

School of Management

**Identifying the Indicators of Trust for Strategic Collaborative Buyer-Supplier
Relationships**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number # HRE2019-0356

Signature:

Date:

Abstract

The research focuses on identifying the indicators of trust that enable the signalling of trust behaviours within strategic collaborative buyer-supplier relationships. Despite the significant role that trust plays in interorganisational relationships, as acknowledged by industry and academia alike, organisations often fail to capitalise on trust. This failure to capitalise on trust in the buyer-supplier relationship could be due to trust being scarce and fragile. However, it often stems from the incapability of organisations to signal trust to a counterpart. The research objective was the development of a conceptual Trust Management System (TMS) and framework to enable organisations within a long-term collaborative buyer-supplier relationship to gauge, monitor, and improve the levels of trust within the relationship. To accomplish this objective, the research aims were to identify and validate the indicators of trust, develop the conceptual TMS model, and propose a framework to guide organisations for applying the system. My original contribution to knowledge is the identification of the indicators of trust for collaborative buyer-supplier relationships. As organisations vary in size and access to resources, the thesis presents two approaches for organisations interested in signalling trust to a counterpart. For instance, organisations with access to significant resources could choose to apply a comprehensive approach consisting of the 51 trust indicators identified in this research. In contrast, organisations lacking in resources could choose to apply the focussed approach consisting of 11 trust indicators. Moreover, the research develops a conceptual model of the TMS and proposes a framework to guide organisations in collaborative relationships in implementing the system.

To achieve the research aims, a mixed-methods approach was adopted, which included data from three sources. Sources for the data included a content analysis of newspaper articles to identify the indicators of trust from the media's perspective. A content analysis of peer-reviewed journal articles to identify the indicators of trust from an academic perspective. Additionally, expert interviews were conducted with five supply chain practitioners to validate trust indicators for industry application. The interviews with the supply chain experts utilised both a quantitative questionnaire and a qualitative verbal semi-structured portion. In the context of supply chain management, the thesis responds to a call from academia to

identify generally applicable indicators of trust that could address various industries from all over the world. Additionally, the research addresses the call for progress when considering performance measurement systems in the supply chain by proposing a system that would allow organisations to quantify trust. Moreover, the thesis contributes to the body of extant knowledge concerning approaches to help sustain and develop interorganisational relationships while providing a system for addressing trust challenges. It is anticipated that the research findings will provide organisations with information that will allow them to signal trust behaviours to a counterpart in a collaborative buyer-supplier relationship. Moreover, the research findings could serve as a steppingstone for researchers interested in developing an application that would further trust-based governance in the supply chain.

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“Love does not delight in evil but rejoices with the truth.

It always protects, always trusts, always hopes, always perseveres.”

– 1 Corinthians 13:6-7

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Related Thesis Publications

Conference Publications

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Glossary of Key Abbreviations

BSR	-	Buyer-Supplier Relationship
CE	-	Circular Economy
CPO	-	Chief Purchasing Officer
CSCM	-	Council of Supply Chain Management
ERP	-	Enterprise Resource Planning
EU	-	European Union
FMCG	-	Fast-moving Consumer Goods
IE	-	Industrial Ecology
IIoT	-	Interview Indicators of Trust
IJV	-	International Joint Ventures
IOT	-	Indicators of Trust
IP	-	Intellectual Property
KPI	-	Key Performance Indicator
KPM	-	Kraljic Portfolio Matrix
MNC	-	Multinational Company
NPD	-	New Product Development
OTV	-	Overall Trust Value
PPA	-	Purchasing Portfolio Approaches
RG	-	Relational Governance
SCRM	-	Supply Chain Relationship Management
SD	-	Standard Deviation
SSCM	-	Sustainable Supply Chain Management
TC	-	Trust Cluster
TCE	-	Transaction Cost Economics
TMS	-	Trust Management System
TMSF	-	Trust Management System Framework

- UK - United Kingdom
 US - United States
 WWII - World War 2

Glossary of Key Definitions

Term	Source	Definition
Ability	Usman, Tjiptoherijanto, Balqiah, and Agung (2017, p. 164)	“the skill and competency possessed by the trustee, which is influential in some specific domain.”
	Tian, Lai, and Daniel (2008, p. 348)	“that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain”.
Alliance	Gulati and Singh (1998, p. 781)	“An alliance is commonly defined as any voluntarily initiated cooperative agreement between firms that involves exchange, sharing, or co-development, and it can include contributions by partners of capital, technology, or firm-specific assets.”
Benevolence	Cook and Schilke (2010a, p. 104)	"Benevolence refers to the extent to which the trustor wants the trustee to do well".
Calculative trust	Saparito, Chen, and Sapienza (2004, p. 401)	“calculus-based trust, which identifies both cost and benefit attributes of meeting or failing to meet expectations.”
Collaboration	Naesens, Pintelon, Taillieu (2007, p. 32)	“Whenever companies work together on activities related to manufacturing or logistics, that activity is referred to as collaboration”.

Commitment	Dwyer, Schurr and Oh's (1987, p. 19)	"an implicit or explicit pledge of relational continuity between exchange partners."
	Daniel (2008, p. 349)	"as a channel member's intention to continue the relationship".
	Ramaseshan and Loo (1998, p. 447)	"an enduring desire to maintain a valued relationship".
	Morgan and Hunt (1994, p. 23)	"define relationship commitment as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely".
Communication	Ramaseshan and Loo (1998, p. 448)	"formal as well as informal sharing of meaningful information between firms".
Competence trust	Bunduchi (2013, p. 5)	"a partner's ability to perform according to expectations"
Discrete transactions	Macneil (1996, p. 60)	"Discreteness is the separating of a transaction from all else between the participants at the same time and before and after. Its [pure form], never achieved in life, occurs when there is nothing else between the parties, never has been, and never will be."
Dysfunctional conflicts	Ramaseshan and Loo (1998, p. 447)	"disagreements between the alliance partners that could not be resolved".
Flexibility	Sharif, Kalafatis, and Samouel (2005, p. 413)	"flexibility has been defined as the attitude amongst parties that an agreement is but a starting point to be modified as the market, the exchange, the relationship and the fortune of the parties evolve".
Functional conflicts	Ramaseshan and Loo (1998, p. 447)	"disagreements between the alliance partners that could be resolved amicably".

Inter-organisational trust	Zaheer, McEvily and Perrone (1998, p. 142)	"The term interorganizational trust is defined as the extent of trust placed in the partner organization by the members of a focal organization."
Interpersonal trust	Schlenker, Helm, and Tedeschi (1973, 419)	"(I)nterpersonal trust may be defined as a reliance upon information received from another person about uncertain environmental states and their accompanying outcomes in a risky situation."
Opportunism	Saleh et al. (2015, p. 271)	"Opportunism is a habitual human act that is driven by self-interest".
Organisation	Tomkins (2001, p. 176)	"An organisation may be thought of as a number of people who agree to act as a group".
Performance measurement	<i>Gunsekaran and Kobu</i> (2007, p. 2821)	"Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of an action".
Power	Ke, Liu, Wei, Gu, and Chen (2009, p. 839)	"Power refers to relative independence in a dyadic inter-organizational relationship".
Risk	Das and Teng (2001, p. 252)	"Risk is often conceptualized as variances in outcomes of importance to the risk-taking subject."
Satisfaction	Burkink (2002, p. 10)	"a positive affective state resulting from the appraisal of all aspects of a working relationship relative to alternatives experienced or observed".
	While Ruekert and Churchill (1984, p. 227)	"channel member satisfaction comprises the domain of all characteristics of the relationship between a channel member (the focal organization) and an- other institution in the channel (the target organization) which the focal organization finds rewarding, profitable, instrumental, and satisfying or frustrating, problematic, inhibiting, or unsatisfying."

Soft computing	Magdalena (2010, p. 158)	“a computational approach to solve problems under circumstances of uncertainty and/or imprecision, being those circumstances either inherent to the problem (the available information is imprecise) or “added” as a way to cope with (to soften) complexity”.
Specific assets	Williamson (2009, p. 464)	“Whatever the particulars, the basic regularity that is associated with transactions that are supported by investments in specific assets is that these assets cannot be redeployed to alternative uses and users without loss of productive value”.
Supply chain	Mentzer, DeWitt, Keebler, Min, Nix, Smith and Zacharia (2001, p. 4)	“a supply chain is defined as a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer.”
Supply chain trust	Spekman, Kamauff, and Myhr (1998, p. 56)	“Trust is simply one’s belief that one’s supply chain partner will act in a consistent manner and do what he/she says he/she will do. It is this sense of performance in accordance with intentions and expectations that hold in check one’s fear of self-serving behavior on the part of the other members of the supply chain.”
Supply chain integration	Flynn, Huo, and Zhao (2010, p. 58)	“the degree to which a manufacturer strategically collaborates with its supply chain partners and collaboratively manages intra- and inter-organizational processes, in order to achieve effective and efficient flows of products and services, information, money and decisions, to provide maximum value to the customer”.
Trusting intention	McKnight, Cummings, and Chervany (1998, p. 474)	“trusting intention, meaning that one is willing to depend on the other person in a given situation”.

1. Introduction

1. Chapter Abstract

Organisations face multiple challenges in the guise of threats, barriers and uncertainties in the marketplace that could hinder their ability to succeed (Hintsa *et al.*, 2009; Nooraie and Mellat Parast, 2015; Vitasek, 2016). Challenges such as an increase in competition in the market due to globalisation or rapid changes in technology and consumer demand (Anand and Grover, 2015; Soosay and Hyland, 2015; Singh and Teng, 2016; Ghadge *et al.*, 2017; Michalski, Montes and Narasimhan, 2019). As well as increasing levels of supply chain complexity caused by supply chain strategies such as the circular economy (CE) (Leising, Quist and Bocken, 2018) and new product development collaborations between organisations (Huang and Wilkinson, 2013; Ho, Ghauri and Larimo, 2018). From a transaction cost perspective, organisations facing considerable uncertainty may choose to place a higher degree of control over their activities by either employing vertical integration or by cultivating long-term collaborative buyer-supplier relationships (Van Dijk, 1995; McCombs, 2002; Tokman *et al.*, 2007; Kim *et al.*, 2012; Scholten and Schilder, 2015; Soosay and Hyland, 2015; Singh and Teng, 2016). Where collaboration refers to the ability of two or more organisations to work together strategically in a buyer-supplier relationship to achieve a shared objective (Scholten and Schilder, 2015; Soosay and Hyland, 2015). Organisations choosing to collaborate may benefit in several ways; for instance, an increase in supply chain flexibility, speed, and visibility, higher efficiency in spending resources, developing competencies, improved positioning in markets (Soosay and Hyland, 2015), and higher levels of operational performance (Jones *et al.*, 2014).

Collaborative buyer-supplier relationships, however, are not without challenges that may negatively impact the involved organisations and require effective governance (Dyer and Singh, 1998; Jones *et al.*, 2014; Michalski, Montes and Narasimhan, 2019). Governance of the buyer-supplier relationship refers to the mechanisms used to 'regulate' and 'facilitate' the

actions between the organisations (Poppo and Zenger, 2002; Arranz and Arroyabe, 2012). The challenges that organisations in collaborative relationships could face include acts of opportunism (Lui and Ngo, 2004; Pavlou and Gefen, 2004), or lack of performance (La and Choi, 2012), or power imbalances (Ghadge *et al.*, 2017; Sætrevik, Ghanonisaber and Lunde, 2018). To protect themselves from challenges, organisations within collaborative buyer-supplier relationships rely on effective governance mechanisms to ensure that their counterparts deliver on their promises (Gulati and Singh, 1998; Yang, Xu and Zhang, 2000). Two possible types of governance mechanisms available to organisations within collaborative buyer-supplier relationships are contractual and trust-based governance mechanisms which may be implemented together or by themselves to ensure adherence between the organisations (Jones *et al.*, 2014; Krishnan, Geyskens and Steenkamp, 2016; Fawcett *et al.*, 2017). The contractual governance mechanism, as supported by transaction cost theory, rely on detailed formal contracts with an extensive focus on terms and clauses detailing each organisation's obligations, rights, and sanctions for non-compliance (Krishnan, Geyskens and Steenkamp, 2016; van der Valk *et al.*, 2016; Vitasek, 2016). The trust-based governance mechanism supported by relational theory (Heide, 1994; Dyer and Singh, 1998; Krishnan, Geyskens and Steenkamp, 2016) represents an informal governance mechanism based on trust, a 'bilateral expectation' that each organisation will act in a befitting manner (Krishnan, Geyskens and Steenkamp, 2016).

When considering both contract-based and trust-based governance, some researchers view them as substitutes for one another where either trust or contracts can serve to achieve the desired outcome of governing the buyer-supplier relationship (Herz *et al.*, 2016; van der Valk *et al.*, 2016; Calderon-Monge and Pastor-Sanz, 2017). Alternatively, some researchers consider contract-based and trust-based governance as complementing one another, where trust and contracts support one another to achieve the desired outcome of the relationship. This thesis supports both views: that trust and contracts could act as either a substitute or a complement to one another. Regardless of whether trust-based governance is implemented as a substitute or a complement it requires indicators to signal the presence of trust behaviours (Cullen, Johnson and Sakano, 2000). Trust signalling behaviours between organisations have also been studied in the literature utilising several synonyms. For instance, they are also referred to as the variables of trust (Wright and Grace, 2011; Usman *et al.*, 2017),

or the components of trust (Perrone, Zaheer and McEvily, 2003), or the indicators of trust (IoT) (Cater and Kidwell, 2014; König and Schuknecht, 2019). For the sake of simplicity, the study refers to the term's indicators of trust or trust indicators. Similarly, the notion of trust between organisations has been studied and referred to using alternating designations in literature. For instance, trust between organisations has been referred to as organisational trust (Khalifa and Saad, 2017), or inter-organisational trust (Krishnan, Geyskens and Steenkamp, 2016; Staniskiene, Stankeviciute and Daunoriene, 2019; Szromek and Naramski, 2019), or inter-firm trust (Elliot, Zhu and Wang, 2019; Espadinha-Cruz and Grilo, 2019; Parast, 2019), or as business-to-business (B2B) trust (Zaheer, McEvily and Perrone, 1998; Saunders *et al.*, 2004; Jones *et al.*, 2014; Cherry, 2016; Vanneste, 2016). The scope of the study primarily focuses on inter-organisational trust and is referred to as trust throughout. When referring to trust between organisations, this study utilises the following definition as the primary interpretation of trust:

“Trust is simply one’s belief that one’s supply chain partner will act in a consistent manner and do what he/she says he/she will do.”

Spekman, Kamauff, and Myhr (1998, p. 56)

In a trust-relationship, the trustor represents the party that places its trust in another party, namely the trustee (van Esterik-Plasmeijer and van Raaij, 2017; Börjeson, 2018). Trust plays a vital role within supply chain management between the buyer and the supplier (Lee and Billington, 1992; Dekker, 2004; Wagner, Coley and Lindemann, 2011; Singh and Teng, 2016; Fawcett *et al.*, 2017; Elliot, Zhu and Wang, 2019; Staniskiene, Stankeviciute and Daunoriene, 2019). Organisations seeking to benefit from innovation and transformation are turning to long-term relationships where the competitive winning at all costs strategies are replaced by a collaborative relationship strategy (Ganesan, 1994; Yeung, Chan and Chan, 2009; Vitasek, 2016). Generally, industries are aware of the importance of trust for buyer-supplier collaborative relationships (Fawcett *et al.*, 2017). However, few industries have access to a mechanism to manage collaborative buyer-supplier relationships using trust (Fawcett *et al.*, 2012, 2017; Day *et al.*, 2013; Jones *et al.*, 2014). Alternatively, organisations may choose not to implement trust-based governance due to fear that their counterpart may act opportunistically or that it may result in conflict between the organisations (Fawcett *et al.*,

2017). There has been a call for research into understanding the nature of trust concerning its use as a governance mechanism (Fawcett *et al.*, 2017), where trust indicators are required to allow organisations to use trust to manage collaborative buyer-supplier relationships. Research to address this gap has provided several studies to identify the indicators of trust as discussed in Section 2.5. However, while the indicators of trust as identified in these studies are informative on a theoretical level, no studies have sought to validate their findings using industry feedback after the research analysis phases (Gamero *et al.*, 2011; van Esterik-Plasmeijer and van Raaij, 2017; Susanty Aries, Sirait Norma Mustiana and Bakhtiar Arfan, 2018). Moreover, the indicators of trust identified in the literature commonly lack generalisability due to the focus of the articles limiting the indicators to a geographic area (Khalifa and Saad, 2017; Usman *et al.*, 2017; Suparjo and Sunarsih, 2018) or a specific industry (Ozawa and Sripad, 2013; Saleh *et al.*, 2015; van Esterik-Plasmeijer and van Raaij, 2017). The research in the thesis addresses this gap by identifying the indicators of trust by analysing the newspaper articles supported by peer-reviewed journal articles. The findings of which have been subjected to feedback from industry experts. The research then implements the resulting indicators of trust to conceptualise a trust-based governance mechanism, titled the Trust Management Systems (TMS) model. The model provides a steppingstone for organisations within a collaborative buyer-supplier relationship to gauge, monitor, and improve the levels of trust.

1.2 Purpose of the Thesis

The purpose of the study is to develop a conceptual model for long-term collaborative buyer-supplier relationships to integrate trust as a strategic component. Organisations in industries engaged in complex supply chain strategies such as the sustainable supply chain and new product development collaborations require higher degrees of collaboration for successful implementation (Um and Kim, 2018; Dominguez *et al.*, 2019; Dora, 2019; Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Concerning innovation and transformation, Vitasek (2016) argued for the utilising of collaborative relationships between buyers and suppliers. While Michalski, Montes, and Narasimhan (2019) stated that trust and innovation are

'essential' for relational management and are the 'basic elements' required for the formation, organisation, and operation of the supply chain. Moreover, for organisations seeking to transition from a traditional supply chain to a sustainable supply chain, such as a circular economy, collaboration is considered to be essential (Leising, Quist and Bocken, 2018). Collaborative buyer-supplier relationships are considered too essential for complex supply chain strategies. Due to suppliers within arm's length relationships, as viewed from the Transaction Cost Economics (TCE) perspective, it generally seeks only to fulfil the buyer's exact specifications. With very little encouragement to provide additional value through innovation (Vitasek, 2016), requiring the need for organisations to distinguish which relationships are strategic and which are relegated to arm's length buyer-supplier relationships.

In order to identify which relationships qualify as being strategic, both academia and industry employ purchasing portfolio approaches (PPAs) (Montgomery, Ogden and Boehmke, 2018; Aloini *et al.*, 2019). The Kraljic Portfolio Matrix (KPM), developed by Kraljic in 1983, is grounded in TCE (Formentini *et al.*, 2019), and is a well-established and accepted purchasing portfolio model (Caniëls and Gelderman, 2005; Narsimhan and Ungarala, 2016; Montgomery, Ogden and Boehmke, 2018; Formentini *et al.*, 2019). As Figure 1-1 illustrates, the KPM utilises four quadrants categorising purchases based on an external dimension (supply risk/complexity) and an internal dimension (importance of the purchase). The thesis when using the term 'products' refers to both tangible goods and intangible services. The categories in the KPM were classified by Kraljic (1983) as being: bottleneck (low-profit impact, high supply), leverage (high-profit impact, low supply risk), noncritical (low-profit impact, low supply risk), and strategic (high-profit, high supply risk) (Ghadge *et al.*, 2017). The proposed TMS framework is specifically focused on relationships where the items in the exchanges (transactions) are categorised within the Strategic Items quadrant (high profit/high supply) of the KPM purchasing focus (see Figure 1-1).

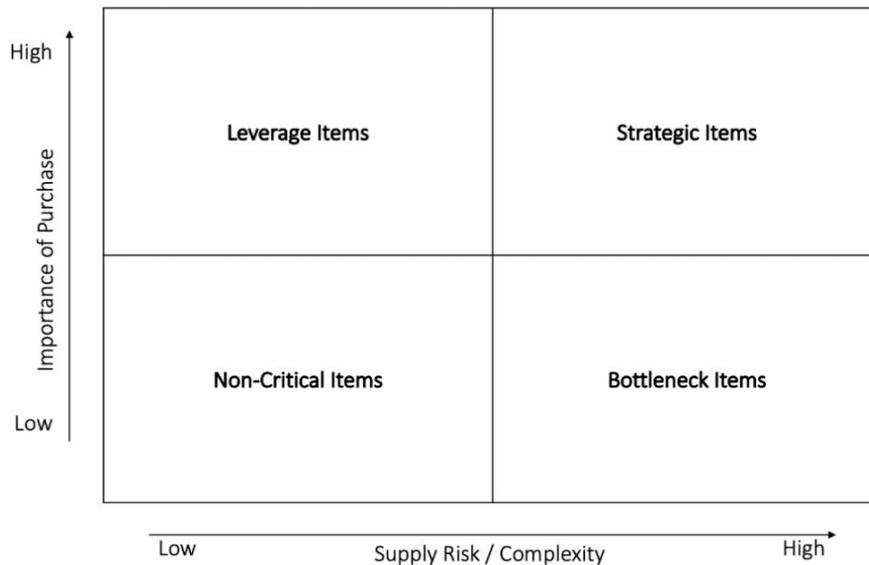


Figure 1-1 Kraljic Portfolio Matrix as adapted from Montgomery, Ogden, and Boehmke (2018)

Products classified as Strategic Items by Kraljic (1983) require decision-making from top-level management, focusing on developing long-term buyer-supplier relationships. These products are highly detailed, requiring long-term supply and demand information. Examples provided by Kraljic as being strategic items included Benzol Cyclohexane, high-value components, and scarce metals. The long-term nature of the relationship and the strategic importance of these products, as identified by Kraljic, are well suited for collaborative buyer-supplier relationships. When considering the need for innovation and transformation, the utilisation of a collaborative relationship is further emphasised (Revilla and Knoppen, 2015). The ability of the supplier to add 'differentiated incremental value' require the organisations to form a relationship, which allows the contracts between the organisations to be written in a manner that allows for innovation and transformation to occur in a relationship utilising repeated transactions over a long period (Vitasek, 2016). Organisations in collaborative relationships rely on signalling behaviours to gauge the state of the buyer-supplier relationship.

Signalling behaviours in the buyer-supplier relationship allow organisations to interpret their counterpart's actions, which is especially true when considering trust. Thus, the indicators of trust (as discussed in section 1.1) are implemented in the proposed TMS through the TMS framework, presented in Chapter 7, to function as key performance indicators (KPIs). KPIs are relied upon by decision-makers and top management to provide accurate data for making

strategic decisions (Chae, 2009; Azadeh *et al.*, 2015). Trust plays a significant role in the buyer and the supplier relationship despite it being elusive and fragile; however, the numerous benefits associated with having trust in the collaborative relationship warrant the pursuit of further research on trust between buyers and suppliers (Shin, Collier and Wilson, 2000; Cai *et al.*, 2013). The research presented in the thesis contributes to the extant knowledge of inter-organisational trust concerning collaborative buyer-supplier relationships.

1.3 Objective of the Thesis

The overall objective of this research is the development of a conceptual Trust Management Systems (TMS) and framework to enable organisations within a long-term collaborative buyer-supplier relationship to gauge, monitor, and improve the levels of trust within the relationship.

This overall objective can be broken down into the following sub-objectives:

1. To identify and validate the indicators of trust:
 - 1.1 Identifying the indicators of trust within a business or commercial context by analysing newspaper media utilising the Factiva database.
 - 1.2 Identifying the indicators of trust within peer-reviewed journal articles utilising the Scopus database.
 - 1.3 Validating the findings from the analysis of the Factiva database using interviews with supply chain experts.
 - 1.4 To compare and analyse the findings from the Factiva analysis, the Scopus analysis, and the feedback from the interviews with the supply chain experts.
2. To develop the Trust Management System.
3. To propose a framework to guide organisations when implementing the Trust Management System.

1.4 Research Phases

The research methodology employed in the thesis to develop the conceptual TMS model employed a qualitative research approach. The study reaches its objectives by moving through five main research phases:

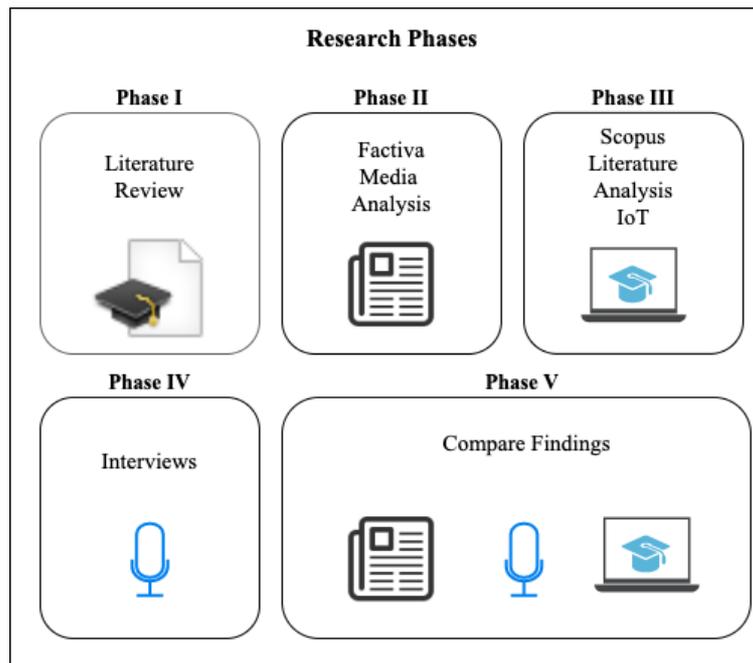


Figure 1-2 Research phases

Research phase I

Phase I is the review of peer-reviewed literature predominantly focused on trust in the supply chain. The literature review aims to familiarise the reader with the foundational knowledge surrounding the topic and to identify the research's focus. The literature review starts by providing a brief introduction to the concept of supply chain relationships and supply chain management. The chapter then discusses trust from the perspective of the supply chain. Trust in the supply chain plays a pivotal role in impacting the relationships between the supply chain members and, ultimately, the end-consumer. The literature review then explores trust in collaborative buyer-supplier relationships by discussing inter-personal trust and inter-

organisational trust before presenting the challenges to trust that can adversely impact the levels of trust between a buyer and a supplier. The literature review then discusses the indicators of trust in the literature before presenting a case study to illustrate the importance of trust in monetary terms to the buyer-supplier relationship. The chapter concludes by presenting the research focus of the thesis, highlighting the need for identifying indicators of trust validated by the industry. Additionally, the section considers the call for methodologies in the literature to progress performance measurement between organisations, especially when considering the measurement, monitoring, and building trust in buyer-supplier relationships.

Research phase II

Phase II relates to identifying of the indicators of trust through a content analysis of newspaper articles utilising the Factiva database. The newspaper media presents information that resonates with both businesses and consumers—providing a valuable source of information for understanding trust. The content analysis was accomplished by implementing a text analysis of newspaper articles to understand trust signalling behaviours as reflected in the newspaper media. The content analysis applied the NVivo software to identify and codify the indicators of trust from the media's perspective.

Research phase III

Phase III describes how an empirical qualitative content analysis of peer-reviewed journals was performed to identify the existing indicators of trust within journal articles in the Scopus database. The purposeful literature review utilised NVivo software to identify and codify the indicators of trust from the perspective of academia.

Research phase IV

Phase IV presents the results from the Factiva media analysis (Phase II) to industry experts to validate the applicability of the identified indicators of trust for use in the supply chain. Here, five experts with over 85 years of experience from various industries were invited to participate in semi-structured interviews providing verbal (interviews) and non-verbal (questionnaires) data collections. The NVivo software was applied to identify and codify concepts and indicators of trust.

Research phase V

Phase V compares the findings resulting from Phase II to Phase IV to structure the TMS indicators of trust and the TMS trust clusters for the proposed Trust Management System.

1.5 The Significance of this Thesis

The purpose of the study is the development of the Trust Management System (TMS) model (see Figure 1-3). The TMS provides a conceptual representation of a mechanism to support organisations in collaborative buyer-supplier relationships when implementing trust-based governance. The thesis also provides a practical TMS artefact to illustrate the potential application of the system. The TMS aims to facilitate organisations within collaborative buyer-supplier relationships to build and maintain trust between the organisations. Allowing organisations to take advantage of the significant benefits of trust while reducing organisations reliance on costly and inflexible contract-based governance mechanisms (Dyer, 1997; Wang, Yeung and Zhang, 2011; Herz *et al.*, 2016). The Trust Management System (TMS) model and practical artefact utilise the indicators of trust identified in the thesis. These indicators may apply to groups and organisations within various sectors. Additionally, the thesis presents a framework to guide how organisations could apply the TMS in strategic collaborative relationships. Moreover, the thesis contributes to the overall understanding of supply chain management by examining supply chain relationship theory and relationship governance by focusing on collaborative buyer-supplier relationships that implement trust as a relationship governance mechanism. Traditionally, the supply chain management literature has focussed extensively on contract-based governance as the primary means of governing relationships between the buyers and suppliers (Krishnan, Geyskens and Steenkamp, 2016; Vitasek, 2016). However, as buyer-supplier relationships have developed over time, there has been a shift in focus towards implementing relational governance when considering collaborative relationships in the supply chain (Poppo and Zenger, 2002; Zhao *et al.*, 2019). Furthermore, the thesis contributes to the growing body of knowledge concerning relational governance by exploring trust and trust-based governance and develops a conceptualised mechanism (model) and framework to implement the system.

While previous studies of trust have focussed on identifying the indicators of trust, none have utilised the newspaper media as the source of the indicators. By identifying the indicators of trust identified in the newspaper media, that industry experts have then validated, the study provides an alternative perspective when discussing trust. Additionally, the study provides a stepping-stone for future research focussed on quantifying trust in buyer-supplier relationships by identifying and illustrating the utility of the indicators of trust identified in the study. The study provides managerial significance by providing valuable insights into how trust is perceived within collaborative buyer-supplier relationships. Additionally, the thesis provides organisations with a framework to guide implementing trust as a governance mechanism. Moreover, the framework provides organisations seeking to improve trust with both comprehensive and focussed approaches.

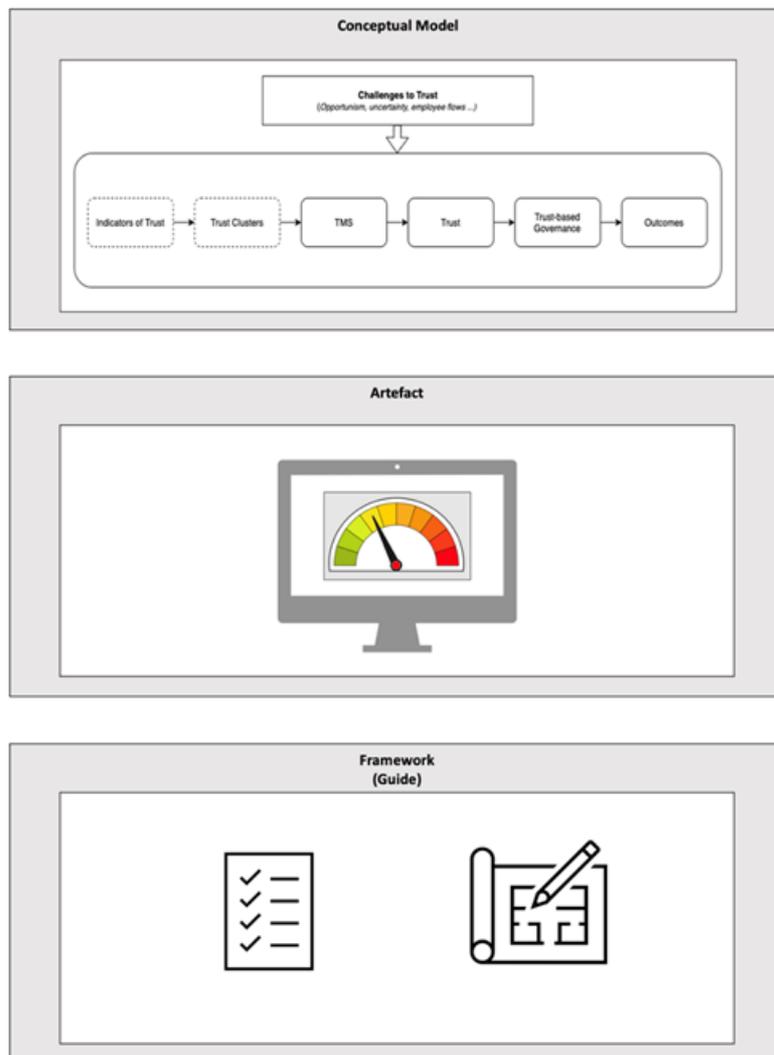


Figure 1-3 Thesis Outcomes

1.6 Outline of the Thesis

Chapter 1 - this chapter served as an introduction to the thesis by presenting the main topics discussed in the thesis before highlighting the importance of trust-based governance for collaborative buyer-supplier relationships. The chapter identified the purpose of the thesis before then outlining the objectives of the thesis. Additionally, the chapter presented the research methodologies used in the thesis. The chapter then addressed the significance of the thesis before providing an outline of what was to come.

Chapter 2 - provides a theoretical understanding of the existing research and demonstrates the gap in the literature the thesis addresses. The literature review defines the concepts and discusses the theory related to trust and the governance of the buyer-supplier relationship (Research Phase I).

Chapter 3 – discusses the research methodology employed in the thesis. The chapter starts by discussing the research aims and objectives. The chapter will then discuss the theory supporting the research methodology, starting with the research philosophy, the research approach to the theory development, the research choice, the type of research strategy, and the research time horizon. The chapter then discusses the ethical considerations and limitations of the research before presenting the research procedures.

Chapter 4 - the purpose of the chapter is to discuss the content analysis employed to identify trust indicators. The chapter discusses the procedures employed for the content analysis of the newspaper articles (Research Phase II) and the content analysis of peer-reviewed journal articles (Research Phase III).

Chapter 5 - presents the interview procedures implemented with supply chain experts to validate the indicators of trust identified from Factiva content analysis (Research Phase III). The chapter discusses the interview research methodology applied by first discussing the interview guide (Research Phase IV). The chapter then provides background information of the interviewees before discussing the interview process.

Chapter 6 - presents and discusses the research findings (Research Phase V). The chapter starts by presenting the Factiva content analysis findings before presenting the Factiva thematic clusters of the indicators of trust. It then presents the thematic clustering of the indicators that resulted from the Factiva content analysis. The chapter then presents the Scopus content analysis findings before presenting the Scopus thematic groupings of the indicators of trust. The chapter then presents and discusses the findings from the interviews. Subsequently, the chapter concludes by applying methodological triangulation before discussing the findings from both a media and industry perspective.

Chapter 7 - presents the conceptual Trust Management System (TMS) model. The chapter starts by first presenting the purpose of the system before presenting the conceptual model. The chapter then discusses the methodology and selection of the indicators of trust for implementation in the Trust Management System. The chapter then provides an overview of a conceptualised model of the Trust Management System as an artefact before providing examples to illustrating the utility of the system in addressing problems that may arise within the buyer-supplier relationship (BSR). The chapter then concludes by providing a framework as a guide to how organisations could implement the system.

Chapter 8 - serves as the discussion and conclusion chapter of the thesis. The chapter provides a summary and the research phases employed in the thesis before responding to the research objectives of the thesis. The chapter then discusses the significance of the research, after which it discusses future research that could stem from the research before concluding the thesis.

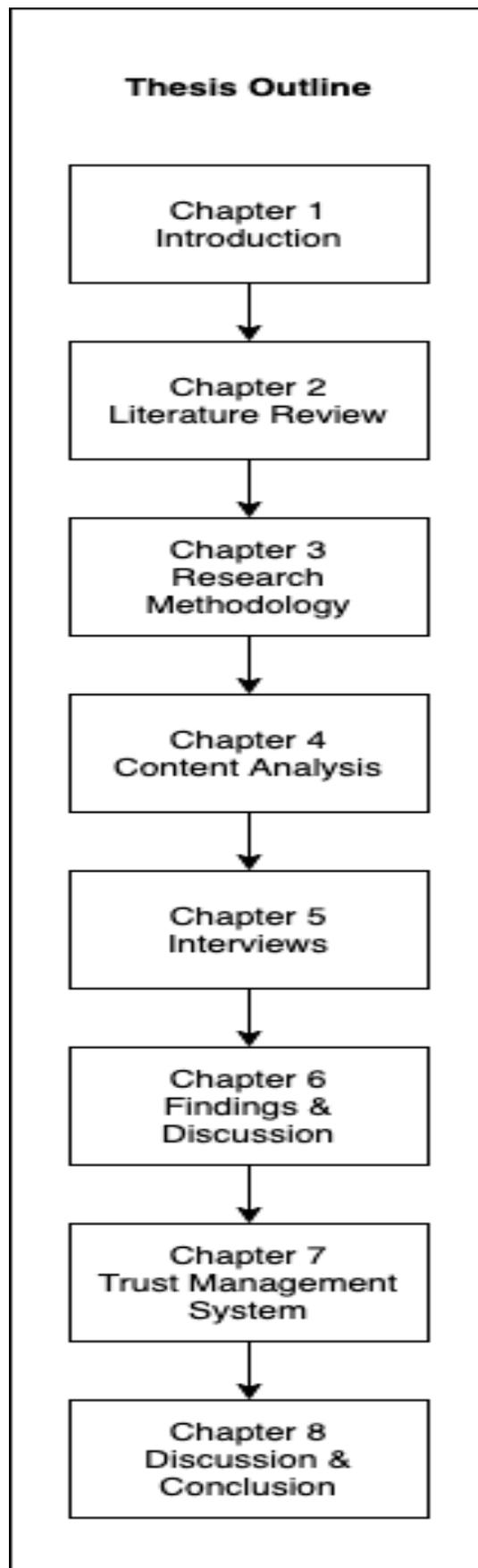


Figure 1-4 Thesis outline

2. The Literature Review

2.1 Chapter Abstract

To help protect from challenges in the marketplace and capitalise on the significant benefits linked to collaboration, more organisations choose to engage in long-term collaborative relationships (Soosay and Hyland, 2015; Vitasek, 2016; Dave *et al.*, 2018). To ensure both the buyer and the supplier in collaborative relationships adhere to the agreements made requires implementing a governance mechanism (Michalski, Montes and Narasimhan, 2019). As trust-based governance plays a significant role as either a complement or substitute to contract-based governance, the research proposes the value of the Trust Management System (TMS). This chapter, the literature review chapter, provides the foundational knowledge most relevant to the research in the study by reviewing the topics of supply chain management and trust. As trust plays a central role in the study, it has been linked with the principal concepts throughout the chapter.

The literature review starts by examining the supply chain management literature. Supply chain relationships are explored from a supply chain management perspective emphasising the role of relationships and collaboration for supply chain success. Co-development of new products and sustainability are then discussed as collaboration intensive initiatives, further accentuating the need for collaboration and trust in the supply chain. Trust is then discussed from a broad supply chain perspective highlighting both the benefits and difficulties of trust before reviewing extant literature on the topic. The literature review then focuses on buyer-supplier relationships by first exploring how buyer-supplier relationships have developed over time before discussing the types of buyer-supplier relationships. Establishing the collaborative buyer-supplier relationship as the chapter transitions to where in the buyer-supplier relationship the system belongs. The chapter lays the foundation for where the system belongs by discussing both contract-based and trust-based governance of buyer-

supplier relationships before shifting the focus of the literature review from the supply chain to that of trust.

The literature review then examines the trust literature. Highlighting the value of trust as it is shown to be rare, fragile, and complicated. Trust is then shown to be multi-levelled, applying to both individuals and organisations. Motivation is then provided for why the trust should be applied in the relationship by focussing on the consequences of trust, the challenges to trust, and the financial reward associated with trust. The chapter then presents the literature discussing trust indicators and identifies the indicators as critical elements of the buyer-supplier relationship. The literature review chapter concludes by presenting the research focus of the study by identifying the gap in the literature and the call from academia for the research presented in the thesis. A table describing the content of the literature reviews has been placed in Appendix XXV.

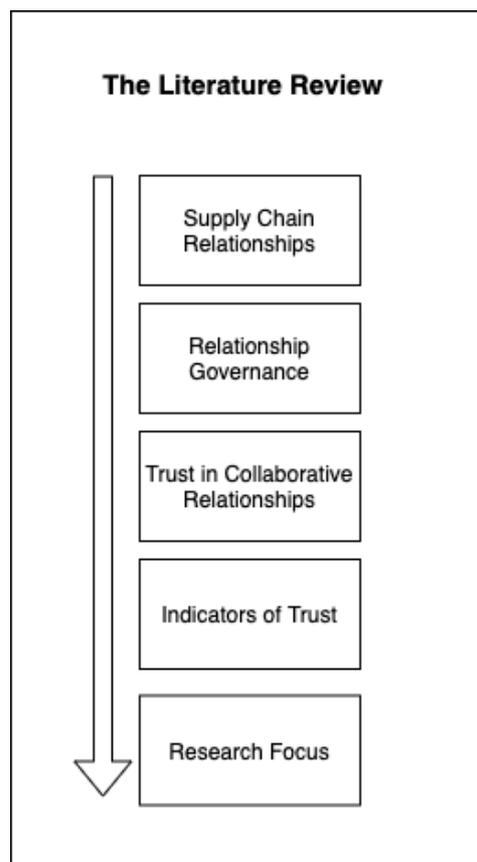


Figure 2-1 Overview of the Literature Review

2.2. Supply Chain Relationships

Supply chain relationships play a pivotal role in the success of the entire supply chain. Collaboration and trust enable the members of the supply chain to cultivate strong relationships. However, the degree to which organisations choose to collaborate is often predicated on the type of relationship between the buyer and the supplier.

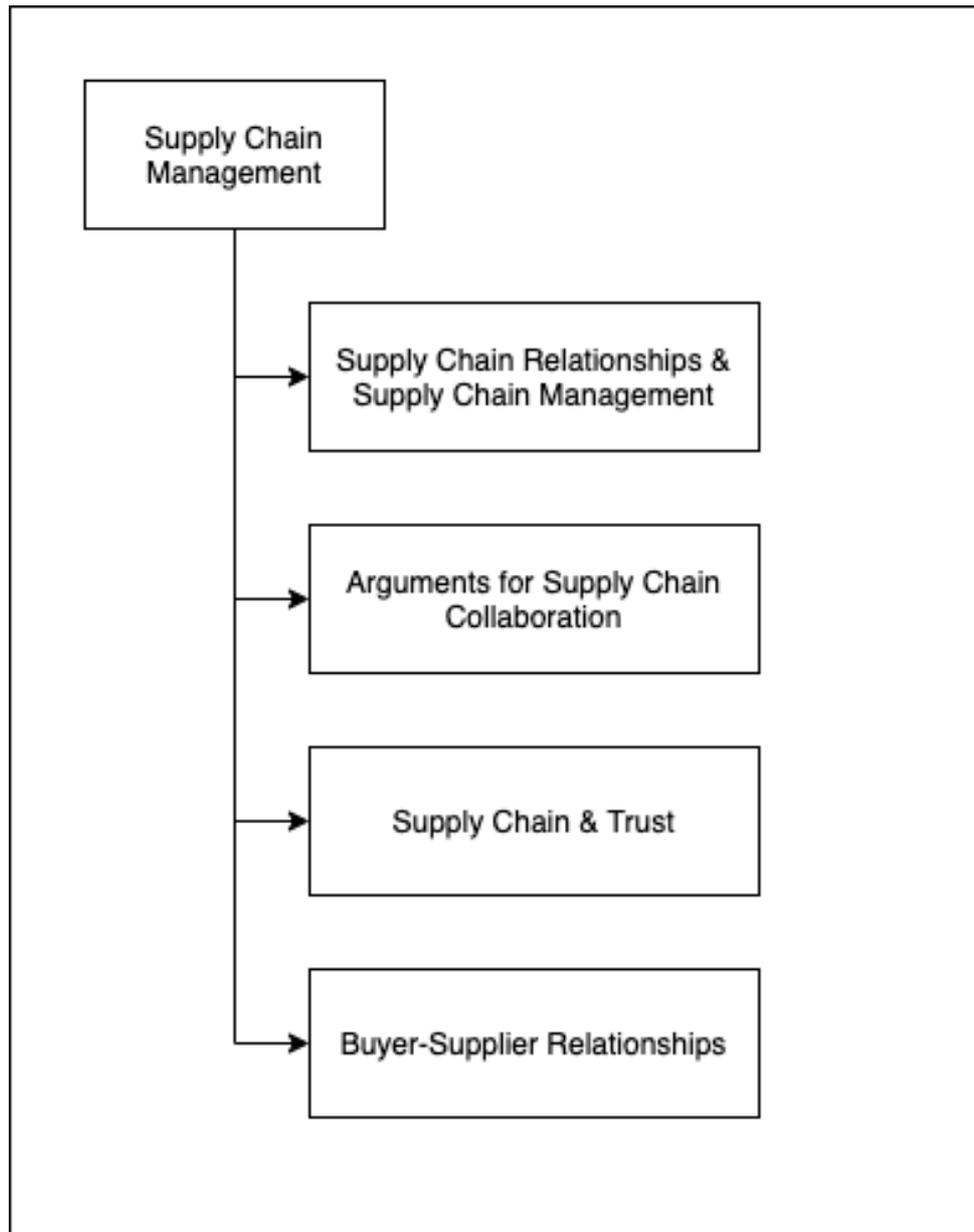


Figure 2-2 Supply chain relationships overview

2.2.1. Supply Chain Relationships and Supply Chain Management

The significance that organisations place on the supply chain has evolved from focusing primarily on the product, to include the role that the supply chain plays as a source of competitive advantage (Anand and Grover, 2015). The term supply chain relationship, also referred to as a buyer-supplier relationship (Wagner and Johnson, 2004), refers to both interpersonal relationships and inter-organisational relationships between members in a supply chain. Interpersonal supply chain relationships refer to the relationships between employees of separate organisations working on behalf of their respective organisations in a supply chain. In contrast, inter-organisational supply chain relationships refer to the relationships between organisations in a supply chain (Wagner and Johnson, 2004). The relationships between the members (organisations) in a supply chain play a significant role in understanding how the supply chain works and the roles of the members within it (Lee and Woo, 2019). The types of relationships in a supply chain range from the traditional arm's length buyer-supplier relationship to collaborative buyer-supplier relationships (Goffin, Szejczewski and New, 1997; Wagner and Johnson, 2004) (see Section 2.2.4). The thesis focuses primarily on the collaborative buyer-supplier relationship in the supply chain environment due to the interest of the organisations in preserving the relationship.

Supply chain management has become a central focus for organisational management due to the competitive advantage that it provides organisations (Anand and Grover, 2015; Papparoidamis, Katsikeas and Chumpitaz, 2019a). The term supply chain management refers to the management philosophy associated with the understanding and control of the activities within the supply chain (Mentzer *et al.*, 2001). The study applies the definition of supply chain management as proposed by the Council of Supply Chain Management Professionals (CSMP, 2020):

Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration

with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.

For the most part, supply chains refer to large and complex networks of individual organisations (Leising, Quist and Bocken, 2018; Sarkis, Santibanez Gonzalez and Koh, 2019). The main objective of supply chains is to deliver value to both customers and stakeholders through production and distribution in a sustainable and cost-effective manner (Lima-Junior and Carpinetti, 2017). To accomplish this objective, the supply chain must both be efficient and responsive which requires strong levels of collaboration between supply chain members (Narayanan, Narasimhan and Schoenherr, 2015; Panahifar *et al.*, 2018). Supply chain collaboration is based on mutual trust, openness, and the sharing of risks and rewards (Soosay, Hyland and Ferrer, 2008). Strong collaboration in the supply chain enables the participating organisations to have an increased ability to address various market forces such as competition, cost reduction, sustainability and innovation with a higher degree of success (Fawcett *et al.*, 2012; Salam, 2017). Traditionally organisational success has been focussed on the internal processes of the organisation, with the transactions only considering 'the simple transfer of ownership' (Matopoulos *et al.*, 2007). However, the last couple of decades have seen a shift of focus from this internal focus to an external focus on organisational collaboration in the supply. This shift in focus benefits both the individual organisations and the supply chain as a whole (Ramanathan, Gunasekaran and Subramanian, 2011; Panahifar *et al.*, 2018).

The literature identifies several benefits that may result from effective collaboration in the supply chain. For example, effective supply chain collaboration allows organisations facing threats, barriers, and uncertainties (cumulatively referred to as challenges in the study) to be more competitive in the market and to benefit from improved information sharing abilities (Soosay and Hyland, 2015; Panahifar *et al.*, 2018). Organisations sharing information on performance data with supply chain members improve the overall performance of the entire supply chain (Ramanathan, Gunasekaran and Subramanian, 2011). Furthermore, the ability to collaborate in the supply chain helps organisations to mitigate the impacts of the bullwhip effect by allowing for improved forecasting (Almeida *et al.*, 2017; Panahifar *et al.*, 2018).

Additionally, organisations who are able to collaborate effectively improve the utilisation of resources (Fawcett *et al.*, 2012; Soosay and Hyland, 2015). Organisations effectively collaborating within the supply chain have shown to improve the resilience of the supply chain (Scholten and Schilder, 2015). Also, collaboration between supply chain partners can lead to a reduction in costs (Matopoulos *et al.*, 2007; Panahifar *et al.*, 2018), while also increasing revenue growth for the organisations (Matopoulos *et al.*, 2007).

Supply chain relationships on both an interpersonal and inter-organisational level play a significant role in determining the success of a supply chain. As the main objective of the supply chain is to deliver value through production and distribution, the collaboration between the members of the supply chain is essential. The following section argues the merits of healthy levels of collaboration by discussing new product development and sustainable supply chain management as examples of complex supply chains.

2.2.2. Arguments Promoting Supply Chain Collaboration

For the members in the supply chain to be efficient and responsive it requires strong levels of collaboration. The following section discusses new product development and sustainable supply chain management as key examples of supply chain initiatives that require increased levels of collaboration between supply chain partners. These industries serve as examples of the type of organisations that would stand to benefit from a mechanism that would improve collaboration through trust.

2.2.2.1. Supply Chain Collaboration and New Product Development

Collaboration in the supply chain is required to drive the innovation and transformation essential for new product development (Melander and Lakemond, 2015; Um and Kim, 2018; Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Innovation is a knowledge intensive activity that is highly structured within supply chain networks where suppliers should be

treated as part of an organisation's technical and business functions (Wang, Yeung and Zhang, 2011). Due to the repeated transactional nature of the relationship, suppliers within collaborative buyer-supplier relationships are able to provide the buyer with value that exceeds the limitations placed in the contract resulting in higher levels of innovation and transformation (Yeung, Chan and Chan, 2009; Revilla and Knoppen, 2015; Vitasek, 2016). Innovation and transformation are essential when considering new product development (NPD) (Kahn, 2018) which may significantly benefit from organisations forming collaborative relationships.

The co-development of new products often involves complex projects (Bernstein, 2015) that involve the relational exchange between two or more organisations in a long-term joint effort (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). New product development (NPD) collaborations with external organisations have, in general, replaced previous NPD development practices (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). However, the quality of collaboration between the organisations considerably impacts whether the NPD project will be a success or a failure (Um and Kim, 2018). Organisations collaborating on NPD projects face challenges that endanger the joint efforts of the organisations.

Uncertainty is inherent in NPD collaborations and creates several challenges for the organisations involved in the development of a new product (Pemartín, Sánchez-Marín, and Munuera-Alemán 2019, Callia et al. 2007, Jap 2001). These challenges may include increased difficulty when defining work plans, the calculation of the required contributions for each organisation ahead of time, and the equitable distribution of outcomes³³(Um and Kim, 2018; Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). NPD collaborations are also at higher risk of a counterpart acting opportunistically (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Due to the uncertain nature of NPD collaborations and risks, the contracts between the organisations need to be kept open to allow organisations to learn and adapt continuously (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Authors such as Melander and Lakemond (2015) stated that the governance of NDP collaboration projects included contractual arrangements, shared goals, and trust. The authors suggested that organisations in NPD collaborations utilise a combination of contract-based transactional

governance (see Section 2.3.2), and trust-based relational governance such as trust (see Section 2.3.4).

Organisations in NPD collaborations endeavouring to overcome uncertainty and risk proactively try to improve the levels of trust between the organisations (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Trust is considered to be vital in collaborative relationships, however, this importance increases in NPD collaboration relationships due to the exchange of valuable proprietary information (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019). Melander and Lakemond (2015) suggest a combination of governance mechanisms which may include transactional and relational governance for NPD collaboration projects. Emphasising the need for a framework for collaborating organisations to aid in the implementation of relational governance between organisations is developed in this dissertation.

2.2.2.2. Supply Chain Management and Sustainability

The significance of collaboration in the supply chain is also apparent in the high levels of collaboration required in order to implement sustainable supply chains effectively (Seuring and Müller, 2008; Dominguez *et al.*, 2019; Dora, 2019; Sarkis, Santibanez Gonzalez and Koh, 2019). Organisations and their stakeholders are increasingly becoming aware of the importance of sustainability. This awareness has placed pressure on organisations to shift from a traditional model of the supply chain, which focusses only on value creation, to a sustainable chain model, which focusses on the creation of value while preserving the environment alongside business and social facets (Bocken *et al.*, 2016; Difrancesco and Huchzermeier, 2016; Dubey *et al.*, 2017; Govindan and Soleimani, 2017). This has led to sustainable supply chain management (SSCM) becoming a strategic process that is used to help organisations achieve a competitive advantage (Genovese *et al.*, 2017).

Sustainable supply chain management refers to the cooperation of organisations to achieve the objectives based on the three dimensions of sustainable development (economic, environmental, and social dimensions, to manage the flows of capital, material and

information (Seuring and Müller, 2008; Dubey *et al.*, 2017). Sustainable supply chain management differs from the general supply chain management definition from the Council of Supply Chain Management (CSMC) (as presented in Section 2.2.1) in that it places less emphasis on the activities in the supply chain and more on the three dimensions of sustainability. Both definitions, however, share the sentiment that collaboration is required between supply chain partners. Sustainable supply chain network strategies require higher levels of supply chain collaboration due to the complexity of sustainable supply chains and the increased levels of information sharing required to implement them (Dominguez *et al.*, 2019; Dora, 2019; Sarkis, Santibanez Gonzalez and Koh, 2019). A popular subset of the sustainable supply chain management is the concept of the circular economy which requires high levels of supply chain collaboration to reach its objectives.

2.2.2.2.1. The Circular Economy

The circular economy involves the creation of self-sustaining production systems where resources are continuously reused (Genovese *et al.*, 2017) as opposed to the traditional linear approach of production which utilises a 'take-make-use-dispose' approach (Bocken *et al.*, 2016; Hartley, van Santen and Kirchherr, 2020). The circular economy, also referred to as circularity (Cardoso *et al.*, 2019), is rooted in industrial ecology (IE) and examines industrial systems and the development of closed material loops able to sustain itself (Bocken *et al.*, 2016; Leising, Quist and Bocken, 2018). Successful transition to a circular economy requires buyers and suppliers to collaborate by collecting and sharing of data, the creation of examples, and to improve innovation (Dora, 2019). Organisations applying the circular economy supply chain model require a high degree of collaboration. The need for higher levels of collaboration stems from the need of organisations from a variety of disciplines in the supply chain to work together to achieve their shared vision of employing the circular economy strategy by assigning responsibilities to all stakeholders within the supply chain (Leising, Quist and Bocken, 2018; Dora, 2019). The support for the circular economy has grown, as a sustainable supply chain management approach to replace the traditional linear supply chain.

The concept of the circular economy has gained popularity within academia, business industries (Kirchherr, Reike and Hekkert, 2017; Leising, Quist and Bocken, 2018), and governments (Hartley, van Santen and Kirchherr, 2020). With governments such as the European Union (EU) (Korhonen, Honkasalo and Seppälä, 2018; Schröder, Lemille and Desmond, 2020), Canada, China, Japan, and the United Kingdom (UK) promoting its application (Korhonen, Honkasalo and Seppälä, 2018). Sustainability literature supports the application of the circular economy for sustainable production and development to occur, stating that industries need to evolve from a linear production model to a circular model to reduce waste (Leising, Quist and Bocken, 2018; Dora, 2019; Hartley, van Santen and Kirchherr, 2020; Schröder, Lemille and Desmond, 2020). The importance of collaboration for the implementation of the circular economy has been supported in the sustainable supply chain literature.

Cardosa, Machado, Chiappetta, & Lopes (2019) argue the need for further research into governance in the circular economy, and that both formal and informal governance mechanisms can positively impact the introduction of the circular economy as a green practice. Their study concerns a cosmetics supply chain, in which the formal governance mechanisms consisted of contracts and environmental norms, and the informal or relational governance mechanisms, consisted of trust and cooperation. In their study, trust is identified as an essential variable to informal governance mechanisms. Furthermore, trust and cooperation were found to aid in the adoption of sustainable practices in the supply chain. Dora (2019) researched collaboration in the supply chain and the circular economy from an agricultural perspective focussing on food waste management. The article explored how suppliers, the farmers, managed the various collaborative relationships in the supply chain to reduce waste. Their research identified that to achieve sustainable practices, collaborative relationships were required in the supply chain. These collaborative relationships could be instigated by stakeholders by developing a collaborative culture — the authors relating to the collaborative nature of the relationships in the circular economy as being symbiotic.

Bao, Lu, Chi, Yuan, and Hao (2019) researched procurement innovation in the construction and demolition (C&D) waste industry. The authors utilised a case-study from a C&D waste recycling project in Suzhou, China. The authors identified that one of the lessons learnt from

the case study was that the contract between the public and private organisation tended to be relational: an informal contract based on verbal agreements. The authors noted that both academia and practitioners have started to understand the drawbacks associated with the traditional contract-based governance mechanism. The authors identified that relational contract type agreements are able to aid organisations in public-private partnerships to reduce negotiation times, deal with ad hoc problems, allow for the development of the circular economy and to build trust between the organisations. The authors noted that how the verbal agreement was supported between the organisations was based on trust and collaboration. Leising, Quist, and Bocken (2018) examined three pilot projects in the Dutch building sector and proposed a tool for supply chain collaboration in the circular economy. The authors examined the network dynamics of the relationships between the organisations (actors) by analysing their essential activities for building the projects and the relationships between the organisations. strategic (continuity) it led to the formation of trust which in turn led to a collaborative attitude.

These studies highlight the importance of supply chain collaboration and relational governance when implementing a complex supply chain system, and the positive impact of trust between organisations. Organisations that can successfully implement the circular economy as a supply chain strategy are able to take advantage of the environmental (Bocken *et al.*, 2016; Witjes and Lozano, 2016; Genovese *et al.*, 2017; Leising, Quist and Bocken, 2018; Dora, 2019), economic, and social benefits that this strategy offers (Genovese *et al.*, 2017; Dora, 2019). The circular economy may additionally serve as a method to create an industrial symbiosis where the waste from one industrial process is utilised within another process of product line (Bocken *et al.*, 2016).

Despite the growing interest in the circular economy within academia, business, and governments, only nine percent of the global economy has adopted the strategy (Hartley, van Santen and Kirchherr, 2020). An increase in the number of organisations utilising a supply chain strategy heavily reliant on supply chain collaboration calls for a governance mechanism framework based on trust to help organisations breach the limitations of traditional contract-based mechanisms.

2.2.3. The Supply Chain and Trust

Trust improves the supply chain and supply chain relationships (Yang et al. 2020, Michalski et al. 2019, Fawcett et al. 2017). The literature abounds with articles that boast the benefits of trust, for instance, from a financial perspective, trust in the supply chain has been shown to improve economic performance, lower transaction costs (Paparoidamis, Katsikeas and Chumpitaz, 2019a; Yang *et al.*, 2020) and helps organisations by improving their competitive advantage (Fainshmidt and Frazier, 2017; Michalski, Montes and Narasimhan, 2019; Staniskiene, Stankeviciute and Daunoriene, 2019). Trust between supply chain partners has shown also to improve the profitability of organisations (Fawcett *et al.*, 2017) (see Section 2.4.3.2). Despite evidence promoting the benefits of trust for organisations, the reality is that for the most part organisations in the supply chain do not trust their counterparts (Jones *et al.*, 2014).

