha = .44$). The α value is less desirable, which is far below the recommended value, this is because the number of items measuring the factor is only 2. Hence, it is difficult to achieve the desired value for scales with a small number of items (Pallant, 2007).

Exchange of information. We measured exchange of information using Cabigiosu & Camuffo's (2012) seven-item scale, making some adjustment that fit our context, which assesses exchange of information pertaining to information concerning (1) new construction

project, (2) inventory level, (3) project plan/demand forecast, (4) performance parameters of the project, (5) the cost breakdown structure of the projects in hand, (6) delivery schedules and other supply services, (7) project capacity and its level of saturation, (8) changes in volume, mix and sequencing of your current projects, and (9) key financial ratios. All nine items loaded onto a single factor (Cronbach's $\alpha = .88$).

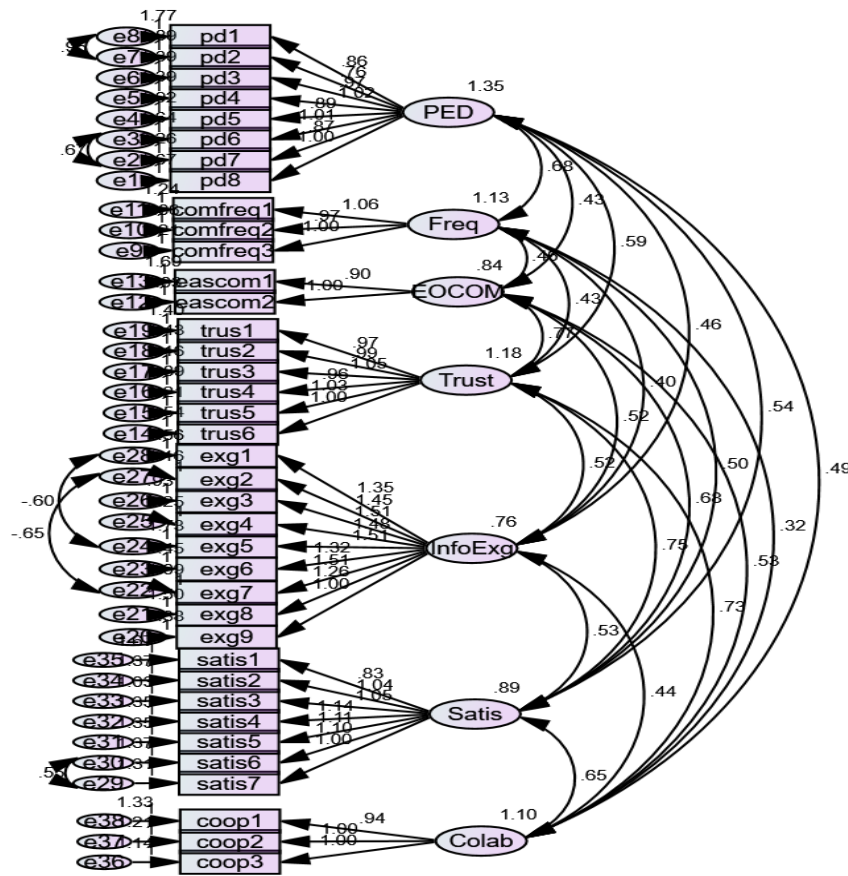
Buyer's satisfaction. We measured buyer's satisfaction by adopting Cabigiosu & Camuffo's (2012) seven-item scale, which operationalizes buyer's satisfaction pertaining to supplier's (1) product and services, (2) technology, (3) quality of supply services, (4) price of product and services, (5) flexibility in customization and modification, (6) batch size, and (7) order to delivery lead time. All seven items loaded onto a single variable (Cronbach's $\alpha = .837$).

Collaboration. We operationalized collaboration using Powell & DiMaggio's (2012) seven-item scale, making minor changes that fit our context, which measures collaboration pertaining to (1) loyalty, (2) face-to-face communication and planning, and (3) high level corporate communication. All three items loaded onto a single factor (Cronbach's $\alpha = .718$).

