Usama Awan

INTER-FIRM RELATIONSHIP LEADING TOWARDS SOCIAL SUSTAINABILITY IN EXPORT MANUFACTURING FIRMS

ACTA UNIVERSITATIS LAPPEENRANTAENSIS 867

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Abstract

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The recognition and move of social sustainability practices are emerging as one of the essential practical management issues of the latter half of the 20th century. Social sustainability remained the focus of considerable supply chain management and marketing research,supporting the idea that inter-firm capabilities are important antecedents to lead towards social sustainability. In September 2015, the United Nations presented 17 Sustainable Development Goals (SDGs), adopted by all the Member States of the UN. The concept of partnership as an agenda of sustainable development goals emerged at the World Commission of United Nation Sustainable Development Goal 17, which emphasizes the importance of global partnership for sustainable development. The existing research on the success of governance mechanism examines the institutional environment, transaction characteristics, and national culture, while some advocate the need for specific organizational culture impact on the inter-firm relationships. So far, less attention has been paid to the specific organizational culture on the success of governing inter-firm relationship. An essential understanding is needed, how different organizational capabilities weigh the importance may help both the suppliers and buyers' firms to develop and maintain a successful relationship.

The research aims to provide an examination of how export manufacturing firms pursue social sustainability. Specifically, a) this study examines the relative importance of the factors in achieving success in the inter-firm relationships in cross-culture relationship, and b) how does it affect social performance. This study tests a conceptual model with a survey research design of export manufacturing firms from Pakistan, using structural equation modelling (SEM) to test the model. The survey data collected from 239 export manufacturing firms in different industries. The findings of the thesis contribute to the empirical literature on international relationship management as well as contribute to the operations management literature by investigating the independent effects of the relational and contract governance on a commitment to sustainability and collaboration. Taking a theoretical perspective, the current study contributes to transaction cost economics (TCE) literature by showing that the firms with better administrative efficiency experience can increase the execution of the contract governance. The result of the study is modestly supporting the role of cultural intelligence (CQ) on the relationship between relational governance and contract governance as they relate to developing commitment and collaboration. Specifically, relational governance is more effective at developing more commitment to metacognitive cultural intelligence (acquire

and understand other cultural knowledge) and behavioural cultural intelligence (individual exhibit an appropriate enacted selected verbal and nonverbal behaviours). Conversely, the contract governance is more effective at developing more collaboration with meta-cognitive cultural intelligence and motivational cultural intelligence (an individual interest to direct attention and energy in learning other cultural differences).

The role of cultural cognition in a managerial decision related to governing inter-firm relationships is increasingly growing in sustainability literature. As regards to the findings, cultural intelligence is a key to maintain an inter-firm relationship across the border, and it has a positive impact on social performance. The findings support that benefits of cultural intelligence in exploiting the embedded cultural knowledge in inter-firm relationships. A significant contribution of the thesis is that distinct governance mechanism modes require distinct dimensions of cultural intelligence for a successful inter-firm relationship. The findings show that aligned governance mechanisms and cultural intelligence context are important in the success of inter-firm relationships leads towards social sustainability. Therefore, the success of the inter-firm relationship depends upon the contract governance with coordination clauses with reliable cultural intelligence, which enhance more collaboration and expand the firm's social sustainability. Therefore, this thesis concludes that in achieving social sustainability, manufacturing firms would require governance mechanisms which aligned their cultural norms with reliable cultural intelligence to enhance collaboration among different global buyers. The results conclude that partnership between buyer and supplier firms that mobilise knowledge resources and expertise support the United Nations Sustainable Development Agenda 17.

I also hope this thesis could inspire practitioners, scholars and policy initiators in emerging economies to achieve a better understanding of governance mechanism effectiveness and its consequences on the social sustainability outcomes. Although cultural intelligence and collaboration are necessary, they may not be able to solve the social sustainability problems completely, so further investigation is required to investigate what are the other factors that may improve the sustainable development of companies. Finally, it hopes that other academic scholars will seek to establish the validity of the findings in this thesis by replicating the research design across industries 4.0 with the internet of things. Industry 4.0 attracting attention and future researchers should investigate the evolution of trust in buyer-supplier relationships and how does it affect on the governance of international relations in the context of internet of things(IoT) and blockchain technologies.

Keywords: Inter-firm relationship, Corporate sustainability, Relational governance, Contract governance, Cultural intelligence, Social sustainability

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Usama Awan
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Dedicated to inspiring Sister

Khalida Liaquat

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List of publications

This dissertation is based on the following published papers. The rights have been granted by publishers to include the papers in the dissertation.

I. Awan, U., Kraslawski, A., & Huiskonen, J. (2018). Buyer-supplier relationship on social sustainability: Moderation analysis of cultural intelligence. Cognet business and management,5(1), pp.1-20
II. Awan, U., Kraslawski, A., & Huiskonen, J. (2018). Governing inter-firm relationship for social sustainability: The relationship between governance mechanism, sustainable collaboration and cultural intelligence. *Sustainability*, 12 (10), pp.1-20
III. Awan, U., Kraslawski, A., & Huiskonen, J. (2018). The impact of relational governance on performance improvement in export manufacturing firms. *Journal of Industrial Engineering and Management*, 11(3), pp. 349-370.
IV. Awan, U., Kraslawski, A., & Huiskonen, J. (2018). A Collaborative Framework for Governance Mechanism and Sustainability Performance in Supply Chain. *In International Conference on Dynamics in Logistics* (pp. 67-75). Springer, Cham.

Author's contribution

I am the principal and corresponding author, conceived of the presented idea, developed the conceptual framework, interpreting the results collected and analyzed the data in papers I, II, III and VI. Professor Andrzej Kraslawski was involved in overall planning and supervised the work, and Professor Janne Huiskonen supports the research project.

Other Published Publications

V. Awan, U., Sroufe, R. and Kraslawski, A., 2019. Creativity enables sustainable development: Supplier engagement as a boundary condition for the positive effect on green innovation. Journal of cleaner production, 226, pp.172-185(JFU2)

VI. Awan, U., Khattak, A., & Kraslawski, A. (2019). Corporate Social Responsibility (CSR) Priorities in the Small and Medium Enterprises (SMEs) of the Industrial Sector of Sialkot, Pakistan. In Corporate Social Responsibility in the Manufacturing and Services Sectors (pp. 267-278). Springer, Berlin, Heidelberg. (JFU2)

VII. Aldakhil, M., Nassani, A., Awan, Usama., Abro, M. M. Q., & Zaman, K. (2018). Determinants of Green Logistics in BRICS Countries: An Integrated Supply Chain Model for Green Business. Journal of Cleaner Production, 195(10) pp.861-868. (JFU2)

VIII. Awan, U., Kraslawski, A., & Huiskonen, J. (2017). Understanding the relationship between stakeholder pressure and sustainability performance in manufacturing firms in Pakistan. *Procedia Manufacturing*, 11, pp.768-777.

IX. Awan, U., Kraslawski, A., & Huiskonen, J. (2017). Modelling and analysis of barriers to implementation social sustainability practices using MICMAC approach, *Proceedings of the International Conference on Industrial Engineering and Operations Management Pretoria*, October 29 – November 1, 2018. Johannesburg, South Arica.

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List of Abbreviation

CG-Contract governance
RG-Relational governance
CQ-Cultural Intelligence
RBVResource-based view
TCE-Transaction cost economies
SET-Social exchange theory
SD-Sustainable Development
UN-United Nation
WCED-World Commission on Environment and Development
UNCED-United Nations Conference on Environment and Development
SDGs- Sustainable development goals
EU-European Union
CSR-Corporate social responsibility
CS-Corporate sustainability
SC- Social Sustainability
SPSS-Statistical Package for the Social Sciences
CMV-Common method variance
SEM- Structured equation modeling
VIF- Variance influence factor
EFA-Exploratory Factor Analysis
KMO-Kaiser-Meyer-Olkin
CFA-Exploratory Factor Analysis
AVE-Average variance extracted
CR-Composite Reliability
CA- Cronbach’s alpha

1 Introduction

In recent years, the nature and forms of governance mechanism have become a central research phenomenon in managing buyer-supplier exchanges by scholars from several various disciplines (Bai et al., 2016; Blome et al., 2013; Handley and Angst, 2015). Governance mechanism has normally been viewed from the two governance approaches. The first perspective focuses on relational governance (RG), which serve as protective safeguards against abnormal behaviour, and regulated through flexibility, solidarity, and information exchange (Heide and John, 1992). The second point of view is in accordance with transactional cost economics (TCE) (Williamson, 1985), focuses on contract governance (CG) or legal contract (formal contract) (Achrol and Gundlach, 1999; Li et al., 2010). The buyer-supplier exchange transactions governed by formal and written rules between the partners, which explicitly stipulates the rights and duties. The written contract may reduce the risk and uncertainty in exchange relationship to safeguard the conflict and opportunities (Lusch and Brown, 1996; Williamson, 1985). CG has criticised as it restricts to follow written rules and procedures, and becoming difficult in observing and measuring the transaction cost (Masten et al., 1991), ignoring the role of different capabilities in structuring exchange relationship (Perrow, 2002), and increasing uncertainty due to the incompleteness of the contracts (Lumineau, 2015). On the other side, TCE also acknowledges control and coordination (Lumineau and Henderson, 2012a). The relational governance covers, exchange of information, joint decision making and solidarity. RG is not only focused on information exchange but also focuses on the voluntary action of exchanges. Within the framework of social exchange theory(SET), the buyer-supplier relationship should structure and motivated by profit what they are looking forward to obtaining (Cropanzano and Mitchell, 2005). Conversely, the strong-tie approach highlights the importance of collaboration between partners that are characterized by social norms in the social exchange theory (Lambe et al., 2016).

In emerging markets, manufacturing firms seek to improve triple bottom line performance of environmental, economic and social performance (Aguinis, 2011; Reuter et al., 2010). The social failures on the part of suppliers have created dissatisfaction with supplier firm products and services. Carter and Jennings (2004) and Paulraj (2011) provided more insights and showed that social aspects such as ethical treatment, human rights, and diversity have been impactful and embracing enough that they have led to allows firms to optimise their triple bottom line. As a growing number of manufacturers from developing countries are dealing with different buyers, thus research is needed to provide the details about how an individual in inter-firm relationship behave to cope with the uncertainties from each other (Berends et al., 2011). However, literature recognises governing inter-firm relationship across geographically dispersed buyers is regarded as the essential challenge for the continuation of international relationship management (Caprar et al., 2015). For example, (Griffith and Myers, 2005) noted that the supply chain governance is developing and future research is needed to take into account the normative cultural expectations of supply chain partner on the relational norms. Most of the research

to date has mainly focused on the role of governance mechanism in the inter-firm organisation and its influence on the relationship performance, opportunistic behaviour and supplier development (Lumineau and Henderson, 2012b).

Inter-firm relations are therefore often studied by developing governance structures among the exchange partners. Over the past few years, a persistent challenge in a buyer-supplier relationship is, what factors are driving inter-firm transactions successfully?. To date, most research takes an institutional role, legal contractual arrangements and enforceability on contractual and relational governance structures, with emphasis on governance mechanism that aim to effectiveness of governance to opportunism and firm-level outcomes (Bai et al., 2016; Poppo & Zenger, 2002; Shou, Zheng & Zhu, 2016). The previous stream of research has laid the foundation for governance research and urged the emergence of a variety new perspective in an inter-firm relationship. For instance, scholars have paid special attention and take a contingency perspective of governance in understanding the implications of culture (Couto et al., 2006; Handley and Angst, 2015). Despite the efforts devoted to the investigation and development of cultural factors in governance mechanism, there is still a demand of research that explores the impact of culture on governance in different institutional context (Awan & Kraslawski, 2017; Blome et al., 2013). Firms use a formal mechanism to encourage the appropriate partner behaviour by prescribing specific production process and procedures that the suppliers must follow (Stouthuysen et al., 2012). Previous studies carried out about the institutional role, individualism and collectivism culture (Bai et al., 2016; Handley and Angst, 2015). At the same time, there is an increasing discussion and concern on the cultural approaches and governance mechanism in inter-firm relationships. Also, in developing economies where a strong institutional environment is lacking, new cultural differences and challenges have emerged and demanded attention from scholars for the changing functions, roles, and effectiveness of governance mechanism in such contexts. A broad focus on culture in different institutional context may help to reexamine the current understanding of the role of governance mechanism. Progress in understanding the role of cultural intelligence in international management has been significant, but little is known about what cultural aspects leads to a successful governing inter-firm relationship. It is critical to account for the culture when contemplating how to successfully govern buyer-supplier relationships in the context of cross-border inter-firm relationship management.

Background of the study

Governing inter-firm relationships turn out to be more decisive on how exactly to handle the cultural differences with foreign partners. Recently (Mohr et al., 2016) suggest that cultural difference is important to the source of uncertainty, conflicts, and miscommunication. Therefore, it is really rewarding to examine under which conditions the established ways of governance work well for collaboration and in making improvements to social performance outcomes. Cultural intelligence (CQ) “reflects the abilities to deal effectively with people from different cultural backgrounds” (Ang and

Inkpen, 2008). There has been good research on cultural intelligence about handling role conflict, ambiguity in ethnically diverse and cross-cultural environments (Van Dyne et al., 2008). The firms are increasingly relying on partnering relationship with outside suppliers to improve social performance (Yawar and Seuring, 2017). In reference to cultural intelligence related issues pertaining to firms and their cultural environment,(Gölgeci et al., 2017) provides an exposition of the potential relevance of absorptive capacity although considerable attention has dedicated to investigating whether cultural differences impact on the impression of specific capabilities (Ryan et al., 2009). The early advances of cultural understanding in managing the buyer-supplier relationships within the governance of supply chain context presented by (Handley & Angst, 2015). CQ is an ability to adapt to the new cultural context in response to changes in the environment and continuous judge, perceive of a different perspective of the problems in cross-culture interaction through learning and understanding what kind of response is needed in handling the cultural differences.

While previous studies have shown that the effectiveness of relational governance depends on the supplier ability to share the needed information and develop relational norms by minimizing the conflicts arise due to the difference in cultural norms. To make governance mechanism successful, it is important to focus on the managerial interaction behaviour with foreign partners, such as, task-progress communication, cooperation, and complying with obligations. Managers should exhibit pro-social behaviour in accordance with the partners responsible for dealing and interacting with a cross-cultural partner for effective relationship functioning (Dekker et al., 2008). If informal relation embedded in the firm resources, both partners will be better able to collaborate and cooperate on improving labour conditions, wages equally, health and safety issues and enhance mutual adaptability, the accomplishment of set goals is likely to improve the firm's social performance. While some advocate the need for cultural intelligence (CQ) to understand the cultural specific differences in multicultural management practices, a few research studies investigated the success of relational governance in the context of social performance. However, previous researches aimed at improving the cultural differences in the context of supply chain management (see for example, (Cannon, Doney, Mullen, & Petersen, 2010; Gunkel et al., 2016; Nazarian, Atkinson, & Foroudi, 2017). Beyond understanding the performance outcomes of culture, recent research has examined cultural factors that explain the effectiveness of governance mechanism in the buyer-supplier relationship (Handley and Angst, 2015). More recently, Dahlquist & Griffith, (2017) have further built on contracting in collaborations, focusing on how the effectiveness of contract on varying magnitudes.

Neither of these previous studies involves a cultural intelligence construct explicitly, although the association has explained between governance structure and collaboration. In this thesis, I suggest that understanding the partner culture is central to the inter-firm relationship. It is important to realise that a firm's capability to acquire and integrate cultural knowledge is essential to take into account during the decision making, primarily when focusing on socially responsible supply chain initiatives. For examples, In Adidas case, they received complaints on sexual harassment, they discovered it through visiting

their supplier to understand the issue. By making a few minor modifications in their policies, one can address employee concern. This reveals that the supplier firm's managerial capabilities embodied in cultural intelligence comprising metacognitive cognitive, motivational and behavioural elements will be able to improve the governance mechanisms more effectively than those firms that do not have intelligence managers culturally. These cultural practices pose a variety of challenges to the firms in managing the inter-firm relationship. However, social issues have been given less attention to developing economies, and this study looks for ways to enhance social sustainability in manufacturing firms. However, there is a limited understanding regarding how effective governance mechanism should be structured for enhancing sustainability. The social issues are an integral part of sustainable development, which demonstrates the importance of examining how social sustainability is being pursued in the organization. The social sustainability-focused strategies could also build a firm´s reputation, for example, attracting sustainability aware buyers by enabling firms to become a market leader. Such a strategy could enhance buyer confidence and pressure firm to implement environmental sustainability initiatives in the operations. To answer the call of this gap in the literature, , the present study focuses on the manufacturing firms, primarily dominated by the labour-intensive system. This study explicitly takes the supplier perspective and considers the collaboration and commitment to the buyers. Although culture has well studied in the buyer-supplier relationship, however, little attention has been directed at how cultural intelligence effect inter-firm collaboration for performance improvements. The empirical setting of this study consists of exporter's relationship with their partners in different countries in the supply chain context. This way of proceeding gives rise to questions as, what are the key cultural intelligence elements impact the governance mechanism? How to contract and relational governance mechanism contributes to the development of collaboration and commitment to sustainability. What is needed to enhance social sustainability in manufacturing firms? This study particular examines whether cultural intelligence is useful for promoting the governance mechanism for the achievement of collaboration, commitment to sustainability, which, in turn, influences social performance improvements.

Research GAP

As social sustainability concerns have grown in recent years, manufacturing firms have directed increasing attention on the social impact of their operations. The research interests in social issues at the supply chain and operational level of the firms is gaining attention. While relatively few studies provided evidence that there has been an improvement in worker rights. The rise of sustainability-related problems has cautioned suppliers to enforce international standards and auditing scheme across their supply chain and networks. On the 12th of September,2012, Ali Enterprises factory in Karachi Pakistan was solely producing jeans for German-based low-cost retailer KiK, least 254 workers killed in a fire at the factory because of inadequate safety procedures (BBC, 2012). The example provides a clue which is ensuring supplier responsibility in the supply chain and providing support in becoming pivotal to meet the social and ecological needs of the future generations without compromising the needs of the present.

On the other hand, the suppliers in the developing countries violate the code of conducts established by their customers (Egels-Zandén, 2014). It is also becoming increasingly difficult for firms operating in developed countries to rely on their supplier's claims of compliance with agreed social conduct (Shafiq et al., 2017). Recent studies have argued that cultural differences are an important source of miscommunication and disagreement (Mohr et al., 2016). There is heterogeneity in the degree of social issues in the developing countries context then those in the developed countries and successfully improved social issues in suppliers is a key challenge (Matos and Hall, 2007). Particularly in developing countries, social sustainability issues have not given adequate attention(Anisul Huq et al., 2014). Supplier's unethical activities and misconduct in developing countries affect the reputation of the buying firms. The recent event of fire broke out in the manufacturing facility of Pakistani supplier that supplies garments to German base store, led to pay $5.15 million in compensation to the victims of one of the worst industrial accident (ECCHR, 2016).

As the last decades had witnessed the growth of governance mechanism in managing inter-firm relationships and researchers and practitioners, have also been enriching their understanding of what constitutes the effective governance mechanism practices (Cao and Lumineau, 2015). In their discussion of new research directions in governance mechanism practices, they portrayed the research areas in contract governance and relational governance. They suggested that while previous research on governance mechanism has made some important contributions to governing the inter-firm exchange relationship, new insights, and valuable paths could emerge from the combinations of these two types of governance mechanism, i.e. contractual governance and relational governance. Transaction cost theory argues that contractual governance (Arranz and de Arroyabe, 2012; Liu et al., 2009; Poppo and Zhou, 2014) could be a successful way to command exchange risks.

There is an ongoing debate about understanding the implication of culture in managing the international relationship (Couto et al., 2006; Handley and Angst, 2015). Nonetheless, all small and medium-size firms experienced globalisation through interaction with buyers, suppliers, and competitors. Some previous studies have examined minimising opportunism and relationship performance in an inter-firm relationship context. In emerging markets, such as China, the governance mechanism was found to truly benefit in venture performance (Chen et al., 2013). Handley and Angst (2015) recently investigated the individualistic and collectivist culture dimensions impact on governance mechanism. Their results reveal that both contract and relational mechanism could be as just effective under the situation of high collectivism and individualistic culture. The key distinction of our study from the (Sancha et al., 2016) and (Liu et al., 2009) is that they both studied the role of governance mechanism concerning the opportunism and performance. This study focuses on collaboration and commitment to sustainability.
As a result, previous research studies have considered the role of culture in the relationship between contractual and relational governance in the supply chain context

(Handley and Angst, 2015). It suggests that there is a link between culture and success of the inter-firm relationship. Despite the importance of culture, limited research attention has devoted to investigating the role of cultural intelligence in governance literature. When the firms deal with the contract and relational governance with their partners, the dependency of each partner increased. Therefore, individual attitudes, traits, and attributes become essential in the governance mechanism to work together, bring resources and to manage the firm relationships to drive sustainability commitment and collaboration. Thus, very little understood regarding the pertinent significance of knowledge, competencies, and capabilities that contribute to the successful handling the inter-firm relationships. Therefore, managing governance mechanism could be more challenging in developing economies, such as Pakistan, where the institutional environment is weakened. Such mixed evidence on the success of inter-firm governance mechanisms, therefore, necessitates a further examination of the phenomena. This thesis tries to address the success of the governance mechanisms in the export manufacturing industry in Pakistan through empirical analysis. Specifically, this thesis examines the cultural intelligence (CQ) as a moderation impact on the relationship between relational governance (RG) and contract governance (CG) and their effect on commitment and collaboration in a buyer-supplier relationship. Further, in testing this relationship, we aim to examine the commitment and collaboration influence on social performance improvements.

The underlying motivation to use the cultural influences is to provide a wide variety of performance indicators through a multitude of the mechanism.

This study is targeted to find the answer to the following research question.

How cultural intelligence influences in managing successful inter-firm relationships, and why is it critical for social sustainability?

The following are the sub-questions:

i. What governance mechanism influences on the development of supplier's commitment to sustainability, and how does it lead to social performance improvements? (Publication 1)
ii. What governance mechanism explained an effective inter-firm relationship and what are the varying underlying roles of cultural intelligence in maximising collaboration and social performance improvements? (Publication 2 and 3)
iii. How does cultural intelligence affect inter-firm relationship outcomes? (Publication 4)

Overall Conceptual Framework

The contractual governance conceptualises in this study, comprised of a (1) agreements on social issues, (2) agreements on technical issues, (3) agreements on rights and obligations of each party, (4) agreements on legal remedies for failure to perform. Recent studies have illustrated that inter-firm contracts serve as a coordination mechanism (Lumineau and Malhotra, 2011). Relational governance is conceptualised and operationalised using social exchange theory. Relational governance holds the view that inter-firm relationship is governed jointly by social incentives and mutual understanding between the parties, reduces the opportunistic behaviour and enhances the cooperation and commitment (Dyer and Singh, 1998). In this context, we argue that the effectiveness of the governance mechanism will be moderated by the extent to which the supplier firm is knowledgeable on the partner cultural knowledge. If the firm poses a high level of cultural knowledge resource, governance mechanism will be adequate to govern the relationship and achieving sustainability commitment and collaboration. The key definitions are presented in Figure 1.

Our conceptual model (Fig.1) grounded in transaction cost economics(TCE) is a theoretical lens for contract governance, social exchange theory (SET) is a theoretical lens for relational governance mechanism and the resource-based view (RBV) of the firm (Barney et al., 2011) for cultural intelligence and sustainability commitment. Scholars frequently draw on for investigating sustainability efforts (Ehrgott et al., 2011; Luzzini et al., 2015; Sancha et al., 2016). As plenty of research has examined how the governance mechanism could be used to minimise opportunistic behaviour of the partner, the investigation of the cultural aspects in a buyer-supplier relationship has received relatively little attention, with a few exceptions (e.g., Blome et al., 2013; Handley & Angst, 2015). Therefore, our first study investigates the moderating role of cultural intelligence on the relationship between relational governance and commitment to sustainability (Study 1). Within this direction, two more studies are developed, which employee transaction cost economic theory, social exchange theory and resource-based view to address two aspects of governance mechanism with cultural intelligence and their impact on collaboration (Study 2), Relational governance and social performance(Study 3), and develop conceptual framework of governance mechanism(Study 4). Table 1, 2, 3 and 4, provides an overview of each study, which we will also briefly introduce later.

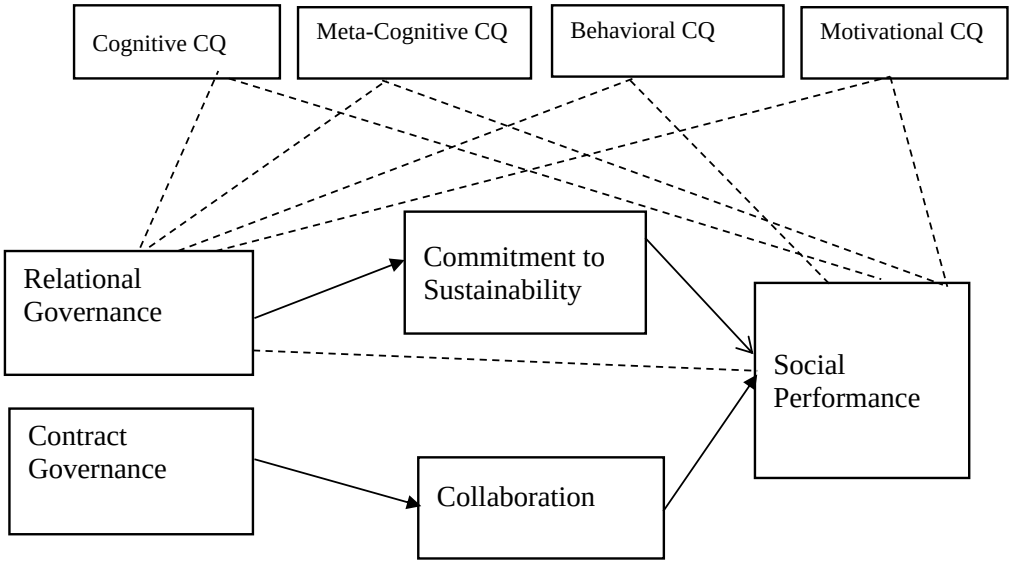

Figure 1. Conceptual Framework

Note :Bold lines represent paper 1 and 2, whereas dotted lines represent paper 3 and

Theoretical Contributions

The contribution of this thesis is two-fold. First, most of the theoretical development and empirical testing of theories in this field has been conducted in the context of a developed country. This study contributes to the advances of the arguments of transaction cost economics (TCE)(Williamson, 1989) and resource-based view (Barney, 2001a; Grant, 1991) to explain the role of cultural intelligence in the relationship between governance mechanism and collaboration, and commitment to sustainability. TCE places emphasis on minimising the cost in transactions towards developing cooperation and collaboration. This study suggests that cultural intelligence, as a capability, explicitly identifies the conditions under which it facilitates inter-firm exchange and gain of cultural knowledge to fill the gap of the cost of communication and information exchange of a firm towards successfully bring about collaboration. This study supports the ongoing argument of (Williamson, 1999), which argues the incorporation firm's existing capabilities and to explore how this influences governance structure. Supplier cultural intelligence is important in deciding the form of governance structure to minimise the cost associated with the transaction in inter-firm relationships. This thesis made three contributions to literature. First, the key incremental contribution is that the export manufacturing with network ties with foreign firms are in a better position to minimise the transaction and transfer of cultural knowledge cost search. Second, this study extends the findings (e.g., williamson, 1996) by showing that in inter-firm context, firms with better administrative efficiency (i.e., cultural intelligence, e.g., motivational CQ) increase the execution of the

contract. The findings of my study contradict the findings of the previous study that contracts may suppress an inter-firm partner's intrinsic motivation to share the information (Adler, 2001). The findings suggest that at a high level of contractual governance have a high level of collaboration with higher motivational cultural intelligence. This shows that management put more energy and efforts to learn partner cultural knowledge in contract governance. It indicates that inter-firm relationship is key to social performance improvements.

Third, this thesis provides a theoretical interpretation of the cultural intelligence linking relational governance and the development of a commitment to sustainability. Our study uses the resource-based view (RBV), to provide a better understanding of how resources are deployed to capture to achieve performance outcomes (Sirmon et al., 2007). Through, firm interaction with their customers in relational governance, firms' cultural capabilities have the potential to subsequently affects its long-term commitment. Through the use of cultural intelligence, the firm increases its ability to sense the cultural differences, grip and adjust globally scattered cultural practices on social issues. It allows for the development of unique cultural knowledge resources to makes firms understand each other and increase knowledge development. I suggest that cultural intelligence benefits the to sense cultural differences and evaluation of cultural practices that have the potential to reposition in some practices.

Managerial contributions

This research has managerial relevance considering the importance of cultural intelligence capabilities. The first implication from findings is that cultural intelligence capability helps to acquire and co-creation of knowledge by the managers to foster and support collaboration. Cultural intelligence plays an essential part in the shaping and implementation of collaboration and is key to managing cross-cultural relationship management in a supply chain. The findings suggest that managers have to give thought to influence their local cultural values and concomitantly understand the partner cultural values. Managers need to understand the situational schema that impacts on employee behaviour. If circumstances are judged to be stable at a local cultural level, the perception modelled by external cultural training, then cross-cultural differences should be fixed over time. The findings indicate that foreign firms with no or little supplier cultural values will benefit more partnering suppliers with a contract governance coordination clause. Indeed, partner firm's with contract governance with coordination clauses will likely to have sizeable knowledge of ways of gripping supplier cultural values and improve social performance.

On the other hand, the managers must keep in mind the complexity of contract governance and its implication. The findings indicate that contract governance with coordination clauses benefits derived from having a supplier with high cultural intelligence capabilities may result in the development of collaboration, which could potentially improve social performance. This informs managers that contract governance with coordination clauses alter the need for relational governance and use as an alternative

mechanism to achieve social sustainability. Essentially, the management must be prepared to make the case of hiring and training of managers, that is, developing and maintaining the crucial cultural intelligence in cross-border inter-firm relationship management.

Terms	Definations
Contractual governance	Contract governance relies on specifying each party's to prespecify and control roles, rights and objectives (Williamson, 1991).
Relational governance	It enforces obligations, promises, and expectations through social processes that promote relational norms and rely on mutual adjustment and joint action (Heide & John, 1992).
Cultural metacognition	Cultural metacognition refers to an individual's level of conscious cultural awareness and executive processing during cross-cultural interactions (Ang & Inkpen, 2008).
Cultural Cognitive	Cultural Cognitive CQ reflects knowledge of the norms, practices, and conventions in different cultures acquired from education and personal experiences (Ang & Inkpen, 2008).
Behavioral Cultural intelligence	Behavioral Cultural intelligence refers to the individual capability to display adequate flexibility and adaptability through verbal and nonverbal actions in a cross-cultural context (Ang & Inkpen, 2008).
Motivation Cultural intelligence	Motivation CQ reflects individual confidence, which helps facilitate the coordination process in situations characterized by cultural differences (Ang & Inkpen, 2008).
Commitment to sustainability	Commitment to sustainability relates to the firm's engagement with social and environmental initiatives to diminish negative impact (Krause, Vachon, & Klassen, 2009).
Collaboration	Collaboration defines as working together with for achieving a single objective (Teh, Yong, & Lin, 2014).
Social sustainability performance	Social sustainability focuses on the ethical code of conduct for growth and human survival that should be achieved in an inclusive, connected equitable and prudent manner" (Sharma & Ruud, 2003).
Fig 2. key definations	

Thesis structure

This thesis is organized into five chapters in which in chapter 1 illustrate the introduction, background of the study. Chapter 1 also explain the modelling of the problem and clarifying the terms and concepts in my study. Chapter 2 summarizes the theoretical view of transaction cost theory, social exchange theory and resource-based view with regard to

the inter-firm governance mechanism. This chapter presented a literature review on contract governance, relational governance, commitment to sustainability, collaboration and social sustainability. Chapter 3 describes the empirical research design, description of the sampling methodology, selection of construct, research philosophy and design, the empirical procedure and methodology of data analysis. Chapter4 provides summarizes publications and results. Based on the result findings and contribution discussed in this chapter, I proposed the overall conclusions of this thesis. Chapter 5 report the research publications appeared in the peer-reviewed journals. This chapter describes the theoretical contributions of publication 1, 2, 3 and 4, respectively, the overall conclusion, contributions, and research limitation and future research directions.

Table 1. Summary of Study 1	
Titled	Buyer-supplier relationship on social sustainability: Moderation analysis of cultural intelligence.
Research Question	(1) Does relational governance enhance supplier sustainability commitment and how it affects firm social sustainability performance? (2) Do cultural intelligence moderate the relationship between relational governance and supplier sustainability commitment?
Theoretical Foundation	Social exchange theory (SET), Resource Base View
Methodology/ Data analysis	Survey-based questionnaire / Structural equation modelling and regression base moderation analysis
Main Findings	This study reveals that cultural intelligence (CQ) can explain the positive effects of relational governance on a commitment to sustainability. However, for social sustainability, not only relational governance mechanisms are crucial but also internal cultural intelligence capabilities positively contribute to sustainable strategic development.
Main Contributions	We suggest that social exchange can act as a centralized control for ensuring commitment to sustainability and social sustainability performance. Our theoretical proposition advances the important idea that cultural intelligence may be important for the stability of buyer-supplier relationships.

Table 2. Summary of Study 2

Titled	Governing inter-firm relationship for social sustainability: The relationship between governance mechanism, sustainable collaboration and cultural intelligence
Research Question	Our study addresses the following research questions: (1) Does contractual governance promote collaboration and, how this might affect the social performance improvement of the exporter firm? Moreover, (2) Do cultural intelligence moderate the relationship between contract governance and collaboration?
Theoretical Foundation	transaction cost economics theory (TCE)
Methodology/Data analysis	Survey based questionnaire / Structural equation modeling and regression base moderation analysis
Main Findings	The finding tends to indicate that cultural intelligence is important for exporting firms in Pakistan in placing a strong emphasis on the relationship and can help firms from emerging economies deal with inter-firm cultural differences in relationship management.
Main Contributions	Our paper contributes by examining the moderating effect of cultural intelligence on contract governance and collaboration.

Table. 3 Summary of Study 3

Titled	The Impact of Relational Governance on Performance Improvement in Export Manufacturing Firms
Research Question	This paper seeks to identify the factors affecting social performance improvements in the Pakistan export manufacturing firms and investigate inter-relationships existing among them.
Theoretical Foundation	Resource-Based View (RBV)
Methodology	Survey Questionnaire, Structural equation modelling approach

Main Findings	Findings confirm that cultural intelligence capabilities are required for maintaining an effective buyer-supplier relationship and improving firm social performance in Pakistan business context. The present of CQ provides no room for misunderstanding; rather, a cooperative norm is maintained in channel relation to facilitating information sharing and communication on social issues.
Main Contributions	The finding that cultural intelligence is influencing the development of other unique knowledge capabilities. Using cultural intelligence, firm increase its ability to sense cultural differences, seize and adapt globally scattered cultural practices on social issues and allows for the development of unique knowledge resources and capabilities, impact on firm social performance and innovation performance improvements.

Table.4 Summar of Study 4	
Titled	A Collaborative Framework for Governance Mechanism and Sustainability Performance in Supply Chain
Research Question	Our study addresses the following research questions: (1) How can relational governance be incorporated into the design of governance and improve social sustainability performance? (2) Do cultural intelligence capabilities mediates the relationship between relational governance mechanisms and realized social performance?
Theoretical Foundation	Resource Base View
Methodology /Data analysis	Survey base questionnaire/Partial least squares structural equation modelling approach
Main Findings	The results indicate that socially sustainable development is two-fold: firstly, involves fostering interaction through relational governance. Secondly, ensuring cohesion with cultural intelligence capability.
Main Contributions	This study demonstrates that the integration of cultural intelligence helps define what social sustainability issues mean to a firm and how to integrate the culture of partner firm into practices and process. Thus, cultural sustainability in firms' operations is an essential part of sustainable development.

2 Literature Review

2.1 Resource-Based View

The organisation holds unique tangible resources including raw material, plant, logistics (Mentzer et al., 2001) and intangible includes relationships, customer loyalty, capabilities and knowledge of supply chain competencies(Hult, 2011; Ketchen and Hult, 2007). The effectiveness of the strategic use of the internal characteristics depends on the firm, as for how the "exploit their internal strength through responding to environmental opportunities" (Barney, 2001a). Different views exist between resources and capabilities (Grant, 1996). The resources can be acquired externally, but these resources should be unique and rare contribute to achieving organisations performance (Barney, 2001b; Barney, 1991). Firms compete on the resources they possessed, and these unique resources are valuable, rare and difficult to match. The resource is defined regarding knowledge, assets, and capabilities that a firm possesses (Barney, 1991). The physical asset and financial capital classified as tangible assets and intangible assets included an image, reputation technical knowledge (Grant, 1991). According to RBV, "Strategic resources are valuable, rare and imperfectly imitable and substitutable" (Barney, 2012).

It is argued that the relationship between buyer and supplier is not supposed to take corrective and preventive measures but rather to form and develop a closer relationship, mutual learning and develop capabilities (Dyer and Hatch, 2004; Giannakis, 2008). In this present study, following RBV theoretical rents, it is reasonable to presume that cultural intelligence as a firm's strategic resource of cultural knowledge through which firms generates new knowledge and modifies its operating process in pursuit of sustainability commitment (Publication 1). Thus, mobilising internal resources for cooperation with buyers are both a stimulus and focus on a variety of collaborative efforts to gain more cultural knowledge and skills. As such, the RBV take the perspective that individual interacts and acquire new cultural knowledge and skills which ultimate transform to a rare intangible asset.

2.2 Transaction Cost Economics Theory

The theory of transaction cost economics (TCE) was conceptualised by (Williamson, 1993) and is heralded as a central consideration in governance mechanism (Poppo and Zenger, 2002).To address the concern of governance mechanism and appropriate alignment of governance structures is a crucial consideration in the establishment of inter-firm relationships (Dyer and Singh, 1998). Even though the dominant inter-firm governance mechanism need to decide to what extent governance mechanism will be deployed (Jap and Anderson, 2003). According to the transaction cost economics, differences in the operational routines, uncertain market changes and high assets specify are regarded as driving reason of contractual governance (Heide and Miner, 1992; Jap and Ganesan, 2000). Governance of inter-firm exchange relationship, the transactional mechanism aimed at controlling the behaviour of another party in jointly stipulated

contractual clauses (Eisenhardt, 1989; Williamson, 1985). According to the (Williamson, 1985), transaction cost theory (TCT), provide the lenses through which we examine the present phenomena, and it explicitly argues that a well-specified contract is viewed as controlling the opportunistic behavior.

TCE is primarily a theory of ex-post decision governance (Williamson, 1985). Neoclassical theory of relational contracts emphasis that changes in adaptations can only be made concerning the original contract, and this approach is the "entire relation as it has developed". (Williamson, 2008). In a transaction where specific investment focused on human and physical capital. As uncertainty increases as a result of increased supply sources, then the prevailing mood of the contract will not be appropriate to use for current transactions with mixed investment features (Williamson, 1993). In the particular circumstance, there is a different alternative available to parties, either forgo the contracts or remove this transaction and "adaptive a sequential decision making with the assistance of hierarchical incentive and control system". When the situation is unambiguous, then different contracting relation might be devised which preserve the ways of trading for additional governance structure (Williamson, 1979).

Previous studies findings are inconsistent with the use of two-governance mechanism related to the performance. Relational governance may reduce the positive impact on performance (Wang et al., 2011). It stats that detailed stipulates the obligations and rights of exchange parties through contracts, rules, and terms could effectively protect the relationship and how future transaction will be handled (Williamson, 1991). A well-specified contract reduces uncertainty, clear roles, and responsibilities and improves performance expectations. It guides interfirm exchange and enhance cooperation, commitment and reduces the uncertainty (Jap and Ganesan, 2000) or conflicts by providing economic incentives (Kotabe et al., 2003). Accordingly, it is suggested that the relational performance contracts contain monitoring, exchange of information clauses tied to the performance (Liu et al., 2009; Sancha et al., 2016). Despite this argument, contractual (transactional) governance is necessary for an ongoing relationship and makes one party behaviour more observable (Liu et al., 2009).TCE is utilized in publication 2.