Trust is difficult to establish in the supply chain (Minerbo *et al.*, 2018). There are several reasons why the members in the supply chain may distrust their counterparts (Yang et al. 2018, Manu et al. 2015). A lack of trust between organisations may stem simply from a lack of understanding or lack of ability on the part of the organisations to express their trustworthiness to their respective counterparts (Jones *et al.*, 2014). Alternatively, the lack of trust between organisations may be due to external challenges such as opportunism and uncertainty which may negatively impact the supply chain (Yang *et al.*, 2018). A lack of trust between organisations in the supply chain could, for instance, prevent organisations from forming closer organisational ties such as strategic alliances (Gambetta, 2000; Laeequddin *et al.*, 2010). Additionally, a lack of trust has shown to impede collaboration between organisations. For instance, Brooks, Leaver, Spence, Elliot, and Dean (2017) researched the perceptions of trust, agency, and power within the Northern Irish beef industry to determine how weaker organisations (actors) in the industry characterised accommodation by more influential organisations. Brooks et al. (2017) noted that the discussion of trust and power in the supply chain had transitioned from using power as coercion to a more collaborative approach over the last 40 plus years. The use of coercive power in the supply chain by meat processors had negatively impacted the trust farmers had in one another and the trust they

had in the meat processors. This lack of trust between the organisations in the supply chain was shown to have negatively impacted how organisations collaborated as the buyers in the low trust relationship viewed the suppliers as adversarial.

Abdallah A.B., Abdallah M.I., and Saleh (2017) examined the effect of trust with suppliers within hospital supply chains in Jordan and found that trust had a positive impact on the hospital supply chain performance and supply chain integration with suppliers. The authors selected trust as a factor that impacted performance because trust is an intangible component of social capital, the importance that trust plays in supply chain management, and the lack of existing literature discussing the impact of trust on supply chain performance and supply chain integration. Notably, supplier integration in the supply chain was found to help transform trust into supply chain performance — with the authors stating that trust was central to collaboration within the healthcare supply chain system. While Panahifar, Byrne, Salam, and Heavey (2018) researched the role of trust and information sharing on supply chain collaboration and organisational performance in Thailand and found that trust was foremost in supply chain collaboration.

Trust plays an essential role for collaboration among supply chain organisations (Abdallah Ayman Bahjat, Abdullah Mais Issam and Mahmoud Saleh Firas Izzat, 2017; Brooks *et al.*, 2017; Panahifar *et al.*, 2018; Yang *et al.*, 2020), which influences the buyer-supplier relationships within the supply chain.

2.2.4. Buyer-Supplier Relationships

The relationship between the buyer and the supplier has developed over time. Allowing the members of the buyer-supplier relationship to take advantage of the benefits afforded through the implementation of strategic sourcing. However, not all types of buyer-supplier relationships are able or even inclined to implement strategic sourcing as a strategy.

2.2.4.1. The Development of Buyer-Supplier Relationships over time

The buyer-supplier relationship has developed significantly over time. For most of the twentieth century, organisations utilised Adam Smith's simple transaction-based approach until the 1980s when authors such as Porter (1980) and Kraljic (1983) suggested that organisations view procurement from a strategic perspective (Vitasek, 2016). The 1980s saw organisations gradually shifting towards more cooperative approaches due to competition from abroad and embracing collaborative practices such as total quality management and lean manufacturing (Choi and Wu, 2009). In 1984 Watson proposed the utilisation of the 'buyer-supplier stability matrix' based on price and margins while researching dependence and power in buyer-supplier relationships which emphasised the push to a more strategic view of procurement (Watson, 1984). However, it was not until the 1990s that organisations in general started to implement Porter's Five Forces model and the Kraljic Matrix (Vitasek, 2016). The 1990s then saw a relationship focus shift from industrial distribution relationships to buyer-supplier relationships (Ellram and Ueltschy Murfield, 2019), with collaboration in buyer-supplier relationships emerging in the 1990s. In 1993, Han, Wilson, and Dant (1993) examined the changes in perception in the industrial marketplace concerning the buyer-supplier relationships. The authors found that there was a shift in the industry to reduce the number of suppliers signifying a shift in the arm's length buyer-supplier relationship. Circa 2006, collaboration started appearing as a central theme in the supply chain management literature (Ellram and Ueltschy Murfield, 2019), signifying a shift from the internal organisational perspective to a greater acknowledgement of the need to improve collaboration between supply chain partners (Choi and Wu, 2009; Ellram and Ueltschy Murfield, 2019). There is a growing consensus that the arm's length approach to the buyer-supplier relationship does not always allow organisations to achieve or optimise their objectives (Soosay and Hyland, 2015; Zhao *et al.*, 2019). There has been a significant increase in the focus being paid to collaborative buyer-supplier relationships from a relational theory perspective over the last two decades (Zhao *et al.*, 2019). A recent development has seen organisations shift to a strategic sourcing approach when considering buyer-supplier relationships.

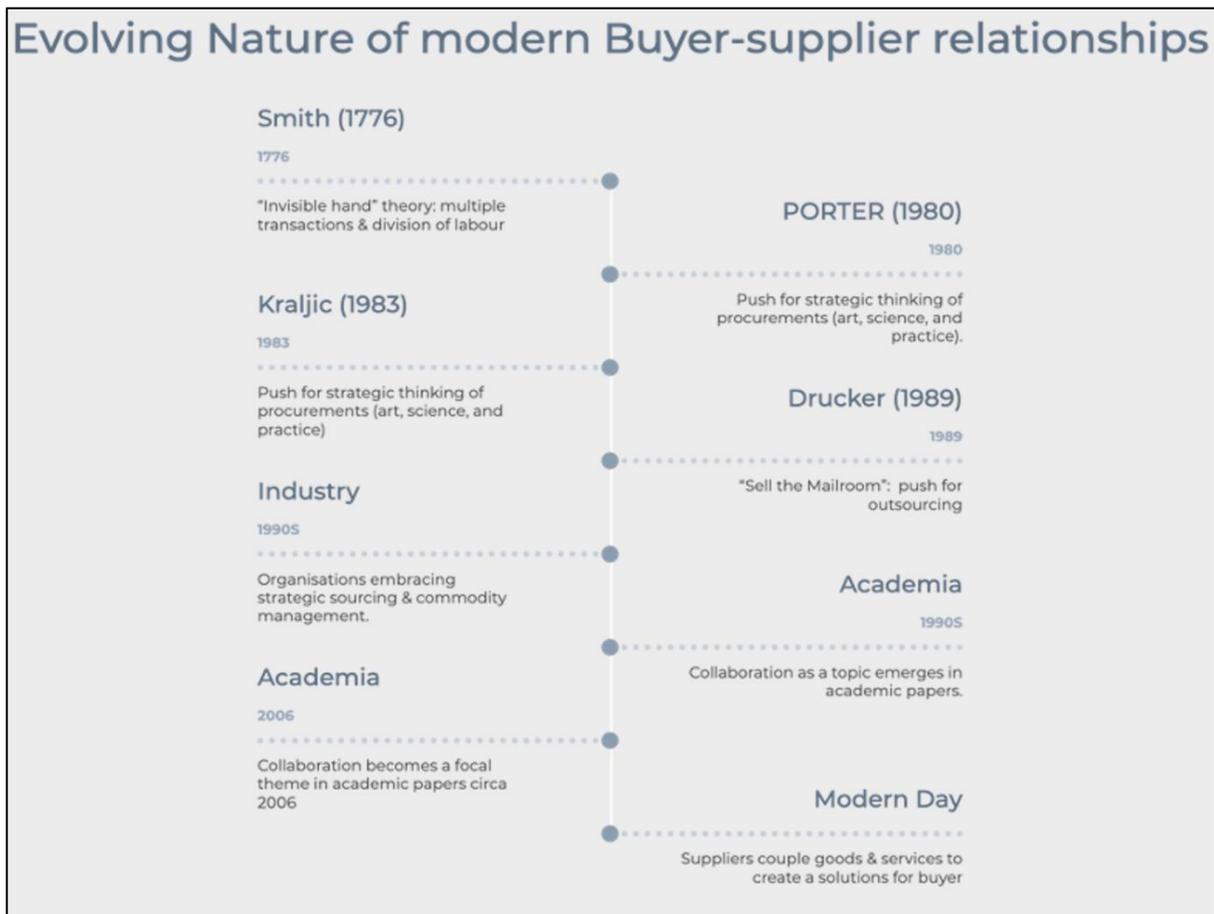


Figure 2-3 Evolving nature of buyer-supplier relationships

Strategic sourcing plays a pivotal role in the buyer-supplier relationship (Talluri, DeCampos and Hult, 2013; Knight *et al.*, 2017). The relationships utilising strategic sourcing are considered to be based on trust, loyalty, and openness (Talluri, DeCampos and Hult, 2013). The reduction in the supplier base allows the buyer to spend more resources and time to develop and improve the buyer-supplier relationship which benefits both organisations (Su, 2013; Talluri, DeCampos and Hult, 2013; Kim and Chai, 2017). Strategic sourcing employs supplier management approaches and supply network designs that improves both the operational and performance objectives for the organisations. That may lead to benefits, such as, a competitive advantage, improved strategic flexibility, supply chain agility, and increased profitability (Kim and Chai, 2017). However, for strategic sourcing to succeed the organisations in the buyer-supplier relationship must focus on collaboration and trust. For strategic sourcing to be effective it requires high levels of collaboration (Knight *et al.*, 2017) and trust between the buyer and the supplier (Birasnav, Mittal and Dalpati, 2019). For

collaboration to occur between buyer and supplier organisations and by extension the individuals working for these organisations trust is required to succeed (Huang and Wilkinson, 2013). Buyer-supplier relationships that exhibit trust are highly valued in the supply chain as they exhibit increased levels of commitment (Birasnav, Mittal and Dalpati, 2019). However, the level of trust that an organisation is willing to place in a counterpart depends on the type of buyer-supplier relationship which plays a strategic role in the success of an organisation (Bensaou, 1999; Wagner and Johnson, 2004).

2.2.4.2. The Types of Buyer-Supplier Relationships

Buyer-supplier relationships generally fall into one of two categories: the arm's length buyer-supplier relationship and the collaborative buyer-supplier relationship (Goffin, Szwajczewski and New, 1997; Wagner and Johnson, 2004; Meqdadi, Johnsen and Johnsen, 2017), sometimes referred to as competitive (arm's length) and cooperative (collaborative) relationships (Choi and Wu, 2009). When considering the Kraljic Portfolio Matrix, the basis for the relationship between the buyer and the supplier often depends on the type of transaction (Kraljic, 1983). When from the perspective of the buyer, the availability of the product is low and can only be sourced from a limited number of suppliers, the buyer may choose to foster a collaborative buyer-supplier relationship to ensure a continuous supply of the product. However, when the availability of a product is high and can be sourced from multiple suppliers, the buyer may choose to utilise an arm's length relationship (Caniëls and Gelderman, 2005; Narsimhan and Ungarala, 2016; Montgomery, Ogden and Boehmke, 2018).

2.2.4.2.1. The Arm's Length Relationship

An arm's length buyer and supplier relationship is one where the transactions and boundaries of the relationship are discrete (Phillips and Caldwell, 2005), the buyer-supplier relationship is considered to a 'win-lose' situation, adversarial (Choi and Wu, 2009) and is generally focussed on the short-term (Choi and Wu, 2009; Brink, 2017). The arm's length buyer-supplier relationship does not embrace collaboration (Chen et al. 2017, Phillips and Caldwell 2005, Heide and John 1990). In an arm's length buyer-supplier relationship, the primary focus of

the relationships is placed on the product in the transaction: the quality of the product, the amount of the product being ordered, and the delivery of the product. The responsibility for how the product is created lies solely with the supplier (Phillips and Caldwell, 2005). Organisations in arm's length relationships generally have low levels of interdependence and low transaction costs (Dyer and Singh, 1998). The arm's length buyer-supplier relationship utilises a stringent formal contract that places strict limitations on the various processes that the buyer and the supplier utilise while transacting to achieve a pre-specified outcome (Das and Teng, 1998; van der Valk *et al.*, 2016). Additionally, arm's length relationships do not emphasise the need or the importance of trust where self-interest is assumed to be the primary driver in the relationship as the arm's-length relationship limits the duration of the buyer-supplier relationship (Dyer and Singh, 1998). The self-interested focus of the arm's length relationship negatively impacts the buyer-supplier relationship.

The arm's length buyer-supplier relationship structure can place additional stress on the supplier if it perceives itself as being replaceable (Spekman *et al.*, 1998). This perceived replace-ability diminishes the commitment the supplier places in the relationship. An arm's length buyer-supplier relationship generally does not utilise asset-specific investments on the part of both the buyer and the supplier. The organisations within these relationships tend to minimise their investments in considering governance mechanisms (Dyer and Singh, 1998). This unwillingness to invest in the buyer-supplier relationship in terms of assets and governance reduces the likelihood that the organisations within these types of relationships would invest in a framework to address the levels of trust between the organisations. The inherent risks associated with arm's length relationships further emphasises and supports the need for collaborative buyer-supplier relationships (Phillips and Caldwell, 2005).

2.2.4.2.2. The Collaborative Buyer-Supplier Relationship

Industry and academia have started to embrace the departure from the arm's length buyer-supplier relationships to that of the collaborative buyer-supplier relationship (Ganesan, 1994; Phillips and Caldwell, 2005; Fang *et al.*, 2008; Yeung, Chan and Chan, 2009; Jones *et al.*, 2014; Revilla and Knoppen, 2015; Singh and Teng, 2016; Vitasek, 2016; Dave *et al.*, 2018; Varoutsas and Scapens, 2018; Ellram and Ueltschy Murfield, 2019). Depending on the needs of the buyer

and the supplier the arm's length relationship structure may not adequately support the necessary coordination required for either organisation to remain competitive in the current market (Huang and Wilkinson, 2013). Organisations when considering complex supply chain strategies such as strategic purchasing, high innovation and transformation industries (Revilla and Knoppen, 2015) or organisations choosing to utilise sustainable supply chain management may benefit from employing collaborative buyer-supplier relationships (Leising, Quist and Bocken, 2018; Dora, 2019). The collaborative buyer-supplier relationships could benefit from a framework that would improve collaboration between the organisations.

Organisations who effectively collaborate benefit from several advantages (Cai *et al.*, 2013; Najafi-Tavani *et al.*, 2018; Cloutier, Oktaei and Lehoux, 2019; Dora, 2019). For instance, collaboration plays a key role in collaborative buyer-supplier relationships as it enhances their ability to communicate (Doney and Cannon, 1997; Bensaou, 1999; Gambetta, 2000; Johnson, Sohi and Grewal, 2004). Collaboration also improves the effectiveness of informal networks while reducing both the social and procedural complexity between the organisations (Abdul-Rahman and Hailes, 2000) while improving customer satisfaction (Wagner and Johnson, 2004). Collaboration between the organisations enables organisations to resolve conflict with one another with a higher degree of efficiency (Morgan and Hunt, 1994; Rousseau *et al.*, 1998; Deutsch, Coleman and Marcus, 2011). While reducing the time and resources spent on negotiations (Rousseau *et al.*, 1998; Hald and Ellegaard, 2011). Additionally, the collaboration between organisations reduces the need for monitoring and the resources spent monitoring one another (Narayanan, Narasimhan and Schoenherr, 2015). As collaborative buyer-supplier relationships view the relationship with a long-term perspective (Choi and Wu, 2009) it may be more pertinent than that of the arm's length buyer-supplier relationship with a short-term perspective (Choi and Wu, 2009; Brink, 2017) as organisations in short-term relationships do not generally consider additional expenditures to maintain relationships. Collaborative relationships provide the organisations in the relationship's financial advantages.

From a financial and logistical perspectives, collaborative relationships provide organisations with significant advantages. For instance, collaborative relationships provide organisations with the ability to extend their reach and improve their financial positions (Fawcett *et al.*,

2012; Ayadi, Halouani and Masmoudi, 2016) and reduces costs (Das and Teng, 1998; Dyer and Singh, 1998; Wagner and Johnson, 2004; Revilla and Knoppen, 2015). Collaborating organisations are also able to improve their competitive advantage in the market (Goffin, Szejcowski and New, 1997; Dyer and Singh, 1998; Spekman, Kamauff and Myhr, 1998; Bensaou, 1999; Gambetta, 2000; Ferreira *et al.*, 2012; Huang and Wilkinson, 2013; Ayadi, Halouani and Masmoudi, 2016; Fawcett *et al.*, 2017). Additionally, collaboration between organisations could aid in reducing the risks brought on by macroeconomic factors (Berger, Gerstenfeld and Zeng, 2004; Wagner and Johnson, 2004). From a logistical perspective, the selection of a reliable supplier as a collaborative supply chain partner may improve the robustness of the buyer's supply chain (Kleindorfer and Saad, 2005; Ledwoch, Yasarcan and Brintrup, 2018). Moreover, the ability to reduce supply chain volatility (Das and Teng, 1998; Dyer and Singh, 1998). Supplier integration combines both the buyer's and the supplier's access to resources and facilitates joint processes to the benefit of both parties and reduces inventory requirements (Mentzer *et al.*, 2001; Wagner and Johnson, 2004). Collaboration between buyers and suppliers additionally provides benefits when considering manufacturing.

From a manufacturing perspective, collaboration between organisations allow them to access significant benefits. For instance, the collaboration between the buyer and the supplier may additionally enhance value creation ability of the organisations (Seppänen, Blomqvist and Sundqvist, 2007; Narayanan, Narasimhan and Schoenherr, 2015; van der Valk *et al.*, 2016). Collaborative relationships have also been shown to improve both innovation (Revilla and Knoppen, 2015) and product quality (Wagner and Johnson, 2004). Buyers and suppliers collaborating provide one another with a higher degree of freedom that often benefits the buyer, as the supplier can adapt processes as improved methodologies become available (Ferreira *et al.*, 2012; Voigt and Inderfurth, 2012). For instance, if a material that can reduce cost or improve the quality of the product becomes available, the manufacturer can substitute the inferior material if it is within the scope of the buyer's requirements. Organisations within collaborative relationships also exhibit higher efficiency in operational performance (Seppänen, Blomqvist and Sundqvist, 2007; Hald, Cordón and Vollmann, 2009; Flynn, Huo and Zhao, 2010; Narayanan, Narasimhan and Schoenherr, 2015; van der Valk *et*

al., 2016). The research focuses on collaborative relationships as it provides a suitable environment for trust.

Relational theory advocates the use of trust between trade partners to form the basis of the collaborative relationship (Yilmaz, Sezen and Ozdemir, 2005; Jones *et al.*, 2014). While trust remains to be a popular option to utilise as a governance tool theoretically, the practical application of trust as the foundation of the collaborative relationship in the real world seems to be the exception rather than the rule (Dekker, 2004). However, organisations that fear to risk trusting their counterparts often miss on fully taking advantage of the relationship (Jones *et al.*, 2014; Singh and Teng, 2016). In an endeavour to curtail these fears organisations fall back on relying on strict complex formal contracts to control the behaviour of the other through fear of legal retribution if a line is dared to be crossed (Che Ibrahim, Costello and Wilkinson, 2013). Thereby negating the initial drivers of the collaboration and restricting the multitudes of benefits gained from a relationship based on trust.

Supply chain relationships between the members of the supply chain play an essential role in the management and success of the supply chain. Collaboration between the members of supply chain is key to building and maintaining supply chain relationships. However, the level of collaboration between organisations is often depended on the type of buyer-supplier relationship. The collaborative buyer-supplier relationship, as the names suggests, provides organisations with stronger levels of collaboration. The following section discusses how buyer-supplier relationships are governed.

2.3. Relationship Governance Mechanisms

The members within the collaborative relationships require a mechanism to govern their affiliation with one another (Dyer and Singh, 1998; Jones *et al.*, 2014; Michalski, Montes and Narasimhan, 2019). The study discusses two types of governance mechanisms which are available to organisations within collaborative buyer-supplier relationships as being contract-based governance mechanisms and trust-based governance mechanisms. Both contract-based governance mechanisms, based on transaction cost economics, and trust-based

governance mechanisms, based on relational theory, are considered to be central for buyers and suppliers to transact with one another (Cho, Bonn and Terrell, 2019).

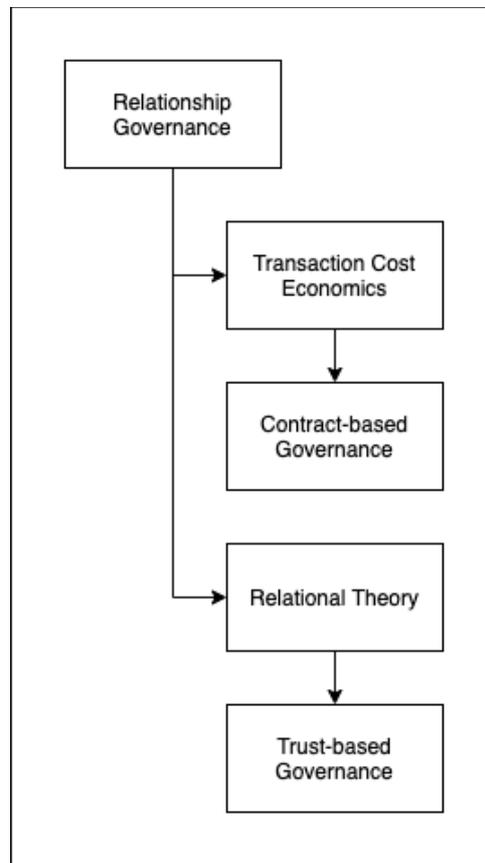


Figure 2-4 Relationship governance overview

2.3.1. Transaction Cost Economics

Transaction cost economics, also known as the ‘economics of governance’ and the ‘economics of organisation’ (Williamson, 2009), has multiple applications within the field of industrial organisation as well as economics, public policy, and agriculture (Williamson, 2009). Williamson (2009) identified that the unit of analysis for transaction cost economics was the ‘transaction’, and defined the dimensions of a transaction as complexity, asset specificity, and the disturbances that may impact the transaction. Transaction cost economics emphasises that production and transaction costs determine the productivity of the value chain (Dyer and Chu, 2003; Cho, Bonn and Terrell, 2019). Transaction cost economics advocates the reduction

of supply market risks such as dependence, price increases, and product shortages by pitting suppliers against one another to compete for the business of the buyer and utilises contractual safeguards for the market risks that competition between the suppliers does not address (Formentini *et al.*, 2019). Transaction cost theory highlights the need for organisations to protect against the perceived risk of a partner acting opportunistically (Williamson, 1979; Lui and Ngo, 2004). Opportunism is considered to be a key risk of buyer-supplier relations (see 2.4.4.1), where the characteristics that affect the likelihood of opportunism occurring includes the type of transaction, the trade partner, and the relationship between the buyer and the supplier (Lui and Ngo 2004). This propensity for opportunism to occur requires a means to govern the buyer-supplier relationship.

Transaction cost economics have often been utilised as a tool when researching inter-organisational governance mechanisms (Williamson, 1991; Poppo and Zenger, 2002; Lacity and Khan, 2016). Williamson (2009) stated that transaction cost economics is an ex-post (after the fact) governance construction that emphasises transactions in which the continuity of the relationship is important. In this context, 'governance' is described as the overarching concept through which transaction cost economics places operational content and control into an organisation. The author stated that governance should be examined through the 'lens of the contract' to reach the objective of a predictive theory of economic organisation. From a transaction cost perspective, scholars identify the formal contract as the primary transactional mechanism (Arranz and Arroyabe, 2012) and that organisations should implement contract-based governance to guard themselves from risks that may affect the buyer-supplier relationship (Arranz and Arroyabe, 2012; Krishnan, Geyskens and Steenkamp, 2016).

2.3.2. Contract-Based Governance

Contract-based governance relies on detailed formal contracts, also referred to as complex contracts (Williamson, 2009; Wang, Fu and Fang, 2019), that focus extensively on the terms and clauses detailing both organisations' obligations, rights, and sanctions for non-compliance (Wang, Yeung and Zhang, 2011; Krishnan, Geyskens and Steenkamp, 2016; van der Valk *et al.*, 2016; Vitasek, 2016; Cho, Bonn and Terrell, 2019). Contract-based governance mechanisms, also referred to as contractual governance, is supported by transaction cost theory (Krishnan, Geyskens and Steenkamp, 2016). A formal contract is a legally binding agreement between two or more parties for specific goods or services (CSMP, 2020). Contract-based governance relies on the threat that the buyer-supplier relationship will be ended if the terms of the contract are not complied with, and requires extensive monitoring to safeguard organisations from opportunistic behaviour (Poppo and Zenger, 2002; Wuyts and Geyskens, 2005; Arranz and Arroyabe, 2012; Krishnan, Geyskens and Steenkamp, 2016). Contract-based governance does provide the buyer-supplier relationships with the means to control the relationship. Contract-based governance has been shown to lead to effective coordination and the benefit of having a written record for use in court if required, while reducing the likelihood of a counterpart to act opportunistically or to deliver a sub-par performance (Krishnan, Geyskens and Steenkamp, 2016; Ghadge *et al.*, 2017). Contract-based governance mechanisms have been shown to be able to deal with moderate behavioural and environmental uncertainty as the formal contract is able to sufficiently address the possible risks related to the moderate levels of uncertainty (Krishnan *et al.* 2016). Despite the efficacy of the formal contract, it is not infallible when governing the buyer-supplier relationship.

While formal contracts are able to govern the buyer-supplier relationship, they are not without inadequacies, requiring support from other governance mechanisms to be effective (Argyres, Bercovitz, and Zanarone 2020; Herz *et al.* 2016; Gorovaia and Windsperger 2013). Despite the ability and the fortitude of the organisations drafting the contract, the risk remains that contracts cannot be enforced entirely due to the inability of organisations to foresee and detail every eventuality within a contract (Williamson, 2008, 2009; Jones *et al.*, 2014; Krishnan, Geyskens and Steenkamp, 2016; Fawcett *et al.*, 2017; Cho, Bonn and Terrell,

2019; Argyres, Bercovitz and Zanarone, 2020). This incompleteness renders the formal contract susceptible to gaps, mistakes, and omissions (Argyres, Bercovitz and Zanarone, 2020). Moreover, organisations are required to repeatedly revise, and rewrite formal contracts to adjust to current circumstances, adding to the accumulated costs (Cho, Bonn and Terrell, 2019). In some instances, formal contracts have been shown to be counterproductive by diminishing productivity (Gambetta, 2000; Voigt and Inderfurth, 2012) as formal contracts that are too detailed hinder collaboration and information sharing between the organisations (Calderon-Monge and Pastor-Sanz, 2017). Another drawback of solely relying on contract-based governance is that while formal contracts might efficiently deal with privacy issues and could provide both parties with a sense of security, formal contracts generally fail to provoke trust in one another (Gambetta, 2000; Johnston *et al.*, 2004; Calderon-Monge and Pastor-Sanz, 2017). Counter intuitively, formal contracts could signal distrust to a counterpart which could lead to the opportunistic behaviour the formal contract was aimed at preventing (Gulati and Nickerson, 2008). The formal contract, while useful, is not impervious to flaws and requires another governance mechanism to complement it. The study supports the implementation of a trust-based governance mechanism as supported by relational theory.

2.3.3. Relational Theory

The last two decades have seen a significant shift in focus to view the buyer-supplier relationship from a relational theory perspective (Zhao *et al.*, 2019). The 'relational view' suggests that organisations should cultivate close relationships with their supply chain partners to build trust, improve information sharing and to increase relational capital (Zhao *et al.*, 2019). These close relationships that form the social bond, however, still require a manner in which they can be governed. Relational governance (RG), also referred to as relational controls, refers to a supply chain partnership that is predicated on more than a hierarchy or market structure (Dekker *et al.*, 2019). Instead, it also focusses on an implicit relational contract based on trust, relational norms, and mutual expectation of the organisations' continued cooperation. As such it is a social arrangement focussed on implementing a long-term reciprocal arrangement between the participating organisations (Arranz and Arroyabe, 2012; Singh and Teng, 2016; Cho, Bonn and Terrell, 2019; Dekker *et al.*,

2019; Argyres, Bercovitz and Zanarone, 2020; Yang *et al.*, 2020). Relational governance includes the appreciation of past transactions, the anticipation of continuing the relationship, flexibility, information sharing, shared problem solving, and the willingness to restrain the use of power (Singh and Teng, 2016). Whereas the contract-based governance employs a formal contract, relational governance employs a relational contract.

The relational contract is a self-enforcing agreement that represents an implicit agreement between the parties that can be adapted to unforeseen contingencies (Singh and Teng, 2016; Argyres, Bercovitz and Zanarone, 2020). Relational contracts are able to complement or to substitute formal contracts through self-enforced informal incentives (Singh and Teng, 2016; Argyres, Bercovitz and Zanarone, 2020; Yang *et al.*, 2020). However, in contrast to the strict formal contract, the relational contract allows organisations increased freedom in the manner in which they produce the desired outcome for their counterparts (Singh and Teng, 2016). With the aid of relational contracting, relational governance provides both the buyer and the supplier significant benefits. For instance, the implementation of relational governance reduces transaction costs and improves commitment between organisations (Poppo, Zheng Zhou and Zenger, 2003; Yang *et al.*, 2020). Additionally, relational governance reduces the need for contracts to be drafted and re-drafted continuously to reflect the changes of each transaction (Ganesan, 1994; Wuyts and Geyskens, 2005; Yeung, Chan and Chan, 2009). Relational governance has also been shown to reduce the impact of the bullwhip effect on organisations who have been involved in long-term buyer-supplier relationships as well as to promote mutual trust and higher degrees of accuracy in communication (Zhao *et al.*, 2019). Relational governance reduces bargaining costs and improves an organisation's ability to reach its performance objectives. Most importantly, relational governance facilitates trust between organisations (Singh and Teng, 2016).

Relational governance provides organisations with a means to govern the buyer-supplier relationship that relies on the social bonds between the organisations to either substitute or complement traditional contract-based governance. Trust-based governance as a type of relational governance plays a vital role in the relationship between the buyer and the supplier.

2.3.4. Trust-Based Governance Mechanisms

A trust-based governance mechanism represents an informal governance mechanism based on the 'bilateral expectation' that each organisation will act in a befitting manner (Krishnan, Geyskens and Steenkamp, 2016). Fawcett et al. (2017) reiterated that trust is both widely accepted and an essential governance mechanism that allows organisations to work together in order to create value. The implementation of a trust-based governance mechanism is not blindly predicated on faith that the counterpart will act with benevolence and integrity but utilises intermittent probes to gauge whether the respective trade partners are performing accordingly (McEvily, Perrone and Zaheer, 2003; Krishnan, Geyskens and Steenkamp, 2016). While the implementation of trust-based governance is widely supported, the manner in which it is applied has been questioned. Scholars are still debating the merits of whether trust-based governance should be used to substitute or to complement contract-based governance (Dyer and Singh, 1998; Wuyts and Geyskens, 2005; Faems *et al.*, 2008; Gulati and Nickerson, 2008; Wang, Yeung and Zhang, 2011; Arranz and Arroyabe, 2012; Herz *et al.*, 2016; van der Valk *et al.*, 2016; Calderon-Monge and Pastor-Sanz, 2017; Shi *et al.*, 2018; Varoutsas and Scapens, 2018; Yu, 2019). To facilitate trust-based governance as either a substitute or to complement contract-based governance, the following section provides a background to both.

2.3.4.1. Trust-Based Governance as a Substitute

Relational theory scholars propose that a trust-based governance mechanism could be employed to deal with the same challenges that contract-based governance deal with and be able to achieve similar outcomes when faced with both behavioural and environmental uncertainties (Adler, 2001; Cavusgil, Deligonul and Zhang, 2004; Gulati and Nickerson, 2008; Gulati and Sytch, 2008; Wang, Yeung and Zhang, 2011; Zhou and Xu, 2012; Herz *et al.*, 2016; Krishnan, Geyskens and Steenkamp, 2016; van der Valk *et al.*, 2016; Calderon-Monge and Pastor-Sanz, 2017). It has been suggested that a trust-based governance mechanism can be used as a substitute to formal governance mechanisms when it offers a more cost-effective and improved safeguard than can be offered by vertical integration and contract-based

governance (Gulati and Nickerson, 2008). Some scholars, such as Dyer and Singh (1998) and Uzzi (1997), argue that trust is a superior form of governance as contracts may be counter-effective and redundant. Similarly, authors such as Wang, Yeung, and Zhang (2011) and Gulati (1995) state that trust de-emphasises the need for organisations to monitor the clauses in a contract thereby reducing the need for the contract (Gulati, 1995; Wang, Yeung and Zhang, 2011).

Trust-based governance provides organisations with benefits similar or even surpassing contract-based governance (Herz *et al.*, 2016; Krishnan, Geyskens and Steenkamp, 2016; van der Valk *et al.*, 2016; Calderon-Monge and Pastor-Sanz, 2017). For instance, trust as a substitute to contract-based governance has been shown to be more effective within inter-organisational relationships where a higher emphasis is placed on innovation as it provides organisations with the freedom to experiment (Wang, Yeung and Zhang, 2011). Similar to contract-based governance, trust-based governance is able to safeguard organisations against opportunism (Herz *et al.*, 2016), while reducing the need for an organisation to control its counterpart (Wang, Yeung and Zhang, 2011). Moreover, trust-based governance as a substitute reduces transaction costs by reducing both governance costs (Gulati and Nickerson, 2008) and the costs associated with formal contracts (Dyer, 1997; Wang, Yeung and Zhang, 2011; Herz *et al.*, 2016).

2.3.4.2. Trust-Based Governance as a Complement

Trust-based governance is able to complement contract-based governance (Gorovaia and Windsperger, 2013; Calderon-Monge and Pastor-Sanz, 2017; Cho, Bonn and Terrell, 2019), and the implementation of multiple forms of governance has been advocated broadly in academia (Ring and van de Ven, 1992; Wuyts and Geyskens, 2005; Gulati and Nickerson, 2008; Arranz and Arroyabe, 2012). The implementation of both contract-based and trust-based governance complements the flaws of both mechanisms. Where the contract-based governance, as a transactional mechanism, provides the legal framework for the organisations to adhere to, trust-based governance provides the relational guides addressing concerns which are not subject to legal ramification (Wang, Yeung and Zhang,

2011; Gorovaia and Windsperger, 2013; Calderon-Monge and Pastor-Sanz, 2017; Cho, Bonn and Terrell, 2019). Trust-based governance and contract-based governance working in tandem provides organisations with multiple benefits. As discussed in section 2.3.2, contract-based governance mechanisms utilising complex formal contracts are unable to foresee all eventualities and therefore, will never be complete (Poppo and Zenger, 2002; Wuyts and Geyskens, 2005; Williamson, 2008; Wang, Yeung and Zhang, 2011; Arranz and Arroyabe, 2012). To address these deficiencies in the contract, trust may be used in addition to the contract-based mechanism to complement the incomplete contract (Gorovaia and Windsperger, 2013; Herz *et al.*, 2016; Argyres, Bercovitz and Zanarone, 2020). Additionally, trust-based governance as a complement increases communication and knowledge sharing between the organisations (Herz *et al.*, 2016). As a complement to formal governance mechanisms, trust-based governance is generally more adaptable and flexible so it may overcome the limitations imposed by an overly complicated contract (Wang, Yeung and Zhang, 2011). In relationships where trust and contracts are utilised as governance mechanisms, the use of a contract may serve as a complement to trust by wording informal limitation which cannot be codified by trust (Wang, Yeung and Zhang, 2011) and reduces supplier opportunism (Cho, Bonn and Terrell, 2019). Organisations using trust and contracts to complement each other can achieve increased levels of innovation and performance (Wang, Yeung and Zhang, 2011). Furthermore, Wuyts and Geyskens (2005) showed that when implementing detailed contracts in buyer-supplier relationships that did not share a close mutual contact, the threat of opportunism increased. Trust as a complement is also crucial for the enforcement of a contract as well as for the collaboration efforts of the organisations (Wang, Yeung and Zhang, 2011).

2.3.4.3. The Benefits of Trust-based Governance

The previous sections discussed the benefits of trust-based governance identified in literature, by first presenting the benefits of trust as a substitute and then as a complement to contract-based governance. The following discusses the benefits of trust-based governance identified in the literature that did not distinguish between trust as being a complement or substitute to contract-based governance.

The benefits of trust-based governance for the buyer-supplier relationship include benefits to performance, risk, cost, communication, and the relationship between the organisations. Trust-based governance improves organisational performance, for instance, trust-based governance has shown to improve the task performance (Carson *et al.*, 2003), the ability of organisations to conduct joint problem solving (Herz *et al.*, 2016), and increases organisations competitive advantage (Fawcett *et al.*, 2012, 2017). Additionally, trust-based governance improves the flexibility of organisations (Carson *et al.*, 2003; Fawcett *et al.*, 2017). Concerning risk, organisations implementing trust-based governance mechanisms could engineer it to increase gains and or to minimise risks (Carson *et al.*, 2003; Michalski, Montes and Narasimhan, 2019). Trust-based governance has also been shown to reduce the probability of opportunism occurring (Wang, Yeung and Zhang, 2011; Ho, Ghauri and Larimo, 2018; Varoutsas and Scapens, 2018) occurring and improves cooperation between the organisations (Ho, Ghauri and Larimo, 2018). Concerning cost, trust-based governance mechanisms have also shown to reduce governance costs (Fawcett *et al.*, 2017), and transaction costs and or increases transactional value (Dyer and Singh, 1998; Griessmair, Hussain and Windsperger, 2014). Regarding communication, trust-based governance improves communication (Gorovaia and Windsperger, 2013; Herz *et al.*, 2016) and information-processing abilities (Carson *et al.*, 2003; Krishnan, Geyskens and Steenkamp, 2016; Fawcett *et al.*, 2017).

Scholars have stated that in order for collaborating organisations to utilise trust as a governance mechanism effectively, organisations should be able to gauge, monitor, and improve the levels of trust between the organisations (Azadeh *et al.* 2015; Jones *et al.* 2010; Laeequddin *et al.* 2010; Chae 2009; Plank, Reid, and Pullins 1999; Moorman, Zaltman, and Deshpande 1992; Butler 1991). The manner in which a buyer-supplier relationship is governed plays a significant role in determining the success of the relationship. Traditionally, contract-based governance has been the primary manner in which the buyer-supplier relationship has been governed. However, this conception has been challenged by the acceptance of trust-based governance in supply chain management. This increasing acceptance of trust-based governance as either a complement or substitute to contract-based governance is because of the significant number of benefits it affords the buyer-supplier relationships implementing it.

The following section delves deeper into trust by examining trust in collaborative relationships.

2.4. Trust in Collaborative Relationships

Considering trust in the supply chain, the literature abounds with a variety of interpretations. This section explores the concept of trust from the wealth of interpretations and perspectives which often conflict with one another to highlight the complexity of trust. The section then explores the multi-levelled nature of trust as it relates to relationships on both an interpersonal and inter-organisational level, before exploring the behaviours that lead to the creation of trust. The consequences and challenges of trust, along with the case study, are then discussed

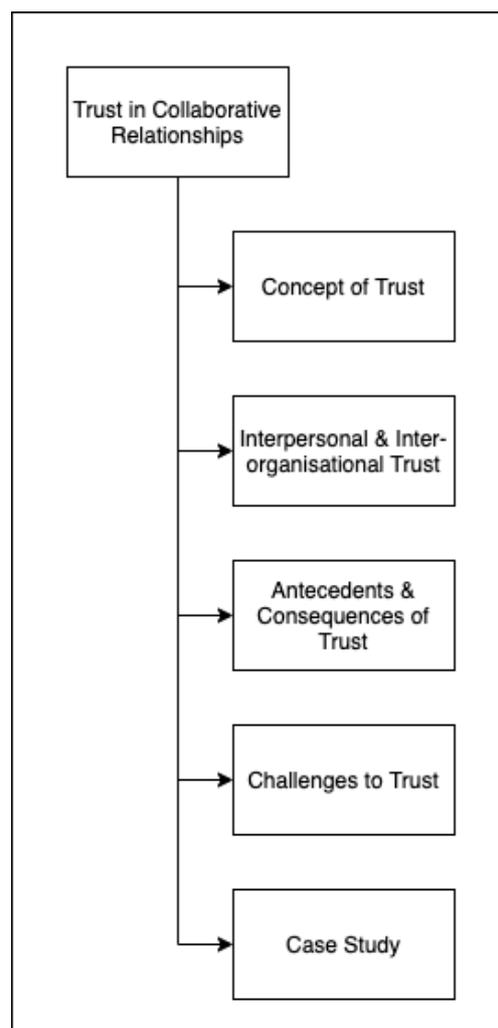


Figure 2-5 Trust in collaborative relationships overview

2.4.1. The Concept of Trust

Despite the significant number of definitions for the concept of trust (Barney and Hansen, 1994; Lewicki and Benedict Bunker, 1994; Varoutsas and Scapens, 2018; Akrouf and La, 2019; Elliot, Zhu and Wang, 2019), there has been little consensus on the final interpretation of trust (Zeffane, 2010) (see Appendix I). This lack of consensus could stem from the sheer number of interactions and interpretations that trust touches upon (Kramer, 1999; Michalski, Montes and Narasimhan, 2019; Szromek and Naramski, 2019). Authors such as McKnight, Cummings, and Chervany (1998), further emphasising this quandary, stated that the word 'trust' almost defies definition due to the broad and confusing interpretations associated with it. Over twenty years later, scholars are still debating the concept of trust due to it being simultaneously vague and rigid (Börjeson, 2018). Trust has been researched by scholars from both an economic and social perspective (Blois, 1999; Young-Ybarra and Wiersema, 1999; Pavlou and Gefen, 2004; Cook and Schilke, 2010a; Cho, Bonn and Terrell, 2019) (see Appendix II), has been researched in multiple industries (see Appendix III) and has been described in a myriad of ways (Szromek and Naramski, 2019):

From a psychological perspective, trust is a psychological concept (Lewis and Weigert, 1985; Kramer, 1999; La and Choi, 2012) or state of mind (Das and Teng, 2001) that evolves over time (Zeffane, 2010). Trust is also considered to be a mechanism that explains behaviour (Khalifa and Saad, 2017) based on the positive expectations of a counterpart (Johnson-George and Swap, 1982; Mayer, Davis and Schoorman, 1995; Nooteboom, 1996; Robinson, 1996; Kramer, 1999; Lui and Ngo, 2004; La and Choi, 2012; Krishnan, Geyskens and Steenkamp, 2016; Varoutsas and Scapens, 2018; Akrouf and La, 2019), and is built on behaviours such as the satisfaction gained from previous experiences where a counterpart had illustrated benevolence, honesty, and fair treatment (La and Choi, 2012). Trust is also portrayed as a type of transferable commodity where an organisation's reputation, built through prior experience with a counterpart, is shared with others (Doney and Cannon, 1997; Stewart, 2003; Pavlou and Gefen, 2004; Fawcett *et al.*, 2017).

From a buyer-supplier perspective, trust has been conceptualised as an organizing principle to assign market hierarchy (McEvily, Perrone and Zaheer, 2003). Trust is regarded to be one of the most critical elements required for creating and maintaining a successful buyer-supplier relationship (Mayer, Davis and Schoorman, 1995; Doney and Cannon, 1997; Zaheer, McEvily and Perrone, 1998; Johnston *et al.*, 2004; Seppänen, Blomqvist and Sundqvist, 2007; Laeequddin *et al.*, 2010; Gregori, Daniele and Altinay, 2014; Henke and Yenyurt, 2014; Cherry, 2016). Trust has also been described as the core of a buyer-supplier relationship, dictating numerous essential aspects such as communication, collaboration, and risk (C. Moorman, Zaltman and Deshpande, 1992). Trust within the buyer-supplier relationship has also been described as a strategic choice (Fawcett *et al.*, 2017) which may serve as a relationship quality indicator between the buyer and the supplier (Narus and Anderson, 1986; Anderson and Narus, 1990; C. Moorman, Zaltman and Deshpande, 1992). The multitudes of ways that trust has been considered and interpreted highlights both the complexity and the significance of trust.

Trust plays a significant role in the buyer-supplier relationship on both an interpersonal and inter-organisational level. The following section discusses trust on an interpersonal level before discussing trust on an inter-organisational level before discussing the interplay between both concepts.

2.4.2. Interpersonal Trust and Inter-Organisational Trust

Interpersonal trust and inter-organisational trust both play important roles when considering the success of an inter-organisational relationship (Fang *et al.*, 2008). While similar in certain respects, interpersonal trust and inter-organisational trust convey trust on different levels and are distinct from one another (Anderson and Narus, 1986, 1990; Zaheer, McEvily and Perrone, 1998; Huang and Wilkinson, 2013; Vanneste, 2016). Despite the similarities between inter-personal and inter-organisational trust it would be a mistake to regard them as being identical (Zaheer, McEvily and Perrone, 1998; Shin, Collier and Wilson, 2000; Huang and Wilkinson, 2013). Research has come to identify this mutualisation of the two concepts as a 'cross-level fallacy' (Zaheer, McEvily and Perrone, 1998; Akrouf and La, 2019), Young-Ybarra

and Wiersema (1999) noted that despite the differences between interpersonal trust and inter-organisational trust. Many researchers have extended the attributes of interpersonal trust to inter-organisational trust. Thus, there is a need to accurately differentiate between trust at an individual level from the trust at an organisational level.

2.4.2.1. Interpersonal Trust

Within the business relationship context, interpersonal trust is defined as the trust placed by the individuals in one organisation into the individuals from another organisation (Shibin Sheng, Brown and Nicholson, 2005; Huang and Wilkinson, 2013; Akrouit and La, 2019). Trust on an interpersonal level develops over time with the experiences the individuals from the respective organisations share with one another (Doney and Cannon, 1997; Vanneste, 2016). Interpersonal trust is considered to be both affective and cognitive; thus, a person chooses whom and why to trust (Zeffane, 2010). For instance, the trust between a procurement agent and a salesperson represents an interpersonal trust relationship. The two employees from their respective organisations choose to trust one another on an interpersonal level. Interpersonal trust between individuals plays a vital role in the supply chain as it serves as a foundation for inter-organisational trust to develop between organisations (Shibin Sheng, Brown and Nicholson, 2005; Vanneste, 2016; Varoutsas and Scapens, 2018; Birasnav, Mittal and Dalpati, 2019). The foundation provided by interpersonal trust allows for social interactions to occur on various levels within an organisation and with the employees of other organisations (Cai *et al.*, 2013; Chang *et al.*, 2014; Brinkhoff, Özer and Sargut, 2015; Ojha, Shockley and Acharya, 2016; Susanty Aries, Sirait Norma Mustiana and Bakhtiar Arfan, 2018). The inter-personal trust formed between the individuals from their respective organisations encourages loyalty, communication and reciprocity between the organisations while improving both personal and business understanding while reducing the probability of opportunism occurring (Butt, Sohal and Prajogo, 2019). Additionally, interpersonal trust between the individuals from the buyer and supplier organisations could lead to increased commitment from the buyer toward the supplier (Butt, 2019) and an increased ability to tolerate risks (Akrouit and La, 2019). Trust on both an interpersonal and inter-organisational level impacts how the buyer-supplier relationship functions; however, inter-organisational

trust plays a more significant role in the buyer-supplier relationship (Zaheer, McEvily and Perrone, 1998; Akrouit and La, 2019).

2.4.2.2. Inter-organisational Trust

The increasing attention in the literature placed on the importance of trust in buyer-supplier relationships has led to inter-organisational trust becoming a key indicator when researching organisational performance, collaboration and relationships between the buyer and the supplier (Granovetter, 1985; Ring and van de Ven, 1992; Dyer and Chu, 2000a; Vanneste, 2016). Inter-organisational trust refers to the degree of trust placed into another organisation by the employees of the focal organisation (Zaheer, McEvily and Perrone, 1998; Akrouit and La, 2019). Inter-organisational trust develops over time through interactions between the organisations (Anderson *et al.*, 2017; Varoutsas and Scapens, 2018; Michalski, Montes and Narasimhan, 2019) where trust requires continuous attention to maintain (Birasnav, Mittal and Dalpati, 2019). Research into the topic of inter-organisational trust is supported by a wealth of literature (Akrouit and La, 2019). For instance, authors such as Seppänen, Blomqvist and Sundqvist (2007) identified that from the early 1990s, a notable increase in the academic research supporting the role of trust within the buyer-supplier relationship was conducted. While trust between organisations have been discussed extensively in the literature, the manner in which it is considered has made significant strides within industry.

The importance of inter-organisational trust has not been limited to the theoretical applications of the concept within the academic environment; the importance of inter-organisational trust has also made significant progress within industry (Jones *et al.*, 2014; Ho, Ghauri and Larimo, 2018; Varoutsas and Scapens, 2018; Staniskiene, Stankeviciute and Daunoriene, 2019). For instance, the practical application of trust has been ranked as the most influential and successful creator of value within supply chain relationships according to a survey of 49 manufacturing organisations (Jones *et al.*, 2014). According to a study by Jones *et al.* 2014, an organisation within a buyer-supplier relationship expresses trust toward another organisation through the decisions that the management of the organisation make concerning that company. These choices may serve as an indicator to its counterpart for the

current relational status of the collaboration between them. Within the context of the buyer-supplier relationship, an example of an inter-organisational trust may be the members of the buying organisation's general trust in the ability of the supplier's organisation to provide a product at a certain level of quality, at the correct quantity and within the scheduled timeframe. Figure 2-6 illustrates inter-organisational trust within the context of supply chain-related trust. It refers to a human trait where the collective trust of the individuals working for Organisation A is placed collectively in the individuals working as a collective for Organisation B.

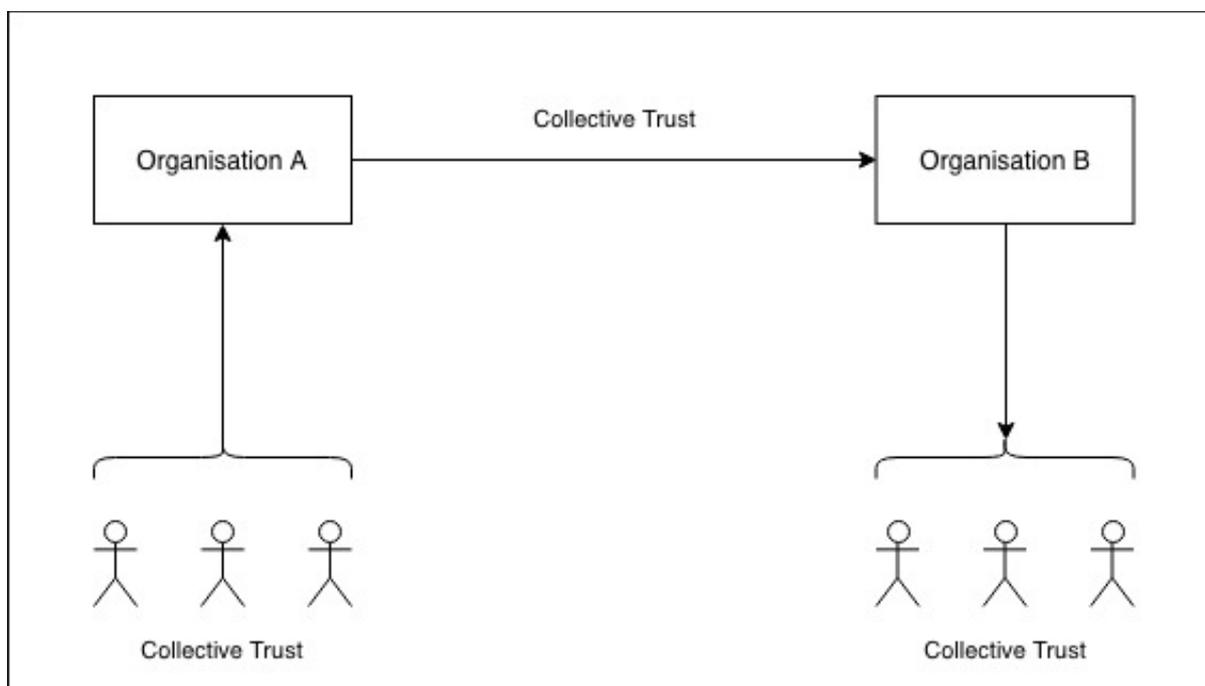


Figure 2-6 Conceptualisation of inter-organisational trust as adapted from Doney and Cannon (1997), Zaheer et al. (1998), Cherry (2016), Vanneste (2016), and Jones et al. (2014)

2.4.2.3. Interplay between Interpersonal Trust and Inter-organisational Trust

Interpersonal trust serves as a foundation for inter-organisational trust to develop (Cai *et al.*, 2013; Chang *et al.*, 2014; Brinkhoff, Özer and Sargut, 2015; Ojha, Shockley and Acharya, 2016; Susanty Aries, Sirait Norma Mustiana and Bakhtiar Arfan, 2018). During the supplier selection phase of the buyer-supplier relationship, in other words before the commencement of the transactional relationship, the levels of trust between organisations may be influenced by its

counterpart on both an interpersonal and inter-organisational level (Khalifa and Saad 2017; Langerak 2001). For instance, interpersonal trust can be represented by the level of trust between the supplier’s sales representative and the buyer’s procurement agent. If the sales representative is perceived to be untrustworthy by the procurement agent, the negative association taints the buyer organisation’s perspective of the supplier organisation. Conversely, if the procurement agent perceives the sales representative to be trustworthy, it transfers to the perceived trustworthiness of the supplier’s organisation. The interplay between interpersonal trust and inter-organisational trust can be described visually.

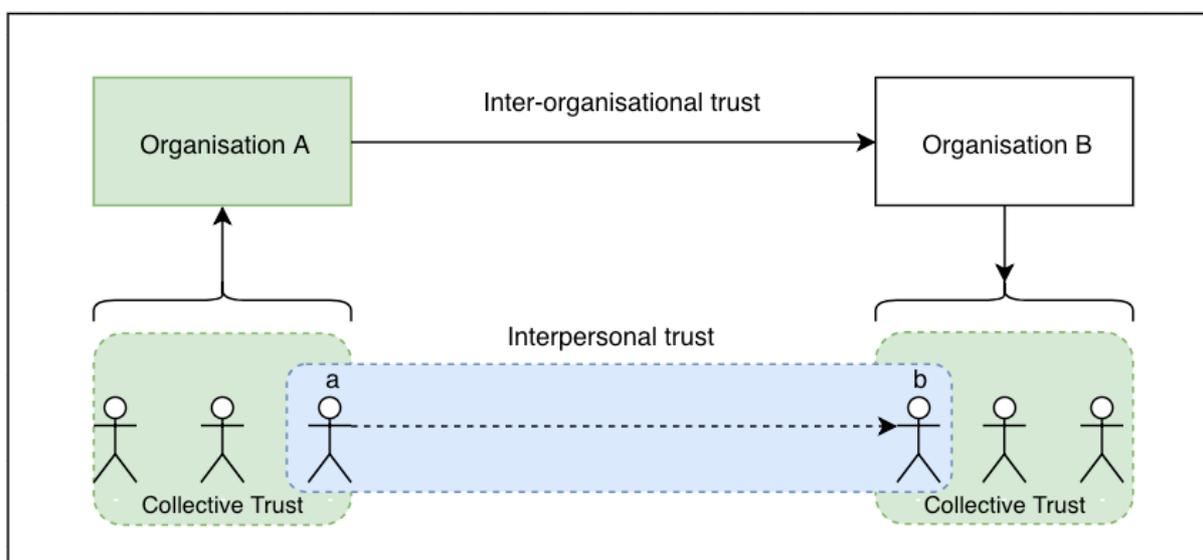


Figure 2-7 Interpersonal and interorganisational trust within a buyer-supplier relationship as adapted from Ganesan and Hess (1997) and Fang et al. (2008)

Figure 2-7 illustrates the interplay between interpersonal and inter-organisational trust in the buyer-supplier relationship. Ganesan and Hess (1997) described the buyer-supplier relationship as consisting of four distinct entities. The buying organisation (A) represented by its buyer (a), and the supplier organisation (B), represented by its sales representative (b). As illustrated, there are two levels of trust illustrated within the scenario, namely interpersonal trust and inter-organisational trust. The attributes assigned to the two concepts stay the same despite the presence of the two levels of trust. Trust moves both collectively and interpersonally: collectively from the employees of Organisation A to the collective staff members of Organisation B, and interpersonally from the buyer (a) to the sales representative (b).

Trust plays a significant role in the buyer-supplier relationship on both an interpersonal and inter-organisational level. As the focus of the thesis is on trust on an inter-organisational perspective it focusses on the antecedents and the consequences of trust.

2.4.3. Antecedents and Consequences of Trust

The antecedents and consequences of trust play a vital role in the buyer-supplier relationship. Where the antecedents of trust explain how trust in the relationships starts and the consequences of trust explain the benefits of trust in the buyer-supplier relationship. The discussion of the antecedents and consequences of trust provides a deeper understanding of trust in the buyer-supplier relationship. Firstly, the antecedents of trust refer to actions or behaviours that lead to the creation of trust, supporting the notion that trust is something that can be controlled. Secondly, the consequences of trust illustrate the significant benefits organisations could achieve by focussing on trust within their collaborative relationships.

2.4.3.1. Antecedents of Trust

Certain activities are designed and implemented with the purpose of creating trust (Franklin and Marshall, 2019). Within the context of supply chain management, this focus on the creation of trust between organisations is often referred to as the antecedents of trust or the determinants of trust (Jennings *et al.*, 2000; Zeffane, 2010; Franklin and Marshall, 2019). The antecedents of trust are considered to be the building blocks of trust (Theron, Terblanche and Boshoff, 2011) which facilitate the preliminary factors and processes in the development of trust (Khalid and Ali, 2017) within a collaborative buyer and supplier relationship. The study supports the notion that the antecedents of trust depend on the contextual situation in which they are utilised as the application of a single or multiple antecedents of trust will not automatically lead to the creation of trust. For instance, Kumar (1996), utilising the qualities of honesty and dependability as examples, stated that a counterpart that often promises

punishment and then follows through on the promise is both honest and dependable however these actions may not lead to trust. The antecedents of trust play an important role in understanding the trust relationship between the buyer and the supplier as they lead to the creation of trust. While certain antecedents of trust, such as competence and effective communication, are considered to be straightforward some such as co-creation and satisfaction are harder to understand (Franklin and Marshall, 2019). Existing literature has placed a great emphasis on researching the origins of trust (Mayer, Davis and Schoorman, 1995; Bianchi and Saleh, 2010; Khalid and Ali, 2017).

The antecedents of trust have been researched from multiple perspectives (Kwon 2008, Khalid and Ali 2017). In business-to-business relationships several antecedents of trust have been identified in the literature, for instance, benevolence, co-creation, communication, competence, integrity, satisfaction, and shared-values (Franklin and Marshall, 2019). The antecedents of trust have also been studied when considering international exchanges, for instance, authors such as Bianchi and Saleh (2010) considering the differences in between countries and cultures identified that trust positively impacted performance. When focussing on a deeper commitment in the buyer-supplier relationship by looking at international joint ventures (IJV), Khalid and Ali (2017) referred to two types of antecedents the social antecedents based on social exchange theory, as communication and expected continuity of the relationship. And the structural antecedent based on transaction cost economics, as resource complementary. Communication as antecedent of trust when considering IJV was also identified by Kwon (2008) who studied 94 IJVs in Korea. As IJVs engage in repeated alliances over time (Khalid and Ali, 2017) previous experience with a counterpart could lead to the creation of trust (Boersma, Buckley and Ghauri, 2003). When considering culture as an antecedent of trust, Boersma et al. (2003) found that cultural sensitivity improved trust between organisation in IJVs. Additionally, an organisation's reputation has been shown to be antecedent of trust as it positively relates to trust when considering IJVs (Jennings *et al.*, 2000). The antecedents of trust presented in this section represent a small percentage of the antecedents of trust discussed in the literature. While Table 2-1 presents additional antecedents of trust in the literature the list is by no means exhausted.