Analysis Procedure

We conducted reliability and validity test via CFA using AMOS statistical software. The first order CFA model included perceived dependency, frequency of communication, ease of communication, relational trust, exchange of information, satisfaction, and collaboration. To ensure the good model fit, the first measure was the χ^2 of 1196.207 ($df(\chi^2) = 639$) with probability of less than .0001 ($p < .0001$) suggesting that fit of the data to hypothesized model is not entirely adequate. The second fit indices GFI, which value stood at .744 suggesting that fit of the data to proposed model is satisfactorily adequate. The third indices IFI = 813 implying that fit of the data to proposed model is adequate. Likewise, CFI and RMSEA values stood at .809 and .072 indicating adequate fit (Figure 2).

Figure 2: Overall analysis of first order CFA model



Notes: * $p < 0.05$; $\chi^2 = 1196.207$, $df = 639$, $p = 0.000$, $CMIN/DF = 1.82$
 GFI = 0.744, RMSEA = 0.072

The factor loadings for each indicator on its respective constructs are statistically significant ($p < .001$), and there is no evidence of cross loading, thus providing support for the dimensionality and convergent validity of the constructs. The composite reliability of each construct ranges from 0.45 to 0.89. All the construct are above the .60 recommended cut off (Bagozzi & Yi, 1988) except for two constructs frequency of communication and ease of communication with values less than cut off value, indicating less than satisfactory reliability. The values for convergent validity ranges from .40 to .50 with cut off value above .50. This indicates the convergent validity of constructs are less than satisfactory. Finally, for discriminant validity, four constructs perceived dependency, frequency of communication, exchange of information, and collaboration their AVEs values have exceeded the squared correlations between all pairs of variables (Fronell & Larcker, 1981). Thus, indicating each construct shares more variance with its measures than with other construct. However, three construct buyer's satisfaction, ease of communication, and relational trust their AVE values have not exceeded the squared correlations, hence revealing mediocre discriminant validity.

Table 2: The criteria of good fit (first order model)

Indices	Criteria	Statistical results
Good model fit for all criteria		
χ^2	$p \geq 0.05$	0.000
CMIN/DF	Close to 1.00	1.82
GFI	Close to 1.00	0.744
CFI	Close to 1.00	0.809
SRMR	< 0.05	0.062
RMSEA	< 0.08	0.072

Table 3: Composite Reliability, Convergent Validity, and Discriminant Validity

	CR	AVE	MSV	MaxR(H)	Satis	PED	Freq	EOCOM	Trust	InfoExg	Colab
Satis	0.833	0.418	0.623	0.838	*0.64						
PED	0.842	0.402	0.305	0.848	0.494	*0.646					
Freq	0.632	0.369	0.305	0.654	0.497	0.552	*0.60				
EOCOM	0.450	0.290	0.623	0.450	0.789	0.402	0.469	*0.539			
Trust	0.833	0.454	0.593	0.836	0.734	0.468	0.371	0.770	*0.67		
InfoExg	0.898	0.500	0.415	0.910	0.643	0.452	0.435	0.644	0.552	*0.707	
Colab	0.720	0.462	0.438	0.721	0.662	0.402	0.289	0.551	0.640	0.481	*0.68