2.3 Social Exchange theory

The social exchange theory (SET) is usually considered the dominant approach in relational governance (RG) literature. Usually, RG is done with shared behaviour expectations that imply mutual understanding between the parties (Heide, 1994; Lusch & Brown, 1996). Relational governance holds the view that inter-firm relationship is governed jointly by social incentives and mutual understanding between the parties, reduces the opportunistic behaviour and enhances the cooperation and commitment (Dyer and Singh, 1998; Gulati and Nickerson, 2008; Malhotra and Murnighan, 2002). Similarly, (Goo et al., 2009; Poppo and Zenger, 2002) suggested that relational governance focus on the cooperation and commitment from both the parties and performance targets are not described. It is widely agreed that the information exchange shift focus from the self-

centred behaviour to common responsibilities and interests, enhance partners jointly decision making and commitment (Rokkan et al., 2003). The frequent exchange of information develop trust and more they feel confident, assured that other partner would care and cooperation in joint decision making. Relational governance involves the extent to which relational norms transaction refers in certain circumstances when the specific investment is made in non-marketable activities (Dyer and Chu, 2003). It is widely agreed that the information exchange shift focus from the self-centred behaviour to common responsibilities and interests, enhance partners jointly decision making and commitment(Awan, Kraslawski & Huiskonen, 2018). The frequent exchange of information develop trust and more they feel confident, assured that other partner will care and cooperation in exchange transaction (see for example, (Narasimhan et al., 2009). SET is utilised in publication 3.

2.4 Review on Governance

2.4.1.1 Governance mechanism

The concept of governance in the form of the system emerges from governing the coordination activities as an opportunity to create a new set of supply chain relations that enable the firm to focus into new patterns of doing business rapidly. The term borrowed from the public administration literature of (Kjaer, 2011), where the aim is to create a set of practices that pursuance of sustainable performance. Governance mechanism is referred to "as practices used by firms to manage relationships with their suppliers with the aim of improving their sustainability performance" (Gimenez et al., 2012). On the other hand, the concept of corporate governance entails the notion of coordination with all stakeholders through a formal, informal, internal and external defined mechanism to ensure decision making that safeguards all actors' interest (Jap and Ganesan, 2000). Monks & Minow (2004) define governance as "the structure that ensures decisions are made to determine a long-term sustainable value for an organisation". The term mechanism is described by (Hedstrom and Swedberg, 1998) develop a system that evolved from the interaction of a set of driving forces. Relational mechanism governs the supply chain relationship because it is embedded in flexibility, solidarity, and reciprocity (Das and Teng, 1998). It is argued that the relationship between the buyer and supplier is not to take corrective and preventive measures but rather to form and develop a closer relationship, mutual learning and develop capabilities(Dyer and Hatch, 2004; Giannakis, 2008). Studies based on the relational norms recognize the safeguarding role of asset-specific investment in improving trust and cooperation's (Jap and Anderson, 2003). Two tradition mode of inter-firm mechanism to govern such relationships is formal governance and relational governance (Poppo & Zhou, 2014). A relationship is formed with some stakeholders such as supplier, retailers, manufacturers, distributors, and customers, to effectively achieve the supply of raw material for the development of the product.

2.4.1.2 Contract Governance

Contract governance manifested in cooperatively lay down contractual clauses leading to the realisation of mutual gains (Heide et al., 2014). Through the use of the control, the controlling side (buyer hereafter) defines the obligations and rights to minimise deviant behaviour (Jap and Anderson, 2003). The contractual governance(CG) means the specific agreements, transactions, and promises between the trading partners and formal rules of compliance (Lumineau and Malhotra, 2011). Previous research studies are rooted in transaction cost economies indicate that contract governance is least effective in the execution of inter-firm exchange in a weak institutional environment (Zhou and Xu, 2012). Contract governance (CG) most often involves monitoring and controlling the behaviour of another partner. The past research has shown that in the presence of unethical behaviour and ambiguity on which it becomes ineffective (Poppo and Zenger, 2002). The contract governance term used both interchangeably is a kind of governance as a means to minimise opportunism behaviour (Zhou & Poppo, 2010). Contract governance has emerged as major into-organizational arrangements that allow firms to exchange resources for gaining effective collaboration. If contracts or legal bonds embedded on social issues, clearly defined guidelines for handling contingencies, (CG) will be conducive to enhance collaboration. Recently, scholars argued that CG is an appropriate mechanism to manage external interactions effectively with customers in foreign countries is another key factor that can determine firms performance (Poppo and Zhou, 2014). From the perspective of transaction cost theory, contract governance with coordination clauses could lead to a higher propensity for collaboration and cultural intelligence become the assurance for the execution of the contract governance.

For example, if a manufacturer had a contractual relationship with one of its major foreign buyers if that manufacturer had committed to exert best efforts to improve social conditions at its operating units within three years, and the buyer was not satisfied with the buyers. This form of coordination may provide support through training concerning safety, health and gender issues. Further, this mechanism will increase both buyer and supplier knowledge. Contract governance mechanism enables firms to adhere to their terms and conditions, focus on social issues with bringing improvement by complying with the contractual control. Through informal coordination, joint decision making and information sharing be more effective in learning and to foster collaboration(Lumineau, 2015). Thus, contract governance with coordination clauses makes it possible for partners to develop adaptable behaviour patterns and enhance effective cooperation. Moreover, given the potential risk in an interfirm relationship, the supplier needs to develop effective contract governance to safeguard transaction and coordination exchange.

2.4.1.3 Relational Governance

Relational governance(RG) also named “relational mechanism” (Jayaraman et al., 2013). RG relies on information “structure and self-enforcement” of each party (Dyer and Singh, 1998; Gulati and Nickerson, 2008). Thus, partners enjoy a high degree of autonomy and

choose the means of cooperation whenever the opportunity arises (Poppo and Zhou, 2014). Relational norms have been recognised as to nourish cooperation and control opportunism (Heide et al., 2014). The most salient characteristics of the relational mechanism are shared norms and trust; Trust promotes mutual understanding and shared goals creating a greater level of understanding and projecting the exchange into future (Tsai and Ghoshal, 1998). The relational mechanism defined as structural planning as intended to affect the behaviour of people given trust and social control rather than to manage in bureaucratic structures (Huang et al., 2014). The governance in the supply chain must focus on coordination of activities by taking formal and informal approaches, assess the norms, standards and monitoring the progress (Egels-Zandén, 2014).

The basic characteristic of developing and facilitating relational norms are trust and cooperations. Each may be viewed as promoting collaboration and reducing the risk. In this present study context, the relational governance is to focus on indirect interactions that enhance the exchange of information, coordination and trust among the partners. Also, the relational mechanism, performance outcomes are specified but allow the partner to make a specific investment or independently allow another partner to achieve the goal. Relational governance comprises a set of conditions that are understandings which regulate the way of acting of the parties. Collaboration is different from the relational governance, in collaboration, a firm working cooperatively to achier common objective and performance outcomes. The literature reveals that the interfirm exchange and transactional confronts high uncertainties and risk. Thus the controller may provide an opportunity that identifies the opportunism behaviour and support the joint decision making in the environmental and sustainability-related problems. In the relational mechanism, there is an opportunity for the buyers to intervene and extend cooperation ties. In this relational governance, managers of the supplier firm are likely to find themselves caught in a conflicting situation. Since partner has the power to terminate, the business ties as well as the power to bargain, having cultural intelligence-oriented employees provides substantial benefits to use skills in such conflicting situations and enhances the effectiveness in the continuity of the relationship and reduce the relational risk.

2.5 Sustainable Development

In June 1972, at the United Nations conference on ‘Human Environment’, considering the need for common principles and common outlook to inspire and transforming his surroundings, can bring and guide the people of the world in the development and preservation an opportunity to enhance the quality of life. The importance of social and environmental development for ensuring a favourable future for all the people of the world was first recognised internationally. Stockholm summit has persistently demanded from developing countries to reduce the gap themselves and the developing countries on technology development. Improving environmental conditions in developing countries requires first international cooperation for the benefit of all the people and their common posterity (Declaration, 1972). In 1982 at the General Assembly of the United Nations

(UN) established "*The World Commission on Environment and Development*" (WCED). Five years later, in 1987, at the Brundtl and Commission committed for seeking ways to maintain a balance between the planet limits and human enterprise (Commission et al., 1987). Sustainable Development (SD) term was first used in the "World Conservation Strategy by International conservation of union of nature and natural resources" (IUCN, 1991) and is understood as 'sustained growth', 'sustained change', 'successful development'(Lélé, 1991).

Earth Summit in June 1992 in Rio De Janeiro, Brazil by the United Nations Conference on Environment and Development (UNCED) issued a declaration and agreements of a detailed 21 points agenda by more than 178 countries on climate change and biodiversity. Ten years later, the agenda on Sustainable Development was reaffirmed to protect the environment and human lives in Johannesburg, South Africa, in 2002, at the World Summit on Sustainable Development (Ramsay, 2002). In the Johannesburg declaration, the report states that human needs are basic, but there has been narrowly focused on human development, social justice, poverty alleviation and equity (Ramsay, 2002). It is commonly understood as 'Societal-level sustainable development' (Bansal, 2005). The Johannesburg Declaration sought to provide a shared blueprint for the advancement and strengthen the interdependent and mutually reinforming on three pillars of sustainability, environmental, economic and social (Hens and Nath, 2005).

The Brundtland document made an effort to close a part of debates while leaving some ambiguity. The focus, however made on human development with an emphasises to meet up human beings' requirements as well as make sure that everyone achieves a reasonable portion of resources. While many other common terms for sustainable development and sustainability. "*Sustainable development to describe attempts to combine concerns with the environment and socio-economic issues*" (Brien, 2005). The concept of sustainability has many different interpretations, for example, development and sustainability are based on different assumptions. The sustain means 'support from the below' and development means ' an act of control' (Visvanathan, 1991) or process of directed change as a means of achieving objectives (Lélé, 1991). The critics of SD differing sustainability objectives in developing and developed countries often consider care for three pillars of sustainable development, environment, social and economic. The (WCED, 1987) definition of sustainability "is a multidimensional undertaking to achieve a higher quality of life for all people".The three pillars of sustainability are interdependent and combined elements of sustainable development. Some others define sustainability as a matter of preserving sources for the survival of existing and future generation (Stiglitz, 1997). Activities undertakings to expand the realm of social sustainability are started (Banerjee, 2003).

The sustainable development goals (SDGs) is to produce a set of universal targets that meet an urgent economic, environmental, and social challenges facing our world. The social sustainability is to establish measurable goals for tackling human development issues, such as reducing poverty, providing access to people's freedom, expanding, equal opportunities for all in all spheres of life, providing access to equal job opportunities,

sanitation, and health and well being. The Social sustainability in the manufacturing is to expand employee's freedoms to access equal job opportunities, equality in income, minimising gender discrimination in the job, fair practices, and development of capabilities that lead to creating worker attractiveness in the job (United Nations, 2016). Sustainable development goals, as evidenced by the policies of the United Nation in transforming agenda 2030 (United Nations, 2015). See Fig.3 for Global indication framework for sustainable development goals. The last few years have seen dramatic changes in socio-economic development. There is a long-standing debate on, how can social sustainability be achieved? Social sustainability issue has become eyespot for many international organizations.

Fig.3 United Nations Sustainable Development Goals

(Source: https://news.un.org/en/story/2015/09/509732-un-adopts-new-global-goals-charting-sustainable-development-people-and-planet)

"*The concept of sustainable development provides an integrated approach to address the emergent and interlinked problems of modern economic development such as ecological destruction, social inequality and the neglect of future generations*" (Siebenhüner and Arnold, 2007). Social sustainability is an important process for the European economy is increasingly attractive attention by academic scholars. Among the many social impacts, manufacturing activity may cause, noise production, increase health and safety issues and gender inequalities. During the past decade, social sustainability has become a research topic for manufacturing firms in the European Union (EU). Based on this notion, EU has realised that they can enjoy the attractiveness of working in manufacturing by being concerned about the social wellbeing and future of people in the plant through the creation of new roles, define a process for the people in the factory (Leeuw, 2013). For example, a German-based multinational company, Adidas show growing interested in the social

sustainability issues into their sub-contractors and suppliers. Specifically, they emphasised gender discrimination, equal employment opportunities and the social well-being of the worker's works in their suppliers. There is limited evidence in the supply chain literature on how firms used their resources for creating conditions to improve socially sustainable development.

Arnold (2017) addresses the issue of determining companies' activities to fostering sustainability across the whole value chain. The dimensions of social sustainability are multidimensional because it depends on several aspects, such as cultural differences and organisational culture. In the domain of supply chain management, Social sustainability (SC) practices as the most difficult initiatives to implement when compared to the design and process for environmental issues. Thus, SC has become an important key and for the European economy and developing economies. According to (Anisul Huq et al., 2014), concerning the prior research on social sustainability issues, little attention has been paid to developing economies. As a hub of sports manufacturing, Pakistan is the largest South Asian manufacturing goods exports and, second-largest exports of surgical equipment and received the largest orders in 2017. Social sustainability issues are gaining importance in Pakistan, due to some factors: the new regulations on social issues, internal and external pressures and improving social well-being. Social sustainability issues are gaining importance in Pakistan, due to some factors: the new regulations on social issues, internal and external pressures and improving social well-being. However, at the same time, many export-manufacturing firms in Pakistan encounter the challenge of reducing child labour, gender equality, and societal well-being. Thus, future research is needed to create a common objective for the improvement of social sustainability in manufacturing (Leeuw, 2013). The concept of partnership as agenda of sustainable development goals emerged at the World Commission of united nation development, which emphasizes the global partnership for sustainable development, "*complemented by multi-stakeholders partnership that transfer and mobilize and share expertise, knowledge, and resources contribute to support the achievement of sustainable developments goals in developing countries"* (United Nations Statistical Commission, 2018). A few empirical studies in the supply chain literature have demonstrated the positive impacts of partnership on the creation of collaboration and commitment; especially, researches lack in the perspective of social sustainability. The sustainable development goals were developed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) in March 2016 at the 49 the session of the United Nation Statistical Commission for Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development.

2.6 Corporate Social Responsibility (CSR)

The term global responsibility appeared in 1990 as the focus on responding to the global demands and needs which specifically focuses on the firm's operations and its impact on the human rather than the ecological (Swindley, 1990). In line with, (Gardiner et al., 2003) explained that "global responsibility implies a global understanding of CSR". According to (Pesqueux, 2003) described it as the focus on business ethics, sustainable

development, and corporate citizenship. The widespread use of the term "*corporate social responsibility (CSR), which captures the general duties and obligations of corporations to society, adds further confusion*". Moreover, "CSR typically encompasses environmental and social issues as components of the triple-bottom-line" (Elkington, 1997). The term social responsibility in supply chain management is rooted in the manager decision, which he has to deal, particularly improving social performance in supply chains (Klassen, 2009).

The concept of protecting the natural environment has become dominant in sustainability research in recent years (Awan, 2011). The core idea of sustainability has been under debate on the general definition of sustainability (Kajikawa et al., 2014). A variety of sustainability definition has been recommended in the previous literature (Christensen et al., 2007). These definitions include sustainable development (Banerjee, 2003); covers socioeconomic dimensions, corporate sustainability (CRS, as pinpointed by (Montiel and Delgado-Ceballos, 2014), includes organisational practices for balancing the interest of diverse stakeholders, sustainable business or its operations (as noted, e.g. by (Lozano, 2015). In the field of environmental management, the "pays-to-be-green" (Orlitzky et al., 2011) and CSR has similarly turn out to be a big deal for firms (Kolk and Pinkse, 2006). Such voluntary approaches and standards have the potential to make companies more competitive (Hallstedt et al., 2010).

The corporate sustainability discipline has emphasised the role of the "firm's processes and procedures, such as overall management philosophy, strategic product decisions, competitiveness, and strategic planning" (Jansson et al., 2017). In the current corporate sustainability(CS) challenges, export manufacturers want to focus more on their capabilities, thereby increasing the need for cooperation and information exchange. Corporate sustainability(CS) has gained considerable attention in recent years and based on the natural resource base view (Hahn et al., 2018). However, business sustainability regarded as much broader than CSR, and even environmental, social and Governance (ESG) has recently gained more acceptance (Rezaee, 2016). The empirical research (Huang and Watson, 2015) suggested an integrated framework on business sustainability, and it is a relatively new concept, and it has been defined as "*as the pursuit of a business growth strategy by allocating financial or in-kind resources of the corporation to ESG practices*". Research on socially responsible practices in supply chain drawing attention from the last decades and provide findings from the corporate socially responsible perspective. There are fewer studies that have been conducted on a socially responsible supply chain. The socially responsible practices in the supply chain has been studied from the corporate social responsibility perspective (e.g, Amaeshi et al., 2008; Spekman, Kamauff, & Werhane, 2007; Gunasekaran & Gallear, 2012; Pullman, Malone, & Carter, 2009b; Quarshie, Salmi, & Leuschner, 2016). Many previous studies in operations management literature have used the term corporate social responsibility (Ałan et al., 2016; Yu et al., 2008) and few authors offered a new idea of social responsibility in a specific supply chain context as (Govindan, Azevedo, Carvalho, & Cruz-Machado, 2014).

Research on socially responsible practices in supply chain drawing attention from the last decades and provide findings from the corporate social responsibility perspective. There are fewer studies that have been conducted on a socially responsible supply chain. The socially responsible practices in the supply chain has been studied from the corporate social responsibility perspective (e.g,Amaeshi et al., 2008; Andersen & Skjoett-Larsen, 2009; Beske et al., 2008; Boyd et al., 2007; Ciliberti et al., 2008; Gunasekaran & Gallear, 2012; Mamic, 2005; Pullman et al., 2009b; Quarshie et al., 2016). Many previous studies in operations management literature have used the term corporate social responsibility (Aɬan et al., 2016; Yu et al., 2008) and few authors offered new idea of social responsibility in a specific supply chain context as (Govindan et al., 2014; Park-Poaps and Rees, 2010; Wolf, 2014). The discussion in the literature highlights the importance of the socially responsible issue in the supply chain. The concept of supply chain management (SCM) is relatively not new; the concept was first introduced in the early 1980s. However, in 1990s, academics differentiate logistics from the SCM on theoretical bases (Cooper et al., 1997; Lambert and Cooper, 2000). Both concepts are quite different, and there is a need for integration and coordination of the logistics process and activities within and between the firms that go beyond logistics (Mentzer et al., 2001). Sustainable Supply Chain Management (SSCM) defines as *"The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements"* (Seuring & Muller, 2008). The definition of SSCM in the context of sustainability has discussed that includes the cooperation and management of information among the supply chain partners.

There are ongoing debates about the importance of the definition of SSCM. SSCM has also been defined as "*The strategic, transparent integration and achievement of an organisation's social, environmental, and economic goals in the systemic coordination of key inter-organisational business processes for improving the long-term economic performance of the individual company and its supply chain*" (Carter and Rogers, 2008)**.** Research efforts have directed towards a better understanding of what social issues must be addressed in suppliers from developing countries (Mani et al., 2016). The best organisational sustainability occurs when they use an integrated approach and incorporated the environmental, social and economic goals into their overall business strategy. The sustainability idea in the supply chain context can be viewed from the buyer-driven social sustainability practices and learning of organisation as inherent in the transformation of knowledge from groups or individual stakeholders and transferred to it to achieve a common goal. Manufacturing firms must consider buyer-driven sustainability practices in order to ensure their long-term social performance and survival. Instead, social performance literature does exist; there has been a lack of evidence on what practices constitutes to achieve social performance. Obtaining social performance improvements requires an ability at each step of chain to execute and implement the practices through the establishment of the structure. Thus, social sustainability originates

from the established policies and goals to conform to and achieving intended outcomes. The terms of social performance and social sustainability used interchange in the literature. The social performance demonstrates that the higher is the social indicator values; the company achieves more social sustainability. This measure contributes to social sustainability performance.

2.6.1 Social Sustainability

Around the globe, the social sustainability landscape is shifting, as efforts to improve social conditions and practices gain support and momentum. Sustainability is a multidimensional issue and corporation interest in sustainability, gaining momentum for fostering sustainable development. The word global responsibility appeared in 1990 as the focus on responding to the global demands and needs which specifically focus on the firm's operations and its impact on the human rather than the ecological (Swindley, 1990). In line with, (Gardiner et al., 2003) explained that "global responsibility implies a global understanding an of CSR". According to (Pesqueux, 2003) described it as the focus on business ethics, sustainable development, and corporate citizenship. The roots of interest in sustainability can be traced back to early decades when 7700 companies in 130 countries signed UN Global Compact, which focuses on discussion of corporate social responsibility, business ethics, corporate environmental management, business and society, corporate sustainability (Weymes, 2004). The significance of sustainable development is broadly appreciated and has become a noteworthy discussion for the business world (Patzelt and Shepherd, 2011). Sustainable development involves a complex coupling between stakeholder dialogue and cultural change(Arnold, 2010).

Social aspects of sustainability have not given much preference because it is more likely to depend on firm preferences (Shi and Chew, 2012). Similarly, in a more practical context, corporate sustainability (CS) has been treated as a mere extension of the corporate social responsibilities(Hutchins and Sutherland, 2008). Although the literature on specific social responsibility and corporate sustainability have been used interchangeably to define sustainability performance (Halme et al., 2018). The need for sustainable practices at the operational level has been recognised to impact positively is in reducing energy consumption and waste management (Boiral, 2006). Social sustainability (SS) issues have not been given adequate attention in the developing country context (Anisul Huq et al., 2014; Brandenburg et al., 2014). The manufacturing industries in the emerging market, such as India, China, are considered a lack of social practices (Zorzini et al., 2015). Prior research studies provide insights into how sustainability strengthens the firm reputation and performance, but the social sustainability issues in the context of the supply chain have largely been given less emphasised. The social sustainability concept encompasses, the identification of the key social aspects to take into consideration in planning, design, procurement in production operations, a large part of the social impacts on depends on the internal infrastructure conditions.

In sustainability literature, sustainability has been encompassing environmental, economic and social dimensions (Elkington, 1994). The concept of Sustainable development is covering environmental, economic and social sustainability aspects. Sustainable development requires focusing on all three dimensions and the development of broader goals associated with sustainable economies and societies (Husgafvel et al., 2015). This means that the manufacturing firms can address its social sustainability challenges within the operational environment by adopting the use of governance mechanism. The dimensions of social issues are varied significantly from one country to another country and vary from emerging economies to industrialised economies. The implication of sustainable development varies according to the industry type, sustainability challenges, regions and cultural needs of different geographical areas. In previous studies, compared with environmental and economic dimensions, social sustainability has most often not been studied in a supply chain relationship (Brandenburg et al., 2014). While the scholarly definition of Social sustainability is vary, the best well known and most appropriate for our study objective is, social sustainability (SS) has been defined as when firm support the creations of skills and capabilities and preservation of current and future generations, support and give equal treatment within and outside the firm borders and promote health (McKenzie, 2004). SS in the supply chain (SC) has emerged as important dimensions of the development of a mechanism that affects overall firm performance (Eccles and Serafeim, 2013).

To date, researchers have specifically considered the environmental performance point of view or what refers to " triple bottom line" (Elkington, 1997). The framework of Sustainability reporting initiative (GRI) provided many indicators of social performance and categorized it into four categories namely, Human right performance indicators, Labor practices, Decent work performance, and Social performance indicators (Global Reporting Initiative and others, 2002). In this study, we only focused on social sustainability performance aspects, bridge sustainability, referring to "changes in behaviour to achieve biophysical goals" (Vallance et al., 2011). While the scholarly definition of SS is a multidimensional idea and could be studied from a different perspective, the best well known and most appropriate for our study objective is, SS has been defined as when a firm support the creations of skills and capabilities and preservation of current and future generations, give equal treatment within and outside the firm borders and promote health (McKenzie, 2004). Hutchins and Sutherland (2008) argue that the causal relationship between corporate activities and social activities is fundamental to address the call for sustainable development fully. According to (Pullman et al., 2009) concept of social sustainability encompasses internal (employee) and external (local communities).

Social sustainability defined as an
"*ethical code of conduct for human survival and outgrowth that needs to be accomplished in a mutually inclusive and prudent way*" (Lafferty and Langhelle, 1999; Sharma and Ruud, 2003).

Social sustainability dimensions in the supply chain include health and safety legislative, welfare, protection from harm and community development (Agrawal & Sharma, 2015; Carter & Easton, 2012). The definition of "social issues" provided by (Klassen and Vereecke, 2012) is broadest in scope and includes all-important issue related to human health and safety. The definition of social issues in the supply chain proposed by (Klassen and Vereecke, 2012) is followed in this study. Social sustainability performance is required to implement social practices across the supply chain. Social issues relating to the supply chain are referred to in different ways in prior research, the same term used in different ways. The idea of social sustainability highlights equality and accessibility to equivalent legal and human rights to opportunities and resources (Bansal, 2003; Wagner and Krause, 2009). Specifically, there has been researcher engaged in studying the social sustainability in relations to the supply chain in the Asian context, Labor standards of Reebok's foot wares supplier in China (Yu, 2008); human rights,equity and education issues in India (Mani et al., 2016); gender diversity in manufacturing firms of Malaysia (Chin and Tat, 2015); Social sustainability practices investigated in Bangladesh (Zorzini et al., 2015); Payment system and working hours per day in Pakistan (Lund-Thomsen, 2013); occupational safety and training in South Asia (Ratnasingam et al., 2012), Workplace and training and education opportunities for local community in Brazile textile firms (de Abreu et al., 2012). Most low-income countries still have gender inequality, health, safety problems. According to (Hutchins and Sutherland, 2008), social aspects have also become a focus area in the context of the supply chain to support sustainability. The social issues in the supply chain are defined as "product or process related aspects of operations that affect human safety, welfare and community development" (Klassen and Vereecke, 2012). Social sustainability performance is required to implement social practices across the supply chain. In emerging markets, it is more important for manufacturing firms to be able to achieve better social sustainability performance because western buyers emphasize buying from socially responsible firms. Social sustainability debate in the supply chain has raised the challenge to how social issues (e.g., safety issue, child labour, health, living conditions, and equity problems) could better be addressed in the supply chain (Wilding et al., 2012).

Social sustainability has been defined in several ways and is defined in the present study as "a system of coordinated social interaction practices for the management of the social impact on people and society with the key internal and external stakeholders. This all happens for creating, developing and delivering the best social and ethical code of conduct". The aim of social sustainability "is to have value for the survival of current business system (customers, partners, and society) and its growth for the future generation equitably and prudently" (Awan et al., 2018). Social sustainability in the supply chain management compels the firms to ensure sustained existing social issues, such as workers' welfare, consideration of health and safety issues, flexibility in production scheduling, gender equity in job-creating, the distribution of equal resources and opportunities, employment human rights and community welfare. These considerations are essential for social sustainability in the supply chain and to meet the demands of stakeholders. Despite many years of sustainable development policies and huge advances

in cleaner production technologies inequalities and social issues are growing in emerging countries. Most attention from global governance players is paid to the child labour issues only, the reason for this focus on the put is simple, and they supped to representing the interest of global institutions and their respective members. The change in the primary object of social sustainability form institutional role to buyer-supplier has implications both for understanding the sources of threats and for developing strategies to enhance social performance.

2.7 Cultural Intelligence

Culture continues to be recognized as an essential parameter highlighting differences in the value system of the organization (Hofstede, 2010). "Cultural values reflect subjective cognitions of shared social or personal cultural orientations attached to managers' mental programs" (Caprar et al., 2015). Cultural Intelligence(CQ) is a multidimensional construct that is composed of four dimensions: meta-cognition, cognition, motivation, and behaviour (Ang et al., 2007). Cultural intelligence capabilities of a firm are particularly concern and strategically important for international business in the light of current globalisation challenge (Ang and Inkpen, 2008).
According to (Awan et al., 2018a),the role of cultural cognition in a managerial decision related to governing inter-firm relationships is increasingly growing in sustainability literature. They argue that cultural intelligence stands as cognitive governance structure providing a way of how to set boundaries of knowledge, motivation and awareness of partner cultures and how to organise its governance to improve social sustainability. Cultural intelligence (CQ) "is a system for understanding and extending cooperative norms in the cross-cultural interaction that allows management to function efficiently and take advantage" (Awan and Kraslawski, 2017).

Cultural learning of foreign partner reflects a firm dynamic learning capability, how a firm creates and delivers value to its customers and mechanism employed to capture a share of that value. Cultural intelligence provides a strong norm for learning from foreign buyers, which can provide benefit necessarily depends on implementation for achieving success in buyer-supplier relationships. Thus, motivational CQ provides insights into the variable influencing human behaviour. Thus, cultural intelligence capability of supplier firm should be able to reduce conflict and potential disputes because the firm has behaviour and motivational cultural intelligence, through Selecting appropriate verbal and nonverbal communications styles for coordination is a critical source of truth that could be developed through conveying flexibility and adaptability in a relationship. It is proposed that behavioural and motivational CQ takes an outreaching approach and emphasise adapting and developing quality communications with cross-country partner aimed at enhancing knowledge acquiring and use this knowledge for stabilising relations and reduce the conflicts.

2.7.1 Metacognitive and Cognitive CQ

Meta-cognition(MEC)is defined as the individual ability to process knowledge that leads to control over cognition and understand cultural knowledge (Ang et al., 2015). It is concentrated in the ability to awareness and consciousness of cultural cues during interaction with people from another cultural background (Ang and Inkpen, 2008). Metacognitive enable individual in cultural domains to increase intercultural adaptability. These capabilities enable the individual to apply an appropriate knowledge to drive novel and useful ideas and strategies before, during and after cross-culture interaction for the joint planning situation and problem to suit the real-time situation. When sustainability initiatives are organized collaboratively, export manufacturer' deals with culturally diverse partners and CQ becomes important in handling, and coping conflicts and disputes arise from interaction with different partners.

Cognition CQ "is competency-based individual knowledgeability of cultural environments, including a legal, economic and social system of different cultures as well as the norms and values of these cultures" (Ang et al., 2007). However, many existing studies concentrated on single or two facets of cultural intelligence; the present study concentrated on the concept of cultural intelligence moderation between relational governance and sustainability commitment. CQ capability makes the employee more effective in working across culture teams. We argued accordingly that when buyer firm shares tacit knowledge resources to the supplier, it makes supplier firm to adapt, understand and coordinate more with the buyer firm and transform these resources to enhance social sustainability performance. These capabilities guide an individual to integrate a sense of oneself and the ability to use that knowledge to respond to challenges. This enables the manager to carefully observe what is going one's mind and the minds of others. In other words, meta-cognitive and cognitive capabilities acquired from the firm may lead to developing more knowledge, which then triggered the behavioural changes that required a supplier firm for improving their social sustainability. People with high Metacognitive capability are able to control their thought process. The CQ dimensions emphasize openness to change and independent actions and favouring change (Awan, 2019). Relational governance is more effective for situations involving joint decision making and working together. When suppliers perceive non-cooperative initiatives in solving differences, then use of culture metacognitive can deal with these differences and prevent the detrimental outcomes in exchange relationships. On the contrary, the firm has accumulated more knowledge and consequently firm ability to uses these resources for the effective implementation of sustainability initiatives, lead to improving commitment towards sustainability.

2.7.2 Behavioural and Motivational CQ

Behavioural CQ is "the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures" (Ang et al., 2007). Behavioural "CQ refers to the action aspect of the contract" (Ang *et al.*, 2007). Behavioural CQ thus refers to as "*capability to exhibit appropriate verbal and non-verbal behaviour when*

interacting with individuals from diverse cultural backgrounds" (Ng & Earley, 2006). It includes a person able to adopt behaviours, how to use gestures, tones, facial expression, and appropriate communication styles (Ang *et al.,* 2007).

The motivational aspects of "CQ represent managers capability to involves in learning about cultural knowledge and direct energy and functioning effectively in a situation characterised by cultural differences" (Ang et al., 2015). In this situation, motivational CQ may play an important role in conflict handling as a constructive solution. A high level of "motivational CQ reflects individual have high interest and are more confident when interacting with culturally diverse situations" (Ang et al., 2007). Motivational CQ dimension refers to the mental capacity to put the effort in adjusting and adapting to various cultural settings (Ng and Earley, 2006). The intact behavioural CQ allows managers to engage in more rich communication and can use language that synthesises observations and ideas about their lives, make them capable of managing and allowing to shift their communication style from negative appraisals to positive appraisal, thus creating a relational bond. Previous research has shown that metacognitive and behaviour CQ build idiosyncratic benefits to succeed in cross-cultural settings (Sahin and Gürbüz, 2014).

For example, some culture emphasises equality and collective decision making regardless of their function. In this cultural, people are often uncomfortable with the unknown and unpredictable outcome. For example, the implementation of relational governance often lies with the managers. In case, for example, if the person responsible for the coordination team of the supplier firm is change and a new manager assume the responsibilities. In this situation, the client (partner firm) may likely find it difficult to coordinate. This could increase the risk to achieve desired results, resulting in high cost and conflict may arise due to coordination style. It expected that cultural intelligence is important and can be hugely beneficial to plan and improve the decision-making and effectiveness of relational governance. However, if flexibility, adaptability and accommodating partner point of view will be perceived as sincere efforts, and results in more support provided by the buyer. Inter-firm communications may improve firm learning and reduce the cost of training. Thus, we expect managers of the firms involves the supply chain management relations can handle contract governance, which enables them to effectively comply with the contracts and resolve conflicting situations with their cultural intelligence capacities. The Culturally Intelligent managers prefer to adjust behaviour to one's specific culture, flexible behaviour, and compromising, cooperative styles and might adopt the different norms and values of the partner culture to interact more effectively.

Some culture emphasises equality and collective decision making regardless of their function. In some culture, particularly many cultures are high in uncertainty avoidance. In this cultural, people are often uncomfortable with the unknown and unpredictable outcome. For example, the implementation of relational governance often lies with the managers. In case, for example, if the person responsible for the coordination team of the supplier firm is change and a new manager assume the responsibilities. In this situation,

it is likely that the client (partner firm) may find it difficult to coordinate. This could increase the risk to achieve desired results, resulting in high cost and conflict may arise due to coordination style. It is expected that cultural intelligence is important and can be hugely beneficial to plan and improve the decision-making and effectiveness of relational governance. Firms with higher cultural intelligence capabilities may adopt relational governance with more social sustainability goals by extending their existing proficiencies in formalising sustainability commitment and improve performance. It is suggested that, if firms create a relational governance mechanism with their customers that support cooperative behaviour, it is likely to promote sustainable social performance through the development of sustainability commitment. Therefore, the interfirm relational governance appears to be a crucial driver for commitment to sustainability for social sustainability performance.

2.8 Commitment to Sustainability

In recent years, the term ´commitment to sustainability` has received attention in corporate sustainability literature. From a corporate sustainability perspective, the commitment to sustainability is a responsible and transparent way of doing business and is central to sustainable development. Commitment to sustainability "relates to a firm's level of engagement with social or environmental initiatives to diminish negative impact" (Krause et al., 2009). According to (Jansson et al., 2017), commitment to sustainability "*is an overall management philosophy, strategic product decisions, competitiveness and strategic planning of the firm's process and procedures*". Sustainability commitment is based on reward perception of suppliers from buyers, focuses on measuring and improving supply chain operations to fulfil social requirements, putting recommendations put forth by buyers, in improving operations and make continuous improvement in the design process practice. Commitment takes several forms and involves suppliers in their operations (Dyer and Singh, 1998). Commitment ensure the exchange of information as anther party requires, firms may provide transparency in information, so consequently improve quality and responsiveness (Singh and Power, 2009). According to (Arnold, 2018), social engagement is crucial to achieving sustainable development goals. However, this will build the relational ties that lead to transforming either partner self-centred or self-interest behaviour into a long-term relationship with common shared sense and goals for achieving the desired goal (Revilla and Villena, 2012).

Commitment to sustainability has been impressively important for firms looking for expansion beyond their local sustainability objectives. Commitment to sustainability involves the management willingness to devote specific resources and put efforts for monitoring and reporting the organisational practices that impact on the natural environment and quality of human life. Sustainability commitment plays an important role in the process of development and adoption of practices to create value for customers by improving socially sustainable performance outcomes. Commitment to sustainability is treated as a firm activity beyond the simple cooperation and transaction, undertaken

with different buyers with planed positive outcomes in the areas of health and safety, human rights, labour, and society through relational governance. In this study, commitment to sustainability treated as part of the common theme of heavily focuses on integrating environmental and socially responsible practices into the operational strategy in priority areas to achieve sustainability objectives.

However, the present study conceptualised sustainability commitment as an on-going process of integrate sustainable practices with other partners and devote specific resources for making a fundamental transition for the long-term continuation of the relationship. More precisely, exporter firm sustainability commitment is a sustainability orientated effort to maintain a relationship with others to strive beyond compliance and make continuous improvements in firms social and environmental initiatives. Sustainability commitment can be used in strategic decision and planning of the firm's process and procedures, setting minimum standards and developing methods for continuous improvements with attributes that are rare, valuable and non-substitutable. In this regard, this study posits that commitment to sustainability offers opportunities for firms who wish to improve their social performance.

2.9 Collaboration

Buyer-supplier collaboration involves the interaction between buyer and supplier to share both tangible (machines, staff etc.) and intangible (knowledge, information, skills etc.) resources across firm boundaries to maximize value for the customer (Powell et al., 1996). Collaboration on sustainability initiative requires devoting specific resources on joint activities to address the sustainability issues (Vachon & Klassen, 2007). Collaboration is defined as working together with for achieving a single objective (Teh et al., 2014). (Gölgeci et al., 2019) explore the relevance of environmental collaboration as the relational underpinnings of environmental performance. The research contributes to theory and practice, how contract governance relates to sustainable collaboration in a buyer-supplier relationship and improve social performance.

Moreover, in export manufacturer industries, in which a variety of inter-firm agreements are necessary and relatively frequent. The form of agreement is purported to vary according to the specific need and partners' requirements. The collaboration is particularly important to effectively generate returns on complementary resources and skills for developing the core capabilities. This study focuses on collaboration from the supplier perspective. The present study gives empirical evidence for the fact that collaboration may have a positive impact on social performance improvement. The findings suggest that collaboration between buyer suppliers not only supplies a legitimising process for the improvement of sustainable collaboration but is also used to form an effective governance mechanism to achieve social performance. It is suggested that companies can achieve social sustainability outcomes by identifying those practices and activities that have potential to cause significant risk to the health and safety to the employees and to minimise through taking collaborative measures with their suppliers.

3 Research design and methods

3.1 Research Philosophy

The purpose of conducting research is to acquire knowledge and to develop an understanding of the world around us and answer the important issues. The process of conducting research is complex, and researchers find the best ways to solve the problem and researchers put their full endeavours to understand the different beliefs and thoughts. This process is known as research philosophy (Cavana et al., 2001). It helps to clarify the research design and to understand the methods and analysis techniques for collecting and interpreting data to answer the research questions.

Further, research philosophy helps researchers to indicate the limitation of the research design. It also helps to generate new search design about the subject of the study under investigate and make them able to think outside their previous experience (Easterby-Smith and Prieto, 2008). The research paradigm of positivism and phenomenology are two extreme points in the continuum, and many other paradigms are located between them. The pure form of the positivism and phenomenology is exceptionally difficult to find in business and management research (Collis and Hussey, 2013). Perhaps, sometimes it is reflecting the realism approach (Saunders, 2011).

Science is a socially embedded activity (Cannella and Paetzold, 1994). Although there is a long-standing debate in social science research, particularly focusing on the nature and type of the philosophy of management research should be derived (Starkey and Transfield, 1998). It is hard to identify all the characteristics of either positivism or interpretive perspective, but some may find to stick in a particular method either positivism or interpretative at some point in time (Easterby-Smith and Prieto, 2008). The positivist paradigm described the positive ontology reflects views the external world and research can explain the causal relationship between the objects using facts. This approach sees the social world, as externally object and its properties should be measured through objectively. Where the interpretive; see the world as reality and socially constructed and given meaning by peoples (Collis and Hussey, 2013).

3.1.1 Explanation of Research Paradigm

There are some research approaches that could be applied in examining the social science phenomena, but the right research approach is to be adopted mainly influenced by the aim of the research and type of research (Collis and Hussey, 2013). Morgan (1980) defines a paradigm as “made up of the general theoretical assumptions, laws and techniques for their application that the members of a particular scientific community adopt”. The word paradigm describes as the cluster of the belief that guided the researcher about what should be studied and how results should be analysed and interpreted. There are different paradigms of research in social science, and each paradigm holds a different research method and focuses on the different area of study (Saunders et al., 2009). The functional

paradigm may take a survey approach and suggest a rational approach to the organisation and problem-solving. A relevant method would be surveyed of people made to investigate something and using a questionnaire with both qualitative and quantitative research approach to gain descriptive response to reality.