Table 2-1 Antecedents of trust

THE ANTECEDENTS OF TRUST
ABILITY (KNOWLEDGE)
Mayer, Davis, and Schoorman (1995), Schoorman, Mayer, and Davis (2007), Saleh, Ali, and Quazi (2013)
ADAPTABILITY (CUSTOMISE, FLEXIBILITY)
Aulakh et al. (1996), Doney and Cannon (1997), Luo (2002), Coulter and Coulter (2003), Sharif et al. (2005), Kwon (2008),
BENEVOLENCE
Mayer, Davis, and Schoorman (1995), Doney, Barry, and Abratt (2007), Schoorman, Mayer, and Davis (2007), Lohtia et al. (2009), Franklin and Marshall (2019)
CO-CREATION
Franklin and Marshall (2019)
COLLABORATION
De Ruyter, Moorman, and Lemmink (2001), Nielsen and Nielsen (2009)
COMMITMENT
Anderson and Narus (1990), Anderson and Narus (1990), Morgan & Hunt (1994), Sako and Helper (1998), Selnes (1998), Jennings (2000)
COMMUNICATION
Anderson and Weitz (1989), Anderson and Narus (1990), Hyvönen (1993), Moorman, Deshpande, and Zaltman (1993), Morgan & Hunt (1994), Sapienza and Korsgaard (1996), Geyskens, Steenkamp, and Kumar (1998), Selnes (1998), Young-Ybarra & Wierseman (1999), Sharma and Patterson (1999), De Ruyter, Moorman, and Lemmink (2001), Coote, Forrest, and Tam (2003), Ball, Simões Coelho, and Machás (2004), Bstieler (2006), Doney, Barry, and Abratt (2007), Nes, Solberg, Silkoset (2007), Bstieler and Hemmert (2008), Kwon (2008), Styles, Patterson, and Ahmed (2008), Costa e Silva, Bradley, and Sousa (2012), Saleh, Ali, and Quazi (2013), Saleh, Ali, and Mavondo (2014), Kadefors (2004), Oba and Semerciöz (2005), Katsikeas, Skarmeas, and Bello (2009), Altinay et al. (2014), Jiang, Lu, and Le (2016), Khalid and Ali (2017), Franklin and Marshall (2019)
CONCERN
Wong, Then, and Skitmore (2000)
CO-LOCATION
Carson et al. (2003)
COMPETENCE
Coulter and Coulter (2003), Theron, Terblanche, and Boshoff (2011), Sariola and Martinsuo (2016), Jiang, Lu, and Le (2016), Franklin and Marshall (2019)
CONFIDENTIALITY
Moorman, Deshpande, & Zaltman (1993)
CONFLICT HANDLING
Selnes (1998)
CONTINUITY EXPECTATION (COMMITMENT, EXPECTED LONGEVITY)
Heide & John (1990), Aulakh et al. (1996), Maurer (2010), Liao et al. (2012), Khalid and Ali (2017)

CONSISTENCY
Dyer and Chu (2000b)
COOPERATION (ASSISTANCE)
Anderson & Narus (1990), Heide & John (1990)
CULTURE (SIMILARITY, SENSITIVITY)
Mehta et al. (2006), Kwon (2008), Styles, Patterson, and Ahmed (2008), Lohtia et al. (2009), Saleh, Ali, and Mavondo (2014), Bianchi and Saleh (2010), Altinay et al. (2014), Khalid and Ali (2017)
CUSTOMER ORIENTATION
Doney, Barry, and Abratt (2007)
DEMOGRAPHICS (AGE, DIALECT FLUENCY, GEOGRAPHIC PROXIMITY)
Gulati (1995), Gulati and Singh (1998), Dyer and Chu (2000b), Armstrong and Yee (2001),
INTERDEPENDENCE (Functional, POWER, AUTONOMY)
Hyvönen (1993), Simpson and Mayo (1997), Oba and Semerciöz (2005), Sharif et al. (2005), Lee et al. (2012), Liao et al. (2012), Anderson et al. (2017)
ECONOMIC HOSTAGE
Young-Ybarra & Wierseman (1999)
EMPATHY
Coulter and Coulter (2003)
EXPERIENCE (with one another, HISTORY)
Larson (1992), Gulati (1995), Poppo, Zhou, and Zenger (2003), Oba and Semerciöz (2005), Khalfan, McDermott, and Swan (2007), Saleh, Ali, and Quazi (2013), Saleh, Ali, and Mavondo (2014), Khalid and Ali (2017)
EXPERTISE
Moorman, Deshpande, & Zaltman (1993), Johnson and Grayson (2005), Oba and Semerciöz (2005), Lohtia et al. (2009)
GOALS SHARING (REWARD, BENEFIT)
Anderson and Weitz (1989), Geyskens, Steenkamp, and Kumar (1998), Jennings (2000), Khalfan, McDermott, and Swan (2007), Maurer (2010)
GOVERNANCE MECHANISMS (CONTRACT)
Dahlstrom and Nygaard (1995), Gounaris and Venetis (2002), Poppo and Zenger (2002), Zhou, and Zenger (2003), Mayer & Argyres (2004), Jiang, Lu, and Le (2016)
GOVERNANCE MECHANISMS (SOFT CONTRACT)
Oba and Semerciöz (2005)
INFORMATION SHARING (OPEN)
Aulakh et al. (1996), Jennings (2000), Coulter and Coulter (2003), Sharif et al. (2005), Anderson et al. (2017)
INTEGRITY (HONESTY, CREDIBLE, FAIRNESS)
Moorman, Deshpande, & Zaltman (1993), Mayer, Davis, and Schoorman (1995), Kumar (1996), Geyskens, Steenkamp, and Kumar (1998), Jennings (2000), Wong, Then, and Skitmore (2000), Bstieler (2006) Doney, Barry, and Abratt (2007), Khalfan, McDermott, and Swan (2007), Schoorman, Mayer, and Davis (2007), Bstieler and Hemmert (2008), Robson, Katsikeas, and Bello (2008), Jiang, Lu, and Le (2016), Franklin and Marshall (2019)
INTERACTION (FREQUENCY)

Gulati (1995), Gulati and Singh (1998), Sariola and Martinsuo (2016)
INVESTMENT (PARTNER SPECIFIC)
Heide & John (1990), Larson (1992), Ganesan (1994), Sharif et al. (2005), Suh and Kwon (2006), Katsikeas, Skarmeeas, and Bello (2009)
KNOWLEDGE (Sharing)
Nielsen and Nielsen (2009), Saleh, Ali, and Mavondo (2014)
LIKABILITY
Styles, Patterson, and Ahmed (2008)
MANAGEMENT PRACTICES
Dahlstrom and Nygaard (1995)
MONITORING MECHANISMS (REDUCED)
Nielsen and Nielsen (2009)
OPPORTUNISM (LACK)
Geyskens, Steenkamp, and Kumar (1998), Nielsen and Nielsen (2009), Saleh, Ali, and Mavondo (2014)
PERFORMANCE
Geyskens, Steenkamp, and Kumar (1998), Wong, Then, and Skitmore (2000), De Ruyter, Moorman, and Lemmink (2001), Johnson and Grayson (2005), Altinay et al. (2014)
POLITENESS
Coulter and Coulter (2003)
PROFESSIONAL BEHAVIOUR
Khalfan, McDermott, and Swan (2007)
PROBLEM-SOLVING
Bstieler (2006), Khalfan, McDermott, and Swan (2007)
PROMPTNESS
Coulter and Coulter (2003)
QUALITY
Heide & John (1990), Sharma and Patterson (1999), Gounaris and Venetis (2002), Gounaris (2005), Doney, Barry, and Abratt (2007), Ian Stuart, Verville, and Taskin (2012)
RECIPROCITY
Khalfan, McDermott, and Swan (2007), Jiang, Lu, and Le (2016)
RELATIONSHIP (BILATERAL, BONDING, SOCIAL)
Gulati and Singh (1998), Armstrong and Yee (2001), Gounaris and Venetis (2002), Zhang, Cavusgil, and Roath (2003), Gounaris (2005), Doney, Barry, and Abratt (2007), Kwon (2008),
RELIABILITY
Coulter and Coulter (2003), Ian Stuart, Verville, and Taskin (2012)
REPUTATION

Ganesan (1994), Anderson and Weitz (1989), Jennings (2000), Coulter and Coulter (2003), Oba and Semerciöz (2005), Sharif et al. (2005), Lee et al. (2012), Jiang, Lu, and Le (2016), Khalid and Ali (2017)
RESOURCES (COMPLEMENTARY, ASSET SPECIFICITY, FIRM SIZE)
Doney and Cannon (1997), Kwon (2008), Bianchi and Saleh (2010), Khalid and Ali (2017)
RESPONSIVENESS (TIMELINESS)
Moorman, Deshpande, & Zaltman (1993)
RISK SHARING
Jennings (2000)
RULES
Jennings (2000)
SALESPERSON
Swan, Trawick, and Silva (1985), Doney and Cannon (1997), Nicholson and Sethi (2001), Coulter and Coulter (2003)
SATISFACTION
Selnes (1998), Johnson and Grayson (2005), Leonidou C., Talias, and Leonidou C.N. (2008), Theron, Terblanche, and Boshoff (2011), Franklin and Marshall (2019)
SERVICE (SUPPORT)
Geyskens, Steenkamp, and Kumar (1998), Anderson and Weitz (1989), De Ruyter, Moorman, and Lemmink (2001), Chiou, Droge, and Hanvanich (2002), Gounaris and Venetis (2002)
SHARE OF PURCHASES
Johnson and Grayson (2005)
SKILL
Carson et al. (2003)
SIMILARITY
Armstrong and Yee (2001), Johnson and Grayson (2005), Robson, Katsikeas, and Bello (2008)
SINCERITY
Moorman, Deshpande, & Zaltman (1993)
TACT
Moorman, Deshpande, & Zaltman (1993)
TASK TEACHABILITY
Carson et al. (2003)
TEAM BUILDING
Kadefors (2004)
TECHNICAL ASSISTANCE
Coulter and Coulter (2003)
UNCERTAINTY
Saleh, Ali, and Mavondo (2014)

VALUES (SHARED)
Morgan & Hunt (1994), Young-Ybarra & Wierseman (1999), Sirdeshmukh, Singh, and Sabol (2002), Theron, Terblanche, and Boshoff (2011), Costa e Silva, Bradley, and Sousa (2012) Franklin and Marshall (2019)
VULNERABILITY (IN BUYER INCREASES SUPPLIER TRUST)
McEvily, Zaheer, & Perrone (2003)

2.4.3.2. The Consequences of Trust

The consequences of trust for organisations have been researched thoroughly in the academic realm due to the accumulating evidence that trust provides organisations with significant benefits (Kramer, 1999). Inter-organisational trust plays multiple roles within the context of the business environment (McEvily, Perrone and Zaheer, 2003). Inter-organisational trust has been described as a ‘social glue’ that binds organisations enabling long-term exchange relationships to exist (Saunders *et al.*, 2004; Varoutsas and Scapens, 2018; Zhang, Zheng and Li, 2019). Inter-organisational trust has also been described as a ‘social lubricant’, allowing the relationship between the buyer and the supplier to run smoothly (Ke *et al.*, 2009). Inter-organisational trust has been shown to provide the organisations utilising it with multiple benefits (McEvily, Perrone and Zaheer, 2003). In terms of collaboration in buyer-supplier relationships, perhaps the most significant role that inter-organisational trust plays are that it enables organisations to enter a commercial relationship. For instance, Anderson and Narus (1990) found that despite the nature of the governance mechanisms, such as contractual safeguards, that very few organisations would enter into a significant buyer-supplier relationship without the presence of at least a low level of initial trust in the counterpart. Moreover, inter-organisational trust in the buyer-supplier relationship improves the ability of the organisations to collaborate (Morgan and Hunt, 1994; Dirks and Ferrin, 2001; Lau and Rowlinson, 2009; Huang and Wilkinson, 2013; Anderson *et al.*, 2017). Allowing for improved coordination with one another and supports the organisation’s ability to manage expectations and improve various interactions between the organisations (Ke *et al.*, 2009; Akrouf and La, 2019). Trust between organisations have shown to improve the levels of communication between them (Seppänen, Blomqvist and Sundqvist, 2007; Huang and

Wilkinson, 2013; Ho, Ghauri and Larimo, 2018; Akrouit and La, 2019) while also reducing the risks associated with the sharing sensitive information (Cai *et al.*, 2013).

Regarding performance, inter-organisational trust has shown to reduce costs (Dyer and Chu, 2003; Narayanan, Narasimhan and Schoenherr, 2015; Jiang, Lu and Le, 2016) and increases organisational performance (Cullen, Johnson and Sakano, 2000; Dirks and Ferrin, 2001; Dyer and Chu, 2003; Zhang, Cavusgil and Roath, 2003; Seppänen, Blomqvist and Sundqvist, 2007; Hald, Córdón and Vollmann, 2009; Katsikeas, Skarmeas and Bello, 2009; Lau and Rowlinson, 2009; Bianchi and Saleh, 2010; Narayanan, Narasimhan and Schoenherr, 2015; Singh and Teng, 2016; van der Valk *et al.*, 2016). Inter-organisational trust also assists organisations to achieve a competitive advantage (Akrouit and La, 2019). Moreover, trust between the buyer and the supplier additionally improves the probability of the supplier granting the buyer improved credit terms since the supplier considers the buyer to be less of a risk than it would an unknown entity (More and Basu, 2013). In terms of risk, the presence of inter-organisational trust between the buyer and the supplier serves as a practical methodology to reduce the perceived risk associated within the collaboration (Saunders *et al.*, 2004; Anderson *et al.*, 2017). Additionally, inter-organisational trust has also shown to reduce the likelihood of opportunism occurring while also acting as a mediator between the buyer and the supplier (Zhang, Cavusgil and Roath, 2003). Trust between organisations reduces the need for monitoring and control efforts (Narayanan, Narasimhan and Schoenherr, 2015; Jiang, Lu and Le, 2016). Concerning the commitment of the members of the buyer-supplier relationship, inter-organisational trust has shown to increase the probability that organisations to cultivate long-term relationships (Ganesan, 1994; Doney and Cannon, 1997; Spekman, Kamauff and Myhr, 1998; Armstrong and Yee, 2001; Huang and Wilkinson, 2013; Yin and Jahanshahi, 2018; Yang *et al.*, 2020) with higher levels of commitment toward one another (Morgan and Hunt, 1994; Geyskens, Steenkamp and Kumar, 1998; Huang and Wilkinson, 2013). While Table 2-2 presents additional consequences of trust in the literature the list is by no means exhausted.

Table 2-2 Consequences of inter-organisational trust

THE CONSEQUENCES OF TRUST	
Consequences of Trust	Article
Positive Consequences of Trust	
Ability (expertise)	Geyskens et al. (1998), Armstrong and Yee (2001)
Adaptability (Flexibility)	Young-Ybarra and Wiesema (1999), Stahl et al. (2011)
Agreement	Schurr and Ozanne (1985), Geyskens et al. (1998)
Anticipation (for future interaction)	Crosby et al. (1990), Doney and Cannon (1997), Geyskens et al. (1998), Armstrong and Yee (2001), Gounaris and Venetis (2002), Johnson and Grayson (2005)
Attitude	Schurr and Ozanne (1985)
Commitment	Moorman, Zaltman, & Deshpande (1992), Morgan and Hunt (1994), Geyskens et al. (1998), Sako and Helper (1998), Sharma and Patterson (1999), Gounaris (2005), Doney, Barry, and Abratt (2007), Leonidou C., Talias, and Leonidou C.N. (2008), Styles, Patterson, and Ahmed (2008), Tian, Lai, and Daniel (2008), Saleh, Ali, and Mavondo (2014), Stahl et al. (2011)
Communication	Anderson and Weitz (1989), Geyskens et al. (1998), Sako and Helper (1998), Seppänen, Blomqvist and Sundqvist (2007), Huang and Wilkinson (2013), Sekhon et al. (2013), Ho, Ghauri and Larimo (2018), Akrouit and La (2019)
Competitiveness	Jap and Anderson (2003), Zhang, Cavusgil, and Roath (2003)
Conflict (reduces conflict, functional conflict)	Anderson and Narus (1990), Morgan and Hunt (1994), Geyskens et al. (1998), Lau and Rowlinson (2009),
Continuity	Schurr and Ozanne (1985), Anderson and Weitz (1989), Geyskens et al. (1998), Selnes (1998), Armstrong and Yee (2001), Coulter and Coulter (2003), Jap and Anderson (2003), Lau and Rowlinson (2009), Bianchi and Saleh (2010),
Collaboration / Cooperation / Coordination	Moorman, Zaltman, & Deshpande (1992), Morgan and Hunt (1994), Andaleeb (1995), Geyskens et al. (1998), Dirks and Ferrin (2001), Vélez, Sánchez, and Álvarez (2008), Lau and Rowlinson (2009), Huang and Wilkinson (2013), Anderson et al. (2017), Akrouit and La (2019)
Cost (-)	Dyer and Chu (2003), Narayanan, Narasimhan and Schoenherr (2015), Jiang, Lu and Le (2016), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Efficiency	Johnson and Grayson (2005), Kwon (2008), Katsikeas, Skarmeeas, and Bello (2009), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Information sharing	Maurer (2010), Stahl et al. (2011)
Innovation	Maurer (2010), Liao et al. (2012)
Investment	Anderson, Chang, Cheng, and Phua (2017)
Mediator	Saparito, Chen, and Sapienza (2004), Bstieler (2006), Nielsen and Nielsen (2009)
Monitoring (reducing cost)	Jennings (2000), Dyer and Chu (2003), Anderson, Chang, Cheng, and Phua (2017), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Long-term orientation	Ganesan (1994), Geyskens, Steenkamp, and Kumar (1998), Sako and Helper (1998), Sharif et al. (2005)
Loyalty	Schurr and Ozanne (1985), Geyskens et al. (1998), De Ruyter, Moorman, and Lemmink (2001), Tian, Lai, and Daniel (2008), Paparoidamis, Katsikeas, and Chumpitaz (2019b)

Objective (strategic)	Kwon (2008)
Opportunism (reduce)	Jap and Anderson (2003)
Performance	Dahlstrom and Nygaard (1995), Kumar (1996), Aulakh, Kotabe, and Sahay (1996), Geyskens et al. (1998), Zaheer, McEvily, and Perrone (1998), Cullen, Johnson and Sakano (2000), Jennings (2000), Dirks and Ferrin (2001), Lane, Salk, and Lyles (2001), Poppo and Zenger (2002), Carlson et al. (2003), Dyer and Chu (2003), Jap and Anderson (2003), Zhang, Cavusgil and Roath (2003), Lui and Ngo (2004), Kadefors (2004), Kauser and Shaw (2004), Bstieler (2006), Doney, Barry, and Abratt (2007), Seppänen, Blomqvist and Sundqvist (2007), Hald, Córdón and Vollmann (2009), Katsikeas, Skarmeas, and Bello (2009), Lau and Rowlinson (2009), Bianchi and Saleh (2010), Ian Stuart, Verville, and Taskin (2012), Costa e Silva, Bradley, and Sousa (2012), Saleh, Ali, and Quazi (2013), Jain, Khalil, Johnston, and Cheng (2014), Narayanan, Narasimhan and Schoenherr (2015), Singh and Teng (2016), Wu (2015), Jiang, Lu, and Le (2016),Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Profit	Jennings (2000), Jap and Anderson (2003), Stahl et al. (2011)
Quality improvement	Lau and Rowlinson (2009), Liao et al. (2012)
Relationship (+)	Moorman, Zaltman, & Deshpande (1992), Selnes (1998), Armstrong and Yee (2001), Dyer and Chu (2003), Zhang, Cavusgil, and Roath (2003), Johnson and Grayson (2005), Kwon (2008), Katsikeas, Skarmeas, and Bello (2009), Bianchi and Saleh (2010), Sekhon et al. (2013), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Risk taking	Mayer, Davis, Schoorman (1995), Nootboom, Berger, & Noorderhaven (1997)
Satisfaction	Anderson and Narus (1990), Armstrong and Yee (1994), Mohr and Spekman (1994), Geyskens, Steenkamp, and Kumar (1998), Bianchi and Saleh (2010), Stahl et al. (2011), Ian Stuart, Verville, and Taskin (2012), Alitinay et al. (2014), Paparoidamis, Katsikeas, and Chumpitaz (2019)
Stability	Geyskens et al. (1998)
Time allocation (partner)	Anderson (1987), Geyskens et al. (1998)
Time savings	Lau and Rowlinson (2009),
Uncertainty (decision making) (-)	Morgan and Hunt (1994)
Negative Consequences of Trust	
Commitment (calculative)	Geyskens et al. (1998)
Control (-)	Andaleeb (1995)
Distributive bargaining	Schurr and Ozanne (1985)
Influence stance (threats)	Andaleeb (1995)

The antecedents and consequences of trust play a vital role in the success of the buyer-supplier relationship. The antecedents of trust identified the origins of trust and the consequences of trust the motivation for implementing trust in the buyer-supplier relationship. The challenges to trust present some of the threats to trust in the buyer-supplier

relationship, which could adversely impact trust between the organisations and ultimately lead to the destruction of the buyer-supplier relationship.

2.4.4. The Challenges to Trust

The challenges to trust in buyer-supplier relationships must be considered in the creation of a mechanism to aid organisations in monitoring and controlling trust within collaborative relationships. The challenges to trust illustrate that there are phenomena that could adversely impact the trust relationship and serves as a motivation for applying the TMS. There are a number of challenges that may negatively impact the collaborative buyer-supplier relationship (Dyer and Singh, 1998; Jones *et al.*, 2014; Michalski, Montes and Narasimhan, 2019). This section provides an overview of some of the challenges that may adversely impact the level of trust between a buyer and a supplier. As discussed earlier in this chapter, it is challenging to create trust. However, despite this difficulty to create trust, it is notoriously easy to destroy (Slovic, 1993; Kramer, 1999; Schweitzer, Hershey and Bradlow, 2006). In addition to trust being fragile, it has also been described as being incredibly rare and elusive within the context of the organisational relationships (Williamson, 1993; Gambetta, 2000). The presence of trust from one organisation will not always lead to trust being reciprocated or that the trusted organisation will not act in an opportunistic manner (Granovetter, 1985; McEvily, Perrone and Zaheer, 2003).

Buyers and suppliers within collaborative relationships, such as alliances, may need to consider weighing when a decision is beneficial for its organisation against decisions that will benefit the relationship. These self-interested considerations, referred to as 'social dilemmas', may cause tension within the relationship, detracting from the levels of trust between the buyer and the supplier in the process (Jones *et al.*, 2014). The social dilemmas that may negatively impact the relationship between the buyer and the supplier may include opportunism (Williamson, 1996; Das and Teng, 1998, 2001; Lui and Ngo, 2004; Pavlou and Gefen, 2004), power imbalances (Pavlou and Gefen, 2004; Ke *et al.*, 2009; Jones *et al.*, 2014), uncertainty (Williamson, 1985; Bhattacharya, Devinney and Pillutla, 1998; Krishnan, Geyskens and Steenkamp, 2016), supplier failures (Hendricks and Singhal, 2005; Schoorman, Mayer and

Davis, 2007; Ellis, Henry and Shockley, 2010; La and Choi, 2012), globalisation (Ghadge *et al.*, 2017; Michalski, Montes and Narasimhan, 2019; Yang *et al.*, 2020), and employee flows (Lee, 2010; Jones *et al.*, 2014).

2.4.4.1. Opportunism

Opportunism is considered to be a core concept in transaction cost economics (Williamson, 1979; Wang, Fu and Fang, 2019) and involves violations of both formal and relational contracts (Wathne and Heide, 2000a; Shi *et al.*, 2018). Williamson (1955, p.47) defined inter-firm opportunism as the “calculated efforts to mislead, distort, disagree, obfuscate or otherwise confuse.” However, Williamson later revised this definition of opportunism to emphasise the counterpart’s purposeful intent to mislead by describing it as follows: “opportunism - which is a more subtle form of self-interest seeking to include self-interest seeking with guile” (1996, p. 152). Opportunism has also been described as the morally weak actions of a counterpart (Morgan and Hunt, 1994; Cho, Bonn and Terrell, 2019). The purpose of buyers and suppliers transacting with one another is to create joint value. However, due to the competitive environment, organisations may choose to act opportunistically due to self-interest (Cho, Bonn and Terrell, 2019). There are several ways that organisations may act opportunistically toward a counterpart, for instance, an organisation may avoid fulfilling obligations and responsibilities made to a counterpart (Wathne and Heide, 2000a; Shi *et al.*, 2018; Cho, Bonn and Terrell, 2019). An organisation may also be considered to be acting opportunistically when choosing to withhold relevant information from a counterpart or even providing its counterpart with inaccurate information (Cho, Bonn and Terrell, 2019). Another example of opportunism is when an organisation chooses to withhold agreed-upon resources from the counterpart or provides its counterpart with products known to be defective (Cho, Bonn and Terrell, 2019; Zhang, Zheng and Li, 2019). Acts of opportunism, in general, may be described as the acts of an organisation to deceive or to manipulate (Wang, Fu and Fang, 2019; Yu, 2019).

Opportunism, and even the perceived risk of opportunism on the part of a counterpart, may negatively impact the cooperative efforts of the relationship severely damaging the ability of

victim of the opportunistic behaviour to trust the offending party (Das and Teng, 1998, 2001; Lui and Ngo, 2004; Pavlou and Gefen, 2004; Cho, Bonn and Terrell, 2019). The victim organisation may then choose to retaliate or to forgive the offending organisation (Zhang, Zheng and Li, 2019). Opportunism is often 'triggered' by uncertainty in the inter-organisational relationships (Wang, Fu and Fang, 2019). Moreover, the higher the degree of damage caused by the act of opportunism by the perpetrator the higher the degree of damage to the level of trust by its counterpart (Zhang, Zheng and Li, 2019). Opportunism has also been described as being the antithesis of trust (Barney and Hansen, 1994; Yu, 2019). As opportunistic acts emerge over time, the levels of trust between the buyer and supplier may vary (Zhang, Zheng and Li, 2019). However, the damage caused to the level of trust by the act of opportunism is not limited to the act alone as the manner in which the organisations respond to opportunism may further impact the levels of trust between the organisations negatively (Zhang, Zheng and Li, 2019). Thus, an alternative means to build the levels of trust post the damage inflicted by the act of opportunism may be required to facilitate the rebuilding of trust.

2.4.4.2. Power Imbalance

Power imbalance, also referred to as asymmetry (Özen, Uysal and Çakar, 2016; Meqdadi, Johnsen and Johnsen, 2017), occurs when one organisation in the buyer-supplier relationship yields a higher level of control (power) in the relationship over its counterpart (Ke *et al.*, 2009; Ghadge *et al.*, 2017; Sætrevik, Ghanonisaber and Lunde, 2018). Power imbalances occur when one organisation has greater access to activities, outcomes, or resources than another organisation (Sætrevik, Ghanonisaber and Lunde, 2018). Power embodies the ability of an organisation to enforce compliance from another organisation (Meqdadi, Johnsen and Johnsen, 2017). The difference in the power dynamics between the organisations may play a significant role for the buyer and the supplier and impact several aspects of the relationship. For instance, when considering power imbalances during contract negotiations, the less powerful organisation may be less effective in securing an equitable agreement (Ghadge *et al.*, 2017). When considering dependence, the less powerful organisation may fear exploitation from the more powerful organisation (Özen, Uysal and Çakar, 2016). The

dependence of the less powerful organisation on the dominant organisation may result in the less dominant organisation being coerced into making an unreasonable number of concessions or face the prospect of being replaced by another more compliant organisation (Pavlou and Gefen, 2004; Ke *et al.*, 2009; Özen, Uysal and Çakar, 2016). Power imbalances may impact the buyer-supplier relationship in several ways.

While some authors believe that power imbalances may provide both structure and a formal hierarchy to the buyer-supplier relationship, excessive imbalances in power may have severe negative impacts on the relationship if abused (Sætrevik, Ghanonisaber and Lunde, 2018). Power imbalances are often characterised negatively as being coercive (Meqdadi, Johnsen and Johnsen, 2017), with examples of the negative impacts of the power imbalances on the buyer-supplier relationship involving relationship asymmetry, environmental uncertainty, opportunism and reduced cooperation between the organisations (Michalski, Montes and Narasimhan, 2019). Power imbalances may also lead to a disparity when distributing information within the relationship (Pavlou and Gefen, 2004), causing anxiety, conflict, and tension between the organisations (Sætrevik, Ghanonisaber and Lunde, 2018). Additionally, less powerful organisations are less able to adequately spread risk as effectively as their more powerful counterparts (Jones *et al.*, 2014). Thus, an unforeseen event occurring which may bankrupt the less powerful organisation, may not even cause significant damage to the more powerful organisation. Less powerful organisations may also not be able to capitalise on the substantial discounts afforded to more powerful organisations based on their access to more significant economies of scale, thus reducing the financial incentive and rewards for the less powerful organisation (Jones *et al.*, 2014).

The imbalance of power between the buyer and the supplier impacts the level of trust between the organisations. To signal trust to a counterpart requires the utilisation of resources. Organisations in the position of power have access to more resources than their less powerful counterpart. Less powerful organisations may not have access to the resources that would allow them to signal trust to their more powerful counterpart. The more powerful organisation may incorrectly construe this lack of trust-signalling from the less powerful organisation as being untrustworthy (Jones *et al.*, 2014). If a more powerful organisation does or has used coercion within the buyer-supplier relationship, this may have led to the trust

between the organisations being destroyed (Meqdadi, Johnsen and Johnsen, 2017), and may require the organisations to proactively rebuild trust between the organisations. The manner in which power issues are resolved in inter-organisational relationships between a buyer and a supplier is impacted by the level of trust in the relationship (Sætrevik, Ghanonisaber and Lunde, 2018). With the weaker of the two organisations generally exhibiting lower levels of trust in the more dominant organisation (Özen, Uysal and Çakar, 2016), a methodology to help to improve the level of trust between the organisations is required.

2.4.4.3. Uncertainty

The literature generally refers to two types of uncertainty, namely behavioural uncertainty and environmental uncertainty, as challenging inter-organisational trust (Krishnan, Geyskens and Steenkamp, 2016). Behavioural uncertainty, as defined by Williamson (1985, p. 57), refers to the “strategic non-disclosure, disguise, or distortion of information” by a counterpart. Environmental uncertainty refers to uncertainty caused by changes in the environment. For instance, changes in the market caused by changes in regulations or volatility in the market (Krishnan, Geyskens and Steenkamp, 2016). Williamson (1985) referred to environmental uncertainty as being innocent and non-strategic in nature. Innocent due to the organisations involved not being responsible for the occurrence causing the uncertainty, and non-strategic due to the immediate and responsive reactions required by the organisations to deal with the uncertainty. In contrast, behavioural uncertainty refers to the actions of the organisations in the relationship misrepresenting its ability or purposefully choosing to not fulfil the promises made to a counterpart. For instance, an organisation may choose to pretend to fail in an endeavour to perform its duties as agreed upon with its counterpart due to self-interest (Krishnan, Geyskens and Steenkamp, 2016). Uncertainty generally negatively impacts the relationships between the buyer and the supplier.

Uncertainty in the buyer-supplier relationship plays an important role in how organisations view one another. From a philosophical perspective, uncertainty can be viewed as prerequisite for trust. For instance, Bhattacharya, Devinney, and Pillutla (1998) state that the presence of vulnerability is considered to be a crucial element of trust. A sentiment echoed

by Laeequddin et al. (2010) who stated that for trust to exist, there must be an element of uncertainty. When two entities share uncertainty and vulnerability towards an external force, this can act as an antecedent of trust. Böstrom (2015) stated that uncertainty and vulnerability will always be part of the trust relationship as both are considered to be both antecedents and detractors of trust. However, when the uncertainty or vulnerability is a result of the counterpart's actions or inaction they may act as barriers to trust (Bhattacharya, Devinney and Pillutla, 1998).

2.4.4.4. Supplier Failures

The failure of a supplier to provide goods or services to a buyer negatively impacts the trust in the buyer-supplier relationship (Hoetker, 2005; André, Dooley and Johnny, 2007; Rao and Lee, 2007). One of the most important objectives within the discipline of supply chain management is the smooth flow or transition of goods between the supplier and the buyer (Ellis, Henry and Shockley, 2010). Supplier failure or supplier disruption occurs when a supplier is unable to deliver goods or services to a buyer as promised (Hendricks and Singhal, 2005). Buyers are dependent on their suppliers to compete in the market (Kolay, 1993; Craighead *et al.*, 2007). Supplier failure directly impacts the buyer's financial and operational performance (Wagner, Bode and Koziol, 2009). Additionally, failure by the supplier could adversely impact the ability of the buyer to provide goods or services to its respective customers (Hora and Klassen, 2013). An example of this dependence is the automotive industry which relies on the dependability its suppliers to remain competitive. The auto manufacturer, as a buyer, relies on the delivery of specific components for which substitute products are not readily available (Wagner, Bode and Koziol, 2009).

Supplier disruptions (failures) may occur due to a multitude of reasons and from multiple perspectives including agreement, logistical, and organisational. From an agreement perspective, the supplier could fail the buyer by providing goods or services that do not comply with the agreed quality standards (Kleindorfer and Saad, 2005; Maruchek *et al.*, 2011). Another manner in which a supplier could fail the buyer is by providing the goods or services as agreed upon but at a higher cost than agreed upon between the organisations

(Wagner and Johnson, 2004). Alternatively, a failure may occur due to the supplier's inability to deliver a product or service on the basis that it may lack the necessary skill or know-how (Wuyts, Rindfleisch and Citrin, 2015). From a logistical perspective, supplier failures may occur when the supplier delivers an incorrect quantity of products or delays the delivery of the products (Wagner and Johnson, 2004). From an organisational perspective, a supplier failure may occur if the supplier became insolvent before the delivery of products despite the buyer having already paid (Wagner and Johnson, 2004; Wagner, Bode and Koziol, 2009). Alternatively, a supplier may also fail to deliver as agreed if a direct competitor of the supplier chooses to acquire the supplier to integrate the businesses (Chopra and Sodhi, 2004). The increasing reliance of organisations to outsource value-adding processes has further increased their dependence on suppliers. This increased dependence on the supplier has emphasised the need for buyers to construct ongoing relationships with reliable suppliers (Goffin, Szwejczewski and New, 1997; Berger, Gerstenfeld and Zeng, 2004; Ruiz-Torres and Mahmoodi, 2007; Gualandris and Kalchschmidt, 2013).

2.4.4.5. Globalisation

Globalisation has had a significant impact on how organisations conduct business (Jovanović, 2010; Yuan, 2018). The origin of globalisation has been linked with the Second World War (WWII). Scholars arguing that the Second World War (WWII) catalysed organisations around the globe to partake in international trade with one another (Ajami, 2020; Cappelli and Cini, 2020). However, despite the fundamental manner in which globalisation has altered the business environment and its popularity within academia, there remains a lot to be understood about the concept (Whalley, 2008; Jovanović, 2010). Scholte (2015, p. 1478) defines globalisation “as the spread of transplanetary – and in recent times also more particularly supraterritorial – connections between people”. Globalisation in business includes increased mergers between organisations, on-and-off shoring, and higher degrees of complexity when outsourcing activities (Anand and Grover, 2015; Ghadge *et al.*, 2017).

However, these increased opportunities in the global market have also led to increased challenges for organisations in the buyer-supplier relationship when considering competition,

risk, and labour (Soosay and Hyland, 2015; Ghadge *et al.*, 2017; Collier, 2018; Michalski, Montes and Narasimhan, 2019). The emphasis on global sourcing has led to an increase in risk for supply chain disruption to occur due to the higher number of suppliers competing and the additional complexity of the supply chains (Barney and Hansen, 1994; Schmitt *et al.*, 2015; Ghadge *et al.*, 2017; Michalski, Montes and Narasimhan, 2019). For the supplier, this increase in competition intensifies its need to cultivate efficient supply chains (Ghadge *et al.*, 2017; Yuan, 2018; Michalski, Montes and Narasimhan, 2019; Yang *et al.*, 2020). Moreover, the increase in potential competition in the global market threatens the existing relationship between a buyer and a supplier. For instance, when an organisation chooses to abandon an existing counterpart for another by offshoring to access similar products at lower prices (Ghadge *et al.*, 2017). Another risk attributed to globalisation is the higher degree of risk organisations face due to fluctuations in demand and price volatility, which has instigated the need for additional governance mechanisms to be implemented to control the relationships (Ghadge *et al.*, 2017). The labour market has also been impacted by globalisation, where employment and industries have moved from developed nations to developing nations to access markets with lower wage costs (Jovanović, 2010; Collier, 2018). The shift of the labour market from the developed nations to developing nations have adversely impacted the employees from the developed nations on a financial and psychological level due to lower access to employment (Collier, 2018). However, the employees from the developed nations have not gained significantly from gaining the employment due to low wages resulting from the inequality in the distribution of the income (Jovanović, 2010). These challenges to the buyer-supplier relationship brought upon by globalisation negatively impacts trust between the organisations.

Trust within the buyer-supplier relationship can be adversely impacted by globalisation when considering logistics, demographics, and operations (Whalley, 2008; Udomkit, Ensslin and Meinhold, 2019). Globalisation has led to an increased number of organisations required to conduct business with unknown organisations that are geographically distant from it emphasising the need for trust in international transactions (Udomkit, Ensslin and Meinhold, 2019). Trust between organisations in international transactions provides organisations with security and helps reduce uncertainty (Udomkit, Ensslin and Meinhold, 2019). However, trust between these organisations could be negatively impacted due demographic (language,

culture, education, and geographic distance) differences between the organisations (Udomkit, Ensslin and Meinhold, 2019). From a new institutional economics perspective, globalisation may lead to buyers and suppliers spending more time in the execution of a transaction due to a lack of trust between the organisations (Whalley, 2008). These transactions could additionally require increased monitoring concerning the quality of the products, thus adding more time to complete the transaction (Bijlsma-Frankema and Koopman, 2004; Whalley, 2008). A lack of trust between the buyer and the supplier brought upon by globalisation requires an effective governance mechanism that can transcend the demographic, logistical, and operational divide between the organisations.

2.4.4.6. Employee Flows

The interpersonal relationships between the representatives of the buyer and supplier organisations are essential for the success of the inter-organisational relationship assuming a positive relationship between the representatives (Schmitz *et al.*, 2020). Employee flows, also referred to as employee turnover (Shi *et al.*, 2017), in organisations refers to the movement of staff into and out of an organisation (Lee, 2010). The replacement of an employee signifies an interpersonal relationship disruption which can impact the buyer-supplier relationship.

Relationship disruptions may result in a loss of performance for organisations (Shi *et al.*, 2017; Schmitz *et al.*, 2020). For instance, the loss of an employee could lead to a supplier losing customer-specific knowledge which could hinder the ability to satisfy the buyer (Schmitz *et al.*, 2020). Moreover, by having to replace an employee with an existing relationship with a counterpart could adversely impact the level of interpersonal trust between the employees of the respective counterparts (Schmitz *et al.*, 2020), reduce revenue (Shi *et al.*, 2017; Schmitz *et al.*, 2020) and diminish organisational commitment (Shi *et al.*, 2017). Employee flows can impact not only the perception of service quality in buyer-supplier relationships but could also impacts the outcome quality, relationship frequency, environmental characteristics and supply chain integration (Lee, 2010). Organisations collaborating may base the resources they invest in the relationship on the level of interpersonal trust between the representatives of the respective organisation (Fang *et al.*, 2008). The turnover in the employees in which this

trust is based may directly impact the trust levels within the buyer-supplier relationships due to the relationships between organisations often far exceeding the tenure of the employees working for these organisations (Mäkelä, Barner-Rasmussen and Björkman, 2008). The replacement of employees requires a new interpersonal relationship between the representatives of the respective organisations, which could impact the levels of inter-organisational trust between the organisations (Lee, 2010; Eriksson, 2015). This new interpersonal relationship requires additional effort to build trust with the buyer after the relationship disruption (Schmitz *et al.*, 2020), and can negatively impact the buyer-supplier relationship as interpersonal trust between the representatives of an organisation is built over time it and can be difficult to reproduce by the replacing representative (Zaheer, McEvily and Perrone, 1998; Shi *et al.*, 2017).

The challenges to trust discussed in this section provide an overview of some of the challenges buyers and suppliers face when considering trust in inter-organisational relationships. These challenges highlight that trust between organisations can be adversely impacted by numerous factors. The challenges to trust motivate the need for a mechanism to aid organisations in using trust as a governance mechanism, to help avoid the deterioration of trust between organisations from being reduced or even destroyed requires constant attention from the organisations in inter-organisational relationships.

2.4.5. Case-Study on Trust in Buyer Supplier Relationship

The importance of trust and the impact it has on the buyer-supplier relationship has been discussed from a theoretical and conceptual perspective in the study. However, when considering the impact that trust has on the buyer-supplier relationship it may be beneficial to also view it from a financial perspective. This section utilises a case-study by Henke, Stallkamp, and Yenyurt (2014) to illustrate the financial significance of trust in the buyer-supplier relationship.

2.4.5.1. ...how Chrysler missed out on \$24 billion in profits over the past 12 years by Henke, Stallkamp, and Yenyurt (2014)

Henke, Stallkamp, and Yenyurt (2014) have discussed the benefits in terms of profits of supplier trust for the buyer. The authors illustrated this by examining how Chrysler failed to capitalise on 24 billion US dollars in profit over twelve-years due to Chrysler's inability to optimise trust between itself and its suppliers (Henke and Yenyurt, 2014). The authors based their conclusions on the results of a twenty-year ongoing study of six major automotive manufacturers (Chrysler, Ford, General Motors, Honda, Nissan, and Toyota) and their Tier 1 suppliers. The authors determined and implemented a methodology to calculate the economic impact concerning the level of supplier trust for the buyer. Data from annual surveys completed by the suppliers of the major automotive manufacturers, starting from 1992 and ended in 2012, were used to gauge the suppliers experience with the buyers (Henke and Yenyurt, 2014). The surveys provided data on the number of times that the automotive manufacturers requested price reductions and those suppliers who obliged in giving them price concessions. A statistically significant relationship was found between the suppliers' ability to trust buyers and the resulting financial performance of the buyers. The authors identified a strong correlation between Chrysler's profits and its suppliers' trust levels over the 20 years (see Figure 2-8).

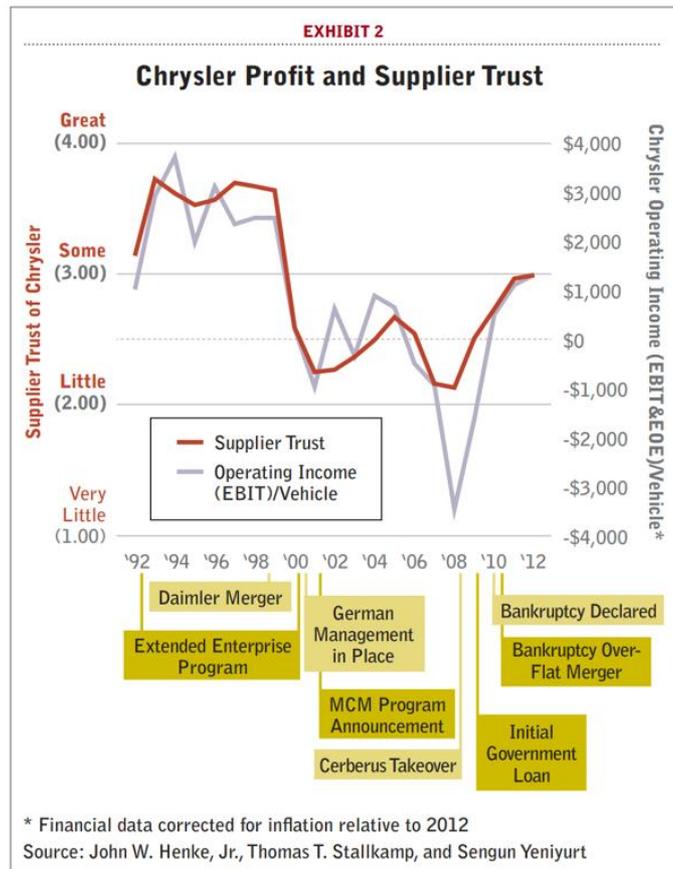


Figure 2-8 Chrysler profit and supplier trust from Henke, Stallkamp, and Yenyurt (2014)

The primary sources for the profit were identified as the capabilities of the managers (for example, skills and talents of management and the workforce, manufacturing and labour efficiency, product quality, marketplace acceptance, and sales incentives) (Henke and Yenyurt, 2014) and the suppliers. The suppliers add to the profitability through price reductions and what the authors refer to as “soft” benefits relating to non-price benefits. These refer to the supplier’s assistance level, the inclination to share process and product and innovation, and the supplier’s willingness to exceed its contractual obligations (Henke and Yenyurt, 2014).

The findings suggest that when buyers utilise an adversarial price concession approach, lower levels of trust from the supplier towards the buyer were experienced. Conversely, the higher the level of trust that the supplier has for the buyer, the more willing the supplier is to support the buyer in terms of communication, sharing innovation, buyer-specific investments, and allocation of resources (Henke and Yenyurt, 2014). The authors conclude that adversarial

buyer-supplier relationships require effort and resources that would be better utilised in building and maintaining trust between the organisations.

This case-study illustrates the importance of trust for existing buyer-supplier relationships in monetary terms. The indicators of trust as a management opportunity would allow organisations to overcome the challenges to trust in the relationships, however, the system requires a means to identify the levels of trust.

2.5. Indicators of Trust

The business, management, economics, and accounting literature agree that the utilisation of an accurate performance management system is essential to implement a successful strategy (Giannakis, 2007; Kucukaltan, Irani and Aktas, 2016; Wudhikarn, Chakpitak and Neubert, 2018). The development of the TMS framework requires a manner in which values can be assigned to enable organisations to gauge, monitor, and improve the levels of trust between long-term collaborative buyer-supplier relationships. The indicators of trust can serve as the inputs for assigning values to the TMS. The TMS framework requires the identification of performance indicators which allow for collaborative buyer-supplier relationships to gauge, monitor, and improve the levels of trust between the organisations.

2.5.1. Trust Indicators in the Literature

The indicators of trust refer to trust signalling behaviours that identify that a level of trust is present in a relationship (Cullen, Johnson and Sakano, 2000). The literature refers to these indicators of trust (Faems, Janssens and van Looy, 2007; Kai-Uwe Brock and Yu Zhou, 2012; Cater and Kidwell, 2014) by using multiple and alternative descriptions that include: the variables of trust (Leek, Turnbull and Naudé, 2006; Wright and Grace, 2011; Usman *et al.*, 2017), the conditions of trust (Jennings *et al.*, 2000) and the factors of trustworthiness (Mayer, Davis and Schoorman, 1995). they all refer to elements present in relationships that denote that trust is present between the parties to a certain degree. The indicators of trust

should not be confused with the antecedents of trust (the behaviours leading to the creation of trust in a relationship (Khalid and Ali, 2017) or the consequences of trust (the behaviours as a result of the trust being present in the relationship (Minerbo *et al.*, 2018)). In this section, the literature reviews identify the various types of indicators of trust. While this section provides a theoretical background to the indicators of trust in the literature, a content analysis identifying the indicators of trust is presented in Chapter 3.

Behaviour can be used as an indirect method of inferring trust in a relationship (Cook and Wall, 1980; Perrone, Zaheer and McEvily, 2003; Wright and Grace, 2011; Saleh *et al.*, 2015; Usman *et al.*, 2017). Academia frequently gauges trust in relationships by measuring the behaviours linked to trust (see Table 23). Trust measures have been implemented to understand populations, social processes, and individual experiences (Ozawa and Sripad, 2013). Where positive behaviours lead to an increase in trust and negative behaviours lead to a decrease in trust (Wright and Grace, 2011). Behaviours such as ability, benevolence, and integrity have been applied to measure trust in the literature using Likert-scale in several articles (Morgan and Hunt, 1994; Doney and Cannon, 1997; Usman *et al.*, 2017). However, other behaviours have also been implemented to measure trust in relationships. For instance, the manner in which a supplier is able to handle complaints has been related trust using the ability to solve-problems as a variable of trust when considering the key processes and outcomes when distinguishing between successful and problematic relationships (Leek, Turnbull and Naudé, 2006). While a negative behaviour such as a lack of respect can lead to a decrease in trust (Wright and Grace, 2011).

Behaviours such as fairness, predictability, and reliability has been used to understand the relationship between autonomy and trust between purchasing managers and suppliers (Perrone, Zaheer and McEvily, 2003). Considering franchisor-franchisee relationships, poor communication between the organisations was identified as limiting both trust and commitment in the relationship (Mohr and Sohi, 1995; Wright and Grace, 2011). Similarly, while considering the impact of behaviours on trust and commitment, communication was shown to improve trust while opportunism reduced trust when considering importer-supplier relationships (Saleh *et al.*, 2015). Additionally, the behaviours associated with religion have been researched to identify that it indirectly impacted how customers viewed the

trustworthiness of banks (Usman *et al.*, 2017). Moreover, behaviours have also been implemented in the literature to distinguish between trust and other constructs. For instance, Brock and Zhou (2012) used behaviours to show that customer intimacy was a distinct from trust and commitment as a relationship indicator. While some authors focussed on an individual behaviour to measure trust, such as Nel *et al.* (2000) (justice) and Faems *et al.* (2007) who focussed on expectation other authors have applied multiple behaviours (Cook and Wall, 1980; Wright and Grace, 2011; Cater and Kidwell, 2014; Saleh *et al.*, 2015). This capability to measure trust using a range of behaviours speaks to utility of implementing the indicators of trust as a means to measure trust within the buyer-supplier relationship using the TMS.

Table 2-3 The journal articles reviewed supporting the indicators of trust

Trust Indicators in Literature		
Variables of Trust		
Article	Type	Variables of Trust
Cook and Wall (1980)	Intra-organisational trust (staff)	commitment reputation collaboration loyalty confidence (in peers) confidence (in management) faith (in management)
Nel <i>et al.</i> (2000)	Organisation and end-consumer trust	justice
Burkink (2002)	Inter-organisational trust	satisfaction commitment
Leek <i>et al.</i> (2006)	Cross-cultural trust	problem-solving
Lymperopoulos, Chaniotakis, and Rigopolou (2010)	Organisation and end-consumer trust	performance quality

Wright and Grace (2011)	Inter-organisational trust	transparency communication contractual safeguards behaviour first impressions emotional involvement experience attitude passion dependence respect
Saleh, Ali, Quazi, and Wickramasekera (2015)	Inter-organisational trust	knowledge experience communication opportunism (lack of)
Usman et al. (2017)	Organisation and end-consumer trust	religion
Suparjo and Sunarish (2018)	Organisation and end-consumer trust	quality reputation
Components of Trust		
Article	Type	Components of Trust
Perrone, Zaheer, and McEvily (2003)	Inter-organisational trust	reliability predictability fairness
Indicators of Trust		
Article	Type	Indicators of Trust
Czaban et al. (2003)	Inter-organisational trust	frequency dependence relationship competence resources sharing risk sharing contractual safeguards communication pricing practices
Faems et al. (2007)	Inter-organisational trust	expectation of long-term relationship
Brock and Zhou (2012)	Organisation and end-consumer trust	relationship

Ozawa and Sripad (2013)	Organisation and end-consumer trust	communication confidence competence honesty
Cater and Kidwell (2014)	Interpersonal trust Inter-organisational trust	leadership competition cooperation acceptance decision making governance

The indicators refer to behaviours present in relationships that denote that trust is present in the relationship between the parties to a certain degree (Cullen, Johnson and Sakano, 2000). While the indicators of trust all play a significant role in the literature, the following section discusses the behaviours that constitute the indicators of trust most relevant to the thesis.

2.5.2. Indicators of Trust Behaviours

Behaviours play an essential role in the buyer-supplier relationship as indicators of the presence of trust in the relationship. This section discusses the ten popular behaviours that are identified as indicators of trust in the literature.

2.5.2.1. Ability

Ability refers to the competence of another person or organisation to complete a task effectively (Johnson and Grayson, 2005; Cook and Schilke, 2010a) based on experience (Schumann *et al.*, 2010), and areas of perceived knowledge (van Esterik-Plasmeijer and van Raaij, 2017). Ability also referred to as competence (Mayer, Davis and Schoorman, 1995; Das and Teng, 2001; Cook and Schilke, 2010a; Stahl *et al.*, 2011; van Esterik-Plasmeijer and van Raaij, 2017), or capability (Doney and Cannon, 1997) or expertise (Mayer, Davis and Schoorman, 1995; van Esterik-Plasmeijer and van Raaij, 2017), or performance (Seppänen, Blomqvist and Sundqvist, 2007; Hald and Ellegaard, 2011; Narayanan, Narasimhan and Schoenherr, 2015; van der Valk *et al.*, 2016). Van Esterik-Plasmeijer and van Raaij (2017) distinguish between three types of competencies: product competence relating to experience

and knowledge with products and services, managerial competence relating to knowledge of the internal and external organisation, and social & marketing competence relating to knowledge about customers.

Competence, or ability, can be based on the capability and resources that an organisation has access to, and plays a significant role in choosing a counterpart. Examples of resources that may impact an organisation's ability include capital, position in the market, technology and tangible assets (Das and Teng, 2001). Ability has been related to effective and efficient service, which improves buyer satisfaction over time (van Esterik-Plasmeijer and van Raaij, 2017). An example of the impact of ability can be taken from the banking industry where Van Esterik-Plasmeijer and van Raaij (2017) identified ability as a significant determinant of customers trust in a bank. The authors identified that ability, alongside stability, transparency, and value congruence, played an essential role in customers' loyalty toward a bank. Furthermore, if the ability or competence level was below a certain threshold, other factors, such as high levels of integrity or the organisation's focus on the customer, would not be enough to generate trust. An organisation's ability is pertinent in how organisations in buyer-supplier relationships perceive their counterpart's trustworthiness (Cook and Schilke, 2010a; Minerbo *et al.*, 2018). For instance, suppliers such as service providers are accessed by the buyer based on the knowledge and experience the supplier exhibits and which enhances the perceived trustworthiness of the supplier for the buyer (Johnson and Grayson, 2005). Additionally, the ability of an organisation is considered to be a universally important driver of trust. As illustrated by Schuman *et al.* (2010), an investigation of how cultural differences impacted the drivers of trust in relational exchanges in the banking industry found that ability was a universally important driver for trust despite the type of culture. Moreover, it has been shown that the ability (or expertise) and trustworthiness of an organisation impacts its perceived credibility (Mayer, Davis and Schoorman, 1995).

2.5.2.2. Collaboration

The ability for the buyer and the supplier to effectively collaborate is an essential part of forming a successful supply chain (Wilson, 1995; Spekman, Kamauff and Myhr, 1998; Bai and Sarkis, 2016; Salam, 2017). Collaboration within a buyer-supplier relationship starts with the mutual planning efforts of the organisations. The collaboration then concludes after the evaluation phase of their shared activities by analysing their shared supply chain (Spekman, Kamauff and Myhr, 1998; Mentzer *et al.*, 2001). The benefits of collaboration have been discussed in Section 2.2.4.2.2.

2.5.2.3. Communication

Communication as the sharing of information remains both an essential creator and indicator of trust between organisations in the supply chain (Narus and Anderson, 1986; Kwon and Suh, 2005; Oosterhuis, 2009; Ennew, Kharouf and Sekhon, 2011; Xuan Zhang, Dirk Pieter van Donk and Taco van der Vaart, 2011). The success of the supply chain often hinges on the capability of supply chain partners to share information (Mohr and Nevin, 1990; Lee, Padmanabhan and Whang, 2004). Communication enables organisations to coordinate the various processes required to complete a transaction regardless of the scale of the transaction (Mohr and Nevin, 1990; Lee, Padmanabhan and Whang, 2004) and to improve their ability to respond to changes in the market (Hsu *et al.*, 2008), benefiting both the collaborating buyer and the supplier. For instance, if the supplier becomes aware of a consumer trend impacting its buyer, it may share this data with the buyer since the success of the buyer in the marketplace directly impacts the success of the supplier (Hsu *et al.*, 2008).

Lack of communication or the withholding of information relevant to the buyer-supplier relationship may negatively impact the organisation not made aware of the information, harm the organisation withholding the information from its counterpart, and hamper its counterpart's ability to transact effectively (Voigt and Inderfurth, 2012). An example of an organisation choosing to withhold information from a counterpart may include when one organisation does not trust its counterpart's ability to maintain the confidence of the

relationship —fearing that its counterpart will share the information with one of its competitors (Voigt and Inderfurth, 2012). An example of an organisation choosing to communicate the wrong information includes an organisation providing its counterpart with false cost information to deceive its counterpart into believing that its profit margins are lower than they are. This tactic may be applied when the supplier fears the buyer may choose to utilise the information when negotiating purchasing contracts to obtain lower prices — thereby inflating the apparent cost price to provide themselves with a strategic negotiation tool (Voigt and Inderfurth, 2012). These omissions in communication emphasise the importance of trust within the buyer-supplier relationship. As both the buyer and the supplier are privy to sensitive information regarding one another's activities, a certain level of implied trust may be required for the relationship to function (Cai *et al.*, 2013). For information sharing to be more productive, the buyer and the supplier need to engage one another to improve trust proactively, instead of leaving the process solely to time and experience (Cai *et al.*, 2013).

2.5.2.4. Duration / Durability

The duration of the relationship between the buyer and the supplier impacts trust between the organisations (Das and Teng, 1998; Dekker, 2004; Mäkelä, Barner-Rasmussen and Björkman, 2008). Long-term buyer-supplier relationships have gained a significant amount of attention from scholars who argue that they provide organisations with 'superior effectiveness' when compared to short-term relationships solely based on price (Aoki and Wilhelm, 2017). The relationship duration refers to the time, often measured in years, since the establishment of knowledge transfer between organisations and the completion of the relationship (Mäkelä, Barner-Rasmussen and Björkman, 2008). Over the duration of the buyer-supplier relationship, the constant interactions between the organisations may result in the formation of relational trust between the organisations and through the shared experience and understanding of each other's inner workings, a sense of loyalty emerges between the organisations (Das and Teng, 1998; Dekker, 2004; Mäkelä, Barner-Rasmussen and Björkman, 2008). This long-term inter-organisational commitment between the buyer and the supplier stems from the mutual benefits both organisations obtain through their

collaborations (Anderson and Weitz, 1992; Goffin, Szwajczewski and New, 1997; Wagner and Johnson, 2004). The benefits that duration provides organisation include the ability to create a competitive advantage for both buyers and suppliers, and access to sustainable growth (Ganesan, 1994; Goffin, Szwajczewski and New, 1997; Ghadge *et al.*, 2017). Long-term relationships between the buyer and the supplier allows them to develop trust between the organisations (Mäkelä, Barner-Rasmussen and Björkman, 2008).

2.5.2.5. Fairness

Research in behavioural economics, economics and marketing fields have shown that companies are impacted by fairness in the business environment (Cui, Raju and Zhang, 2007; Wagner, Coley and Lindemann, 2011). Fairness, also referred to as honesty, integrity, and morality (van Esterik-Plasmeijer and van Raaij, 2017) and justice (Jokela and Söderman, 2017), has been expressed as “*the propensity to harmonize the interests of both parties*” (Perrone, Zaheer and McEvily, 2003, p. 425). Fairness is an essential criterion when evaluating the quality of a buyer-supplier relationship. Organisations who are judged to be inequitable (unfair/unjust) are treated harshly, while organisations who are deemed to be equitable (fair/just) are valued in the marketplace (Rabin, 1993). This phenomenon, referred to as the fairness equilibria, is the tendency of entities to reward those who treat them well while punishing those who treat them harshly (Rabin, 1993). Fairness has been described as an ‘evaluative judgement’ based on the actions and behaviours of organisations (Jokela and Söderman, 2017). An organisation that behaves fairly instils a sense of trust in its various stakeholders (Pavlou and Gefen, 2004; Wagner, Coley and Lindemann, 2011). Research has identified that a large number of buyers are concerned about supplier fairness (Fehr and Schmidt, 1999). If a supplier is perceived to be unreasonable by an existing buyer, the buyer may seek to find alternative methods to circumvent the apparent exploitation (Kumar, 1996). Signalling fairness could be beneficial for suppliers in attracting buyers for future buyer-supplier collaborations as it garners a favourable reputation (Wagner, Coley and Lindemann, 2011). Fairness in a buyer-supplier relationship may additionally improve the buyer-supplier relationship by improving the levels of commitment between the organisations (Jokela and Söderman, 2017). Fairness also serves as a precondition for improving operational

performance, enhancing cooperation, increasing continuity and trust in buyer and the supplier relationships (Jokela and Söderman, 2017).