CR = Composite Reliability
 AVE = Convergent Validity
 *Discriminant Validity

Criteria
 CR > 0.70
 AVE > 0.50
 If square root of AVE > Inter-construct Mean

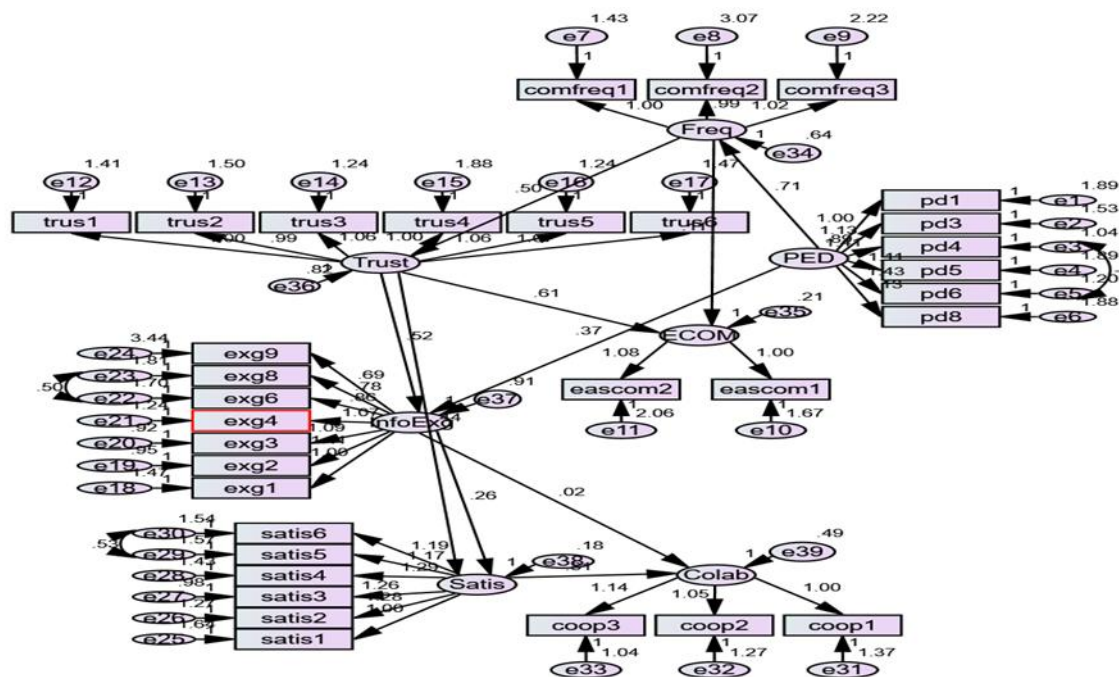
4. Hypotheses Testing and Results

Prior to testing of hypotheses, the overall model fit of second order CFA was conducted with respect to one or more goodness-of-fit measures. The model fit was assessed using six overall indices of fit as shown in Figure 2 and summarized in Table 2 accordingly.

Table 4: Variables and their codes

S.N.	Name of the variables	Codes
1	Perceived Dependency	PED
2	Frequency of Communication	Freq
3	Ease of Communication	ECOM
4	Relational Trust	Trust
5	Exchange of Information	InfoExg
6	Buyer' Satisfaction	Satis
7	Collaboration	Colab

Figure 3: Overall results of analytical model



Notes: * $p < 0.05$; $\chi^2 = 863.006$, $df = 483$, $p = 0.000$, $CMIN/DF = 1.78$

GFI = 0.776, RMSEA = 0.068

Table 5: Path coefficients among variables in terms of total direct and indirect effects

Variables	Effect	Perceived Dependence	Frequency of Commu- nication	Relational Trust	Exchange of infor- mation	Buyer's Satis- faction	Colla- boration	Ease of Commu- nication
Frequency of communication	DE	0.642	0.000	0.000	0.000	0.000	0.000	0.000
	IE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	TE	0.642	0.000	0.000	0.000	0.000	0.000	0.000
Relational Trust	DE	0.000	0.502	0.000	0.000	0.000	0.000	0.000
	IE	0.322	0.000	0.000	0.000	0.000	0.000	0.000
	TE	0.322	0.502	0.000	0.000	0.000	0.000	0.000
Exchange of information	DE	0.291	0.000	0.453	0.000	0.000	0.000	0.000
	IE	0.146	0.227	0.000	0.000	0.000	0.000	0.000
	TE	0.437	0.227	0.453	0.000	0.000	0.000	0.000
Buyer's Satisfaction	DE	0.000	0.000	0.575	0.386	0.000	0.000	0.000
	IE	0.354	0.377	0.175	0.000	0.000	0.000	0.000
	TE	0.354	0.377	0.75	0.386	0.000	0.000	0.000
Collaboration	DE	0.000	0.000	0.000	0.025	0.671	0.000	0.000
	IE	0.248	0.258	0.514	0.259	0.000	0.000	0.000
	TE	0.248	0.258	0.514	0.283	0.671	0.000	0.000
Ease of Communication	DE	0.000	0.138	0.757	0.000	0.000	0.000	0.000
	IE	0.332	0.380	0.000	0.000	0.000	0.000	0.000
	TE	0.332	0.518	0.757	0.000	0.000	0.000	0.000