Cannella and Paetzold (1994) criticized the philosophy of management research for its pluralism, reflexivity, and relativism from positivism perspective. Management research is relying on evidence to prove it is a positivist, objective and consensus approach. Phenomenological approach emphasis that theories must help to generate real and not mirror the reality (Cannella and Paetzold, 1994). Positivism approach is linked with natural science and testing them empirically. This approach based on the notion that researcher can produce knowledge which we can judge by our senses (taste, smell, touch, hearing, sight). It is testing to prove or disapprove the hypothesis and generates new theories by putting new facts together. Positivism is subjective statements rather than normative (objective). In business and management studies, interpretivism is the idea that is much more common. Because it promotes that subjective ideas are more valuable and reliable. In business and management studies, humans are involved, and this study sees the world through the eyes of the people under investigation, studying different perspective of facts rather than one perspective of positivism. So it is important to understand where this difference lies between the qualitative and quantitative studies. A quantitative research strategy involves a deductive approach to testing and measuring the theory. It often uses numbers of facts and the positivist approach of natural sciences. Where the qualitative research strategy involves inductive approach and more likely associated with producing theories using Interpretivism, allowing the multiple perspectives and focused on constructing rather than seeking to find a new way (Creswell, 2009).

In social science, the measurable and observable phenomena are regarded as reliable, valid knowledge in conducting research (Collis and Hussey, 2013). The positivist research design consists of formulating the hypothesis and observations are deduced to accept or reject the stated hypothesis (Easterby-Smith and Prieto, 2008). In this process, knowledge is acquired by using valid and reliable sources and facts test statistically to provide explanations of the hypothesis. This research often an emphasis on using large samples and structured design (Saunders, 2011). This phenomenon of research increases the understanding of the problem and uncover the reality as it is understood (Cavana et al., 2001) and human behaviour understands as it from the participant's point of view (Collis and Hussey, 2013).

The realism concept is based on that world is independent of human thoughts and belief (Sayer, 2000). The knowledge in the social science is determined by the time, culture and situation (Saunders, 2011) and seeking to understand the meaning of social forces that influence on the people’s views and nature (Saunders et al., 2009). In realism, knowledge is subject to change and challenge on empirical grounds. This approach allows researchers to use both qualitative and quantitative method (Saunders et al., 2009). This approach

builds the bridge the positivism and phenomenology for researching the social sciences (Stiles, 2003). The integrative approaches to research help to validate the research findings and cover the important perspectives of research under study.

The term paradigm is frequently appearing in the research of social sciences, and it has multiple meaning. The definition of paradigm is used in this study as the examining social phenomena that can help to gain a better understanding of the research objective. A system of belief that influences how research decides to select question and method intend to use in their research study. Paradigm is a frame of reference is thus representing worldview or comprehensive belief system that guide the researcher to deal what we know or can we know and how can we know (Burrell and Morgan, 2017).

Cross-Sectional studies are aimed at finding out the phenomena by taking a snapshot of the population. In this type of study, data on several variables is collected at a time (point time). The cross-sectional study design is selected for this study. The characteristics of this study design are association, directionality, and isolation. This research tool focuses on measuring the casual (co-variation) among the variables and on identifying the type of relationship exist variables (Saunders et al., 2009). The present study adopts the questionnaire-based survey methodology to achieve the research objective. This methodology approach is most suitable when the respondents may not have time for the interview (Saunders et al., 2009). Availability of data regarding green operations and environmental practices are difficult to gather. The phenomena of acquiring knowledge are different in social sciences and from natural sciences. The results are constructing the knowledge, that can be investigated in many different ways, and it tends to change certain conditions. The results of the approach are practical and to some extent, can be subjective. This thesis focuses on the approach of realism, knowledge sharing, and reuse.

A research paradigm consists of the philosophical assumptions, and it constitutes a way of looking at the world, how people study and how knowledge about the world can be obtained, interpreting what is seen; and researcher decided things can be seen and studied are important or valid to document in the study (Rubin and Meiran, 2005). The research epistemology based on three philosophical paradigms; positivism, critical and interpretive.

The positivism research assumes that research neither is an independent object of the part of the research and neither effect nor affected by the theme of the research According to (Remenyi and Williams, 1998). Gill and Johnson (2010) argue “the positivist research emphasises the highly structured methodology to facilitate replication and quantifiable observations which leads to the statistical analysis”. Whereas the interpretive is concerned with the social context by which it is developed and constructed by the social process that influences, is influenced by the social norms and settings. This explores the subjective meanings that motivating the people/individual to discover the details of a particular situation (Remenyi and Williams, 1998). On the other hand, interpretive research is concerned to seek and derive meaningful information from the interaction between the

various independent social factors. It is expected that the research will contribute to the existing knowledge and research and practitioners must link with the philosophy (Collis and Hussey, 2013). Does a researcher have to consider three main questions of why this research? What to research?
Moreover, how to research within the range of the philosophical research paradigms and each paradigm has its assumptions (Creswell, 2009). The selection of appropriate research philosophical paradigm affects the way to conduct the research strategy (Easterby-Smith et al., 2015). The world views (Paradigm) are different with a particular paradigm in a specific field of study from author to author, but most of the authors have research consensus on three paradigms (Morgan, 1980). The two main aspects of the philosophy are Ontology and Epistemology, commonly known as metaphysics. Ontological questions deal with what the universal characteristics are to exist or what characteristics of the world exist. Ontology deals with how the world operates. Whereas Epistemology deals with what and how can we know about the reality, and it examines what can be considered as knowledge in a specific field of inquiry and in which ways to be linked with the reality (Saunders et al., 2009). The present study uses the epistemological approach rooted in empiricism. Every paradigm has its assumptions, and the researcher has to choose a paradigm based on the problem of phenomena is under research. The best approach is to solve the problem to use either qualitative and qualitative or both method (Creswell, 2009). The selection of an appropriate research approach mainly depends on the philosophical background of research (Saunders, 2011).

The positivist approach used in this study; this approach views the world as real, objective and quantifiable. Empiricism is a popular approach that emphasises testing of existing theories and developing a hypothesis against observations (Johnson and Onwuegbuzie, 2004). The present study involves testing the theoretical frameworks that are built on the observations and explains various relationships existing between the construct and when results are generalised. The most pragmatic approach that can be used to test the theoretical frameworks is empiricism. The phenomena should look separately and independently without the emotional and attitudinal behaviour of the parties involved in the management of the relationship. This involves the normative emphasis on the phenomena that different researchers have different interpretations and conclusions of one observation.

3.1.2 **Criteria for choosing validity and Reliability**

McGrath and Brinberg (1983) explained that the research design is a series of the process used to answer the research question and test hypothesis that provide the information needed to solve the problem. According to McGrath, the causal relation is established between the construct, and observable and between the observed variables. Conceptual and methodological domains referred to as the design path. In this type of research exemplifier, the structure called Design. This seems too important in designing the path, and it consists of a combination of elements and relations form the conceptual and methodological domains. This kind of research is usually concerned to the extent that the

instruments are valid for measuring the concept that statistical and analytical tools are appropriate for capturing the models.

In the theoretical path, the research combines the concepts and relations from the conceptual domain with phenomena that study for stating a set of hypotheses. Then investigators test these hypotheses for empirical findings. The validity of questions regarding how and at what extent the concepts in the hypothesis and theoretical relational can be measured to the events in substantive demand correspond with the methodological challenge of setting predictions are less common (McGrath and Brinberg, 1983).

Evaluation of research designs

The following are the three main research design for testing the theory,

1. Laboratory experiments
2. The quasi-experiment
3. Non-experimental field study.

A few researchers have conducted research using laboratory experiment (Achrol and Gundlach, 1999; Cook et al., 2002). The laboratory experiments allow the researchers to control the effect of the third variable to be influenced in any observed relationship between the dependent and independent variable. Wherein this uses the standardised procedures and respondents randomly assigned to treatments. When experiments are performed in the field rather than in the laboratory, it is known as Quasi-experiments. This kind of research design uses the comparison of group effect and subjects are assigned randomly to either experiment, or all the participants do not have same chances to be in the control group of receiving treatment or not (Cook et al., 2002). In non-experimental field study design fit with (McGrath and Brinberg, 1983). “Theoretical path”, As to provide a good measurement for ensuring that concepts in theoretical correspond with the real phenomena (McGrath and Brinberg, 1983). This study design is most suitable when observations or set of data choose with a minimum of two or do a panel data analysis. Therefore, the theoretical testing model in the laboratory and the quasi-experimental design is regarded as inadequate and impossible for this study design. Panel data analysis is also considered a problematic design for this type of study due to resource constraint of the study. In cross-sectional studies are aimed at finding out the phenomena by taking a snapshot of the population. In this type of study, data on several variables is collected at a time (point time). The cross-sectional study design is selected for this study. The characteristics of this study design are association, directionality, and isolation. This research tool focuses on measuring the casual (co-variation) among the variables and to identify the type of relationship existing variables.

3.1.3 Research Approach

Inductive and deductive are two important approaches used to examine the relationship between theory and research (Collis and Hussey, 2013). The deductive approach of research presenting their hypothesis based on the facts (theories) and then translate and

test them statistically. It also helps to confirm or reject the facts or theories through which hypothesis deduced (Saunders, 2011). The inductive approach involves moving from specific to general and whereas the deductive approach involves moving from the general to specific inquiry to the research (Anderson, 2013). In inductive methodology research finding the general principles of the single source and coding the facts. Whereas the deductive approach conclusion usually is drawn from the stated hypothesis and inferences deduced from general to a specific case. The study assumes stated a hypothesis and facts gathered from reviewing literature and data collected from the field surveys, interviews and examination of all kinds of documents. In this present research, a deductive research approach applied since the hypothesis developed from the existing theories of stakeholders and resource-based view.

The deductive approach has been chosen since this research fulfils the criteria suggested by the (Robson, 2011). This research involves the following criteria

1. Developing a hypothesis from theory
2. By specifying and expressing the relationship between the variables to be measured.
3. By testing hypothesis empirically.
4. By confirming theories and examining the outcome of the research inquiry.
5. Modifying the theories in the light of the outcome of the results.

Therefore, the theoretical testing model in the laboratory and through the quasi-experimental design is regarded as inadequate and impossible for this study design. Panel data analysis also considered a problematic design for this type of study due to recourse constraint of the study.

3.1.4 Research Strategy

Research strategy usually determines the ways of collecting the data, making analysis and generating the results of research under study. Choosing an approximate research strategy often involve many issues; each approach has many advantages and disadvantages. It involves how a researcher will answer the research questions (Saunders, 2011).

Research strategies in social science research involve survey, case study, and experimental research approach.

3.1.5 Survey Research

A survey approach is appropriate when the research questions deal with why what and how (Yin, 2015). This method involves a collection of large evidence and converted it into numeric using questionnaires (Remenyi and Williams, 1998). It involves the drawing samples from the known population and makes inferences about the populations (Collis and Hussey, 2013). Survey methods are economical, less time consuming and useful in studying attitude, motives, and beliefs (Saunders, 2011). Lower response rate and many other reasons, among others, are the few limitations of this method (Cavana et al., 2001). This research examines the relationship between the governance mechanism and firm

social performance. Uniformity of data is required for using statistical techniques. To achieve this, the use of survey strategy looks appropriate. The survey method allows for the research to compare the results of the present study with the previous studies. This approach allows for collecting data from multiple respondents. When research involves time horizon, it can be divided into two types, cross-sectional and longitudinal studies. It involves studying the phenomena at a specific given time (Cavana et al., 2001). Data is collected once in a single time (De Vaus and de Vaus, 2001). Whereas in a longitudinal study, data is gathered in a different time interval to measure the change over some period. Cross-sectional data used for the following reasons. The descriptive and explanatory study involves the survey method research in business and management (Remenyi and Williams, 1998). The buyer-supplier activities intercorrelated with many other factors throughout the relationship lifecycle. Research should provide the complete picture of the object of problem, facts, viewpoints and detailed description of the phenomena understudy in the complex and uncertain environment. The demand for establishing a close relationship, commitment and cooperation do not only come from the supplier, but it also comes from the buyer, so this requires the intensive close observation. However, enhancing the researcher knowledge on different aspects of their relationship needed close observation. Thus, the survey method is more appropriate research methods facilitate the researcher to investigate a broad field of study without focusing on the limited number of the relationship between variables.

3.1.6 **Research Philosophy**

The purpose of conducting research is to acquire knowledge and to develop an understanding of the world around us and answer the important issues. The process of conducting research is complex, and researchers find the best ways to solve a particular problem and researchers put their full endeavours to understand the different beliefs and thoughts. This process is known as research philosophy (Cavana et al., 2001). It helps to clarify the research design and to understand the methods and analysis techniques for the collection of data and results interpretation to answer the research questions.

Further research philosophy helps researchers to indicate the limitation of the research design. It also helps to generate new search design about the subject of the study under investigate and make them able to think outside their previous experience. The research paradigm of positivism and phenomenology are two extreme points in the continuum, and many other paradigms located between them. The pure form of the positivism and phenomenology is exceptionally difficult to find in business and management research, (Collis and Hussey, 2013) perhaps sometimes it is reflecting the realism approach (Saunders, 2011). In social science, the measurable and observable phenomena are regarded as reliable, valid knowledge in conducting research (Collis and Hussey, 2013). The positivist research design consists of formulating the hypothesis and observations are deduced to accept or reject the stated hypothesis (Easterby-Smith et al., 2015). In this process, knowledge is acquired by using valid and reliable sources and facts. The use of statistical statistically techniques is important to explain the stated hypothesis. This

research often an emphasis on using large samples and structured design (Saunders, 2011). This phenomenon of research increases the understanding of the problem and uncover the reality as it is understood (Cavana et al., 2001) and human behavior understands as it from the participant's point of view (Collis and Hussey, 2013).

This approach allows researchers to use both qualitative and quantitative method (Saunders, 2011). The positivism has used in social sciences research (Stiles, 2003). The integrative approaches to research help to validate the research findings and cover the important perspective of research under study. The present study undertakes the buyer supplier's perspective; commitment is considered the large-scale social forces and it impacts on the organisational performance. This study emphasises the importance of the suppliers understanding and meaning to these forces. This research attempts to discover the mechanisms of the relationship established, and it will try to cover the hidden reasons through which these social forces help to achieve the relationship quality/performance. This approach allows using qualitative and quantitative methods within this framework of the study, and a better view of the stated objective can be achieved. In the present study, a quantitative research method is used to examine the relationship between buyer-supplier and its significant and direct effect on performance.

3.2 Methodology

3.2.1 Items and measure development

This section provides the rationale behind the survey instruments employed in the collection of primary data and explained the introduction of the survey methodology and its link with the and service quality. Then describing the data collection method, survey items selection, ordering the survey items and a brief description of the scale design and selection.

3.2.1.1 Survey Instrument

The present research is based on quantitative methodology and has been used in different business studies. (Sekaran and Bougie, 2016) described it as a "pre-formulated written set of questions to which respondents record answers, usually within rather closely defined alternativeness". According to the (Collis and Hussey, 2013) called it a positive methodology where the sample is drawn from the defined population and inferences are drawn about the target samples. The survey research method is the most effective data collection method, and the researcher can easily understand how to use the variables. This survey is aimed at the collection of primary and factual data from key respondents by designing and developing a standardized group of related survey questionnaires within one questionnaire. It has some advantages; it can be easily (quickly) distributed and collected, low cost involves; the response rate is high and easy to organise and structure. The survey benefits include ease of distribution and cost-effectiveness, good response rate, different analysis can be performed by using different software application (Sekaran

and Bougie, 2016). Most of the people are familiar with this type of data collection method. However, this may create a problem for those people who are poorly educated, but it has been observed in most cases people feel free to complete the survey questionnaire easily than other methods of data collection, such as telephonic interviews. Sir Francis Galton was among the pioneers who used this data collection method from human communities (Godin, 2007). The aim of quantitative research is to control the problem arises from the design of the questionnaire stage, and a great effort is needed to achieve the research (Bartholomew, 1968). To achieve thesis goal, the researcher put many efforts in the development of the survey scale and consider the recommendation of many researchers' studies in preparing the final survey instrument. A simple questionnaire title was added, followed by a brief introduction to the research purpose. The concise and straightforward language was used for introduction writing, in the same manner, to elicit more accurate and relevant answers, as suggested by (Berdie et al., 1986).

The survey questionnaire is an effective mechanism that consists of a collection of related worded questions used mainly to collect a particular type of actual information to solve the management specific problem (Wrenn et al., 2007). It consists of a series of sequence questions that translate the objective of the research explained in the literature review and divided into specific different sections and followed a logical and smooth sequenced. The questionnaire was designed according to the guidelines suggested by (Collis and Hussey, 2013). The questionnaire design consisted of the different types of questions, in this research, open and closed-end questions have included in the questionnaire. The purpose is to give freedom to the respondents to write about his views precisely. A closed question is considered a convenient method for collecting required information which is easy to analyze and interpret. The rating scale questions is a form of like scale that consists of agree to disagree, and respondents asked to indicate their level of satisfaction or dissatisfaction by specifying one value to the point scale.

The arrangement of the questionnaire may affect the quality of the data in many ways, such as the way of contacting and administration the questionnaires (Bowling, 2005). The researcher has paid precise attention to how to order the questions because the illogical order can create problems and affect the participant's response (Schuman and Presser, 1981). The question should be grouped logically and connected in a way to indulge respondents interests to obtain a similar response (Moreno, 1998). The questionnaire should start from general to specific questions to enhance respondents interest in filling the survey (McFarland, 1981). Likert scales pertain a declarative statement followed by the set of response options consisting of an agreement to disagreement. The purpose of the declarative statement is to seek the negative and positive opinion of the customers (Roberts et al., 1999). There has been a debate on what Likert scale should be used to capture the response of the customers, (Foddy, 1994) suggested that seven-point categories scale ensure more validity and reliability of the data. While (Dillman et al., 2014) have recommended five categories of Likert scale instead of 7 point categories scale. The scale design is necessary if the researcher is using the primary data for

interpretation, in the case where the secondary data is involved in interpretation and analysis, it is confirmed that scale of data is included in the data. This study employed the primary data collection methods as has been discussed in previous sections. The design of scale is very important in social sciences studies, it satisfies the study purposes and summarizes the required information and make statistical analysis easy.

The number of cases should be greater than the five times as proportion to the number of variables are included in the study (MacCallum et al., 2002) demonstrate when the population is more heterogeneous than the general rule of thumb for minimum sample size is factor-to-variable ratio recommended. It is hard to suggest what constitutes a good sample size for a population. (Hair et al., 2010) suggested that whenever possible, the researcher obtain more sample for the factor analysis. They consider the100 sample size is (poor) and 500 (is very good) of 5 times the number of variables. For multiple regression analysis, the question is how large sample is adequate for the study? The sample size is needed to be given equal importance that sample size should be greater than at least eight times the number of the independent variables including 50 for the R squared (Tabachnick & Fidell, 2007).

The exact number of independent variables can extract from factor analysis. For example, if there are 8 number of variables, then 115 questionnaires are required. Then minimum recommended sample size for the consumer survey are of the order from 300 to 500 The sample size selected was subject to the number of item ratio for analysis of the data Hair et al., 2010). Level of confidence and error explained by the sample size (Sapsford and Jupp, 2006) and in social studies, the 5 per cent standard error is acceptable. The standard error is a precision measurement of an estimate of a population parameter (Hair et al., 2010). In general practice,95 per cent confidence interval means that all units of sample size that were selected included in 95% the true mean of the population, and other 5% would not be included (Hair et al., 2010). The questionnaires developed from the academic literature discussed in the previous chapter and through discussion with the focus group and interview from the expert panel. The questionnaires were consisted of the nominal, ordinal scale whenever possible to catch maximum response from the customers. Some researchers widely use a nominal scale as it gives a high response to questionnaires. The research exploration of this study is dependent on selecting the appropriate method of study. However, in this study, the researchers investigate the related variable to the inter-firm relationship. The quantitative method will be used to collect analyse the data to answer the research question and hypothesis. Data will be collected through structured questionnaires based on a Likert scale from senior managers of the export firms from Sialkot.

3.2.2 **Sampling Methodology**

The sampling frame for this study was developed from the registered list of exporters was maintained by the Federal Chamber of Commerce Industry (FCCI). The selection of sampling is very important for any study. Saunders (2011) described sampling " a part of

the target population, carefully selected to represent that population".Sekaran and Bougie (2016) defined sampling "a group of units or observations taken from a larger collection of units, the quantity of material, or observations that serves to provide information that may be used as a basis for deciding the large quantity". The importance of sampling is that you can determine the adequate response of the respondents instead to focus on all the target population. Creswell(2009) underlying the importance of sampling methodology for three reasons, the accuracy of results, the speed of a collection of required data and the availability of the population elements. The issues and problems arise in data analysis if sampling is not done properly. Thus sampling has become an important part of a selection of elements from a defined target population based on specific criteria (Sekaran and Bougie, 2016).

Traditionally, the sampling method divided into two methods, probability sampling, and non-probability sampling method. Selection of the sample is important in the analysis of the data and inferences the results; the appropriate method of selection of sampling is determined by the number of theoretical and practical issues. Probability sampling is associated with survey-based research, and sampling elements are selected randomly to ensure that the sample is adequately representative of the population for making inferences about the population answer the research questions. In non-probability, sampling elements are selected on the judgment or experienced-based and selection of elements for the sample are not made with a statistical representation of population being considered is not known (Hair et al., 2010). To make assumptions about the generalisation of the construct is under investigation, one has to consider the appropriateness sample size is to be considered. A selection of good sample size can make better statistically generalisation about the research study. There is no single rule to answer what appropriate sample size is required for the research; it depends on the research objective. However, the selected sample need to be reliable and adequately represent the population from which sample is drawn, and a close relationship between population parameters and margin of error is preferred (Sekaran and Bougie, 2016). The rule of thumb for performing the factor analysis is that the sample size should be five times the number of variables being analysed for the research (Hair et al., 2010). Sample size, large or small, can have an impact on the data analysis, and the researcher must take into considerations when selecting the sample size (Hair et al., 2010). The sampling strategy was random sampling. The unit of analysis described "who and what" is the basic unit used in analysing in research, and it "refers extent to which level of aggregation" (Creswell, 2009). It focuses on the collection and analysing data of objects, and on the object and in social sciences research it refers to as individuals, groups, organisations, department (Cavana et al., 2001).

3.2.3 **Key Informants**

It is imperative pertinent to select knowledgeable informants who engaged in export-related decision-making activities (Kim and Frazier, 1997). The key informants should have some experience in dealing with the home institutional organisations and direct

involvement in the export activities. Survey questionnaires should target only qualified person of export firms who have specific knowledge about the required information being sought in the research (Mitchell, 1994). Keeping these guidelines, the key respondents were selected for the study, either the manager or owner involved in dealings with the local and foreigners' customers. Multiple key respondents from a firm is a better approach to reduce the common method variance (Podsakoff et al., 2003). The key informants who had high ranked in the firm were considered reliable and having sound knowledge and information across the firm (Mitchell, 1994). In this study, data gathered from the single informants from sampled firms. If data gathered from different respondents in a single firm, it would explain the potential of differences between the informants. The sampling frame consists of all the companies from different industrial sectors engaged in export activities. Multiple industrial sectors were targeted to empirically testing the hypothetical model and collecting the data from the multiple industries have been employed in previous research studies.

3.2.4 Research designs

A researcher has to provide a clear answer to the research question to do research successfully, and for this, he needs to collect the data and specify the analysis tools (Edmondson and McManus, 2007). Some different types of research methodologies can be used in social science research. The guidelines of (Creswell, 2009) were followed in the selection of a particular methodology. The quantitative research methodology approach is most appropriate when the researcher wants to explain, test and to modify the existing theory and generalise his research findings to a population (Collis and Hussey, 2013). The quantitative method can use in research when the objective of the research is to examine the factors of certain outcomes (Saunders, 2011). A questionnaire-based research data collection tools were adapted to meet the research objective and answer the research question.

3.3 Data Collection Procedures

Although the export industry is relatively large in Pakistan, it constituted a large number of firms from a different industry. This study tests a conceptual model with a survey research design of export manufacturing firms from Pakistan, using structural equation modelling (SEM) to test the model. There is considerable evidence to suggest that many Pakistani export manufacturers are active seekers of sustainable development issues. Pakistan is one of the world emerging markets and reflects emerging supply markets relevant to the developed world (Baskin., 2016). Pakistan is famous for its global reputation in sports manufacturing goods, surgical and textile. In the 1980s Sialkot gained international celebrity status when it produced the "Tango Ball" used at the Federation International Football Association (FIFA). Pakistan has made "Brazuca" for FIFA Football World Cup matches in Brazil after a gap of 32 years (Khattak et al., 2017). Pakistan, therefore, provides an appropriate context to explore the link between inter-firm relationship and improvement in social performance.

It cannot say that one selected method of data collection is appropriate, and one is free from some limitations. Data collected through self- the administrated survey is mostly adopted and deemed appropriate for such type of study involves widespread research program. This data collection method is appropriate to generate uniform data, and major strengths are confidentiality, the anonymity of respondents (Bush and Hair Jr, 1985). Previous studies suggested that this method has some weakness, such as the low response rate from the respondent. The special measurement was designed to increase the response rate of the survey and reducing the response bias according to the guidelines of (Churchill, 2002). It was ensured to respondents that this study conducted only for the academic purpose and other information of participants would be confidential. This approach of investigation is based on the positivist to explore inquiry of the phenomena under study. This encompasses the deductive approach. This distinguishes the resulting outcome through statistical experiment to quantify whether the proposed hypothesised relationship exists or not. This research approach provides an answer to the research question in a scientifically way and provides the results by employing statistical tools and techniques (Burrell and Morgan, 2017). The student research team was formed to interact with the sampled firms. Particularly, first students were explained about the purpose of this study, and they visited the key respondents and filled the survey. The methodology chosen for contacting the firms was followed, first contacting the key informant on the phone and seek his willingness to participate and then research team visited. A cover letter was attached to the questionnaire assuring the respondents that all the information you provide will keep in the confidential and used on for the academic purpose. Two teams of students were formed in two regions. The use of research team for the survey was advantageous, due to the wide geographical area of the firms involved and it provides a greater sense of ease and increased chances for the collection of data than the other methods of data collection. All the students were studying at the undergraduate level and belonged to the business administration department. They already had prior knowledge of research and data collection.

3.3.1 In Data Analysis Pilot Tested Results

The pilot study was designed to test the potential relationship between the variables and to test the adequacy of the research design that provides insight for other researchers. Pilot study help to improve the internal validity of the data by eliminating various kinds of statements from the survey, removing the ambiguities and amending the items of survey questions. “Statistical Package for Social Sciences” (SPSS) 23 was used for data analysis. Normality of data, correlations, reliability, and validity of the pilot study was evaluated. Cronbach alpha (CA) was examined to check the validity of the data, and it was also used to test the scale item value individually. The reliability score for all the items was greater than the 60 per cent that meets the minimum standard of scale measurement. In statistic, the reliability concept encompasses the idea to measure the consistency between the items and the number of measurement scale (Hair et al., 2010). For this pilot study, the alpha value meets the acceptable criteria as recommended by the

many researchers in similar studies. A correlation matrix was constructing for each variable, and the value of correlation for all the construct variable was greater than 0.40 per cent. Tabachnick and Fidell (2007b) suggested that the researcher should avoid using the variables that produce less than 0.30 per cent correlation between the inter variables.

In this study measure of the construct are used, that has already applied in different research. Cross-sectional research methodology has been used rather the longitudinal. Independent and dependent variables have measured at the same time (Parallel). The longitudinal method has not been applied to save time because it was not practical. The approach adopted for investigation of the proposed conceptual framework based on empirically testing the hypothesis drawn from the theory. The measurement items were adopted from the existing test scales by many researchers. Based on the understanding from this, initial a pre-test of the survey questionnaire will be implemented on few consumers to get a better insight into the survey, the possibility to include more variable, then final questionnaire will be prepared and after that data will be collected from the different customers on based on various variables.

3.3.2 Tests for Biases (Non-Response Biase)

To ensure that the received response rate is representative of the population. This research followed the two main approaches to assess the non-response bias, which have been widely used in supply chain research. One way analysis of variance (ANOVA) will be used to assess the non-response bias of early respondents and late respondents. In the second approach, group difference will be assessed among the different ranked. The non-bias will check all characteristics of firms and respondents such as the type of industry, number of years in current business (age of the firm, number of employees, job title, Experience in the firm, gender and qualification and age of respondents). Harmon's one-factor test was used to assess whether the common method variance (CMV) is a problem for this study or not (Armstrong and Overton, 1977). Further CMV was assessed using the t-test between the type of industry and construct of social performance simultaneously. Before proceeding to the factor analysis, the assumptions of the data were subject to specific conditions.

3.4 Data Analysis Techniques / SEM

3.4.1 A structured approach to data analysis

This section explains the important research strategies are available to a researcher and choosing the best available statistical method for data analysis. There are different statistical approaches available for data analysis; each has limitations to perform specific analysis. However, the researcher must select the suitable and right approach for data analysis. It involves some different methods ranging from the descriptive statistics to the advanced data analysis tools. In most of the studies, researchers preferred to use

regression and structure equation modelling (SEM) for measuring the relationship and correlation between the variables.

3.4.1.1 Multivariate Data Analysis

Some critical issues involved in the application of the multivariate data analysis. It depends on successfully choosing the right diagnostic test because it involves a large number of variables, and sometimes they overlap with each other and become dependent. For multivariate analysis, the researcher must define the problem and specify the objectives in conceptual terms. The conceptual model should not be complex and detailed; it must represent the simple relationship between the variables. Research than define the dependent and independent variables and specify the measurement method to be used. The assumption of the multivariate normality, linearity, independence must be met before applying any statistical technique. The descriptive analysis shows that there were missing values at random in the data. The missing value was handled through mean substitution method. The data screening procedure was employed and convert all the questionnaire items to z-scores to test the skewness and kurtosis to ensure the normality of the data.

Therefore, a researcher may choose some different statistical tools to evaluate the data (Hair et al., 2010). R-squares measure the proportion of variance explained by the explanatory variable for the dependent variables. The power test in regression is defined as detecting the probability of significance level for the coefficients of determination. The R square can assume the value from 0 to 1. The higher the value of R square, it is then concluded that there are explanatory variables which can better predict the dependent variables. The value of adjusted-R square used to compare the models between the explanatory variables (Hair et al., 2010). When the variables are strongly correlated, then it becomes impossible to get the appropriate values of the regression coefficients. Most commonly variance influence factor (VIF) and tolerance factors used to detect the collinearity. VIF and tolerance values greater than 10 and 0.02 are the cause of concern for the multicollinearity (Hair et al., 2010). In the interpretation of the model, R-square is used to explain the effect of the prediction variable on the dependent variables. The one drawback is associated with the R-square is increase as one new variable is added. Adj-R- the square is used to compare models with different numbers of explanatory variables.

3.4.1.2 Multicollinearity

The key use in regression is to assess either correlation is exit between both dependent and independent variables. It also used to determine the multicollinearity of the data. The researcher task is to determine which variables are highly correlated or less correlated. Multicollinearity will occur between the variables if the correlation value is to be less than 0.30 or greater than 0.90. The multicollinearity can be examined through an analysis of the correlation matrix. When the correlation values are higher than 0.90, then collinearity exists. Tolerance is the most common measure used to assess the colinearity or the multicollinearity. Some remedies are available to minimise the effect of the

collinearity. (1) To identify which explanatory variable correlated more, the appropriate method is to delete such high correlated variables. High correlation values are used to predict the model only. However, it cannot be used to interpret the results. (2) To use simple correlation among each explanatory variable. The purpose is to make a decision, which variables are to be included in the regression.

3.4.1.3 Interpretation of model

3.4.2 Factor analysis

Factor analysis reduced the number of a variable into a smaller set of factors. A factor that has less than three items is not considered good and stable for the factor analysis (Costello and Osborne, 2005). If there are high commonalities observed in the data and the expected numbers of the variables are small. The primary purpose of the factor analysis (is known as multivariate statistical method) is to define ordered structure within a defined set of observed variables and in which all variables are measured simultaneously (Hair et al., 2010). The purpose of using factor analysis method (1) is to reduce the number of variables, (2) easy to determine the data either quantitative or qualitative when the data is large, (3) and finally testing the hypothesis within defined distinctions number of variables in a dataset (Stewart, 1981). Factor analysis can be applied to determine and to explore the structural domain, unknown concepts, classify the data, transform or screen of data, to establish a different relationship, apply to test the hypothesis or make inferences. In this research, the main consideration will be related to the description, inferences, explanation, and classification of the theory. There are three different types of factor analysis techniques, but the following sections discuss the types of factors analysis that are relevant to this research.

1. Assumptions of factor analysis
2. Factor rotation method
3. Interpretation of factor out

To determine the appropriateness method is based on the research objective, the objective sets here are to find the appropriate factors that have a strong relationship with other variables' selected from a defined set of variables (Hair et al., 2010).

3.4.2.1 Factor Analysis Explanations

Factor analysis method explains and identifies the correlations between the variables and connect indirectly. The objective of factor analysis is:

- To explain and understand the structure of the variables
- To understand and measure the correlations between variables
- To reduce variables into a manageable size

The use of the factor analysis technique in business has gained popularity from the last decade. When the pattern of relationship in the variable is complex and multidimensional,

and large numbers of variables are involved in data analysis, the factor analysis, however, becomes pertinent to use. It reduces the number of variables and describes the data in a smaller number of concepts (Hair et al., 2010). The assumption of the factor analysis must be met before applying any statistical tool, the assumption underlying for the factor analysis; normality test is mandatory, and some degree of the correlation can be ignored in the matrix because the objective is to determine where inter-correlation exists in the variables. The correlation matrix must satisfy the conditions that inter-item correlation must be greater than 0.03. Otherwise, factor analysis should not be performed (Hair et al., 2010).

3.4.2.2 Types of Factor Analysis

Exploratory Factor Analysis (EFA) is commonly used when the dimensions of the data structure are unknown and confirmatory factor analysis (CFA) is more appropriate to use for building theory and testing the hypothesis about the data structure which has been formed by the previous research (Stewart, 1981). The data structure for this study is unknown, and many researchers have recommended using exploratory factor analysis method. The overall objective is to determine which model can be used depends on the objectives and variance explained in the variables. According to (Hair et al., 2010). EFA has two basic models, common factor analysis and component factor analysis. The common factor is used when the objective is to identify dimensions that show the variable share in common. When the objective is to identify or predict the minimum number of factors that account for the variance and error variance represents a small value with proportion to the total variance (Hair et al., 2010).

3.4.2.3 Assumptions of factor analysis

Factor analysis explored the data structure and used to determine the correlation between variables. Factors analysis typically can apply to a data set where the relationship between the variable is linear. Therefore, it is suggested that data should examine carefully, and any departures from the linearity are needed to be addressed. Conceptual and statistically assumption of factor analysis are: Linearity, Normality, and Homoscedasticity (Hair et al., 2010). Normality of the data significantly improve the results. However, normality is not a fundamentals requirement for factor analysis. If the data is not linear, it could bring certain problems; if the data were extremely skewed, untransformed correlation results would be a problem for interpretation. Normality of the data must be examined in multivariate analysis to determine whether data is normally distributed between the observed and predicted variables (Stewart, 1981). According to (Hair et al., 2010), homoscedasticity is defined as an equal level of variability of one variable from a given value of another variable. The distribution of two variables is said to be homoscedasticity if the variability of one quantitative dependent variable observes the same standard deviation from across independent variables. Factor analysis assumed to some extent that observed correlations are diminished at equal variances of dependent variables exist across the independent variables that are either categorical or continuous (Hair et al., 2010).

The Kaiser-Meyer-Olkin (KMO) test measures the sampling adequacy by calculating the squared partial correlations between the variables and satisfactory value should be greater than 0.5. The values of KMO falls between 0 to 1; if the values are near to 0, factor analysis could not be used. On the other side if values are closed to 1 indicate that the factor analysis test could be used. The acceptable level of KMO values falls between 0.7 to 0.10 (Hair et al., 2010). Bartlett's test of sphericity measures the appropriateness of the model, whether the resulted correlation matrix is the identity matrix or not. This test also used to check the strength of the variable association. It checks the null hypothesis that the variables are uncorrelated. Thus, the level of significance determines the acceptance or rejection of the null hypothesis. If the significance value is less than 0.5, thus we fail to reject the hypothesis and accept the alternative hypothesis. This shows that there is a strong association among all the variables. It is also concluded that the correlation matrix is not an identity matrix. This provides further evidence that it is a good idea to use the factor analysis for the data. Eigenvalues have the greatest importance in the factor analysis, which determines the linear components within the survey data and provides evidence that the factors are dependent or otherwise. Eigenvalues explained the percentage of the variance within each factor. The eigenvalues (latent roots) must be greater than 1 and factors having a value less than one is insignificant. This method determines when to stop the factor extraction method and how many factors a researcher should extract from the factor matrix (Hair et al., 2010).

3.4.2.4 Reliability and Validity

The use of validity is common in quantitative research, it tells how sound and reliable your study is, and it can answer the research problem. More commonly, the validity can be applied in quantitative and qualitative studies. Validity has defined the extent to which data collection methods and findings of the data analysis appear as what it was intended to measure accurately the concept it aims to measure (Saunders, 2011). There are two major forms of validity; external and internal. The external validity refers to the extent to which the data has the ability of generalisation of the results across a large group, settings and times. The internal validity affected by the data collection methods, and it referred to the ability of a research instrument to measure what is its purpose of measuring (Hair et al., 2010). Face validity is concerned with whether measurement items are covering the concept or not. What it measures or what it is claimed. Face validity was ensured in this research, starting from the development of the questionnaires, relating questionnaires with the literature review and feedback received from the practitioners and academicians. A pre-test is a useful way to enhance the face validity of the test. A panel of the experts was asked to comment on the different variables and finally the pre-test method was adopted to further validate the draft of the questionnaire.

Mainly two measures of reliability: 1) Average variance extracted(AVE): 2) composite reliability(CR) often use to determine the reliability in conjunction with analysis of covariance to estimate the individual items and factors. Composite reliability is most commonly used to measure the internal consistency of items. Moreover, it is computed

from factors loadings, and it shows, maximum consistency (Anderson & Gerbing, 1988). The term reliability refers to the consistency of a research study to which a scale produces the same results repeatedly (Hair et al., 2010). Bagozzi and Yi (1988) suggested that a composite reliability value should be at least 0.60, and the most widely acceptable level of reliability value is 0.70. AVE is representing the value of variance extracted by the construct. Acceptable level of AVE value should exceed 0.50 for a construct (Hair et al., 2010).

Construct validity

It refers to the ability of a specific measurement instrument to measure the evidence on the accumulation from numerous studies; this also examines the relationship between the measurement of concepts to be examined. There are two types of construct validity: convergent validity and discriminate validity. The validity referred to as where a strong correlation exists between the variables and discriminates validity when a lack of relationship between the variable exists (Collis and Hussey, 2013).

Content validity

This type of validity addresses to what extent the measurement items are representative samples of all the items intended to measure the construct of interest. The objective of content validity is to assess that scale item include correspondence between the individual and the concept. The content validity indicates that all the selected items are representing what is intended to measure (Hair et al., 2010). Content validity establishes the logical connection between the test items relevant and representative for the construct and what it claims to measure or to be measuring.

Reliability, Construct validity, internal and external validity are acknowledged for judging the quality of good empirical research (Hair et al., 2010). The reliability of data is concerned with the consistency and precision of the research results when a researcher follows the same methodology of the previous research, the findings of the second researcher would be the same as the previous research. The extent to which the ability of a variable measured at a particular time should have the ability to measure the variable of interest at the same measurement instrument (Hair et al., 2010). Cronbach's alpha (CA) is used to determine the internal consistency of the data; this method based on the average correlation among the standardised items within a test. Construct validity is an important concept in empirical social research and relates to the researcher claims about the consistency and accuracy of the data. It referred to all reliable sources of the data and established a correct measure for the research being studied (Saunders, 2011). Internal validity is the only concern and relevant in most of the studies where a cause-effect relationship exists between the variables; it helps to establish the causal relationship (Nunnally and Bernstein, 1994). It concerned with generalizability of your results; it means that the results of the research can be applied in other places at different time.