2.5.2.6. Investment

Investment in the buyer-supplier relationship plays a significant role in the quality of the relationship regardless of whether the investment is being driven by the buyer or the supplier. The literature distinguishes between supplier development investments and buyer development investments (Bai and Sarkis, 2016; Merckx and Chaturvedi, 2020). Supplier development investments focus on the investments a buyer makes to benefit the supplier (Bai and Sarkis, 2016; Mizgier, Pasia and Talluri, 2017) while buyer development investments focus on the investments made by a supplier to benefit a buyer (Merckx and Chaturvedi, 2020). The recent shift of organisations from standalone actions by the buyer and the supplier to more collaborative (joint) efforts by the organisations have sparked an increase in interest into supplier development (Bai and Sarkis, 2016; Golmohammadi *et al.*, 2018). This is due to the challenges that the complexity of modern supply chains and the impact that globalisation has had on organisations (Mizgier, Pasia and Talluri, 2017). Supplier development includes both tangible and intangible investments from a buyer into a supplier, where the tangible may include capital resources, equipment, and the sharing of costs, and intangible investments may include knowledge investment (Bai and Sarkis, 2016). The buyer may also invest in on-site assistance that provides suppliers with joint problem-solving or investing in the supplier's factory capacity by helping to expand it (Bai and Sarkis, 2016). Investment also includes supplier development programs such as information sharing, informal assessments, and enforced competition (Golmohammadi *et al.*, 2018).

Supplier development have been shown to provide buyer-supplier relationships with significant benefits. For instance, supplier development collaboration strategies have been shown to have a direct and significant relationship to the performance of the organisations in buyer-supplier relationships (Bai and Sarkis, 2016). Supplier development programs help reduce supply chain costs and improve profitability (Golmohammadi *et al.*, 2018), and may provide organisations and their supply chains with a critical competitive advantage (Bai and

Sarkis, 2016). Organisations utilising supplier development programs that reduce costs may agree to share the savings (Bai and Sarkis, 2016). For the supplier, the investments from the buyer may benefit the supplier by enhancing its capacity and capability and increase its profits and the quality of the products it produces. Supplier investments may also reduce a supplier's delivery times, production costs, and help the supplier manage uncertainty (Golmohammadi *et al.*, 2018), while supplier development may also increase the supplier's performance and the efficiency (Golmohammadi *et al.*, 2018). For the buyer, the benefits of supplier development investments may include competitive advantage (Golmohammadi *et al.*, 2018), greater protection for the buyer against environmental changes, the advancement of technology (Bai and Sarkis, 2016), globalisation, and supply chain complexity (Bai and Sarkis, 2016; Mizgier, Pasia and Talluri, 2017). Additionally, supplier development provides the buyer with a supplier that is able to be more agile and willing to customise products on the buyer's behalf (Bai and Sarkis, 2016).

Investment in the buyer-supplier relationship is not limited to the supplier; buyer development represents the supplier investing in its buyer. Buyer investments may include effort, resources, and time (Merckx and Chaturvedi, 2020). Investments in the buyer by the supplier may be reliant on the relationship between the organisations. The level of relation-specific investment in general made by the supplier towards a buyer will depend on the expected continuity (duration) of the buyer-supplier relationship (Merckx and Chaturvedi, 2020). In other words, a supplier interested in investing in a buyer will need to be confident that the relationship between the organisations will continue for a long enough period to justify the risk in investing into the buyer. This may allow a buyer to incentivise a supplier into making relation-specific investments by offering the supplier the opportunity to engage in a long-term contract (Merckx and Chaturvedi, 2020). This in turn allows the supplier to invest in the buyer after a commitment has been made to the supplier and to contribute to the buyer, investments based on the needs and knowledge specific to their relationship (Merckx and Chaturvedi, 2020).

The industry has exhibited multiple ways that suppliers can invest in their buyers. From a retail perspective, an example from industry of larger buyers investing into suppliers are organisations such as Ikea & Walmart. Where the suppliers shared energy efficiency

assessment programs with the buyers to assist in reducing their production costs which ultimately benefits both organisations (Merckx and Chaturvedi, 2020). Examples from the industry of buyer-specific investments by the supplier may include technologic investments where a supplier develops a buyer-specific enterprise resource planning (ERP) model to integrate the buyer into its ERP system (Merckx and Chaturvedi, 2020). Suppliers are able to make human capital investments into the buyer, for instance, through engineers that are able to develop the buyer's manufacturing processes, or by investing in the buyer's warehouses to allow for more capacity (Merckx and Chaturvedi, 2020). Another type of buyer investment includes buyer-specific learning investments, where the supplier invests in experiments and trials to optimise the production process for the buyer's orders which reduces costs for both organisations (Merckx and Chaturvedi, 2020). There tends to be a correlation between the type of buyer-supplier relationship and the level of specific investment in the buyer-supplier relationship, and justifiably the higher the level of commitment between the buyer and the supplier, the higher the specific investment from the respective parties tends to be (Bensaou, 1999; Wang and Yang, 2013; Merckx and Chaturvedi, 2020). The supplier investing into the buyer may allow the supplier to benefit from cost-savings and the ability to retain the buyer as a customer for a longer period (Merckx and Chaturvedi, 2020).

2.5.2.7. Quality

Quality refers to the perception of the buyer of the product or service in terms of meeting their requirements (Johnson and Grayson, 2005). Johnson and Grayson (2005) distinguished two types of quality: outcome quality and process quality. Outcome quality is based on the performance of tangibles and process quality is based on the behavioural interactions between organisations. Quality applies to the delivery of both services and tangible products (Suparjo and Sunarsih, 2018; Paparoidamis, Katsikeas and Chumpitaz, 2019a). However, service quality may be harder to measure due to the subjective measurement of services as opposed to tangible products which can be measured objectively, for instance through formability and durability (Suparjo and Sunarsih, 2018). Generally, in the buyer-supplier relationship the supplier is often credited with the responsibility of having control over quality (Johnson and Grayson, 2005). When considering the selection of a supplier, the capability to

provide a consistently quality performance plays an essential role (Johnson and Grayson, 2005). Relational theory states that suppliers who are able to satisfy the needs of their buyers by providing high-quality products are more likely to retain the buyer for longer periods (Berry, 1995; Suparjo and Sunarsih, 2018). The relationship between the buyer and the supplier is thereby solidified through the trust that the buyer places in the supplier to maintain or improve the quality of the provided product. Quality plays a significant role for buyers when building trust with suppliers across markets (Paparoidamis, Katsikeas and Chumpitaz, 2019a). As the supplier is considered to be responsible for the quality of the product, quality affects the buyer-supplier trust relationship (Johnson and Grayson, 2005) when considering both product quality and sales service (Paparoidamis, Katsikeas and Chumpitaz, 2019a).

2.5.2.8. Reputation

An organisation's reputation is an essential consideration when considering a counterpart (Sharif, Kalafatis and Samouel, 2005; Khalifa and Saad, 2017). Reputation refers to an intangible asset (Wagner, Coley and Lindemann, 2011) that signals a perception to others of how an organisation is known to have conducted business in the past (past behaviour) (Johnson and Grayson, 2005; Howorth and Moro, 2006; Wagner, Coley and Lindemann, 2011). The behaviour of an organisation may be considered to be either a positive or negative interaction. This behaviour as interpreted by others forms an organisation's reputation (Milgrom and Roberts, 1982; Dellarocas, 2003; Cook and Schilke, 2010a). An organisation's reputation creates a future expectation from others that the organisation's future behaviour will be in line with past behaviour (Howorth and Moro, 2006). Wilson (1985) stated that according to game theory, when player (A) is faced with uncertainty in regards to player (B)'s intentions, player (A) will assess player (B)'s past actions in similar scenarios. An organisation's reputation spreads by word-of-mouth (verbally or non-verbally) and impacts the organisation's capability to compete in the marketplace based on the subjective views of others (Dellarocas, 2003; Khalifa and Saad, 2017).

Reputation may additionally impact future collaboration with a counterpart as the reputation of an organisation at the start of a collaboration may signal future collaboration and continuity with the counterpart (Wagner, Coley and Lindemann, 2011). An organisation viewed positively by others benefits from a positive reputation as it serves as an economic enabler. However, an organisation viewed negatively through a bad reputation serves as an economic disabler (Milgrom and Roberts, 1982; Dellarocas, 2003; Johnson and Grayson, 2005; Howorth and Moro, 2006; Wagner, Coley and Lindemann, 2011). A good reputation may act as a competitive advantage, for instance, when a buyer is unable to differentiate between the product offerings in the market the buyer may choose to support the supplier with the better reputation (Khalifa and Saad, 2017). Additionally, a positive relationship may enhance an organisation's financial performance and reduce uncertainty in buyer-supplier relationships (Wagner, Coley and Lindemann, 2011). Khalifa and Saad's (2017) research into the determinants of trust in the Tunisian banking industry identified both personnel contact and reputation as the determinants of interpersonal and inter-organisational trust, with reputation considered to be the primary contributor to the creation of inter-organisational trust. Trust between organisations may be initially facilitated through reputation, previous collaboration, and openness (Jennings *et al.*, 2000). Additionally, reputation and trust are directly related during buyer and supplier collaborations (Wagner, Coley and Lindemann, 2011), with a positive reputation leading to higher levels of trust in an organisation (Johnson and Grayson, 2005; Suparjo and Sunarsih, 2018). For instance, organisations that can maintain longer durations of having a positive reputation are perceived to be 'trusted' or trustworthy. The accolade of being considered trustworthy further incentivises organisation to build and maintain a strategic positive reputation (Dellarocas, 2003). However, organisations that have a negative reputation due to poor behaviour may struggle to rebuild trust (Howorth and Moro, 2006).

2.5.2.9. Security

In the supply chain literature, security is referred to as supply chain security (Hintsä *et al.*, 2009; Lu *et al.*, 2019), where breaches in security may negatively impact both individuals and organisations (Lu *et al.*, 2019). When discussing security, the study refers to the safeguarding

of products, services, information, and money in the buyer-supplier relationship (Hintsä *et al.*, 2009). Hintsä, Gutierrez, Wieser, and Hameri (2009) stated that security, including its constraints and demands, constitute obstacles, or logical and physical barriers, in the flow of distribution and supply. These obstacles, collectively referred to as security obstacles in this section, reduce the capability of an organisation to react to events and may inhibit an organisation's economic and physical performance (Hintsä *et al.*, 2009). An example of a security obstacle is the threat of opportunism from a counterpart within the buyer and supplier relationship and which requires organisations to take steps to implement security measures (Saleh *et al.*, 2015). Transaction cost theory presumes that if an organisation is provided with an opportunity to act opportunistically towards a collaborator, and the benefit to risk ratio is favourable, that an organisation would likely choose to do so (John, 1984; Wathne and Heide, 2000b; Saleh *et al.*, 2015). The high probability of opportunism occurring within the buyer-supplier relationship further emphasises the need to identify and build long-term collaborative relationships with organisations which may serve as trustworthy partners (Das and Teng, 1998; Dekker, 2004). A security obstacle that may adversely impact the buyer-supplier relationship is the threat of opportunism when considering information. A counterpart may choose to withhold information (Cho, Bonn and Terrell, 2019), share, or poach intellectual property (IP). Pouching refers to an organisation using the IP of another company to create an imitation product (Skowronski and Benton, 2018) which will then compete with the organisation from which it was stolen. A common security obstacle that organisations encounter within buyer-supplier relationships is the threat of misuse of information shared with a counterpart. For instance, organisations may feel the need to secure information (knowledge) when considering their relationships with a counterpart. This need to secure information may be especially applicable within international buyer-supplier relationships (Ho, Ghauri and Larimo, 2018). As discussed in Section 2.4.4.1, opportunism can be described as being the antithesis of trust. As the objective of security is to endeavour to restrict the occurrence of opportunism, the utilisation of trust may limit the exposure of security obstacles by allowing organisations to be more adaptable, reducing uncertainty, and help balance the proprietary interests of the organisations (Pemartín, Sánchez-Marín and Munuera-Alemán, 2019).

2.5.2.10. Social Bond

Inter-organisational relationships often exhibit a strong social bond between the buyer and the supplier (Dekker, 2004), there has been a significant increase in academic attention over the last two decades to the buyer-supplier relationship using a relational theory perspective (Jones *et al.*, 2014; Zhao *et al.*, 2019) where buyers and suppliers concentrate on the development of their relationships (social bond) (Krause, Handfield and Tyler, 2007; Argyres, Bercovitz and Zanarone, 2020). This social bond may develop as a result of the organisation's proximity from one another within a shared social network (Dekker, 2004) and plays an intricate role in the buyer-supplier relationship. The social bond between the buyer and the supplier may lead to social control, also referred to as informal control or relational governance. In this case, the decisions made by the collaborating organisations depart from relying solely on transaction costs and are complemented by an informal governance based on trust and reciprocity (Yang, Xu and Zhang, 2000; Singh and Teng, 2016; Argyres, Bercovitz and Zanarone, 2020). The social bond between the buyer and supplier affords the organisations a number of benefits, including improved collaboration when facing challenges and sharing of resources (Dekker, 2004). Additionally, the social bond between the buyer and the supplier simplifies the coordination between the participating entities (Dekker, 2004; Singh and Teng, 2016).

Performance indicators, including indicators of trust, are of great significance in the context of the business environment. As stated by Lord Kelvin, "if you cannot measure it, you cannot improve it" (as cited by Anand and Grover 2015, p136). Additionally, the academic literature has identified the indicators of trust as they relate to the buyer-supplier relationship. The implementation of the indicators of trust as quantitative performance indicators would provide organisations with an effective way to gauge and to monitor the levels of trust between organisations.

2.6. Research Focus

This chapter has presented and examined academic concepts and theories related to trust in collaborative buyer-supplier relationships. The literature review identified two main issues of relevance to progressing knowledge and understanding of trust in buyer-supplier relationships generally, and the indicators of trust in particular. The first issue identified is that of a lack of generalisability of the indicators of trust due to the focus of the research being related to specific geographical areas (demographics) (see Table 2-4). For instance, ‘religion’ as identified by Usman et al. (2017) as an indicator of trust within Indonesia may not be relevant to countries where religion plays a lesser role in the buyer-supplier relationship.

Table 2-4 The journal articles researching the indicators of trust with a focus on a geographic locations or specific industry

Geographic focus
Suparjo and Sunarish (2018), Khalifa and Saad (2017), Usman et al. (2017), Van Esterik-Plasmeijer and van Raaij (2017), Mohr and Puck (2013), Brock and Zhou (2012), Lympelopoulos, Chaniotakis, and Rigopolou (2010), Roberts et al. (2010), Mäkelä et al. (2008), Adobor (2006), Diwakara (2006), Howorth and Moro (2006), Arai et al. (2005), Czaban et al. (2003), Burkink (2002), Jennings et al. (2000), Pérez and Descals (1999), Cook and Wall (1980),
Specific Industry
Khalifa and Saad (2017), Van Esterik-Plasmeijer and van Raaij (2017), Saleh, Ali, Quazi, and Wickramasekera (2015), Ozawa and Sripad (2013), Cook and Schilke (2010b), Maniscalco et al. (2010), Roberts et al. (2010), Schumann et al. (2010), Faems et al. (2007), Howorth and Moro (2006), Payne and Clark (2003), Coulter and Coulter (2002)

The second issue identified is the lack of generalisability of the indicators of trust due to the research being related to specific industries. For example, the indicators of trust identified within the banking industry by Khalifa and Saad (2017) may not necessarily be applicable to those within the healthcare industry as identified by Cook and Schilke (2010b). The study addresses these gaps in generalisability by researching and identifying a list of indicators of trust that provide a higher degree of generalisability concerning the geographical location and the industry sector.

Furthermore, the indicators of trust identified in the literature are informative on a theoretical level. However, no studies regarding the indicators of trust between a buyer and a supplier in a long-term collaborative relationship have sought to validate their findings using industry feedback post the analysis phases of the research (Gamero *et al.*, 2011; van Esterik-Plasmeijer and van Raaij, 2017; Susanty Aries, Sirait Norma Mustiana and Bakhtiar Arfan, 2018). In other words, research has been done to identify the indicators of trust that could be utilised but has not validated the findings using industry feedback after the analysis phases. To address this need, this study first identifies the indicators of trust by analysing both the newspaper media and peer-reviewed journal articles. The resulting indicators of trust have then been subject to feedback from industry experts, and the resulting indicators of trust used to conceptualise a trust-based governance mechanism, named the Trust Management Systems (TMS) framework.

The need for the conceptual TMS model is further supported by the need to progress performance measurement between organisations given that continuous improvement in supply chain performance has become a significant element for organisations in buyer-supplier relationships (Anand and Grover, 2015). Additionally, the thesis endeavours to consider the measurement of trust considering the importance it plays in collaborative buyer-supplier relationships (Child, 2001; Seppänen, Blomqvist and Sundqvist, 2007; McEvily and Tortoriello, 2011; Fawcett *et al.*, 2017; Szromek and Naramski, 2019). Handfield and Bechtel (2002) called for research in relationship development concerning methods and models to sustain, develop, and aid in dealing with conflict when considering aspects such as trust. Additionally, authors such as Fawcett S.E., Jin, Fawcett A.M., and Magnan (2017), McEvily, Perrone, and Zaheer (2003), and Poppo, Zhou, and Zenger (2003) suggest that the research regarding trust has been lagging behind the theoretical developments of the field. The research presented in the research adds to the theoretical development of trust between buyers and suppliers in long-term collaborative relationships.

2.7. Summary

This chapter has presented and discussed concepts and theories pertinent to supplier-buyer relationship management and trust. The supply chain consists of multiple organisations, where the relationships between them play a significant role in delivering value to customers and stakeholders (Lima-Junior and Carpinetti, 2017; Sarkis, Santibanez Gonzalez and Koh, 2019). To allow the supply chain to be efficient and responsive requires collaboration based on trust, communication, and the sharing of risks and rewards (Soosay and Hyland, 2015; Panahifar *et al.*, 2018). The level of collaboration a supply chain requires depends on the needs of the relationships that constitute the supply chain. When considering complex supply chains, collaboration between the organisations plays a pivotal role in determining success for each organisation. When considering collaborative new product development and sustainable supply chain endeavours, higher levels of collaboration are considered to be key (Um and Kim, 2018; Dora, 2019; Pemartín, Sánchez-Marín and Munuera-Alemán, 2019; Sarkis, Santibanez Gonzalez and Koh, 2019). Trust was shown to improve supply chain relationships and the performance of the supply chain (Fawcett *et al.*, 2017; Michalski, Montes and Narasimhan, 2019; Yang *et al.*, 2020).

The literature review then delved deeper into relationships in the supply chain, generally considered to be either an arm's length buyer-supplier relationship or a collaborative buyer-supplier relationship (Wagner and Johnson, 2004; Meqdadi, Johnsen and Johnsen, 2017). Over time, the focus of the buyer-supplier relationship has developed from primarily a transaction-based approach implemented through arm's length relationship to embracing collaborative buyer-supplier relationships (Soosay and Hyland, 2015; Vitasek, 2016; Zhao *et al.*, 2019). The discrete and often adversarial nature of the boundaries and transactions of the arm's length relationship, along with its general lack of interest when considering trust (Phillips and Caldwell, 2005; Choi and Wu, 2009; Brink, 2017), rules it out as an option for the proposed Trust Management Strategy (TMS) framework. Conversely, collaborative buyer-supplier relationships with their emphasis on trust and a 'win-win' approach for both organisations over the long-term (Choi and Wu, 2009; Dave *et al.*, 2018; Birasnav, Mittal and Dalpati, 2019) serve as an optimal choice for applying the TMS.

As the study focuses on the governance of the buyer-supplier relationship, both contract and trust-based governance mechanisms were discussed. The benefits of trust-based governance were illustrated as a means to either replace or to improve traditional contract-based governance. The benefits of trust-based governance identified represent the 'carrot' that could entice the application of the TMS by organisations, while the challenges to trust represent the 'stick' motivating the need for organisations to protect trust in the buyer-supplier relationship. Additionally, the Chrysler case-study provides further motivation for a system allowing organisations to monitor and control trust between collaborative organisations by quantifying the loss of profit organisations could incur when not capitalising on trust. Having provided rationale for the need for the TMS, the chapter then focussed on the inputs for the proposed system.

The indicators of trust serve as performance indicators for the TMS and provide a means to categorise and quantify behaviours to measure and monitor the level of trust between the organisations. The current lack of indicators of trust not hampered by geographic location or industry was discussed. Additionally, the research focus identified a need to develop and apply indicators of trust that have been validated by supply chain experts. Moreover, the call for progress in performance measurement systems, especially when considering trust, was discussed. The identification of the indicators of trust from the newspaper media allows for the generalisability of the indicators as the media is not limited by geography or specific industry. The following chapter discusses the identification of the indicators of trust that resulted from the content analysis of the newspaper media in combination with the systematic literature review of peer-reviewed journals.

3 Research Methodology

3.1 Chapter Abstract

The purpose of the research is to add to the existing body of supply chain management knowledge. The previous chapter, the Literature Review (Phase I of the Research Phases), reviewed supply chain management literature discussing buyer-supplier relationship management and trust. This chapter discusses the research methodologies employed to achieve the research aims and objectives.

The chapter starts by discussing the research aims and objectives. The chapter will then discuss the theory supporting the research methodology, beginning with the research philosophy, the research approach to the theory development, the research choice, the type of research strategy, and the research time horizon. The chapter then discusses the ethical considerations and limitations of the research before presenting the research procedures.

3.2 Research Aims and Objective

The overall objective of this thesis is the development of a conceptual Trust Management Systems (TMS) and governance framework to enable organisations within a long-term collaborative buyer-supplier relationship to gauge, monitor, and improve the levels of trust within the relationship, thereby aiding organisations in creating and maintaining sustainable interorganisational relationships.

1. To identify and validate the indicators of trust.
2. To develop a Trust Management System.
3. To propose a governance framework to guide organisations when implementing the Trust Management System.

3.4 Research Philosophy

According to Saunders, Lewis, and Thornhill (2019), a research philosophy refers to the assumptions and beliefs when developing knowledge. The research philosophy serves as the basis for selecting the research methodology, strategy, data collection and analysis (Saunders et al., 2019). Business and management scholars are able to apply either a unification approach (utilising one research philosophy, paradigm, and methodology) or a pluralism approach (utilising multiple research philosophies, paradigms, and methodologies) when considering research philosophies. The thesis utilises a pluralism approach, as it allows for utilising a variety of unique and valuable approaches that benefit business and management research (Saunders et al., 2019). The research philosophies selected for the research include an interpretivism approach and a pragmatism approach.

3.4.1 Interpretivism

Interpretivism emphasises the difference between humans and physical phenomena, arguing that humans create meaning (Saunders *et al.*, 2019). Interpretivism argues that because of these differences between the social worlds of humans and physical phenomena, the social sciences need to be different from the natural sciences researching physical phenomena (Saunders *et al.*, 2019). Importantly, interpretivism believes that people from different cultures, under different circumstances, lead to different experiences in social realities (Saunders *et al.*, 2019). Interpretivist also places a high value on the importance of culture, history, and language to understand multiple interpretations and derive meaning. Furthermore, interpretivism allows researchers to employ methodologies with small sample sizes, allowing for in-depth investigations, utilising qualitative data (Saunders *et al.*, 2019).

3.4.2 Pragmatism

Pragmatist only considers concepts when they support action by considering concepts, ideas, and research findings as instruments of action and thought (Saunders *et al.*, 2019). For the pragmatist researcher, the process starts by considering the problem and taking the necessary actions to solve it. Thus, the most crucial consideration for pragmatist is the research problem. This focus leads to the research question (how to solve the problem), which leads to a practical outcome (Saunders *et al.*, 2019) —allowing the pragmatist to work with multiple types of methodologies, for instance, the utilisation of action research, mixed methods, multiple methods, quantitative, and qualitative research.

3.4.3 Research Philosophy Selection

The research in this study employs both interpretivism and pragmatism as research philosophies. As mentioned earlier, the utilisation of multiple research philosophies enriches both business and management research (Saunders *et al.*, 2019). The research objective drives the selection of these philosophies, the research focus and the research methodologies. As discussed in the Research Focus (Section 2.6), the literature focusing on trust and supply chain management concentrates on the relationship between humans from different organisations (buyer & supplier), taking into account various demographical differences. The application of an interpretivist approach supports the need for the research to examine and understand the different cultures, circumstances, and experiences required to accomplish the research objectives. Additionally, the interpretivist philosophy allows for the necessary tools to acquire the data required to address to achieve the research objectives. In conjunction with the interpretivism philosophy, the research adopts a pragmatism approach. Pragmatism allows the research to focus on the concepts and tools required to achieve the research objectives and solve the research problem.

3.5 Research Approach

The Saunders, Lewis, and Thornhill (2019) research design, as illustrated in Figure 31, employs three different research approaches: the deductive approach, the inductive approach, and the abductive approach.

3.5.1 Deduction

The deductive approach starts with a theory which leads to a research design to test the theory (Saunders *et al.*, 2019). The deductive approach is built on the logic that if the premises are true, the conclusion must be true. Using data to research an existing theory either proves the theory correct or incorrect (Saunders *et al.*, 2019).

3.5.2 Induction

The inductive approach starts with collecting data, which in leads to the creation of a theory (Saunders *et al.*, 2019). The inductive approach is built on logic using known premises to generate conclusions. The inductive approach collects data to explore phenomena and identify patterns and themes to create and build a theory (Saunders *et al.*, 2019).

3.5.3 Abduction

The abductive approach combines the inductive and deductive approach, allowing the researcher to collect data to identify patterns and themes to create a theory or modify an existing theory (Saunders *et al.*, 2019). The abductive approach is built on the logic of using known inferences to generate testable conclusions. The abductive approach collects data to identify patterns and themes which can be tested through subsequent research (Saunders *et al.*, 2019).

3.5.4 Research Approach Selection

Arguments could be made for the research presented to be either deductive or inductive. When considering the origins of the research, it can be traced to a theory that was developed as a result of reading academic literature. Suggesting the research approach to be deductive; however, when considering that the data collected is used to identify themes and concepts, it suggests that an inductive approach has been utilised. These factors lead to the conclusion that the research implemented an abductive approach. Saunders, Lewis, and Thornhill (2019) contending that due to the difficulty of applying a purely deductive or purely inductive approach, that the abductive approach is implemented by most of the management researchers, some without realising it.

3.6 Research Choice

Given the nature of the research strategies discussed above, the research presented utilises a mixed-method design. Saunders, Lewis, and Thornhill (2019) identify a list of 10 reasons motivating the application of a mixed-method design, of which two apply to the research presented. The first reason refers to generalisability; as discussed in the Research Focus (Section 2.6), the research presented in the thesis proposes utilising indicators of trust, which are more generalisable when considering various demographics and industries. The second reason for applying a mixed-method design is the ability to capitalise on triangulation. Triangulation is a qualitative research methodology where different data types using multiple methods from either similar or different theoretical perspectives may be linked in addressing a research question (Flick, 2018). As triangulation requires two or more datasets, not all datasets require the same type of data to validate a position. Triangulation improves the validity of a study, offers increased reflection, increases knowledge, and overcomes the limitations of single methods (Denzin, 2012; Flick, 2018). Triangulation is not without its critics, for instance, applying different theories that could cause empirical issues and access to resources such as time, money, and data (Flick, 2018). However, these limitations do not apply to the thesis when considering theory and resources.

3.7 Research Strategies

When considering the 'research onion', the research strategy and the research choice inform one another. As such, the research strategy and choices are addressed together. The research strategy refers to how the data is collected, for instance, by experiment, survey, archival research, case study, ethnography, action research, grounded theory, or narrative inquiry. The research choice refers to the number and the combination of data collection strategies (techniques) used within a research design, for instance, mono method quantitative, mono method qualitative, multi-method quantitative, multi-method qualitative, mixed-method simple, or mixed-method complex (Saunders *et al.*, 2019).

The methodological choice depends on whether the data being collected and analysed is quantitative (numerical) or qualitative (non-numerical) or a combination of both quantitative and qualitative data (Saunders *et al.*, 2019). The research presented in the study utilises both quantitative and qualitative data. While discussing the quantitative research designs, Saunders, Lewis, and Thornhill (2019) link quantitative research with positivism, realist, and pragmatism philosophies. However, the authors stipulate that data obtained from opinions (referred to in qualitative numbers) may fit somewhat with the application of an interpretivist philosophy. Supporting the utilisation of quantitative data with the selected research philosophies (interpretivism and pragmatism) as discussed in Section 3.4.3. Additionally, quantitative research is primarily linked with experimental and survey research strategies (Saunders *et al.*, 2019).

While discussing the qualitative research designs, Saunders, Lewis, and Thornhill (2019) link qualitative research with interpretivist, realist, and pragmatism philosophies. However, the authors emphasise the association between qualitative research and the interpretivism research philosophy due to the need for researchers to interpret subjective and socially constructed expressions (Saunders *et al.*, 2019). Similarly, to quantitative research discussed above, the utilisation of qualitative data is supported by the selected research philosophies for the research. Moreover, qualitative data has been linked to several research strategies, including action research, case study research, ethnography, narrative research, and Grounded Theory (Saunders *et al.*, 2019).

3.7.1 Content Analysis

Content analysis based on grounded theory (Scheufele, 2008) is a scientific research technique, within empirical social science (Seuring and Gold, 2012; Morali and Searcy, 2013) that employs texts or other meaningful matter to make replicable and valid inferences (Walliman, 2010; Krippendorff, 2012; Kache and Seuring, 2014; Bengtsson, 2016; Mir *et al.*, 2018). Content analysis was defined by Berelson (1952, p. 55) as “a research technique for the objective, systematic and quantitative description of the manifest content of communication”. The objective of content analysis is to both structure and gain insight from the collected data to elicit realistic conclusions (Hazen, Hall and Hanna, 2012; Bengtsson, 2016). The popularity of the implementation of content analysis has been linked to software technology development and the rapid increase of secondary data (Mir *et al.*, 2018). Content analysis has been described as both a quantitative and qualitative research methodology (Bengtsson, 2016). Quantitative when counting and recording content from text and qualitative when used to interpret meaning from the text (Hazen, Hall and Hanna, 2012). The strength of content analysis has been described as its capability to combine qualitative approaches with quantitative analyses for valuable insights (Seuring and Gold, 2012). Content analysis is a research methodology that has been applied in several academic disciplines to extract quantitative data from text (Mir *et al.*, 2018). Moreover, content analysis can be applied to various formats such as press releases, company reports, interviews, and videos (Mir *et al.*, 2018).

Content analysis has been implemented within a variety of supply chain-related research (Seuring and Gold, 2012; Mir *et al.*, 2018), for instance, the study of supply chain collaboration (Fawcett, Magnan and McCarter, 2008; Kache and Seuring, 2014), the closeness of interorganisational relationships (Golicic and Mentzer, 2005), logistical decision making (Hazen, Hall and Hanna, 2012), risk in the supply chain (König and Spinler, 2016), and sustainable supply chain management (Birkin *et al.*, 2009; Morali and Searcy, 2013). Similar to several other research methods, content analysis employs multiple different approaches depending on the needs of the researcher. As such there is no single systematic approach in the implementation of the research methodology, requiring great care when applied (Hazen, Hall and Hanna, 2012). However, the advantages of applying content analysis within the

supply chain and logistics disciplines include an unobtrusive investigation of issues using secondary data (Krippendorff, 2012; Mir *et al.*, 2018). Moreover, it allows for the research of situations where survey data may be difficult to access (Mir *et al.*, 2018). Content analysis provides researchers with additional value by permitting them to use computer software to examine various archival data sources such as longitudinal data. Additionally, the use of computer software for content analysis provides researchers with the means to increase data collection and data analysis speed. Moreover, content analysis through the investigation of qualitative and quantitative data provides researchers with a means to triangulate data (Mir *et al.*, 2018).

3.7.2 Semi-Structured Interviews

The survey strategy provides researchers with the means to collect qualitative data, which can be analysed quantitatively (Saunders *et al.*, 2019) —enabling the researcher to identify possible relationships variables. Survey research generally utilises questionnaires or structured interviews (Saunders *et al.*, 2019). However, Saunders, Lewis, and Thornhill (2019) state that research strategies should not be considered to be mutually exclusive. Thus, the research presented utilises both questionnaires and semi-structured interviews. The purpose of an interview is to gather descriptions from the real world from the interviewees' perspectives concerning a particular phenomenon (King, 2004). Interviews represent one of the most common research methods for qualitative research, which can be applied in multiple ways within every primary methodological and theoretical approach with applied psychology (King, 2004). Interviews provide researchers with information that may generally be difficult to obtain from other data sources (Morali and Searcy, 2013). Supply chain literature often utilises interviews as a source of primary data. For instance, when researching trust and collaboration when researching innovation (Fawcett, Jones and Fawcett, 2012), information sharing between supply chain members (Kembro and Selviaridis, 2015), information sharing and trust (Panahifar *et al.*, 2018), innovation (Rampersad, Hordacre and Spoehr, 2019), and sustainable supply chain management (Birkin *et al.*, 2009; Sharma, Chandna and Bhardwaj, 2017). Chapter 4 discusses the interview process and findings in greater detail.

3.8 Time Horizons

When considering time horizons Saunders, Lewis, and Thornhill (2019) identify two categories: cross-sectional and longitudinal. Cross-sectional research refers to the research of phenomena at a certain point in time. In comparison, longitudinal refers to the research of phenomena over a more extended period (Saunders *et al.*, 2019). The research presented utilises a cross-sectional approach given the parameters placed on the research and the author's personal preference.

3.9 Ethics and Limitations

While not illustrated in the research onion (Figure 31), Saunders, Lewis, and Thornhill (2019) place a significant emphasis on ethics when considering a research design. The authors warn that the research design should not subject research participants to the risk of embarrassment, harm, pain, or other material disadvantages. Ethics approval for the research was obtained from the Curtin University Ethics Committee (HRE2019-0356). Potential interviewees were invited to participate in the research via email (see Appendix XVII). Those who expressed an interest in participating in the research project were provided with an executive summary and the Likert and Cluster questionnaires before the interviews via email before meeting (see Appendix XIX). Before starting each interview, the interviewees were asked to sign a consent form (see Appendix XVIII).

Moreover, the interviewees were informed that their participation was voluntary and that they had the right to withdraw partially or entirely from the research process at any time. Additionally, participants were assured that they would remain anonymous (Naesens, Pintelon and Taillieu, 2007). The study acknowledges the limitation of the interviews as being: The number of interviews, the five interviews despite the relatively low number, the feedback from the interviews that the saturation point had been achieved. While a small sample size prohibits decisive announcements, having a large sample does not necessarily matter (*Qualitative methods and analysis in organizational research: A practical guide.*, 1998; Birkin *et al.*, 2009).

3.10 Research Design

As discussed, the overall research methodology consists of five phases. The first research phase, the literature review, was discussed in Chapter 2. The following chapter discusses research methodologies for phases II to IV.

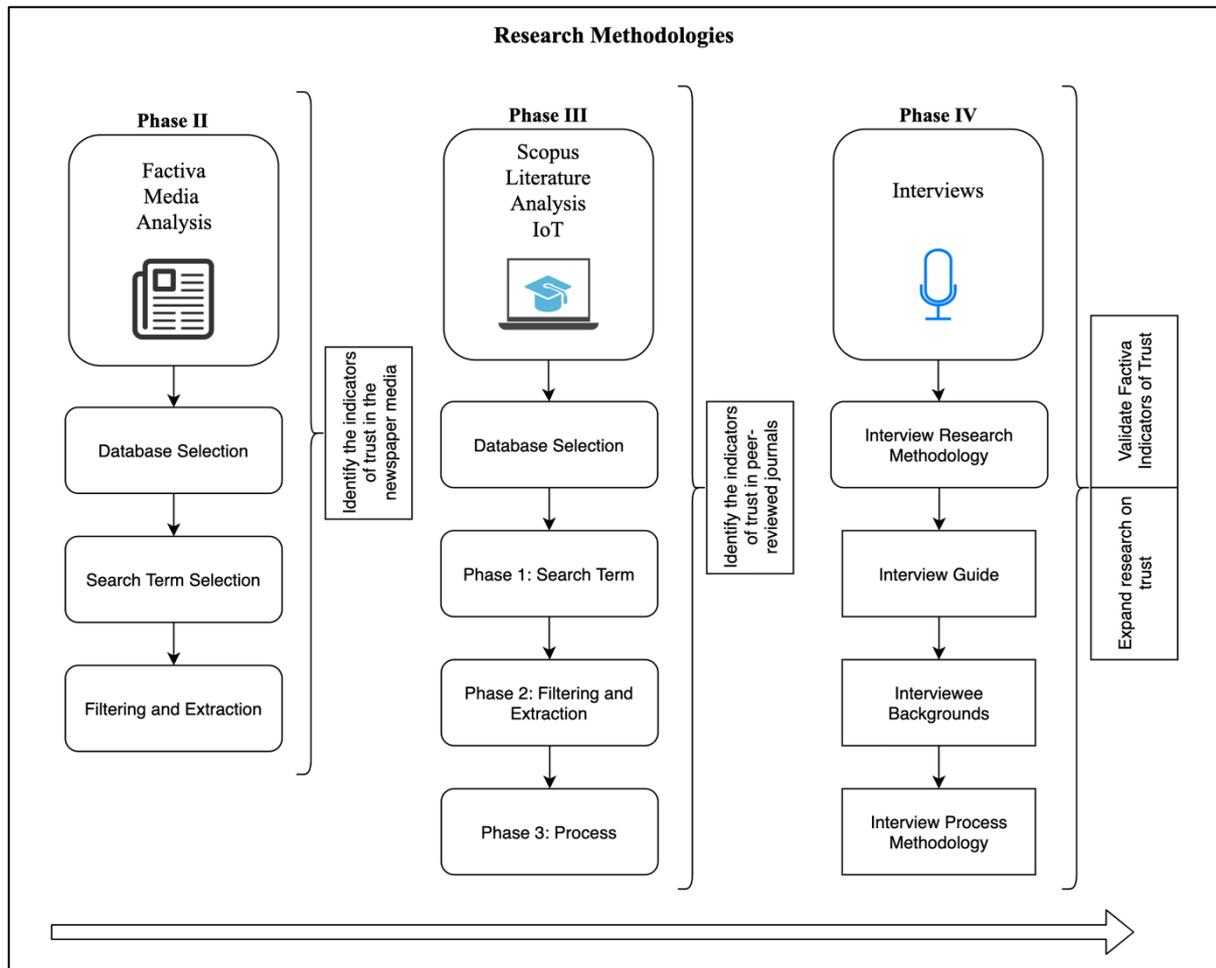


Figure 3-2 Research methodologies

4. Content Analysis

4.1 Chapter Abstract

The purpose of the chapter is to discuss the steps employed to identify the indicators of trust. The chapter discusses the procedures employed for the content analysis of the newspaper articles (Research Phase II) and the content analysis of peer-reviewed journal articles (Research Phase III). The chapter starts by discussing the procedures applied for the newspaper articles' content analysis, referred to as the Factiva content analysis, by describing both the search-term and the filtering and extraction procedures implemented. The chapter then discusses the procedures applied for the content analysis of the peer-reviewed journal articles referred to as the Scopus content analysis by describing the selection of the database, the search term, and the filtering and extraction procedures implemented.

4.2 Research Procedures for Factiva Content Analysis

In a novel approach to identifying the indicators of trust from a supply chain perspective, departing from the general convention of relying solely on existing academic literature, interview data, and questionnaires, the research also utilises the news media via newspaper articles. The newspaper articles were obtained through the Dow Jones Factiva Global News Database and Licensed Content electronic database, referred to as Factiva in the research, to identify the Indicators of Trust. As the media reports on current events in a manner that both mirrors and resonates with consumers and businesses alike (Bengtsson, 2016), the research utilises this medium to extract a list of essential trust indicators suitable for industry application and enhance the current academic understanding of trust. The research implements a content analysis of newspaper articles to identify how the newspaper media describes trust to its readers. The Factiva study applies a quantitative content analysis as the facts from the text are expressed as numbers and placed into categories (Bengtsson, 2016). The content analysis applies both an interpretive latent analysis and a manifest analysis. The

latent analysis refers to interpreting the text's underlying meaning, while manifest analysis refers to the text itself (Seuring and Gold, 2012; Bengtsson, 2016).

4.1.1 Selection of Database

The Factiva database was selected as it provides an extensive database of publications (licensed), websites, blogs, and videos (Factiva, 2017). The Factiva research focussed on the newspaper publications found in the database. Throughout the study, the term media, when used, refers to the newspaper articles aggregated from the Factiva database. The media plays a vital role in describing current events and shaping perception and terminology (Van Dijk, 1995; McCombs, 2002; Kim *et al.*, 2012). Newspaper publishers are incentivised to customise their content to reflect the readers' preferences by providing the readers with an understandable message accessible to the general public (Bushee *et al.*, 2010; Kim, Song and Kim, 2020). The thesis capitalises on this trait by researching attributes and behaviours attributed to the concept of trust as ascribed by the media as an intermediary to further understanding how organisations interpret trust to identify the Indicators of Trust (IoT).

4.1.2 Search Term

The research question the Factiva analysis investigated was identifying how the newspaper media view and describe trust as the research question plays an essential step in how a content analysis operationalises the variables being investigated (Mir *et al.*, 2018). The search term entered into the Factiva database search bar consisted of six parts; each section focused on distinctive aspects of trust (Table 41). The first section, 'trust within three words of the indicator', identifies articles referring to an indicator or indicators of trust (trust w/3 indicator*). The second part, the search-term 'trust and gauge', to identify articles containing both the words 'trust' and 'gauge' utilised truncation operator to include articles where 'gauge' used as a plural in the form of 'gauges' (trust and gauge*). The third part identifies the word 'trust' within three words of the word 'supplier'. To identify articles where the words 'trust' and 'supplier' was in a range of three words from one another. The fourth part utilised the word 'trust' within three words of 'factor' to obtain articles where the word trust was within three words of the word factor of factors (trust w/3 factor*) — placing a truncation on the word 'factor' to include the plural form. In the fifth section, the word 'trust' within three words of the word 'buyer' in combination with the truncation allows for the plural of 'buyer'

(trust w/3 buyer*). In the final part, the words 'firm' or 'company' were utilised to identify articles containing the words. The utilisation of the question mark operator fulfilled the role of allowing both Americanised and British spelling of the same word, in this case, organisation vs organization. All sections in the search were connected with the 'or' connector. For more information about the Factiva search operators, please refer to the Factiva website (https://global.factiva.com/help/en/text/ft_exmpl.html).

The search's period was from 17 October 2017, ranging back to the first records provided on the Factiva database. The search accessed the entire database. As Factiva provides access to an extensive range of publications, only the examples of the top sources as listed in this section as; Dow Jones Newswires, Major News and Business Sources, Press Release Wires, Reuters Newswires, and all the sources available from the Wall Street Journal (Factiva, 2017). For a complete list of all publications accessed, please refer to the Factiva website. Similarly, the option to refer to all authors was utilised and the mention of all companies, all subjects, all industries, and all regions. The final selection option that of language, the option to focus on English was utilised. The search yielded 701 articles in total, excluding duplicates.

Table 4-1 Factiva search-term utilised with legion indicating Factiva operators

Search-term	
((trust w/3 indicator*) or (trust and gauge*) or (trust w/3 supplier) or (trust w/3 factor*) or (trust w/3 buyer*)) and (firm or company or organi?ation)	
Factiva Search Operators	
w/3: within 3 words	* truncation
?: wildcard	And: include
Or: either information on topic or another topic	

This section discussed the search-term implemented on the Factiva database, which identified the selection criteria applied for the search. The result of the search was that 701 newspaper articles were identified on the Factiva database. The following section discusses the filtering and extraction process implemented in the Factiva study.

Phase 1, the 701 articles were read and reread to ensure that the utilisation of the trust parameters was in keeping with the objectives of the study, being how trust is described in the media (Bengtsson, 2016; Conz and Magnani, 2020; Supardi and Hadi, 2020). Duplicates and articles not pertaining to the study were removed; for instance, newspaper articles that referred to business or company trusts as types of organisations (Figure 4-2) or trust funds as legal fiduciary tools were removed. Additionally, articles that referred to anti-trust, referring to the competition laws, were removed (Figure 4-3). Of the 701 articles, 229 met the requirements to continue to the next phase.

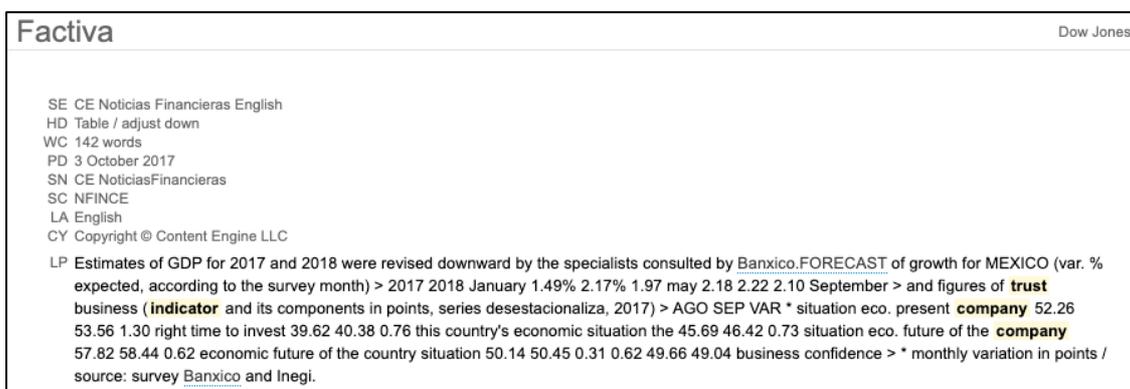


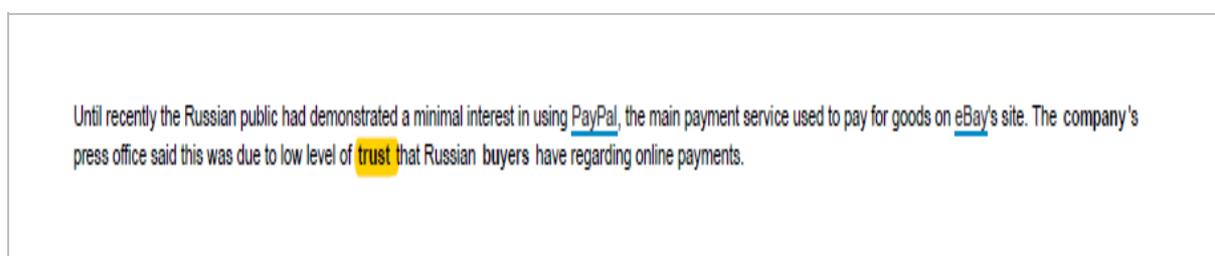
Figure 4-2 Example of an article discussing business trust



Figure 4-3 Example of an article discussing Antitrust laws

Phase 2, in this phase, the paragraphs containing the word 'trust' were extracted to a separate document (Butler, 1991). Thus, removing any noise that could impact the analysis resulting in inaccurate data (Bengtsson, 2016). The choice of utilising the whole paragraph containing the word 'trust' was to ensure the correct contextual interpretation was still present when reading in the absence of the complete article. Phase 3, the paragraphs were then examined and coded using open coding on the NVivo qualitative application (Wright and Grace, 2011; Conz and Magnani, 2020; Supardi and Hadi, 2020) to identify the words and the context describing trust, interpreting both the causality and circumstances. The process implemented both latent and manifest content analysis. A latent analysis refers to what the intended message was, and a manifest analysis refers to what has actually been said (Seuring and Gold, 2012; Bengtsson, 2016) (see examples below).

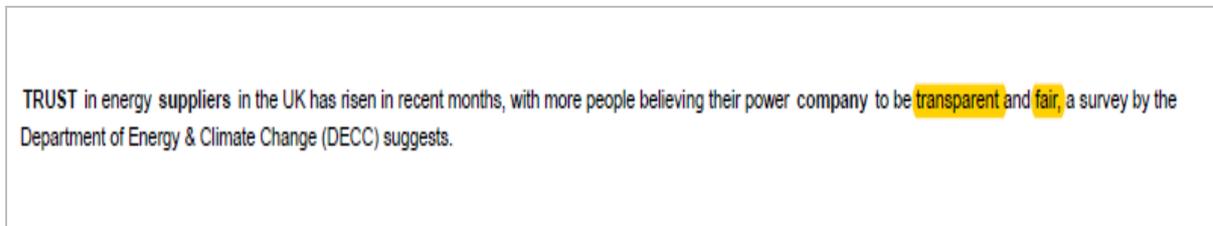
Figure 4-4 illustrates an example of latent analysis, where the instances identified were expressed in a sentence (multiple words), the instance was then manually coded into a single word (meaning units) describing the instance (Bengtsson, 2016; Neuendorf, 2017; Mir *et al.*, 2018). The research refers to instances however, other authors have referred to units of analysis (Krippendorff, 2012) and considerations (Hazen, Hall and Hanna, 2012) when conducting content analysis. For example, when the instance described an expression where an organisation was well known for its excellent work ethic, it was assigned to the reputation category. Example 1. in the figure below illustrates utilising context, the primary indicator of trust refers to 'security' as the primary concern of the targeted demographics in the article related to the security of their finances when utilising the online payment system.



Until recently the Russian public had demonstrated a minimal interest in using PayPal, the main payment service used to pay for goods on eBay's site. The company's press office said this was due to low level of trust that Russian buyers have regarding online payments.

Figure 4-4 Example 1: context example - Arutyunyan, Igor. 2014. "eBay is attracting new customers with the help of the Russian Qiwi payment service". *Bizekon-Russica Izvestia*, 6 November 2014

Figure 4-5 illustrates an example of manifest analysis in the cases where words were used to describe trust. It resulted in the implementation of manifest analysis (Bengtsson, 2016). Example 2. illustrates the use of verbs to identify the primary Indicators of Trust within the extract. In this example, the verbs ‘transparent’ and ‘fair’ are utilised as the causality of trust.



TRUST in energy suppliers in the UK has risen in recent months, with more people believing their power company to be transparent and fair, a survey by the Department of Energy & Climate Change (DECC) suggests.

Figure 4-5 Example 2: verbs example “Trust in energy suppliers increases as anxiety about bills shows slight decline”. 2014. The Herald, 5 November 2014

4.3 Research Procedures for Scopus Content Analysis

The Scopus content analysis served to identify the indicators of trust pertaining to academia by analysing peer-reviewed journals from the Scopus database. A content analysis was used to execute the systematic literature review to identify and extract text discussing the indicators of trust (Hazen, Hall and Hanna, 2012; Kache and Seuring, 2014). The indicators identified from the Scopus analysis provides academic support for the indicators identified in the Factiva study. The section starts by discussing the research methodology employed during the Scopus analysis. By first discussing the formulation of the search term entered into the database. It then discusses the selection process to identify the peer-reviewed journal articles pertinent to the study. The process to identify the indicators within the articles are then discussed before presenting the Scopus indicators of trust. The Scopus indicators are then placed into thematic clusters based on the categories identified in the Factiva study.

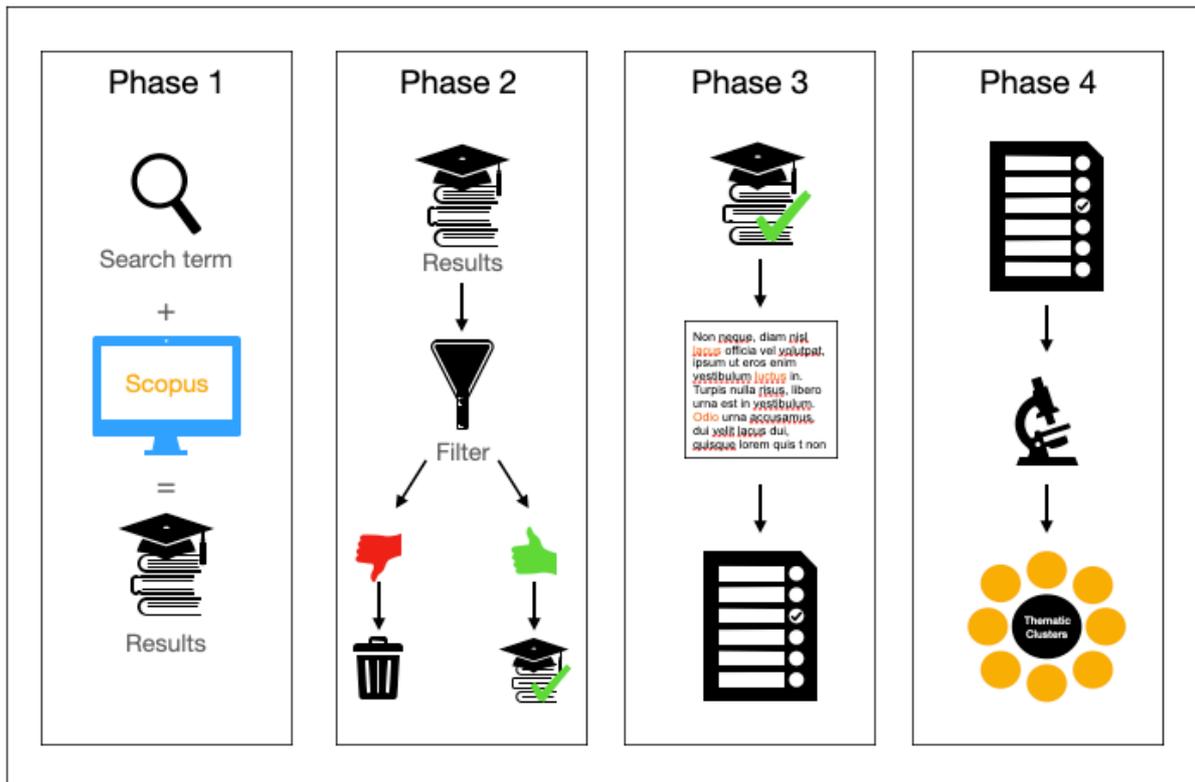


Figure 4-6 Phases of the Scopus analysis of peer-reviewed articles adapted from Bengtsson (2016)

4.3.1 Selection of Database

The Scopus content analysis of peer-reviewed journal articles' objective was to identify trust indicators prevalent within academia. The Scopus electronic database was selected due to the size of the database, which consisted of over 71 million records, over 23 700 peer-reviewed journals and over 5000 publishers (Elsevier, 2018). The Scopus analysis of English peer-reviewed journal articles to identify the indicators of trust utilised an electronic database to search for and identify particular topics of interest (Hazen, Hall and Hanna, 2012; Seuring and Gold, 2012). Peer-reviewed journal articles were selected to represent a significant portion of academia (Seuring and Gold, 2012). The Scopus analysis of peer-reviewed articles for the indicators of trust consisted of three phases. Phase 1 discusses the formulation of the search term. Phase 2 addresses the selection of peer-reviewed journal articles in the study. Phase 3 explains the process implemented in the analysis. Phase 4 discusses the analysis and findings of the study, which includes the identified Indicators of Trust and the proposed thematic groupings of the indicators.

4.3.2 Phase 1: Search Term

The systematic search started with identifying the main terms implemented in the search (Kache and Seuring, 2014). The Scopus search term focused on three main terms: the 'indicators of trust', the 'determinants of trust', and the 'variables of trust'. The search term/keyword search is the most widely implemented method of searching databases and library services (Seuring and Gold, 2012). The parameters utilised for identifying the terms focussed on the titles, abstracts, and keywords within the Scopus database (Seuring and Gold, 2012; Kache and Seuring, 2014). The search was further limited to only focussing on journal articles, thereby excluding books, conference papers, editorials, and short surveys. As the purpose of the study was to identify the indicators of trust as pertinent to the business environment, the subject area was limited to the business, management, and accounting topic. The final limitation applied was that of the language of the results being limited to the English language. The search was run on the 14th of October 2018 with no limitation on the start date and resulted in 76 documents being identified.

```
Search: (TITLE-ABS-KEY("indicators of trust") OR TITLE-ABS-KEY("determinants of trust")OR  
TITLE-ABS-KEY("variables of trust")) AND ( LIMIT-TO ( DOCTYPE,"ar" ) ) AND ( LIMIT-TO (   
SUBJAREA,"BUSI" ) ) AND ( LIMIT-TO ( LANGUAGE,"English" ) )
```

Figure 4-7 Scopus search-term

4.3.3 Phase 2: Filtering and Extraction

In the second phase, the search results were entered into an Excel spreadsheet for analysis (Kache and Seuring, 2014). The 76 articles were examined to identify which were available for download for further analysis. Despite specific articles being present in the Scopus search result, access to four articles failed (see Table 42). Despite the implementation of the search parameters, the Scopus search results yielded several articles that did not meet the search criteria. When considering relevant materials, the articles were limited to predefined topics (Hazen, Hall and Hanna, 2012). To identify the articles fit for purpose, the filtering of the

search results required the reading of the 72 remaining documents (Kache and Seuring, 2014). As the research focussed on business-to-business relationships (both on an interpersonal level and an organisational level), it led to the removal of articles centred on trust concerning information technology (online -5, websites -4, or social media -1) which eliminated ten articles. Additionally, this led to removing five articles focussed on trust on a macro-level (trust on an inter-governmental level). An article was removed due to its focus on the trust concerning tourism regarding a holiday destination. Another article was removed due to its focus on trust concerning the impact of tourism and the political economy. Two articles discussing trust from a linguistic perspective were then removed. Additionally, two articles were removed due to the orientation (medicinal and branding). One article was removed due to the article being on the topic of politics concerning voter trust. Two articles focussed on the end-consumer in such a manner as to distinguish it too much to be considered part of the buyer-supplier relationship were also removed. Four articles were removed due to duplication.

The remaining 47 articles were then further analysed for suitability by examining the abstracts to identify articles that could be ruled out (Saunders *et al.*, 2004; Kache and Seuring, 2014). Using the NVivo qualitative software application to analyse both the articles' titles and abstracts led to removing seven articles not abiding by the guidelines mentioned earlier. While implementing the NVivo application, three more duplicates were identified and removed that were not filtered out by the Scopus search result due to slight differences in the titles and article information. One article was removed due to not containing any of the required data regarding indicators, determinants or variables of trust. The resulting 35 articles are presented in Appendix XIV.

Table 4-2 Articles not available at the time of the study

Author	Year	Title
Skvarciany, V., Jurevičienė, D.	2017	Factors affecting personal customers' trust in traditional banking: case of the Baltics
Suryawardani, I.G.A.O., Wiranatha, A.S., Bendesa, I.K.G., Antara, M., Gravari-Barbas, M.	2017	A structural model of foreign tourists' loyalty in nature-based tourism in Bali

Teh, P.-L., Ahmed, P.K., Tayi, G.K.	2015	Generation-Y shopping: The impact of network externalities and trust on adoption of social commerce
Altschuller, S., Benbunan-Fich, R.	2008	In search of trust for newly formed virtual disaster recovery teams

4.3.4 Phase 3: Process

The process for the Scopus analysis was more straightforward than the previously discussed Factiva content analysis as the unit of analysis for the research was the indicators of trust. The Scopus content analysis implemented a manifest analysis identifying the actual text (Bengtsson, 2016) to identify references to behaviours identified as the indicators of trust. Thus, the analysis required less interpretation than the Factiva content analysis. The 35 articles selected were then imported in PDF format to the NVivo application for analysis (Wright and Grace, 2011; Conz and Magnani, 2020; Supardi and Hadi, 2020). As the purpose of the analysis was to identify the various types of indicators of trust, as discussed in the literature, the indicators of trust discussed by other authors in the articles were also included. Like the Factiva study, the Scopus analysis implemented a quantitative content analysis, where the frequency of specific texts (indicators) is implemented to analyse a phenomenon (Kache and Seuring, 2014; Bengtsson, 2016). Implementing the NVivo application, the indicators of trust were identified by reading and re-reading the articles. The indicators identified were coded and recorded using Excel spreadsheets (Kache and Seuring, 2014). The findings of the Scopus analysis are presented in Chapter 6.