The first fit index was χ^2 of 863.006 ($df(\chi^2) = 483$). For a proposed model to satisfactorily represent the sample population, the χ^2 value must be non-significant ($p < 0.5$) (Carmines & McIver, 1981). The significant level of 0.000 of χ^2 of the model is below the threshold level of 0.05 indicating less than satisfactory model fit. The second fit index reported the normalized χ^2 (CMIN/DF), where the χ^2 was computed according to the degree of freedom to reckon the model fit. To ensure adequate model fit, the normalized χ^2 value must be less than 2.0 or 3.0 maximum (Carmines & McIver, 1981). With χ^2 of 1.78, the model provided a satisfactory explanation of the data. In terms of the comparative fit index (CFI) and goodness-of-fit (GFI); the value of these two indices ranges from 0 to 1.00. The value closest to 1.00 is considered good fit. For this model, the GFI was 0.776 and the CFI was 0.827, indicating that the model displayed a satisfactory representation of the data.

Table 6: The criteria of good fit (Second order model)

Indices	Criteria	Statistical results
Good model fit for all criteria		
χ^2	$p \geq 0.05$	0.000
CMIN/DF	Close to 1.00	1.78
GFI	Close to 1.00	0.776
CFI	Close to 1.00	0.827
SRMR	< 0.05	0.0742
RMSEA	< 0.08	0.068

Next fit index, is the root-mean square residual (RMR), which in contrast, is a measure of the variance and covariance that are unexplained in the model. The value close to 0 indicates good fit (Brown & Cudeek, 1993). For this model, Standardized RMR was 0.0742, implying that little of the variance and covariance was left unaccounted for by the proposed model. The achieved value confirmed the satisfactory soundness of the model fit. Finally, the root mean square error of approximation (RMSEA) is an estimate of the discrepancy between the observed and estimated covariance matrices in the population. For well-fitting model, in conjunction to RMSEA the value must be close to 0 (Arbuckle, 1995) or the cut-off point of 0.08 (Byrne, 2016). In the model, the value of RMSEA was 0.068 indicating adequate model fit.

Referring to the findings, the model tested in this study has verified the importance of several variables related to the buyer-supplier exchange relationship in nine hypotheses. Seven of them were confirmed their significant correlations and were summarized overall direct and indirect effects in Table 3

Then, hypothesis testing was performed. Seven out of nine hypotheses were confirmed with positive relationships. The hypothesized model has a significant mediating effect on collaboration. It can be concluded that seven out of nine hypothesized relationships, H1, H2B, H2C, H3A, H3B, H3C, and H3E, were found to be statistically significant at the 0.05 level in direct causal relationship, while two of them consisting of H2A and H3D were rejected. H3D has only indirect effect through other mediating variable ($\beta = 0.283$; $p \geq 0.05$). It was found that H2A, the results show that the direct effect of frequency of communication on the ease of

communication in the buyer and supplier exchange relationship was not statistically significant H2A ($\beta = 0.518$ ($DE = 0.138 + IE = 0.380$); $p \geq 0.05$). Thus, H2A was rejected.

The standard coefficient for the relationship represented by H1 ($\beta = 0.642$ ($DE = 0.642 + IE = 0.000$); $p \leq 0.05$), H2B ($\beta = 0.502$ ($DE = 0.502 + IE = 0.000$); $p \leq 0.05$), H2C ($\beta = 0.757$ ($DE = 0.757 + IE = 0.000$); $p \leq 0.05$) had a strong positive impact of perceived dependency on frequency of communication a midrange variable, frequency of communication on relational trust, and relational trust on ease of communication. These mid range variables represented relational governance in the proposed model. The model posited that relational trust has a strong positive impact on other two mediating variables exchange of information and buyer's satisfaction. H3A ($\beta = 0.453$ ($DE = 0.453 + IE = 0.000$); $p \leq 0.05$) and H3B ($\beta = 0.750$ ($DE = 0.575 + IE = 0.175$); $p \leq 0.05$); thus, confirming H3A and H3B. Lastly, the model also postulated that there is strong association between exchange of information and buyer's satisfaction and strong positive impact of buyer satisfaction on collaboration. Hence, H3C ($\beta = 0.386$ ($DE = 0.386 + IE = 0.000$); $p \leq 0.05$) and H3E ($\beta = 0.671$ ($DE = 0.671 + IE = 0.000$); $p \leq 0.05$). This confirms that these two hypotheses, H3C and H3E, are statistically significant.