External validity refers to that extent the results of the research can be generalised to the rest of the population (to other places) (Calder et al., 1982).

Reliability defined as to measure at what extent the items are consistent. Consistency in the data is a pre-requisite of the survey data analysis. Reliability refers to the internal consistency of the survey instrument tests whether the scale reflects what it wants to measure (Nunnally and Bernstein, 1994). The concept consistency means that the response of each respondent towards the survey data should be similar in the same way at a different time. It has become a prerequisite to check the reliability of the survey data earlier to check its validity studied (Saunders, 2011). A most popular method to check the reliability of the data is to split half. In this method, the data split randomly in split half, and the score of each is calculated based on the split-half scale. A scale will be reliable if its split-half are perfectly correlated (Field, 2013). Cronbach introduces the test to measure the reliability of the data (Cronbach α), and it is widely used in scale in measuring and testing the reliability of the survey data measure (Nunnally and Bernstein, 1994). To better understand the scale measurement, research should look into scale validity (Hair et al., 2010). The validity of the scale is important because it reflects how well a measure is different in the observed scales. Validity can be measured at least by adopting the criteria recommended by (Malhotra & Grover, 1998). In this section, two types of validities, construct and criterion validities are a discussion.

3.5 Structured Equation Modeling (SEM)/Data Analysis

The examination of multiple independent and dependent variables is needed to answer the research question. The structural equation modelling (SEM) is used when multiple observed and unobserved factors are related directly and indirectly (Tabachnick & Fidell, 2007). This technique provides a clear understanding of detecting a causal relationship between the construct measures (Byrne, 2016). In traditional regression analysis is based on examining the interrelation between the observed variables. Whereas SEM provides an opportunity to analyse both observed and unobserved variable simultaneously (Hair et al., 2010).The exogenous variables, commonly known as independent variables and endogenous variables, are known as dependent variables in structured equation modelling **(**SEM) (Tabachnick & Fidell, 2007). There are two most common techniques used in the SEM to examine the theoretical model. The technique used either covariance based-SEM and variance-based SEM (PLS-SEM). Both techniques can be used; each of them has some merits and demerits (Henseler et al., 2009). It can also be used when the data is non-normal or when there are few numbers of responses (Hair Jr and Hult, 2016). The present study involves a number of the interrelationship between variables, and this study may also consider as covariance base (Henseler et al., 2009). There are two main components of the SEM model,(1) measurement model (this involves the reduced number of observed variables to a smaller number of unobserved variables and uses confirmatory factor analysis prior to using structural model, and (2) Structural model involves to test the potential causal relationship between the dependent and independent variables (Byrne, 2016). SEM can be employed for evaluating the causal relationship by using the

combination of statistical methods. The most commonly this method is used for confirmatory analysis, and simply it measures the cause-effect relationships that provide a quantitative analysis of the variables. The objective of employed the SEM is (1) to validate the theoretical relationships and (2) to predict the latent variables. This method examines the structural relationship between the dependent and independent variables in a series of equation and works like the multiple regression analysis. Each variable is linked with the construct of theoretical in reflective manners. Where the sample size is small, the maximum likelihood (ML) estimate are not compatible with SEM. The adequate sample size must be greater than 200 for using the SEM (Hair et al., 2010). The SEM is a multivariate technique used to analyze the structural model which combines the aspects of multiple regression and factor analysis to examine the relationship between independent, dependent variables and even when dependent variables become the independent variable. The SEM model can incorporate latently or construct variables and provides the values of measurement error during the estimation process (Hair et al., 2010).

The process of SEM measurement somehow varies with regard to the number of stages suggested by the researchers ranging from five and seven process stages (Hair et al., 2010). Since this thesis contains both "measurement and structural model".The guidelines of (Byrne, 2016) are followed in specification, identification, estimation, and evaluation of the model. (Hair et al., 2010)has recommended two-stage approaches for measuring SEM models and their maximising interpretability can be achieved by employing this approach. First, it assesses the validity of the model by using confirmatory factor analysis (CFA) (Byrne, 2016). The structural model specifies the hypothesis relationship between constructor measurement (Hair et al., 2010).

The relationships between the variables are represented by the path or arrow which denotes the influence or effect (direct or indirect) of one variable on other variables (Nunnally and Bernstein, 1994). SEM provides two types of error associated with the observed variables. An error term which represents the causes of variance exists in an observed variable. Whereas, the residual term represents the error estimation from the independent variable to the dependent variable (Hair et al., 2010). The use of composite scales application in academic and managerial research has increased, and it offers the following benefits. It helps to overcome the measurement error in all measured variables, and it can represent multiple aspects of different concepts in a single measure. A model with three levels of items does yield the results known as just identified. It is, therefore, to work with models which are having four or more level of identification is commonly known as over-identified (Byrne, 2016). Unidimensionality exists when a variable contains only one indicator or items for an underlying construct. It determines the usefulness of an item or indicator which share a common core. The best approach presented by (Hair et al., 2010), a measurement model with a positive degree of freedom can commonly use for identification of the model. By increasing the number of items can provide reliable results (Hair et al., 2010).

3.5.1 Model Fit Statistics

Absolute fit indices measures (chi-square ($\chi 2$), "normed chi-square" ($\chi 2/df$), "standardized Root Mean-square Residual" (SRMR) and "Root-Mean-Square Error of Approximation" (RMSEA)) recommended for use when evaluating the models. Chi-square statistical test is used to test whether there is a significant difference between the implied matrix and covariance to the matrix of sample and covariance. Acceptable level of chi-square is when $p>0.05$ at alpha = 0.05. Chi-square value is increased when the sample size is increased (Hu et al., 1995). The larger values of chi-square lead to rejecting the model; in this situation, the normed chi-square test is used to model parsimony (Hu et al., 1995). Small values of chi-square suggest that model contains too many parameters or in other words, the model is overspecified. Normed chi-square values close to 1 indicate that model is good fit and values should be less than 2, but values between 2 to 3 indicate a model is reasonably fit (Hair et al., 2010). SRMR is an alternative measure of absolute fit indices and values lies between 0.05 and 0.08 are considered satisfactory, when the sample size is <250 and number of observed variables are between 13 to 30 (Hair et al., 2010). SRMR values greater than 0.08 are considered absolute good. RMSEA indicates the error of approximation in population. It has known the distribution and better represents how well it fits a population. It explicitly corrects the complexity of sample size (Hair et al., 2010). In contrast to indices of SRMR which produces a better fit model when the values are high. However, RMSEA values less than 0.05 are good. A value higher than 0.05 and less than 0.08 indicates a reasonable fit of the model (Hair et al., 2010). Relative fit indices measure that all measured variables in the model are uncorrelated. It measures how well the better-fitted model is compared with the independent model (Byrne, 2016). Relative fit indices included "Tucker-Lewis Index" (TLI) and "Comparative Fit Index" (CFI), "Goodness-of-Fit Index" (GFI), "Adjusted Goodness-of-Fit Index" (AGFI). The values of these relative fit indices range between the 0 and 1. An acceptable threshold values > 0.95 recommended and values > 0.90 are reasonable acceptable (Byrne, 2016). Whereas Parsimonious fit measures assist the researcher in diagnosing whether the fit indices have been achieved or not by overfitting the data. Akaike Information Criterion (AIC) is used to compare the model (Byrne 1995), and the smallest values of AIC indicate a good fit of the model. There is no consensus as to what indices should use to determine the best measure of model fit (Hu et al., 1995).

This section provides the importance of research techniques to be used for measuring the relationship between the variables. This presents the importance of quantitative data in research and then discusses the use of the regression analysis and SEM. The statistical research method tools are discussed within the proposed framework and its application in the pretest pilot study. This also discusses the construct of the scales for a different design of questionnaires and outlines the techniques of data collection. The results of the reliability analysis support that all the extracted values of Cronbach's α from the questionnaires are reliable and meet the standards to conduct the further statistical test.

4 Results

Echoing the call for more research into the role of culture in governing inter-firm relationship (Handley and Angst, 2015). We aim to understand how cultural intelligence influence governing the inter-firm relationship, in turn, impact on social performance. This study tackles this aim form a transaction cost economy (TCE) and Resource-based view (RBV) by uncovering the moderating role of cultural intelligence on the effectiveness of contract and relational governance on collaboration and commitment respectively, as well as the direct impact on social performance.

In paper 1, I explored the moderating impact of the 4 x dimensions of cultural intelligence between relational governance and commitment. Whereas in paper 2, I explored the moderating role of 4 x dimensions of cultural intelligence between contract governance and collaboration. The empirical findings from a survey of 239 export manufacturing firms demonstrate that there is a positive association between contract governance and relational governance and commitment and collaboration, and further that this association is stronger under the varying influence of cultural intelligence.

Specifically, I found that firms who usually promote learning about the home culture and other's culture when and how to use learning for solving the cultural difference are more likely to be successful in the implementation of collaboration. We find that firms which reflect the capability to direct their attention and energy towards learning about cultural differences are likely to be successful in the continuation of contract governance. The findings suggest that contract governance is a viable mean of enhancing collaboration; on the other hand, relational governance significantly contributes to developing more commitment to sustainability.

Seuring & Muller (2008) posit that sustainable supply chain management is the management of the cooperation among the partners for improving the environmental, economic and social dimensions of the sustainable development. From this definition approach, my results empirically analysed the presence of moderation analysis of cultural intelligence on the relationship between relational governance, contract governance on collaboration and commitment, in turn, its impact on the social performance. Although, suppliers from emerging economy such as Pakistan are increasingly involved in trust-building activities to improve social performance through collaboration and commitment to sustainability. Contradicting the previous studies (Bai et al., 2016; Handley and Angst, 2015; Krishnan et al., 2016), the key incremental finding is to encourage a multi-stakeholder partnership rather than focus on institutional support, as highlighted in the previous studies. In order to achieve the well-being of employees and society at large, I argue that a better way is to focus on the inter-firm partnership, as to create a commitment to sustainability and collaboration. From this point of view, in the supply chain relationship, as highlighted in the definition of (Seuring and Muller, 2008b), my results contribute to the sustainable development goals (SDGs) SDG17. The findings of thesis contribute to the SDG17 agenda 15, the export manufacturing firms need to emphasize

on the partnership and collaboration among the various customers to facilitate the development of appropriate strategies to ensure integrated activities for social performance. The results reveal that meta-cognitive, behavioural cognitive and motivational behaviour with contract governance among the exchange partner, as a basic value of social sustainability. Consistent with (Sharma and Ruud, 2003), my study made incremental contribution in the literature by highlighting that, promoting social sustainability requires both buyers and suppliers to incorporate the social dimensions (labor issue, no discrimination equality) in the design of the contract governance that encourage companies to more develop collaborative ties, is a way forward for the organizational social sustainability. Many of inter-firm relationships are formed with the aim of improving resources. This study has highlighted a set of governance structure associated with the improvement of social performance. These governance structures include the use of cultural intelligence in governing inter-firm relationship and contract governance in standalone for sustainable collaboration.

For example, social dimensions of sustainable development are generally assumed to be an SDG 3, 5, 8 and 17. My empirical findings are that commitment to sustainability and collaboration is driven by the effective governance mechanism, which is contingent on the firm's cultural intelligence capability. Thus, collaboration and commitment efforts geared towards social performance improvement, through contributing to the organizational capacities (that is, cultural intelligence), may ultimately contribute to health improvement, safety, and child labour issues and benefit growth. My analysis shows that organizational capabilities (that is, Cultural Intelligence) can and should play a substantive role in helping policy development and action at the export manufacturing firms in a way that contributes towards SDG 3,5 and 7. I argue that multi-stakeholders partnership aspects of sustainable development goals 17, a global partnership between buyers-supplier that mobilise and share knowledge, resources, and expertise, to support the achievement of social dimensions of sustainable development particularly in developing countries is an important way forward. I suggest that international regulatory institutions should encourage and promote partnerships among buyer and suppliers through contract governance. Cultural intelligence capability is central for balancing an inter-firm relationship and exert force to maintain the collaboration.

Social sustainability has, from the inception, been know as "the well-being of human and society". There are diverge view that a socially sustainable organisation can be attained in the absence of collaboration and cooperation. However, it is generally evident that collaboration and cooperation alone, regardless of how important, diverse in reach and influence, is not going to support for achieving social sustainability at the organisational level. Social sustainability that is not merely a marketing philosophy cannot be performed in the absence of firm internal cultural intelligence capabilities. If, as some have proposed, social sustainability is actually to address social issues such as child labour, equality, health and safety, and decent work practices, regardless of adhering to the inter-firm collaboration and cultural intelligence capabilities, this might enable export manufacturers prospective possibilities of sustainable development outcomes.

4.1 Summary of the publications and results

In this section, I will provide an overview of the studies that constitute the thesis, which address governance mechanism, commitment to sustainability, collaboration, social performance in relation with the cultural intelligence within the boundaries outlined in the conceptual framework. Table 1, 2, 3 and 4 has summarized the research questions, theoretical focus, data methodology, findings and contribution of all studies.

Study 1 adopts a social exchange theory (SET) perspective to examine the relationship between relational governance, commitment to sustainability, cultural intelligence, and social performance. Prior research on relational governance has focused on their role as relationship performance, new product development, and cost performance. While little attention has bee paid to the underlying mechanism that shape governance mechanism in buyer-supplier relationships. In this study, we examine does relational governance enhances supplier commitment to sustainability and how it affects firm social performance? Study 2 examines the role of cultural intelligence between contract governance and collaboration. Cultural intelligence constitutes one potential way for the export industry to manage intercultural differences and profitably achieve an increase in collaboration and brings about improved social performance.

Study 3 propose that cultural intelligence is a key to sustaining a committed buyer-supplier relationship by means of improvement, better cultural knowledge and understanding. Study 4 investigates the implication of cultural intelligence for strategic change in export manufacturing firms. Cultural intelligence serves the function to indicate a company pattern is in learning development. Therefore, improvement in firm social performance is considered to signify a firm tendency to initiate strategic collaboration with their different buyers. In this study, we employ a resource base view to investigating how relational governance can be incorporated into the design of governance and improve social sustainability performance in export manufacturing firms. We predict that when cultural intelligence is present, the conflicts among partners are likely to be reduced.

4.2 Answering research sub-questions

The sub-question, “What governance mechanism influences the development of supplier’s commitment to sustainability and how does it lead to social performance improvements? is answered by the first” (Publication 1). This research question formulated because prior research on governing inter-firm relationship identified the success of governance mechanism is mainly due to the institutional and national culture, it produced mixed and conflicting views and failed to explain the varying effective roles of the successful inter-firm relationship completely and maximize commitment to sustainability. For Example, Firms are seeing a clear increase demand for social

performance improvements, to achieve such targets and objectives, adapting to cultural conditions. Relational governance is essential, which requires diffusion of cultural intelligence capabilities, which may enhance supplier commitment to sustainability. The results of this study show that relational governance influences the development of a commitment to sustainability. Focusing on the inter-firm relationship, our analysis indicates that increased cultural intelligence leads to improving inter-firm commitment to sustainability, resulting in improving social sustainability performance.

Next, the second sub-question, "What governance mechanism explained an effective inter-firm relationship and what are the varying underlying roles of cultural intelligence in maximizing collaboration and social performance improvements?", is answered by research article Publication 2 and 3. The second research paper builds on TCE and draws on the buyer-supplier (BSR) literature and examines the effectiveness of contract governance in a supply chain relationship from the view of cultural intelligence. Social sustainability comes in two varieties: Customer Push and Firm self-select: findings ways to solve customers problems relying on relationships. They should not make a balance between local and their partner cultural practices, acceptable to their norms, not just accepting international standard social practices. From a supply chain perspective, the firm's relying on cultural intelligence may provide strategic support for relationship management with their customers. In this study, I suggest that understanding the supply chain partner culture is central to inter-firm relationships. This research question developed because existing literature fails to provide a complete understanding of how firms in cross border relationship minimise the transaction costs and enhance collaboration.

The buyer-supplier relationship is key to social performance improvements. The third research paper is a continuation of the second paper, which demonstrates that relational governance may be enhanced by the introduction of cultural intelligence capabilities that support adaptability and flexibility in inter-firm relationships. Our findings show that cultural intelligence capabilities create a strong effect on relational governance enhances more cooperative norms. The third sub-question," How do the cultural intelligence affect inter-firm relationship outcomes?" is answered by Publication 4. Particular, this paper supports and add in terms of the success of inter-firm relationship and development in social sustainability, this study has shown that firms, which manage to develop cultural intelligence, can enhance collaboration, eventually, manage to their social sustainability. The cultural intelligence (CQ) may enhance adaptation and maximise the ex-post value of the relationship.

4.3 Summary of Publications

4.3.1.1 Summary of Study 1 (Paper 1)

In this study, I take the perspective of the moderating role of cultural intelligence and examine how cultural intelligence could serve as a function to shape governance mechanisms to enhance its commitment to sustainability. This study contributes to the governance literature on emerging market export manufacturing firms. However, prior literature acknowledges that governance mechanism is adequate in explaining the international buyer-supplier exchange opportunism behaviour. They provide evidence that how these dimensions of relational governance exercised influencing on manufacturing firms. This study extends this line of research to explore how different dimensions of cultural intelligence further moderate governance mechanism to enhance commitment to sustainability on emerging economy export manufacturing firms. My study shows that the supplier firm can enhance commitment to sustainability. It is recognized in the literature that main impediment in commitment to sustainability in an inter-firm relationship is lack of partner cultural knowledge; lead to erupt differences and disputes. I suggest that social exchange can act as a centralised control for ensuring commitment to sustainability and social performance improvements.

4.3.1.2 Summary of Study 2 (Paper2)

An ongoing debate on governing interfirm buyer-supplier relationship concerns whether contract governance function as an antecedent of collaboration or not. Further, it is unclear what specific factors promote successful supply chain collaborations to achieve social performance improvements. The paper aims to investigate by focusing on how to export manufacturers from a developing country use cultural intelligence capabilities to manage contract governance to promote collaboration, consequently, lead to improving social performance. Our research findings highlight the role f the contract governance in accelerating the collaboration in export manufacturing firms. However, my findings highlight that active use of cultural intelligence is essential and that firm can use to promote collaboration for social performance. Based on a sample of 239 Pakistanis export manufacturer firms, this study shows that cultural intelligence (CQ) has a varying level of effect on collaboration. Meta-cognitive and motivational CQ moderating role established, while for the other two dimensions of cultural intelligence, i.e. cognitive and behavioural CQ not established for contract governance. My findings contribute to buyer-supplier relationship literature by explaining how cultural intelligence capabilities shape to balance the productive exchange relationship through contract governance. This research finds evidence that cultural intelligence plays an important role in mutual exchange relationship and enhance collaboration in an emerging country context.

4.3.1.3 Summary of Study 3 (Paper 3)

This study examines the importance of cultural intelligence may signal cooperative norms to reduce the conflicts and differences in exchange relationships. It is suggested that strict monitoring and assessment may not negatively influence cooperation but leads to erupt differences and conflicts. According to the results, employees particularly are attached to adaptability, empathy and motivational ability. This behaviour is positively influenced to promotes joint cooperates and reduce differences in business practices. This study

enriches the literature by adopting a social exchange theory (SET) to explain whether and when cultural intelligence capability could be reflected in social performance outcomes. My findings also indicate that relational governance may be enhanced by the introduction of cultural intelligence capabilities that support adaptability and flexibility in inter-firm relationships. My findings show that cultural intelligence capabilities create a strong effect on relational governance enhances more norms that are cooperative. It is suggested that cultural intelligence capabilities allow the firm to more engage in joint problem solving and joint planning with their different buyers, reduce support uncertainty, lead to improving firm performance.

4.3.1.4 Summary of Study 4 (Paper 4)

Prior research on governance mechanism has been focusing on trust, solidarity, fairness, information exchange and informal roles and procedures, which is described as a combination of relational governance. However, very few studies have looked into the impact on collaboration and performance. My results indicate that cultural intelligence plays an important role in the relationship between governance mechanism and firm social performance. My findings contribute to the literature by demonstrating that cultural intelligence is an interactive learning process to co-creation of knowledge, and to integrate acquired knowledge which achieving a good balance between local culture and enhance culture skills and knowledge. The learning of partner culture is repetitive to facilitate collaboration among the partners, as cultural understanding continuously evolves and employees, who can contribute and update the firm's cultural knowledge stock update knowledge. My findings contribute to the stream of literature on the role of social exchange on the buyer-supplier relationship in export manufacturing firms.

4.4 Contributions

The study has important contributions. First, study shows that all the dimensions of the cultural intelligence (CQ) help firm to understand actions and behaviours of their partners and adjust their actions and behaviours which ultimately help the firm to enhance collaboration. A strong cultural intelligence capability and a focus on governance mechanism and collaboration positively influence social performance improvements. The success of inter-firm relationship leads to minimising supplier operations adverse impact on the community.

Second, this study also highlights the importance of contract governance adopted by western/foreign suppliers' firms in developing countries able to minimise the hazardous material impact on the surrounding community that could result from the supplier operations. The results highlight that contract governance with coordination clauses western firms benefit even more that there is no forced labour, managing equal opportunities and no discriminate and retaliate against any workers based on gender. It is recognized in the literature that main impediment in commitment to sustainability in an

inter-firm relationship is the lack of partner cultural knowledge; lead to erupt differences and disputes. In such cases, managers should, therefore, think of cultural intelligence culture capabilities as being trying to foster collaboration and commitment to sustainability for developing long term social sustainability. This research offers supply chain managers a framework and suggests that social exchange can act as a centralised control for ensuring commitment to sustainability and social sustainability performance. Third, this research finds evidence that cultural intelligence plays an important role in the mutual exchange relationship and enhance collaboration in an emerging country context. The idea that inter-firm relationship plays a crucial role in the social sustainability of manufacturing firms has been grown within the corporate sustainable development literature.

The developed framework (see fig.4) shows how different factors contribute to social sustainability and how much cultural intelligence is important between inter-firm relationships and collaborations. Social sustainability goals cannot be defined as subjective and objective goals once for all the industries. If this has to be achieved, it would require a long-term commitment and ascertainment of the necessary environment for the viability of the socio-economic system. Moreover, cultural practices change in the transformation of the organisational vertical or horizontal structure due to joint venture or licensing. Social sustainability goals thus, may consist of ambiguous and reporting objectives. This understanding of cultural practices needs to be taken into account during in preliminary collaboration process for formulating social sustainability goals. Once, the social sustainability goals have been formulated; it needs to be revised in a participatory process to adapt to evolving changing norms, values in the course of collaborations.

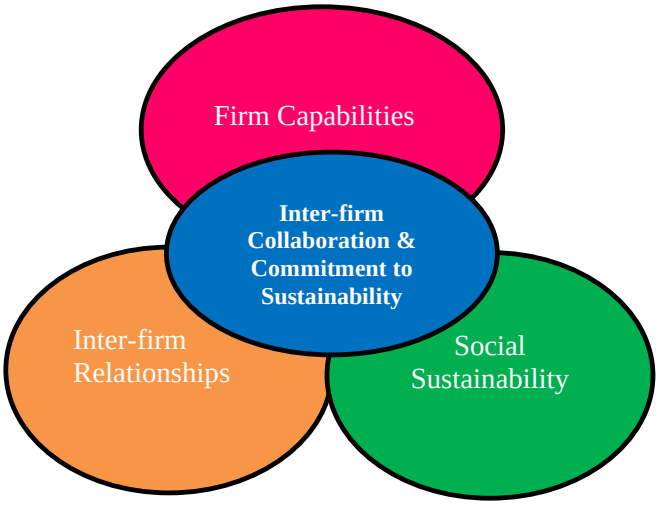

Fig 4. the map of the developed conceptual framework

4.4.1.1 Managerial Implications

The thesis has important implications for managers involved in an inter-firm relationship with export manufacturers in Pakistan. Managers can gain insights into the significance of considering multiple dimensions of cultural intelligence during the implementation of a governance mechanism. Especially, main understanding dimensions of the cultural intelligence and their effects may assist managers in engaging in governance mechanism, in focussing efforts on certain culturally different practices while becoming more thriving in commitment to sustainability and collaboration. I found that metacognitive cultural intelligence (CQ) and behaviour cognitive, cultural intelligence moderates the relationship between relational governance and effectiveness of commitment to sustainability, which positively influences the social performance improvement. It is important to note that the managers involved in cross-border inter-firm relationship management should recognise that behavioural and motivational dimensions of cultural intelligence are crucial in the process of developing sustainable commitment and collaboration.

This implies that managers should consider that CQ it as a central premise of the cross-border inter-firm relationship management. Besides four dimensions of Hofstede culture, power distance, masculinity, uncertainty avoidance, and individualism. (Hofstede and Bond, 1988) introduced long-term orientation (LTO). The focus is on creating, maintaining long-term relationship influences negotiations and international relations. Pakistan, with an intermediate score of 50, is not considered a long-term orientation and short-term orientation. LTO has been the most prominent in the operations management literature. National culture influences the implementation of environmental practices(Durach and Wiengarten, 2018).

Combining the findings, we suggest that export manufacturing firms from Pakistan are willing to maintain some links with its own culture; on the other hand, motivation thrift and efforts maintained a long-term relationship with enterprises. One aspect of long-term orientation is the desire to maintain a relationship. This is in line with the findings of (Hofstede and Bond, 1988), the score of the national culture of LTO falls at an intermediate level 50. Recognising this aspect, we recommend that the export manufacturers from Pakistan: (1) bottom line is important by maintaining how culture is similar and different from others, and (2) Firms are likely to reflect a high level of interest for cross-cultural adaptions and at the same time focuses on their culture. We also suggest that managers should also consider adapting communication practices are important to fend off buyer concern. I also found that metacognitive CQ and motivational CQ positively moderates the relationship between contract governance and effectiveness of collaboration, which positively influences social performance improvements. I advise managers, involved in cross-border inter-firm relationship management to understand the existing culturally differences in social practices and attempt to understand the difference between culturally distant buyers. Such understanding and appreciation of different

cultural practices can assist in acquiring new knowledge to formulate a more effective socially acceptable strategy.

The study contributes to managerial practices by showing that contract governance and metacognitive CQ and metacognitive CQ could serve as a function to resolve the conflicts and assisting differences. Thus, managers in export manufacturing firms need to recognise that cultural intelligence is mobilising and motivating the employee to interact with other international buyers, is important for internal learning for the effectiveness of the inter-firm relationships. Managers of the export manufacturers need to blend external cultural knowledge resources and internal cultural knowledge resources that require a keen understanding of those cultural differences that enable interaction with buyers. Therefore, the cultural intelligence competencies of export manufacturers can assist in ensuring stable collaboration and commitment to sustainability in the buyer-supplier relationship. Results suggest that the ability of a firm to interact effectively with buyers depends on its cultural intelligence capability and improve skills and inputs enable the firm to enjoy the collaboration benefits and enjoy sustainability growth. This further may imply that training to foreign firm managers on the supplier home country institutional environment can encourage commitment and enhances collaboration. Because the training helps a supplier firm to become familiar with the beliefs, values, norms and social practices, which help supplier firm to make necessary adjustment enhances their performance. When facing conflicts and insecure circumstances in moving ahead in the governing relationships, using CQ helps to avoid the ineffectiveness of relational contracts and further positively contributes to maintaining social performance in the manufacturing firms of emerging economies. This study also offers implications for manufacturers in Pakistan. First, managers should be aware of the benefits and downsides associated with contract governance. Second, managers aiming to enhance their firm social performance are thus encouraged to foster collaboration. For a company heavily outsources, should consider standard contract governance with coordination clauses to achieve better collaboration with a foreign partner. In sum, cross-cultural management training can improve cultural intelligence dimensions (Mor et al., 2013). Practitioners can design training programs aimed at enhancing skills as the sensitivity to cultural effective and conflict management styles to reduce personal fear and improving confidence. The practitioners employ such cultural intelligence measures play an essential role to maintain contract governance and to minimise the cultural differences in efforts to strengthen the collaboration in the hopes of fostering knowledge resources and skills in cross-culture environment. Thus, firms seeking to improve social sustainability performance through contractual governance should adapt their contract designs to reflect local social practices, which might vary significantly in developing countries.

4.4.1.2 Policy Implications

The findings of the thesis can inform public policy. First, policymakers should consider the lack of international experience employee may harness the successful coordination with the foreign partners. Policymakers should seek to target different policies to a different segment of the industry. Those involved with the improvement of export

promotion programs should seek continuous improvement in the cultural understanding of different countries, and simultaneously need to provide an incentive program to improve the worker social conditions. This suggests that behaviour base contract control, which specifies the performance outcomes and allows suppliers to determine how to achieve the performance goals, would be suitable (Bai et al., 2016). In this study, we provide broader insights into the role of cultural intelligence capability as a form of firm intelligence that can be applied to make contract governance effectiveness. The findings of this study encourage managers to understand what buyers need and what social practices they will expect in the future so that process and infrastructure can be designed to satisfy these requirements and wishes to improve firm social sustainability. Thus, we encourage managers first to assess their cultural intelligence and then to use appropriate governance mechanisms to address collaboration and behavioural commitment interfirm exchange. Social sustainability comes in two varieties: Customer Push and Firm self-select: findings ways to solve customers problems relying on relationships. They should not make a balance between local and their partner cultural practices, acceptable to their norms, not just accepting international standard social practices.

The anticipation of the company's existing needs and to meet the demands of customer future needs demand the managers acquire with cultural intelligence capabilities to gain extensive cultural knowledge and to adopt practices about buyer desires and preferences. The enforcement of international certificate such as Social Accountability with SA8000 Certification, ISO 26000 guides how businesses can operate in a socially responsible way. Fair Trade Certificate includes "social, environmental and economic standards (Hutchins and Sutherland, 2008). In order to achieve social sustainability in the supply chain, firms should not only rely on the enforcement of international standards, but also work in close collaboration with their suppliers. Because state intuitions can only exert a limited role in exercises press in structuring social activities, because the character of state action remains useful sometimes, due to certain areas of policymaking are heavily constrained. In all these ways, if we solely rely on the regulations implemented by the manufacturing host country could decline in responsiveness to attain desired social sustainability objective. Manufacturing firms require to develop more policies on human rights, child labour, equality may contribute significantly towards advances in the living of standards and well being of employees in the work area.

4.4.1.3 Limitation and direction for future research

This thesis has some limitation that present opportunities for future research. My thesis would not be able to adequately address all the relevant aspects of the effectiveness of governance mechanisms and coordination structure and their impact on social performance. I want to point out some limitation and several directions for future research and call the attention of researchers to devote research efforts in the following research agenda. First, the conclusion of this study based on cross-sectional data collected from few industries; future research could attempt in collecting data from both sides to understand better the nature of cultural intelligence affects the contracts over time. This study collected the data from a few manufacturing firms in a single country, Pakistan,

cannot represent all emerging economies that limit the generalizability of our findings. Second, while the sample from single informants limits the generalizability of the result. Therefore, future research should collect data from multiple informants to understand the role of cultural intelligence better.

Further, future research can seek to validate the national culture may influence cultural intelligence. Social aspects of sustainability have not given much attention because it is more likely to depend on the firm's preferences and resources they possess. Despite many years of sustainable development policies and tremendous advances in cleaner production technologies, inequalities and social issues are growing in emerging countries. Regarding social sustainability issues at the supply chain level, there is a straightforward but urgent important question as to whether the governance mechanism in place to tackle sustainability issues and to promote more extensive development at the firm and community level is adequate to the task.

Future research efforts should direct inquiries to other countries to test and replicate our theoretical developed model. Future research studies should adopt a longitudinal methodology to investigate from a buyer point of view, whether the enhancement of specific cultural capabilities could lead to improving trust. It is also important to understand the adverse effect of the social sustainability issues in the supply chain context on economic performance; the firms may face the strict imposition of regulation in case their firm practices and supplier found in irresponsible social practices, might ban to conduct business in future. In that case, if there is no business, there will be no environmental issue at all, this does not mean that environmental sustainability issues are less important, it means to say, all these practices finally have an impact on the human side. Finally, the measurement of social performance could further improve by developing objective measures and comparing them with subjective measures. Finally, it hopes that other academic scholars will seek to establish the validity of the findings in this thesis by replicating the research design across industries 4.0 with the internet of things. Industry 4.0 attracting attention and future researchers should investigate the evolution of trust in buyer-supplier relationships and how does it affect on the governance of international relations in the context of internet of things(IoT) and blockchain technologies.

4.5 Conclusions

Owing to recent social sustainability challenges attributed to manufacturing companies, sustainable development goals continued to be critical to the management and improvement for the sustainability of manufacturing companies. Increasingly, it is understood that current operational practices by the manufacturing firms can contribute to the sustainable development agenda goals of 2030. In line with manufacturing, firms need a transition towards more relevance governance, and social performance is essential to protect the well-being of employees and the community. Therefore, it is essential to understand how these firms are improving their social performance. This thesis extends

the understanding of inter-firm relationship while positioning itself between the theoretical concepts of transaction cost economics (TCE), social exchange theory (SET), governance mechanism, collaboration, commitment and cultural intelligence in an inter-firm relationship by linking them to the social performance and offering a fresh critical perspective on an existing view.

The findings of the thesis point to the high level of firm´s cultural intelligence capability is essential for the effectiveness of contract governance for collaboration and relational governance for commitment. The research indicated that heterogeneous management with higher cultural intelligence might lead to an increase in the effectiveness of the governance mechanism. Furthermore, the varying nature of cultural intelligence enables firms to adopt an effective governance mechanism, which facilitates collaboration and commitment to sustainability. Cultural intelligence process needs to understand their relationship objectives and outcomes to design appropriate governance mechanism for particular activities. Such approaches may provide opportunities to understand how inter-firm relationship influences on social sustainability.

It is important to advance understanding of the causal mechanism between cultural intelligence and inter-firm relationship to guide further empirical and theoretical analysis. Similarly, contract and relational governance mechanism are of equal significance for successful supply chain relationship management, but their effects are different under the supplier cultural intelligence. The study suggests that there is no single pattern for the impact of cultural intelligence on governance mechanism that should be considered in seeking effective collaboration and commitment. The findings support that benefits of cultural intelligence in exploiting the embedded cultural knowledge in inter-firm relationships. This confirms that cultural intelligence context is important in the success of inter-firm relationships. As regards to the findings, the thesis concluded that cultural intelligence is a key to maintain an inter-firm relationship across the border, it has a positive impact on social performance. A significant contribution of the thesis is that distinct governance mechanism modes require distinct dimensions of cultural intelligence for a successful inter-firm relationship. Furthermore, findings reveal that the success of the inter-firm relationship has a great potential to enhance the social sustainability aspects in manufacturing firms.

The key incremental contribution of this thesis is that the success of the inter-firm relationship depends upon the contract governance with coordination clauses and cultural intelligence dimensions to enhance more collaboration and increase firm social sustainability. This thesis concludes that in achieving social sustainability, objective resides in establishing aligned contract governance with coordination clauses for inter-firm successful collaboration between partners. Therefore, the success of the inter-firm relationship depends upon the contract governance with coordination clauses with reliable cultural intelligence, which enhance more collaboration and expand the firm's social sustainability. Therefore, this thesis concludes that in achieving social sustainability, manufacturing firms would require governance mechanisms which aligned their cultural norms with reliable cultural intelligence to enhance collaboration among different global

buyers. The results conclude that partnership between buyer and supplier firms that mobilise knowledge resources and expertise support the United Nations Sustainable Development Agenda 17.

I also hope this thesis could inspire practitioners, scholars and policy initiators in emerging economies to achieve a better understanding of governance mechanism effectiveness and its consequences on the social sustainability outcomes. Although cultural intelligence and collaborations are necessary, they may not be able to solve the social sustainability problems completely, so further investigation is required to investigate what are the other factors that may improve the sustainable development of companies. Cultural intelligence plays an essential role in the shaping and implementation of collaboration and is key to managing cross-cultural relationship management. Finally, further research warranted on the role of internal organisational capabilities in promoting an inter-firm relationship to establish the validity of the findings in this thesis by replicating the research design across industries and countries.

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Abstract: The aim of this study is to investigate moderating impact of cultural intelligence among relational governance and commitment to sustainability, consequently on the social sustainability performance. Relying on social exchange theory and dynamic capability view, we advance a more nuanced approach to examining how cultural intelligence interaction with relational governance enhances supplier's commitment to sustainability and hence allows suppliers firm to improve their social sustainability performance, based on data collected from 239 manufacturing firms located in Pakistan. Structural equation modelling and regression base moderation analysis supported the hypothesis. The results suggest that relational governance can act as centralised control for ensuring commitment to sustainability and social sustainability performance. Our results suggest that cultural intelligence moderates the relationship among relational governance and commitment to sustainability. Our study contributes to the debate about the relational governance in the achievement of commitment to sustainability that so far has never been investigated within manufacturing industry of Pakistan. The results of the research clearly show the positive impact of commitment on social sustainability performance. Theoretical contributions, managerial implications and future research direction also presented.

Subjects: Environment & Business; Business, Management and Accounting; Industry & Industrial Studies

Keywords: relational governance; cultural intelligence capability; social sustainability performance; buyer-supplier relationship; manufacturing firms

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PUBLIC INTEREST STATEMENT

This research study is useful for the policy-makers, manufacturing firms that want to enter the international markets; sustainability commitment issue will be a vital issue in future.

Export manufacturing firms should focus on implementing social sustainability practices before internationalisation operations. One of the main implications for the managers is that relational governance mechanism should consider in parallel when the objective is to improve social sustainability performance.

Our study suggests policy-makers that government institutions should develop legislation for export manufacturing firm for addressing social sustainability issues in conjunction with the international labour standards by considering country cultural.

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1. Introduction

One of the key challenges companies face concerning the social sustainability is its extension and integration to other supply chain stakeholders. Many of today's social sustainability issues of manufacturing firms are rooted in unsustainable patterns of environmental and social practices. There is growing interest of researchers to study how supplier development efforts lead to improving the social performance (Klassen & Vereecke, 2012). It is therefore important that firms properly govern their relationship with suppliers to foster their supplier's commitment to sustainability (Sancha, Wong, & Thomsen, 2016). For example, Awan and Kraslawski (2017) suggested that joint planning and problem-solving dimensions of relational governance may signal to recognise better hazards in exchange relationships requiring adaptability, flexibility and credibility. The adoption of governance mechanism significantly affects supplier performance, thus designing appropriate mechanism is critical for supplier management and sustainability initiatives (Xie, Liang, & Zhou, 2016). For example, Hennes & Mauritz AB's (H & M) active involvement in an environmental business relationship and signing their sustainability commitment is mandatory for all suppliers before entering a business relationship (H & M, 2016). This example suggests that use of governance mechanism can make the supply chain more sustainable and enhance social sustainability. Awan and Kraslawski (2017) suggest that jointly working with all stakeholder groups is particularly important to understand the social and environmental aspects of a manufacturing firm and is central to designing effective policies. As a result, it is essential for manufacturers to consider relational governance mechanism in mitigating conflict and deterring opportunism and enhancing performance (Liu, Luo, & Liu, 2009; Sancha et al., 2016). Relational governance is to govern transactions through relational norms in which both parties behave with the aim of achieving the joint objectives (Cao & Lumineau, 2015; Jap & Anderson, 2003). Given the limitation and advantage of relational governance, firms often employ them in their performance improvement. Meanwhile, supply chain commitment to sustainability is becoming increasingly complex, as global competition and cultural difference drive growing customer requirements. Hence, the literature provides little guidance for the supply chain managers who seek to make their commitment to sustainability more comprehensive and improve social performance.

Linking environmental and socially responsible practices in manufacturing firms to the human aspects has become even more important over the past few decades for sustainable performance and is one of the distinctive features of the field of supply chain management (Awan, Kraslawski, & Huiskonen, 2017). With growing concerns over the sustainability and ethicality of business practices, supply chain (SC) relationships have become even more critical. Companies face increasing pressure to account for the malpractices of their suppliers (Touboulic, Chicksand, & Walker, 2014). Of all the globalisation challenges, social sustainability is the most suitable example of a test case for triple bottom line performance. There is increased focus in academic research on broadening perspective on sustainability-related issues in the low-income countries (Govindan, Seuring, Zhu, & Azevedo, 2016). The result findings show successful integration of sustainability relying on process improvement with a focus on both environmental and social performance (Sroufe, 2017). Collaboration with the suppliers plays an essential role in developing a better understanding and improving the social and environmental aspects of the supply chain to implement social sustainability (Awan et al., 2017). Prior research has recognised the importance of helping suppliers and supporting them in implementing their sustainability improvement initiatives; this represents a significant agenda facing firms today (Ageron, Gunasekaran, & Spalanzani, 2012). A central challenge for buyer firms is how to govern the relationship with suppliers to foster supplier commitment to sustainability (Sancha et al., 2016). There is little research exploring how the firm is pursuing sustainability commitment and how this in turn influences performance (Schrettle, Hinz, Scherrer-Rathje, & Friedli, 2013).