4.4 Research Procedures for Semi-Structured Interviews

The interview research methodology consists of the interview guide and the qualitative analysis methodology. Before conducting the interviews, an interview guide was developed with specific questions (Given, 2008). The interview guide follows King's four steps to the qualitative interview provided. The section then discusses the qualitative analysis methodology implemented for analyses. The research methodology section starts by identifying the steps utilised in the interview guide by addressing the four steps as defined by King (2004). The chapter then discusses the methodologies utilised during the interview process. The primary purpose of conducting the interviews was to validate the findings (Sharma, Chandna and Bhardwaj, 2017; Panahifar *et al.*, 2018; Bhatia *et al.*, 2020) of the Factiva indicators of trust. The validation of the indicators of trust (IoT) by the supply chain experts confirms that the indicators of trust are theoretically applicable and practically applicable to real-world implementation. The secondary purpose of interviews with experts provides a deeper understanding of complex topics (Fritz *et al.*, 2018). The interviews with the supply chain experts provided valuable insight provided concerning the importance of each indicator when considering trust with a supply chain partner. The third purpose of conducting the interviews was to obtain feedback on the Factiva indicators of trust clusters, which would help categorise the IoT within the TMS framework while gaining additional understanding of how the supply chain experts interpreted the clusters. Feedback from expert interviews has been used several times within supply chain literature, for instance, when researching supply chain relationships (Meng, 2010), digital supply chain management (Farahani, Meier and Wilke, 2017), sustainable supply chain management (Morali and Searcy, 2013; Raak *et al.*, 2017).

5. Interviews

5.1 Chapter Abstract

The purpose of this chapter is to present the interview procedures implemented with supply chain experts to validate the indicators of trust identified from Factiva content analysis (Research Phase III). The chapter discusses the interview research methodology applied by first discussing the interview guide. The chapter then provides background information of the interviewees before discussing the interview process methodology.

5.2 Interview Research Methodology

King (2004), in the book 'Essential Guide to Qualitative Methods in Organizational Research', stated that the process of constructing and implementing research interviews requires four steps; 1. defining the research question, 2. creating the interview guide, 3. recruiting of participants. 4. And carrying out the interviews. The research implemented the steps as follows:

5.2.1 Interview Guide

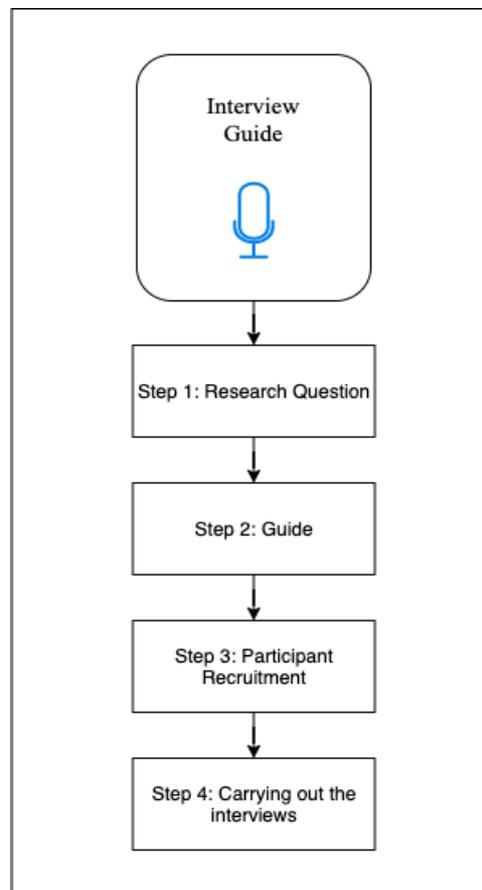


Figure 5-1 Interview Guide adapted from King (2004)

Step 1: The research question for the study and interview selected

Are the indicators of trust and trust clusters identified in the Factiva newspaper media analysis pertinent to the supply chain industry?

Step 2: Creating the interview guide

There were four sources for the topics used within the interview guide: the results from the Factiva media analysis, the interviewer's personal experience and knowledge working in the field and studying supply chain management, the preliminary discussions with various experts in the field, and the related research literature (King, 2004; Sharma, Chandna and Bhardwaj,

2017). The primary driver for the concepts and topics discussed and examined during the interviews were the results obtained from the Factiva indicators of trust analysis (see Chapter 3). As the main objective of the interviews was to gather input from the supply chain experts on what the media consider to be the indicators of trust and the trust clusters. Similar to an approach by Bhatia et al. (2020), who identified factors utilising a literature review that was validated from the input of seven industry experts. Additionally, the author's and the author's thesis supervisors, own experience, and academic expertise served as drivers for the topics selected and implemented while structuring the initial interview-guideline. The preliminary casual discussions with the experts' overtime before the study, the peer-reviewed literature review done for informing the study (McCutcheon and Stuart, 2000; Wagner and Johnson, 2004), and the literature analysed during the thesis literature review (see Chapter 2) and the Scopus analysis (academia) (see Chapter 3) study.

The interviewees were given both verbal and written instructions guiding the interview (Butler, 1991) where the interview consisted of multiple sections, namely, the questionnaire (written portion) section and the interview questions (verbal portion) section (Wagner and Johnson, 2004; Yeung, Chan and Chan, 2008). The questionnaire consisted of an executive summary, purpose, scope, methodology, conclusion, trust factors, and groupings (see Appendix XIX). The interview was unconstrained and in-depth exploratory (there was an empty list of information needs). Czakon and Czernek (2016) stated that this type of interview allows the interviewees to delve deeper into an issue, allowing them the freedom to express their opinions. The executive summary provided a short introduction and background to the interviewee regarding the nature of the study (Butler, 1991). The purpose section explained to the interviewees the reason why the information gathered for the research was relevant. The scope section identified to the interviewee the context of the concepts to remove ambiguity when viewing and to discuss the various concepts as being pertinent to the interviewee's related field. The methodology section explained, in brief, the interview process, the sequence of events, and what was required in each section. This process was also discussed verbally with the interviewee.

The trust factors section presented the 51 indicators of trust to the interviewee as identified in the Factiva analysis of newspaper media. The interviewee was then requested to assign a value ranging from 1 to 5 on a Likert scale (Naesens, Pintelon and Taillieu, 2007; Yeung, Chan and Chan, 2008; Panahifar *et al.*, 2018), representing the importance the interviewee believes the indicator plays in identifying trust within the buyer-supplier relationship. Where 1 represented that the indicator did not play a part at all in trusting a trade partner up to 5, signifying that the indicator was extremely important in trusting a trade-partner.

The second section utilised multiple tables consisting of concepts grouped by theme by the authors. In this section, the interviewees were given three tasks. With each trust cluster, the interviewee was invited to:

1. The interviewees were asked to identify whether they agreed with the grouping by clearly circling a yes or no on the questionnaire.
2. The interviewee was then asked to suggest a title for each grouping that best describes it.
3. In the cases where the interviewee indicated that they disagreed with the grouping content, they were asked to provide the reasoning for the choice within the allocated spaces for this purpose on the questionnaire.

The final stage of the interview consisted of the verbal portion of the interview. There are four types of qualitative research interviews (King, 2004), namely, in-depth interviews, exploratory interviews, semi-structured interviews, and unstructured interviews with the study utilising a semi-structured interview format (Craighead *et al.*, 2007; Raak *et al.*, 2017; Bao *et al.*, 2019; Cardoso *et al.*, 2019). The interview format selected was semi-structured, where interviewees were asked six predetermined questions (see Appendix XVII). The questions for the interviewees were not provided to the interviewees before the interview. Semi-structured interviews are a qualitative data collection methodology that provides consistency when conducting multiple interviews with multiple companies. Interviewers ask interviewees predetermined questions (Given, 2008; Fawcett, Jones and Fawcett, 2012), allowing interviewers to ask follow-up questions based on how the interviewees respond, allowing interviewers the opportunity to ask for clarification when needed (Craighead *et al.*, 2007; Walliman, 2010).

Step 3: The recruitment of participants

The interviews utilised a purposeful sampling based on the interviewee's knowledge and experience within the supply chain industry (Wagner and Johnson, 2004). The interviewees being selected from a wide range of industries and backgrounds, thereby enhancing the generalisability and robustness of the outcomes (Wagner and Johnson, 2004; Craighead *et al.*, 2007). The purposeful sampling enables researchers to select participants following the needs of the research (Coyne, 1997). Where participants are selected based on their knowledge of a topic, the utilisation of purposeful sampling allows for selecting information-rich cases (McCutcheon and Stuart, 2000; Adobor, 2006; Smith *et al.*, 2009; Czakon and Czernek, 2016). An introduction/invitation letter was emailed to the prospective interviewees (Smith *et al.*, 2009) (see Appendix XVI). Of the five prospective interviewees invited, all agreed to conduct the interviews. A date and time mutually acceptable to all parties were agreed upon for the interviews to be conducted separately, either at Curtin University or a location convenient to the interviewees.

Step 4: Carrying out the interviews

Before the commencement of the interviews, the interviewees were given an interview consent form to read and complete. The interviews were conducted in person and lasted for about half an hour each. The first interview conducted was completed by the author and the author's two thesis supervisors, after which the author conducted the subsequent interviews. Four interviews were done on campus and one at the offices of the interviewee. With express permission from the interviewees, the interviews were recorded. The interviewees were given time to read the executive summary (see Appendix XIX), which provided the interviewees with an insight into the topic of the interview, the purpose of the research, the scope of the research, the interview procedure (methodology), and a conclusion.

The interviewees were then asked to complete the first questionnaire, namely the 'Trust Factors' (see Figure 5-2). The interviewees were asked to rate the importance of a concept regarding trust on a scale from 1 to 5 (1 not at all, 5 extremely important). As the Factiva analysis identified indicators that were in some cases very similar to one another (e.g., transparency and visibility), the interviewer provided more insight into the meaning of the concepts when the interviewee requested further clarification.

Appendix A

Trust Factors

On a scale between 1 and 5 how important do you find the concept to trust a trade-partner?
(1 not at all, 5 extremely important)

Concept	Rating (1 - 5)	Concepts	Rating (1 - 5)
accountability		legal	
accuracy		legitimate	
altruism		location	
believability		loyalty	
benevolence		natural phenomena	
collaboration		networking	
commitment		objective	
communication		performance	
competence		quality	
confidence		reciprocity	
contract		reliability	
cooperation		reputation	
credibility		respect	
culture		responsibility	
demographics		responsiveness	
duration		security	
ethics		service	
fairness		social bonds	
flexibility		social responsibility	
honesty		support	
independent		sustainability	
innovation		traceability	
input		transparency	
integrity		value	
investment		visibility	
leadership			

Figure 5-2 Appendix A Indicators of Trust (Likert Scale)

The second segment of the interview, namely the ‘Groupings’ segment, required the interviewee to look at nine unique tables (clusters) that contained concepts thematically grouped (see example in Figure 5-3). The smallest tables containing two concepts, with the largest table containing 11 concepts. If the interviewee found that they agreed with the cluster group, they should circle the ‘YES’ option, and if they did not agree with the grouping of the cluster, they should circle the ‘NO’ option. When the interviewee disagreed with the grouping of the cluster, the interviewee was asked to write a reason for the disagreement in a section below the cluster. Additionally, the interviewees were also asked to provide a suggested title for the cluster based on their perceived understanding of the theme of the cluster. Interviewees were allowed to create an entirely new name for the cluster or select one word from within the cluster to choose one concept from the table to describe the entire cluster.

Do you agree with the grouping of the terms? (Circle choice)

Group 1 **YES / NO**

Credibility	Fairness
Believability	Reciprocity
Confidence	Benevolence
Leadership	Honesty
Ethics	Integrity
Altruism	

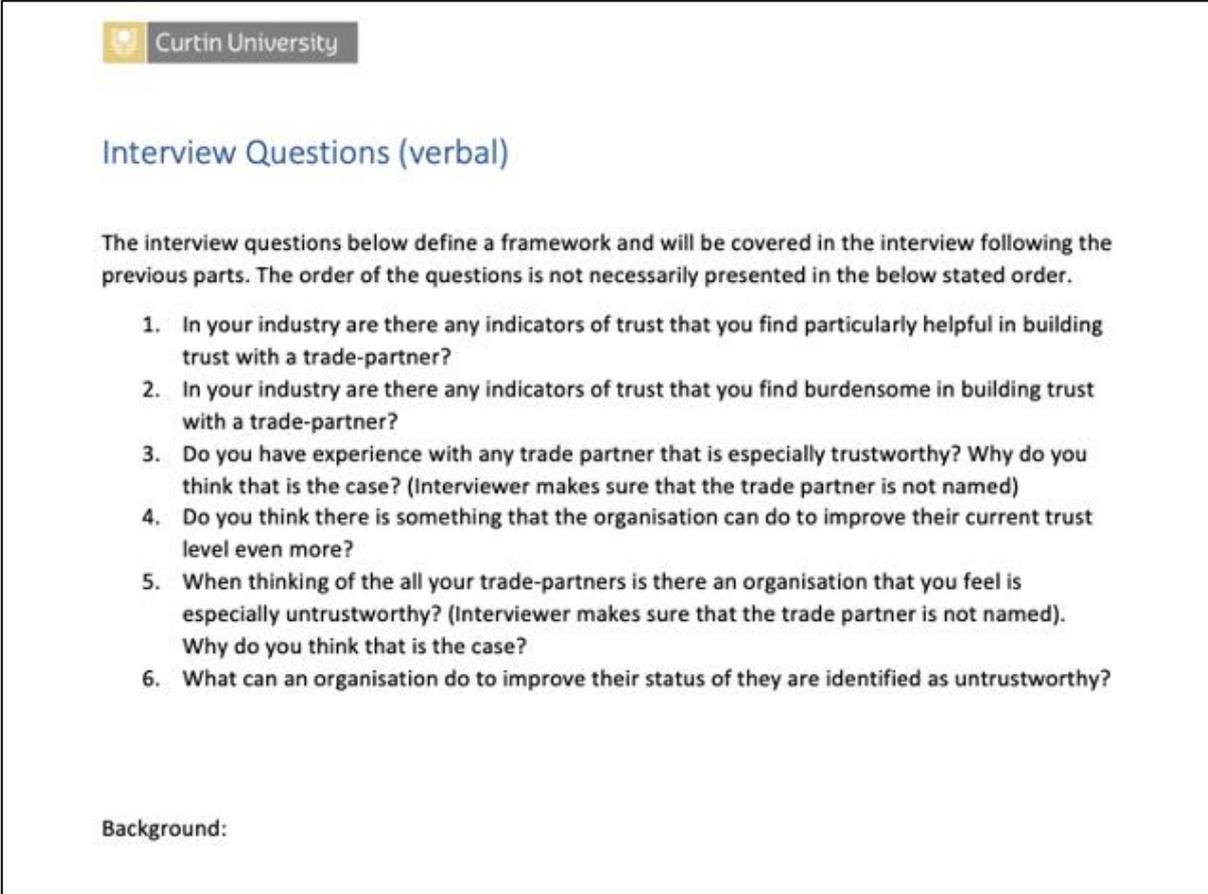
What would you title the grouping?

If NOT, why?

Figure 5-3 Example of one of the thematic clusters presented to the interviewees

The final segment of the interview consisted of a verbal exchange between the interviewer and interviewee based on six questions forming the framework for the semi-structured interview (Butler, 1991; Adobor, 2006; Craighead *et al.*, 2007) (see Figure 5-4). As the nature of the interview was semi-structured, it allowed for follow-up questions to the pre-determined questions eliciting clarification on the interviewee’s answers. After the first interview, it was decided to alter the questions for subsequent interviews. King (2004) and

McCutcheon and Stuart (2000) stated that the interview guide does not end at the start of the first interview as it may evolve through the adaptation of probes or ‘even entire topics’ as it is influenced by discussion or relevant research literature. The interviewers took great care not to become too immersed in the interaction, thus eliminating the danger of turning the interview into a conversation (King, 2004). Post-interview, the recordings of the interviews were transcribed for analysis (Yeung, Chan and Chan, 2008; Raak *et al.*, 2017).



 Curtin University

Interview Questions (verbal)

The interview questions below define a framework and will be covered in the interview following the previous parts. The order of the questions is not necessarily presented in the below stated order.

1. In your industry are there any indicators of trust that you find particularly helpful in building trust with a trade-partner?
2. In your industry are there any indicators of trust that you find burdensome in building trust with a trade-partner?
3. Do you have experience with any trade partner that is especially trustworthy? Why do you think that is the case? (Interviewer makes sure that the trade partner is not named)
4. Do you think there is something that the organisation can do to improve their current trust level even more?
5. When thinking of the all your trade-partners is there an organisation that you feel is especially untrustworthy? (Interviewer makes sure that the trade partner is not named). Why do you think that is the case?
6. What can an organisation do to improve their status of they are identified as untrustworthy?

Background:

Figure 5-4 Questions for the semi-structured interviews

5.2.2 The Interviewee Backgrounds

Before discussing the interview process methodology, it may be pertinent to provide an overview of the backgrounds of the interviewees. The interviewees were experts in supply chain management related professions representing various industries with more than a combined eighty-five years of experience between the five interviewees. The interviewees were all from Australia; however, one of the interviewees had also worked in Europe and

Asia. The first interview was conducted by three interviewers, after which the remaining interviews were conducted by one interviewer (the author). The average duration of the interviews was thirty-one minutes and thirty seconds. The most extended interview being thirty-eight minutes and eleven seconds, and the shortest interview being twenty-nine minutes and six seconds. As context relating to the supply chain experts may provide more in-depth insight regarding the findings and discussion of the findings, each of the interviewees' background is provided (Yardley, 2000; Cassell and Symon, 2004; Bhatia *et al.*, 2020). Each of the interviewees was assigned a code to maintain privacy (Smith *et al.*, 2009). The code based on the purpose of the interview, namely, interview indicators of trust (IIOT) and a sequential number.

Table 5-1 Interviewee backgrounds

Interviewee Code	Interviewee Code	Verbal Interview Duration	Position	Industry	Experience (years)
Interviewee 1	IIOT1	29:06 min	Supply chain manager	Aviation industry	20+
Interviewee 2	IIOT2	30:02 min	Business analyst	Supply chain management	20+
Interviewee 3	IIOT3	28:35 min	Category specialist	FMCG, oil & gas	20+
Interviewee 4	IIOT4	38:11 min	Senior purchaser	Oil & gas, hospitality	10+
Interviewee 5	IIOT5	31:38 min	Manager contracts & procurement	Mining, oil & gas	15+

IIOT1 had a background as a supply chain manager within the aviation industry, with over 20 years of experience working for a large multinational organisation with an emphasis on sourcing, logistics and warehouse management. IIOT2's had a background as a business analyst in the supply chain management industry with over 20 years of experience. The interviewee described their experience from both a business and systems perspective, with the business perspective focussing on 'business best practices' between buyer and suppliers for large retail organisations in addition to a systems perspective experience in creating online transaction systems for large suppliers. IIOT3's background was as a category specialist with over 20 years of experience in supply chain management roles working for large multinational

organisations within various sectors such as the retail sector, the oil and gas sector, and the logistics sector. IOT4's background was as a senior purchaser within the oil & gas and the hospitality industries with over 17 years of experience in supply chain management roles working for major multinational organisations. IOT5's background was that of a contract and procurement manager with over 15 years of management experience within the mining industry who has also worked for tier one organisations in the oil & gas industry working in Australia, Europe, and Asia. The interviewees, as described above, are shown to be experts within the supply chain management field with a wealth of knowledge and experience concerning relationships between buyer organisations and supplier organisations — the interviewees representing insights from a wide array of supply chain-related management positions and industries. This section provided a broad background to the interviewees to illustrate their experience and competence relating to supply chain management. The following section discusses the methodology employed during the semi-structured interviews.

5.2.3 Interview Process Methodology

This section describes how quantitative and qualitative data was obtained utilising the interviews. The findings resulting from the interview feedback and discussion is provided in Section 6.6. The analysis methodology for the interviews consisted of both questionnaire and verbal portion (see Appendix XIX). The quantitative portion of the interviews referring to the questionnaire that the interviewees completed, and the verbal portion of the interview referring to the verbal exchange. The following section first discusses the analysis methodology for the questionnaire portion of the interview before discussing the analysis methodology for the verbal portion of the interview.

5.2.3.1 Questionnaire

The first part of the interview utilised a questionnaire to obtain feedback from the interviewees on the indicators of trust identified in the Factiva content analysis and the resulting trust clusters (see Chapter 3). The questionnaire consisted of three parts: the Executive Summary, Appendix A – Trust Factors, and Appendix B – Groupings.

5.2.3.2 Appendix A – Trust Factors

The purpose of the trust factor portion of the questionnaire was to validate the indicators of trust identified in the Factiva study. The second part of the questionnaire, the Trust Factors segment, provided the interviewees with the 51 the indicators of trust identified in the Factiva content analysis. The indicators were referred to as concepts not to provide the interviewees with too much context. The interviewees were asked to rate the importance of the concepts regarding trust a trade-partner using a 5-point Likert scale (1 not at all, 5 extremely important). After the interviews had concluded, the numeric values assigned to each of the indicators were then inputted into separate individual Excel worksheets reflecting the values as assigned by each interviewee. At a later stage, these values were amalgamated into one Excel sheet reflecting all the interviews' findings (see Appendix XX).

5.2.3.3 Appendix B – Groupings

The purpose of the Groupings portion of the questionnaire was to validate the trust clusters identified in the previous chapter. An additional purpose of the groupings portion was to identify possible headings for each cluster that would resonate with industry members. The interviewees were then presented with the nine trust clusters (see Appendix XIX). The trust clusters were referred to as clusters in the previous chapter to distinguish them from the Scopus Groups in the previous chapter. The questionnaire provided to the interviewees referred to the unnamed trust clusters as 'Groupings' to not unnecessarily complicate the process for the interviewees. The interviewees were presented with the groupings (trust clusters). The headings for each grouping referred were based on numerical sequences (Group 1, Group 2, Group 3, Etc.). In the first part of the Groupings portion, interviewees were asked to look at the content of each group consisting of multiple terms (IoT). Firstly, interviewees were asked to indicate whether they agreed with the terms within a specified

grouping by circling either 'YES' or 'NO' on the questionnaire. Secondly, the interviewees were asked to suggest a name for the grouping based on the grouping terms. Thirdly, if the interviewees disagreed with the grouping of the terms, they could provide a reason to substantiate the reason within the box provided. This portion of the questionnaire provided three distinct outcomes; however, due to the nature of the outcomes, only the agreement or the disagreement of the thematic trust clusters could be quantified. The binary allocation being utilised with 1 denoting the interviewee's agreement and 0 denoting the interviewee's disagreement with the clusters. The remaining outcomes, the portions where interviewees were asked to title the respective clusters and the reasons for not agreeing with the clusters are discussed in the qualitative analysis section.

This section discussed the quantitative portion of the interview methodology which utilised a questionnaire to get interview feedback concerning the indicators of trust and trust clusters as identified in the previous chapter. The interviews of the indicators of trust feedback and numerical findings of the trust clusters, and the qualitative findings for the trust cluster feedback are provided in Chapter 6. The following section discusses the qualitative portion of the interview methodology.

5.2.3.4 Semi-structured Interview

The purpose of the verbal portion of the interviews was to obtain more profound insight into how industry experts view trust when dealing with a counterpart. The interviews were semi-structured and were based on six pre-selected questions (see Appendix XVII). These questions were not provided to the interviewees before the interviews. The analysis of the verbal portion included transcribing the interviews to written form and analysed. As Yardley (2000) suggested and echoed by Cassel and Symon (2004), proper qualitative research should be sensitive to context, exhibit coherence, commitment, transparency, and rigour. Great care was taken during the analysis of the verbal feedback. The transcripts of the interviews were analysed using a qualitative software application (King 2005, Nadin and Cassell 2005), namely NVivo Pro 12 (Schenkel *et al.*, 2019). The transcripts were uploaded to the application, where each interview was coded to established mechanisms in the trust study. By analysing the content of the transcripts, units of analysis were identified and sorted according to the relevant categories (codes) (Miles, Huberman and Saldaña, 1994; Craighead *et al.*, 2007;

Czakon and Czernek, 2016). The relevant categories served in the quantification of the concepts. Table 5-2 provides an example of an excerpt from one of the interviews where the interviewee was asked question 1 of the pre-selected interview questions.

The interviewees responded with an answer; from this reply, for instance, three distinct indicators were identified and codified with the aid of the NVivo application. The three indicators identified were transparency, culture, and values. This methodology was replicated for all the questions in this segment to identify and codify the interviews' verbal portion. The steps implemented for the analysis of the verbal portion of the interviews follow.

For instance:

Table 5-2 Interview excerpt example of the qualitative analysis

Interviewer: In your industry, are there any indicators of trust that you find particularly helpful in building trust with a trade partner?
K: Yeah, well transparency of the company and culture , their culture and their values .

5.2.3.5 Steps for the Analysis of the Verbal Portion of the Interviews

Step 1: At this point, the research's focus was on the information as provided by the interviewee from the semi-structured interviews was kept and separated from the numerical data (i.e., what was said by the interviewer) not relevant to the verbal portion of the interview.

Step 2: The transcript of the interviews was then inputted into the NVivo 12 Pro program for analysis.

Step 3: Each question was then analysed and codified within NVivo.

Step 4: The codified concepts of each interviewee were then entered into separate Excel data files based on the question category.

Step 5: The data from the separate interviewee Excel files were then amalgamated into one Excel document to represent the findings of the written questions portion of the interviews.

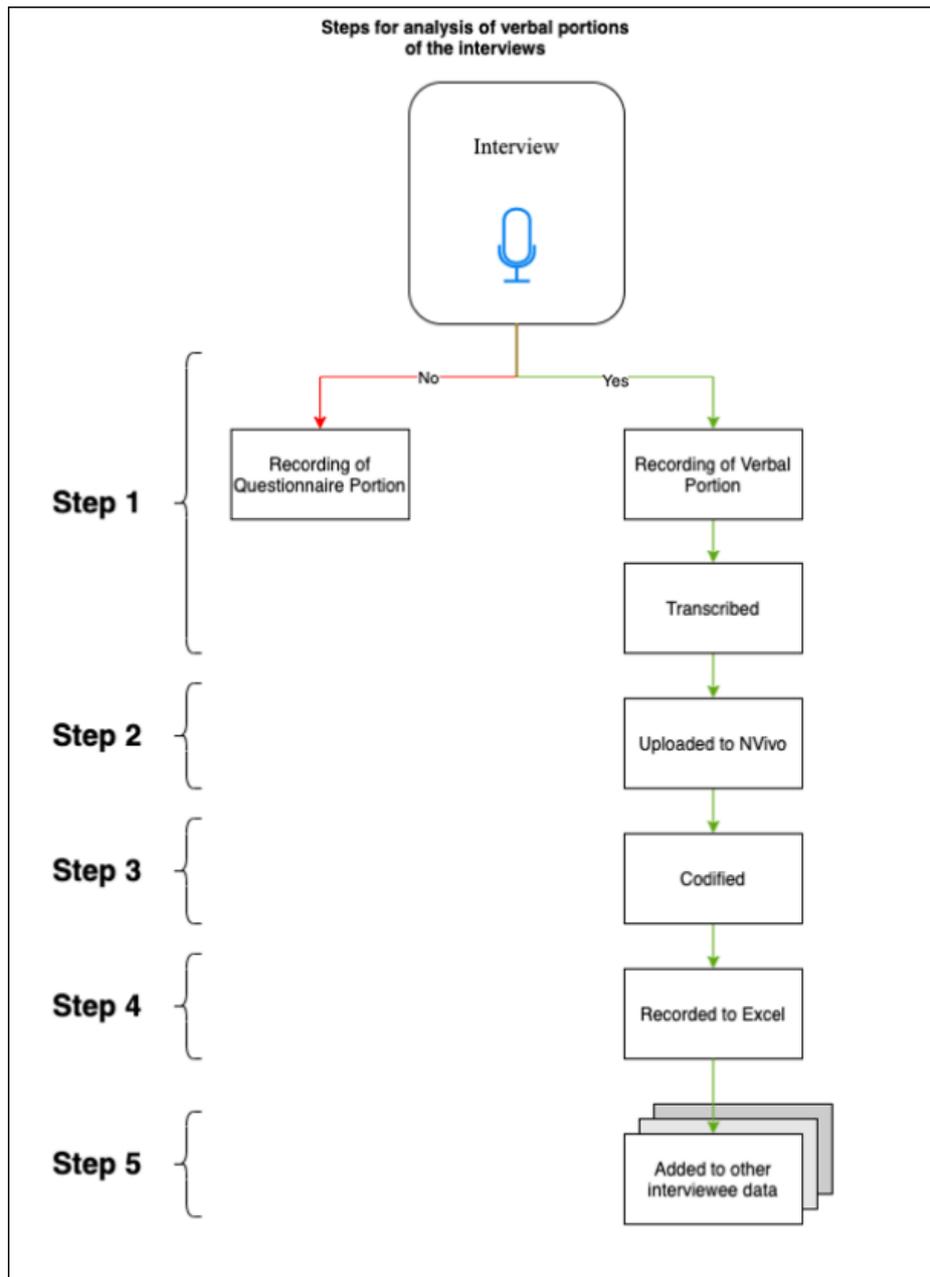


Figure 5-5 Steps for the analysis of the verbal portions of the interview

The chapter discussed the interview procedures implemented during the interviews with the supply chain experts to validate the indicators of trust identified from Factiva content analysis (Research Phase III). The chapter discussed the interview research methodology by presenting the interview guide, the backgrounds of the interviewees, and the interview process methodology consisting of the questionnaires and the verbal interviews. The following chapter presents the findings and the discussion of the research.

6. Findings and Discussion

6.1 Chapter Abstract

The objective of the chapter is to present and discuss the research findings. The chapter starts by presenting the Factiva content analysis findings before presenting the Factiva thematic clusters of the indicators of trust. It then presents the thematic clustering of the indicators that resulted from the Factiva content analysis. The chapter then presents the Scopus content analysis findings before presenting the Scopus thematic groupings of the indicators of trust. The chapter then presents and discusses the findings from the interviews. The chapter then concludes by applying methodological triangulation before discussing the findings from both a media and industry perspective.

6.2 Findings of the Factiva Content Analysis

The 229 Factiva articles generated 675 separate instances of trust indicators, where an instance denotes an expression of trust (see Appendix VIII). As a single article may express several repetitions of a unique instance, great care was taken to utilise each trust instance only once per article to avoid the skewing impact of longer articles over shorter articles. For the indicators that were synonyms of one another, the indicators were merged and assigned the name of the indicator with the higher instance value (explication) (Seuring and Gold, 2012). Figure 6-1 illustrates the process of merging the synonyms 'fairness' (50 instances) and 'impartial' (3 instances). The two synonyms were merged, taking on the name of the synonym with the higher value and combining the instance values. The process of assigning synonyms consisted of five rounds of comparison. The objective was to minimise the indicator list without impacting the individual semantic interpretations.

Descriptor	Instance Count		Descriptor	Instance Count		Merger	Instance Count
Fairness	50	+	Impartial	3	=	Fairness	53

Figure 6-1 Example of merging synonym instances process

The process resulted in a list of 51 Indicators of Trust being identified, referred to as the Factiva Indicators of Trust (see Table 6-1 and see Figure 6-2).

Table 6-1 Unique instances identified in Factiva analysis of newspaper media with the instance values

accountability (5)	contract (1)	independent (1)	natural phenomena (1)	responsiveness (1)
accuracy (3)	cooperation (5)	innovation (2)	networking (3)	security (31)
altruism (5)	credibility (4)	input (1)	objective (1)	service (2)
believability (1)	culture (17)	integrity (6)	performance (129)	social bonds (28)
benevolence (1)	demographics (9)	investment (23)	quality (44)	social responsibility (1)
collaboration (22)	duration (48)	leadership (1)	reciprocity (1)	support (3)
commitment (4)	ethics (3)	legal (9)	reliability (2)	sustainability (7)
communication (64)	fairness (53)	legitimate (2)	reputation (76)	traceability (3)
competence (3)	flexibility (4)	location (3)	respect (1)	transparency (24)
confidence (1)	honesty (5)	loyalty (1)	responsibility (2)	value (4)
				visibility (4)

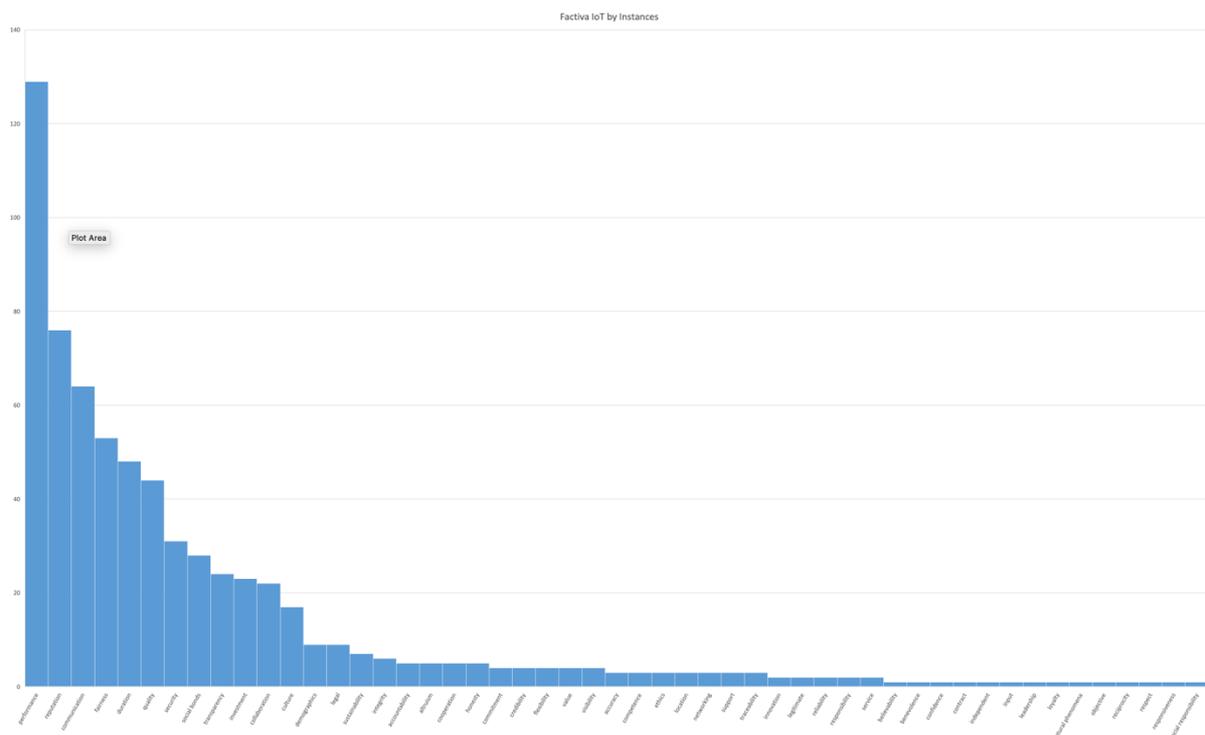


Figure 6-2 Indicators (instances) of trust charted

An analysis of the Factiva Indicators of Trust's findings identified that the top 11 indicators represented 80% of the instances identified in the Factiva analysis of newspaper media (Figure 6-3). The 11 trust indicators below represented 80% of the 5-1 Factiva analysed trust indicators. Demonstrating a potential trust indicator power law where 21.5% of the trust

indicators represents 80% of the instances, while the remaining 78.4% of trust indicators represented only 20% of the found instances. This potential power law may suggest that organisations in strategic trust-building with a counterpart could focus on the top 11 trust indicators to optimise the process. The recommended trust indicators include performance, reputation, communication, fairness, duration, quality, security, social bonds, transparency, investment, and collaboration. These indicators have been defined and discussed in Chapter 2 in the literature review. While the notion of a potential trust power law is interesting, it falls outside the scope of the research and is relegated for future research. This section presents the Factiva top 11 Indicators of Trust (see Figure 6-3), which are further discussed in Chapter 5 concerning assessing the findings from the Factiva analysis, the Scopus analysis, and the interview feedback.

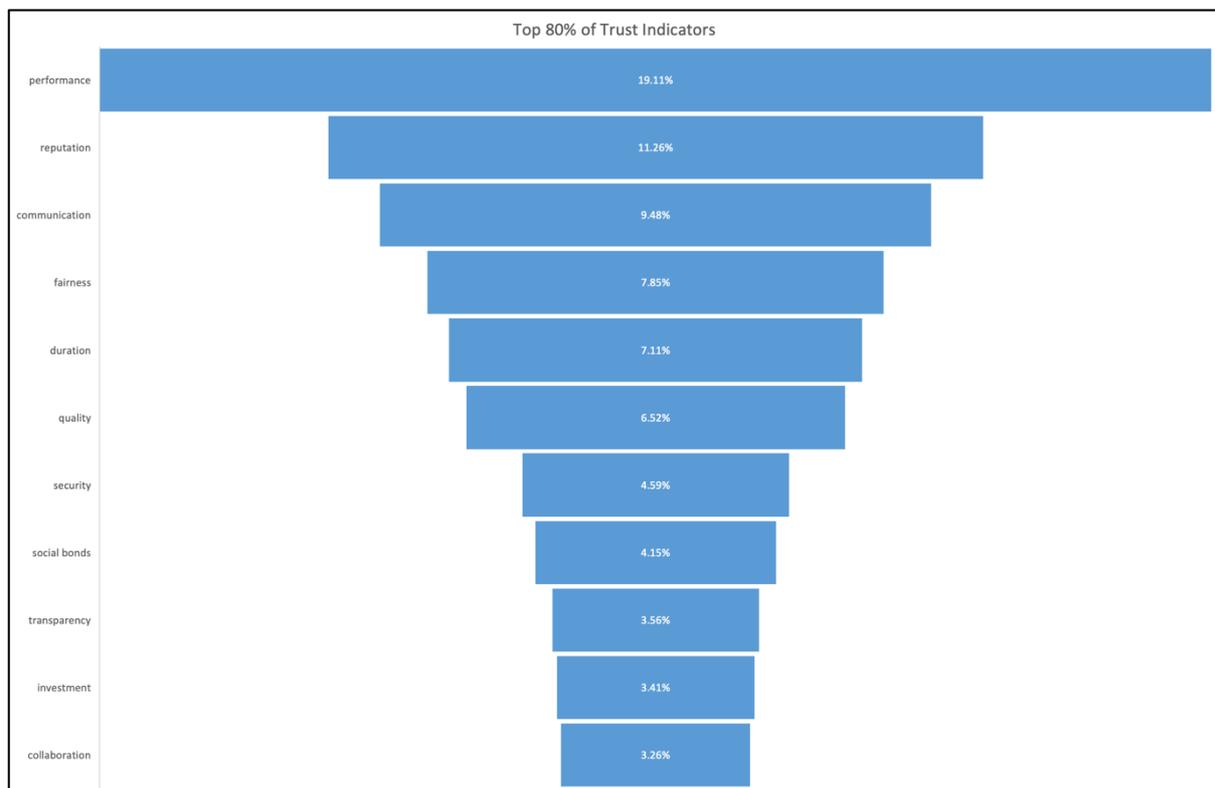


Figure 6-3 The top 11 Indicators of Trust representing eighty percent of the instances found

This section discussed Part 1 of the Factiva study, which presented the Factiva newspaper media content analysis by first disusing the search-term entered into the Factiva database. The section then presented how the search's resulting articles were filtered before it discussed the extraction process of the data. The section then discussed the codification

process implemented on the data using examples before presenting the findings of Part 1 as the identification of the 51 Factiva Indicators of Trust and the Factiva top 11 Indicators of Trust. The following section discusses the thematic clustering of the Factiva Indicators of Trust into the Factiva Trust Clusters.

6.3 Thematic Clustering of Indicators identified in the Factiva Analysis

In part one, the Factiva articles were analysed to identify the Indicators of Trust, which led to identifying 51 Indicators of Trust. The clustering of the indicators, referred to as the Factiva Trust Clusters, provides the user with a simplified reference tool that identifies the importance of the cluster regarding trust in the buyer-supplier relationship. The 51 trust indicators were then coded into nine theme-based clusters (see Table 6-2) (Craighead *et al.*, 2007; Seuring and Gold, 2012) by the author and the PhD supervisors. The themes (clusters) identified during the process was the Ability cluster, the Values cluster, the Reputation cluster, the Communication cluster, the Relationships cluster, the Commitment cluster, the Accountability cluster, and the Investment cluster.

Table 6-2 The Factiva Trust Clusters

Ability	Accountability	Commitment	Communication	Demographics	Investment	Relationships	Reputation	Values
Accuracy (3)	Accountability (5)	Reliability (2)	Networking (3)	Corporate Culture (17)	Innovation (2)	Input (1)	Reputation (76)	Credibility (4)
Competence (3)	Contract (1)	Responsibility (2)	Communication (64)	Location (3)	Investment (23)	Support (3)	Respect (1)	Believability (1)
Objective (1)	Legality (9)	Commitment (4)	Transparency (3)	Demographics (9)		Collaboration (22)		Confidence (1)
Performance (129)	Legitimacy (2)	Loyalty (1)	Visibility (4)	Natural Phenomena (1)		Responsiveness (1)		Leadership (1)
Quality (44)	Security (31)	Duration (48)				Social Bonds (28)		Ethics (3)
Service (2)	Social Responsibility (1)	Sustainability (7)				Cooperation (5)		Altruism (5)
Value (4)	Traceability (3)					Independent (1)		Fairness (53)
						Flexibility (4)		Reciprocity (1)
								Benevolence (1)
								Honesty (5)
								Integrity (6)
186	52	64	74	30	25	65	77	81

The Ability cluster associated with an organisation's aptitude to achieve an outcome. Values cluster relating to indicators that communicate the organisation's approach to stakeholders. Reputation cluster addressing the public perception of the organisation. Communication cluster addressing the ability of the organisation to both share and receive information with others. The relationship cluster concerning the involvement of the organisation regarding

social interaction. The Commitment cluster relating to the organisation's willingness to create and maintain sustainable relationships. The accountability cluster refers to the organisation's ability to adhere to statutory and social guidelines. The Demographics cluster denoting trust indicators impacted by geographic indicators. Moreover, the investment cluster relating to trust indicators demonstrates an organisation's willingness to spend financial resources for mutually beneficial buyer-supplier relationships. As illustrated in Figure 610 the Factiva analysis of newspaper media resulted in nine thematic trust clusters. The analysis indicated that the performance-based trust indicators in the Ability cluster represent 28.44% of the trust indicator instances. The cluster representing Values with 12.39% of the trust indicator instances. The Reputation cluster with 11.77% of the trust indicator instances. The Communication cluster with 11.32% of the trust indicator instances. The Relationship cluster with 9.94% of the trust indicator instances. The Commitment cluster with 9.79% of the trust indicator instances. The Accountability cluster with 7.96% of the trust indicator instances. The Demographic cluster with 4.59% of the trust indicator instances. Moreover, the Investment cluster with 3.82% of the trust indicator instances.

6.4 The Findings of the Scopus Analysis

The analysis of the 35 articles identified a total of 116 separate instances of indicators of trust in the literature, which included 75 unique indicators of trust. Table 6-3 represents the 75 unique Indicators of Trust and the number of instances identified in the analysis.

Table 6-3 Unique instances identified in Scopus analysis of peer-reviewed articles with the instance values

ability (1)	credible (1)	faith (1)	justice (1)	reputation (4)
acceptance (1)	cultural values (similarity) (1)	flexibility (2)	leadership (1)	respect (2)
ambition (1)	culture (1)	Frequency (order) (1)	loyalty (1)	responsiveness (1)
asset specificity (1)	customer orientation (1)	governance mechanism (4)	mediator (1)	satisfaction (1)
attitude (1)	customization (product) (1)	honesty (1)	need (fulfilment) (1)	similarity (1)
behaviour (1)	decision making (1)	identity (organisation) (1)	openness (1)	stability (1)
benefit & risk sharing (2)	demographics (1)	implicit & explicit rules (1)	order (discipline) (1)	sustainability (1)
benevolence (1)	duration (2)	impressions (first) (1)	passion (1)	technical assistance (1)
brand (1)	economic attributes (1)	information sharing (3)	performance (1)	transparency (1)

commitment (4)	education (1)	innovation (2)	politeness (1)	uncertainty (2)
communication (9)	empathy (1)	integrity (3)	power (2)	values (similarity) (3)
competence (4)	empowerment (1)	intention (perceived) (1)	problem solving (3)	
competition (4)	expectation (2)	interdependence (2)	promptness (2)	
confidence (2)	experience (2)	intimacy (1)	reciprocity (1)	
cooperation (1)	expertise (2)	investment (1)	relationship (5)	
courage (1)	fairness (2)	involvement (2)	religion (1)	

The Scopus analysis of peer-reviewed articles study identified the top trust indicator found in the literature to be the 'Communication' indicator representing 7.38% of the trust indicators found. The second highest indicator of trust found was the 'Relationship' indicator with 4.10%. The third position shared by the 'Commitment', 'Competence', 'Governance Mechanism' and the 'Reputation' indicators, each representing 3.30% of the total trust indicators found. The fourth position represented 1.70% each of the total Indicators of Trust found was shared by 'Benefit & Risk sharing', 'Confidence', 'Duration', 'Expectation', 'Experience', 'Expertise', 'Fairness', 'Flexibility', 'Innovation', 'Interdependence', 'Involvement', 'Power', 'Promptness', 'Respect', 'Uncertainty', and 'Values (similarity)'. The remaining indicators shared the fifth position representing 0.82% each of the indicators identified, as shown in Table 6-4.

Table 6-4 Indicators of trust identified in the Scopus analysis of peer-reviewed articles

Instances %	Scopus Indicators of Trust
7.83	communication
4.10	relationship
3.28	commitment, competence, governance mechanism, reputation
2.46	integrity, information sharing, problem solving
1.64	benefit & risk sharing, confidence, duration, expectation, experience, expertise, fairness, flexibility, innovation, interdependence, involvement, power, promptness, respect, uncertainty, values (similarity)

0.82	ability, acceptance, ambition, asset specificity, attitude, behaviour, benevolence, brand, competition, cooperation, credible, courage, culture, cultural values (similarity), customer orientation, customization (product), decision making, demographics, economic attributes, education, empathy, empowerment, faith, frequency (order), honesty, identity (organisation), implicit & explicit rules, impressions (first), intention (perceived), intimacy, investment, justice, leadership, loyalty, mediator, need (fulfilment), openness, order (discipline), passion, performance, politeness, value, reciprocity, religion, responsiveness, satisfaction, similarity, stability, sustainability, transparency, technical assistance
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The Scopus literature analysis identified that the communication indicator was identified as the most important indicator of trust in the peer-reviewed literature when searching specifically for peer-reviewed articles the “indicators of trust” or “determinants of trust” or the “variables of trust” on the Scopus database. The communication indicator represented 7.38% of the total of the indicators found. However, when considering other indicators that form part of the communication grouping between organisations, in other words, a grouping of indicators that represent the ability of an organisation to share information, it resulted in a grouping of the communication indicator (7.40%), information sharing indicator (2.50%), openness indicator (0.82%), and the transparency indicator (0.82%). This communication grouping represented 11.48% of the total indicators. Highlighting the importance that academia has placed on communication concerning trust in peer-reviewed literature.

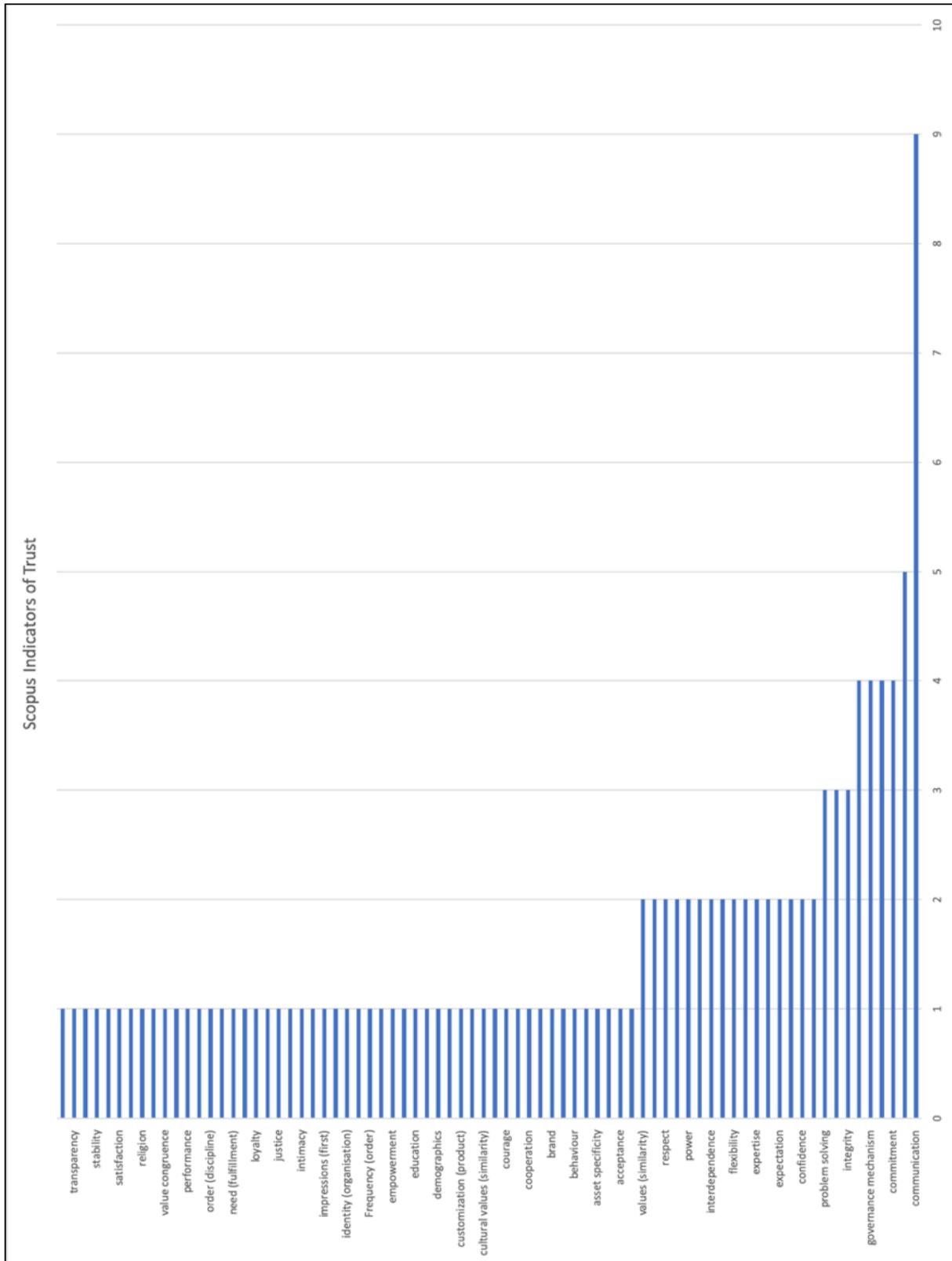


Figure 6-4 Indicators of Trust as identified with the Scopus analysis

6.5 Scopus Thematic Groupings

The 75 indicators were reduced to 48 unique indicators to incorporate the indicators that were synonyms for one another (Seuring and Gold, 2012). These indicators were then thematically sorted into nine groupings, using a similar to the process used for the Factiva Trust Clusters identified in the Factiva media analysis. For clarification, the groupings are referred to as the Scopus Trust Groupings to avoid any possible confusion with the Factiva Trust Clusters identified in the Factiva media analysis. Table 6-5 serves as an example of the merging of the indicators that were considered to be synonyms. Synonym 1 represents the one indicator, and synonym 2 representing the second synonym. The selection represents the name selected for the indicator. For instance, the 'faith' and 'religion' indicators given the context of the articles analysed were considered to be synonyms. Due to the word 'religion' ability to convey the concept with a higher degree of clarity, it was selected instead of 'faith' that may convey multiple meanings - faith in individuals or faith in terms of religion. Another example included the 'communication' indicator and the 'information sharing' indicator as synonyms, where communication was selected due to information sharing being a subset of communication. The final example utilised the 'openness' indicator and the 'transparency' indicator. The selection of the transparency indicator was due to conforming to an established indicator as identified in the Factiva newspaper analysis.

Table 6-5 Example of the synonym matching methodology utilised for the Scopus literature analysis

Synonym 1	Synonym 2	Selection
faith	religion	religion
cultural values	culture	culture
communication	Information sharing	communication
openness	transparency	transparency
investment	asset specificity	investment
innovation	product customization	innovation

The 48 trust indicators were then assigned to nine theme-based groupings (Craighead *et al.*, 2007) similar to the thematic Factiva Trust Clusters identified in the Factiva media analysis (see Table 6-6). The themes (groupings), namely, the ability group, the values group, the reputation group, the communication group, the relationships group, the commitment group, the accountability group, and the investment group. The capability and performance groupings associated with an organisation's aptitude to achieve an outcome. Values relating to indicators that communicate the organisation's approach to stakeholders. Reputation addressing the public perception of the organisation. Communication addressing the ability of the organisation to both share and receive information with others. The relationship concerning the involvement of the organisation regarding social interaction. Commitment relating to the organisation's willingness to create and maintain sustainable relationships. Accountability relates to the organisation's ability to adhere to statutory and social guidelines. Demographics denoting trust indicators impacted by geographic indicators. Investment relating to trust indicators demonstrates an organisation's willingness to spend financial resources for mutually beneficial buyer-supplier relationships.

Table 6-6 The Scopus Trust Groups

Capability & Performance	Accountability	Commitment	Communication	Demographics	Investment	Relationship	Reputation	Values
Competence	Governance Mechanism	Commitment	Communication	Demographics	Investment	Relationship	Reputation	Organisational Values
Performance	Implicit & Explicit rules	Loyalty	Transparency	Culture	Innovation	Responsiveness	Respect	Integrity
Quality		Duration		Religion		Cooperation	Expectation	Credible
Problem solving		Sustainability				Interdependence	First Impression	Confidence
Uncertainty						Flexibility		Leadership
Economic attributes (financial strength of org)						Similarity		Fairness
Frequency (order)						Benefit & Risk Sharing		Reciprocity
Competition						Mediator		Benevolence
						Empowerment		Honesty
								(Behavioural aspects)
								Values (Similarity)
								Politeness
								Ambition
								Attitude
								Passion
								Courage

The section started by discussing the research methodology employed to search the database. The section then presented the analysis findings, which led to the Scopus Indicators of Trust and the Scopus Trust Groupings. The following section concludes the chapter with a summary.

6.6 Interview Findings and Discussion

6.6.1 The Quantitative Findings

6.6.1.1 Trust Factors Findings

Table 6-7 represents the combined responses to the Likert-segment of the five interviews. The scale ranged from 1 to 5, where 1 indicated the indicator to not being important at all, and 5 being extremely important.

Table 6-7 Responses to the individual Factiva indicators of trust by the supply chain experts

	IOT1	IOT2	IOT3	IOT4	IOT5
accountability	5	4	5	5	5
accuracy	5	5	5	5	4
altruism	3	3	4	3	3
believability	5	4	3	5	2
benevolence	4	4	3	1	3
collaboration	3	4	4	5	5
commitment	4	4	5	4	5
communication	5	4	5	5	4
competence	5	5	4	5	4
confidence	4	4	3	5	3
contract	4	5	4	5	4
cooperation	3	5	4	5	5
credibility	4	5	3	5	5
culture	3	3	3	4	4
demographics	3	3	3	3	3
duration	3	4	1	5	1

ethics	5	5	5	5	5
fairness	3	5	4	5	5
flexibility	5	4	4	5	4
honesty	4	5	4	5	5
independent	3	4	2	5	3
innovation	4	5	2	5	4
input	3	4	3	5	5
integrity	5	5	4	5	5
investment	5	3	1	5	4
leadership	3	3	4	5	5
legal	5	5	5	5	3
legitimate	4	5	4	5	5
location	4	3	5	5	3
loyalty	4	4	4	4	4
natural phenomena	3	3	3	3	3
networking	3	3	3	4	3
objective	3	3	3	5	3
performance	4	5	4	5	4
quality	4	5	4	5	4
reciprocity	4	3	3	3	4
reliability	4	5	5	5	5
reputation	4	5	3	5	4
respect	4	5	4	5	5
responsibility	4	5	5	5	5
responsiveness	5	5	5	5	4
security	4	3	3	5	3
service	4	5	4	5	5
social bonds	4	3	3	2	1
social responsibility	3	3	5	5	3
support	4	3	3	4	5
sustainability	4	5	5	5	4

traceability	5	5	5	5	3
transparency	5	5	4	5	4
value	4	5	4	5	5
visibility	4	5	3	4	3

6.6.1.2 Trust Factors Discussion

The purpose of the Trust Factors (Likert portion) of the questionnaire was twofold. Firstly, to validate the indicators of trust as being relevant for industry application. Secondly, to gauge the importance of each Indicator of Trust from the interviewee's perspective. Table 6-8 represents the concepts and the totals utilising the Likert segment assigned by the supply chain experts during the interview process. The totals represent the views of the four interviewees utilising a Likert scale ranging from 1 to 5. Where 1 designated the indicator of not being important at all, and 5 being extremely important. Thus, the highest score possible for any of the concepts was 25 (5 interviewees x 5 Likert score), and the lowest possible score for any of the concepts was 5. The Likert segment identified that the five interviewees all agreed that the most important indicator of trust to be 'ethics', as all five the interviewees assigned the 'ethics' indicator with the highest possible value on the Likert-scale (5/5).

Table 6-8 Responses to the individual Factiva indicators of trust by the supply chain experts ranked

Indicator	Total	Indicator	Total
ethics	25	collaboration	21
accountability	24	reputation	21
accuracy	24	innovation	20
integrity	24	input	20
reliability	24	leadership	20
responsibility	24	location	20
responsiveness	24	loyalty	20
communication	23	believability	19
competence	23	confidence	19

honesty	23	social responsibility	19
legal	23	support	19
legitimate	23	visibility	19
respect	23	investment	18
service	23	security	18
sustainability	23	culture	17
traceability	23	independent	17
transparency	23	objective	17
value	23	reciprocity	17
commitment	22	altruism	16
contract	22	networking	16
cooperation	22	benevolence	15
credibility	22	demographics	15
fairness	22	natural phenomena	15
flexibility	22	duration	14
performance	22	social bonds	13
quality	22		

Figure 6-5 and Table 6-9 presents the ranking of the individual Factiva indicators of trust by the interviewees listed below:

The indicator ranked to be of 100% of importance was ethics. The indicators ranked to be of 96% of importance included accountability, accuracy, integrity, reliability, responsibility, and responsiveness. The indicators ranked to be of 92% importance, included communication, competence, honesty, legal, legitimate, respect, service, sustainability, traceability, and transparency. The indicators ranked to be of 88% importance, included commitment, contract, cooperation, credibility, fairness, flexibility, performance, quality. The indicators ranked to be of 84% importance, included collaboration, and reputation. The indicators ranked to be of 80% importance, included innovation, input, leadership, and location. The indicators ranked to be of 76% importance, included believability, confidence, social responsibility, support, and visibility. The indicators ranked to be of 72% importance included

investment and security. The indicators ranked to be of 68% importance included culture, independent, objective, and reciprocity. The indicators ranked to be of 64% importance included altruism and networking. The indicators ranked to be of 60% importance included benevolence, demographics, and natural phenomena. The indicator ranked 56% importance was duration, and the indicator ranked to be of 52% importance as social bonds.