5. Discussion

The scope of this study was to address the gap in the inter-firm governance literature by advancing understanding of relational governance in buyer-supplier relationship, and also an attempt to clear the ambiguity of contractual governance vs relational governance. As such we worked on establishing the relationship perceived dependency and relational trust. We also showed that relational trust serves as a mediating variable between perceived dependency and exchange of information, and buyer's satisfaction serves as mediating role between exchange of information and collaboration relationship. Finally, we identified the role relational trust in creating favorable environment for collaboration. The finding provides new insight in Nepalese context of exchange relationship, advancing the inter-firm governance literature in several significant ways.

Theoretical Implication

The result of this study discloses new insights about the role of perceived dependency in developing relational trust within the buyer-supplier exchange relationship. Also, our findings attempt to clear the ambiguity in choice between contractual and relational governance from previous studies in inter-firm governance literature (Bonatto, de Resende, & Pontes, 2020; Abdi & Aulakh, 2017; Bhattacharya, Devinney, & Pillutla, 1998; Faems, Janssens, Madhok, & Looy, 2008; Elfenbein & Zenger, 2017; Ju & Gao, 2017; Poppo & Zenger, 2002; Poppo, Zhou, & Li, 2016). To date the past studies on inter-firm governance has tended to focus on factors such as assets specificity, resource complementary, property-based asset, opportunistic behavior, relational history, culture, risk, uncertainty, country level factors and power in determining the choice of governance in managing inter-firm relationship (Bonatto, de Resende, & Pontes, 2020; Mellewigt, Madhok, & Weibel, 2007; Reuer & Arino, 2007; Murray, 2001; Griffith & Zhao, 2015). However, there has been few studies that has focused

on dependency of buyer to forge relational trust in buyer-supplier exchange relationship, especially in Nepalese context. Hence, to address this shortcoming, we examine and find that frequency of communication act as the mediating variable between dependency of buyer and relational trust.

First, we find that trust between parties in exchange relationship is not built overnight. It takes series of transactions to make parties in relationship to trust each other. The result indicates that when the buyer is dependent on supplier for goods and services, perceived dependency has direct association with the frequency of buyer. We suggest this effect is mainly due to the dependency of buyer, as the buyer becomes more dependent on supplier, they tend to communicate more frequently with their supplier to maintain consistent supply of goods and services. Also, such frequent communication can gradually build trust between two parties. The result supported this notion as there was direct association between frequency of communication and relational trust. We theorized that the as the parties in relationship build trust, all channels for communication opens giving buyers a privilege to communicate openly with any staffs at the supplier's organization. The result indicated according to our prediction, establishing positive association between frequency of communication and ease of communication. This work extends to theoretical arguments as well as findings of Garbade et al., (2016) that the ongoing communication between parties in alliance can open other channels of communication giving parties a latitude to communicate any time.

Second, the results extend the inter-firm governance literature demonstrating that despite the existence of proper legal system in Nepal to settle disputes, yet organizations prefer relational trust to govern and manage their exchange relationship. This is because contractual governance can be costly, and drafting legal documents can cost both parties substantially. Besides, due to bounded rationality of the parties, to foresee all possibilities and specify every contingency is rarely possible (Williamson O. E., 1975; Klien, 1980; Dekker, 2004; Gulati & Singh, 1998). The result also indicated that the exchange relationship between buyer and supplier was solely managed by relational trust, there is a strong association between relational trust and exchange of information. This implies that rather than relying on formal contract, it is more convenient to exchange crucial information for parties which is entirely governed by trust. Indeed, in the network where organizations are interconnected and are depended to each other, such actions are characterized by social reciprocity and reputation. Hence, in order to maintain reputation and creditability, organizations renege from opportunistic behavior. This work extends the arguments and findings of Uzzi (1997), in that the result suggests that all economic actions are characterized by social reciprocity, where social norms and rules act as a self-governing mechanism.