Managing cultural differences across geographically dispersed locations is one of the central challenges for international firms (Caprar, Devinney, Kirkman, & Caligiuri, 2015). Relational governance on sustainability issues is essential; for example, in 2014, Adidas received a complaint from a factory

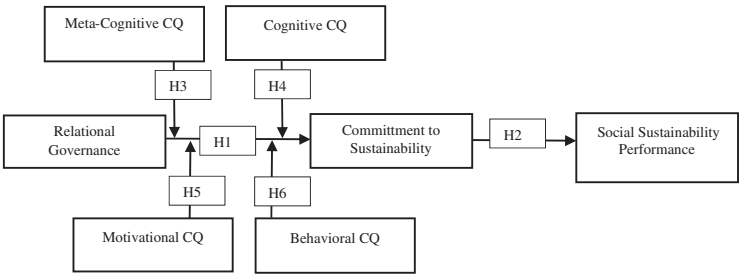

Figure 1. Conceptual framework.

worker in Pakistan, alleging physical harassment. Our team visited the supplier factory and found some sizeable gaps in understanding the requirements of our workplace standards. They launched a training programme jointly with their supplier to ensure workers were better placed to raise grievances when they occurred (Adidas, 2014). It shows that relational governance mechanism foster shared understanding and helps to resolve cultural difference problems smoothly and build more commitment to sustainability.

Culture might thus impede the generation of mutual understanding that is necessary for relationship-based management of inter-firm ties (Slater & Robson, 2012). Furthermore, prior empirical studies have examined the unique contribution of cultural intelligence in supply chain performance (Tuan, 2016). However, there are few studies that take culture as driving force for an inter-firm relationship (Handley & Angst, 2015). The reviewed literature suggests that there is need to integrate cultural aspects to the governance mechanism (Awan & Kraslawski, 2017; Handley & Angst, 2015). However, the literature has not provided a thorough an understanding of how culture effects governance mechanism in cross-border supply chain relationships.

We aim to investigate how cultural intelligence shapes the relationship between relational governance and commitment to sustainability in cross-border interactions. We also investigate the effect of commitment to sustainability on the social sustainability performance of a firm. The present study strives to expand research by answering the research questions: (1) Does the relational governance enhance supplier sustainability commitment and how it affects firm social sustainability performance? (2) Does cultural intelligence moderate the relationship between relational governance and supplier sustainability commitment? Our conceptual framework (Figure 1) grounded on the social exchange theory (SET) is a theoretical lens for relational governance, and cultural intelligence grounded on dynamic capability. We draw our conceptual framework on some theories that have used in previous research studies in buyer-supplier relationships. A unique element of our model compared to previous research studies is the inclusion of cultural intelligence (CQ) as a moderator between the relational governance and sustainability commitment. Practically, findings of our study provide more guidelines that are explicit to academicians and practitioners on what managers can do and how to promote sustainability commitment and enhance firm social sustainability.

2. Literature review

2.1. Social sustainability

According to Sharma and Ruud (2003), social sustainability is an "ethical code of conduct for human survival and outgrowth that needs to accomplish in a mutually inclusive and prudent way". In particular, the social sustainability performance defines as "the improvement in product and process aspects that determine human safety, welfare and wellness" (Wood, 1991). Social issues have

received little attention in academic literature in developing countries context (Seuring & Müller, 2008; Wilding, Wagner, Ashby, Leat, & Hudson-Smith, 2012). Social sustainability performance is described "as the product and process aspects that determine the wellness of human health and safety as engaged in proactive initiatives in the supply chain" (Husgafvel et al., 2015). The interrelationship among the environment, economic and social issues are integral to sustainability in both developing and industrialised country (Hutchins & Sutherland, 2008). Social issues in the supply chain such as health and safety, bonded child labour and worker job environment have an impact on firm social performance (Agrawal & Sharma, 2015). Thus, social performance aims to improve and balance health and safety, child labour and societal issues in which it survives and assures intergenerational equity. Furthermore, the number of research studies on social sustainability performance is limited especially from the supplier manufacturing perspective in Asia (Lee, 2016). There is growing trend towards developing a more sustainable way of managing social sustainability performance among the manufacturing firms (Husgafvel et al., 2015). To address social aspects, there is a need for formal procedures and availability of information to people in the new process and product initiatives (Sroufe, 2003).

In this study, we use the approach of Awaysheh and Klassen (2010) and Kleindorfer, Singhal, and Wassenhove (2005) and measure social performance considering items related to employee working condition, compliance with the human rights, develop health and safety measure and benefits related to the external community. We use (Carter & Rogers, 2008) definition of sustainable supply chain management as "The strategic, transparent integration and achievement of an organisation's social, environmental, and economic goals in the systemic coordination of key inter-organisational business processes for improving the long-term economic". Their definition builds upon the triple bottom line view of sustainability (Elkington, 1998). The definition of Carter and Rogers highlight the importance of achieving economic, environmental and social performance require to corporate, collaborate and extend coordination in across the supply chain and inter-organisational business process. Social sustainability is a broad concept, and its assessment may influence by cultural preferences (Popovic & Kraslawski, 2015). However, Awan et al. (2017) highlights that sustainability performance of manufacturing firms is strengthened by better addressing stakeholders' needs and developing firm capabilities. Our definition of social sustainability is a system of coordinated social interaction practices for the management of the social impact on people and society with the key internal and external stakeholders. This all happens for creating, developing and delivering a best social and ethical code of conduct. The aim is, to have value for the survival of current business system (customers, partners and society) and its growth for the future generation equitably and prudently.

2.2. Cultural intelligence

This study builds explicitly on the concept described by Pagell, Katz, and Sheu (2005), who initiated debate and emphasises that studies related to culture in operations management should focus on "how culture matters" rather than the question "whether culture matters" (Ribbink & Grimm, 2014). Organisational collaborative culture effects on the core competencies and are inevitable for the sustainable growth of the firm (Awan, Muneer, & Abbas, 2013). In this study, we focus on how cultural intelligence (CQ) capability matters to adopt a course of action that leads them to pursue sustainable commitment. Ang and Inkpen (2008) note that firms must create and sustain effective cultural intelligence capabilities in cross-culture interactions. Cultural intelligence consists of a set of four distinct elements namely metacognitive facet, cognitive facet, motivational facet and behavioural facet (Ang, Van Dyne, & Koh, 2006; Ng & Earley, 2006). Metacognitive CQ refers to "the mental processes that individuals use to acquire and understand cultural knowledge" and "relevant capabilities include planning, monitoring, and revising mental models of cultural norms for countries or groups of people". Metacognitive and cognitive relates to how the individual makes sense of differences and similarities between cultures (Ang et al., 2007). Behavioural CQ refers to the individual capability to display adequate flexibility and adaptability through verbal and nonverbal actions in a cross-cultural context (Ang & Inkpen, 2008). Motivation CQ reflects individual confidence, which

helps facilitate coordination process in situations characterised by cultural differences (Ang & Inkpen, 2008). The present study addresses the research call of (Handley & Angst, 2015) and addresses the gaps that follow (Ang & Inkpen, 2008).

CQ provides behaviour flexibility, intrinsic interest and adaptability for acquiring new knowledge across cultural setting, representing an important external learning and knowledge acquisition capability (Awan et al., 2017). Cultural intelligence promotes active thinking about people and situations and unleashes critical thinking about habits and beliefs (Gonçalves et al., 2016). Cultural intelligence is a system for understanding and extending cooperative norms (joint planning and joint problem solving) in the cross-cultural interaction that allows management to function efficiently and take advantage (Awan et al., 2017). Cultural intelligence promotes a more effective conflict management style that could help in decision-making and negotiation and therefore contributes to organisational success (Gonçalves et al., 2016). This approach may lead to stimulating interest to adjust quickly to a new culture and develop informational resources to develop strategies, which help them to facilitate coordination process.

2.3. Hypothesis development

Relational Governance refers to the extent to which relationship between the parties is governed by shared norms and social mechanism (Bai & Sarkis, 2010; Poppo & Zhou, 2014). It enforces obligations, promises and expectations through social processes that promote relational norms and rely on mutual adjustment and joint action (Heide & John, 1992). We used SET to gain understanding of supplier expectation of a reward from their interactions with buyers and these relationships deriving primarily upon ties of mutual dependence relationship (Jayaraman, Narayanan, Luo, & Swaminathan, 2013). "For example", in the context of the present study, a supplier firm makes relational governance with the buyer. Both collaborate frequently exchanges information's shared knowledge and enhance coordination with the motivation to achieve rewards. Relational governance is a subjective construct that focusing on inter-firm information sharing, inter-firm power balance and inter-firm relations (Zhang, Cavusgil, & Roath, 2003). Furthermore, there is support in the literature that mutual trust and cooperation set the basis for a productive relationship (Dyer & Hatch, 2006). Thus, inter-firm relationship based on trust and cooperation is likely to share resources, decreases uncertainty and the desire to resolve disagreement thus may increase operational productivity and performance (Lee & Cavusgil, 2006). In practice, supply chains may need to find a balance between the supplier side and customer side if they are well integrated (Ding, Lu, & Fan, 2017).

Fair exchange of information and good faith between supply chain partners may develop more strong commitment and enable suppliers to focus on improving the social performance. With such initiatives supply chain partners can build competencies to focus on the increasing investment and exchange of resources (Madhok & Tallman, 1998). Thus socially created ongoing information exchange among the partners may offer long-term commitment (Dyer & Singh, 1998). Following Heide and John (1992), define information exchange is a behaviour expectation between the partners to provide and share the useful and fair information to each other. Additionally, social developed information exchange and solidarity through enables to develop and promote more cooperation for achieving mutual goals (Heide & John, 1992). As a result, relational governance mechanism tends to enhance more supplier commitment towards the sustainability issues with the exchange of information and working in the less constrained environment. Therefore, relational governance is essential that contributes to the enhancement of supplier sustainability commitment on social issues on supply chain relationships. Commitment to sustainability relates to firm's engagement with social and environmental initiatives to diminish negative impact (Krause, Vachon, & Klassen, 2009).

According to Jansson, Nilsson, Modig, and Hed Vall (2017), commitment to sustainability is a management philosophy which includes strategic product decisions, competitiveness and strategic planning of the firm's process and procedures. Here, applying SET, we argue that relational attitudes and behaviours stimulated via the perceived justice and reward demonstrated by the more influential

member of the exchange and that the enactment of such policies allows the member to retain and protect its power (Griffith, Harvey, & Lusch, 2006). Moreover, Agan, Acar, and Borodin (2013) showed that customer demand on sustainability initiatives has a significant impact on environmental management system adoption. Luzzini, Brandon-Jones, Brandon-Jones, and Spina (2015) argue that cooperative arrangements with an external partner are beneficial when focusing heavily on improving social sustainability initiatives. However, some argue that exchange of information and joint decision-making between partners are to generate knowledge resources and create supplier commitment to sustainability (Sancha et al., 2016). We argue that information and knowledge received by supplier firm from a buyer influence both their motivation and satisfaction with an attitudinal loyalty towards the compliance, which in turn influences the sustainability commitment. It is hypothesised:

Hypothesis 1: Relational governance have a positive impact on commitment to sustainability.

2.4. Sustainability commitment to social sustainability performance

According to the Krause, Handfield, and Tyler (2007), expectation of long-term relationship may contribute to the performance improvement and build capabilities. Previous research studies have investigated the relationship between commitment to sustainability and performance and have still reported mixed finding on performance (Schrettle et al., 2013). Thus, a relationship commitment on the part of the suppliers plays a strategic role and a base for the innovative solutions for the social challenge (Parmigiani & Rivera-Santos, 2011). However, the relationship between commitment to sustainability and performance is still under investigation (Schrettle et al., 2013). The supplier commitment towards sustainability initiatives brings improvement in the firm's social performance (Sancha et al., 2016). Social sustainability issues in the supply chain are fundamentally concerned with the future of employee health and safety, not an operational level or plant level but through the life cycle of the product. The concept of social sustainability emphasises on the equality and access to the equal rights to resources and opportunities (Bansal, 2003; Wagner & Krause, 2009). Social sustainability focuses on the ethical code of conduct for growth and human survival "that should be achieved in an inclusive, connected equitable and prudent manner" (Sharma & Ruud, 2003). Some research scholars refer and connect social sustainability with the sustainable management of social resources, such as people abilities, skill and social values (Sarkis, Zhu, & Lai, 2011).

Lee (2016) argues that commitment is positively associated with the environmental and social performance. Further, Kyazze, Nkote, and Wakaisuka-Isingoma (2017) suggest participation and decision-making promote social performance. Social sustainability performance is described "as the product and process aspects that determine the wellness of human health and safety as engaged in proactive initiatives in the supply chain" (Husgafvel et al., 2015). The interrelationship among the environment, economic and social issues are integral to sustainability in both developing and industrialised countries (Hutchins & Sutherland, 2008). Sustainability performance of manufacturing firms is strengthened by better addressing stakeholders' needs and developing firm capabilities for implementation of sustainable supply chain practices (Awan et al., 2017). Social issues in the supply chain, such as health and safety, bonded child labour and worker job environment, have an impact on firm social performance (Agrawal & Sharma, 2015). Thus, social sustainability aims to improve and balance health and safety, child labour and societal issues in which it survives and assures intergenerational equity. Sustainable supply chain practices also have a unique strategic advantage in improving the social and environmental performance (Awan et al., 2017).

From RBV, we suggest that commitment to sustainability may act as an antecedent to the social sustainability performance. However, commitment to sustainability allows the firm to put more focus on knowledge sharing practices, lead to improving social sustainability performance. We argue that firms can also improve social sustainability-related issues, in turn, the firm can lessen potential threats to sustainable development. Thus,

Hypothesis 2: Commitment to sustainability have a positive impact on firm social sustainability performance.

2.5. Moderation role of cultural intelligence

This study adopts the definition of CQ (Ang & Inkpen, 2008) defined as "the capability of an individual to function effectively in situations characterised by cultural diversity and also the capability to function effectively in interactions across culture groups". *Cultural metacognition* refers to an individual's level of conscious cultural awareness and executive processing during cross-cultural interactions (Ang & Inkpen, 2008). Cognitive CQ "reflects knowledge of the norms, practices, and conventions in different cultures acquired from education and personal experiences" (Ang & Inkpen, 2008). Especially the cultural intelligence dimensions of metacognitive, cognitive, motivational and behavioural influence the various dimensions, such as task performance, conflicts handling and adaptations (see, for example, Ang et al., 2007). Metacognitive CQ refers to the mental processes individuals use at acquiring, comprehending and calibrating cultural knowledge. Generate and comprehend cultural knowledge (Ang et al., 2006) and may stimulate reflection on knowledge (Thomas et al., 2008).

Metacognitive CQ emphasises on the importance of thinking consciously, and a manager can assess which aspects of culture are more relevant with a heightened sensitivity to the cultural context and problem which he faced with at that point (Van Dyne et al., 2012). Such challenges require organisations to assemble and develop resources and capabilities to resolve such problems (Husted & de Sousa-Filho, 2017). The literature points to the importance of installing cultural intelligence capability in the firm to facilitate effective relational governance practices. Chua, Morris, and Mor (2012) reported positive effects of metacognitive CQ on collaboration, while (Van Dyne, Ang, & Koh, 2008) found that metacognitive CQ is conducive to the adoption of cultural preferences and norm of different countries. Firms require culture metacognitive as the related to explain manager success in navigating cultural values and particularly essential to perform essential firms activities (Klafehn, Banerjee, & Chiu, 2008). Such cultural metacognitive may be especially essential to collaborate relationship individual from different cultures because of its ultimate effects on inter-culture trust (Mor, Morris, & Joh, 2013). People in different countries react to inputs differently, communicate differently and make decisions differently (Meyer, 2015). For example, there are areas of disagreement as well as agreement on how many women will be employed for a particular task to have gender equality. Differences may arise due to the local cultural practices and another partner's culture-specific context. The supplier may consider these inappropriate according to his culture, leading to disagreement and conflict (Bai, Sheng, & Li, 2016) and eventually hurting cooperative and collaboration ties. When metacognitive CQ is high, managers focus on understanding other cultural knowledge, Chua et al. (2012) find a positive relationship between high metacognitive CQ and high collaboration across cultures more effectively. We have argued for a positive relationship between relational governance and sustainability commitment to social issues. Summarising our argument, we suggest that culture metacognitive is sensing CQ capability that involves exploring cultural knowledge opportunities, along with scanning their own culture. If firm's metacognition CQ is low, contract governance will not be adequate to govern the relationship and achieving sustainability commitment. Based on this reasoning, therefore, we hypothesise that:

Hypothesis 3: The impact of relational governance on the commitment to sustainability is higher, when cognition cultural intelligence is high, as opposed to low cognition cultural intelligence.

Hypothesis 4: The impact of relational governance on the commitment to sustainability is higher, when metacognition cultural intelligence is high, as opposed to low metacognition cultural intelligence.

2.6. Behavioural and motivational CQ

Behavioural CQ refers to the ability and flexibility to exhibit situation-appropriate behaviours (Earley & Ang, 2003). Behavioural CQ is defined by (Ang et al., 2007) as a process where an individual exhibits appropriate enacted selected verbal and nonverbal behaviours by cognition and motivational when interacting with people from different cultural backgrounds. Individual with behavioural capability is not the pursuit of their success but also have the ability to dominate others by adapting with those who are emplacing acceptance and show concern for their welfare; their approach is universalism rather self-enhancement (Van Dyne et al., 2012). This supports the notion that culturally intelligent individuals are more flexible, adaptive and able to adjust to the different environment (Ang, Rockstuhl, & Tan, 2015). Flexibility and adaptability in communication strategies are important to fend off stakeholder concerns. The knowledge acquired by an individual is more likely to share and facilitate goal accomplishment. The literature points to the importance of installing behaviour CQ, Ang et al. (2007) reported positive effects of behaviour CQ on flexibility, while Charoensukmongkol (2016) positively related to the acquisition of knowledge in cross-culture interactions. As people with high behavioural CQ tend to be motivated to adapt their behaviours to produce a culturally appropriate response (Earley & Gardner, 2005). Behavioural CQ capability rooted in large part of individual behaviour to identify and address new cultural knowledge to respond to changing customer needs. This often continuously reshapes, configures and reconfigures those cultural to create a harmonious relationship (Awan et al., 2017).

We argue that Cultural intelligent teams can respond more effectively in uncertain conditions instead of relying on solely on adaptations to the procedures. In Asian culture, indirect communication is the norm, and Nordic culture tends to favour direct communications. Managers of manufacturing firms will not be able to effectively coordinate and address the specific requirements on social issues without understanding partner firm's communications style. The transforming or reconfiguring capability described as behavioural CQ is continuous adaptation capability (Earley & Ang, 2003). Meeting regularly, supplier firm can tackle their concerns and regularly update information on improvement in the working conditions, safety training, community development communication and some ethnicities are in the workforce can improve relationship from both sides. Thus, if CQ behaviours are not present in supplier firm, buyer perceives this as thinly veiled attempts to gain benefits and impress management. Therefore, we hypothesise:

> Hypothesis 5: The impact of relational governance on the commitment to sustainability is higher, when behavioural cultural intelligence is high, as opposed to low metacognition cultural intelligence.

Motivation has focused on measuring the effort expended to achieve a task-relevant reward (McCarthy, Treadway, Bennett, & Blanchard, 2016). Motivational CQ "refers to the degree of interest and drives to adapt to new cultural surroundings functioning in situations characterised by cultural differences" (Earley & Ang, 2003). Moreover, Imai and Gelfand (2010) conclude that individual with high motivational CQ persists and invests effort into forming an accurate understanding of their culturally unfamiliar counterparts. In other words, have high adapting skills to situations in unfamiliar cultures. CQ dimension assists in identifying mutually beneficial agreements and a higher level of CQ had more of an impact on the extent to which partner engaged in action sequences. Motivational CQ reflects people's interest in and drive to adapt to new cultural environments (Templer, Tay, & Chandrasekar, 2006). Empirical research has primarily focused on compliance with the supplier, and growing evidence shows that higher level of motivational CQ contributes to more cooperative behaviour in intercultural negotiations (Imai & Gelfand, 2010). Chua et al. (2012) find a positive relationship between high motivation CQ and high collaboration across cultures. Thus, the motivation focused on the ability to gain cultural understanding and knowledge of different cultures, highly motivated people likely to have higher abilities (Magnusson, Westjohn, Semenov, Randrianasolo, & Zdravkovic, 2013). This aspect of CQ also reflects the skill or the ability to adapt to the traditions, customs and lifestyles of different countries (Ang et al., 2015). This implies that motivational CQ

individual direct energy to shape their knowledge by the partner cultural knowledge. A conceptual framework is shown in Figure 1. We propose:

> Hypothesis 6: The impact of relational governance on the commitment to sustainability is higher, when motivational cultural intelligence is high, as opposed to low metacognition cultural intelligence.

3. Research methods

3.1. Measures and scales

The construct of CQ is consist of 20 items assesses each of the four subscales: cognitive, metacognitive. Motivational and behavioural (Ang et al., 2015). We measured CQ by 20 items capturing the degree to which managers could use and influence relationship related decision (Ang & Inkpen, 2008; Earley & Ang, 2003). All items and construct were adapted from previous studies and were measured by using a seven-point Likert scale. The social performance was measured using four items from Awaysheh and Klassen (2010) and Kleindorfer et al. (2005). We adapted existing measures from previous studies, relational governance (Lusch & Brown, 1996). Commitment to Sustainability was measured using four items from Aragón-Correa (1998). The four items of relational governance consist of supplier involved in the development of social initiatives, how to make a joint decision in the case of failure to the protection of social issues, how to jointly settle down the issue with customer and actions to be carried out when there are accidents at worker place. The items of sustainability commitment included: (1) clear expectations on customer social requirements, (2) to comply with our social practices and (3) clear standards on the improvement of product and process issues.

We also included a set of control variables such as the size of the firm and number of years of employee experiences. Prior research has shown that relationship length may affect governance mechanism (Liu et al., 2009; Shou, Zheng, & Zhu, 2016). Since our study focuses on the relational governance and social sustainability, this was measured through governance mechanism, and it is necessary to control firm age (number of employees, length of relationship, type of industry and number of years employees experience may affect the social performance and cultural intelligence. The firms with fewer employees tend to have more informal social interaction and are more active in establishing social ties. Experienced firms have had more opportunities to accumulate more knowledge and resources through both external and internal learning (Cao & Lumineau, 2015). We controlled variables such as the age of firm and size of the firm with the natural logarithm.

3.2. Sample and data collection

This study uses Pakistan manufacturer exporters as an empirical setting to test the hypothesis. Pakistan is a global production base of textile, sports goods and surgical instruments, exporting a wide variety of goods to Europe and Western countries. We test our hypothesis using data from 239 manufacturing firms in the four export manufacturing industries. These exporter manufacturer industries to some extent need to implement social practices to meet the buyer requirements. They, therefore, provide a fruitful context for studying how firms develop a relationship with their buyers and unfold its effects.

Survey data were collected on site from the manufacturing firms in Sialkot and Faisalabad in March to April 2017. The informants in this study were senior managers, who were deemed knowledgeable about the buyer-supplier relationship and were engaged in the implementation of the sustainability-related initiatives. We conducted two pretests to assess the quality of twenty items. In pretest one, a brief questionnaire containing the items was given in person to seven operations managers having extensive export experience and were involved in dealing with international customers across different countries for at least five years. In the second pretest, survey questionnaire was presented to the academic experts. The managers were asked to point out any items that were both ambiguous and not related to their practices. We randomly drew a sample of Pakistan

manufacturer exporters from the database of Federal Chamber of Commerce Industry. There were 1,152 firms from four industries. Data were collected in March to April 2017. From this sampling frame, we selected 650 matching the criteria that they had at least five years experience in dealing international customers. We identified 650 firms matching our sampling criteria. A sample of 650 manufacturing firms was selected randomly and contacted by telephone for their participation and request the designation of critical informants, 316 firms responded to participate in the survey. Out of 316 firms, 257 firms completed the questionnaire. Of 257, five responses were dropped due to missing values and lack of knowledge. We then followed by telephone calls and through sending them an email, and 71 responses were received after the three weeks. Because of this approach, 257 responses were received, of which 18 responses were unusable due to missing values, and firm respondents lacked knowledge, resulting in 239 useable responses.

We controlled the common method bias ex-ante by separating the respondents answering independent and dependent variable (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Common method variance is posing a severe threat to behavioural research, notably when data collected using single informants the interpretation of the data. Harmon's one-factor test (Podsakoff et al., 2003) was carried out using un-rotated factor analysis of all independent and dependent variables. The results revealed that first factor captured only 29.41% of the variance. This suggests that common method variance is not a significant problem in this study, although the sample size was enough to perform the structural equation modelling approach and the refined sample size was 239. The sample size was sufficient enough to perform the further analysis (Tabachnick & Fidell, 2007) and measure the sampling adequacy (Hair, Black, Babin, & Anderson, 2010).

To test the hypothesis, the data analyses were conducted by using statistical package for social sciences (SPSS) and analysis of a moment structures (AMOS 23) (Arbuckle, 2014). Factor analysis test was performed using maximum likelihood with varimax rotation, yield Kaiser-Meyer-Olkin (MSA) estimate for the data was 0.83, $p = 0.05$, results indicates that use of factor analysis is appropriate. In this study, we used different fit indices to check whether data fitted well to our hypothesised mode or not. Normed Chi-Square (χ^2/df) < 3, Comparative Fit Index (CFI) > 0.90, Goodness of Fit Index (GFI) 0.90 and Root Mean Square Error of Approximation (RMSEA) < 0.08 regarded as cut-off score for a reasonable model fit (Hu, Bentler, & Hoyle, 1995). The model fit statistics of measurement model were acceptable, the goodness-of-fit indices were as follows: $\chi^2/df = 345.67/196 = 1.76$; CFI = 0.94; GFI = 0.93; RMSEA = 0.05; SRMR = 0.06. We have used the goodness of fit indices criteria, which has been previously used in many research studies to test the measurement model. The goodness of fit statistics of confirmatory factor analysis met the requirement for measurement model fit.

3.3. Reliability and validity

The correlation matrix and descriptive statistics for the variable set are shown in Table 1. The final measurement items, including their completely standardised loadings, Cronbach's alpha (a), composite reliability (CR) and average variance extracted (AVE) presented in Table 2. Composite reliability coefficients for each construct exceeded the recommended 0.60 benchmarks (Bagozzi, Yi, & Phillips, 1991) and the average variance extracted (AVE) for all scales exceeded the recommended 0.7 0 thresholds. AVEs for all construct was higher than the 0.50 cut of value (Anderson & Gerbing, 1988). AVE is also referred to as "communality index" and is used to measure the quality of the measurement model for each construct. The variance extracted value is a measure of construct reliability; higher AVE values occur when indicators are truly representative of the latent construct and it measures the amount of variance for a specified indicator accounted for by the latent construct.

The results indicate AVE and Cronbach's alpha and composite reliability (CR) exceed the cutoff values of 0.70 (Fornell & Larcker, 1981). Unidimensionality and internal consistency of all items confirmed that all items loaded on their latent construct in exploratory factor analysis. In this study, the Cronbach alpha coefficient for Variable1 was 0.70 and for each item ranged from 0.72 to 0.92. The

Table 1. Mean, standard deviation, correlation and results of discriminant validity

	BCQ	COQ	MCQ	MEC	RG	SP	SC	WE	FS	FA
BCQ	0.759									
COQ	0.125*	0.81								
MCQ	0.188**	0.127*	0.776							
MEC	0.257**	0.205**	.0142*	0.793						
RG	0.221**	0.113	−0.09*	0.235**	0.805					
SP	0.276**	0.319**	0.137*	0.324**	0.285**	0.806				
SC	0.251**	0.09	0.115	0.374**	0.311**	0.35**	0.803			
WE	−0.049	0.09	0.018	−0.022	−0.068	0.056	−0.041	1		
FS	−0.008	0.03	0.084	0.022	−0.04	0.013	−0.07	0.119*	1	
FA	−0.073	0.067	−0.015	0.031	−0.004	0.015	−0.033	0.029	0.16*	1
M	5.809	6.114	5.997	5.921	6.211	6.082	6.11	0.37	0.82	0.81
SD	0.817	0.622	0.649	0.709	0.565	625	0.59	0.35	0.33	0.47

Notes: BCQ = Behavior Cognitive, COQ = Cognitive, MCQ = Motivational Cognitive, MEC = Metacognitive, RG = Relational governance, SP = Social performance, SC = Sustainability Commitment, WE = Work experience, FS = Firm size, FA = Firm age, M = mean and SD = Standard deviation.

*Correlation is significant at the $p < 0.01$ level.

**Correlation is significant at the $p < 0.05$ level.

discriminant validity of the measures was evaluated by comparing the AVE for each measure with the respective squared correlation between the two constructs (Fornell & Larcker, 1981). Every pair of constructs passed the test. Overall, the results showed acceptable reliability and validity.

3.4. Moderation analysis and model evaluation

The multicollinearity of variables was tested using recommended procedure (Hair et al., 2010). The variance inflation factor (VIF) value was <2.37, suggesting no significant multicollinearity issue. The independent variables were mean centred before the formation of interaction terms as suggested by Aiken, West, and Reno (1991). We used hierarchical moderated regression analyses to test the hypothesis. The relational governance is independent and cultural intelligence variable is likely endogenous because these variables implemented, least in part, to address the sustainability commitment making them endogenous determinants of our dependent variable. To address this endogeneity issue, we follow the guidance in literature and apply multi-stage least square regression approach (Handley & Angst, 2015; Poppo, Zhou, & Zenger, 2008).

First, we regressed relational governance (RG) on metacognition (MEQ), cognition (COQ), behaviour (BCQ) and motivational cognition (MCQ). This results showed that RG is positively related to metacognitive ($\beta = 0.1$, $p < 0.01$) but not to cognition. The RG related positively to behavioural CQ ($\beta = 0.21$, $p < 0.05$) and negatively to motivational cognitive CQ ($\beta = -0.06$, $p < 0.01$). The findings show that CQ has a negative impact on RG. This lends the support to use a two-stage regression model to address potential endogeneity among the predictors. The use of these residuals in the second stage of regression is to correct for endogeneity issue. We create interaction terms using these residuals as indicators (observed minus predicted value) rather than original values for creating interaction terms. In Table 3, we showed moderated regression analysis results using three models. In the first model, we enter the Control variables; in model 2, subsequently the variables representing the main effects; in model 3, we introduce the interaction terms.

As results are presented in Table 3, model 1, shows, the Control variable explained for only 33% of the variance in performance. The work experience has a significant effect ($\beta = 0.15$, $p < 0.05$) on performance. Also, firm age has a positive but not significant effect on the performance. In the second model, we entered independent and moderators variables increased the R^2 value by 0.11

Table 2. Validation of constructs survey items

Items	Factor loadings[a]	*t*-value	Error variance	Item R^2
Relational governance (RG)				
AVE: 0.64, CA: 0.82, CR: 0.88				
RG1	0.86	24.45	0.254	0.746
RG2	0.8	22.07	0.352	0.648
RG3	0.77	22.07	0.404	0.596
RG4	0.78	18.27	0.395	0.605
Social performance (SP)				
AVE: 0.64, CA: 0.81, CR: 0.88				
SP1	0.77	17.39	0.407	0.593
SP2	0.85	32.09	0.278	0.722
SP3	0.82	27.95	0.316	0.684
SP4	0.77	21.36	0.401	0.599
Commitment to sustainability				
AVE:0.69, CA:0.90, CR: 0.90				
SC1	0.87	23.65	0.243	0.757
SC2	0.83	14.04	0.311	0.689
SC3	0.77	15.66	0.407	0.593
SC4	0.86	23.05	0.26	0.74
Cultural intelligence (CQ)				
Metacognitive				
AVE: 0.63, CA: 0.72, CR: 0.83				
MEC1	0.81	10.46	0.333	0.667
MEC2	0.82	10.25	0.326	0.674
MEC3	0.74	7.48	0.439	0.561
Cognitive				
AVE: 0.65, CA: 0.74, CR: 0.85				
COQ1	0.73	7.14	0.467	0.533
COQ2	0.87	23.04	0.241	0.759
COQ3	0.82	16.05	0.323	0.677
Behavior cognitive				
AVE: 0.55, CA: 0.75, CR: 0.84				
BCQ1	0.76	15.53	0.409	0.591
BCQ2	0.73	12.48	0.458	0.542
BCQ3	0.77	19.06	0.398	0.602
BCQ4	0.75	1184	0.428	0.572
Motivational cognitive				
AVE: 0.60, CA: 0.78, CR: 0.85				
MCQ1	0.75	13.37	0.425	0.575
MCQ2	0.78	14.36	0.388	0.612
MCQ3	0.82	26.47	0.324	0.676
MCQ4	0.74	12.72	0.452	0.548

Notes: MCQ = Motivational culture intelligence, MEC = Meta cognitive intelligence, BCQ = Behavior cognitive, α = Cronbach's alpha.

[a]$p < 0.05$.

Table 3. Standardised results of hierarchical regression

Control	Model 1	Model 2	Model 3
FS: Firm size	0.09	0.09	0.09
Firm age	0.04	0.06	0.07
Work experience	0.09	0.011	0.15*
Main Effects			
Relational governance (RG)	–	0.28**	0.28**
Sustainability commitment (SC)	–	0.32**	0.32**
Meta cognition (MEQ)	–	0.31**	0.31**
Cognition (COQ)	–	0.03	0.03
Behavioural (BCQ)	–	0.22**	0.22**
Motivational (MCQ)	–	0.04	0.04
Interaction effects			
MEQ x SC	–	0.26**	0.26**
COQ x SC	–	0.06	0.05
BCQ x SC	–	.14*	.14*
MCQ x SC	–	−0.18*	−0.18*
R^2	0.33	0.44	0.48
ΔR^2	–	0.11**	0.04**
F	5.83**	7.24**	7.01**

*$p = 0.05$.
**$p = 0.01$.

($p < 0.01$). The addition of interaction effect in model 3 also increased both explained variance in social performance, in support of the moderation effects of cultural intelligence factors. The result shows that relational governance significantly associated with sustainability commitment ($b = 0.33$, $p < 0.01$). Thus, H1 is accepted. The findings are consistent with the findings of past studies on buyer collaborative ties and commitment to sustainability (Sancha, Gimenez, & Sierra, 2016). The export-manufacturing firms in Pakistan require the compliance to these collaborative ties. This requirement compels the managers to engage themselves with external cooperative behaviours to buyers boost the firm capacity to comply with the requirements and improve internal environmental conditions.

Sustainability commitment (SC) has a significant positive effect on social performance ($\beta = 0.32$, $p < 0.01$), supporting hypothesis H2. The findings are consistent with the findings of past studies on a commitment to sustainability and sustainability performance (Luzzini et al., 2015). The increase in compliance tends to make the managers inclined towards the use of practices and knowledge to implement the practices. The cooperative norms and compliance increase knowledge result in increased productivity that ultimately improves the social sustainability performance. Consistent with the previous study, we suggest that environmental and socially sustainable practices together play an important role to better achieve sustainability performance in supply chain management (Awan et al., 2017). Inter-firm cooperation leads to creating sustainability commitment, which boots the social sustainability performance.

To better illustrate the moderation effect, the interaction was plotted one standard deviation above and below using (Cohen, Cohen, West, & Aiken, 2013) procedure. The results in model 3 of Table 3 show that the interaction between metacognition cultural intelligence (CQ) and relational governance (RG) indeed has a statistically significant, positive effect on sustainability commitment ($\beta = 0.26$, $p < 0.01$), supporting H3. In line with H3, Figure 2 shows that the positive effects of relational governance on a commitment to sustainability are enhanced at high levels of metacognition CQ. The results show slope is steep and positive for a higher level of metacognition but horizontal for

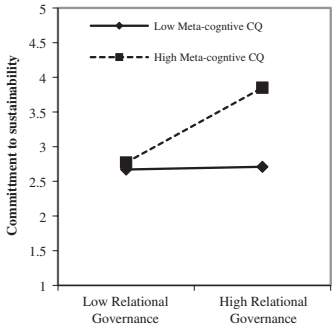

Figure 2. moderating effects of metacognition cultural intelligence on the relationship between relational governance and sustainability commitment.

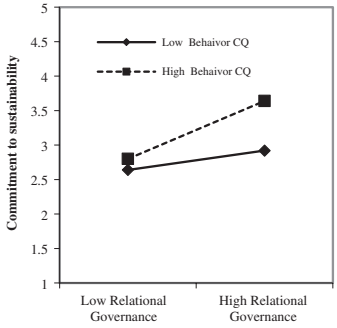

Figure 3. Moderating effects of behavior cultural intelligence on the relationship between relational governance and sustainability commitment.

low metacognition, which implies that firm with higher metacognition CQ would strengthen the relational governance.

Next, H4 does not predict a significant effect of the interaction of cognitive CQ and SC. Thus, no moderation is concluded, and H4 received no support. The insignificance might be attributed to the cognition CQ to an individual cultural knowledge that ensures the provision of explicit documented knowledge through education and experience. Moreover, the reason is that less international experience and education of the managers might also be a reason for less cognitive CQ sharing during the interaction.

As shown in model 3 of Table 3, the interactive effect of RG and behavioural CQ on SC is positive and statistically significant ($\beta = 0.22$, $p < 0.01$), supporting H5. The findings are consistent with the findings of past studies on behaviour CQ significantly related to organisation commitment (Alipour, Feizi, & Azarvand, 2013). In Figure 3, shows relational governance has a substantial positive effect on the sustainability commitment at a high level of behaviour CQ (BCQ). The results imply that manager's non-verbal skills and flexibility help to make relational governance more effective. A firm with high behaviour CQ can gain some benefits needed for enhancement of sustainability commitment.

The results in model 3 of Table 3 shows that interaction between motivational CQ and RG is negative but significant ($\beta = -0.18$, $p < 0.05$). These findings indicate that motivational CQ negatively influences on relational governance and we, therefore, did not find support for hypothesis H6. These findings to some extent contrast with those of (Zhang, Henke, & Griffith, 2009), buyer cooperative norms becomes most effective at stimulating supplier willingness to invest in new resources.

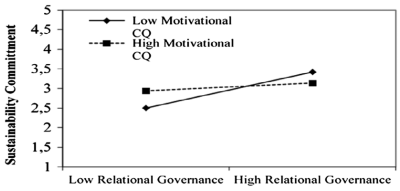

Figure 4. Moderating effects of motivational cultural intelligence on the relationship between relational governance and sustanabiliaty commitment.

Motivational CQ is focused on gain understanding and knowledge of different cultures and does not capture a person's ability (Thomas, 2010). Our findings show that the level of motivational CQ increases the effect of relational governance on sustainability commitment decreases. With the increasing level of motivational CQ, relational governance is diminishing. The underlying reason for this may be under the high level of CQ; they may continue their cooperative norms, they are less committed to direct energy and attention to build stronger emotional bonds with their partners. Thus, sustainability commitment can be detrimental when internal motivation is low to acquire more knowledge. In Figure 4, indicates that motivational CQ (MCQ) negatively moderates the effect of relational governance on sustainability commitment. Our results suggest that under buyer high cooperative norms, supplier views it as relational stress to view as a formidable threat to continue to give more compliance with the buyer requirements.