Table 6-9 The supply chain expert ranked Factiva indicators of trust grouped by rating

Indicators rated 100%				
ethics				
Indicators rated 96%				
accountability	accuracy	integrity	reliability	responsibility
responsiveness				
Indicators rated 92%				
communication	competence	honesty	legal	legitimate
respect	service	sustainability	traceability	transparency
Indicators rated 88%				
commitment	contract	cooperation	credibility	fairness
flexibility	performance	quality		
Indicators rated 84%				
collaboration	reputation			
Indicators rated 76%				
believability	confidence	social responsibility	support	visibility
Indicators rated 72%				
investment	security			
Indicators rated 68%				
culture	independent	objective	reciprocity	
Indicators rated 64%				
altruism	networking			
Indicators rated 60%				
benevolence	demographics	natural phenomena		
Indicators rated 56%				
duration				

Indicators rated 52%

social bonds

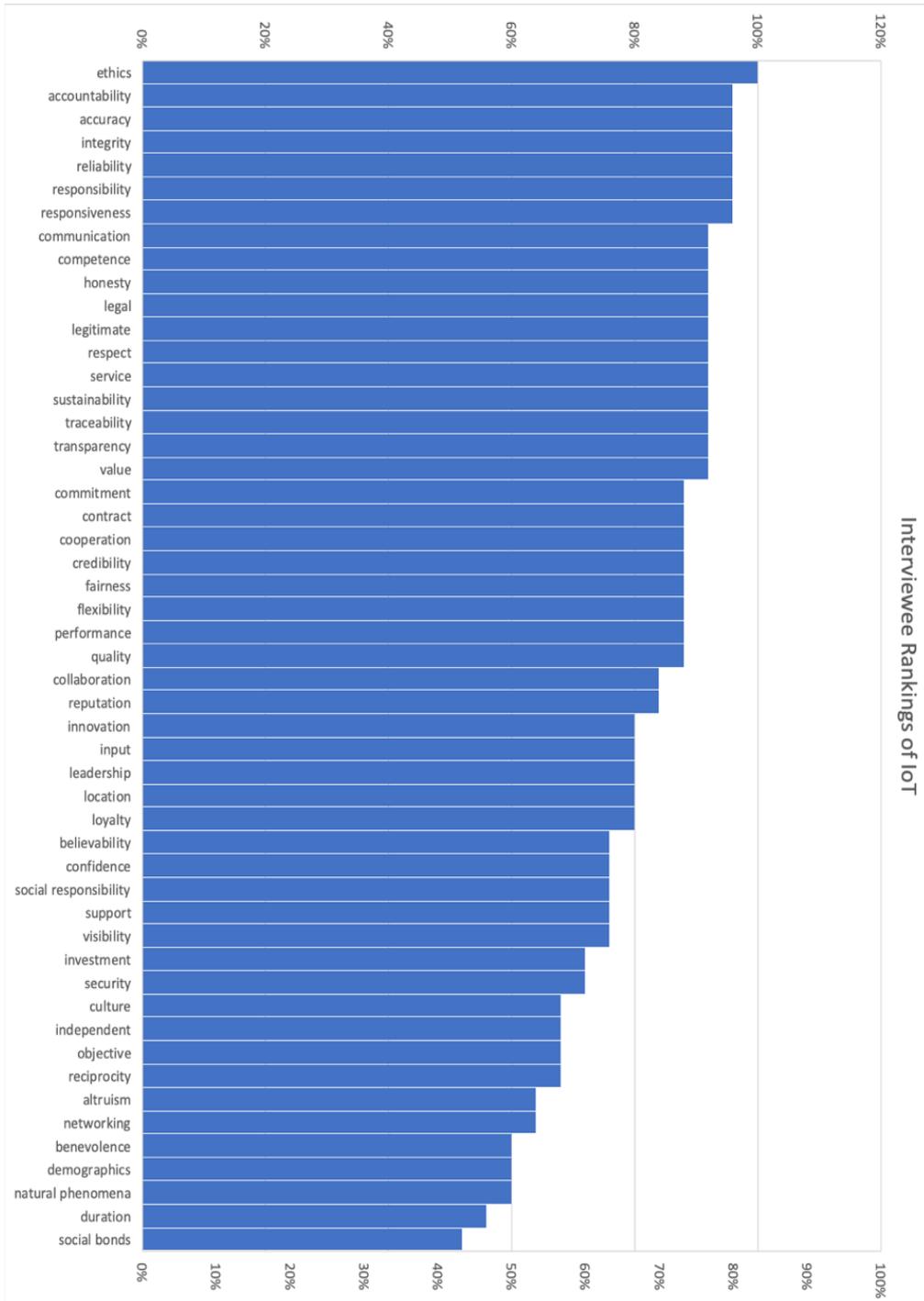


Figure 6-5 Interviewees ranking of the indicators of trust

6.6.1.2.1 Trust Factors Standard Deviations

The Likert segment identified seven indicators that yielded a standard deviation higher than one (see Table 6-10). The average for the believability indicator was 3.8 out of 5 from all the interviewees. The average for the benevolence indicator was 3 out of 5 from all the interviewees. The average for the duration indicator was 2.8 out of 5 from all the interviewees. The average for the independent indicator was 3.4 out of 5 from all the interviewees. The average for the innovation indicator was 3.8 out of 5 from all the interviewees. The average for the investment indicator was 3.6 out of 5 from all the interviewees. The average for the social bond's indicator was 2.6 out of 5 from all the interviewees. The indicators identified with standard deviations higher than one are identified in Table 610 as; believability (1.166 SD), benevolence (1.095 SD), duration (1.6 SD), independent (1.020 SD, innovation (1.095 SD), and investment (1.497 SD), and social bonds (1.020 SD).

Table 6-10 Indicators identified by the interviewees with a standard deviation higher than one

	IOT1	IOT2	IOT3	IOT4	IOT5	Average	Standard Deviation
believability	5	4	3	5	2	3.80	1.166
benevolence	4	4	3	1	3	3.00	1.095
duration	3	4	1	5	1	2.80	1.600
independent	3	4	2	5	3	3.40	1.020
innovation	4	5	2	5	4	4.00	1.095
investment	5	3	1	5	4	3.60	1.497
social bonds	4	3	3	2	1	2.60	1.020

The primary objective of the interviews was to validate the indicators of trust to be fit for use in the supply chain. To ascertain whether this objective was reached, the individual scores of the indicators assigned by interviewees using the percentage of the aggregated Likert-scores towards the possible maximum. The possible maximum score was 1275 (51 indicators x 5 max value of the Likert scale x 5 interviewees). The interview feedback value is 1043 (51 indicators

x assigned values of the Likert scale x 5 interviewees). This resulted in an agreement level value of 82% (81.80%). Validating the indicators of trust for industry application.

6.6.1.3 Trust Clusters Interview Findings

In the second portion of the written part of the interview, the interviewees were presented with nine clusters of the indicators grouped thematically¹. The interviewees were asked whether they agreed to the thematic grouping. Table 6-11 represents the responses from the supply chain industry experts to the thematic clusters. The binary allocation being utilised with 1 denoting the interviewee’s agreement and 0 denoting the interviewee’s disagreement with the clusters².

Table 6-11 Responses to the thematic groupings of the Factiva indicators of trust by the supply chain experts

Cluster (Title not presented)	Title (presented)	IOT1	IOT2	IOT3	IOT4	IOT5
Values	Group 1	1	1	1	1	-
Accountability	Group 2	0	1	0	1	-
Demographics	Group 3	0	1	1	0	-
Commitment	Group 4	1	1	1	1	-
Communication	Group 5	1	1	1	1	-
Ability	Group 6	1	1	1	1	-
Investment	Group 7	1	1	1	1	-
Reputation	Group 8	0	1	0	1	-
Relationships	Group 9	1	1	1	1	-

¹ The headings of the clusters were not included in the questionnaire and have been included to the table to inform the reader.

² It should be noted that interviewee IOT5 did not understand the requirements for this section and chose to restructure the tables. As the purpose of this portion of the interview was to gain contextual feedback from the interviewees in regard to the thematic groupings the interviewee was not corrected as to gain insight into the interviewee’s thoughts on the subject.

6.6.1.4 Trust Clusters Methodology Findings Analysis

The purpose of the Groupings portion of the questionnaire was to validate the trust clusters identified in the previous chapter. Table 6-12 represents the supply chain experts' feedback regarding the thematic clustering of the indicators of trust. Where an interviewee agreed with a thematic clustering, it is indicated in the table as 1, while non-agreement with the thematic cluster has been indicated with a 0. The inputs and feedback from the supply chain experts laid the framework to improve the trust clusters and gain additional insight into how to present the trust clusters for application. Table 612 refers to each cluster by the title, as presented in Chapter 3. The titles were not present during the interview process but have been added in this section to improve readability. IOT1 found the Factiva thematic clustering to be 67% accurate. IOT2 found the Factiva thematic clustering to be 100% accurate. IOT3 found the Factiva thematic clustering to be 78% accurate. IOT4 found the Factiva thematic clustering to be 89% accurate. The average agreement level for the Factiva trust clusters between the interviewees was 83%.

Table 6-12 Supply chain experts input on the thematic clustering of the Factiva indicators of trust

	IOT1	IOT2	IOT3	IOT4	Agreement % (Cluster)
Cluster 1 Values	1	1	1	1	100%
Cluster 2 Accountability	0	1	0	1	50%
Cluster 3 Demographics	0	1	1	0	50%
Cluster 4 Commitment	1	1	1	1	100%
Cluster 5 Communication	1	1	1	1	100%

Cluster 6 Ability	1	1	1	1	100%
Cluster 7 Investment	1	1	1	1	100%
Cluster 8 Reputation	0	1	0	1	50%
Cluster 9 Relationship	1	1	1	1	100%
Agreed	67%	100%	78%	89%	

The interviewees agreed 100% with all but three of the trust clusters. The clusters that did not receive complete agreement was the Accountability cluster (cluster 2) with 50% agreement level, the Demographics cluster (cluster 3) with 50% agreement level, and the Reputation cluster (cluster 8) with a 50% agreement level.

Table 6-13 Reasons given by interviewees for disagreement of a thematic cluster

Cluster	Interviewee	Reason for divergence
Cluster 2 Accountability	IOT1	“Social responsibility doesn’t seem to fit. Corporate social responsibility would imply acting in the better interest of the community (employing local staff, supporting the community a company operates in, etc). The other words reflect more of a contracted agreement where you want accountability, security, etc. But social responsibility wouldn’t necessarily be part of contractual requirements for a legitimate contract. It may be a consideration, but you wouldn’t normally see social responsibility grouped in this terminology.”
	IOT3	“Contract can influence items but may not have any impact at all.”

Cluster 3 Demographics	IOT1	"I don't understand how natural phenomena is relevant. Contextually demographics is location oriented and corporate culture could also be influenced by this. However natural phenomena can certainly be a part of a location (prone to flood, earthquakes, etc) but would be more a risk-based approach to a location based on actual likely hood of events. As opposed to Corporate culture, etc which is closer related to attitudes/beliefs and cultural dimensions."
	IOT4	"Should be more explicit."
Cluster 8 Reputation	IOT1	"Respect is earned and comes from within. Whereas Reputation can be attributed to external factors which may not be able to be controlled or could be subjective on other persons dealings which may or may not reflect one's own opinion."
	IOT3	"Items (reputation & respect) may conflict in reality or be independent."

The first trust cluster that the interviewees did not fully agree on was the Accountability cluster. Since the interviewees were not provided with the purpose of the groupings (trust clusters), they viewed the trust clusters and trust indicators from unique perspectives. The interviewees, when viewing the trust clusters portion of the questionnaire assigned their own interpretations of each cluster. For instance, IOT1 and IOT2, when they considered the Accountability cluster (cluster 2) consisting of the indicators describing accountability, related the indicators in the cluster to a contract perspective. From the feedback of the interviews and given that no context was provided for the cluster, it signalled those future iterations of the trust cluster should be adapted to remove possible ambiguity. The second trust cluster that the interviewees did not fully agree on was the Demographics cluster. The interviewees given the grouping of the indicators in the Demographics cluster did not naturally relate the cluster to demographics. Before the interviews, it was assumed that the indicators in the cluster (Corporate Culture, Location, Demographics, and Natural Phenomena) would align with demographics given the characteristics and definition of the concept as based on Wordnet 2.1 result (see Table 6-6). Notwithstanding this, the Demographics cluster did not receive complete agreement in the questionnaire portion of the interview it was supported during the verbal portion of the interview with an interviewee stating the following: "Well, it depends, it has to do with the cultural context, you know you're entering into a geographical

area you know that there is a high corruption, and you have to tread very carefully". Similar to the Accountability cluster, this feedback highlighted the need to remove ambiguity when adapting the trust clusters.

Sense 1

demographic -- (a statistic characterizing human populations (or segments of human populations broken down by age or sex or income etc.))

-> statistic -- (a datum that can be represented numerically)

=> average, norm -- (a statistic describing the location of a distribution; "it set the norm for American homes")

=> demographic -- (a statistic characterizing human populations (or segments of human populations broken down by age or sex or income etc.))

=> deviation -- (the difference between an observed value and the expected value of a variable or function)

=> moment -- (the n-th moment of a distribution is the expected value of the n-th power of the deviations from a fixed value)

=> nonparametric statistic, distribution free statistic -- (a statistic computed without knowledge of the form or the parameters of the distribution from which observations are drawn)

=> parametric statistic -- (any statistic computed by procedures that assume the data were drawn from a particular distribution)

=> time series -- (a series of values of a variable at successive times)

=> vital statistics -- (data relating to births and deaths and health and diseases and marriages)

Figure 6-6 Coordinate terms associated with demographics in the WordNet 2.1 application

The third trust cluster that the interviewees did not fully agree on was the Reputation cluster. Two interviewees (IIOT1 & IIOT4) disagreed that reputation and respect should be grouped due to the nature of the origins of the concepts. One interviewee stating that respect comes within while reputation comes from the outside (IIOT3). The second interviewee stated that the two indicators are not mutually exclusive from one another. Whereby a supplier may have a good reputation but may not respect their clients (IIOT4). Given that the interviewees were not presented with the context or the purpose of the clusters, the non-agreement of the

cluster is understandable. However, the reasons provided for not agreeing with the cluster supports the intention of the Reputation cluster.

This section discussed the findings from the numerical feedback from the interviews obtained from the interviews' questionnaire. The section started by discussing the feedback of trust indicators, with the interviewees validated the Factiva indicators of trust with an agreement level percentage of 82% (81.80%). The section then discussed the interview feedback regarding the experts' agreement of the Factiva trust clusters' groupings where interviewees validated the Factiva trust clusters with an average of agreement level 83%. The feedback provided regarding the thematic groupings of the indicators highlighted the need for the trust clusters to be adapted to remove possible ambiguity. Moreover, the clusters should be presented in a manner to clarify the intent of the clusters. The removal of possible ambiguity of the trust clusters may be accomplished by providing headings to the clusters relevant to practitioners. The following section discusses the qualitative analysis of the interviews' findings, which discusses the interview feedback concerning the headings for the trust clusters and the verbal feedback from the interviews.

6.6.2 The Qualitative Findings

This section presents the feedback regarding the suggested headings Clusters and the verbal feedback provided by the interviews. The first section discusses the suggested headings for the trust clusters. The second section then discusses the verbal feedback gained during the verbal portion of the interviews.

6.6.2.1 Suggested Cluster Headings

The primary purpose of the suggested headings portion of the interviews was to identify headings for the trust clusters that would signal to practitioners the purpose and the content of the clusters. The interview feedback provided in this section impacted the headings for the Factiva trust clusters. The secondary purpose of asking interviewees to provide headings for

the trust clusters was to gain insight into the interviewees understanding of the trust clusters³.

Cluster 1 – Values cluster

The interviewees were presented with a cluster that represented an organisations value. The cluster consisted of the following concepts: altruism, believability, benevolence, confidence, credibility, ethics, fairness, honesty, integrity, leadership, and reciprocity.

Table 6-14 Trust cluster 1 concepts as presented to the interviewees

Credibility	Fairness
Believability	Reciprocity
Confidence	Benevolence
Leadership	Honesty
Ethics	Integrity
Altruism	

The interviewees suggested the following names for trust clusters 1 - “Business Ethics and Integrity”, “Integrity” (x2), “Personal traits”, and “Reputation”. Three of the interviews utilising the word integrity as being either the suggested title or part of the title. This focus on the integrity indicator may suggest that it plays an essential role for the interviewees when considering a counterpart’s values. Or that for the interviewees, the eleven other indicators are required are evaluated to judge if the counterpart will act with integrity. One interviewee utilised “Personal traits” as a suggested heading for the trust cluster which may indicate that for the interviewee the indicators speak more to a personal relationship than to an inter-organisational relationship. Another interviewee suggested the heading for the trust cluster

³ Interviewee I10T5 did not correctly understand the requirements for this section and chose to restructure the tables. As the purpose of this portion of the interviewee was to gain contextual feedback from the interviewees regarding the thematic groupings the interviewee was not corrected as not to contaminate the interviewees as to gain insight into the interviewee’s real thoughts on the subject.

to be “Reputation” which may convey that the indicators within the cluster may convey how others may perceive or describe the entity.

Table 6-15 Interviewee suggested headings or titles for Cluster 1

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 1	Business Ethics and Integrity	Integrity	Integrity	Personal traits	Reputation

Cluster 2 – Accountability cluster

The interviewees were presented with a cluster that represented an organisations accountability. The cluster consisted of the following concepts: accountability, contract, legitimacy, security, social responsibility, traceability.

Table 6-16 Trust Cluster 2 concepts as presented to the interviewees

Traceability	Social Responsibility
Accountability	Legitimacy
Contract	Security

The interviewees suggested the following names for trust cluster 2 - “Contractual Reliability”, “Transparency”, “Contractual terms”, and “Sustainability”. Two interviewees utilised the word contract as either the suggested title or part of the title, perhaps alluding to the importance that formal contracts play when considering the accountability of a trade-partner. While one of the interviewees proposed naming the trust cluster “Transparency”, whereby the interviewee linked transparency to the ability to be open and honest to the rest of the indicators, perhaps signifying that if an organisation is transparent, it will naturally act per the agreement between the organisations. Another interviewee suggested the heading “Sustainability”, which may infer that if a trade-partner utilises the indicators within the cluster, it may lead to a sustainable relationship between the organisations.

Table 6-17 Interviewee suggested headings or titles for Cluster 2

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 2	Contractual Reliability	Transparency	-	Contractual terms	Sustainability

Cluster 3 – Demographics cluster

The interviewees were presented with a cluster that represented the demographically related indicators. The cluster consisted of the following concepts: corporate culture, demographics, location, and natural phenomena.

Table 6-18 Trust Cluster 3 concepts as presented to the interviewees

Corporate culture	Demographics
Location	Natural Phenomena

The interviewees suggested the following names for trust Cluster 3 - “Cultural Dimensions”, “Culture / Diversity”, “Geography”, and “Location”. Two interviewees utilised the word culture as either the suggested title or part of the title, perhaps inferring the role of the essential role that culture plays in assigning trust. One interviewee assigned the trust cluster with the title “Geography”, which may denote that the interviewee’s geographic location plays a significant role in the culture and demographics of a counterpart. Another interviewee suggested the heading "Location", which may suggest that the interviewee considers the indicators; corporate culture, demographics, and natural phenomena rely on the organisation's location.

The authors suggested the following as heading or titles to the cluster:

Table 6-19 Interviewee suggested headings or titles for Cluster 3

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 3	Cultural Dimensions	Culture / Diversity	Geography	0	Location

Cluster 4 – Commitment cluster

The interviewees were presented with a cluster that represented organisations commitment towards one another. The cluster consisted of the following concepts: reliability, loyalty, responsibility, duration, commitment, and sustainability.

Table 6-20 Trust Cluster 4 concepts as presented to the interviewees

Reliability	Responsibility
Loyalty	Duration
Commitment	Sustainability

The interviewees suggested the following names for trust cluster 4 - “Environmental Attributes / Factors”, “Customer Focussed”, “Customer Service”, “Customer Support”, “Service delivery”, and “Trust”. One interviewee suggested three headings for the trust cluster, which all utilised the word customer. This focus on the word customer may indicate that to the interviewee that the indicators’ reliability, responsibility, loyalty, duration, commitment, and sustainability relate to the needs of the customer. One interviewee suggested the title “Service delivery”, possibly denoting that for a customer to achieve a high level of service, the supplier should be perceived as reliable, responsible, loyal, committed, and willing to engage in a long-term sustainable relationship. One interviewee suggested the title “Environmental Attributes / Factors” unfortunately, it is not understood how the interviewee would come to this conclusion.

Table 6-21 Interviewee suggested headings or titles for Cluster 4

	I1OT1	I1OT2	I1OT3	I1OT4	I1OT5
Cluster 4	Environmental Attributes / Factors	Customer Focussed, Customer Service / Customer Support	Service Delivery	Trust	0

Cluster 5 – Communication cluster

The interviewees were presented with a cluster of organisations that represents organisation’s ability to communicate. The cluster consisted of the following concepts: communication networking, transparency, and visibility.

Table 6-22 Trust Cluster 5 concepts as presented to the interviewees

Communication	Networking
Transparency	Visibility

The interviewees suggested the following names for trust cluster 5 - “Information Sharing”, “Corporate”, “Open Communication”, and “Information Sharing”. Two interviewees suggested the title Information Sharing, which may indicate the interviewees consider networking, communication, transparency, and visibility as relevant to the organisations’ ability to share information. One interviewee suggested the heading “Corporate”, which may infer that the interviewee considers the indicators in the trust cluster to be a corporate function to be found on a more strategic level. One interviewee suggested the title “Open Communication” which may indicate that when organisations wish to communicate more openly, there should be networking and communication between the organisations and transparency and visibility.

Table 6-23 Interviewee suggested headings or titles for Cluster 5

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 5	Information Sharing	Corporate	Open Communication	Information Sharing	0

Cluster 6 –Ability cluster

The interviewees were presented with a cluster of organisations that represents organisation’s ability to perform. The cluster consisted of the following concepts: accuracy, competence, objective, performance, quality, service, and value.

Table 6-24 Trust Cluster 6 concepts as presented to the interviewees

Competence	Accuracy
Objective	Quality
Performance	Value
Service	

The interviewees suggested the following names for trust cluster 6 - “Quality Attributes”, “Performance”, “Technical value”, “Deliverables”, and “Performance / Service”. Two interviewees suggested titles with the word performance, which may indicate the interviewees relate the indicators competence, accuracy, objective, quality, value, and service as performance indicators. One interviewee suggested the heading “Quality Attributes”, which may indicate that for the interviewee that when appraising quality that the interviewee relates or even assign a level of quality utilising the indicators in the cluster. One interviewee suggested the title “Deliverables” for the trust cluster, suggesting that the transactional outcomes may be gauged using the indicators in the trust cluster.

Table 6-25 Interviewee suggested headings or titles for Cluster 6

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 6	Quality Attributes	Performance	Technical Value	Deliverables	Performance / Service

Cluster 7 –Investment cluster

The interviewees were presented with a cluster of organisations that represents an organisation willingness to invest in a trade-partner. The cluster consisted of the following concepts: investment and innovation.

Table 6-26 Trust cluster 7 concepts as presented to the interviewees

Innovation
Investment

The interviewees suggested the following names for trust cluster 7 - “Product Development”, “Structure”, “Growth/development”, “Common/research between buyer and supplier”, and “Innovation”. Two interviewees suggested titles with the word development, which may indicate the interviewees relate the indicators: innovation and investment to how organisations collaborate for research purposes. One interviewee chose to suggest the heading for the trust cluster as “Structure”, which may indicate that the interviewee considers innovation and investment to the organisations collaborating to build the infrastructure for both organisations to benefit. One interviewee suggested the heading for the cluster to be “Innovation”, perhaps hinting that investment plays a vital role in innovation.

Table 6-27 Interviewee suggested headings or titles for Cluster 7

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 7	Product Development	Structure	Growth / Development	Common / Research between buyer and supplier	Innovation

Cluster 8 –Reputation cluster

The interviewees were presented with a cluster of organisations that represents reputational indicators. The cluster consisted of the following concepts: reputation and respect.

Table 6-28 Trust Cluster 8 concepts as presented to the interviewees

Reputation
Respect

The interviewees suggested the following names for trust cluster 8 - “Human Perception”, “Customer”, and “Values”. Two of the interviewees chose not to suggest a heading for this trust cluster which may indicate that the reputation and respect indicators from the perspective of the interviewees may be challenging to classify. One interviewee suggested the heading “Human Perception”, which may indicate that the interviewee sees both respect and reputation to be considered on an interpersonal level instead of an inter-organisational level. One interviewee suggested the heading “Values”, which may indicate that the interviewee considers the indicators reputation and respect to be more aligned with the first trust cluster.

Table 6-29 Interviewee suggested headings or titles for Cluster 8

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 8	Human Perception	Customer	-	Values	-

Cluster 9 –Relationship cluster

The interviewees were presented with a cluster of organisations that represents relational indicators between organisations. The cluster consisted of the following concepts: collaboration, cooperation, flexibility, independent, input from others, responsiveness, social bonds, and support.

Table 6-30 Trust Cluster 9 concepts as presented to the interviewees

Input from others	Social bonds
Support	Cooperation
Collaboration	Independent
Responsiveness	Flexibility

The interviewees suggested the following names for trust cluster 9 - “Teamwork”, “Business”, “Collaboration”, and “Tacit knowledge”. One interviewee suggested the heading “Teamwork”. Another interviewee suggested the title “Collaboration”, which may support the notion that the indicators in the trust cluster relate to the ability for organisations to collaborate. One interviewee suggested the title “Business”, which may indicate that the interviewee believes that for organisations to be effective in conduction business, the organisations should accept input from each other. Have social bonds with one another and be able to cooperate and provide support. Moreover, be both responsive and flexible to the needs of its trade-partner.

Table 6-31 Interviewee suggested headings or titles for Cluster 9

	IOT1	IOT2	IOT3	IOT4	IOT5
Cluster 9	Teamwork	Business	Collaboration	Tacit Knowledge	-

The interview feedback provided in this section impacted the headings for the trust clusters. The changes made to the Factiva trust clusters headings as presented in Chapter 3 was done to provide practitioners with headings that signal with a higher degree of accuracy the purpose and the content of the trust clusters (see Table 6-32).

Table 6-32 Adapted Trust Cluster heading changes due to interview feedback

Original	Values	Demographics	Ability	Investment
Adapted	Ethics	Culture	Performance	Development

The following table presents the trust clusters for implementation in the TMS (see Table 6-33).

Table 6-33 Adapted trust clusters for implementation in the TMS

Accountability	Culture	Performance
Commitment	Development	Relationship
Communication	Ethics	Reputation

The updated trust clusters with the indicators of trust are presented below (see Figure 6-7).

Accountability	Commitment	Communication	Culture	Development	Ethics	Performance	Relationship	Reputation
Accountability	Reliability	Networking	Corporate Culture	Corporate Culture	Credibility	Accuracy	Input	Reputation
Contract	Responsibility	Communication	Location	Location	Believability	Competence	Support	Respect
Legality	Commitment	Transparency	Demographics		Confidence	Objective	Collaboration	
Legitimacy	Loyalty	Visibility	Natural Phenomena		Leadership	Performance	Responsiveness	
Security	Duration				Ethics	Quality	Social Bonds	
Social Responsibility	Sustainability				Altruism	Service	Cooperation	
Traceability					Fairness	Value	Independent	
					Reciprocity		Flexibility	
					Benevolence			
					Honesty			
					Integrity			

Figure 6-7 Trust clusters and indicators of trust

This section discussed the interview feedback concerning the suggested headings for the trust clusters. The resulting feedback from the interviews resulted in four changes of the headings of the trust clusters to provide users with headings that signal the purpose and content of each cluster. Additionally, this section's interview feedback added to the insight for the implementation of the TMS framework discussed in Chapter 6. The following section discusses the verbal portion of the interviews.

6.6.2.2 Verbal Questions Findings Discussion

The verbal portion of the interviews' primary purpose was to gain insight from industry experts on how they view trust. The questions were designed to understand industry experts working within the supply chain view the antecedents of trust, the indicators of trust, the detractors of trust, and the builders of trust. The following section presents the feedback from the verbal portion of the interview process, after which academic support for the interview feedback is provided. The interviewees were given six questions during the verbal portion of the interview (see Figure 6-8). In some instances, excerpts from the interviews are presented to emphasise essential concepts (Dora, 2019; Elliot, Zhu and Wang, 2019; Schenkel *et al.*, 2019)⁴.

⁴ As English was a second language for some of the interviewees, the excerpts may have some grammatical errors. In the verbal portion questionnaire portion, the author acknowledges the change of the questions utilised, thereby nullifying the oral part of the first interview; however, the questionnaire portion was unaffected for the interviewee.

1. In your industry are there any indicators of trust that you find particularly helpful in building trust with a trade-partner?
2. In your industry are there any indicators of trust that you find burdensome in building trust with a trade-partner?
3. Do you have experience with any trade partner that is especially trustworthy? Why do you think that is the case?
4. Do you think there is something that the organisation can do to improve their current trust level even more?
5. When thinking of the all your trade-partners is there an organisation that you feel is especially untrustworthy? Why do you think that is the case?
6. What can an organisation do to improve their status of they are identified as untrustworthy?

Figure 6-8 Verbal questions utilised for the interviews

Question 1: In your industry are there any indicators of trust that you find particularly helpful in building trust with a trade-partner?

Interviewee I1OT2 – identified the trade-partner’s organisational culture, ethics and transparency as playing important roles as the indicators of trust when building trust with a trade-partner. I1OT2 expanded on this by stating:

"I work in big companies like big corporate companies, and in it's been retail, it's been government based and also mining, and operations and stuff, and we find a lot of times and we run into companies when they do a review of a supplier it was based on the working, with the ethics of the company, the culture, and also the values, and they ensure that they align with the same valleys".

Interviewee I1OT3 – identified that attentiveness, communication, honesty, and the ability of the trade-partner to add value to the transactions aided in building trust in the relationship. I1OT3 in discussing the question stated:

“If a supplier makes contact with me, if they are attentive, they communicate properly if they are honest and open about what they are good at and what they're not good at and how they can actually the generally add value to my business rather than just trying to trick me into spending more money, that to me is a huge selling point and I'll go out of my way to work with businesses like that even if they're not quite the perfect fit in terms of the product or service they deliver, but I know that if I work with them I can get them to where I need them to be in terms of quality and value”.

Interviewee I1OT4 – stated that experience with the trade-partner played an essential role in building trust and that trust needed to be built over time. The interviewee also noted that the trade-partners pre-existing reputation in the market played a role in building trust in a new relationship as well as the trade-partner being consistently reliable. I1OT4 stated on experience with a trade-partner:

“And trust is not gained before you have some track record. If it's a completely new supplier, a completely new frame agreement then you're more cautious and more in the sense that you kind of feeling them out in order to see where you are at. And then when time goes by and you are developing a trust-based relationship, you will be more willing to do some more information sharing and so on, but it takes time, it doesn't go from 0 to hero because it has to do with the trustworthiness and also of course, it will you build in teams usually that you work together for you know getting, so I can get what I want but you build teams to support this”.

Interviewee I1OT5 – stated that integrity played a significant role in building trust. The interviewee identified how the trade-partner collaborated with their organisation played a prominent role in building trust and its reputation. The interviewee stated the following recognising the role of performance in building trust:

“To be able to give us the best service and be able to assist us with the needs of the business. And invested to really help rather than and working together in a very collaborative way is a big foundation of having the trust”.

The following table provides a list of indicators identified from the interviewees' feedback for this question that the interviewees consider to be particularly helpful when building trust with a counterpart (see Table 6-34).

Table 6-34 Indicators of trust particularly helpful in building trust identified by interviewees

Indicators of trust particularly helpful in building trust				
ability	add value (transaction)	attentive	collaboration	commitment
communication	culture	ethics	experience	honest
integrity	investment	performance	relationship	reputation
transparency	values			

Table 6-35 identifies and lists the indicators of trust identified by the interviewees as antecedents of trust matched with the Scopus antecedents of trust, which was presented in Chapter 2.

Table 6-35 Scopus articles supporting antecedents identified in the feedback

Scopus articles supporting antecedents of trust identified in the feedback					
Antecedent	Scopus Articles	Antecedent	Scopus Articles	Antecedent	Scopus Articles
ability	24	communication & information sharing	49	performance	15
add value (transaction) (offer characteristics)	2	culture	14	relationship & likeability	16
attentive (customer orientation)	2	ethics, honesty, integrity	12	reputation	13
collaboration	6	experience	7	transparency	1
commitment	18	investment	8	values	9

Question 2: In your industry are there any indicators of trust that you find burdensome in building trust with a trade-partner?

Interviewee IIOT2 – when asked the question, the interviewee stated while pointing at the 51 Factiva indicators of trust presented in the Likert-segment:

“No, because they all relevant, because you don’t want to get burnt.”

Interviewee IIOT3 – stated that rigid contracts, poor or inaccurate communication, and the trade-partner’s unwillingness to negotiate were indicators that were barriers in building trust. IIOT3 stating as part of the explanation:

“So I shy away from those businesses where they just throw 1000 terms and conditions at you or that are unwilling to negotiate especially where it's what they're presenting to is not practical for the work or the services that you want to purchase from them. So, when they put up the corporate wall, or they make it too hard to deal with. And that could just be terms of getting hold of people, where they send information through is not accurate or representative of what you asked for, it's more cookie cutter that's when I tend to just generally switch off”.

Interviewee IIOT4 – found that refraining from favouritism to be challenging within the industry, which could negatively impact the levels of trust. The interviewee stating:

“I would say that's the kind of challenge and also, it's balancing you know being professional, not favourite people companies which is very important because you are staying objective”.

Interviewee IIOT5 – identified that organisations that often-had long lead times or failed to meet deadlines were cumbersome to building trust. The interviewee stating:

“This particular industry is very fast, and although we want to give people as much time as possible, there are instances that there isn't”.

The following table provides a list of indicators identified from this question's feedback that the interviewees consider to be particularly burdensome to building trust with a counterpart (see Table 6-36).

Table 6-36 Indicators of trust burdensome in building trust identified by the interviewees

Indicators of trust burdensome in building trust	
Rigid contracts	Delays (not meeting deadlines)
Unwilling to negotiate	Favouritism
Poor communication	Long lead times

Question 3: Do you have experience with any trade-partner that is especially trustworthy? Why do you think that is the case?

Interviewee IIOT2 – identified that open communication with a trade-partner and intuition regarding a counterpart aided in finding the organisation especially trustworthy. Stating regarding intuition:

“If the communication is open, the majority of the time, it's based on not only in the company's reputation, meaning the person but also on gut feel? Yeah, you got to use that a lot, because sometimes when something doesn't feel right, it's not right”.

Interviewee IIOT3 – identified open communication, honesty, professionalism, constructive conflict, and willingness to be aspects present in trade-partners found to be especially trustworthy. Regarding constructive conflict, the interviewee stated:

“I think the biggest indicator for me is when I reach out to them with a commercial or an operational problem and they don't take it defensively. Instead of saying oh no that's not our fault, we didn't do it we didn't do that, it's your contract it's wrong. They say we take your position, let's have a think about it let's see what we're trying to achieve here and how can we work through this”.

Interviewee IIOT4 – found that trade-partners who were especially well trusted were organisations with whom the organisations have had significant experience. Thus trust had built-up over time and organisations that provided high service levels. The interviewee stating regarding service:

“they are within the frame agreement because of their willingness to go the extra mile and their service mindedness from A to Z in the company, it is how you always see it when you are buying these services, and that's people, that's it”.

Interviewee I1OT5 – the interviewee stated that transparency, honesty, and the ability to solve problems have helped to further trust between organisations the interviewee considered to be especially trustworthy. The interviewee also identified that the trade-partner’s organisational culture played a significant role in allowing their organisation to communicate problems. The interviewee stating:

“I think it's a different culture that we're building in terms of being able to talk to a company and tell them the business problems and ask them to find a solution for us or if they could help us with a solution.”

The following table provides a list of indicators identified from this question's feedback that the interviewees identified of organisations that they consider to be especially trustworthy (see Table 6-37).

Table 6-37 Indicators of trust identified by the interviewees found in especially trustworthy relationships

Indicators of trust in high level trust relationships				
communication	constructive conflict	culture (organisation)	experience (positive)	service (positive)
intuition	problem-solving	professional	transparency	willingness

Question 4: Do you think there is something that the organisation can do to improve their current trust level even more?

Interviewee I1OT2 – when asked how an organisation may improve on its current level of trust, suggested that trusted organisations may further increase their level of trust through enhanced marketing.

Interviewee I1OT3 – stated that trade-partners could improve their already high levels of trust by enhancing their communication, being open to constructive criticism, being willing to negotiate, adding value to the transactions, and being willing to work on the buyer-supplier relationship. I1OT3 regarding the question stated:

“...so my good contractor is generally tick a lot of boxes, we don't have any disputes, commission discussions are easy, communication lines are open, we can complain and whinge about stuff but this is taken in a right way and the business is electively work together. At the opposite end of the scale, it's people who don't respond, who get defensive straight away, who turn to the contract immediately even in the operational level when something goes wrong, those are the ones that are hard to manage that you have a problem with.”

Interviewee I1OT4 – suggested that a trusted trade-partner could improve their levels of trust through their behaviour towards the trade-partner, improve its performance service and reliability further, and build on the relationship over time. The interviewee, regarding improving established trust, further stated:

“if they are performing well, they deliver what they say, they're going to deliver, willing to go the extra mile. Even if we are in a spot and then they will be favoured”.

Interviewee I1OT5 – identified continuity of the relationship despite not being in the process of conducting transactions to improve trust further. The interviewee stating:

“I think you just continue maintaining the relationship. There will be times that you don't have any transactions between the companies, but you just keep maintaining that.”

The following table presents actions that interviewees identified to improve trust between organisations (see Table 6-38).

Table 6-38 Steps identified by the interviewees as being able to improve the levels of trust in a trust-based buyer-supplier relationship

Actions trusted organisations may take to improve trust further
Enhance marketing
Open-up communication
Be open to criticism
Reduce number of disputes
Willingness to renegotiate
Build on the relational aspects
Add value to transactions

Long-term view to the buyer-supplier relationship
Build on performance
Improve reliability
Relationship continuity

Question 5: When thinking of the all your trade-partners is there an organisation that you feel is especially untrustworthy? Why do you think that is the case?

Interviewee IIOT2 – stated that there were several times that the interviewee has considered counterparts to be untrustworthy. The interviewee noted that the primary cause for this low level of trust was not due to how the counterpart had dealt with the interviewee’s organisation but how poorly they treated their own employees. Thus, the trade-partner’s poor internal organisational culture directly led to its counterpart viewing the organisation as untrustworthy. The interviewee stating:

“Yeah, yeah, and I've actually been in companies where it's come out, and I've been sitting there and dealt with them and seen how the managers have treated their own employees, and it's actually had a negative effect to the point that they've run out of contract, and why we renegotiate?”

Interviewee IIOT3 – stated that there were indeed trade-partners who the interviewee found to be untrustworthy and identified the reasons for this lack of trust as being an unwillingness to adhere to the contract, an individual within the own organisation ambition hampering the cooperation, lack of integrity, and an unwillingness to negotiate. To emphasise this, point the interviewee stated:

“So instead of working collectively towards a common goal they're almost working counter to that goal to actually make themselves look and feel better in the eyes of their employees for personal gain.”

Interviewee IIOT4 – found the culture and the geographic location of the trade-partner to be a cause of lower levels of trust. Stating that:

“it depends, it has to do with the cultural context, you know you're entering into a geographical area, you know that there is a high corruption, and you have to tread very carefully.”

Interviewee I10T5 – at this point, distinguished between trust and non-performance. Stating that while certain companies could not perform as required, it may have been due to errors and did not relate to trust. The interviewee stating:

“If it was a genuine error that they presented wrong, I couldn't, in this instance, call it out in terms of somebody that was not trustworthy.”

The following table provides a list of aspects identified from this question's feedback that the interviewees consider to be causes of low levels of trust between organisations (see Table 6-39).

Table 6-39 Aspects identified by the interviewees as being causes to low levels of trust

Aspects identified by the interviewees as being causes of low levels of trust
Poor organisational culture
Not abiding to the contract
Individual ambition hampering cooperation
Lack of integrity
Unwilling to negotiate
Culture of corruption
Poor reputation
Large geographic distance between organisations

Question 6: What can an organisation do to improve their status if they are identified as untrustworthy?

Interviewee IOT2 – stated that organisations that have been identified as being untrustworthy should place focus on their organisational culture and values and, by doing so, would improve their reputation.

Interviewee IOT3 – identified the following steps as a method of improving a low level of trust between organisations: regular contact, not being overbearing, not being too formal, understanding the client's business and problems from the client's perspective, by being attentive, and by providing good transactional value. IOT3 stated:

“Say hey I'm stopping by can I come and see you next month for a chat, no worries get to learn more business understand what my challenges and problems are, read between the lines of what I'm saying. In terms of hey, I want this service, but I might have an issue over here, be smart enough to go hey well if I can link those 2 things together, then I can actually maybe fix both problems”.

Interviewee IOT4 stated that due to a large number of organisations willing to work with their organisation, they would simply ignore the counterpart with low levels of trust. The interviewee stating:

“Ignore (them) because there's so much more to choose from. You know if it was a unique technology and I needed that. My kind of gearing to was (sic) this customer or this supplier will be totally different because if I need them, then I have to work around them. The issues but if I've got the same thing, just the same and 10 times better and 10 times seemed more trustworthy, you know have no scandals, no anything and have a good track record and of course you go with the suppliers which you know.”

Interviewee IOT5 stated that for an organisation with low levels of trust to improve their trust levels, the organisation should endeavour to improve its accuracy in identifying the required objectives and requirements. The interviewee stating:

“When you talk about accuracy, if there is any doubt in terms of why things happened, it's maybe the data has not been presented very well, or the evidence is not seeming to add up.”

The following table provides a list of indicators identified from the feedback from this question that the interviewees consider helping organisations with low levels of trust that would like to improve trust with a counterpart (see Table 6-40).

Table 6-40 Interviewee suggested steps that organisations identified with low levels of trust may apply to improve trust levels

Step's organisations identified with low levels of trust may apply to improve low trust-levels
Improve organisational culture & values
Improve the organisation's reputation & be attentive to the client
Regular contact with one another
Not be too overbearing in attempting to make sales (pushy)
Understand the client's business from client's perspective (challenges & problems)
Provide high levels of value (transaction)
Improve accuracy of the trade-partner's requirements and objectives.

Academic Support for the Verbal Interview Feedback

The verbal portion of the interviews provided a deeper understanding of how supply chain experts view trust in the supply chain. The experts' feedback revealed six primary themes: ability, communication, demographics, relationships, reputation, commitment, and values. This section provides academic support for the primary themes identified in the interview process.

Theme 1: Ability

When considering indicators of trust burdensome to building trust, concerning ability, the feedback identified delays and long lead times negatively impacting trust. When considering supply chain responsiveness, the interviews' feedback is supported in the literature by authors such as Handfield and Bechtel (2002). In examining supply chain responsiveness, the authors found that trust was a function of sustained, reliable performance. Thus, the non-responsiveness of a counterpart to not deliver as promised could negatively impact the level

of trust between the organisations. While discussing what trusted organisations could do to improve their existing levels of trust concerning ability, the interviews' feedback suggested that organisations add value to transactions. The need to add value to transactions has been linked to literature discussing satisfaction. For instance, Altinay et al. (2014) researched the link between trust and satisfaction concerning franchise networks by identifying a positive relationship between trust and satisfaction. Additionally, Franklin and Marshall (2019) identified satisfaction as one of six antecedents of trust when considering business-to-business relationships while examining co-creation as an antecedent of trust.

As discussed in Chapter 2, ability has been linked to competence, capability, expertise, and performance in the literature. When considering ability as an indicator of trust, it has been supported by Cook and Schilke (2010a). That identified it along with benevolence and integrity as indicators (dimensions) of trust while studying the role of public, relational, and organisational trust in economic affairs. Additionally, competence was identified in the Scopus IoT study in four articles (Jennings *et al.*, 2000; Czaban *et al.*, 2003; Mäkelä, Barner-Rasmussen and Björkman, 2008; van Esterik-Plasmeijer and van Raaij, 2017). Two articles in the Scopus IoT study identified expertise as an indicator of trust (Maniscalco, Daniloski and Brinberg, 2010; Gamero *et al.*, 2011), while performance was identified in one article (Mohr and Puck, 2013). Moreover, Dave et al. (2018) identified problem-solving when considering conceptualising trust in research partnerships.

Theme 2: Communication

When considering indicators of trust burdensome to building trust concerning communication, the interview feedback identified poor communication as a cause. Support for the pivotal role that communication play for the buyer-supplier relationship has been provided by authors such as, for instance, Johnston et al. (2004) and Voight and Inderfurth (2012), who stated that the levels of trust between organisations were higher when plans were effectively communicated between members. Moreover, the interviewees identified opening communication as a means to improve trust between organisations. Communication as a means to enhance trust is well supported in academia (Morgan and Hunt, 1994; Aulakh, Kotabe and Sahay, 1996; Young-Ybarra and Wiersema, 1999; Jennings *et al.*, 2000).

Theme 3: Demographics

Experiences with organisations considered to be especially trustworthy concerning demographics, the interview feedback identified culture and values, supported in the literature as trust indicators. When considering trust indicators, Armstrong and Yee (2001) identified that cultural values are an indicator of trust when researching Chinese buyers and suppliers in Malaysia. Similarly, Sako and Helper (1998) discussed values and culture (societal and corporate culture) as indicators of trust while researching the differences between the US and the Japanese automotive industry. Moreover, when the interviewees discussed organisations deemed untrustworthy, their feedback identified poor organisational culture as a cause. For instance, an interviewee identified another organisation's employees' poor treatment as a justification for not trusting a counterpart. In contrast, a different interviewee identified the actions of a sole employee from the counterpart as justification for not trusting the counterpart organisation. When considering the poor treatment of employees as a signifier of weak organisational culture, authors, such as Guiso et al. (2015), when considering management integrity and trustworthiness as perceived by employees, found that high levels of integrity positively correlated with positive outcomes such as improved industrial relations, profitability, and productivity. Considering an employee acting in their self-interest at the cost of the relationship between the buyer and the supplier as an example of weak organisational culture. It has been shown in the literature, as discussed in Chapter 2, that inter-personal trust and interorganisational trust are intrinsically linked (Doney and Cannon, 1997; Zaheer, McEvily and Perrone, 1998; Vanneste, 2016; Akrouf and La, 2019). Thus, the actions of the employee of an organisation could adversely impact the inter-organisational relationship. For instance, Akrouf and La (2019) identified that inter-organisational relationships, considering collaborating project teams within the construction industry, could stress the buyer-supplier relationship. Further supported by Zaheer et al. (1998), who found that trust between organisations depends on the trust between the employees of the respective organisations.

The literature provides additional support for the feedback provided concerning organisations perceived trustworthiness based on their geographic location. Trust plays a critical role in international buyer-supplier relationships. However, corruption can negatively impact the trade between the organisations and disrupt both on an organisational and

consumer level (DiRienzo *et al.*, 2007). When considering corruption from an international perspective, some organisations might interpret it differently based on their cultural norms. For instance, gift-giving and nepotism in China form part of *guanxi*, a system built on favours considered a standard business practice in China. Are deemed corrupt practices by organisations in the West (Millington, Eberhardt and Wilkinson, 2005). This apprehension to do business with an organisation from an ethically questionable area is further supported in the literature when considering trust. For instance, Saleh *et al.* (2014), when researching international buyer-supplier relationships, found that cultural similarity was a vital antecedent for both trust and commitment.

Theme 4: Relationships

When considering indicators of trust burdensome to trust between organisations concerning relationships, the feedback from the interviews identified favouritism. Favouritism negatively impacting trust in the relationship has been supported in the literature by authors such as Chung and Jin (2011) and Flax *et al.* (2016). For instance, Chung and Jin (2011) identified that where organisations did not treat a counterpart equally, it adversely impacted the organisations' level of trust. Flax *et al.* (2016) supports this notion by stating that the unequal treatment of a counterpart could negatively impact the offending organisation as ethical standards and honest (candid) relationships are considered significant factors affecting an organisation's corporate brand and reputation. The feedback discussing experiences with a counterpart deemed to be especially trustworthy identified the following relational aspects; experience (prior), service, intuition, professionalism, and willingness. Experience, as described in the interviews, refers to the observation of the counterpart over time. Not to be confused with the application of the term as linked to ability. The notion that experiences with a counterpart act as an indicator of trust were supported in the Scopus IoT study by Payne and Clarke (2003), who examined the indicators (determinants) of managers' trust. Additionally, when considering organisations that were deemed trustworthy, the interviews identified the following concepts related to customer orientation: service, intuition, professionalism, and willingness. Customer orientation is also supported in the literature as an indicator of trust (Esterik-Plasmeijer and van Raaij 2017).

When asked what organisations could do to improve a trusted relationship with a counterpart, the interviewees discussed the relational aspects concerning criticism and disputes and building relational elements. The interviewee feedback addressing criticism has been related to trust conflict in the buyer-supplier relationship. The literature supporting that unresolved conflict impacts trust include, for instance, Bstieler and Hemmert (2008). They identified that unresolved conflict played a significant negative role in trust formation while comparing South Korea and Austria cultures. In comparison, authors such as Piricz (2018) found that trust between organisations reduced conflict. The interview feedback suggesting organisations build on relational aspects has been linked to the social bond and likability between the buyer and the supplier, as discussed in Chapter 2. Doney and Cannon (1997), for example, linked the likability of a sales representative to the ability of the buyer to trust the supplier, which was further supported by Nicholson et al. (2001) while researching the role of 'liking' in long-term-channel relationships. Additionally, authors such as Moorman et al. (1993) studied factors affecting trust in market research relationships and identified a negative correlation between formalisation, such as bureaucracies, and trust.

Theme 5: Reputation

When asked what organisations could do to improve a trusted relationship with a counterpart, even more, discussed reputation, the interviewees asked what organisations could do. Interviewee feedback suggesting enhancing marketing has been related to the concept of reputation. Reputation has been shown to impact the ability of an organisation to compete (Dellarocas, 2003; Khalifa and Saad, 2017). Additionally, an organisation's reputation directly impacts buyer-supplier collaborations where an organisation's positive reputation may lead to higher levels of trust between the buyer and the supplier (Johnson and Grayson, 2005; Suparjo and Sunarsih, 2018). When discussing organisations deemed to be especially untrustworthy, they identified an organisation's poor reputation as one of the causes. This notion that an organisation's reputation plays a significant role in determining its trustworthiness has been supported in the literature. As described in Chapter 2, an organisation's reputation reflects the organisation's behaviour, which may be viewed as positive or negative by counterparts or third parties (Milgrom and Roberts, 1982; Dellarocas, 2003; Howorth and Moro, 2006; Cook and Schilke, 2010a). A negative reputation could lead

to the organisation being viewed as untrustworthy, leading its counterpart to end the relationship (Howorth and Moro, 2006).

Theme 6: Commitment

The interviewees identified rigid contracts and an unwillingness to negotiate as indicators of trust burdensome to building trust concerning commitment (power imbalances between organisations) (see Chapter 2). For instance, Handfield and Bechtel (2002) found that an overreliance on formal contracts could impede the development of trust. Ring and van de Ven (1992) shared this sentiment, which identified that while a formal contract may lead to trust at the start of a relationship, it may not aid the development of trust over time. When asked what organisations could do to improve a trusted relationship with a counterpart, the interviewees discussed commitment aspects such as reliability and continuity of the relationship. This emphasis on reliability as a means to enhance trust is supported in the literature. For instance, authors such as Ian Stuart et al. (2012) identified that delivery reliability and product quality, built trust in relationships. Considering continuity, authors such as Styles et al. (2008), who research the relational aspects of export performance, found that commitment to future business transactions was impacted by trust built between the organisations from past transactions. Moreover, authors such as Bianchi and Saleh (2010), while studying importer trust and commitment, identified that importer commitment toward a foreign supplier was more substantial when it was considered to be trustworthy. Similarly, de Ruyter et al. (2001) found that trust positively impacted affective commitment while studying relationships in high-technology markets. However, the authors did identify a negative effect between trust and calculative commitment.

Additionally, Karlsen et al. (2008) identified that showing commitment helped build trust while studying project-stakeholder relationships within the construction industry. From the interview feedback, it is clear that commitment and formal contracts are not necessarily linked when considering trust. For instance, the interviewees identified that organisations that chose not to abide by contracts to be especially untrustworthy. As discussed in the Literature Review chapter, contract-based governance relies on a threat that if a counterpart does not abide by its promises that the relationship between the organisations will be ended

(2016). From the feedback provided, the threat of breaking the contract did not deter the counterpart from breaching the contract, thereby removing the efficacy of the contract as a governance mechanism. The feedback by the interview is further supported in the literature security that contracts generally fail to provoke trust in one another (Gambetta, 2000; Johnston et al., 2004; Calderon-Monge and Pastor-Sanz, 2017).

Theme 7: Values

The interviewees discussed organisations deemed to be especially untrustworthy. The feedback from the interviewees identified that a lack of integrity on the counterpart was the cause. As discussed in Chapter 2, authors such as Jennings et al. (2000), when exploring strategic alliances, identified integrity as an indicator of trust. While authors such as Morgan and Hunt (1994) and Mayer et al. (1995) associated trust with integrity in their seminal research. Similarly, Cook and Schilke (2010a) identified integrity as a significant determinant of trust. More recently, the work of van Esterik-Plasmeijer and van Raaij (2017) has also identified integrity as a determinant of trust. The abundance of support for integrity as pivotal trust supports the feedback from the interviews that when a counterpart does not display integrity towards an organisation, it could lead to the levels of trust between the organisations to degrade.

The feedback from the interviews' verbal questions has been categorised in Figure 6-9, identifying the antecedents of trust, indicators of trust, builders of trust, and detractors of trust.

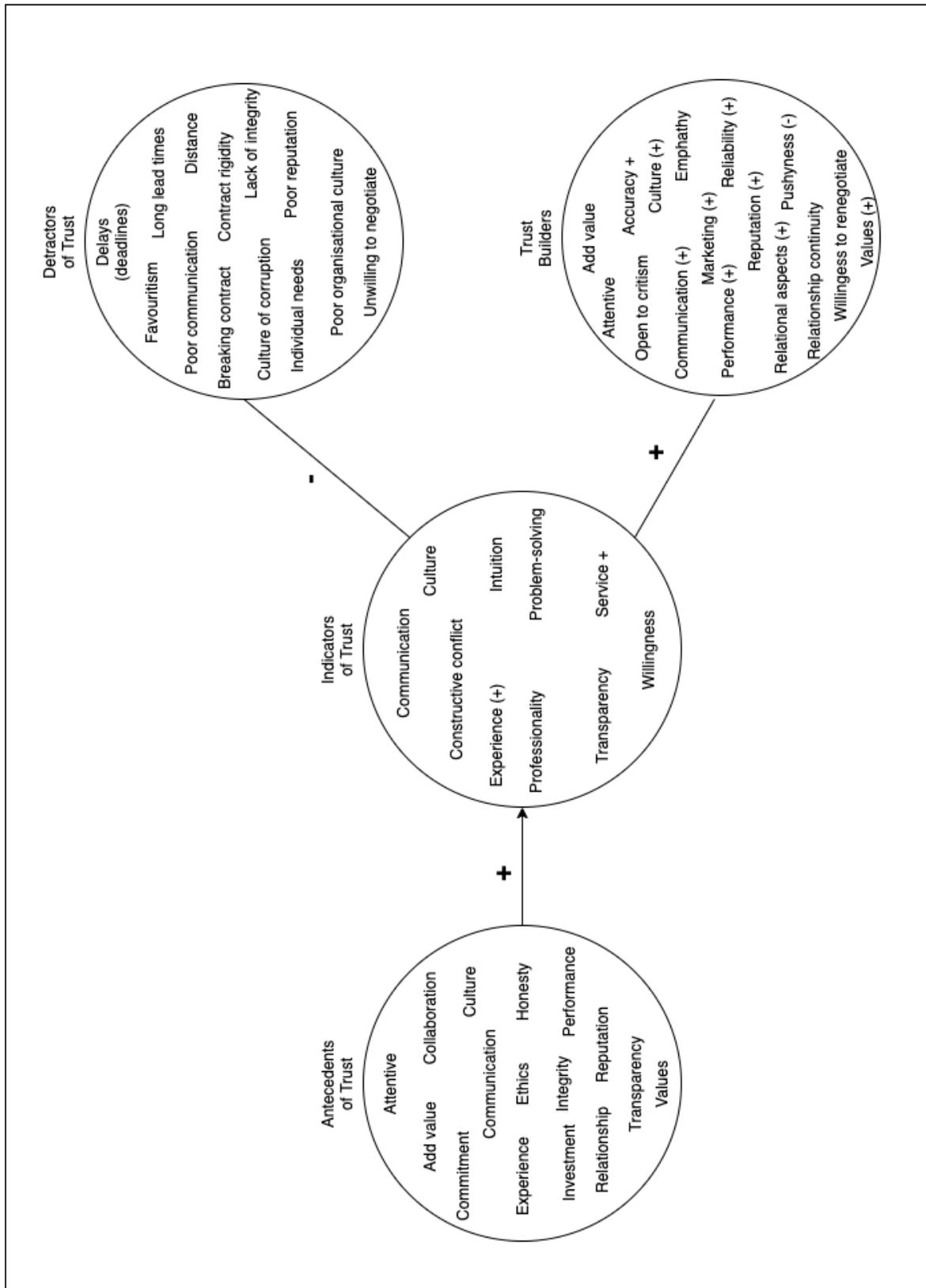


Figure 6-9 Verbal feedback results categorised

6.7 Triangulation of the Results

Triangulation is a qualitative research methodology that can combine different types of data allowing for the linking of multiple perspectives in addressing a research question. It supports the application of various research methods, utilising similar or dissimilar data types (Flick, 2018). For instance, triangulation can combine both quantitative and qualitative methodologies (Flick, 2018). Methodological triangulation employs two or more methods researching a single problem to understand issues in qualitative research. In comparison, between-methods triangulation utilises different methods to explore the same methodology (Flick, 2018). As triangulation requires at least two or more datasets, not all datasets require the same type of data to validate a position. Triangulation improves the validity of a study, offers increased reflection, increases knowledge, and overcomes the limitations of single methods (Denzin, 2012; Flick, 2018). Triangulation is not without its critics, for instance, applying different theories that could cause empirical issues and access to resources such as time, money, and data (Flick, 2018). However, these limitations do not apply to the research considering theory and resources. The following section triangulates the Factiva analysis findings, the Scopus analysis, and the interviews' supply chain experts.

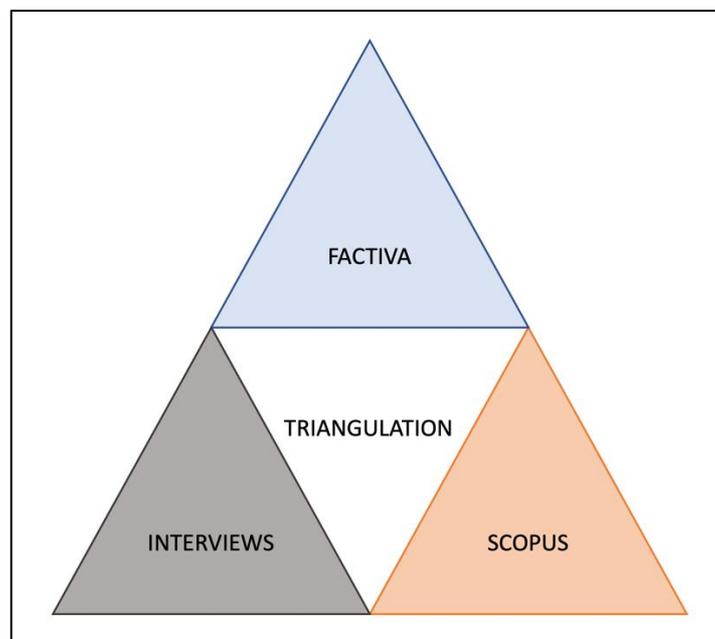


Figure 6-10 Triangulation of the results

6.7.1 Discussion of the Findings

The following section compares the Factiva study results and the interview data using the Likert-scale questionnaire (see Table 641). As the Factiva data and the interview data utilised different data types, the indicators have been ranked to allow for comparison. The ranking process for the interview data was defined as the percentage of the aggregated Likert-scores towards the possible maximum and ranked (from 1 – 13). In the ranking process for the Factiva data, the importance level is defined as the percentage of the aggregated instances towards the possible maximum and ranked from (from 1 – 21). The ranking of both the interview indicators and Factiva indicators using averages allowed for a comparison between the two different data types. Additionally, if the Factiva IoT discussed were present within the Scopus IoT study, the references of the articles were placed to provide academic support for the indicators.