Third, the primary objective of exchange relationship is to create favorable outcomes and reduce environmental dependency. Hence, organization enter exchange relationship to collaborate as well as to reduce environmental dependency. The result indicates that buyer enter exchange relationship with supplier in a hope to achieve continuous supply of goods and services, hence they tend to share information that would benefit both the parties. Such extensive sharing of information resulted strong and direct association between variables: exchange of information and buyer's satisfaction. Furthermore, collaboration between buyers and supplier only resulted when buyers were satisfied with their respective supplier. Such relationship adds new insights in the existing buyer-supplier exchange relationship literature.

Practical Implication

From practical perspective, our studies can serve managers in two ways. First, it guides aspiring managers that to do business in Nepal, one must understand that the market is governed by network, where economic action is embedded in structures of social relations. In other words, rather than rely on formal written contract, the parties in exchange relationship prefer relational ties governed by social norms and rules based on trust. Hence, the organization must abide by the norms and rules of network, and avoid actions that are deemed opportunistic and malfeasant lest smear their reputation and credibility. Furthermore, this study also implicates managers that trust in exchange relationship or any kind of alliances is not built overnight, it takes series of successful historical transaction to establish exchange dyad supported by social relation. Hence, managers willing to conduct business in Nepal, must maintain good social relation rather than relying on formal contract. As such over reliance on formal contracts can discourage another party in the exchange relation.

Second, the finding provides some suggestions relating to collaboration. The primary objectives of exchange relationship are not limited to continuous supply of goods and services, but also to have access to information that are not easily available. Such access to information can only occur when both parties in relationship trust each other. Trust between parties can foster an environment that is favorable for collaboration. Collaboration requires changes in structure of both organizations to bridge organizational differences. Such differences include cultural, structural, and operational. Hence, this study helps aspiring managers by implying that to bridge such differences it is important to maintain intense communication that results in developing trust, which in turn creates a favorable milieu to exchange information and collaborate for innovation.

6. Limitations and Directions for Further Research

Although our study makes several contributions to inter-firm governance research and practice, it is not without its limitation. First, we examined the impact of perceived dependency on the choice of governing mechanism, and influence of relational trust on collaboration using a cross-sectional survey, which is not only subject to common method bias but also faces limitation in establishing causality because the study records data at single point in time. Since, cross-sectional studies are limited to a single snapshot, preventing researchers from tracking changes in behavior, trends, or the development of phenomena over time, we encourage future researcher to conduct longitudinal method to examine the impact of perceived dependency, and relational trust on collaboration. Such assessment not only overcomes the common method bias, but also the difficulty of establishing causality due to data recorded at single point in time,

Second, the scope of the study is limited to the sample specific to construction industry only, whereby the study lacks inclusiveness of buyer-supplier relationship in other areas. Hence, the result of the study may only be applicable to buyer and supplier related to construction industry only, and may fail to provide proper insight to other industry such as manufacturing, trading, and service sectors. Since, the scope is limited to construction industry only we may not be able to assert that the relationship between dependency and relational trust can be

applied to other context. Hence, it is recommended future researcher to expand sample size inclusive of buyer-supplier exchange relationship from other industries.

Third, the study only explores the single aspect of inter-firm governance, which is relational governance. Exploring only one aspect of governance literature can limit the scope of the study as such the effect of other governing mechanisms such as formal governance can remain unknown in Nepalese context. Hence, we encourage future researcher to explore the effect of formal governance not only in the context of construction industry but also in other manufacturing and service industries such as banking and financing.

Finally, although this study attempts to fill the gap by examining the impact of perceived dependency in formation of exchange relationship between buyer and supplier, the work is limited to single perspective only. In other words, there are other factors that can initiate collaboration between buyer and supplier, such as asset specificity, resource complementary, uncertainty, resource complementary, property-based asset, opportunistic behavior, relational history, culture, risk, uncertainty, country level factors and power. Such factors can play significant role in determining the governance structure of inter-firm relationships. Hence, we encourage future researcher to includes factors that are more significant in determining the choice of governance structure that can provide result with broader scope in Nepalese context.

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