4. Conclusions

This study provides valuable insights into how cultural intelligence forces shape relational governance and commitment to sustainability in buyer-supplier relationships. Prior research on international supply chain relationship has not theorised a key role of cultural intelligence in shaping relational governance and commitment to sustainability. Focusing on the buyer-supplier relationship in supply chain context, our analysis indicates that increased cultural intelligence leads to improving inter-firm commitment to sustainability, resulting in improving social sustainability performance. Metacognitive and motivational CQ moderating role is established, while high motivational CQ negatively influences commitment to sustainability under relational governance. This study reveals that the CQ can explain positive effects of relational governance on a commitment to sustainability. Evidence suggests that high metacognition CQ and behaviour CQ make more relational adjustments and exercise better decision-making on environmental and social issues. We find that relational governance is more effective at the high level of metacognitive CQ and behaviour CQ for achieving commitment to sustainability. Moreover, such commitment to sustainability is important for social sustainability performance in export manufacturing firms of South Asian economies. The result shows that any measure to improve the social sustainability of the export manufacturing firms should consider the commitment to sustainability. The results indicate that social sustainability may be explained to incorporate a stronger emphasis on commitment to sustainability to fulfil the socially sustainable performance outcomes. However, for social sustainability, not only relational governance mechanisms are crucial but also internal cultural intelligence capabilities positively contribute to sustainable strategic development.

Our findings contribute to the literature in some ways. First, this research contributes to the body of knowledge on the buyer-supplier relationship by demonstrating how different social exchange conduits contribute to improving the commitment to sustainability in the supply chain management. We suggest that social exchange can act as centralised control for ensuring commitment to sustainability and social sustainability performance. Second, our conceptualisation of the influence of cultural intelligence is also novel in that it connects relational governance with a commitment to sustainability. Our theoretical proposition advances the important idea that cultural intelligence may be important for the stability of buyer-supplier relationships. On the other hand, findings reinforce that commitment to sustainability are important for social sustainability performance. Thus, social sustainability aims to improve and balance health and safety, child labour and societal issues

in which it survives and assures intergenerational equity. We define social sustainability is a system of coordinated social interaction practices for the management of the social impact on people and society with the key internal and external stakeholders. This all happens for creating, developing and delivering the best social and ethical code of conduct. The aim is to have value for the survival of current business system (customers, partners and society) and its growth for the future generation in an equitable and prudent manner.

5. Managerial implications

The first relevant result of the study is that commitment to sustainability has a positive and significant impact on the improvement of social sustainability performance. Further, result highlights the important role of relational governance in the achievement of social sustainability goals in the export manufacturing industry. The development of social sustainability requires cooperation among suppliers and buyers. In this perspective, cooperation and cultural intelligence become a prerequisite to compete in the international market from a sustainability perspective. The supplier firm should involve buyers in sustainability collaboration with relational governance mechanism from the early phase of the process and product developments.

Our result findings provide some implications with suggestions for companies aiming to pursue a commitment to sustainability and social sustainability regarding how they can approach this objective in a manner that is consistent with local cultural competitive priorities. Social sustainability practices are becoming key priorities for companies from emerging economies, but the way in which they integrate into operations are very different from those in the developing countries which remains an open issue. The management of social sustainability issues is increasingly an essential ingredient of companies' operation strategy, given the recognised need to ensure the long-term quality of life both inside and outside firm operation.

This study offers two important implications to managers. First, our study suggests that accumulation of cultural intelligence can lead to increase joint decision-making and problem solving and promote sustainability commitment. When CQ is present, supplier firm effective cooperative ties is a key to avoid confusing on cooperation and satisfy buyer needs, promote commitment to sustainability. The present study advises managers that they may achieve supply chain relationship success through cultural intelligence. We suggest that managers cultural intelligence capability is a tool that enables individual effectively interact with and learn from their buyers can overcome dualities of decision-making and help to foster sustainability commitment. Second, we suggest that with the dynamic capability, management of the supplier firm can first spot the cultural differences, make the necessary decisions to execute on those cultural differences, as they stay active and continuously update the partner cultural knowledge. Subsequently, the presence of cultural intelligence further assembles a more complex configuration of knowledge resources to resolve sustainability issues impact positively on the commitment to sustainability and improve social sustainability performance. We suggest that, owing to the different social and cultural environment between the buyer and suppliers, cultural intelligence can ensure the relationship between supply chain partners in South Asia. Meanwhile, it acts as centralised control for ensuring commitment to sustainability impacts positively on social sustainability performance.

Our study findings, however, caution that foreign firms must be aware of the cultural knowledge of the partner and points to the fact that relational governance with the key supplier is important for the success of commitment to sustainability. At the same time, our findings suggest that manufacturing firms need to develop sensing capabilities to overcome the cultural differences that may foster the development of joint initiatives and lead to improve commitment to sustainability. These capabilities enable firms to continue search, scan and make sense of cultural knowledge and interpret the vast array of cultural differences and threats towards their effectiveness of relational governance.

5.1. Limitations and future directions

Our study provides some valuable insights for supply chain management and operations management. We have collected data only from supplier firms. Social sustainability helps to ensure that needs of employees and society are met without jeopardising the ability of future generation to meet their needs if manufacturer committed towards sustainability. When we look at firm supply chain operations, we see that it has a somewhat remarkable ability rejuvenate itself and sustain suitable conditions so future generations can grow. For example, when employees are injured, it affects firm operations, adding unavailability of the trained employee, absenteeism and lost day. This can take the form of developing a commitment to sustainability and companies have a role to play in ensuring that there is no forced child labour, improving living conditions, staff promoted and trained that they have decent conditions of work. Dyadic data from both buyer and suppliers are vital to examine the possible mutual influence of cultural intelligence capabilities. Given the context-specific nature of industries and type of the relationship, the moderation effects found in this study may be different in another industrial sector. One limitation of the study is that data were collected from single informants; common method bias may be an issue, future research could seek to enhance reliability and validity of the data through triangulations, statistical and procedural remedies. Future studies should examine the effectiveness of relational governance under moderation effect of relational risk and unethical behaviour. This may be a worthwhile effort for research related to developing a measure of relational patience and stress of sustainability commitment to investigate with institutional theory, may help guide the managers. Relational patience capability (reliability of individual, truth worthiness empathy and agreeableness) is described here as manager work skill because managers have to deal with different foreign customers with whom calm and rational approach is necessary. This relational patience capability would help to smooth out conflicts differences and mediating or moderating differences. Finally, future research might examine whether the findings of the study hold with a more extensive set of data collection across multiple industries.

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Publication II

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Governing inter-firm relationship for social sustainability: The relationship between governance mechanism, sustainable collaboration and cultural intelligence

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Article

Governing Interfirm Relationships for Social Sustainability: The Relationship between Governance Mechanisms, Sustainable Collaboration, and Cultural Intelligence

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Abstract: The concept of social sustainability is gaining attention within the field of supply chain relationships and international business. There are conflicting arguments regarding the effectiveness of contract governance and collaboration in an interfirm relationship. Previous studies have investigated the effect of a national culture on contract governance and opportunism. This study examines the effects of contract governance on collaboration, incorporating the moderating influence of cultural intelligence. Survey data were collected from 239 export manufacturing firms in different industries. The current authors suggest that contract governance might be more effective under conditions of a greater level of firm cultural intelligence capabilities. Cultural intelligence plays an important role in the shaping and implementation of collaboration and is the key to manage cross-culture relationship management in a supply chain. Cultural intelligence constitutes one potential way for the export industry to manage intercultural differences and profitably achieve an increase in collaboration. Collaboration with a socially responsible partner brings about improved social performance. The social dimensions of sustainability, such as fair labor practices and decent worker conditions, health and safety, no child labor, and employee empowerment must be addressed to accomplish the most sustainable growth. Managers also need to take advantage of cultural intelligence to adapt, collaborate, and share cultural knowledge.

Keywords: contract governance; cultural intelligence; social sustainability performance; buyer-supplier relationship; cultural difference

1. Introduction

Industrialization contributes to the damage caused to the natural environment and to human life [1]. As a result, there is a pressing need for organizations to work together to implement management practices that not only promote the company and overall performance, but also focus on social, economic, and environmental concerns. Recently, wellbeing at all stages; development, training, and retaining of the health of the workforce; gender equality; and the adoption of wage and social protection policies have become topics of interest as they link to sustainable development. All the United Nations Member States adopted the 2030 Agenda for Sustainable Development in 2015. Socially sustainable development issues are inherently connected with United Nations Sustainable Development Goals (UNSDGs), for example, SDG3 (good health and wellbeing),

SDG5 (gender equality), SDG8 (decent work and economic growth), SDG10 (reduce inequalities), and multistakeholder cooperation (SDG17) [2]. The development of social performance, which includes the development of health and safety practices, equal opportunities for employment and decent jobs, elimination of all harmful practices such as child forced labor, female participation at all levels of decision-making, the elimination of discriminating policies and practices, and promoting appropriate wage and social protection policies adds to the challenges. Social performance improvement is the biggest challenge humanity faces today and is the main obstacle to sustainable development [3]. The researchers have considered that buyer-supplier cooperation accelerates social performance [4]. Recent studies on governing interfirm relationships on sustainability have suggested that better relationship management is useful for developing a socially sustainable performance [5].

Customer relationship management across cultures often hampers collaborations due to different management styles, cultural philosophies, values, and governance mechanisms [6]. The cultural differences in their functioning already have been pointed out as an important source of distrust, miscommunication, and conflict [7]. Still, many of these collaborative relationships are often unsuccessful [8]. There is little research so far to gain an understanding of the differences and similarities in the outcomes of cultural norms and values, which continue to be a subject to be developed for future research [9]. It is crucial to examine organizational environments when contemplating how to reduce cultural differences in a buyer-supplier relationship.

Governance, therefore, becomes significant in a buyer-supplier relationship. Many firms use relational or contract governance to govern interfirm collaboration with their customers [10,11]. Although supply chain governance scholars have documented the effective roles of governance on relationship commitment and performance [11,12], only a few studies have examined their impact on collaboration [13]. Much of the previous research on the interfirm relationship in the supply chain has relied on contract governance or relational governance [14]. Contract governance is manifested in jointly stipulated contract clauses leading to the fulfillment of joint objectives [15]. Relational governance might serve to support the exchange of information and maintenance of the relationship over time, curtailing behavior and promoting flexibility and participation. The prior research focuses on whether contract or relational governance acts as a substitute or complement to the subsequent outcome with limited attention given to contract governance [14]. The contract governance dimensions on the development of the collaboration are the current study's focus.

Given this potential for mitigating conflicts and differences, buyer suppliers rely on contract governance to promote cooperation [14]. However, prior studies have primarily focused on the contingent effect of national culture on governance and opportunities [16], culture and governance on corporate social reporting [17], or national culture and alliances [18]. Moreover, Handley and Angst (2015) have called for research on how organizational cultural factors moderate the effects on the effectiveness of the governance mechanism [16]. This study responds to a research call for explicit consideration of the effect of organizational culture, or culture in general, in a broader organizational governance mechanism [19]. It is therefore argued that understanding the effects of cultural intelligence is an important mechanism to provide a better understanding of the interfirm relationship and their impact on collaboration.

This study draws on the buyer-supplier (BSR) literature and examines the effectiveness of contract governance in a supply chain relationship from the view of cultural intelligence. The empirical setting of this study consists of the cross-border exporter's relationship with importers in Western countries implicit in the supply chain context. The main contributions of this study are twofold. First, the main contribution is to assess these sustainable development goals under three main parameters, promotion of health and decent work, which covers SGD8, and the promotion of gender equality at the workplace, which largely covers SGD5 and SGD10. Second, this study suggests that contract governance might be more effective under conditions of a greater level of firm cultural intelligence from a theoretical perspective, which enriches transaction cost economics (TCE) by showing that firms with better administrative efficiency experience an increase in the execution of the contract [20].

The rest of the paper develops as follows. First, a discussion of the concepts of contract governance followed by a discussion of the potential role of cultural intelligence and the formulated hypotheses. The subsequent section presents a conceptual framework and describes sample selection. Then, the next section explains the methods used to conduct the analysis. Finally, the results and discussion are presented and the implications for further research directions are discussed.

2. Literature Review

The present study uses a 'transaction cost economics' (TCE) theory to examine the viability of contract governance collaboration. The governance literature broadly falls into two categories. One stream of contract governance examines the obligations and rights of exchange parties through contracts, rules, and terms which can adequately protect the relationship and how future transactions will be handled [21,22]. The second stream of relational mechanisms govern such exchanges through shared behavioral expectations that imply implicit control and mutual understanding between parties [23].

TEC advocates that enter into a contract can minimize costs by improving the usefulness of administrative functions, as well as repelling opportunism [20] following the recommendations of previous research [14]. To be more specific, the coordination purpose of a contract points to the organization of a priority and courses for the future, mentioning the transacting parties requirements and anticipations, along with the rearrangement of particular behaviors to deal with the activities and operations chosen for a common endeavor [24]. The legal bond can stipulate formally how disputes and complaints will be resolved, the operational requirements of goods or services provided, and how the performance of the supplier is to be evaluated [25]. Through contract governance, buyers and suppliers can specify the roles, obligations, and expectations of how disputes and complaints will be determined through operational requirements. Legal bonds, as a form of contract governance, have a strong ability to constrain opportunism [26]. Legal bonds also have been linked to improvements in performance between buyers and suppliers and for fostering commitment [27]. Consistent with the perspective of a past paper [25], the current authors argue that legal bonds, as a form of contract governance, help identify the formal expectations of both the buyer and supplier in the relationship.

Contract governance lays out the obligations and rights of each party through contracts, rules, and terms which systematically can safeguard the partnership as to how future transactions will be handled [21,22]. Contract governance is manifested in jointly stipulated contract clauses leading to the fulfillment of joint objectives [15]. Contract governance promotes cooperation, which deters opportunism and exhibits a greater commitment to the partnership [10]. The recent studies have illustrated that interfirm contracts serve as a coordination mechanism [24]. Thus, working jointly through contract governance during cross-culture interaction could also result in improved collaboration [28]. Taking a TCE perspective, following Williamson (1996) [20], it was expected that firms with greater administrative efficiency would have a positive effect on collaboration when facing different exchange partners which would indicate that contract governance can influence collaboration [11]. As discussed earlier in the literature, contract governance serves to decrease opportunistic behavior and boost conformity to the buyer's demands to encourage and develop relationships leading to a successful collaboration. Therefore, contract governance is conducive to achieve collaboration.

Hypothesis (H1). *Contract governance positively affects a firm's collaboration propensity.*

Regarding the context of social performance, Sancha et al. (2016) [29] proposed that there is a direct association between buyer-supplier collaboration concerning sustainability issues, resulting in increased knowledge aiming to improve firm social performance. Given that collaboration on both dimensions involves working collectively with customers for an extended period, this resulted in better sustainability performance [30]. However, the governance mechanism has been recognized as one of

the key factors affecting collaboration [31]. Collaboration leads to the development of more sustainable business practices, assists the firm with long-term survival, and provides skills and resources for the development of social performance improvements [32]. Conversely, Awan et al. (2017) [33] highlighted that sustainability performance at the firm level is the ability to maintain a certain state of stakeholder's needs in the current time as well as in the future. Therefore, sustainability refers to managing existing resources to an optimal level and planning for continued development of human activities [34].

The concept of social sustainability has evolved to include many areas such as, transportation [35], the benefits and challenges of inter-organizational collaboration in a bio-based industry [36], agriculture [37], in the construction industry [38], logistics [39], and in human resource management [40]. Given the multidimensional expansion of social performance literature, the current study focuses on social performance practices in manufacturing industries. These kinds of social performance practices consist of internal and external activities within a sustainable supply chain management. The terms of social performance and social sustainability are used interchangeably in the literature. Social performance will be elaborated thoroughly in this paper.

Social performance in the supply chain focuses on the improvement of individuals, safety, health, and environmental issues [41]. Shokravi and Kurnia (2011) [42] pointed out that literature on sustainability is not diverse. The stream of literature addressing social performance has been growing rapidly and many firms have started implementing social practices. Awan et al. (2018) [13] defined social performance management and development of an ethical code of best practices for the survival and growth of current business for present and future generations in a prudent manner. The manufacturing firm performance is defined as a continuing ability to maintain the quality of life of the internal and external actors. Managing social issues has also been shown to enhance sustainability performance and the explanation of firm outcomes [43]. Recently, Luzzini et al. (2015) [44] found collaboration allowed firms to achieve resources that enable the firm to build on those resources and improve social performance. Conversely, Awan (2019) [45] found a positive relationship between joint planning and social performance improvements. Sancha et al. (2016) [29] empirically showed that the adoption of interfirm collaboration on sustainability practices regarding social issues helped to improve social performance. Such collaboration contributes to a firm's ability to nurture and develop the resources and skills of employees to accomplish performance targets. Based on these arguments, the current authors suggest the following.

Hypothesis (H2). *There is a positive relationship between collaboration and social performance improvements.*

2.1. Meta-Cognitive and Cognitive CQ

To understand the effect of cultural intelligence (CQ) on the relationship between contract governance and collaboration, the CQ definition formulated by (Ang and Inkpen (2008) [46] is used. The four dimensions of CQ, include cognition, metacognition, behavioral, and motivational CQ. Cultural Intelligence (CQ) is defined as the capability to observe, interpret, and act upon unfamiliar and ambiguous social and cultural cues, and function effectively in situations characterized by cultural diversity and novelty [46]. Cultural intelligence is the capability to learn and create alternative ways to adapt to customers' different preferences and judge the appropriateness of strategies for solving for these differences and problems which arise in the buyer-supplier relationships [47]. Cognitive CQ (COG) refers to a person's knowledge of cultural norms, practices, and their role in determining the comparison and disagreement between cultures [48]. According to VanDyne et al. (2008) [48], meta-cognition (MEQ) is an "individual mental capacity to acquire and understand other cultural knowledge of norms" practices and conventions in cross-cultural relations [49]. MEQ exhibits a mental capacity to understand and gain knowledge prior to and during the cross-cultural interactions and pertains to monitoring and planning for norms deemed appropriate to a particular group of people [50]. Cultural intelligence research has shown that each dimension of CQ is sharply different and each of these dimensions affects intercultural interaction [51]. Some studies endorse that CQ is an important

strategy in safeguarding cooperation to apply one's own cultural knowledge in cross-culture interaction for minimizing differences [4]. Previous research has not shown clearly which dimensions of CQ are critical for collaboration [28]. Hence, rather than relying on combining the aggregate construct of CQ [52], the current authors focused this investigation on four dimensions of CQ individually as to how they impact on contract governance and collaboration.

The failure to comply with buyer requirements might give rise to conflicts and increase opportunistic behavior under the conditions of behavior and environmental uncertainty [53]. Meta-cognitive CQ (MEQ) is likely to be the most important to the collaborative relationship due to its influence on communication quality and, eventually, intercultural confidence development [28,54]. The MEQ component empowers individuals to adapt and to modify one's conduct to the culture which is unfamiliar to them during communication, thus facilitating an increase in trust [55]. Chua et al. (2012) [28] found that high metacognitive CQ had a direct effect on collaboration in cross-cultural interactions. Cognition and meta-cognition enable managers to monitor one's knowledge process deliberately and to regulate these states to achieve greater adaptation to some objectives [4,56]. As an illustration, Crotty and Brett (2012) [57] highlighted the significance of self-awareness and consciousness of other reactions in handling foreign collaborative culture. Meta-cognition has an important influence on creative collaboration [58].

Hypothesis (H3). *Cognitive CQ positively moderates the relationship between contract governance and collaboration.*

Hypothesis (H4). *Meta-cognitive CQ positively moderates the relationship between contract governance and collaboration.*

2.2. Behavioral and Motivational CQ

The behavioral component of cultural intelligence (CQ) is defined by Thomas et al. (2015) [55] as an individual capacity to manifest the appropriate formal and informal patterns of communication behaviors in interacting with individuals from various cultural backgrounds. Motivational cultural intelligence CQ (MCQ) is defined "as an individual desire and interest to direct attention and energy toward learning and experiencing in situations characterized by the cultural difference" [59]. An individual with a high level of verbal and nonverbal communication behavior demonstrates more flexibility and adaptability to adjust to different cultures [55,60]. Behavioral CQ enables the organizational individual to select the methods they might require at that time to accomplish their goals. The behavioral CQ aims to exhibit accepted verbal and nonverbal communication, that in turn has an influence on collaboration [47]. These enable the exploitation of more fine-grained complex knowledge to improve firm performance [61]. This form of adaptability is helpful for the individuals to use communication effectively which is necessary for the coordination and exchange of information to build a relationship with others and leads to fostering collaborative ties.

As suggested previously [50], motivational CQ provides a more robust basis for adaptability to the customs, traditions, and way of living in different countries. The high MCQ anticipate cultural differences and develop a problem-solving strategy for overcoming the challenges posed by more culturally distant locations [62]. The high-level motivational CQ component leads to more cooperative behavior and collaborates effectively with members of different cultures in intercultural negotiations [51,63]. Motivational CQ is important to gain superior collaboration [28]. Specifically, doing things right requires motivation. Thus, motivational CQ is positively related to collaboration [61]. Research by Awan et al. (2018) [13] showed that motivational CQ was negatively associated with strong relational ties with the customers.

Moreover, Johnson et al. (1996) [56] suggests that the behavioral CQ component can be more helpful in gaining harmony to solve conflict and differences. Hedi and stump (1995) [64] suggested that individuals with higher behavioral CQ tend to have higher cooperative motives than those having low

CQ. Behavioral CQ is appropriate to the particular cultural situation [56]. These enable the exploitation of more fine-grained intricate knowledge to improve firm performance [61]. A conceptual framework is shown in Figure 1. The present authors hypothesized that:

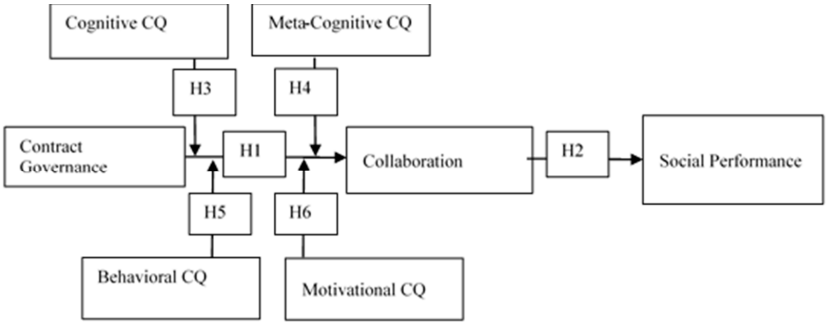

Figure 1. Conceptual framework.

Hypothesis (H5). *Behavioral CQ positively moderates the relationship between contract governance and collaboration.*

Hypothesis (H6). *Motivational CQ positively moderates the relationship between contract governance and collaboration.*

3. Methodology and Data Collection

3.1. Measures

This study drew solely on proven constructs and measures identified throughout the literature (see Appendix A). Multiple scale items were adopted, measured using Likert-type scales ranging from 1 to 7, and followed standard data collection protocol reported in previous literature. Face validity was established by using a pretest of the adapted scale. The measures and items of contract governance were adopted from two previous studies [25,65]. Contract governance is measured from the supplier's perspective using four items on information sharing, coordination, detailed contract, and decision-making. To measure cultural intelligence (CQ), four measures adapted from a previous paper [55] were used. The four dimensions were, "meta-cognitive", "cognitive", "behavioral", and "motivational cultural intelligence". The collaboration with the supplier was measured with a multi-item scale [66] and social performance improvement items were measured by subjective performance outcomes used by [67,68]. A perceptual measure of social performance was used. The subjective measures have been considered as a preferred approach in the South Asian context due to the low reliability of objective social performances being disclosed by firms.

Important variables, such as size of the firm, firm age, type of industry, and employee experiences that may influence buyer-supplier collaboration to handle the endogeneity issue were controlled by the present authors. The number of years in the business is well recognized in the overall effectiveness of the governance mechanism of firms. The relationship length develops trust and curbs the risk aversion behavior of a partner. The length of the relationship between the partners is likely to influence cooperation toward sustainability, it has more influence on strengthening the relationship [10]. During this study, the authors controlled firm age, industry type, and in some years employees' experience specific factors which might affect the social performance [69].

3.2. Sample Selection and Data Collections

The construct was operationalized based on a previously published scale, following the well-accepted guidelines [70]. The questionnaire was pretested and refined before being finalized. The empirical context for the study sets a population parameter of Pakistani manufacturing firms that are export-oriented. The sample was drawn from the directory of registered exporters from the Chamber of Competence and Industry, who had export experience. This study follows the data collection procedure used previously in a buyer-supplier relationship [71]. The sample data for this study consisted of 1152 firms from different export industries. Data was collected through a structured survey, and 257 responses from 650 sampled firms were received, of which 18 responses were eliminated due to missing values, therefore, the final responses comprised 239 firms. The data was gathered from key target respondents due to their interaction and dealing with an international partner and who are knowledgeable in supplier management and corporate social performance [72]. Table 1 shows the characteristics of informants.

Table 1. Firms' characteristics.

Industry Type	f	%	Education Level	f	%
Surgical	37	15.5	Secondary	143	59.8
Sports	84	35.1	Bachelor	42	17.6
Leather wares	35	14.6	Master	45	18.8
Textile	83	34.7	Other	9	3.8
Titles	f	%	[a] Firm size	f	%
General Manager Operations	66	27.6	Less than 20	23	9.6
Managing Director	53	22.2	Between 51 and 250	101	42.3
Director Supply chain and logistics	78	32.2	More than 251	115	48.1
Director import and export	38	15.9	[b] Firm age	49	20.5
Other	4	1.7	Less than 10	58	24.3
Experience	f	%	Between 11 and 30	97	40.6
Less than 5	34	14.2	Between 21 and 30	35	14.6
Between 5 and 15	123	51.5			
More than 15	82	34.3			

[a] Firm size = measured in number of employees, [b] Firm age = Number of years in the same business.

3.3. Data Analysis Procedure and Evaluation of the Model

AMOS (version 24.0) and SPSS (version 23.0) 'Statistical Package for the Social Sciences' was used to evaluate models. All the variables were normally distributed, the value of the Z-test was within the range of −2.56 + 2.56. Table 2 shows descriptive statistics.

Table 2. Mean, standard deviation, and results of discriminant validity.

	CG	SC	SP	MEQ	COG	BCQ	MCQ	PE	WE	FS	FA
CG	**0.749**										
SC	0.39 **	**0.758**									
SP	0.15	0.29 **	**0.743**								
MEQ	0.18 *	0.20 **	0.16 *	**0.831**							
COG	0.40 **	0.164 *	0.08	**0.13** *	**0.775**						
BCQ	0.27 **	0.36 **	0.02	0.17 *	0.30 **	**0.744**					
MCQ	0.29 **	0.20 **	0.140 *	0.09	0.14 *	0.143 *	**0.756**				
PE	0.058	−011	−0.017	−0.099	0.046	−0.021	−0.001	1			
WE	−0.049	0.09	0.018	−0.022	the −0.068	0.056	−0.041	−0.085	1		
FS	−0.006	0.03	−0.084	−0.018	−0.020	0.013	−0.070	0.11 *	0.53 **	1	
FA	−0.066	0.07	−0.015	−0.031	−0.003	0.013	−0.029	0.029	0.54 **	0.52 **	1
M	6.02	5.02	5.73	6.11	5.99	6.17	6.07	0.38	0.73	0.82	0.81
SD	0.59	0.77	0.87	0.60	0.63	0.54	0.61	0.48	0.35	0.33	0.47

Notes: Diagonally bold values are the square root of average variance extracted; CG = Contract governance, SP = Social Performance, SC: Collaboration; MEQ: Meta-cognitive cultural intelligence, COG: Cognitive cultural intelligence; BCQ = Behavioral cognitive, MCQ = Motivational cognitive. PE: Level of education. WE: Work experience. FS: Firm size. FA: Firm age. M: Mean. SD: Standard Deviation; ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed).

3.4. Common Method Bias and Nonresponse Bias

Guidelines developed by Podsakoff et al. (2003) [73] were followed to assess the magnitude of common method bias (CMB). The participants were advised that research participation was voluntary. To evaluate the face validity, a pretest of the survey questionnaire among 12 manufacturing firms to build up an understanding of the subject material was conducted. Harman's one-factor test to assess Podsakoff and Organ (1986) [74] was conducted. The resulting analysis of principal component factor analysis without rotation shows that variance explained by a single factor was 27.35%. Further, confirmatory factor analysis was performed as a more stringent test. A model that consists of a common method factor, following the lead of Li (2016) [73], was specified. The comparative fit index, CFI = 0.63, and root means squared error of approximation, RMSEA = 0.24, revealed that the one-factor structural model did not fit the data. Therefore, a comparison with constrained (χ^2 (288) = 160.01) and without unconstrained (χ^2 (257) = 183.73) measurement error correlation was necessary. The results show that there was no significant difference in the chi-square difference (χ^2 (31) = 23.72, p = 0.224) between group variation. The results reveal that the present study did not suffer from a common method bias. It is now becoming important that survey research studies address the endogeneity problem. Recently, Dan and Yang (2018) [75] already called attention to the endogeneity issue in survey research. Regarding the control variable, the current results are presented in Table 3. The important variables on the size of the firm, firm age and employee experiences that might influence buyer-supplier collaboration were controlled. The number of years in the business is well recognized for the overall effectiveness of the governance mechanism of firms. Firm size is a more important fundamental firm characteristic than other control variables. The rationally of using firm size following guidelines by Zhu et al. (2012) [76] were explained. The firm age, industry type and some years employees experience specific factors which might affect the social performance Hair et al. (2010) [77] were controlled in this study. Considering the control variables in Model 3, firm size, firm age, and level of education have no influence on the collaboration, however, work experience positively influences the collaboration (see Table 3). The findings tend to indicate that work experience is expected to have a positive impact on the collaboration.

Table 3. Standardized results of hierarchical regression.

Control	Model 1	Model 2	Model 3
FS: Firm size	−02	−0.02	−0.03
FA: Firm age	0.04	0.06	0.06
WE: Work experience	0.08	0.011	0.15 *
PE: Level of education	0.01	−0.02	−0.03
Main Effects			
Contract governance (CG)	-	0.39 **	0.39 **
Collaboration	-	0.26 **	0.27 **
Cognition (COQ)	-	0.07	0.05
Meta Cognitive (MEQ)	-	0.16 *	0.16 *
Motivational (MCQ)	-	0.09	0.09
Behavioral (BCQ)	-	−0.06	−0.06
Interaction effects	-		
COQ x CG	-	0.01	0.00
MEQ x CG	-	0.25 **	0.26 **
MCQ x CG	-	0.17 *	0.17 *
BCQ x CG	-	−0.03	−0.03
R^2	0.43	0.54	0.58
ΔR^2	-	0.11 **	0.04 **
F	6.83 **	8.24 **	8.01 **

* p 0.05; ** p 0.01.

3.5. Reliability and Validity Measure

Confirmatory factor analysis (CFA) was used to assess the model fit. The fit statistics were acceptable using χ^2/df ratio = 304.58/178 = 1.71; $p < 0.01$; "goodness-of-fit index" [GFI] = 0.925, "comparative fit index" [CFI] = 0.931, "Incremental fit index" [IFI] = 0.930; "root mean square error of approximation" [RMSEA] = 0.07 [78]. The CFA model revealed a good fit to the data. The psychometric properties of all measurement items were assessed for unidimensionality, reliability, 'convergent', and 'discriminant validity'. The value of the average variance extracted (AVE) for all variables exceeded the 0.70 thresholds, demonstrating the good reliability of this construct. The values of Cronbach's alpha (CA) and the composite reliability (CR) of all variables were higher than the 0.50 cut of value [79,80]. The discriminant validity of all measures were assessed by comparing the squared intercorrelation with AVE for each measure between the two constructs [79]. All the items loaded corresponding to their related construct, and factor loadings were statistically significant and positive, supporting evidence of convergent validity [78].

A two-factor confirmatory factor analysis model assessing discriminant validity following Poppo et al. (2008) [81] was also performed. First, the model ran a constraining the correlation between construct unity and, second, freeing the parameter. The value of chi-square (χ^2) difference between the constrained and unconstrained models was significant ($\Delta\chi^2$ (1) > 3.84). Overall, the results showed acceptable validity to this data (see Table 4).

Table 4. Validation of constructs survey items, item means, and standard deviation.

Items	Factor Loadings	*t*-Value	Error Variance	Indicator Reliability
Contract governance AVE:0.561;CR:836;CA:0.741				
CG1	0.750	16.01	0.438	0.563
CG2	0.761	17.31	0.421	0.579
CG3	0.781	19.68	0.391	0.610
CG4	0.701	13.27	0.509	0.491
Social Performance AVE:0.552;CR:0.831;CA:0.728				
SP1	0.701	13.51	0.509	0.491
SP2	0.769	18.34	0.409	0.591
SP3	0.825	35.17	0.319	0.681
SP4	0.669	12.37	0.552	0.448
Collaboration AVE:0.575;CR:0.844;CA:0.782				
SC1	0.733	13.78	0.463	0.537
SC2	0.759	17.02	0.424	0.576
SC3	0.811	35.44	0.342	0.658
SC4	0.730	12.22	0.467	0.533
Meta cognitive AVE:0.691; CR:0.900; CA:0.851				
MEQ1	0.795	18.49	0.368	0.632
MEQ2	0.851	21.82	0.276	0.724
MEQ3	0.867	36.63	0.248	0.752
MEQ4	0.811	20.80	0.342	0.658
Cognitive AVE:0.601;CR:0.815;CA:0.712				
COG1	0.916	4.01	0.161	0.839
COG2	0.633	2.71	0.599	0.401
COG3	0.750	3.74	0.438	0.563

Table 4. *Cont.*

Behavior cognitive AVE:0.553;CR:0.832;CA:0.736				
BCQ1	0.745	15.74	0.445	0.555
BCQ2	0.708	11.61	0.499	0.501
BCQ3	0.802	24.41	0.357	0.643
BCQ4	0.716	11.98	0.487	0.513
Motivational Cognitive AVE:0.572;CR:0.842;CA:0.753				
MCQ1	0.730	10.91	0.467	0.533
MCQ2	0.757	13.69	0.427	0.573
MCQ3	0.809	18.94	0.346	0.654
MCQ4	0.727	12.82	0.471	0.529

Note: CG: Contract governance, SP: Social Performance, MEQ: Meta-cognitive cultural intelligence, COG: Cognitive cultural intelligence, BCQ: Behavior Cognitive, MCQ: Motivational culture Intelligence, AVE: Average Variance Extraction, CR: Composite Reliability, CA: Cronbach's alpha.

3.6. Moderation Analysis and Model Evaluation

The value of the variance inflation factor (VIF) was generated to test whether multicollinearity between the variables was present or not, using the recommended procedure [78]. The moderated hypothesis with a three-regression model using hierarchical moderated regression analyses (MRG) was tested. The MRG approach tested the complex relationship and assessed the endogeneity issue in relation to the exogenous and endogenous variables to be estimated. Prior practices were followed and a multi-stage least square regression approach [16,82] was run.

First, the independent variable contract governance (CG) on meta-cognitive CQ, cognitive CQ, behavioral CQ, and motivational CQ were regressed. Similarly, the positive effect of CG on meta-cognition was significant ($\beta = 0.18$, $p < 0.01$). Further, there was no association between CG and cognition. In contrast, the CG was positively related to motivational CQ ($\beta = 0.23$, $p < 0.01$). The results also revealed a negative association between CG and motivational behavior CQ ($\beta = 0.09$, $p < 0.05$). Interaction terms using an observed minus predicted value were added. Table 3 shows the moderated regression analysis results (MRA) of the three models.

Found in Table 3 and Model 1, the results suggest that experience was positively associated with collaboration ($\beta = 0.15$, $p < 0.05$). Model 2 serves as the main effects model. An independent and moderator's variable was added and the model suggests that the R-square value had risen modestly by 0.11 at ($p < 0.01$). Model 3 shows interaction terms were added. The R-square value increased. These interaction terms support the cultural intelligence effect on the independent variable in comparison. The result findings in Model 3, Table 3, suggest that there was a positive association between CG and collaboration ($\beta = 0.27$, $p < 0.05$).

Support for H1 is found, therefore, that export manufacturers seem to be more likely to involve buyers in contract governance. Previous studies proposed that formal contracts are positively associated with the collaboration [11]. The current findings extend this stream of research by linking contract governance to the performance of collaboration. The results in Model 3 suggest that the coefficient of collaboration have a positive and significant effect on social performance improvement ($\beta = 0.398$, $p < 0.05$), thus supporting H2. This result is similar to the previous studies that showed collaboration is beneficial for firm social performance improvement [11].

The findings suggest that surveyed firms benefit from collaboration. Taking this view, collaboration is a great source of social performance improvement for firms, providing new knowledge and solutions that are useful to compete nowadays in challenging business arenas. According to the current results, this means that the more firms involved contract governance in their operations and activities, the more they were likely to benefit from solutions and knowledge coming through contract

governance. Export manufacturing firms in Pakistan can be in a position to acquire a specific process and resource from buyers through collaboration for achieving a sustainable performance outcome.

Looking at Model 3 of Table 3, the results indicate that the coefficient of interaction between cognitive CQ and CG are not significant for collaboration ($\beta = 0.05$, $p > 0.01$), thus, there is no support for H3. One possible explanation for this result is that managers of export manufacturing firms in Pakistan are less likely to modify their behavior and are unable to control emotional reactions to buyers belonging to a specific group to accommodate the cultural differences. The results support past studies on cultural judgment and task performance that state having cognitive CQ does not necessarily translate into actions and behaviors [55].

The results support previous studies [60,83] and put forth the generalization of the findings. This current research suggests that firms from collectivist cultures tend to prefer avoiding learning similarities and differences in cultural values and norms.

Next, H4, the meta-cognitive CQ component, is significantly and positively related to the contract governance in the enhancement of collaboration ($\beta = 0.26$, $p < 0.05$). The results are not contrasted with a recent study [60] and put forth that firms from a long distance and low orientation countries prefer to maintain traditions as well as awareness of the cultural preferences of different groups. The findings also support the past studies that managers with a high meta-cognitive CQ are likely to adapt to these situations when a cultural difference exists in cross-culture interaction [84]. The findings show that managers from export manufacturers in Pakistan acquire and understand cultural knowledge in cross-border interaction. The managers pay close attention to the corresponding buyer's reactions and make a judgment to understand his/her reactions to the extent to which cultural difference bias might not influence the situation and attempt to build cultural awareness. Consistent with H4, Figure 2 shows that the relationship between metacognition CQ and contract governance is positive and significant for the collaboration. The results suggest a moderating effect of meta-cognition CQ on the relationship between contract governance and collaboration is stronger at a high level of meta-cognition CQ. Differences in firm meta-cognition CQ are associated with the different level of collaboration at low levels of contract governance.

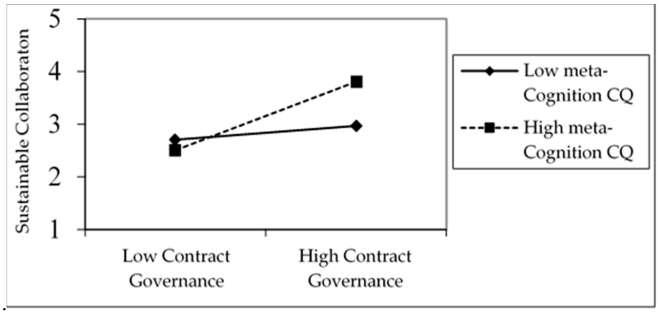

Figure 2. Moderating effects of cognition cultural intelligence on the relationship between contract governance and sustainable collaboration.

Concerning H5, behavioral CQ is argued to positively moderate the relationship between contract governance and collaboration. However, the interaction effect of behavioral CQ between CG on collaboration is not significant ($\beta = -0.03$, $p > 0.01$). Thus, there is no support for H5. One possible explanation for this result is that managers of export manufacturing firms in Pakistan, with contract governance with their buyers, are less likely to focus on nonverbal skills to communicate. Regarding H6, it was argued that motivational CQ positively moderates the relationship between contract governance and collaboration ($\beta = 0.17$, $p < 0.05$). Thus, there is no support for H6. The findings are consistent with the findings of past studies on collaboration across culture [28]. Specifically, managers from manufacturing firms in Pakistan understand and appreciate cultural differences that are different from

their local norms and practices. The results support a recent study [60] and put forth that firms from an uncertainty avoidance culture directed energy and intentions to adapt to an unfamiliar cultural environment. Figure 3 shows that contract governance had a strong positive effect on collaboration when the firm motivational CQ is high. Specifically, in contract governance, managers do not direct their efforts to understand these differences when interacting with buyers from different cultures. This result is similar to the previous studies on cultural judgment and task performance that surveyed firms are not likely to modify their actions and behaviors to adapt to different situations [55].