Table 6-41 Interview Likert data and Factiva data

FACTIVA				INTERVIEWS			
Indicators	Instances	Rank	Total %	Interview Likert	Total [25 Max]	Rank	Total %
performance	129	1	19.111%	ethics	25	1	100%
reputation	76	2	11.259%	accountability	24	2	96%
communication	64	3	9.481%	accuracy	24	2	96%
fairness	53	4	7.852%	integrity	24	2	96%
duration	48	5	7.111%	reliability	24	2	96%
quality	44	6	6.519%	responsibility	24	2	96%
security	31	7	4.593%	responsiveness	24	2	96%
social bonds	28	8	4.148%	communication	23	3	92%
transparency	24	9	3.556%	competence	23	3	92%
investment	23	10	3.407%	honesty	23	3	92%
collaboration	22	11	3.259%	legal	23	3	92%
culture	17	12	2.519%	legitimate	23	3	92%
demographics	9	13	1.333%	respect	23	3	92%
legal	9	14	1.333%	service	23	3	92%
sustainability	7	15	1.037%	sustainability	23	3	92%
integrity	6	16	0.889%	traceability	23	3	92%

accountability	5	17	0.741%	transparency	23	3	92%
altruism	5	17	0.741%	value	23	3	92%
cooperation	5	17	0.741%	commitment	22	4	88%
honesty	5	17	0.741%	contract	22	4	88%
commitment	4	18	0.593%	cooperation	22	4	88%
credibility	4	18	0.593%	credibility	22	4	88%
flexibility	4	18	0.593%	fairness	22	4	88%
value	4	18	0.593%	flexibility	22	4	88%
visibility	4	18	0.593%	performance	22	4	88%
accuracy	3	19	0.444%	quality	22	4	88%
competence	3	19	0.444%	collaboration	21	5	84%
ethics	3	19	0.444%	reputation	21	5	84%
location	3	19	0.444%	innovation	20	6	80%
networking	3	19	0.444%	input	20	6	80%
support	3	19	0.444%	leadership	20	6	80%
traceability	3	19	0.444%	location	20	6	80%
innovation	2	20	0.296%	loyalty	20	6	80%
legitimate	2	20	0.296%	believability	19	7	76%
reliability	2	20	0.296%	confidence	19	7	76%
responsibility	2	20	0.296%	social responsibility	19	7	76%
service	2	20	0.296%	support	19	7	76%
believability	1	21	0.148%	visibility	19	7	76%
benevolence	1	21	0.148%	investment	18	8	72%
confidence	1	21	0.148%	security	18	8	72%
contract	1	21	0.148%	culture	17	9	68%
independent	1	21	0.148%	independent	17	9	68%
input	1	21	0.148%	objective	17	9	68%
leadership	1	21	0.148%	reciprocity	17	9	68%
loyalty	1	21	0.148%	altruism	16	10	64%
natural phenomena	1	21	0.148%	networking	16	10	64%
objective	1	21	0.148%	benevolence	15	11	60%
reciprocity	1	21	0.148%	demographics	15	11	60%

respect	1	21	0.148%	natural phenomena	15	11	60%
responsiveness	1	21	0.148%	duration	14	12	56%
social responsibility	1	21	0.148%	social bonds	13	13	52%

For the cases where multiple indicators had similar results within their respective studies, the indicators were ranked the same. For instance, in the case of the Factiva study, the accountability, altruism, cooperation, and honesty indicators all shared the 17th rank out of a possible 21 (see Table 6-42).

Table 6-42 Factiva indicators with similar results

Factiva Indicator	Instances	Rank	Total %
accountability	5	17	0.74%
altruism	5	17	0.74%
cooperation	5	17	0.74%
honesty	5	17	0.74%

The possible interpretations of the data from both the Factiva study (media) and the interviews (industry) perspective are discussed. The first section compares the Factiva study findings and the industry and discusses it from a media perspective. The second section compares the Factiva study findings and the industry and discusses it from an industry perspective. Given the significance of the top 11 indicators identified in the Factiva study (representing 80% of the instances). The results are compared with the indicator rankings from the interview the interviews.

6.7.1.1 Media Perspective on the Top 11 IoT

In this section, there is a comparison between the Factiva and Scopus analysis findings from a media perspective (see Table 643). The ranks of the indicators from each study are presented and, where applicable, supported by peer-reviewed journal articles identified in the Scopus analysis. From the media perspective, the most significant indicator of trust was

identified as the performance indicator. Compared with the interview feedback, the performance indicator was ranked as fourth out of thirteen—illustrating that the media focusses on performance as the primary gauge of trustworthiness. While the experts viewed performance as very important, assigning a Likert agreement of 88%, however, conveying those other indicators play a more significant role in the trust relationship. Performance was also identified as an indicator of trust within the Scopus analysis. For instance, Mohr and Puck (2013) identified performance as an indicator of trust while researching the link between trust and performance in strategic alliances.

Additionally, while researching the indicators of trust within the pharmacist and consumer relationship, Maniscalco et al. (2010) identified that the ability of the pharmacist to provide medical advice served as an indicator of trust. Moreover, when considering trust in leadership (Zeffane, 2010). Zeffane identified the ability to perform as an indicator of trust on an interpersonal within an organisation. While researching the differences of interorganisational collaboration within organisations in Hungary and Slovenia, Czaban et al. (2003) identified the performance of an organisation as an indicator of trust. Performance was also identified as an indicator of trust by Coulter and Coulter (2002) while researching long-term relationships between buyer and suppliers.

From the media perspective, the second most influential indicator of trust was identified as the reputation indicator. In comparison, the experts ranked the indicator as fifth out of thirteen. The high ranking of reputation illustrates the high emphasis the media places on reputation as an indicator. The experts placed it within the midrange of the rankings denoting that reputation plays a significant role when considering trust; however, it is not the only factor. Reputation was also identified as an indicator of trust within the Scopus analysis. For instance, Khalifa and Saad (2017) identified reputation as an indicator of trust while researching relationships between banks and customers within Tunisia. Similarly, reputation was identified as an indicator of trust by Howorth and Moro (2006) while researching relationships between banks and customer in Italy. Researching trust in small and medium organisations, Sharif et al. (2005) identified reputation as a cognitive determinant of trust. Reputation was also linked with trust by Jennings et al. (2000) while researching global strategic relationships.

Communication was ranked to be the third most influential factor by both the media and the experts. Highlighting the importance of communication when considering trust. Communication was also identified as an indicator of trust within the Scopus analysis; for instance, Dave et al. (2018) investigating community-academic research partnerships and by Wright and Grace (2011), who researched trust and commitment within franchise systems. The fourth most influential indicator of trust from both a media and industry perspective was the fairness indicator. This shared ranking highlights the significance of fairness within both industries when considering trust. When considering the Scopus analysis, authors such as Nel et al. (2000) supported fairness as an indicator when considering customer evaluations. When considering the length of the relationship, the duration indicator was ranked as the fifth most influential indicator by the media analysis. However, the industry experts ranked it as only being the twelfth most significant indicator of trust. This low ranking of duration as an indicator by the experts may be supported by the Scopus analysis that yielded no results. Quality was ranked as the sixth most influential indicator by the media and fourth by the experts. Suggesting that quality plays a significant role when considering trust. Quality has been linked with trust when considering retail brands and consumer trust, where trust in a brand was determined to be essential for selecting a brand. Moreover, the quality and the reliability of brands reduced the perceptions of risks for consumers. Quality was also shown to be significant to trust when considering student trust in universities (Suparjo and Sunarsih, 2018).

The seventh most influential indicator of trust by both the media and the experts was the security indicator. The media and the industry both rank value the importance of security when considering trust. However, we did expect the industry to have placed a higher degree of importance on security before the interviews were conducted. This lower rank than expected by the author may be due to the interviewees having backgrounds representing multinational companies (MNCs) where a loss due to security breaches may be easier to absorb by the organisation. Alternatively, due to the size and the complexity of the MNCs, the interviewee's exposure to security breaches may be limited. The ranking of security may be higher for smaller organisations where the cost of security breaches is harder to absorb, and the employees are closer to the breaches. Social bonds were identified as the eighth most

influential indicator by media analysis and the lowest rank of thirteenth by the industry experts. This low rank by the experts may illustrate that the relationship between the buyer and the supplier plays little to no role for the experts from the large organisations when considering the organisations' trust. However, the Scopus analysis identified the social bond as an indicator of trust within multiple articles. For instance, Khalifa and Saad (2017), Czaban et al. (2003), Maniscalco et al. (2010), and Sako and Helper (1998). Where Sako and Helper investigated trust within the automotive industries with Japan and the United States. The ninth most influential ranking from the media was the transparency indicator.

Conversely, the experts ranked the indicator as third with an agreement level of 92%. This difference between the two industries may be to how journalists choose to write articles. As transparency can be considered a subset of communication, this low ranking may be attributed to journalists choosing to express this behaviour as a communication. The transparency indicator was identified as an indicator of trust with the Scopus analysis by two articles, by van Esterik-Plasmeijer and van Raaij (2017) and Jennings et al. (2000).

The investment indicator ranked as the ninth most influential indicator by the media analysis and eighth by the experts. This low ranking by both industries may be due to a lack of coverage in the media when considering interorganisational investment. However, the agreement of the experts with the low ranking supports the notion that investment plays a minor role when considering trust. The Scopus analysis identified three articles supporting investment as an indicator of trust by Sako and Helper (1998), Wright and Grace (2011), and Cook and Wall (1980). As identified by the media analysis, the eleventh most influential indicator of trust was the collaboration indicator. In comparison, the experts assigned collaboration within the midlevel range of the indicators with a fifth ranking. Additionally, Cater and Kidwell (2014) identified collaboration as an indicator of trust while researching trust in successor leadership in family-run organisations. This result was surprising given the generally accepted importance of collaboration when considering interorganisational relationships, as discussed in the literature review chapter.

Table 6-43 Possible interpretations of the results from a media perspective

Media Perspective				
	Factiva		Interview	
Indicator	Rank	Instances %	Rank	Likert %
Performance	1	19.11	4	88
Scopus articles	Mohr and Puck (2013), Maniscalco et al. (2010), Zeffane (2010), Czaban et al. (2003), Coulter and Coulter (2002)			
Reputation	2	11.26	5	84
Scopus articles	Khalifa and Saad (2017), Howorth and Moro (2006), Sharif et al. (2005), Jennings et al. (2000)			
Communication	3	9.84	3	92
Scopus articles	Dave et al. (2018), Khalifa and Saad (2017), Gamero et al. (2011), Wright and Grace (2011), Mäkelä et al. (2008), Howorth and Moro (2006), Sharif et al. (2005), Czaban et al. (2003) Armstrong and Yee (2001), Jennings et al. (2000), Fisman and Khanna (1999), Sako and Helper (1998)			
Fairness	4	7.85	4	88
Scopus articles	Gamero et al. (2011), Zeffane (2010), Nel et al. (2000)			
Duration	5	7.11	12	48
Quality	6	6.52	4	88
Security	7	4.59	7	72
Social Bonds	8	4.15	13	52
Scopus articles	Khalifa and Saad (2017), Maniscalco et al. (2010), Adobor (2006), Czaban et al. (2003), Sako and Helper (1998)			
Transparency	9	3.56	3	92
Scopus articles	van Esterik-Plasmeijer and van Raaij (2017), Jennings et al. (2000)			
Investment	10	3.41	8	72
Scopus articles	Sako and Helper (1998), Wright and Grace (2011), Cook and Wall (1980)			
Collaboration	11	3.26	5	84
Scopus articles	Cater and Kidwell (2014)			

6.7.1.2 Industry Perspective on the Top 11 IoT

In this section, the Factiva and Scopus analysis findings are compared from an industry perspective (see Table 6-44). The rank of the indicator from each study is provided and, where applicable, supported by peer-reviewed journal articles identified in the Scopus analysis. From the industry perspective, the most significant indicator of trust was identified as the ethics indicator. When compared with the media analysis, the ethics indicator was ranked as nineteenth out of twenty-one. The ethics indicator was the only indicator ranked with a 100% agreement by the experts, highlighting the significance of ethical behaviour when considering interorganisational relationships. While the low ranking from the media analysis could indicate that ethics plays a minor role when communicating trust. The second most influential indicator identified by the experts was the accountability indicator. However, the media analysis ranked accountability low on the list (17th out of 21). The high rank by the experts emphasises the need for counterparts to be accountable and acknowledge their mistakes as it could negatively impact the trust relationship if avoided or if blame is shifted. Alternatively, the low rank by the media could be due to journalists not linking accountability with trust. Thus, when someone acts unaccountable, trust is not mentioned in the article, or when someone is acting accountable, it is considered the status quo and thus not mentioned in the article.

Accuracy was also ranked as the second most crucial indicator by the experts, while also ranked poorly in the media analysis (17/21). The high ranking of accuracy signifies that the industry experts acknowledge that outcomes when dealing with a counterpart may result in various degrees of success. In comparison, the media may perceive an outcome utilising a binary approach where an outcome is either a win or a loss. When considering the Scopus articles, a lack of integrity was shown to adversely impact public trust (Gamero et al., 2011). In comparison, integrity was shown to be required for followers to trust a leader as part of the “leadership package” (Zeffane, 2010). The capability to demonstrate integrity was also identified as an indicator of trust when considering global strategic alliances (Jennings et al., 2000). When considering trust in banking systems, sincere behaviour (integrity) was identified as a means to restore trust between the bank and its customers (van Esterik-Plasmeijer and

van Raaij, 2017). The similar rankings at number two, reliability and responsibility by both the industry experts and the media, indicate that the experts value reliability and responsibility as highly valued indicators when considering trust. In contrast, however, the media might be placing a higher emphasis on the outcome of inter-organisational collaborations over the processes involved in reaching the outcomes when considering the ranking of the indicators at the second-lowest position (20th/21). Reliability has been linked to trust when considering service providers when considering long-term relationships between sales representatives and customers (Coulter and Coulter, 2002).

The responsiveness indicator was ranked second by the experts, while the media analysis placed it at the lowest possible position (21st /21). The high ranking of responsiveness by the industry experts highlights the importance it has when considering trust with a counterpart. The knowledge that a counterpart will be willing to adapt as needed instils trust in the relationship. In contrast, the low rank of responsiveness by the media may indicate that the media might not correlate responsiveness with trustworthiness. Suggesting the media's focus to be outcome-based instead of how successfully organisations can respond to the needs of their counterparts. Responsiveness was identified as a critical influence of trust within building retail tenant relationships by Roberts et al. (2010). The authors noted that responsiveness was related to communication, but it was more comprehensive than communication. The communication indicator was ranked third by both the experts and the media, highlighting the importance of communication when considering trust. The importance that communication plays is also supported by academia when considering the Scopus analysis with multiple articles linking it trust (Sako and Helper, 1998; Fisman and Khanna, 1999; Jennings et al., 2000; Armstrong and Yee, 2001; Czaban et al., 2003; Sharif, Kalafatis and Samouel, 2005; Howorth and Moro, 2006; Mäkelä, Barner-Rasmussen and Björkman, 2008; Gamero et al., 2011; Wright and Grace, 2011; Khalifa and Saad, 2017; Dave et al., 2018)

Table 6-44 Possible interpretations of the results from an industry perspective

Industry Perspective				
	Interview		Factiva	
Indicator	Rank	Likert %	Rank	Instances %
Ethics	1	100	19	0.44
Accountability	2	96	17	0.74
Accuracy	2	96	19	0.44
Integrity	2	96	16	0.89
Scopus articles	van Esterik-Plasmeijer and van Raaij (2017), Gamero et al. (2011), Zeffane (2010), Jennings et al. (2000)			
Reliability	2	96	20	0.30
Scopus articles	Coulter and Coulter (2002)			
Responsibility	2	96	20	0.30
Responsiveness	2	96	21	0.15
Scopus articles	Roberts et al. (2010)			
Communication	3	92	3	9.48
Scopus articles	Dave et al. (2018), Khalifa and Saad (2017), Gamero et al. (2011), Wright and Grace (2011), Mäkelä et al. (2008), Howorth and Moro (2006), Sharif et al. (2005), Czaban et al. (2003) Armstrong and Yee (2001), Jennings et al. (2000), Fisman and Khanna (1999), Sako and Helper (1998)			

6.8 Summary of the Findings

Table 6-45 Summary of the Research Objectives linked to Methodologies and Deliverables

Research Objectives	Methodology	Findings	Deliverables
Identify IoT in the media	Content analysis (Manifest & Latent)	<ul style="list-style-type: none"> - Identified 51 IoT - Identified 11 IoT representing 80% IoT - Identified trust cluster 	<ul style="list-style-type: none"> - 51 IoT to serve as KPIs for the TMS - Trust clusters as categories for the TMS
Identify IoT in the literature	Content analysis (Manifest)	<ul style="list-style-type: none"> - Identified 48 IoT - Identified trust groups 	<ul style="list-style-type: none"> - 48 IoT to provide academic support for the indicators

			- Trust groups as categories for the TMS
Validate IoT identified in the media	Interviews (Purposeful)	Identified: - Antecedents of trust - Indicators of trust - Detractors of trust - Trust builders	Validated - 51 IoT identified in the media analysis - Trust clusters identified in the media analysis

The primary objectives of the thesis included 1.) identifying and validating the indicators of trust, 2.) the development of the Trust Management System, and 3.) the proposal of a framework to guide organisations when implementing the Trust Management System. To achieve the first objective, that of identifying and validating the indicators of trust, the thesis utilised multiple research methodologies. These methodologies included a content analysis of newspapers to identify the indicators of trust relevant to industry. The content analysis resulted in the identification of 51 indicators of trust eligible for use in the TMS. Additionally, the analyses of the newspaper media found that 11 of the 51 indicators represented 80% of the instances identified. The 11 indicators could potentially represent a power law when considering trust in relation to the media. The indicators were then clustered into nine thematic categories for application to the TMS.

The second methodology used to identify and validate the indicators of trust utilised a content analysis of peer-reviewed journals to identify the indicators of trust relevant to academia. The content analysis resulted in the identification of 48 indicators of trust which were thematically grouped. The third methodology applied in the thesis to achieve the objective of identifying and validating the indicators of trust utilised interviews with supply chain experts to validate the findings of the newspaper content analysis. As the interviewees represent a range of

industries with extensive experience in their fields the successful validation of the indicators identified in the newspaper content analysis provides additional support for the indicators as inputs in the TMS.

The following chapter discusses the second primary objective that of the development of the Trust Management System. The chapter utilises the findings from the content analyses and constructs a conceptual model, system as a practical artefact, and framework to help guide the implementation of the system in strategic collaborative buyer-supplier relationships. Before discussing the methodology supporting the inputs for the system before presenting the TMS artefact.

7. Proposed Trust Management Systems Model & Framework

7.1 Chapter Abstract

In the previous chapters, the thesis has highlighted the importance of trust in collaborative buyer-supplier relationships and has presented the research identifying trust indicators. This chapter utilises the research findings from the thesis. It presents a conceptual model, system as a practical artefact, and framework to help guide the implementation of the system in strategic collaborative buyer-supplier relationships. The chapter discusses the purpose of the Trust Management System (TMS) before presenting a conceptual Trust Management System model. The chapter will then discuss the methodology supporting the inputs for the system before presenting the TMS artefact. The chapter will then illustrate how the system can be implemented to address problems in the buyer-supplier relationship using examples. The chapter then concludes with a prospective framework designed to help guide organisations to implement the TMS.

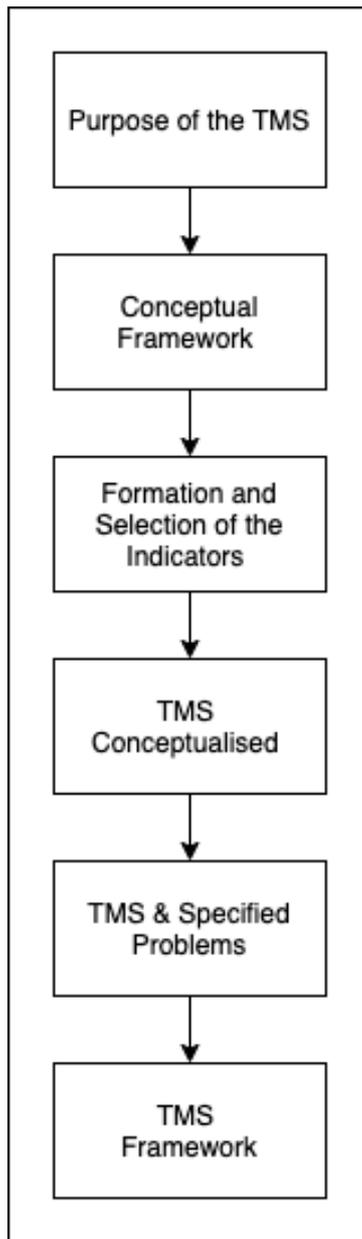


Figure 7-1 Chapter overview

7.2 Purpose of the Trust Management System

The purpose of the TMS is to act as a mechanism to assist organisations who choose to implement a trust-based governance mechanism. The TMS Framework (Section 7.7) guides organisations on implementing the TMS, which provides organisations with a mechanism to control the trust relationship to implement trust-based governance. The system's primary intended users are buyers and suppliers in a collaborative relationship endeavouring to

increase the continuity of the relationship. The system helps organisations, and their stakeholders understand the requirements for a trust-based buyer-supplier relationship and how to integrate measures to support trust-based governance. Additionally, the system also helps identify the areas of concern using the trust clusters (TCs) and indicators of trust (IoT) as benchmarks that organisations should pay closer to concerning trust in the relationship. This section discussed the objectives of the TMS. The following section provides a conceptual model of the TMS.

7.3 Conceptual Trust Management System Model

The model emphasises the role of trust-based governance by focussing on the indicators of trust to signal relational behaviour within a collaborative buyer-supplier relationship. The study suggests that the relevant mechanisms supporting the implementation of trust-based governance rely on the ability of the organisations in the relationship to signal their trustworthiness to one another. By addressing the inability of organisations in collaborative buyer-supplier relationships to implement trust-based governance, the research successfully discussed the concepts most prevalent to the problem. In the literature review chapter, the main topics discussed were supply chain relationships, relationship governance, and trust. The study proposes implementing the TMS Indicators of Trust, grouped thematically into Trust Clusters, into the Trust Management System (Section 7.4). The TMS serves as a mechanism to help enable organisations in collaborative buyer-supplier relationships to capitalise on the benefits of utilising trust-based governance by allowing them to identify and signal trust. The research presents the conceptualisation of the implementation of the TMS (see Figure 7-2) that illustrates the process of utilising the TMS as a mechanism to supporting the implementation of trust-based governance based on the identified indicators of trust.

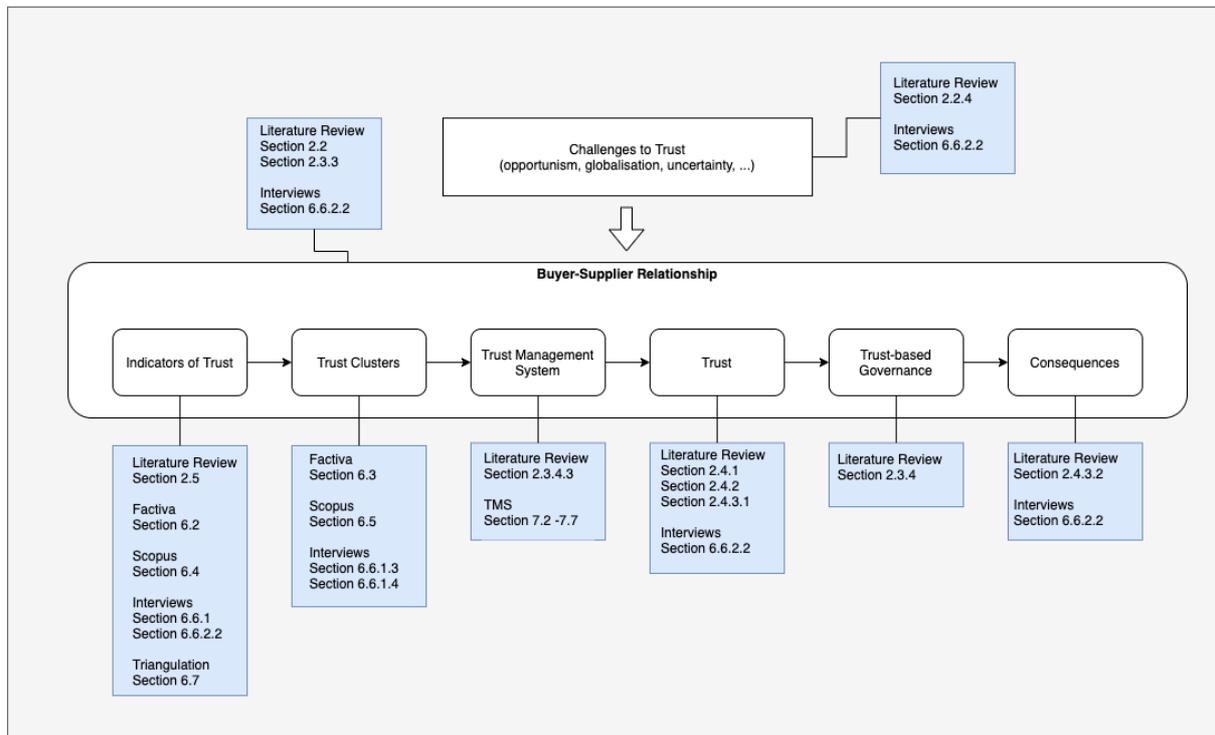


Figure 7-2 Conceptual Trust Management System Model

7.4 TMS Indicators of Trust and the Trust Clusters Methodology

This section discusses the formation and selection of the indicators of trust for implementation in the Trust Management System utilising either a comprehensive strategy or a focussed strategy. The assessment of the findings identified two options for utilising the IoT as inputs in the TMS framework (see Figure 7-3). The first option, the comprehensive strategy, would be for the organisations to utilise the comprehensive strategy (51 IoT). While the second option, the focussed strategy, would utilise a focussed strategy of utilising the top 11 IoT that represented 80% of the 51 Factiva analysed trust indicators.

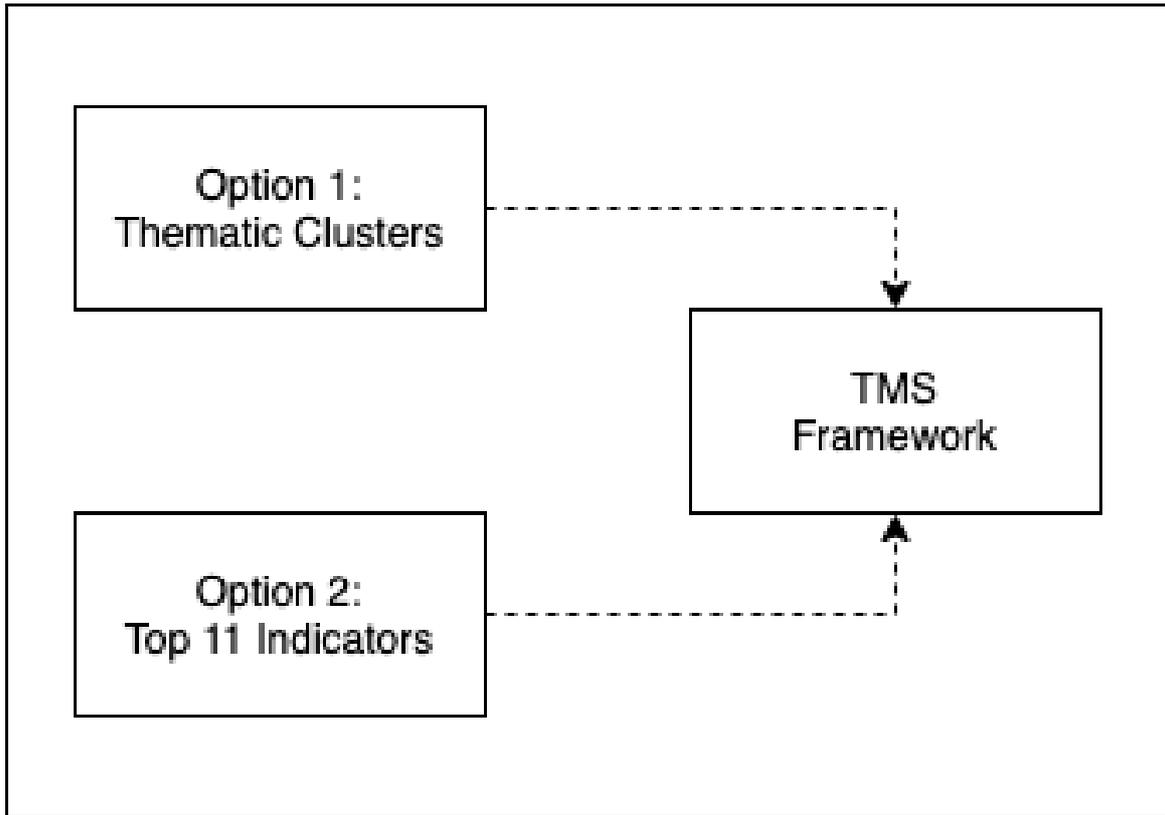


Figure 7-3 Input options for the TMS framework

The selection of either option 1 or 2 would depend on the needs and resources of the organisations implementing the framework. The first option, while more comprehensive, would require more resources to be spent on implementing the system. While the second option reduces the resources required to implement the system while still providing a significant level of coverage, given that the 11 indicators identified represented 80% of the instances identified.

7.4.1 Comprehensive Strategy

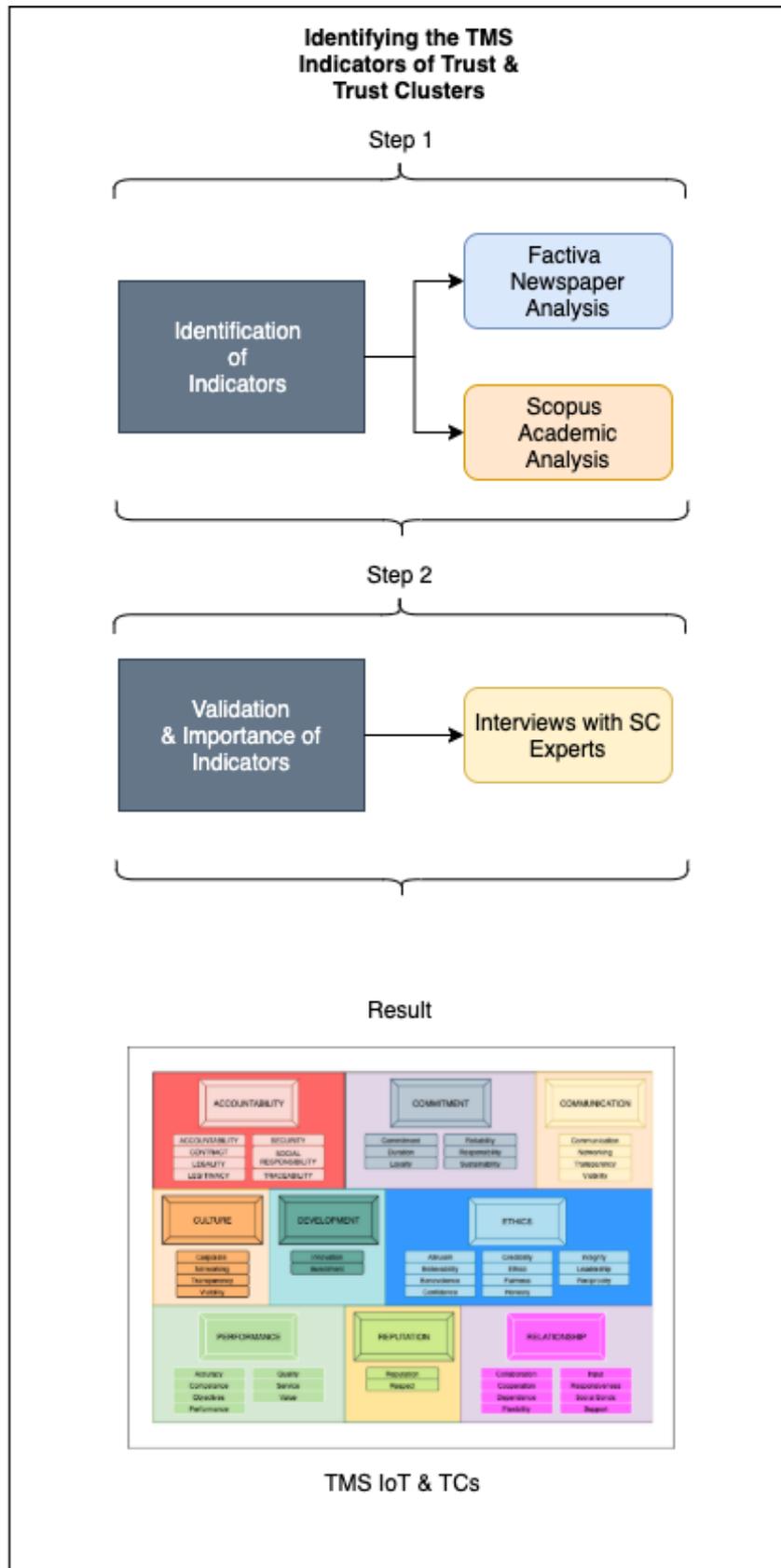


Figure 7-4 Identifying the TMS Indicators of Trust and TCs

Step 1: In Chapter 4, the Factiva study served as the primary source for identifying the Factiva indicators of trust (IoT) and their respective trust clusters (TCs).

Step 2: In Chapter 5, the identified Factiva IoT and the TCs, from Chapter 3 were presented to supply chain experts to achieve two objectives. The first objective was to validate both the Factiva indicators of trust and their respective trust clusters as being relevant to practitioners in the industry. Moreover, the supply chain experts' feedback led to adapting the headings of the trust clusters to convey the purpose of each cluster more clearly. The second objective of the expert interviews was to gain a deeper insight into trust in buyer-supplier relationships. Thereby informing the research presented in the study and expanding the body of knowledge in the field of supply chain relationship management (SCRM).

Result: The result of the previous steps led to the TMS TCs and associated IoT (see Figure 7-5).

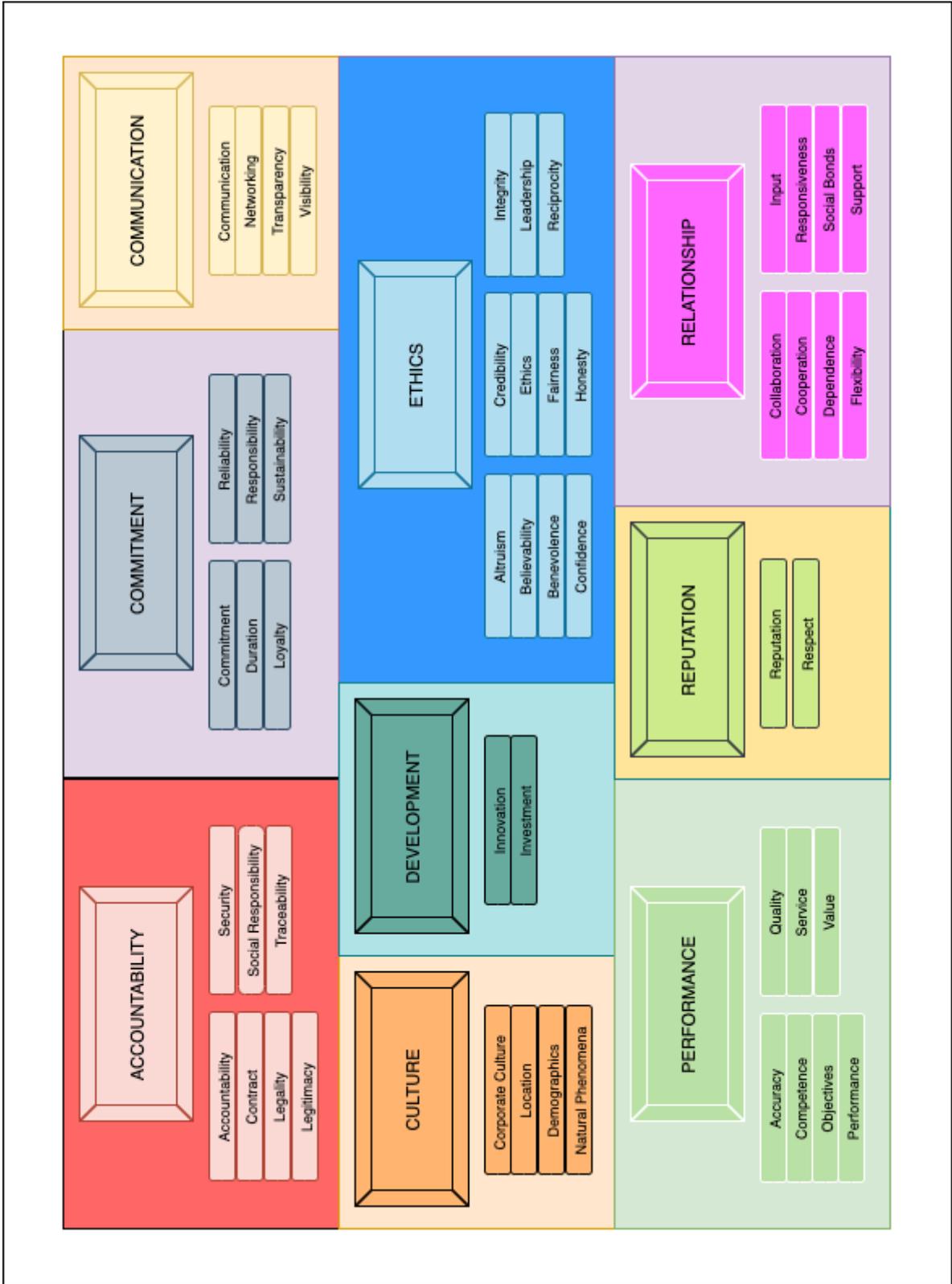


Figure 7-5 TMS trust clusters and associated indicators of trust

7.4.2 Focussed Strategy

The focussed strategy utilises the Top 11 indicators of trust as identified in the Factiva study (Chapter 4) and have been validated by supply chain experts (Chapter 5).

In Chapter 4, the Factiva study served as the primary source for identifying the Factiva indicators of trust (IoT) and their respective trust clusters (TCs). An additional finding from the content analysis of the newspaper media was identification of 11 indicators of trust that represented 80% of the identified trust instances. These 11 indicators could be implemented by academics and managers who choose to utilise a focussed approach. The focussed approach may benefit those lacking the needed resources (for instance, time and capital) to implement a more comprehensive approach.

Performance	Fairness	Security
Reputation	Duration	Social Bond
Communication	Quality	Transparency
		Investment

Figure 7-6 Focussed strategy

7.5 Trust Management System Conceptualised- Implementation Design Artefact

This section provides a practical artefact illustrating how the TMS could be applied by buyer and supplier collaborating. The values presented are fabricated and often exaggerated for illustration purposes. As the system implements similar processes for both the buyer and the supplier, this section refers to them as the users. The users start by inputting values into the

TMS (see Section a). The values from the inputs are then sent to the Direct input and Stored databases (see Section b). The values are sent to the black box from the Direct and Stored input database, which calculates the trust values as outputs (see Section c). The resulting calculated trust values are then presented to the users (see Section d).

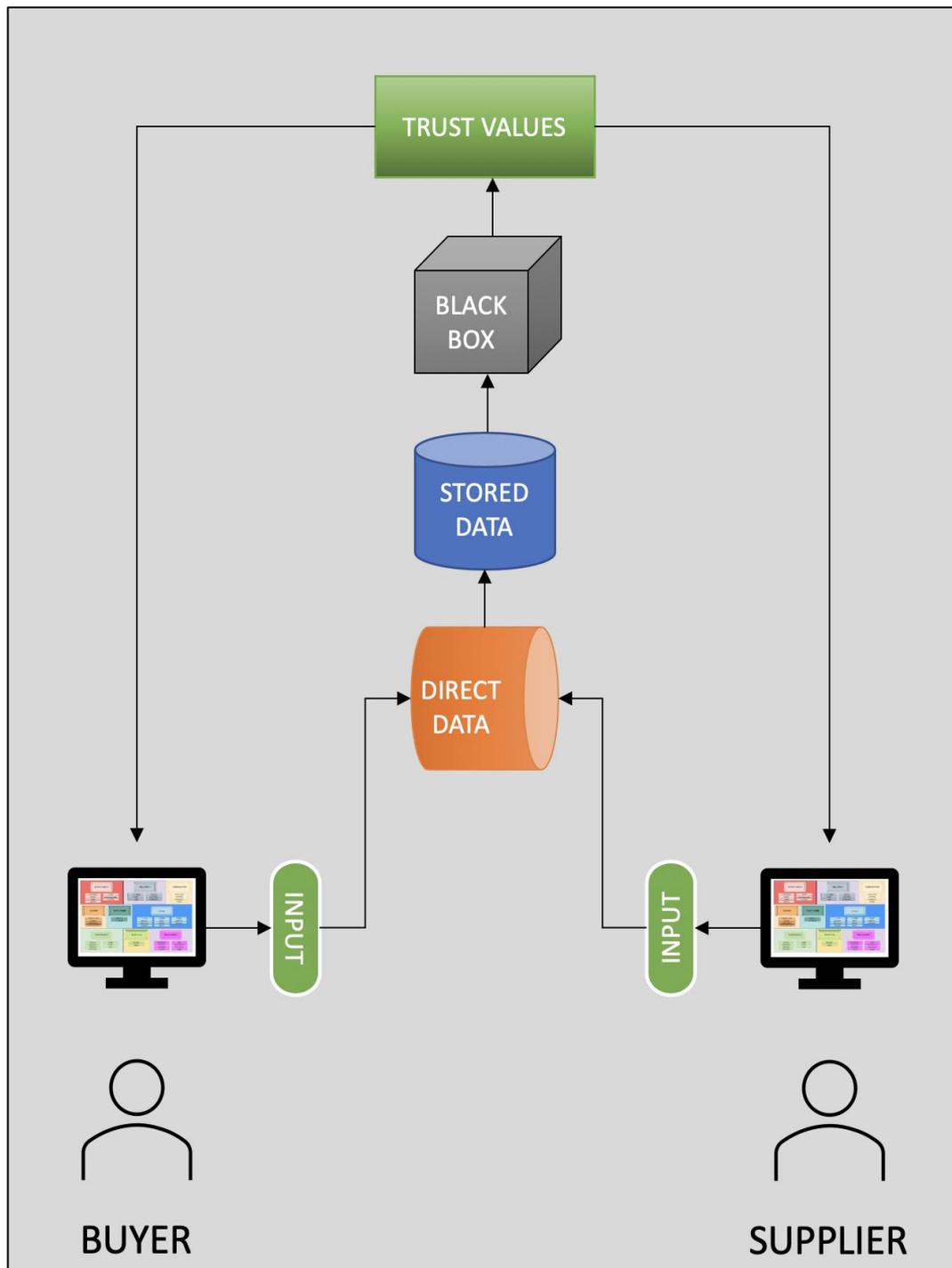


Figure 7-7 TMS practical artefact

a. Input

The TMS utilises nine categories based on the TCs, as identified in Chapter 5, as the inputs for the system referred to as the TC inputs (see Figure 7-8).

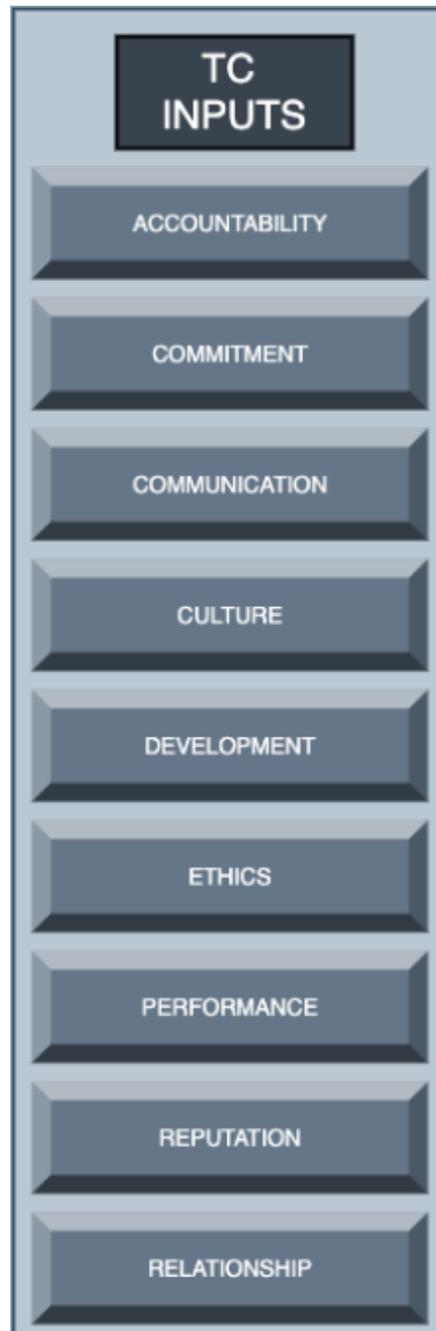


Figure 7-8 Trust Cluster categories

Given the nature of the interaction, for instance, a recent transaction with a counterpart, the user selects a Trust Cluster input category. When a Trust Cluster input is selected, the user is presented with the IoT inputs associated with the selected TC. In the example, the Communication TC input has been selected which presents the user with the IoT inputs associated with the Communication TC input (see Figure 7-9). The IoT inputs associated with the Communication TC input are the Networking IoT input, the Communication IoT input, the Transparency IoT input, and the Visibility IoT input.

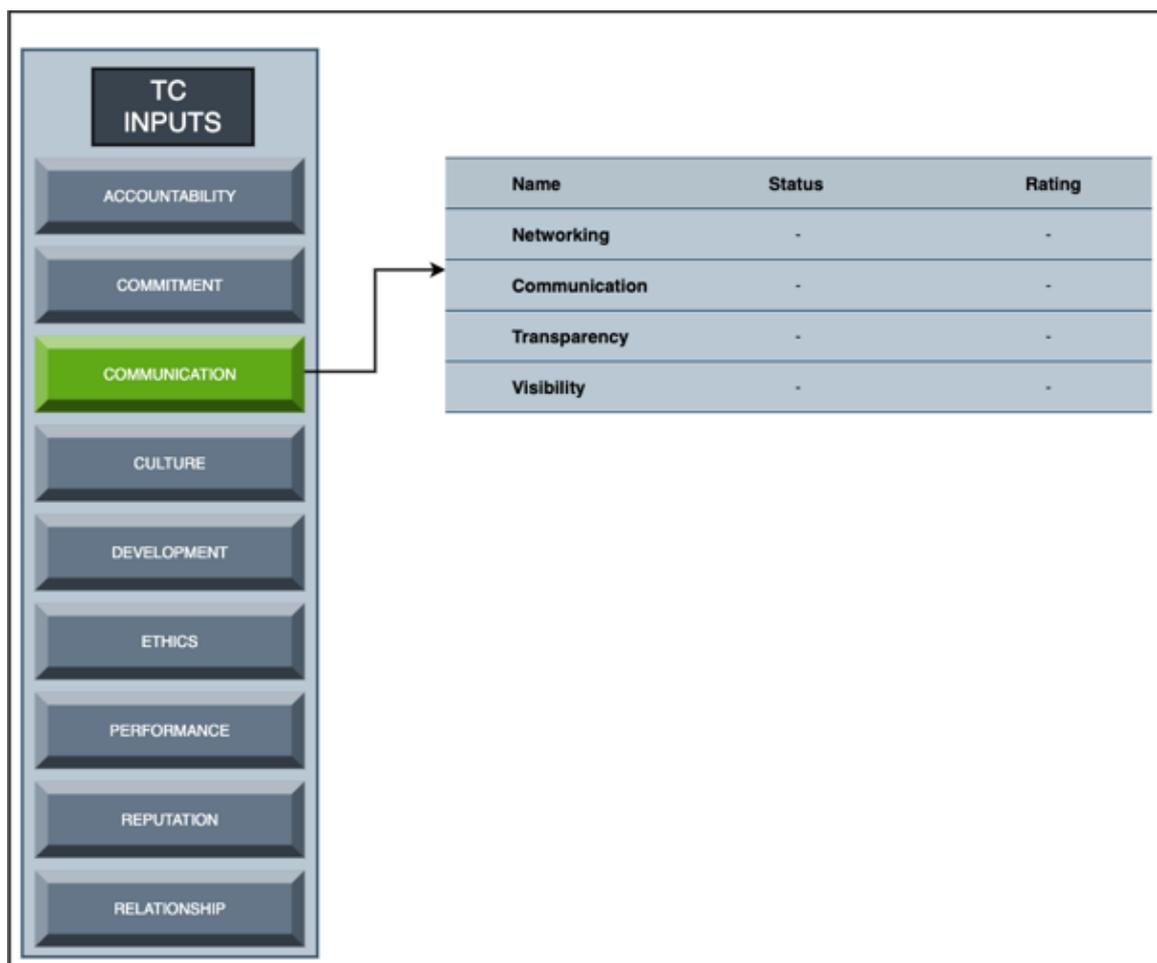


Figure 7-9 Example of TMS with TC and IoT input

The user then assigns values to the IoT inputs based on the experience with the counterpart by using a 5-point Likert scale. Continuing with the example, with the Communication TC input being selected, the example shows that the user rated the Networking IoT input as 'AVERAGE' (3/5), the Communication IoT input as 'GOOD' (4/5), the Transparency IoT input as 'GOOD' (4/5), and the Visibility IoT input as 'POOR' (2/5) (see Figure 7-10).

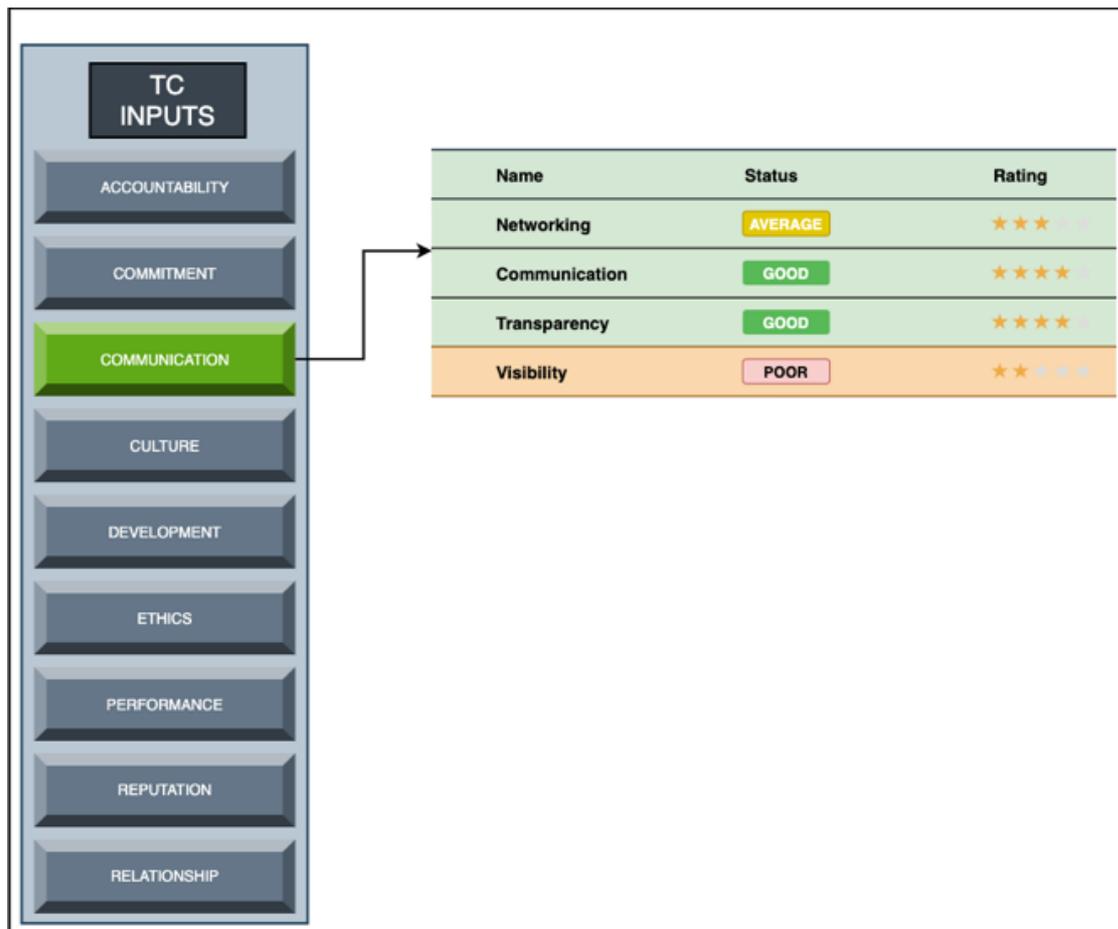


Figure 7-10 Example of TMS with TC and IoT input rated

This section discussed the input system for the users of the TMS. The following section discusses the storage of the values as information sources.

b. Information Sources

The inputs provided by the user from the TC inputs are sent to two databases, namely the Direct database and the Stored database (Figure 7-11). The Direct database reflects data on a discrete level, for instance, transaction by transaction. The Stored database reflects information based on all the previous inputs. The accuracy of the system improves over time as the Stored database accumulates datasets from previous interactions. The Direct and Stored database data are then fed into the black box, discussed in the following section.

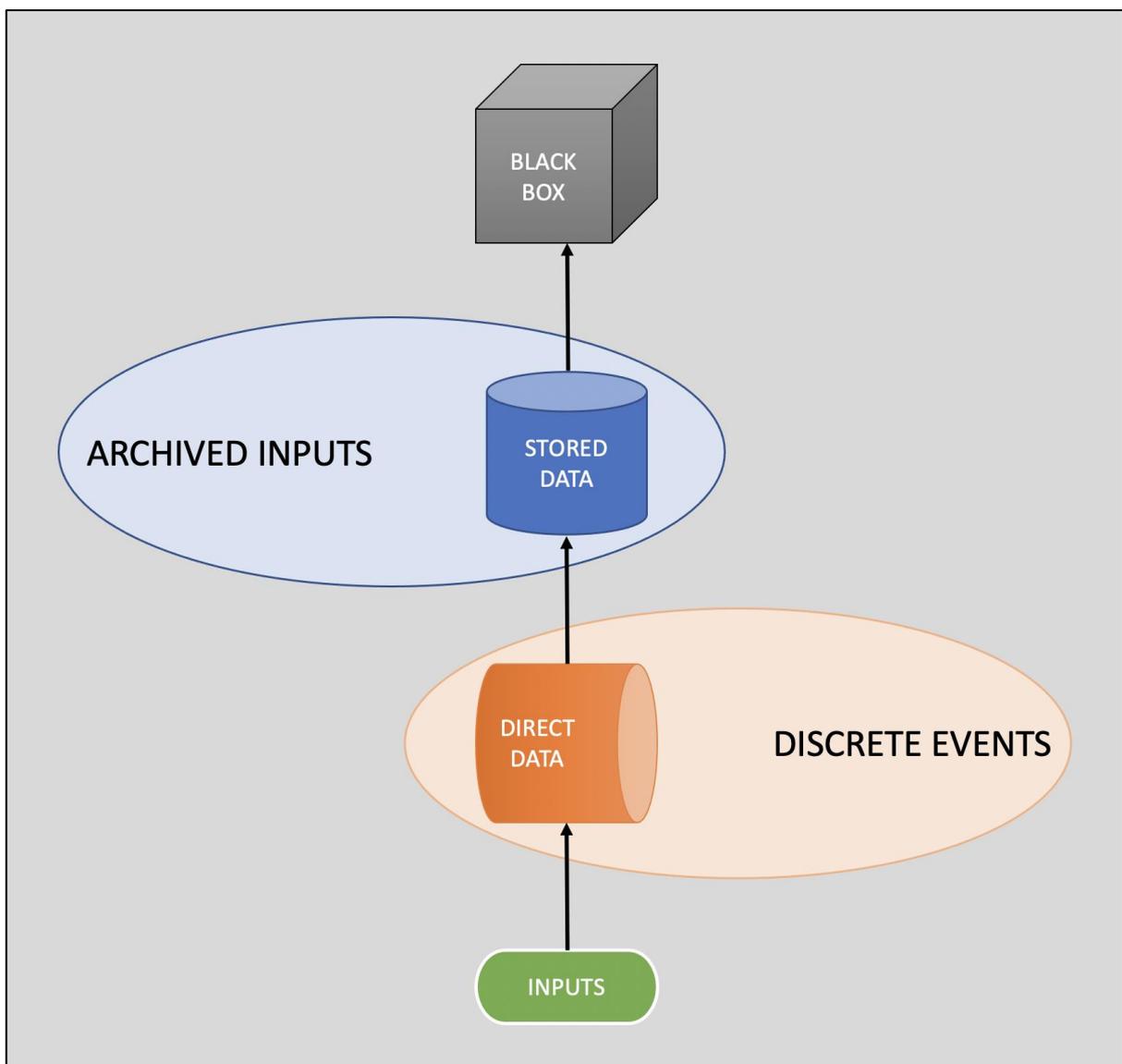


Figure 7-11 TMS information sources

c. Computation

The Direct and Stored database data are then fed into the black box in the computation phase. For the example, it is assumed that the black box contains a machine learning system, which it then implements to calculate the output values. The output values provided by the black box are discussed in the following section.

d. Output

The black box provides each of the users with five output values; these output values are categorised according to the TMS TCs and IoT (see Figure 7-12). The outputs provided to each user are the TC output (discrete), TC output (continuous), IoT output (discrete), IoT output (continuous), and the Overall Trust Value (OTV). All of the outputs reflect the feedback from the user's counterpart except for the OTV value, which reflects the overall trust value and status for the buyer-supplier relationship. The following section provides examples for each of the outputs: The Direct and Stored database data are then fed into the black box in the computation phase. For the example, it is assumed that the black box contains a machine learning system, which it then implements to calculate the output values. The output values provided by the black box are discussed in the following section.