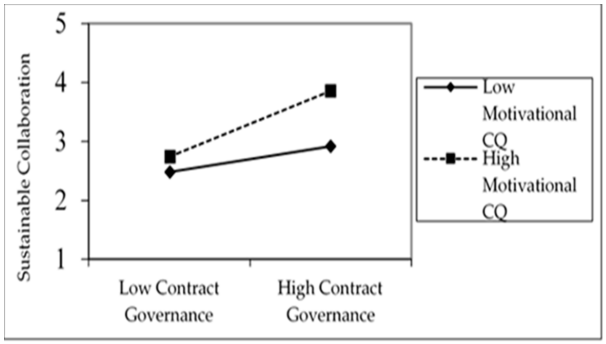

Figure 3. Moderating effects of motivational cultural intelligence on the relationship between contract governance and sustainable collaboration.

One possible explanation is that meta-cognitive cultural intelligence and motivational cultural intelligence are important social relations mechanisms that exert influence on contract governance. A company with high involvement gains some benefits needed for improving collaboration. The logic of cultural intelligence (CQ) in contract governance is particularly important in some emerging economies, such as Pakistan, where the implementation and the rule of law are weak and regulatory and political uncertainty is high. The current authors suggest that when the institutional environment is weak, provision for dispute resolution informal contact with cultural intelligence become the assurance for the execution of contracts. However, if CQ is absent, the situation will deteriorate, reducing the cooperation and, thus, hurts the performance outcomes. Acknowledging cultural intelligence is a double-edged sword and more attention should be directed to such a governance mechanism that can turn cultural differences in fostering collaboration. The results demonstrate that if firms decided to pursue social sustainability, it is best to consider cultural intelligence for the development and implementation of collaboration.

4. Discussion

This study's findings reveal several important arenas. This study provides new insights, such as how dimensions of cultural intelligence (CQ) affect the relationship between contract governance and collaboration. The earlier researchers have highlighted the impact of legal and institutional factors on contract governance [85,86]. This research contributes to governance literature by analyzing common problems companies experience in long-term contract ineffectiveness [86]. The present results reveal two cultural intelligence dimensions that might give rise to such contract effectiveness. This study also responds to Handley and Angst (2015) [16] call for future research on the impact of culture on the governance mechanism. They found that the institution environment reduces buyer-supplier conflicts in contract governance. The current results suggest that a firm with a higher level of meta-cognitive CQ attains a more creative style of conflict handling in their intercultural ties, relative to those lower in meta-cognitive CQ.

The result of this study is also in alignment with Blome et al. (2013) [19], who suggested that employees need to be knowledgeable and in possession of a high level of absorptive capacity (ability to

acquire, analyze, and utilize external knowledge). The CQ impact on CG confirms that collaboration is not only influenced by contract governance but, also, by the CQ. These findings further extend past research examining contract effectiveness in an emerging country [87]. These results are in line with previous studies [28] that found meta-cognitive CQ enhancing intercultural interactions and helping individuals draw on knowledge effectively, which allows them to avoid disagreement and is likely to be the key driver to create collaboration. Different from previous research, the current authors suggest that a meta-cognitive CQ-based mechanism leads to intercultural cooperation and trust, which increases the willingness to engage a culturally different partner. Findings confirm that behavior CQ (flexibility and adaptability) are also critical and has an influence on the relationship between contract governance and performance. The current findings deepen prior research by highlighting that collaboration is important for social performance improvement. Finally, these findings deepen prior research [29] by highlighting that collaboration is important for social performance improvement. Collaboration leads to a socially sustainable system that maintains a stable employment, avoids exploitation of child labor and focuses on the development of health and safety practices that aim to reduce the rate of injuries, absenteeism, and occupational diseases. The social sustainability at the firm level ensures that equal opportunities and fair access to the resources for health, safety, employment, human rights for employees, and community development. This study makes two important contributions. First, this study is grounded in TCE literature that addresses the issue of contract effectiveness. When flexibility and adaptability are lacking, the situation will deteriorate, as the supplier firm will act in their own best interest without considering another point of view. It might lead to increased opportunism [87]. This empirical study confirms the interconnection between contract governance and cultural intelligence capabilities promoting adaptation to the buyer requirements and promoting collaboration. This empirical study confirms the interconnection between contract governance and cultural intelligence and the promotion of adaptation to buyer requirements. Taking a theoretical perspective, the current study contributes to transaction cost economics (TCE) literature by showing that the firms with better administrative efficiency experience can increase the execution of the contract [20]. The present authors expect that supply chain managers are quite familiar with cultural differences and can reconcile differences among partners, decreasing the cost of coordination. Cultural intelligence has a double-edged sword effect on the interfirm relationship and encourages long-term cooperation in channel relationship management. Viewed from a TCE perspective, the current authors expect that, at high levels of meta-cognitive CQ and motivational CQ enhancing intercultural interactions, lowers information exchange cost, and improves collaboration.

5. Conclusions

The purpose of this study is to develop and test the theoretical framework of how cultural intelligence (CQ) among buyer-supplier relationships influences collaboration efforts and performance outcomes.

There is an increasing recognition that collaboration represents important opportunities for development of socially sustainable performance. Regarding contract governance, it is found that the meta-cognitive CQ and motivational CQ dimensions have a positive effect on contract governance effectiveness. That is, high levels of meta-cognitive CQ are associated with increased contract effectiveness for collaboration, while a high level of motivational CQ is also associated with an increase in the contract effectiveness. The findings also manifest that collaboration is important for export manufacturing firms to improve social performance. Collaborative activities include joint planning, mutual understanding of responsibilities regarding environmental, and social issues, thus facilitating compliance in human rights, fair labor practices, and decent working conditions, development of health and safety that helps improve the understanding of the worker's conditions, and design a strategy for improvement. These findings contribute to SDGs 3, 5, and 7.

Industrialization impacts increase human vulnerabilities and contribute to an increasing demand for waste conservation, renewable energy resources, water infrastructure development, decreasing

greenhouse gases emissions, recycling, and waste management, provision of health and safety, access to education, reducing inequalities and child labor, and improving quality of life of the community. The social performance improvement requires effective cooperation and partnership among buyer–suppliers to mobilize resources. As such, collaboration is only a promising strategy for developing and implementing social sustainability solutions. The current results support the SDG 17, by revealing that contract governance has been framed as a new form of governance with the potential to bridge local cultural norms by drawing on a diverse number of partners. The interinstitutional role itself might barely cope with the demanding issues together with complex dimensions of sustainable development [88], however. The current findings contribute to the SDG17 agenda 15; it is important for the export manufacturing firms to emphasize the partnership and collaboration among the various customers to facilitate the development of appropriate strategies to ensure integrated activities for social performance. As cultural intelligence and contract governance fit the unique configuration of collaboration in emerging economies, it is likely to contribute to social sustainability performance.

The concept of cultural intelligence in the developing countries export manufacturing firms is growing due to its importance in an interfirm relationship accompanied by the increasing challenges of globalization in procurement, outsourcing, and collaboration for sustainable development. Interfirm supply chain relationships frequently cause conflicts and impede collaboration owing to different cultural practices, values, philosophies, and management styles. The findings emphasize that the relationship between contract governance and collaboration will increase in the extent to which firms emphasize cultural intelligence. Thus, cultural intelligence is becoming more important for export manufacturers, to enable employees to better adjust and drive to engage in culturally different partners for collaborations. This study also contributes to the literature linking collaboration and social performance. The buyer-supplier relationship is key to social performance improvements [13].

This suggests that sustainable collaboration is vital to the improvement of the overall health and wellbeing of the individuals as well as to having an equal standard of living within the surrounding communities, although social sustainability is pursued differently in a different geographic location [89]. Thus, without collaboration, social sustainability in manufacturing firms remains a challenge.

5.1. Practical Implications

Governing interfirm relationship across cultures requires supply chain managers to show motivation, knowledge, and awareness of partner cultural practices in exercising the governance structure. This study offers insights for the managers. Recently, sustainable supply chain management has become a popular research topic and the manufacturing industry is one of the important research themes in social sustainability management. During the last few decades, environmental and social sustainability is undoubtedly becoming important for sustainable development. It focuses particularly on fair labor practices and decent worker conditions, health and safety, no child labor, employee empowerment, and reduction of poverty and income inequality, searches for ways to reduce greenhouse gases and economic growth is essential for global sustainability. To achieve social sustainability in the supply chain, firms should not only rely on the enforcement of international standards, but also work in close collaboration with their suppliers. The managers should undertake collaboration options in their social sustainability. Regarding supplier firm managers, they should focus on maintaining a high level of coordination for the successful development of cognitive insights, which may serve as a pivotal tool to enhance cooperative norms. Manufacturing firms that are required to develop more policies on human rights, child labor, and equality may contribute significantly towards advances in the living of standards and wellbeing of employees in the work area. In sum, cross-cultural management training can improve cultural intelligence dimensions [90].

Industrialization impacts on the quality of human life and damages the natural environment. There is growing recognition of environmental sustainability issues in the literature; however, there has been reported very little attention on social sustainability issues in international business. Thus, firms seeking to improve social sustainability performance through contract governance need

to adjust their written agreements to reveal traditional social practices that might differ largely in developing countries. The firms with collaborative objectives are required to emplace cultural intelligence teams, which reduces the interfirm conflict, allowing firms to focus on the exchange of information, thereby keeping the firms aligned in their collaboration objective accordingly. To achieve social sustainability, buyers and suppliers should manage the relationship through contract governance and cultural intelligence capabilities.

Cultural intelligence has an important implication for supporting the global sustainable development agenda. Cultural intelligence (CQ) is particularly important in the case of interfirm collaboration. It might generate knowledge, force firms to adapt to norms and beliefs of a given culture, and transform into collaboration. The use of cultural intelligence in an interfirm cross-border relationship is an emerging phenomenon in the international business environment. Therefore, the current authors recommend that supply chain management adopting cross-cultural collaboration require flexibility to match local cultural practices and work processes for the demand of diverse supply chain members. Cultural intelligence, which connects suppliers with customers from different cultural backgrounds, plays an important role in buyer-supplier relationship management. Cultural intelligence plays an important role in the shaping and implementation of collaboration and is key to managing cross-cultural relationship management in a supply chain. Although, cultural intelligence (CQ) within buyer-supplier relations provides access to build more relational ties to develop a better cultural understanding of partners and, in turn, might create a relational lock-in risk. One key implication of the study is that contract governance helps to align collaboration activities, therefore, in such situations, cultural intelligence is particularly important for a strong source of collaboration.

5.2. Limitations

Despite many years of sustainable development, research in cleaner production technologies, economic sustainability and environmental sustainability, social sustainability issues have been given less attention in interfirm relationships. Governments and policy institutions are developing strategies for cleaner production technologies for minimizing greenhouse gas footprints on communities and environments by renewal in their supply chain. Given the global nature of sustainable development issues, the current authors call for more inquiry into the changing patterns of consumption impacts on reducing water availability, the impact of production patterns on water and air pollution, and the natural resource depletion of community development. Social sustainability is widely accepted as the third pillar of sustainable development; however, dimensions of social sustainability are often overlooked in international business. The social aspects of sustainability have not been given much attention because it is more likely to depend on the firm's preferences and their resources. The study is not without limitations that need to be addressed in future endeavors. Future research might engage these issues, offering both practical and theoretical insights into how these machines work in promoting cultural intelligence capabilities. Thus, it is still a fertile research avenue to investigate the interplay of contract and relational governance with transaction cost economics (TCE). Further, this study collected data from few manufacturing firms in a single country, Pakistan, which cannot represent all emerging economies and limits the generalizability of the current findings. The authors concluded that collaboration through contract governance might be even more important in developing countries for social sustainability using these approaches. The current results show collaboration seems to be grounded on contract governance. The future research studies should adopt a longitudinal methodology to investigate from a buyer's point of view, as to whether the enhancement of specific cultural capabilities could lead to improved collaboration. Despite the rapidly growing interest in the circular economy, collaboration on reuse and remanufacturing that can increase environmental sustainability has received little research attention. Additionally, the authors suggest future studies to conduct multilevel analysis testing for possible moderating and mediation variables, such as cultural orientations, to transform the digital technology in a supply chain relationship.

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Appendix A. Constructs Survey Items

Items
Contract Governance (CG) is measured to what degree do you agree or disagree with the following statements on a 7-point scale (1—Strongly disagree, 7—Strongly agree)
CG1 The firm have formal written agreements outlining social issues.
CG2 The firm formal written agreements outlining how to handle technical requirements.
CG3 The firm formal written agreements that detail the rights and obligations of both parties.
CG4 The firm formal written agreements that precisely state the legal remedies for failure to perform.
Social Performance (SP) is measured as the degree of improvement on a 7-point scale (1 not at all, 7: a very great extent)
SSP1 We have improved compliance with human rights
SSP2 We have improved occupational health and safety
SSP3 We have invested in community well-being programs
SSP4 We have improved worker, conditions and have developed safety measures
Collaboration (SC) is measured as to what degree do you agree or disagree with the following statements on a 7-point scale (1 not at all, 4—moderately, 7—great extent)
SC1 Achieving sustainability goals collectively
SC2 Developing a mutual understanding of responsibilities regarding environmental and social performance.
SC3 Working together to reduce the environmental impact of our activities that support sustainability goals.
SC4 Conducting joint planning to anticipate and resolve the environmental-related problems and reduce overall environmental impact.
Cultural Intelligence (CQ) is measured to what degree do you agree or disagree with the following statements on a 7-point scale (1—Strongly disagree, 7—Strongly agree)
Metacognitive
MEQ1 We are conscious of cultural knowledge, we use when interacting with people from different cultural backgrounds.
MEQ2 We adjust our cultural knowledge as we interact with people from a culture that is unfamiliar to me
MEQ3 We check the accuracy of my cultural knowledge as we interact with people from different cultures
MEQ 4 We are conscious of the cultural knowledge, we apply to cross-cultural interactions (Deleted)
Cognitive
COQ1 We are aware of cultural values and religious beliefs of other cultures
COQ2 We are aware of legal and economic systems of other cultures
COQ3 We are aware of rules for expressing nonverbal behavior in other cultures
Behavior Cognitive
BCQ1 We can effectively do things in culturally diverse situations
BCQ2 We are flexible in regard to changing our verbal behavior when a cross-cultural interaction requires it

BCQ3 We are flexible in regard to changing our nonverbal behavior when a cross-cultural interaction requires it
BCQ4 We can effectively control facial expressions when a cross-cultural interaction requires it
Motivational Cognitive
MCQ1 We are confident that we can socialize with locals in a culture that is unfamiliar to us.
MCQ2 We feel comfortable in interacting with people from different cultures
MCQ3 We are confident that we can deal with the stress of adjusting to a culture that is new to us.
MCQ4 We feel comfortable dealing in cultures that are unfamiliar to us.

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The Impact of Relational Governance on Performance Improvement in Export Manufacturing Firms

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Abstract:

Purpose: This paper seeks to identify the factors affecting social performance improvements in the Pakistan export manufacturing firms and investigate inter-relationships existing among them.

Design/methodology/approach: This study used a cross-sectional survey; data were collected using self-administered survey questionnaire. Using data collected from 239 small- and medium-sized direct exporters manufacturing firms in Pakistan. We used structural equation modelling (SEM) approach to test structural model, and mediation analysis was conducted with regression analysis.

Findings: The results support that meta-cognitive dimensions of cultural intelligence effect on social performance improvements, while the social performance improvement significant associated with innovation performance improvements. We suggest that cultural intelligence is a key to maintaining a relationship through development better cultural understanding and creating harmony among suppliers and buyers through minimizing the differences and disputes, requires developing social cohesion. Our results reveal that exporting firms need to adapt, reconfigure cultural knowledge and integrate resources into the operations to build learning capability, in turn, they can improve social performance and achieve superior innovation performance.

Practical implications: Through the application of cultural intelligence capability, a firm could increase its ability to sense cultural differences, seize and adapt globally scattered cultural practices on social issues and allows for the development of unique knowledge resources and capabilities, impact on firm social performance and innovation performance improvements.

Originality/value: The study conducted in Pakistan cultural context, which can be extended to other Asian countries. We argue that in a globalising world it is pertinent for exporting firms to have a better understanding of the various facets of cultural when dealing with inter-organisational relationships.

Keywords: relational governance, cultural intelligence, social performance, innovation performance improvement, manufacturing firms

1. Introduction

The supply chain relationship caused by cultural differences is now a challenge for supply chain management. Cross-cultural interaction is inevitable between supply chain partners to deal with the disputes, and ways to handle and understand different beliefs and expectations. The innovation performance implications in export and importer relationship are gaining scholarly attention in international business research. Relational governance may

significantly impact on innovation performance improvements (Awan, 2018). As an increasing number of firms are dealing with buyers and suppliers abroad, cultural differences create misunderstanding within the inter-organisational relationship that can result in a false reading of partner's behaviour (Ribbink & Grimm, 2014). The current discussion on governance of inter-firm relationships calls for research on "how" governance influences outcomes (Cao & Lumineau, 2015). This study responds to the increase in recent calls to understand the impact of culture on firm performance outcomes through governance mechanism (Handley & Angst, 2015). Recently, (Awan, Kraslawski & Huiskonen, 2018a) found that the supplier-buyer engagement in a supply chain is essential for the adoption and diffusion of new sustainability practices and Cultural intelligence is at the heart of the socially sustainable development processes. The present study investigates the question, whether the use of cultural capabilities by export manufacturing firm's are effective in bringing the improvement of the firm performance. Furthermore, (Bstieler & Hemmert, 2015) proposed a conceptual framework how manufacturing firm in Asia can achieve coordination with their foreign partner. According to (López-Duarte, González-Loureiro, Vidal-Suárez & González-Diaz, 2016) cultural differences among the distant partners tend to hamper collaboration, the establishment of process and procedure that encourage information flow. Despite the crucial role governance mechanism plays in firm performance improvements, the extant research mostly focuses on the operational and relationship performance (Paulraj, Jayaraman & Blome, 2014).

Relational governance emphasises the role of repeated interactions which lead to mutual understanding, social identification, and trust (Das & Teng, 1998). Prior research in operations management literature has examined organisational culture at individual partnership context in a single industry evaluated its effect on firm manufacturing practices and performance (Naor, Linderman & Schroeder, 2010). Whereas, more recent studies emphasise on improving innovation performance through environmental practices (Macchion, Moretto, Caniato, Caridi, Danese, Spina et al., 2017). In the era of globalisation, supply chains play a fundamental role in the development of an organisation and its goal of profit maximization (Tavana, Amin, Di & Rahpeyma, 2016). Given the importance of being successful in coordination in an international context, many scholars have argued that it is vital to possess cultural knowledge and skills in cross-culture interactions (Charoensukmongkol, 2016). Further, (Awan, Kraslawsk & Huiskonen, 2018b) suggest that cultural intelligence capability is a tool that enables individual effectively interact with and learn from their buyers can overcome dualities of decision-making and help to foster sustainability commitment. Moreover, Gonçalves, Reis, Sousa, Santos, Orgambídez-Ramos and Scott (2016) emphasize the importance of cultural intelligence promotes a more effective conflict management style and therefore contributing to organisational success.

A prior study (Molinsky, 2007) has observed that employees with a better cultural understanding of other partners can benefit to enhance knowledge exchange. While some scholars have started examining the implications of culture on governance mechanism (Handley & Angst, 2015), there is still little research that explores the various aspects of culture and how firm deal with it. Specifically, exporting firms from emerging countries tend to have limited resource (Adu-Gyamfi & Korneliussen, 2013). It thus becomes possible for firms to learn to form each other and benefit from mutual learning in a way that creates new value (Tan, Wong & Chung, 2016).

The ample research on governing inter-firm supply chain relationship and innovation performance improvement has yet to yield a uniform conclusion in the light of diverse perspective and cultural differences on the nature of cooperation and its performance contributions. In today's culturally diverse customers and successful international business transactions, effective work interaction with multi-cultural customers requires an understanding of differences in behaviours, perspectives, and motivation and communication styles. For successful international business transactions, one has to go beyond the ethnocentric worldview and develop a global mindset' (Christiansen, 2015). Pakistan has a higher power distance culture, where decision-making and communication style is informal. This study has responded to research call (Molinsky, 2007), by exploring the role of supplier firm cultural intelligence to enhance more coordination for social performance improvement and innovation performance improvements. While the research on cultural intelligence is developing, so far few study has explicitly investigated culture's influence on governance mechanism. The role of cultural intelligence (CQ) has not been examined at the level of governance mechanism an important gap exists and offer a useful venue within the operations management literature. Moreover, little is known about how social performance improvement mediates between the relational

governance and innovation performance improvements. Empirical research provides us with little understanding of how different integration efforts and approaches influence on firm performance.

The present study strives to expand research by answering the research questions, (1) What is the relationship between relational governance and firm social performance and innovation performance improvements? (2) Do cognitive and meta-cognitive cultural intelligence capabilities mediates the relationship between relational governance social performance improvement and innovation performance improvements? Our conceptual framework (Figure 1) is grounded in the resource-based view (RBV). We draw our conceptual framework on theories that have used in previous research studies in Buyer-supplier relationships. According to the RBV theory resources are heterogeneous and immobile (Hunt & Morgan, 1995). As a result, organizations establish relationships to access resources and enhance their competitive advantage. Such relational capabilities can be rare, inimitable and substitutable at a company level (Matanda & Freeman, 2009). The present study makes two important contributions to both theory and practice. First, we contribute to the literature by highlighting the role of cultural adaptation as a prerequisite for the operations managers in export manufacturing firms. Second, our findings lend support to the important role of cultural intelligence two factors, cognitive and meta-cognitive factors influencing social performance improvements and innovation performance improvements.

2. Literature Review

2.1. Theoretical View

The resource-based view (RBV) of the firm is one of the most widely accepted theoretical frameworks, proposing that organisational capabilities can be important in shaping firm success in the market (Barney & Felin, 2013). Recent RBV research has called for a better understanding of how resources and capabilities are deployed to capture performance benefits (Sirmon, Hitt & Ireland, 2007). Previous studies focused on the different factor of organisational capabilities, such as learning, emotional, technological to improve the performance. Few studies have demonstrated the cultural aspects of firm-specific capabilities and the impact on performance (Moon, 2010). The development of learning capabilities requires integration of resources. However, CQ capability is another organisational capability that over time make distinctive, embedded a source of competitive. According to (Moon, 2010), it demonstrates organisation's capability to reconfigure and adapt its competency to rapidly changing the intercultural environment.

Social performance aspects in the supply chain of manufacturing firms are less emphasised (Brandenburg, Govindan, Sarkis & Seuring, 2014; Husgafvel, Pajunen, Virtanen, Paavola, Päällysaho, Inkinen et al., 2015). Social issues in the supply chain such as health and safety, bonded child labour and worker job environment have an impact on firm social performance (Mani, Agrawal & Sharma, 2015). Managing and identifying the environmental impact on human life through Supply chain research receiving attention in operations management Chiou, Chan, Lettice and Chung (2011). Lee, Klassen, Furlan and Vinelli (2014) highlighted the importance of investigating how different social supply chain practices have affected the firm sustainability performance in Asian countries. There is growing trend towards developing a more sustainable way of managing social performance among the manufacturing firms (Husgafvel et al., 2015).

Cultural intelligence defined as "A person's capability for successful adaptation to new cultural settings; that is, for unfamiliar settings attributable to cultural context" (Earley & Ang, 2003). Similarly (Peterson, 2011) found CQ as "the aptitude to use skills and abilities appropriately in cross-culture environment". In line with this (Eisenberg, Lee, Brück, Brenner, Claes, Mironski et al., 2013), whose definition we followed in our present study, stating that cultural intelligence (CQ), reflects capabilities to manage oneself effectively and to interact and harmonise with others in cross-cultural landscapes (Eisenberg et al., 2013). Metacognitive and cognitive facets of cultural intelligence (CQ) deal with information processing aspects of intelligence, which closely linked to mental capability of processing to acquire, cultural knowledge and reflects the specific knowledge of content in the culturally diverse situation. This process is concerned with structure and procedures facilitating coordination and integration in a cross-cultural context (Moon, 2010). According to (Moon, 2010), organisational CQ capability framework consists of cross-cultural coordination, cross-cultural learning, and cross-cultural reconfiguration. The literature suggests that firm develop process and reconfiguration capability is embedded in coordination and sharing and processing of

knowledge and information (Teece & Pisano 2004). Organisational collaborative culture effects on the core competencies and essential for the sustainable growth of the firm (Awan, Muneer & Abbas, 2013).

2.2. Hypothesis Development

Much research has attempted to explain the effects of relational governance structure on performance, but few studies have incorporated strategic consideration the role of culture in managing interfirm relationship (Handley & Angst, 2015). According to (Poppo & Zenger, 2002), relational governance enforces of promise, obligations, expectations through social process that promotes norms of flexibility, solidarity and adaptations. In this present study, relational governance is based on the joint problem solving and collaboration. However, in many buyer-supplier relationships, a natural way of doing business is work jointly through relational governance (Zhou, Zhang, Sheng, Xie & Bao, 2014). This supports the notion that firm deploys relational governance is useful in knowledge acquisition (Zhou et al., 2014). Collaboration and assessment with social performance, measure social performance of buying firm (Golini, Longoni & Cagliano, 2014; Gualandris, Golini & Kalchschmidt, 2014). Relational governance refers to the extent to which relationship between the parties are governed by shared norms and social mechanism (Liu, Luo & Liu, 2009). Relational governance is a necessary component of firm performance (Schepker, Oh, Martynov & Poppo, 2014). Governance mechanisms are essentially important for the stability of the supplier relationship, and it refers to a structural mechanism through which both parties behave with the aim of achieving the joint objectives (Cao & Lumineau, 2015; Liu et al., 2009).

Recently (Awan & Kraslawski, 2017), examines the way in which supplier firm perceived support from the partner for the improvement of the worker's conditions. They suggest that exchange of information can exist regarding the nature of the perceived change in firm performance. The results have shown that the social exchange perspective that views relational contracts in the form of norms or personal relation itself a driver for inter-firm trust, cooperation and information exchange, is an effective means of governance. Cooperation and information exchange behaviour of supplier firm towards their buyer is motivated by rewarding trustworthy reactions (Awan & Kraslawski, 2017).

Social performance defined as "ethical code of conduct for growth and human survival that should be achieved in an inclusive, connected equitable and prudent manner" (Sharma & Ruud, 2003). The same may be true and give rise to the relational governance rather than the contractual governance Some scholars also suggest that formal contracts have a direct effect on the economic performance (Arranz & de Arroyabe, 2012; Liu et al., 2009). Social performance defines as the "incorporate the health and safety issues, improvement of environmental issues and child labours (Hutchins & Sutherland, 2008). Accordingly Luzzini, Brandon-Jones, Brandon-Jones and Spina (2015) argue that cooperative arrangements with an external partner are beneficial when focusing heavily on improving social sustainability initiatives. Awan, Kraslawski and Huiskonen (2018b) define social sustainability a system of coordinated social interaction practices for the management of the social impact on people and society with the key internal and external stakeholders. This all happens for creating, developing and delivering the best social and ethical code of conduct. The aim is to have value for the survival of current business system (customers, partners and society) and its growth for the future generation equitably and prudently.

The empirical evidence suggests that relational governance is positively associated with the social performance improvements (Awan & Kraslawski, 2017). Furthermore, the ability to implement process successfully and continuously is crucial, resides mainly with the firm employees, who constitute learning capability, acquire resources and knowledge. Thus, joint problem solving could also result in improved supplier's performance. Finally, collaborative communication enhances supplier's performance by allowing both buyer and supplier to complete tasks more effectively (Cai, Yang & Hu, 2009). The export manufacturing firms in Pakistan require the compliance to these collaborative ties. This requirement compels the managers to engage themselves with external cooperative behaviours to buyers boost the firm capacity to comply with the requirements and improve internal environmental conditions (Awan, Kraslawski & Huiskonen, 2018b). Resource-based view emphasizes how the firm may achieve performance outcomes by developing intangible and tangible resources. From a resource-based perspective, firm interaction with different buyers helps firms with the development of new learning capabilities they can leverage to enhance their competitive advantage (Barney & Felin, 2013). Firm social performance improvement can be explained

by a set of core different learning capabilities linked to the firm relational governance. Learning from their buyers in exchange of information can help firms to offer new opportunities in the development of process development. For these firms, development of learning capabilities for development of new process as a key internal resource in order to improve social performance.

Thus, we hypothesise that:

Hypothesis 1: Relational governance in export markets is positively associated with social performance improvements.

Innovation is a term that connotes the development of new products, processes and ideas (Burrus, Graham & Jones, 2018). Joshi, Das & Mouri (2015) define innovativeness as "an organisation's proclivity to engage in and support new ideas, creativity, novelty, and experimentation that may lead to new products, services, and processes". A firm must acquire required information from every possible source to develop leading-edge innovative products to fulfil the market's needs (Makri, Theodosiou & Katsikea, 2017; Weerawardena, Mort, Liesch & Knight, 2007). Improving aspects of innovation performance such as product and process design and manufacturing flexibility mean that more tacit, and organisation-specific information has to be shared between buyers and suppliers, which requires trust (Blomqvist, Hurmelinna & Seppänen, 2005). More information exchange in a relational relationship, may enhance trust and reduce the concern associated with this information sharing, encouraging buyer and suppliers to act ambitious (Carey, Lawson & Krause, 2011).

Recent empirical evidence emphasizes the important role of information acquisition about customers and competitors in increasing firm performance through the advancement of innovativeness (Ozkaya, Droge, Hult, Calantone & Ozkaya, 2015). Organizational culture has a mediating effect on performance (Gorondutse & Hilman, 2016). Firms engaged in intense information exchange naturally enhance their process of information gathering and analysing, which greatly contributes to their capability to support novelty, creativity and research and development (Makri et al., 2017). Export manufacturers can enhance its innovation performance improvements by increasing focus on relational governance (Awan, 2018). These sustainability practices could create a competitive advantage and are the part of the firm's resources and capabilities which integrated into the Resource Base View (RBV) attempt to build variability performance across the firm (Barney, 1991). We argue that repeated interactions lead to developing mutual understanding, sharing of information and resources, may help to find new ways to develop process and products. Thus,

Hypothesis 2: Relational governance in export markets is positively associated with innovation performance improvement.

2.3. Mediation Effect of Meta-Cognitive CQ and Cognitive

The dramatic change in the global business environment and frequent interaction between the stakeholders in the conduct of business is required cultural intelligence skills in the management (Tuan, 2016). According to (Van Dyne, Ang & Koh, 2008: page 17), metacognitive is an individual ability to acquire and understand other cultural knowledge during interactions with those from the different cultural background. It essentially reflects the ability to form strategies before an intercultural interaction, check about key assumptions and cultural bonding thinking and adjust mental maps, when the experience is different from expectations. When people adopting a metacognitive approach to differences and dispute resolution are likely to focus on arguments that reflect own cultural position as legitimate while adopting the other cultural claim and demands as valid and supported standards that govern the mutual relationships. This cooperative frame entails norms, practices and belief regarding social practices and leads to behaviours aimed at gaining mutually agreed performance outcomes. Thus, a cooperative frame will lead to an interest-based approach for dispute resolution (Lumineau & Malhotra, 2011).

Cognitive CQ, which refers to an individual's use of its cultural practices, norms and conventions in different cultural settings (Van Dyne et al., 2008), can be used to understand both differences and similarities among cultures. Cognitive CQ directly reflects mental maps about own and other culture mainly knowledge about social, legal and economic systems in a specific context (Earley & Gardner, 2005). Metacognitive and cognitive are not mutually exclusive. However, that approaches can have consequences for whether and how the differences and dispute are

resolved. It is possible that both of these two frames will be activated within the same dispute (Fiske & Taylor, 1991). The presence, under a systemic perspective, of homogeneous cultural values and practices in which collaboration actors can be identified may strengthen the group membership or establish a social network that facilitates interactions among its members (Vilana & Monroy, 2010).

The use of these approaches is especially likely when the difference and conflict are complex. For example, when there are areas of disagreement as well as agreement on how many women will be employed for a particular task, to have gender equality. Differences may arise due to the locally culturally practices and another partner culture-specific context. In other words, metacognitive and cognitive CQ may be sufficient to be effective in interaction with different cultural backgrounds if the situation is required to adopt another perspective in certain situations even they know what they should do and have the necessary own cultural knowledge. We argue that complexity of intercultural behaviour, metacognitive and cognitive capable individual developmental maps and then adjust the maps that help them to reach accurate expectations to form strategies of interacting with different cultural background individuals.

The effectiveness of learning CQ capability to adapt or acquire behaviours appropriate for culture adjustments. According to the RBV, individuals interact and learn new skills to adapt or acquire behaviours appropriate for culture adjustments (Earley, 2002). Organizational culture is rare as it is different from other organization (Barney, 2001) and it aligned organizational strategic goals and led to cultivating competitive advantage. Thus, the firm requires dynamic capability in a cross-cultural context, "as it is defined as firm's capability to integrate, build, and reconfigure internal and external competencies with response to rapidly changing environments". (Teece & Pisano, 2004). Thus, these differences in coordination routines provide a great impact on developing rare and intangible assets, help to deploy effectively to gain performance. A firm with this capabilities tends to generate capabilities (Moon, 2010). Cross-cultural coordination integration reflects the organisation's capability for effectively and efficiently integrating external and internal resources and competencies. Cultural intelligence is consists of knowledge, thinking, motivation and behaviours and is an adaptive cultural capability (Awan & Kraslawski, 2017). Here, applying RBV, we argue that:

Hypothesis 3: Meta-cognitive cultural intelligence significantly mediates the relationship between relational governance and social performance improvement.

Hypothesis 4: Cognitive, cultural intelligence significantly mediates the relationship between relational governance and firm social performance.

2.4. Mediation Effect of Social Performance

Social interaction ties have also been linked to performance improvements and value creation in buyer-supplier relationships (Cousins, Handfield, Lawson & Petersen, 2006). Further, Aydin and Ceylan, (2008) argue that, in organisations, people come together and try to connect the interdependent parts of the mechanism for the social system to improve the efficiency of organizational development. Through formal interaction ties and integration of resources, improved operational efficiencies and product design (Cousins et al., 2006). Social sustainability issues in the manufacturing supply chain are growing and there is need to conduct future research on the aspects of the social sustainability and performance (Hoejmose, Brammer & Millington, 2013; Sarkis, Helms & Hervani, 2010; Zorzini, Hendry, Huq & Stevenson, 2015).

Supply chain researchers have pointed out the importance to achieve sustainability performance (Carter & Rogers, 2008; Klassen & Vereecke, 2012; Pagell & Wu, 2009; Sancha, Gimenez & Sierra, 2016). This creates a sense of satisfaction, which in turn employee can be directed to generate more ideas, focus on reducing cost, and reduce product time (Carey et al., 2011). Business practices related to sustainability are an approach which firms adopted by altering or modifying their current established practices and rules (Engardio, Capell, Carey & Hall, 2007). Organizations are required to make continuous changing into their internal operations to compete competitively in ever changing the environment in the global place (Schoenherr, 2009). We argue that social performance improvement brings excellent insights into process-based practices, which makes firms more efficient by reducing the accidents at workplace, improving the work conditions and compliance with the procedures. Such activities may stimulate not only process and product innovation but also in the administration process, which can contribute

towards significant operational efficiency and knowledge integration. Here applying RBV, we suggest that innovation performance improvement is importantly influenced by a firm that continuously improves the process and improves production environment. All of these resources exert a significant positive effect on the innovation performance. We argue that such improvement in process and production environment is critical mechanisms for knowledge combination, which could help the firm to introduce new products. Thus,

Hypothesis 5: Social Performance improvement is positively and significantly mediates the relationship between relational governance and innovation performance improvement.

In summary, we propose a conceptual model as shown in Figure 1.

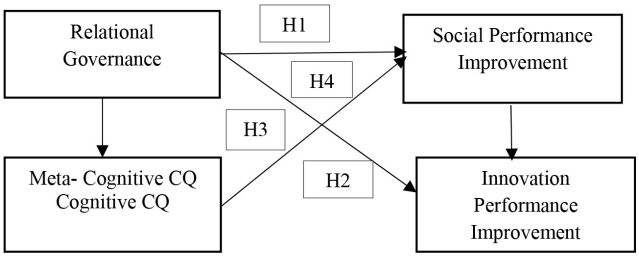

Figure 1. Conceptual Framework

3. Methodology and Data Collection

3.1. Measures and Samples

The construct of CQ is consist of 20 items assesses each of the four subscales: cognitive, metacognitive. Motivational and behavioural) (Ang, Rockstuhl & Tan, 2015). Hence, the construct of CQ was adapted (Ang & Inkpen, 2008; Earley & Ang, 2003). All items and construct were adapted from previous studies and were measured by using a seven-point Likert scale, which ranged from 1 ("not at all") to 7 ("to a strong extent"). The items of social performance use 7 points Likert scale 1: not at all, 2: a limited extent, 3: slightly improve 4: neutral, 5: a moderate extent, 6: a great extent, 7: a very great extent). We adapted existing measures from previous studies, relational governance (Lusch & Brown, 1996), and social performance (Awaysheh & Klassen, 2010; Kleindorfer, Singhal & Wassenhove, 2005). The reliability and convergent validity of the CQ scale have been established in previous studies (Van Dyne, Ang, Ng, Rockstuhl, Tan & Koh, 2012). Respondents were asked to consider the extent to which they had improved the social performance while collaboration with their customers from the last three years. Innovation performance scaled was measured using establishes scale, adapted from (Kotabe, Martin & Domoto, 2003). The adopted scales were measures with seven levels by using a seven-point Likert scale. Scale items are presented in Appendix A.

3.2. Data Collection

We test our research model and hypotheses using survey questionnaire data on export manufacturing firms in Pakistan. This study uses Pakistan manufacturer exporters as an empirical setting to test the hypothesis. Currently, Pakistan is also emerging economy and globalization sustainability challenges result in both pressure and drivers for Pakistanies exporter firms to engage with their buyers and understand partner cultural knowledge by engaging with more inter-firm relationship activities in global supply chain networks to improve their social performance. Pakistanies culture has a strong tradition for inter-organizational and inter-personal in supply chain relationships. Pakistan is an emerging economy based on the collaboration with partners and relationship, which is an important factor influencing social performance improvement in many firms. Thus, Pakistan provides a right context to test the interplay among the variables, such as cultural intelligence, social performance improvement and innovation performance improvement. Pakistan is a global production base of textile, sports goods and surgical instruments, exporting a wide variety of goods to Europe and Western countries. Pakistan recent rise importer and exporter inter-frim problems have emerged due to weak regulations and institutional system that have caused international

concerns related to its transaction arrangements not only on the social issues but also on health issues in surroundings of the firm facility.

The questionnaire reviewed by supply chain management academic experts and then pretested among 12 manufacturing firms (excluded in the final analysis) to gain clarity of content and improve readability. We made minor modifications in two items; two items were deleted due to low factor loadings each from contractual governance and social performance. We randomly drew a sample of Pakistan manufacturer exporters from the database of Federal Chamber of Commerce Industry of two major cities. A random sampling technique was used for choosing the appropriate firms and identified 650 firms matching our sampling criteria. After having eliminated those firm did not meet the at least five years exporting experience as well as those who did not have complete contact details.

A sample of 650 manufacturing firms contacted by telephone for their participation and request the designation of key informants, 316 firms responded to participate in the survey. The key respondents in this study were senior supply chain managers. All key respondent firms were told that survey mainly contained questions related to their governance of supply chain relationships. Out of 316 firms, 257 firms completed the questionnaire. In total, we obtained 186 questionnaires in the first three weeks. We then followed by telephone calls and through sending them an email, and 71 responses were received after the three weeks. As a result of this approach, 257 responses were received, of which 18 response were unusable due to missing values, and firm respondents lack knowledge, resulting in 239 useable responses. The key informants came from executive's level positions managed and involved in decision makings, such as Managing director, General manager, Director supply chain and logistics and Director import and exports.

Our sample covered a wide range of industries, including textile, sports, surgical. We make appointments with the key informants and solicit their cooperation to participate in the survey. The key informants assured that all provided information would be used only for the academic purpose. To assess the non-response bias, we divide the sample into early and late respondents (Armstrong & Overton, 1977). This study used independent sample t-test to compare early and late respondents. The result of Leven's test of equality of variance of each variable were $p > 0.05$. The results reveal that those of who responded early and later to this study's survey did not provide a significant difference. This supports the notion that non-response bias is not a concern for this study.

3.3.Measurement Assessment

The hypotheses were tested in structural equation model (SEM) with maximum likelihood estimation in Analysis of Moment Structures (AMOS) with Statistical Package for Social Science for Windows 23 version used to analyses the hypothesised model (Arbuckle, 2014). Collected data were analysed with statistical package for social science (SPSS) and AMOS v.23, an appropriate method particularly suitable when values of a parameter that has more than one solution (Byrne, 2016). We calculated the descriptive statistics, and missing data were found to be missing at random, we replaced missing value with multiple imputation methods (Hair, Black, Babin & Anderson, 2010). Skewness and multivariate kurtosis of the scales was assessed using Mahalanobis distance test. The results reveal that skewness and kurtosis fall within the recommended range. Mahalanobis distance value greater 57.437 at $p < 0.01$ was considered for potential outliers. Skewness, kurtosis and normality of data were assessed using the guidelines of (Hair et al., 2010). The Kolmogorov-Smirnov test used to assess the normality of data; the results provide evidence that we met the assumptions of normality $p > 0.05$, as suggested by (Hair et al., 2010).

3.4. Data Analysis

To assess a better subset of the measurement construct, exploratory factor analysis (EFA) was conducted with a varimax solution on all the items. The obtained component matrix provides an adequate fit. The Kaiser-Meyer-Olkin (MSA) estimate for the data set was 0.822. The items measures were largely grounded in the western literature, while data were collected in Pakistan. In Table 1, we reported means, standard deviations and person correlations for all the variables.

	RG	SP	IP	MEQ	COG	PE	WE	FS	FA
RG	0.805								
SP	.295**	0.805							
IP	.195**	.208**	0.882						
MEQ	.176**	.303**	.069	0.796					
COG	.11*	.16**	.106*	.118**	0.810				
PE	.058	-.099	.037	-.017	.046	1			
WE	-.049	-.022	-.076	.018	-.068	-.085	1		
FS	-.006	-.018	-.117*	-.084	-.020	.119**	.537**	1	
FA	-.007	-.031	-.060	-.015	-.003	.029	.540**	.524**	1
M	6.02	6.11	5.69	5.73	5.99	0.38	0.73	0.82	0.81
SD	0.59	0.60	0.92	0.87	0.63	0.489	0.35	0.33	0.47

Notes: Results from EFA. Diagonally bold values are the square root of average variance extracted. COG = Cognitive; FA: Firm Age; FS: Firm Size; IP: Innovation Performance; M: Mean; MEQ: Meta Cognitive; PE: Level of Education; RG: Relational Governance; SD: Standard Deviation; WE: Work Experience. **Correlation is significant at the $p < 0.01$ level.

Table 1. Mean, Standard deviation and results of discriminant validity

The correlation of all the items ranged from 0.18 to 0.69 significant at 0.1 and 0.05 percent significance level (Hair et al., 2010). Confirmatory factor analysis (CFA) was performed using AMOS23. (AMOS: Analysis of Moment Structures) (Arbuckle, 2014). CFA is a desirable analytical technique for conducting validation studies (Byrne, 2016). The value of χ^2 is sensitive to sample size. We calculated the ratio of chi-square to the degree of freed (df), Tabachnick and Fidell (2007), the value of $\chi^2 | df < 3$ at $p < 0.05$ as acceptable model fit (Kline, 2015).

In addition to confirm the factor structure found in EFA, comparative fit indices (CFI > 0.90; Bentler and Bonett 1980), Goodness of fit indices (GFI > 0.95); Adjusted Goodness of fit indices (AGFI > 0.90); the Tucker-Lewis index (TLI > 0.95); the root mean square residual (SRMR < 0.08; Jöreskog & Yang, 1996) and the Root Mean Square Error of Approximation (RMSEA < 0.06; Hu, Bentler & Hoyle, 1995).

3.5. Reliability and Validity Measure

We tested measurement and structural model using covariance-based structural equation modelling (CB-SEM) with AMOS 23 with maximum likelihood estimation except for mediation analysis. The mediation analysis was performed using the guidelines (Baron & Kenny, 1986) and tested model with (Preacher & Hayes, 2008) Process macro with SPSS. Only those measurement items with factor loadings larger than 0.60 and with statistical significance less at 0.01 and 0.05 retained for further analysis. The results of exploratory factor analysis also demonstrated that all the constructs are discriminate, no items were cross loaded, established the discriminant validity (Anderson & Gerbing, 1988). Further to reinforce the construct validity of the measurement model, a chi-square difference test compared with the constrained and unconstrained model (Netemeyer, Johnston & Burton, 1990). The resulted factors scores were above 0.50 for all the variables and explained 63.21% total variance extraction. The results of factors loadings are presented in Table 2.

The results provide the necessary evidence that all the constructs exhibited convergent validity. Average variance extracted (AVE) capture a quantity of variance through its items through the construct and amount of measurement error should greater than 0.50. Composite reliability (CR) coefficients for each construct also exceeded the recommended 0.60 benchmarks (Bagozzi & Yi, 1988), and the average variance extracted (AVE) for all scales exceeded the recommended threshold, AVEs for all construct were greater than the 0.50 cut of value (Anderson & Gerbing, 1988). (Fornell & Larcker, 1981). The AVE is also applied to determine the discriminant validity. The correlation matrix of all construct and square root of AVE. The AVE of all construct is greater than 0.5, which shows that correlation of all the items is less than the square root of average variance extracted, further establish the discriminant validity of the scales. The results indicate AVE and Cronbach's alpha and CR exceed the cutoff values

of 0.70 (Fornell & Larcker, 1981; Hair et al., 2010). The discriminant validity of the measures evaluated by comparing the AVE for each measure with the respective squared correlation between the two constructs (Fornell & Larcker, 1981).

Items	Factor loadings[a]	Error variance	Construct reliability
Relational Governance			
RG1	0.864	0.254	0.746
RG2	0.805	0.352	0.648
RG3	0.772	0.404	0.596
RG4	0.778	0.395	0.605
Social Performance			
SP1	0.770	0.407	0.593
SP2	0.850	0.278	0.722
SP3	0.827	0.316	0.684
SP4	0.774	0.401	0.599
Innovation Performance			
IP1	0.857	0.266	0.734
IP2	0.887	0.213	0.787
IP3	0.902	0.186	0.814
IP4	0.495*	–	–
Meta-cognitive CQ			
MEQ1	0.817	0.333	0.667
MEQ2	0.821	0.326	0.674
MEQ3	0.749	0.439	0.561
Cognitive CQ			
COQ1	0.730	0.467	0.533
COQ2	0.871	0.241	0.759
COQ3	0.823	0.323	0.677

*Items deleted in EFA due to low factor loadings and insignificant results.

Table 2. Validation of constructs Survey items, item means, standard deviation

In this study, the composite reliability for all variables ranged between 0.70 (see Table 3). The measurement model allows us to decide whether the unidimensionality is in modelling is warranted (Hu et al., 1995; Kline, 2015). The results of CFA show that model consists of the data and factor loadings are statistically significant at p = 0.05. Thus all item related strongly to its intended latent construct. Validity and reliability assessed using CFA and it involves all items loaded on its related construct. Every pair of constructs passed the test. Overall, the results showed acceptable reliability and validity for all the variables. The structural model had an acceptable model fit. χ^2 = 335.04 (df = 236), root mean square error of approximation RMSEA = .053, goodness-of-fit index (GFI) = 0.952, IFI = .947; comparative fit index CFI = .943.

Items	Average variance extraction	Composite reliability	Cronbach's alpha
Relational Governance	0.649	0.820	0.80
Social Performance	0.649	0.881	0.819
Innovation Performance Improvement	0.778	0.913	0.760
Meta cognitive	0.634	0.838	0.720
Cognitive	0.656	0.851	0.744

Table 3. Validity and Reliability of constructs Survey items

Hypothesis 1 predicts a positive relationship between relational governance and social performance improvements. Result analysis indicated that relational governance is significantly associated with firm improvement in social performance ($\beta = 0.24$, $t = 4.96$, $p < 0.05$) by controlling Control firm age and firm size, providing support for the H1. The findings are consistent with the findings of (Awan, 2018; Awan & Kraslawski, 2017). The findings indicate that relational governance enhances trust that enables individuals to come up with new ideas during interactions; this is likely to be the key driver to transform ideas into practicability to improve the social quality of life for their workers and society. This might indicate that when an export manufacturer implements relational governance, it reinforces the possibility of being involved with the importer, exchange of information and joint planning significant impact on social performance improvement. Whereas relational governance is also positive and significantly associated with the innovation performance improvement. ($\beta = 0.16$, $t = 3.434$, $p < 0.05$), providing support for H2. The results show that social performance improvement has a positive effect on innovation performance improvement ($\beta = 0.19$, $t = 2.731$, $p < 0.05$). The findings are consistent with the findings of (Awan, 2018). That is, to transform the impact of its employee well-being on innovation performance improvements, exporter firms must suitably improve process and production facilities. In sum, the results certainly show that export firms with better health and safety policies, better working conditions, compliance with human rights can achieve a product or process innovation.

The mediation analysis of cultural Intelligence (CQ) between the governance mechanism and social performance to the firm were tested using preacher and (Preacher & Hayes, 2008) macro process for SPPS. We test indirect and total effects to account for potential mediation through cultural intelligence. We followed the causal step approach in testing for mediation proposed by (Baron & Kenny, 1986) and a bootstrap approach (Bollen, Lennox & Dahly, 2009). We examined mediation analysis via the PROCESS macro developed by (Preacher & Hayes, 2008) in SPPS, using 95% confidence interval (CI) with 5000 re-sample bootstrapping. We also report K^2 statistics to provide a standardised effect size for any significant effects following recommendation for estimating "the proportion of the maximum possible indirect effect that could have occurred" (Preacher & Kelley, 2011).

According to the results, meta-cognitive (MCQ) and cognitive (COQ) positively associated with the social performance improvements (see Table 1). The first condition for mediation effect of MCQ, COQ is fulfilled. The total effect of relational governance, and social performance improvement is significant and positive ($\beta = 0.39$, $t = 6.62$, $p < 0.05$). In Hypothesis 3, it was proposed the MCQ positively, and significant mediates the relationship between the relational governance and social performance improvements. Subsequently, indirect effect of relational governance and social performance improvement is significant and positive ($\beta = 0.042$, $t = 2.731$, $p < 0.05$). Thus, there are chances for either partially or fully mediation relationship. To test whether there is full or partial mediation; the direct effect is examined. The path coefficient for a direct effect of relational governance on social performance improvement after introducing of mediating variable is found positive and significant ($\beta = 0.35$, $t = 6.0$, $p < 0.05$). Thus partial mediation is concluded.

Prior research has also proposed that cultural intelligence measures taken together could be used at a firm level in the context of international business context (Ang & Inkpen, 2008). Managers with a high level of Metacognitive CQ skills likely to adjust their counterpart cultural knowledge. The high level of metacognitive CQ suggested that supplier firm's individual has acquired and brought to the firm partner cultural knowledge in facilitating the development of the critical resource. In Hypothesis 4, it was proposed that cognitive, cultural intelligence (COQ)

mediate the relationship between the relational governance and social performance improvements. In contrast the indirect effects of cognitive (COQ) is not statistical significant, ($\beta = 0.0096$, $t = 1.031$, $p > 0.05$), Rejected H5. The results of mediation analysis shown in Tables 4 and 5 respectively for MCQ and COQ. Our results reveal that exporting firms need to adapt, reconfigure cultural knowledge and integrate resources into the operations so that they can proactively improve social performance and achieve superior innovation performance. We suggest that cultural intelligence capabilities with relational governance in exporting manufacturing firms in emerging market can promote social cohesion between partners. Social cohesion can be used to attempt to establish a link to a lost moment of social harmony (Pahl, 1991). Social cohesion is emerging through cultural intelligence, which serves to bring suppliers and buyers together to work jointly and improve collaboration. The idea of cultural intelligence capability (CQ) lens is to ensure supply chain operations proceed in harmony with partner cultural context (Awan, Kraslawski & Huiskonen, 2018a).

Relationship	Total effect (c):			Direct effect (c'):			Indirect effect	
	b	t	SE	b	t	SE	b	SE
RG to SP	.397	6.62	.061	.35	6.00	.05	.042	.025
LLCI	.2794				.2386		.0094	
ULCI	.5162				.4714		.1156	
Sobel test results	b = 0.042, SE = .019, Z = 2.24, p = 0.024							

Standardized results based on 5000 bootstrap samples in Hayes's (2013) PROCESS macro. Bias-corrected 95% confidence interval reported in brackets.

Table 4. Direct, and indirect effects of RG on Social performance through Meta-cognitive CQ

Relationship	Total effect (c):			Direct effect (c'):			Indirect effect	
	b	t	SE	b	t	SE	b	SE
SP to IP	.397	6.62	.061	.382	6.50	.05	.0096	.0126
LLCI	.2794			.2707			-.0043	.0515
ULCI	.5162			5058				
Sobel test results	b = 0.008, SE = .010, Z = 0.92, p = 0.367							

Standardized results based on 5000 bootstrap samples in Hayes's (2013) PROCESS macro. Bias-corrected 95% confidence interval reported in brackets.

Table 5. Direct, and indirect effects of RG on Social performance through Cognitive CQ

In Hypothesis 6, it was predicted social performance improvement significant mediation relationship between the relational governance and innovation performance improvements. The total effect of relational governance, and social performance improvement is significant and positive ($\beta = 0.39$, $t = 6.62$, $p < 0.05$). Subsequently, indirect effect of relational governance and innovation performance improvement is significant and positive ($\beta = 0.09$, $p < 0.05$). Thus, there are chances for either partially or fully mediation relationship. To test whether there is full or partial mediation; the direct effect is examined. The path coefficient for a direct effect of relational governance on innovation performance improvement after introducing of mediating variable is found insignificant ($\beta = 0.20$, $p > 0.05$). The findings are consistent with the findings of (Pavelin & Porter, 2008). The innovation performance improvement tends to be positively associated with export firms those who have improved social performance. The mediation analysis of social performance between relational governance and innovation performance improvement shown in Table 6. Findings from this research highlight other factors, which leverage social performance to deliver enhanced innovation performance outcomes, beyond relational governance. These findings imply that firms with a superior supporting work environment (social support, physical factors, and internal satisfaction) positively associated with the ability to design new process and development of products.

Relationship	Total effect (*c*):			Direct effect (*c′*):			Indirect effect	
	b	t	SE	b	t	SE	b	SE
CG to IP	.303	3.06	.106	.20	1.94	.05	.095	.043
LLCI	.1085				-.0019		.0211	.1990
ULCI	.4977				.4181			
Sobel test results	B = 0.095, SE = .044, Z = 2.113, p = 0.034							

Standardized results based on 5000 bootstrap samples in Hayes's (2013) PROCESS macro. Bias-corrected 95% confidence interval reported in brackets.

Table 6. Direct, and indirect effects of RG on Innovation performance through Social Performance

4. Discussions

The present research provides new insight into the literature in following ways. First, recent research has begun to emphasise the importance of sustainability on innovation (Macchion et al., 2017), no empirical research has examined the nature of the relationship between social performance and innovation performance outcomes in exporting context. Drawing on the resource-based view (RBV) and empirically tests a conceptual model investigating a set of relational governance, cultural intelligence, and social performance effect on innovation performance improvement. Our results reveal the importance of meta-cognitive CQ effect on social performance improvements. These results consistent of the findings of past studies on relational governance and cultural intelligence. Strategic orientation towards cultural intelligence should be integrated into the company's governance mechanism (Awan et al., 2018a). The export firms in Pakistan require the adaptation to the cultural norms and values of partner culture in cross-border supply chain relationships. This requirement compels firms to engage themselves with cross-cultural training, is key to successful collaboration.

Our results reveal that exporting firms in Pakistan likely to adapt to the partner cultural preferences, resolve differences, resulting in the more significant exchange of information and increase collaboration has an impact on the social performance improvement. Chua, Morris and Mor (2012) reported positive effects of meta-cognitive CQ on collaboration. The results showed that repeated interaction and exchange of information might allow the firm to articulate one's knowledge and improve the understanding of the partner culture. This could because of that, Pakistan cultural norms favour cooperative norms, which smoothly articulate and questioning ones the mental model is important for effective learning. It allows an individual to transcend existing knowledge and engage in double-loop learning (Sun & Anderson, 2010). Second, our findings highlight the urgency of adopting a more integrated approach to study the effect of social performance on innovation performance. We especially contended with a growing stream of research, supporting that performance benefits of innovation do not merely result from relational governance. We extend the literature on innovation by showing that, relational governance enable the organisation to increase collaboration, enables the improvement of social performance, which in turn results in the firm's increase success in innovation.

5. Conclusions

This study contributes to a growing field of research in manufacturing and supply chain relationship by demonstrating how relational governance shapes the relationship between social performance improvement and innovation performance improvement. In this paper, we investigate how relational governance influences on firm's cultural intelligence capability and social performance improvements. By applying, resource-based view, we provide evidence that relational governance effects firm cultural intelligence development from adoptability to adaptability for social performance improvements. The conceptual model we develop reinforce this implication that there is a positive mediation effect of cultural intelligence between relational governance and social performance improvements. We provide conceptual evidence to demonstrate that cultural understanding and adaptability in a buyer-supplier relationship can develop learning capabilities for social sustainability. Our results highlight the importance of cultural intelligence a guiding principle for the development of buyer-supplier relationships and deployment of learning resources. The export manufacturer that are likely to see social performance improvement

in the coming decades that are not only doing business internationally through relational governance but that are developing the strategic cultural intelligence capability to successfully doing business internationally.

The results show a positive association between firm-level meta-cognitive cultural intelligence capabilities and social performance improvement. Similarly, results show an indirect association social performance improvement between relational governance and innovation performance improvement. Improvements. Our results suggest that innovation performance improvements positively depend on the capacity of the firm to activate participate in relational governance but also on social performance improvements. These findings imply that firms with a superior supporting work environment (social support, physical factors, and internal satisfaction) positively associated with the design of new process and development of products. We conclude that firm internal capability effects on the buyer-supplier relationship and firm performance improvements. These findings underline the importance of fit between the export-manufacturing firm's cultural intelligence and the resources need to be associated with relational governance. The cultural capability is at the centre of today's sustainable development advantage in the buyer-supplier relationship.

Our study contributes to the sustainability literature on supply chain relationship. First, focusing on the role of social performance improvement by export firms in innovation performance. This study shows that innovation performance depends on a firm's continuously sustainability learning practice. Our study moves beyond the direct link between relational governance and innovation performance by identifying social performance improvements a contextual variable in the relationship between relational governance and innovation performance. Second, this study makes theoretical contributions. Our study uses resource-based view (RBV), applying it to the cultural intelligence. The finding that cultural intelligence is influencing the development of other unique knowledge capabilities. Through the use of cultural intelligence, firm increase its ability to sense cultural differences, seize and adapt globally scattered cultural practices on social issues and allows for the development of unique knowledge resources and capabilities, impact on firm social performance and innovation performance improvements.

5.1. Managerial Implications

This study offers implications for the practitioners and policymakers. Managers should pay close attention to the cultural differences of the evolving needs of their foreign customers on social issues. This cultural understanding can strongly affect their collaboration development and inter-firm exchange relationship. The unprecedented pace of globalisation and sustainable development, the firm capability to capture and understand social cohesion constitute one important element in the process of development more collaborative ties. Supplier's managers need to understand the extent of the buyer's level of cultural practices on social sustainability issues to implement best sustainability practices. Cross-cultural training of the manager dealing with cross-border partners could simply improve the international collaboration in international business.

Moreover, our study findings indicate that cultural intelligence dimensions affect performance improvements. In this respect, top management in exporting firms should delegate decision making to managers and power sharing. Remarkably, it is found that higher level of cognitive CQ is associated with the coordination and it is crucial for the manufacturers' exporters to learn quickly and to make sense of cultural knowledge in foreign markets. Importantly managers are advised to establish more informal information exchange channels within their company to accelerate the performance outcomes. For managers from developed countries, when purchasing from developing countries suppliers, must consider the higher management have considerable experience and qualified international managers in dealing with the different cultural customers to seek social performance. Our study results suggest that cultural intelligence exists in export manufacturing firms, where suppliers feel part of the buyers, and personal relationship are strong; differences among buyers are respected; and where the partners support supplier managers. The result from this study emphasized cultural intelligence to be treated, as part of social cohesion that deeply rooted in cultural intelligence capabilities of an organisation, is the key to success towards social performance. Furthermore, the supply chain relationship is likely to benefit from cultural intelligence capability when there are differences and disputes on the implementation of different social sustainability practices among buyers and suppliers.

5.2. Limitations and Future Research

This study has the limitation that needs to be addressed. The major limitation is that it is a cross-sectional study with few industries and does not present the whole population. Further research could examine how firms implement governance mechanism by paying particular to draw a comparison between their govern mechanism practices and so social performer in other developing countries (China and India). We restrict our analysis only to Pakistan export manufacturers. Further, it would also be useful to improve our understanding of the relationship between internal governance and institutional differences in implementation sustainable practices. Examination of the mediating role of knowledge acquisition, knowledge sharing and moderating role of sustainable investment on firm performance improvement is an important research area for future researchers. Future research studies could include examining whether the manufacturer re-orientation on ecological is influenced by the customers when they have a contractual relationship with each other. It would be interesting to investigate whether relational governance could lead to developing trust and commitment towards social sustainability issues differ from those of firms in another industrial sector in emerging economies. In light of the growing debate on the role of governance mechanism, future studies should attempt to address to what extent contractual, relational governance mechanisms are a complementary or good substitute for the development of a goodwill trust and commitment to sustainability, and what are the efficiency consequences and antecedents of social performance? However, regarding our conceptual model does not include all dimensions of social performance, there is need to identify the what are the good self-governance mechanism in the different industry upon which social performance measures can be binding in contracts to achieve desired targets. Future research may seek to investigate how and what type of social cohesion is needed in order to improve the buyer-supplier relationships in a sustainable way?

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Appendix A

Scale Items	
Relational Governance (RG): measured to what degree do you agree or disagree the following statements about on a 7-point scale (1 – Strongly disagree, 7 – Strongly agree)	
RG1	Our customer is involved early in the development of social initiatives.
RG2	Our firm has the mutual understanding of how to carry out solutions for failure in the protection of social issues.
RG3	Our firm has the mutual understanding of how to settle down issues with our customer on social protection of our workers
RG4	Our firm has the mutual understanding with customers the actions to be carried out when there are accidents at worker place.
Social Performance (Cronbach's alpha = 0. 0.819) 1: not at all, 2: a limited extent, 3: slightly improve, 4: neutral, 5: a moderate extent, 6: a great extent, 7: a very great extent	
SSP1	We have reduced the number of industrial accidents.
SSP2	We have improved child labor employeement in our facilities.
SSP3	We have improved employee level of satisfaction with policies (social security systems, job security).
SSP4	We have improved safety and labor conditions in our facilities
Innovation Performance (Cronbach's alpha = 0.778) 1: Strongly disagree, 2: Disagree, 3: Somewhat disagree, 4: Neither agree or disagree Agree, 5: Somewhat agree, 6: Agree, 7: Strongly agree	
IPF1	Process design
IPF2	Product design
IPF3	Ability to conformances to specification
IPF4	Ability to develop new products
Cultural Intelligence (CQ), measured to what degree do you agree or disagree the following statements about on a 7-point scale (1 – Strongly disagree, 7 – Strongly agree)	
Meta cognitive	
MEQ1	We are conscious of the cultural knowledge, we use when interacting with people with different cultural backgrounds.
MEQ2	We adjust our cultural knowledge as we interact with people from a culture that is unfamiliar to me
MEQ3	We check the accuracy of our cultural knowledge as we interact with people from different cultures
MEQ 4	We are conscious of the cultural knowledge I apply to cross-cultural interactions (Deleted)
Cognitive	
COQ1	We are aware of the cultural values and religious beliefs of other cultures
COQ2	We are aware of the legal and economic systems of other cultures
COQ3	We are aware of the rules for expressing nonverbal behavior in other cultures

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A Collaborative Framework for Governance Mechanism and Sustainability Performance in Supply Chain

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Abstract. The results indicate that socially sustainable development is two-fold:firstly, involves fostering interaction through relational governance and secondly, ensuring cohesion with cultural intelligence capability.We develop a theoretical framework and empirical research approach for understanding how cultural intelligence capabilities can be used to transform relational governance to improve social sustainability in an inter-firm exchange relationship. The analysis is based on cross-sectional base survey questionnaires on a sample of 239 senior managers from four manufacturer industries using partial least squares structural equation modelling approach. Sustainability performance framework is conceived on a foundation of the theoretical body of knowledge in the literature. This study contributes by identifying key cultural intelligence capabilities; management is more likely to work effectively with their cross-border supply chain partners. The dynamic capability theory helps explain how culturally intelligent individuals are able to dynamically adjust, protecting and adapt to the partner cultural in inter-organizational collaborations. Our results through structural equation modelling approach confirmed that collaborative relational governance is useful to improve the social sustainability performance.

Keywords: Relational governance; cultural Intelligence capability; social sustainability performance; buyer-supplier relationship; sustainable social development.

1 Introduction

The effectiveness of relational governance mechanism has been a severe problem to supply chain management. Managing cultural differences across geographically dispersed locations is one of the central challenges for International business firms (Caprar et al., 2015). Collaboration challenges arise from differences in cultural values between managers with different national backgrounds when dealing with their foreign partner (Shin et al., 2017). By promoting cooperation between the partners, sustainable collaborative governance mechanism is expected to achieve a win-

win situation (Zhao et al., 2017). Meanwhile, supply chain collaboration governance is becoming increasingly complex, as global competition and cultural difference drive growing customer requirements. Hence, the literature provides little evidence as how to make collaboration with partners more comprehensive and improve sustainability performance. Given the limitation and advantage of relational governance, firms often employ them in their performance improvement. Previous research has established a direct relationship between the relational governance and economic performance, relationship performance (Chen et al., 2013) and firm social performance (Awan and Kraslawski, 2017). Much research has attempted to explain the effects of relational governance structure on performance, but few studies have incorporated strategic consideration the role of culture in managing interfirm relationship (Handley and Angst, 2015). Thus, little is known about the relative importance of cultural intelligence capabilities which facilities interfirm cultural differences and lead in the successful management of relational governance.

We argue that individuals who possess a high level of cultural intelligence must act to make progress towards build interpersonal connections. If either partner not intended to share cultural knowledge, the supplier firm may be harm, damaged the collaborative process, and result in loss of sustainability performance. To pursue social sustainability performance, the cultural intelligence capabilities aimed to strengthen by integrating social, cultural perspective into firm's operation strategy (Awanand Kraslawski, 2017). Although a significant literature has been developed on the triple bottom line in the developed and emerging economies, thus so far very little attention has been paid to such social sustainability issues to the less developed countries in Asia region. The purpose of this article is to propose and empirically examine a theoretical model about how cultural intelligence capability affects the process of governing inter-frim exchange relationship and how those changed processes result in different outcomes. Our study addresses the following research questions: (1) How can relational governance improve be incorporated into the design of governance and improve social sustainability performance?. (2) Do cultural intelligence capabilities mediates the relationship between relational governance mechanisms and realized social performance?. This paper is structured as follows. In the next section, we discuss the main concept of social sustainability performance, followed by hypothesis development which results in the presentation of propositions. Next section described the methodology and data analysis methods. The final sections provide discussion, conclusion and provide a future outlook on the new framework.

2 Literature Review

Relational governance refers to the extent to which relationship between the parties are governed by shared norms and social mechanism (Liu et al., 2009). Relational

governance is a necessary component of firm performance (Schepker et al., 2014). In a recent study on the relationship between governance mechanism and performance, (Huang et al., 2014) examined a sample of managers and found that governance mechanism was a strong predictor of performance. Through relational governance based on joint planning and joint problem solving, a partner may replace opportunism behaviour and increase performance (Liu et al., 2009). Zheng et al. (2011) suggest that joint problem is solving affect the knowledge combination capability. Hence, joint problem solving is a way for the firm to acquire different kinds of knowledge and integrate (Zheng et al., 2011). Relational mechanism increases the likelihood of joint planning and problem-solving, which deter opportunism and enhance performance (Huang et al., 2014).

World Commission on Environment and Development (WCED) broad definition is widely accepted, and it integrates social, environmental and economic issues. The sustainability definition is followed by the concept of sustainable development is based on the balance of three pillars of environmental, social and economic sustainability (Elkington, 1997).According to (Sharma and Ruud, 2003) social sustainability "ethical code of conduct for human survival and outgrowth that needs to be accomplished in a mutually inclusive and prudent way". Sustainable Supply Chain Management define as "The strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key inter-organizational business processes for improving the long-term economic Performance of the individual company and its supply chain." (Carter and Rogers, 2008). Social sustainability performance defines as the "incorporate the health and safety issues, improvement of environmental issues and child labours (Hutchins and Sutherland, 2008). Therefore, a firm commitment to sustainability requires collaborative capabilities to devote specify resources to cooperative activities addressing environmental and social issues (Vachon and Klassen, 2007). Thus, we hypothesize that:

Hypothesis 1: Relational governance is positively associated with the firm social performance.

2.1 Mediation Impact of Cultural Intelligence

This study adopts the definition of CQ (Earley and Ang, 2003) defined as "the capability of an individual to function effectively in situations characterized by cultural diversity and also the capability to efficiently function in interactions across culture groups (Ang and Inkpen, 2008). Metacognitive emphasizes the importance of thinking consciously to assess which aspects of culture are more relevant (Van Dyne et al., 2012). Cognitive CQ "reflects knowledge of the norms, practices and conventions in different cultures acquired from education and personal experiences"(Ang et al., 2007).Understanding of subjective and objective cultural knowledge help to shape the relationship mutually beneficially and with high cognitive CQ are better able to interact with a cross-culturally diverse set of peoples (Ang et al., 2015).Such challenges require organizations to assemble and develop

resources and capabilities to resolve such problems (Husted and Sousa-Filho, 2017). Thus,

Hypothesis 2: Metacognitive CQ is positively and strongly mediates the effect of relational governance and supplier social performance.

Hypothesis 3: Cognitive CQ is positively and strongly mediates the effect of relational governance and supplier social performance.

2.2 Behavioral and Motivational CQ

Greater social benefits accrue from the firm ability to develop capabilities for its core business to the social and environmental problems (Husted and Sousa-Filho, 2017).These internal capabilities can improve the firm social sustainability due to the firm is able to implement sustainability initiatives in more efficient way to appropriate the benefits of the relational governance. Behavioral CQ is "the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures" (Ang et al., 2006).The management of social initiatives in operations largely depends on the firm ability to flexibility and adaptability towards the partner understanding the cultural norms. Adopting socially responsible practices by the firms to address the social issues are grounded in communication and compliance (Yawar and Seuring, 2017).Motivation has focused on measuring the effort expended to achieve a task-relevant reward (McCarthy et al., 2016). Therefore, CQ explains the success of joint problem solving and planning in international business, and also positively influences performance (Korzilius et al., 2017). Therefore, we hypothesize:

Hypothesis 4: Behavioral, cultural intelligence fully mediates the positive relationship between the relational governance and supplier social performance.

Hypothesis 5: Motivational cultural intelligence mediates the positive relationship between the relational governance and supplier social performance.

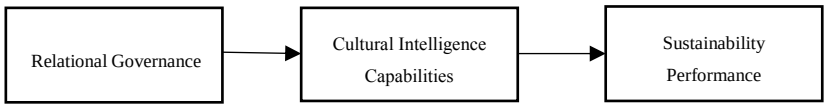

Figure.1 Conceptual Framework

3 Methodology

The construct of CQ is consist of 20 items assesses each of the four subscales: cognitive, metacognitive. Motivational and behavioural) (Ang et al., 2015). All items and construct were adapted from previous studies and were measured by using a seven-point Likert scale, which ranged from 1 ("not at all") to 7 ("to a strong extent"). We used (Ang et al., 2007) dimensions of meta-cognitive, cognitive, behavioural and motivational to operationalize culture intelligence scale. A supplier firm sustainable social performance is measured by subjective performance outcomes along four dimensions based on (Awaysheh and Klassen, 2010; Kleindorfer et al.,

2005). Social performance (towards the focal buyer) including improvement in human rights, health and safety, community wellbeing and safety measures. The items of social performance use 7 points Likert scale 1.not at all, 2: a limited extent, 3: Slightly improve 4: Neutral, 5: a moderate extent, 6: a great extent, 7: a very great extent. Relational governance scale was operationalized on the basis of the work by (Lusch and Brown, 1996) .We adapted existing measures from previous studies

Survey data were collected on site from the manufacturing firms from Pakistan in March to April 2017 from seniors operations and supply chain managers. Out of 316 firms, a total of 257 companies completed the questionnaire. In total, we obtained 186 surveys in the first three weeks. We then followed by telephone calls and by sending them an email, and a total of 71 responses received after the three weeks. As a result of this approach, a total of 257 responses received, of which 18 response were unusable due to missing values, and firm respondents lack knowledge, resulting in 239 useable responses. Harmon's one-factor test (Podsakoff et al., 2003) was carried out using an un-rotated factor analysis of all independent and dependent variables. The results revealed that a total of 71.2% of the variance was accounted for that the first factor captured only 28.8% of the variance. This suggests that common method variance is not a significant problem in this study.

3.1 *Reliability and Validity*

All analysis was carried out using partial least square (PLS) version 2.3.1 and statistical package for social sciences (SPSS 23). Overall, the results showed acceptable reliability and validity. The results are summarized in Table 1 and Table 2

Tabl 1. Validation of constructs Survey items

Items	Factor loadings a	t-value	Error Variance	Item R2
Relational Governance (RG) AVE:0.649, α:0.820, CR: 0.880				
RG1	0.864	36.494	0.254	0.746
RG2	0.805	22.070	0.352	0.648
RG3	0.772	22.175	0.404	0.596
RG4	0.778	18.277	0.395	0.605
Social Performance (SP) AVE:0.649, α:0.819, CR: 0.881				
SP1	0.770	17.396	0.407	0.593
SP2	0.850	32.092	0.278	0.722
SP3	0.827	27.956	0.316	0.684
SP4	0.774	21.363	0.401	0.599

Cultural Intelligence (CQ)				
Meta cognitive				
AVE:0.634, α:0.720, CR: 0.839				
MEC1	0.817	10.467	0.333	0.667
MEC2	0.821	10.256	0.326	0.674
MEC3	0.749	7.482	0.439	0.561
Cognitive				
AVE:0.656, α:0.744, CR: 0.851				
COQ1	0.730	7.148	0.467	0.533
COQ2	0.871	23.042	0.241	0.759
COQ3	0.823	16.055	0.323	0.677
Behavior Cognitive				
AVE:0.557, α:0.759, CR: 0.845				
BCQ1	0.769	15.538	0.409	0.591
BCQ2	0.736	12.485	0.458	0.542
BCQ3	0.776	19.065	0.398	0.602
BCQ4	0.756	11.846	0.428	0.572
Motivational Cognitive				
AVE:0.602, α:0.784, CR: 0.858				
MCQ1	0.758	13.377	0.425	0.575
MCQ2	0.782	14.368	0.388	0.612
MCQ3	0.822	26.473	0.324	0.676
MCQ4	0.740	12.725	0.452	0.548

Notes: MEC: Meta Cognitive Cultural Intelligence, COQ: Cognitive Cultural Intelligence, BCQ: Behavior Cultural intelligence: MCQ: Motivational culture Intelligence,
AVE: Average Variance Extraction,α: Cronbach's alpha: CA: Composite Reliability

Table.2 Mean, Standard deviation, correlation and results of discriminant validity

	M	SD	BCQ	COQ	MCQ	MEC	RG	SP
BCQ	5.809	.817	0.759					
COQ	6.114	.622	.125*	0.810				
MCQ	5.997	.649	.188**	.127*	0.776			
MEC	5.921	.709	.257**	.205**	.142*	0.793		

RG	6.211	.565	.176**	.190**	.310**	.195**	.805	
SP	6.082	.625	.355**	.319**	.227**	.188**	.295**	.806

M=mean, SD: Standard deviation, , BCQ=Behavior Cognitive, COQ=Cognitive, MCQ=Motivational Cognitive, MEC=Meta cognitive, RG; Relational governance, SP: Social performance,

*Correlation is significant at the $p<0.01$ level. **Correlation is significant at the $p<0.05$ level.

We used partial least square-Structural equation modelling (PLS-SEM) to test the model and measure direct hypothesis. The Cohen's effect size (*f*) and R^2 value provides a satisfactory prediction power. This study assesses the model fit by means of its standardized root mean square residual (SRMR) as an index for model validation (Henseler et al., 2014). The overall model fit was assessed based on the standardized root mean square residual (SRMR) with a value of 0.06. The results obtained in blindfold procedure provide evidence that value Q2>0 for BCQ, COQ, MCQ, MEC and SP are 0.014, 0.017, 0.051, 0.02 and 0.13 respectively. The mediation model estimated with a maximum 5000 iterations and stop criterion 10-7 was chosen. We tested all hypothesis except mediation using partial least square-Structural equation modelling (PLS-SEM). The results reveal that relational governance positively predicts the social sustainability ($\beta = .24$, $t= 4.63$) in support of H1. The relational governance (RG) is positively related to meta-cognitive (MEC) ($\beta =0.14$, $t=2.87$, $p<0.01$) and cognitive (COQ) ($\beta =0.15$, $t=2.84$, $p<0.05$). Whereas RG is significantly related to behavior cognitive (BCQ) ($\beta =0.11$, $t=2.50$, $p<0.01$) and motivational cognitive (MCQ) ($\beta =.0.23$, $t=4.84$, $p<.0.05$). The results also show significant relationship between the MEC to SP ($\beta =0.13$, $t=2.08$, $p<0.01$), COQ to SP ($\beta =0.25$, $t=4.289$, $p<.0.05$), BCQ to SP ($\beta =0.37$, $t=5.20$, $p<.0.05$), and MCQ to SP ($\beta =0.14$, $t=2.09$, $p<0.01$) provide support to proceed for the mediation analysis.

The mediation analysis of Cultural Intelligence (CQ) between the relational governance and social sustainability was performed using (Preacher and Hayes, 2008) macro process for SPPS. We test indirect and total effects to account for potential mediation through cultural intelligence. We followed the causal step approach in testing for mediation proposed by (Baron and Kenny, 1986) and a bootstrap approach (Bollen et al., 2009). The indirect effect of MEC is not significant because confidence interval contains zero (b= .02, SE: 0.15, CI=-0.0008, 0.0623).The results do not support the hypothesis 2. The indirect of RG on SP through cognitive CQ is significant (b= 0.039, SE= .022, CI= 0.0084, 0.1012). As it can be seen, CI at 95% does not contain zero, and direct effect of RG on SP is significant. This provides the partial support for the H3. The indirect of RG on SP through behavior CQ is significant (b= .042, SE=.023, CI=0.0021, 0.0939). As it can be seen, CI at 95% does not contain zero, and direct effect of RG on SP is significant, support the hypothesis H4.The mediation result of motivational CQ fails

to support H5, because indirect effect is not significant (b= .03, SE=, .022, CI= -0.0046, 0.0843).

4 Conclusion

The results indicate that socially sustainable development is two fold:firstly, involves fostering interaction through relational governance and secondly, ensuring cohesion with cultural intelligence capability.Cultural intelligence is at the heart of the socially sustainable development processes.Collaboration governance mechanism is seen as a means to learn about customer culture and to understand their preferences and needs on social initiatives.This study demonstrates that integration of cultural intelligence helps define what the social sustainability issues mean to a firm and how to integrate the culture of partner firm into practices and process. The idea of cultural intelligence capability(CQ) lens is to ensure supply chain operations proceed in harmony with partner cultural context.Therefore, companies need to focus on the type of cultural intelligence capability they have with their supply chain partners.Firms with such CQ capabilities are likely to stand out in terms of social sustainability performance. Strategic orientation towards cultural intelligence should be integrated into the company's governance mechanism.This study found that the supplier-buyer engagement in a supply chain is essential for the adoption and diffusion of new sustainability practices. In summary, social sustainability emphasizes the importance of fostering the relationship between buyers-suppliers and cohesion among these. Thus, cultural sustainability in firms operations is an essential part of sustainable development.

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