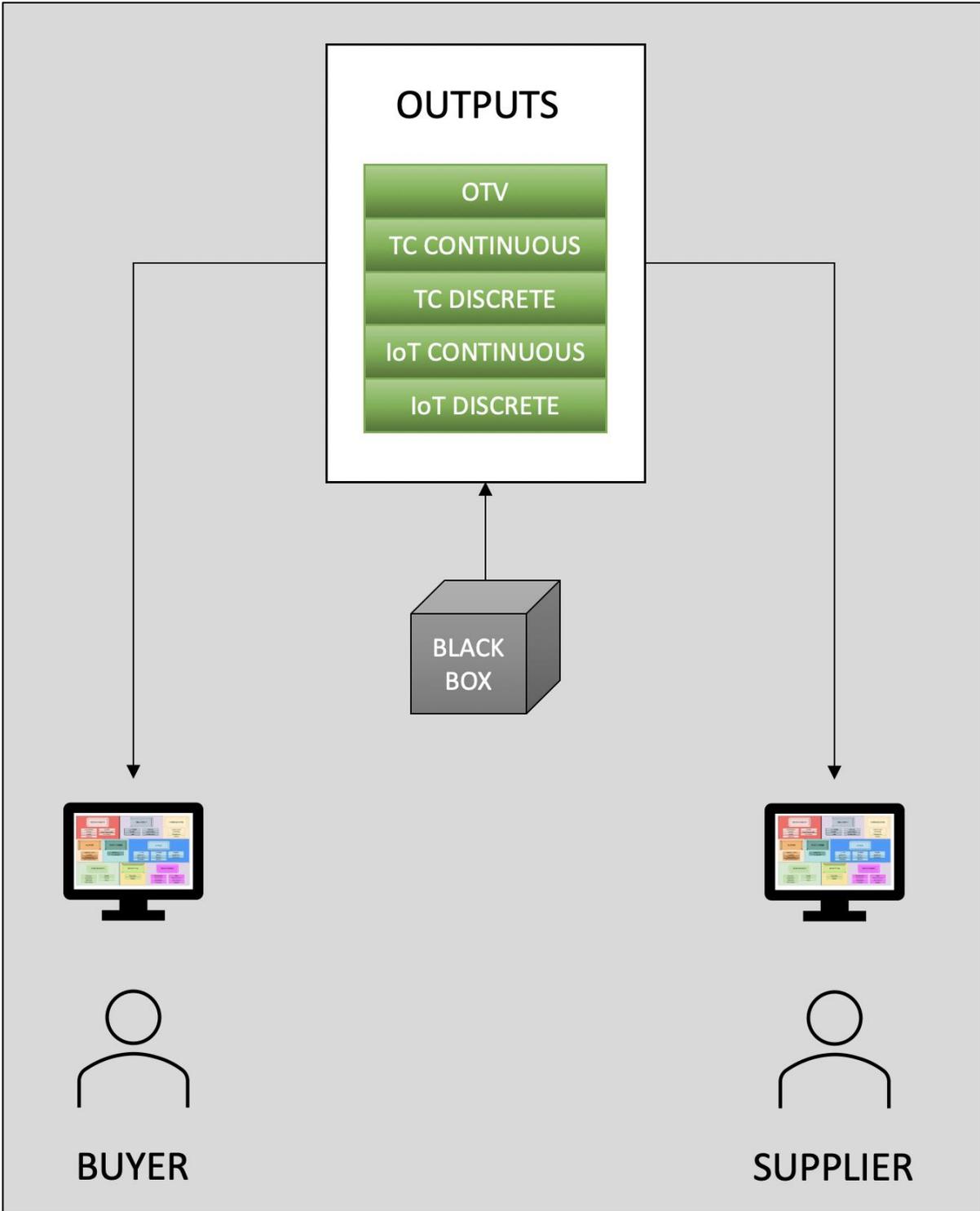


Figure 7-12 TMS outputs

TCs output – discrete: This TMS output provides the trust values associated with each of the nine TCs outputs for the most recent transaction. An example of the TC output – discrete is provided in Figure 7-13. This example reflects the nine TCs outputs as ranked by a counterpart for the most recent transaction between the buyer and the supplier.

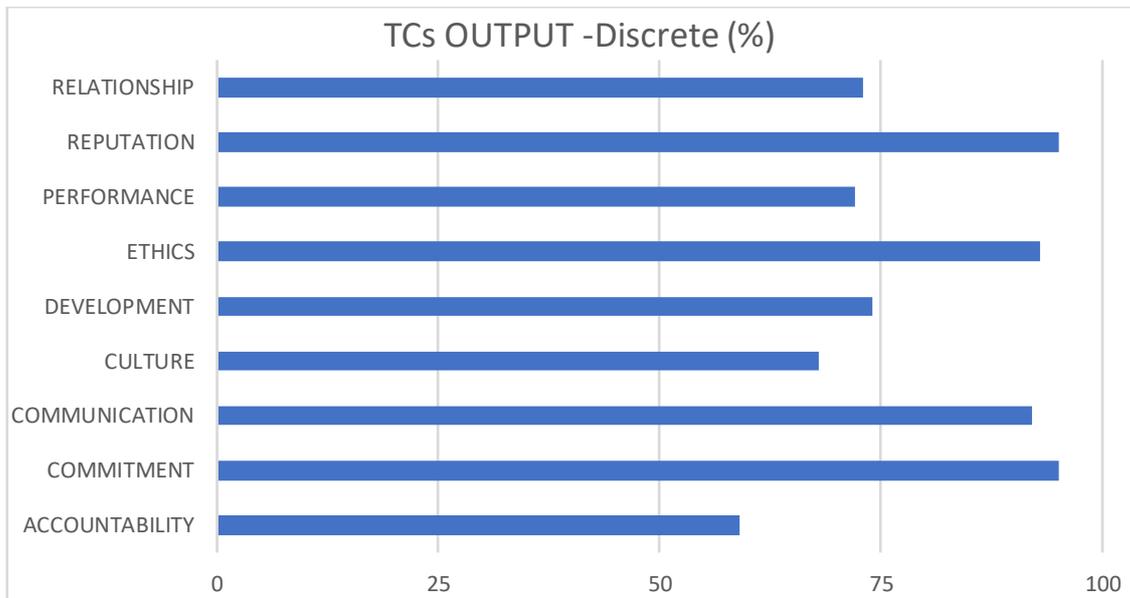


Figure 7-13 Example of the TCs output – discrete

TC outputs – continuous: This TMS output provides the trust values associated with each of the nine TCs outputs for the duration of the buyer-supplier relationship. The example in Figure 7-14 illustrates the TC outputs for the buyer-supplier relationship for one year.

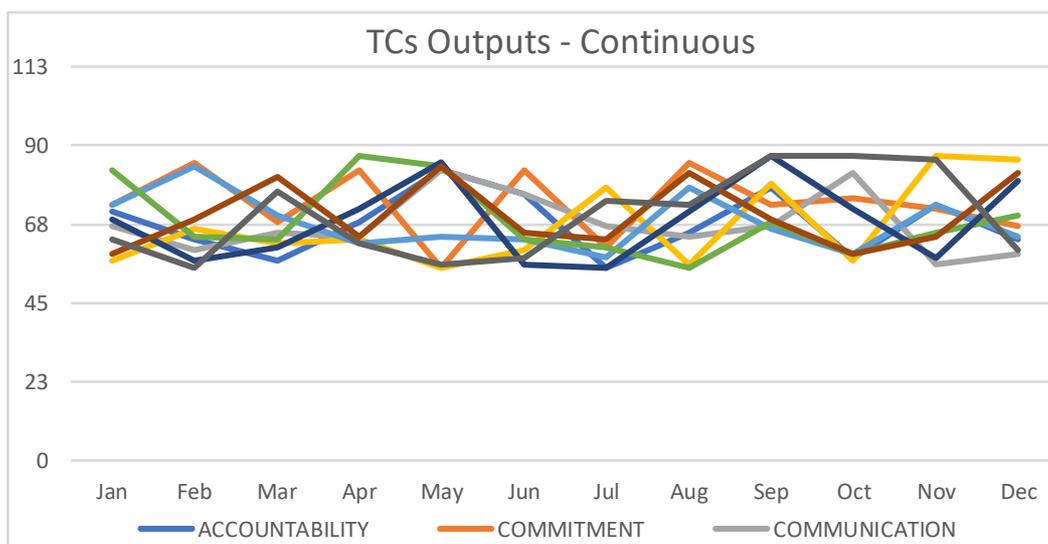


Figure 7-14 example of TCs Outputs – continuous

IoT outputs -discrete: This TMS output provides the trust values associated with each of the 51 IoT outputs for the most recent transaction. The example in Figure 7-15 illustrates the IoT output values grouped by their respective TCs for the most recent transaction between the buyer and the supplier.

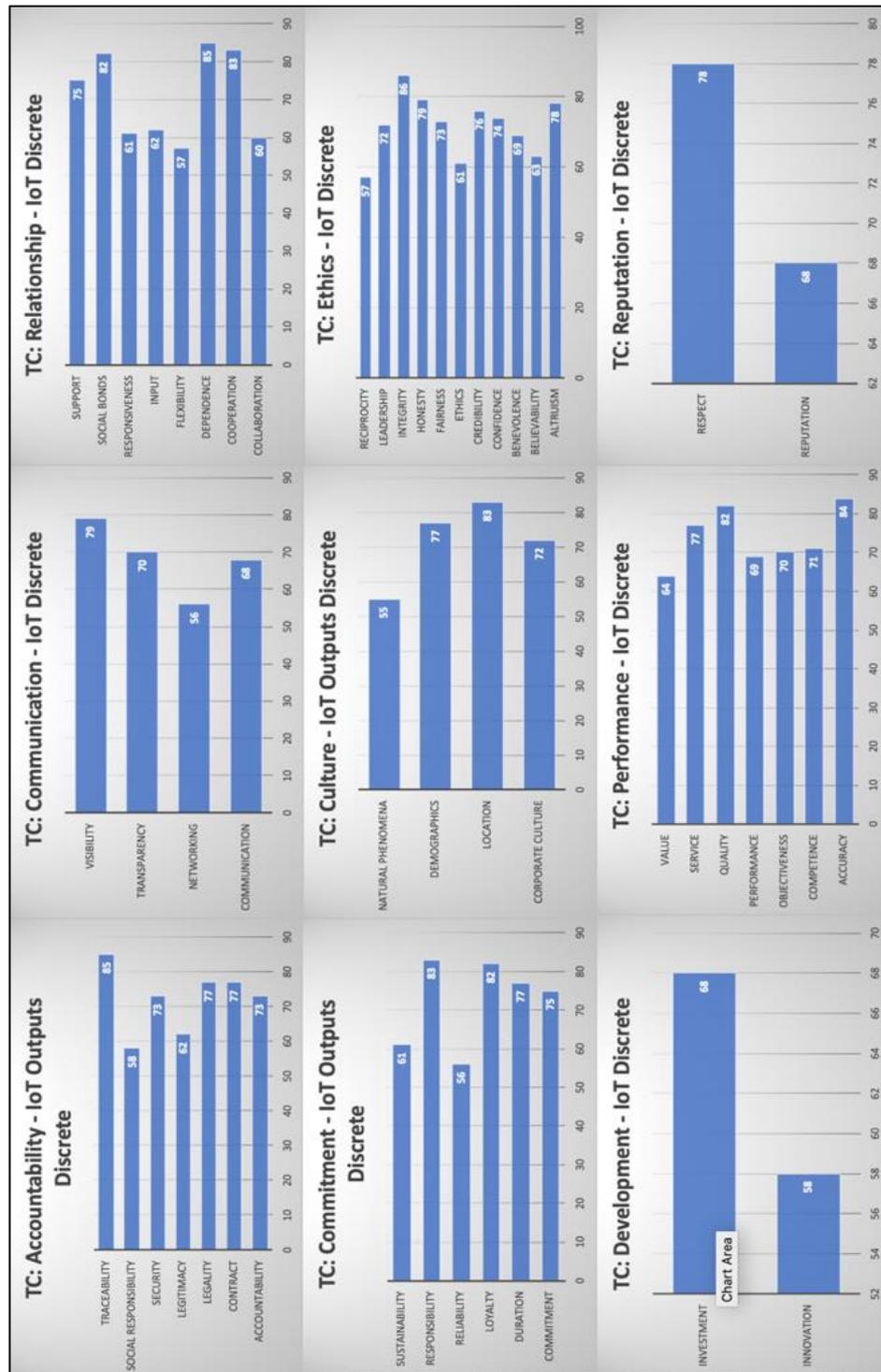


Figure 7-15 Example of the IoT outputs – discrete

IoT outputs -continuous: This TMS output provides the trust values associated with each of the 51 IoT outputs for the buyer-supplier relationship. The example in Figure 7-16 illustrates the IoT outputs grouped by TC for the buyer-supplier relationship for one year.



Figure 7-16 Example of the IoT outputs – continuous

Overall Trust Value (OTV) status: This TMS output provides the overall trust value and status for the buyer-supplier relationship Figure 7-17. This value is calculated using the previously mentioned output values and reflects the users' current OTV between the organisations. In the example, the current OTV status is reflected as "Good" at 70%.



Figure 7-17 Current status of the Overall Trust Value for the buyer-supplier relationship

This section provided an overview of how the TMS system could function. The following section discusses the TMS when addressing a specific concern from either a buyer or a supplier, which could impact the level of trust between the organisations.

7.6. The Trust Management System & Exemplar Problems

The previous section discussed the general implementation of the TMS; however, organisations often encounter problems that could impact the level of trust in the buyer-supplier relationship. The buyer and supplier are referred to as stakeholders in this section. The following section discusses how the TMS could be implemented to resolve specified problems. The TMS, when presented with a specified problem by either the buyer or the

supplier, analyses and selects which Trust Cluster or Trust Clusters, would be most suitable to address the specific problem (see Figure 7-18). This analysis is based on the criteria and parameters set during the implementation of the TMS discussed in Section 7.7.2. From the selected Trust Clusters the system then identifies and selects the most appropriate Indicators of Trust. The selected Indicators of Trust with their respective guidelines are then presented to both stakeholders to address the specified problem. The guidelines for each indicator are discussed and agreed upon during the implementation of the TMS framework (as discussed in Section 7.7.2).

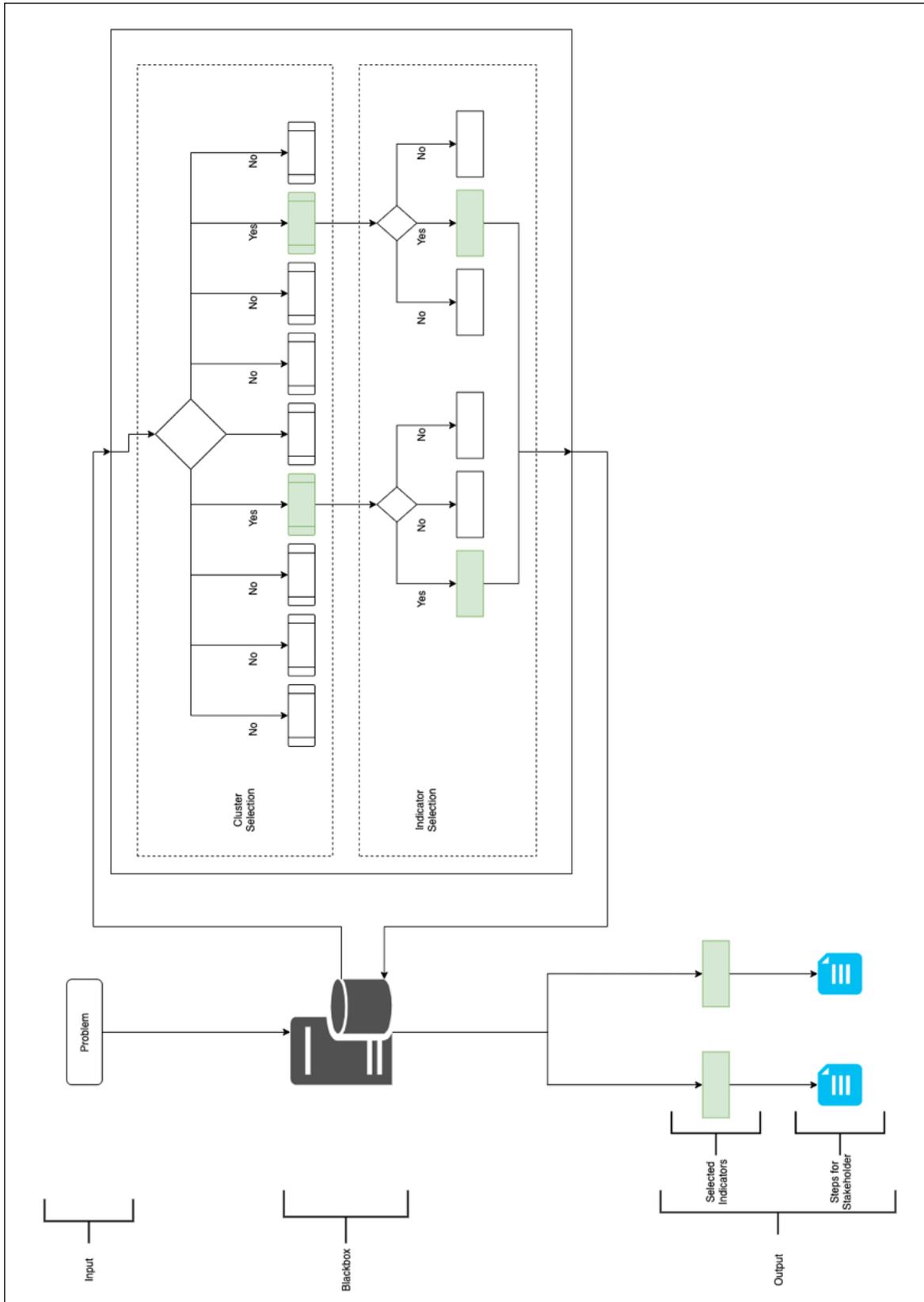


Figure 7-18 Conceptual representation of the TMS

The following section provides an example of how the TMS can assist buyer-supplier relationships to address impediments to building trust. The impediments to building trust were selected from the interview feedback discussed in Chapter 4, namely poor communication & unwillingness to communicate and long lead times & delays. Section 7.6.1 presents an example of implementing the TMS to address poor communication and an unwillingness to communicate. After which Section 7.6.2 presents an example of implementing the TMS to address long lead times and delays.

7.6.1. Poor Communication and an Unwillingness to Communicate

Communication between organisations plays a significant role in obtaining success as it allows organisations to coordinate, collaborate, and respond to changes in the market (Lee, Padmanabhan and Whang, 2004; Hsu *et al.*, 2008). Conversely, a lack of communication between organisations may reduce the probability of a collaboration to achieve their desired objectives (Doloi, 2009). A counterpart who is unwilling to communicate or provides inadequate (inaccurate) information to its trade-partner could negatively impact its ability to perform (Voigt and Inderfurth, 2012). The failure to properly communicate additionally harms the level of trust between organisations (Doloi, 2009). This negative impact on trust by not correctly communicating was supported by the feedback from the interviews, with an interviewee stating that when requesting specific information from a counterpart who then responded with inaccurate information or with a generic (“cookie-cutter”) information, it was a burden to building trust in the relationship (IIOT3).

How the TMS addresses the Communication Problem

In this example, the problem of poor communication and an unwillingness to communicate has been inputted into the system (see Figure 7.19). Using a black-box approach, the system identifies that the most pertinent Trust Cluster for the problem of poor communication and an unwillingness to communicate would be the Communication Trust Cluster. The system then selects the most appropriate Indicators of Trust from the ‘Communication Trust Cluster’

to address the specified problem. The Communication Trust Cluster's options are the Communication IoT, the Networking IoT, the Transparency IoT, and the Visibility IoT. From these options, for the example, to resolve the specified problem, the system identifies the 'Communication IoT' and the 'Networking IoT' to be the most appropriate options. The system then notifies both the stakeholders of the specified problem and identifies which IoT has been selected to address the problem. In addition, to identifying the IoT, the system also provides each stakeholder with the guidelines to address the problem. The problem-solving guidelines are set during the implementation stage of the TMS, as discussed in Section 7.7.2

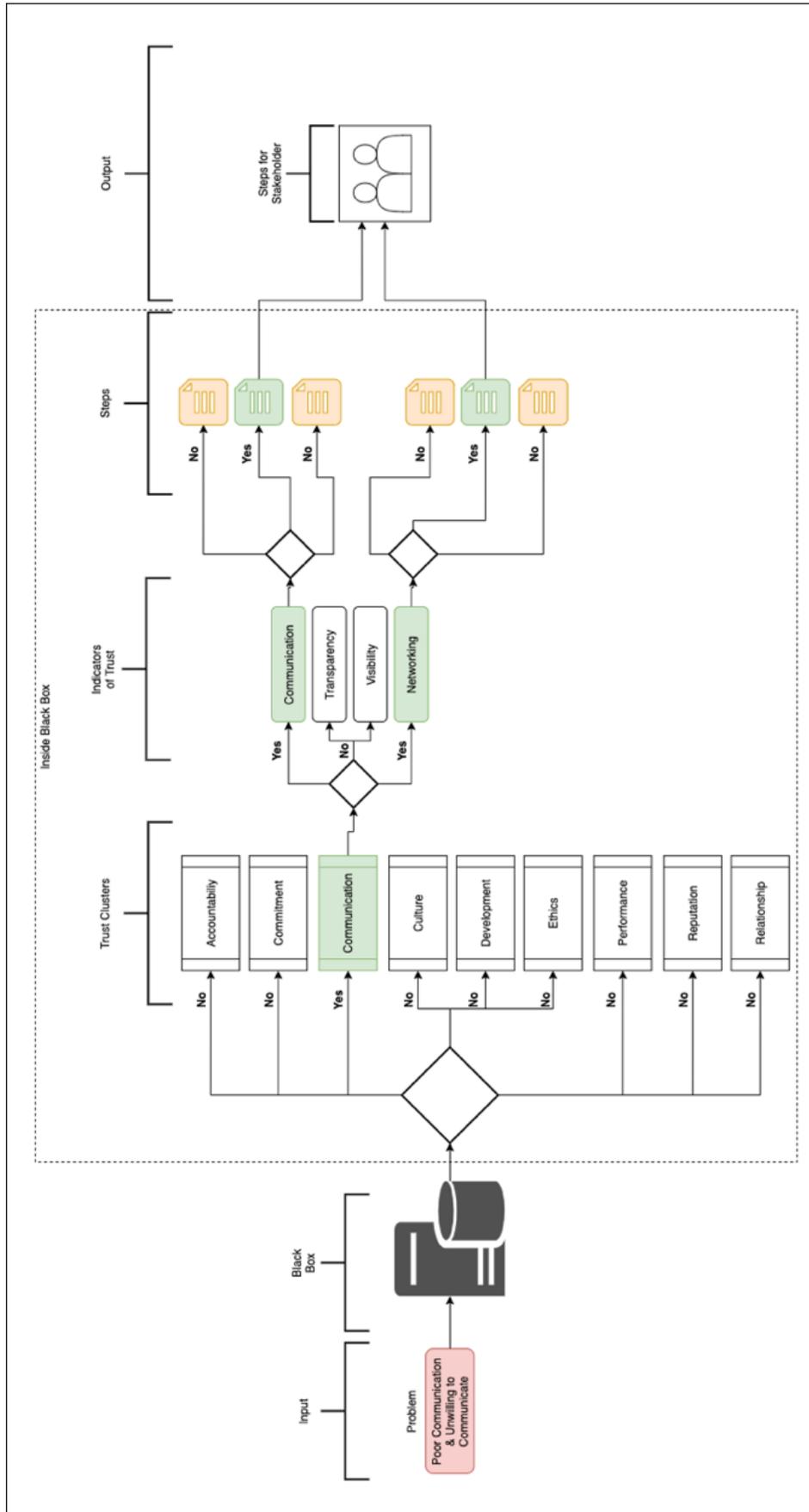


Figure 7-19 Example of the TMS implemented to resolve an impediment to trust

- During the implementation of the TMS framework, organisations identify and share with its counterpart the manner, frequency, and objectives they would like to accomplish. The TMS Organisations can communicate in a manner as predefined by their counterpart, supported by the interview feedback responding to how an untrusted counterpart could improve its low level of trustworthiness. The interviewee stated that contact that was not too formal or overbearing would help rebuild trust (IIOT3). This statement by the interviewee highlights the importance of being able to communicate with a counterpart in a style and basis tailored to a specific buyer-supplier relationship.

TMS impact on Trust

- Effective communication improves trust (Das and Teng, 1998; Cheung, Yiu and Lam, 2013), while trust, in turn, has been described as being able to dictate how organisations communicate (C. Moorman, Zaltman and Deshpande, 1992).
- Additionally, trust between organisations improves their ability to communicate (Seppänen, Blomqvist and Sundqvist, 2007; Huang and Wilkinson, 2013; Ho, Ghauri and Larimo, 2018).
- The TMS approach of utilising trust to address concerns between buyer-supplier relationships has been supported in the literature. For instance, when considering governance mechanisms, trust-based governance has shown to improve communication between organisations (Gorovaia and Windsperger, 2013; Herz *et al.*, 2016). This sentiment was mirrored by the interviewees' feedback, who stated that when considering organisations that they considered being especially trustworthy, that open communication (visibility) played a significant role (IIOT2 & IIOT3).

This section illustrated the TMS ability to resolve the problem of poor communication and an unwillingness to communicate by illustrating an overview of the TMS. The following sections provide an example of how the TMS could be applied to address long lead times and delays.

7.6.2. Long Lead Times & Delays

The following section provides an example of how organisations could address long lead times and delays when implementing the TMS. The study distinguishes between delays and long lead times, where a delay signifies a sudden postponement of delivery after an order has been placed. A long lead time refers to an expected extended waiting period before delivery. The example utilises the Communication and Performance Trust Clusters to address the trust burden. Delays are unavoidable when considering the supply chain due to organisations inability to control lead times, logistics, communication, and decision making (S. Chopra and Sodhi, 2004; Sipahi and Delice, 2010). Additionally, delays may be caused by a lack of ability, for instance, when a supplier needs to rework a product (S. Chopra and Sodhi, 2004; Mello, Strandhagen and Alfnes, 2015). Delays are hard to predict (Azadeh *et al.*, 2014) and are considered significant problems that adversely impact the buyer's performance and supply chain (S. Chopra and Sodhi, 2004; Mello, Strandhagen and Alfnes, 2015). Lead time is defined as the time that it takes to complete an order from when it was received (Vitasek, 2013). When there is uncertainty concerning lead time, it impacts and even alters supply chain decisions when considering risk (Bandaly, Satir and Shanker, 2016). Long lead times may result in a bullwhip effect, increase inventory and opportunity costs, increase risk, and result in buyers requiring higher safety stock levels (Bandaly, Satir and Shanker, 2016).

How the TMS addresses the Long Lead Times and Delays Problems

The stakeholder concerned with the problem enters it into the system. The TMS, for this example selects the 'Communication Trust Cluster' and the 'Performance Trust Cluster' to address the problem (see Figure 7-20). The TMS then selects the most appropriate Indicators of Trust from the Communication Trust Cluster to address the specified problem.

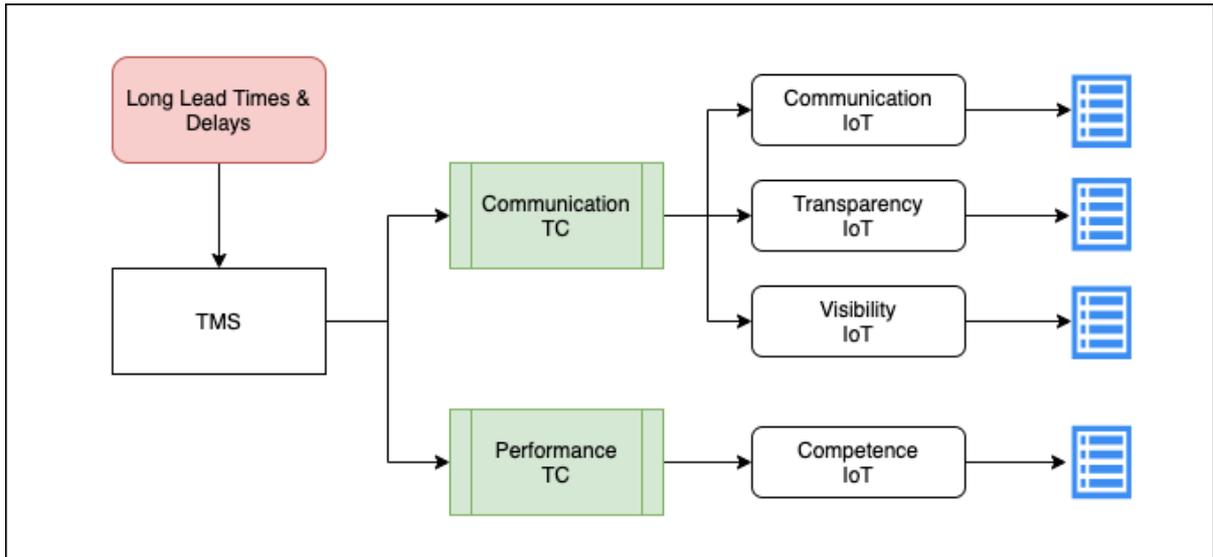


Figure 7-20 Example of TMS implemented to resolve the problems of long lead times and delays

This section first discusses the Communication Trust Cluster's implementation before discussing the implementation of the Performance Trust Cluster. The Communication Trust Cluster has access to four possible IoT, namely, the Communication IoT, the Networking IoT, the Transparency IoT, and the Visibility IoT. The system starts by informing the stakeholders of the problem and provides each stakeholder with the recommended IoT to address the problem. For this example, concerning the Communication Trust Cluster, the TMS selected three IoT: the Communication IoT, the Transparency IoT, and the Visibility IoT. Additionally, the system provides each stakeholder with their respective suggested guidelines for addressing the problem. In this example, the buyer is unsatisfied with the long lead times and delays occurring on the supplier's side. The TMS utilising the respective Communication IoT guidelines for this problem could, for instance, provide the following guidelines:

Problem	Stakeholder	IoT	Guidelines
Long lead times or delays	Supplier	Communication	Acknowledge the long lead time or delay.
		Transparency	Communicate to the buyer the reason for the long lead time or delay.
		Visibility	Communicate to the buyer steps taken to resolve the delay or long lead time. Focus on updating the buyer on a regular basis on the status of the order.

	Buyer	Communication	Communicate expectations for delivery.
		Transparency	Communicate the reason for the urgency.
		Visibility	N.A.

Figure 7-21 Example of Communication TC IoT and guidelines for addressing the problem of long lead times or delays

The options for the selected Performance Trust Cluster being the Accuracy IoT, the Competence IoT, the Objectives IoT, the Performance IoT, the Quality IoT, the Service IoT, and the Value IoT. For this example, concerning the Performance Trust Cluster, the TMS selected the Competence IoT. Additionally, the system provides each stakeholder with their respective suggested guidelines for addressing the problem.

Problem	Stakeholder	IoT	Guidelines
Long lead times or delays	Supplier	Competence	The supplier informs the buyer that the delay is due to faulty equipment resulting in poor quality products which require rework.
	Buyer	Competence	N.A.

Figure 7-22 Example of the Performance TC IoT and guidelines for addressing the problem of long lead times or delays

- When considering the long lead times and delays as examples of performance problems, the interviews' feedback provided additional insight. For instance, interviewees stated that when considering a counterpart whom they found to be especially trustworthy that when the counterpart did something wrong, they did not respond aggressively when reaching out to them and being open to criticism (IIOT3 & IIOT5).
- The utilisation of the Communication Trust Cluster provides the offending organisation with a means to respond to criticism. An interviewee stated that if a counterpart had made a "genuine" error that led to poor performance, it would not affect the level of trust between the organisation (IIOT5). Thus, if an organisation is

willing to communicate that it had made an error and not try to avoid blame, it would not affect the trust between the organisations.

- The Communication Trust Cluster may also be utilised to improve the collaboration (coordination) between the organisations. As coordination between organisations aid in reducing delays (Mello, Strandhagen and Alfnes, 2015).

TMS impact on Trust

The Performance Trust Cluster provides organisations with the means to address the problems stated by the interviewees using joint problem solving to build trust between organisations (IIOT3 & IIOT5). The authors supported joint problem solving, such as Doloï (2009) who identified that trust and commitment promoted joint problem-solving.

Moreover, joint problem solving has also been shown to be an antecedent of trust (Dyer and Chu, 2003; Bstieler, 2006; Khalfan, McDermott and Swan, 2007; Stuart, Verville and Taskin, 2012; Jiang, Lu and Le, 2016).

- Additionally, trust-based governance has been shown to improve organisation's ability to employ joint problem solving (Herz *et al.*, 2016).

This section provided two examples of how the TMS could be implemented to resolve specified problems that could impact the level of trust between the buyer and the supplier. The following section provides a framework on how organisations could implement the Trust Management System.

7.7. The Trust Management Systems Framework

Naesens et al. (2007) developed a phase-based model for implementing and sustaining trust in collaborative initiatives utilising four collaboration models from the socio-psychological sciences. The model presented by Naesens et al. (2007) implemented a series of phases to build and sustain trust, while the Trust Management Systems Framework (TMSF) utilises the phases as steps to implement an existing system to influence/navigate trust. The TMSF adopts and adapts the steps suggested by Naesens et al. (2007). The authors utilised four phases to implement their framework: the preliminary phase, the setting of the stage phase, the direction setting and problem-solving phase, and the implementing and sustaining phase. The three-phase model is applied in the thesis to illustrate how the TMS could be implemented within a buyer-supplier relationship.

The following section discusses the phases of implementation for the TMS. The implementation of the framework is discussed using four phases; namely the preliminary phase, the first phase named the setting the stage phase, the second phase named the direction setting problem solving, the third phase named implementing and sustaining trust (see Figure 7-23). The outcome of the TMS framework is presented in Figure 724. The first phase examines the initial steps of the framework by discussing the identification of the stakeholders, objectives, and available resources. The second phase discusses the ground rules, initial agreements, and information sharing between the organisations. The third phase discusses how the results and to whom the results from the feedback are shared. Additionally, the third phase discusses the formality of agreements and procedures implemented in the framework before discussing the evaluation of the results.

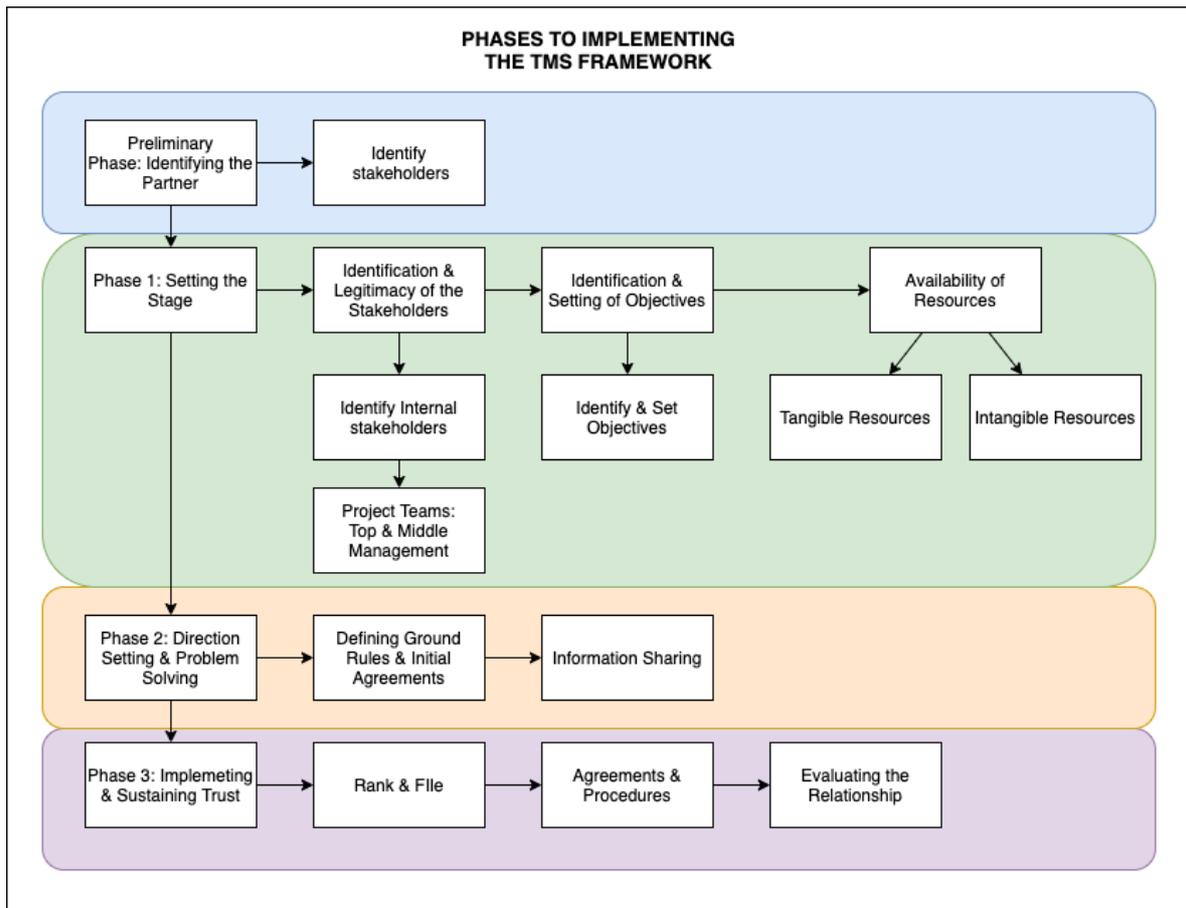


Figure 7-23 Phases for TMS framework adapted from Naesens et al. (2007)

Preliminary Phase: Identifying the Partner

In this phase, the buyer and supplier identify each other as participants and agree to implement the TMS framework. This choice to integrate more deeply with a counterpart is supported by the increasing popularity of cross-organisational integration and the utilisation of teams (Trent, 2004).

Phase 1: Setting the Stage

This phase discusses the identification of the various internal stakeholders involved in implementing the TMS. It also discusses the identification and setting of objectives for the TMS. Additionally, this phase discusses the availability of resources.

a. Identification and Legitimacy of the Stakeholders

As the respective partner for implementing the TMS framework has been identified in the Preliminary phase, the first part of the Setting the Stage phase identifies the internal stakeholders from the respective organisations for the project teams (Naesens, Pintelon and Taillieu, 2007). Project teams play a vital role for organisations where their utilisation have gained popularity within medium and large organisations (Trent, 2004). The stakeholders responsible for implementing the TMS framework are identified as a project team consisting of top and middle management from both organisations. The inclusion of top management members allows organisations access to resources and knowledge, which drives innovation and organisational performance. Additionally, middle management plays a vital role in supporting top management and are essential for strategy implementation and organisational performance (Schaefer and Guenther, 2016; Heyden, Sidhu and Volberda, 2018; Singh *et al.*, 2019).

Buyer's Perspective

The Buyer identifies internal stakeholders from within its organisation from the top and middle management positions as a part of the project team responsible for implementing the TMS framework. The top management representatives can view the project from a strategic view, while middle management can view the project from a tactical perspective. Top management employees that may form part of the project team include, for instance, Chief Purchasing Officers (CPOs), Head of Purchasing, Vice-president of Purchasing, Director of Purchasing. The middle management representatives that may form part of the project team include, for instance, Lead Buyers, Supply Managers, Category Managers. The TMS framework provides the Buyer's project team representatives with a mechanism to implement a trust framework with the representatives that provides both organisations implementing the framework and the system with standard terminology, improved coherence, and reference for the organisations.

The Supplier identifies the internal stakeholders from within its organisation from the top and middle management positions as a part of the project team responsible for implementing the TMS framework. The top management representatives can view the project from a strategic view while middle management can view the project from a tactical perspective. Top management employees that may form part of the project team include, for instance, Supply Chain Director, Sales & Marketing Director, Vice President of Sales. The middle management representatives that may form part of the project team include, for instance, Production Managers, Sales Managers, Marketing Managers. The TMS framework provides the Supplier's project team representatives with a mechanism to implement a trust framework with the representatives that provide both organisations with standard terminology, improved coherence, and reference for the organisations.

b. Identification and Setting of Objectives

This section was referred to by Naesens et al. (2007) as 'Common Definition of the Problem or Opportunity'. However, as the pertinent outcome for this section is identifying and setting the objectives, the heading was changed for the TMS framework to Identification and Setting of Objectives. The project teams, consisting of the top and middle management representatives from the respective organisations, identify both the problems and the opportunities the application of the TMS framework would solve and gain for the organisations. Using this information, project teams can identify and set mutual objectives. The importance of identifying and setting mutual of objectives was emphasised in the interviews, in Chapter 4, with the feedback from an interviewee stated that untrusted counterpart might improve their low levels of trust by increasing their accuracy when identifying the objectives and requirements that are required in the relationship (IIOT5). While both frameworks can provide collaborations with a wide range of benefits, an interesting comparison can be made between them. Naesens et al. (2007), when discussing the identification of objectives, identified three primary objectives: the benefits of collaboration as lowering costs, expanding market share, and improving customer service

while identifying problems and opportunities when using their framework. Similarly, by utilising the TMS framework, which shifts the focus from collaboration to that of trust can achieve comparable benefits. As trust has been shown to reduce costs (Dyer and Chu, 2003; Paparoidamis, Katsikeas and Chumpitaz, 2019a), increase satisfaction (Paparoidamis, Katsikeas and Chumpitaz, 2019a) and increasing competitive advantages (Fainshmidt and Frazier, 2017; Michalski, Montes and Narasimhan, 2019; Staniskiene, Stankeviciute and Daunoriene, 2019). After setting and defining the objectives, the TMS framework should address the project teams need to designate whether the objectives are categorised by time, as either intermediate objectives or long-term objectives. As industries differ, the interpretation of what is considered to be an intermediate duration and a long-term duration should be defined by the project teams. When considering supply chain collaboration, a general guide to duration suggested by Simatupang and Sridharan (2002) views the short-term as falling within one-year, intermediate duration to reflect one to three long-term to reflect two to five years.

Buyer's Perspective

The TMS framework provides the Buyer utilising the Trust Clusters as a guide to identify and set objectives. The Trust Clusters within the TMS framework provides the Buyer with both broad categories on which to focus objectives as well as the IoT to help identify and set sub-objectives. Additionally, the Buyer's project team, in this step, need to distinguish whether the objectives and sub-objectives are short-term, medium-term, or long-term in nature.

Supplier's Perspective

The TMS framework provides the Supplier utilising the Trust Clusters a guide to identify and set objectives. The Trust Clusters within the TMS framework provides the Supplier with both broad categories on which to focus objectives as well as the IoT to help identify and set sub-objectives. Additionally, the Supplier's project team needs to distinguish whether the selected objectives and sub-objectives are short-term, medium-term, or long-term in nature.

c. Availability of Resources

The project teams need to identify which resources are pertinent to implementing the TMS framework and the collaboration between the organisations. Naesens et al. (2007) distinguished between financial, workforce and relational resources for their framework. While the TMS framework refers to tangible and intangible resources as described in the literature review.

Buyer's Perspective

In this step, the Buyer's project team needs to identify which resources are pertinent to implementing the TMS framework and the collaboration with the Supplier. The project teams should distinguish and categorise between tangible and intangible resources. Tangible resources from Buyer when considering a Supplier may include, for instance, capital resources, equipment, and the sharing of costs (Bai and Sarkis, 2016), while intangible assets may include, for instance, problem-solving, development programs such as information sharing, informal assessments (Golmohammadi *et al.*, 2018).

Supplier's Perspective

The Supplier's project team needs to identify which resources are pertinent to implementing the TMS and the implementation of the TMS framework. The project team can accomplish this by first categorising tangible and intangible resources. Tangible resources from Supplier when considering a Buyer may include, for instance, technology investments, human resources, capital, product trials, while intangible assets may include, for instance, assessment programs (Merckx and Chaturvedi, 2020).

Phase 2: Direction Setting and Problem Solving

The second phase discusses defining the ground rules and agreements for organisations implementing the TMS. Additionally, it discusses the information sharing for the utilisation of the TMS. Moreover, organisations are required to identify potential problems that may arise during the buyer-supplier relationship. The organisations can identify and categorise the potential problems utilising the TMS Trust Clusters and Indicators of Trust.

d. Defining Ground Rules and Initial Agreements

In this step, the project teams define what is considered to be acceptable and unacceptable behaviour for the organisations while implementing the TMS framework and the TMS. Agreements can be formal and informal; however, it does not refer to contracts when considering formal agreements. For instance, Naesens et al. (2007) distinguished between confidentiality agreements, decision-making agreements, information and knowledge sharing agreements. It should be highlighted that based on their findings, Naesens et al. (2007) delayed the implementation of contracts to Phase 3. As the TMS framework focuses on trust-based governance, the use of contracts is only required if the organisations are utilising trust-based governance as a complement to contract-based governance.

Buyer's Perspective

The Buyer's project team needs to identify what it considers to be acceptable and unacceptable behaviour when utilising the TMS framework for the Buyer and the Supplier organisations. The Buyer's project team are required to identify both formal and informal agreements for the implementation of the TMS framework. Examples of formal agreements may include, confidentiality agreements, decision-making agreements, information and knowledge sharing agreements (Naesens, Pintelon and Taillieu, 2007). Examples of informal agreements include informal communication, including technical and non-technical information (Bönte and Keilbach, 2005; Bönte, 2008).

Supplier's Perspective

The Supplier's project team needs to identify what it considers to be acceptable and unacceptable behaviour when utilising the TMS framework for the Supplier and the Buyer organisations. The Supplier's project team are required to identify both formal and informal agreements for the implementation of the TMS framework. Examples of formal agreements may include, confidentiality agreements, decision-making agreements, information and knowledge sharing agreements (Naesens, Pintelon and Taillieu, 2007).

e. Information Sharing

In this step, the project teams discuss what information is considered relevant to applying the TMS framework and the TMS. Organisations need to balance hiding relevant information and over-sharing information (Naesens, Pintelon and Taillieu, 2007). Before implementing the TMS framework, organisations discussing what information to share can refer to categories in the TMS for guidance on pertinent information to share.

Buyer's Perspective

The Buyer's project team needs to identify what information is appropriate to share and what information is required for implementing the TMS framework and TMS for the benefit of the relationship with the supplier. The TMS can guide the Buyer's project team by utilising the IoT within the Communication Trust Cluster.

Supplier's Perspective

The Supplier's project team needs to identify what information is appropriate to share and what information is required to implement the TMS framework, and the benefit of the relationship with the Supplier. The TMS can guide the Supplier's project team by utilising the IoT within the Communication Trust Cluster.

f. Problem Solving

In this stage, the organisations need to identify and categorise the potential problems that could arise during the buyer-supplier relationship. Organisations can utilise the TMS Trust Clusters and Indicators of Trust as a guide when implementing this step. A basic outline for this step is provided in Phase 2:C Problem Solving Guide (see Appendix XXIV). Additionally, organisations need to agree on the steps to be taken to resolve the problems. These steps to resolve the pre-identified problems will then be provided to the organisations when the TMS detects the problem using either the input from the organisations or when an organisation enters a problem explicitly into the TMS (as illustrated in Section 7.6).

Buyer's Perspective

By utilising the Phase 2:C Problem Solving guide, the buyer can record potential problems that could arise during the buyer-supplier relationship and assign potential steps to be taken by the buyer and the supplier collaboratively to solve the problem.

Supplier's Perspective

By utilising the Phase 2:C Problem Solving guide, the supplier can record potential problems that could arise during the buyer-supplier relationship and assign potential steps to be taken by the buyer and the supplier collaboratively to solve the problem.

Phase 3: Implementing and Sustaining Trust

This section starts by identifying access to the information obtained from the TMS. Moreover, it discusses the agreements and procedures concerning contract-based governance. It then discusses how the project teams should approach the evaluation of the relationship using the TMS.

g. Rank and File

When considering sharing the framework information, the project teams need to distinguish between informing the top management and lower levels of employees (Naesens, Pintelon and Taillieu, 2007). The TMS information should be shared with top management frequently. In contrast, the amount of information and the frequency of information being shared with lower levels of staff should be restricted to what is considered practical by the project teams.

h. Agreements and Procedures

As discussed above, the TMS framework focuses on trust-based governance. Thus, the formalisation of agreements to contracts should only be considered if the organisations utilise trust-based governance as a complement to contract-based governance. In this section,

project teams should reach an agreement and implement the agreements and procedures. Organisations choosing to implement trust-based governance as a complement to trust-based governance should also draft formal contracts to include the TMS utilisation.

i. Evaluating the Relationship

Blois (1999) noted that an organisation can only be perceived as trustworthy after another has accessed the circumstances. Using the outputs from the TMS, organisations can evaluate the relationship when considering the levels of trust between the organisations. Additionally, the system allows organisations to observe multiple facets of the relationship through the selected trust clusters' outputs and their associated indicators. The benefits of utilising an effective performance measurement system are that it provides organisations collaborating with a means to understand the relationship by providing feedback on the behaviours that impact the relationship (Simatupang and Sridharan, 2002).

Buyer's Perspective

The TMS results allow the Buyer to evaluate the relationship with the Supplier when considering the levels of trust. The TMS framework allows the Buyer to observe multiple facets with its interaction with the Supplier. For instance, the output of the TMS may warn the Buyer when a Supplier has ranked a Communication IoT as being below the agreed threshold. The Buyer can then act appropriately to remedy the situation by increasing the frequency of communications.

Supplier's Perspective

The TMS outputs allow the Supplier to evaluate the relationship with the Supplier when considering the levels of trust between the organisations. The ability of the Supplier to demonstrate its capabilities and competencies to the Buyer plays a considerable role in determining its trustworthiness (Blois, 1999). The TMS framework allows the Buyer to observe multiple facets with its interaction with the Supplier. For instance, the output of the TMS may warn the Supplier when a Buyer has ranked a Quality IoT as being below the agreed

threshold. The Supplier can then act appropriately to remedy the situation by increasing quality control inspections.

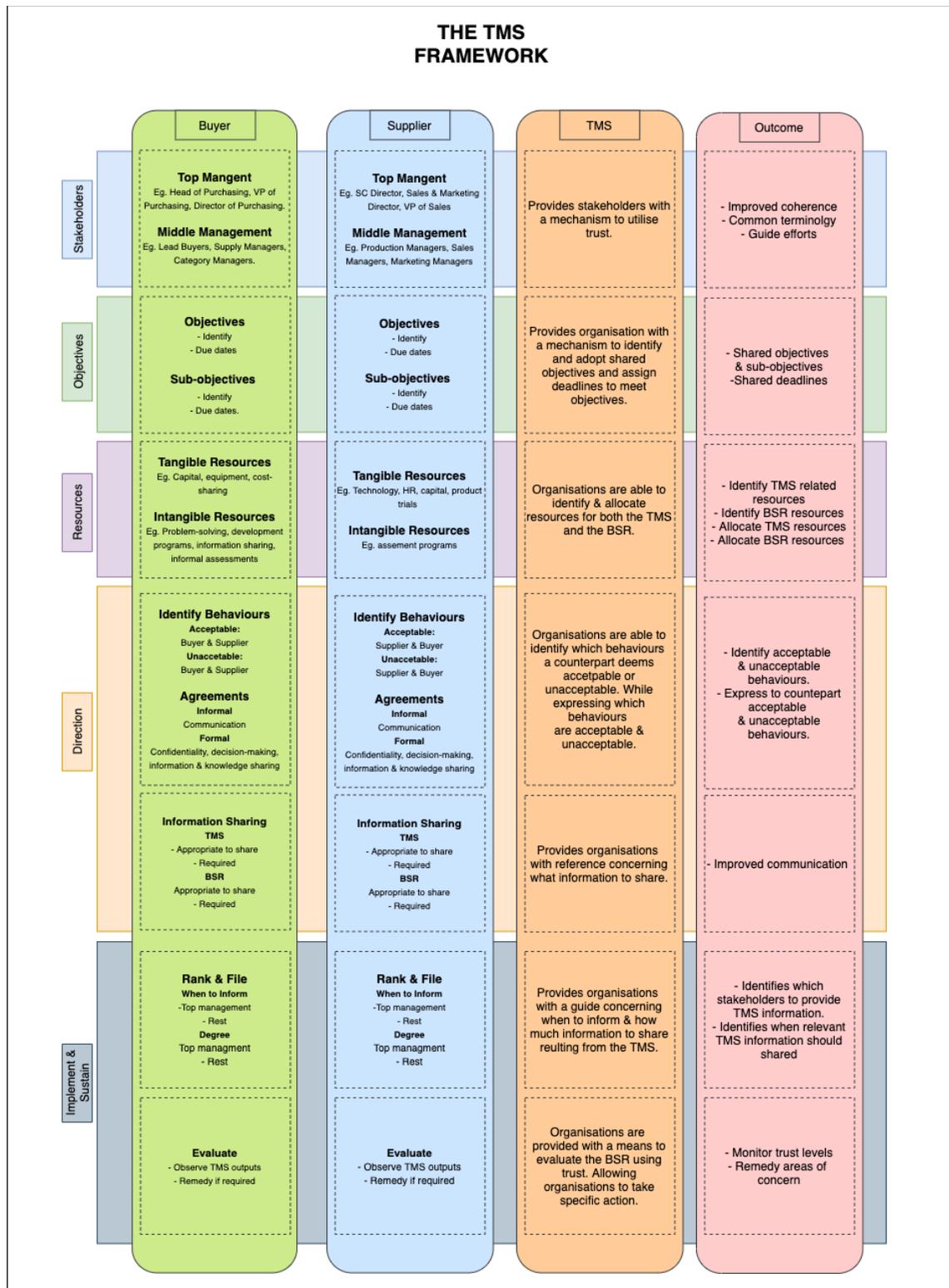


Figure 7-24 The TMS framework outcome

7.7.3. Business Performance Benefits of the TMS

The implementation of the TMS provides organisations in collaborative buyer-supplier relationships with the means to utilise trust as a business tool. Trust provides organisations with a myriad of benefits, as discussed in Chapter 2, such as improved communication (Ho, Ghauri and Larimo, 2018; Akrouf and La, 2019), improved performance (Paparoidamis, Katsikeas and Chumpitaz, 2019a), greater satisfaction (Stuart, Verville and Taskin, 2012; Altinay *et al.*, 2014), and a reduction of costs (Narayanan, Narasimhan and Schoenherr, 2015; Jiang, Lu and Le, 2016). The application of the TMS would help facilitate trust in organisations to capitalise on the benefits afforded by trust utilising it as a relational commodity. The system itself provides organisations with the means to improve relational and operational monitoring. The ability to monitor trust in the relationship allows organisations to respond to specified and unspecified problems providing organisations with a greater degree of control over relational and operational outcomes.

Additionally, the TMS provides organisations with a means to improve communication by quantifying traditionally abstract concepts such as the social bond, communication, and fairness. The quantisation of which provides current and future employees with the means to record and understand the organisational relationships of their own organisations with other organisations. Allowing organisations to build relationships similar to that of interpersonal relationships on the individual level. Moreover, the system provides a means to systemise predetermined responses to issues which in the past would hamper the relationship between the organisations. The system allows for the responses to be based on the organisations' collaborative efforts, ensuring a higher degree of fairness in outcomes. In the future, third-party consulting would be able to design modules to be implemented in the TMS.

8. Discussion and Conclusion

8.1 Chapter Abstract

Motivated by the difficulty of organisations in collaborative buyer-supplier relationships to implement and benefit from trust-based governance. The research explored and discovered the indicators of trust by analysing newspaper articles. The indicators were then presented and validated by industry experts. Subsequently, the indicators were applied to the conceptual Trust Management System (TMS) model before presenting it as a practical artefact. The purpose of which is to provide organisations with a mechanism to utilise trust as a strategic component to improve collaboration and the sustainability (continuity) of the buyer-supplier relationship. This chapter provides an overview of the content from Chapter 1 to Chapter 7 as a summary of the study. The chapter then provides a summary of the research phases before responding to the thesis research objectives. The chapter then discusses the significance of the TMS and framework. The chapter then presents the research implications of the research. The chapter then presents possible future research that could stem from the study before concluding the thesis.

8.2 Discussion of the Research

The main objective of the thesis was to identify generalisable indicators of trust that could be utilised in the creation and development of a TMS to manage the collaborative relationship better. As trust has been shown to provide a multitude of benefits which include sustainability, it formed the basis of the framework. The literature review enabled a clarifying discussion of trust as seen from both the buyer and seller perspectives. It accomplished this by reviewing literature discussing supply chain relationships, the governance of the relationships, and the impact that trust has on collaboration in these relationships. The use of an analysis of media contributed to the existing body of knowledge of the indicators of trust by identifying the indicators pertinent to the industry.

Additionally, the Scopus analysis identified the indicators of trust from an academic perspective, providing academic support for the indicators of trust resulting from the Factiva media analysis. Further support for the identified Factiva indicators was provided when the indicators were validated through interviews with supply chain experts. The media and academic analysis findings and the feedback resulting from the interviews led to trust indicators for the proposed TMS.

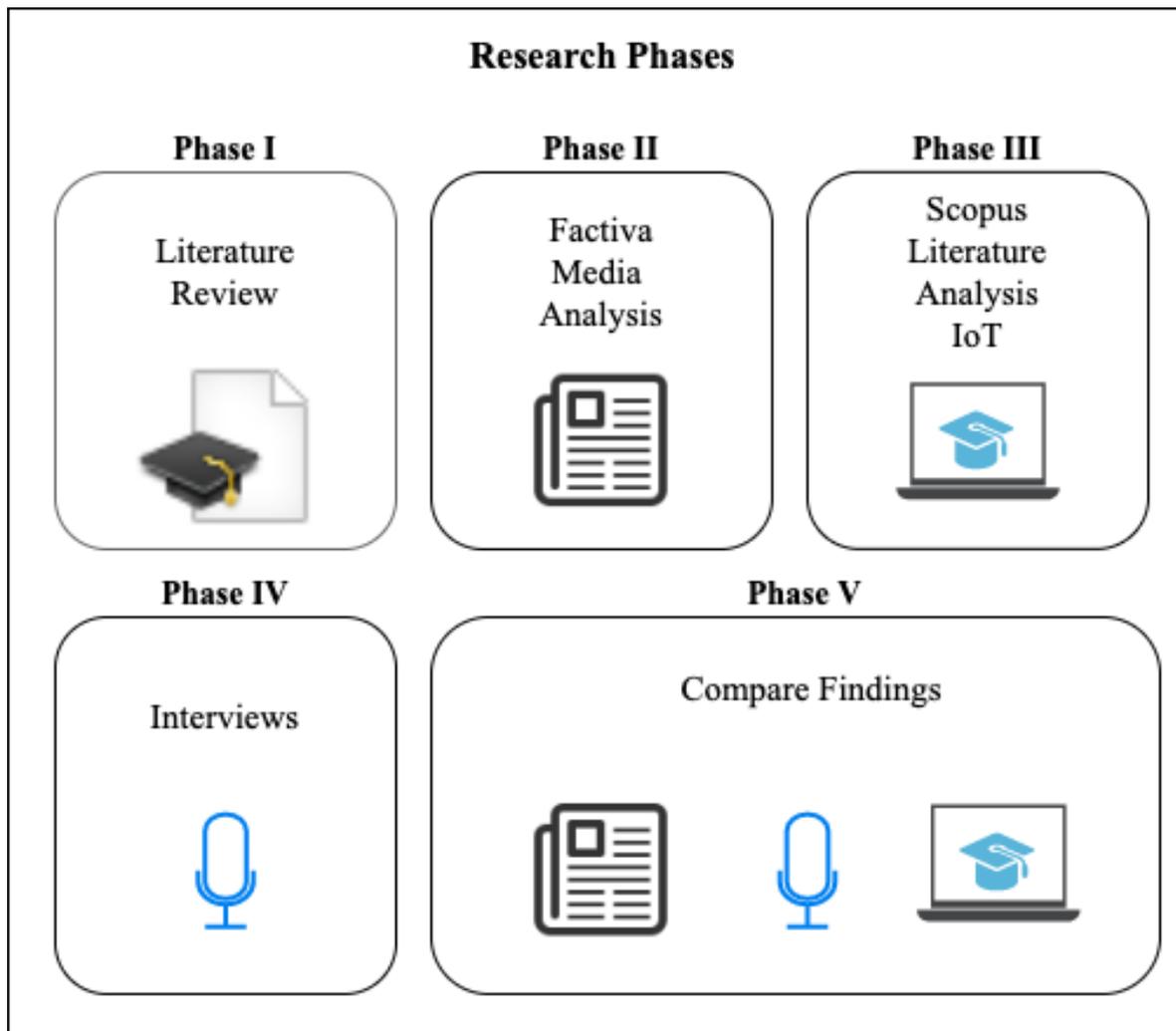


Figure 8-1 Research phases

8.3 Responses to the Thesis Research Objectives

The thesis has described the research leading to the conceptualisation of the Trust Management Systems (TMS) model and provided a framework to apply the system. The framework serves as a guide for the implementation of trust-based governance mechanisms between collaborating organisations. In order to develop the TMS and framework, the research objectives included:

1. To identify and validate the indicators of trust.
2. To develop the Trust Management System.
3. To create a framework to guide organisations when implementing the Trust Management System.

The following section presents evidence supporting that the sub-objectives of the research have successfully been achieved:

1. To identify and validate the indicators of trust:

Identifying the indicators of trust in the newspaper media

To achieve the primary objective, the TMS conceptualisation required a set of indicators to serve as inputs for the system. As the basis for the TMS is trust, the system requires inputs related to trust. However, trust is an abstract concept. Thus, it required a methodology that would be able to quantify the qualitative concepts. The newspaper media was selected as the primary source for identifying the trust indicators to accomplish this quantification process. The newspaper media serves as an information conduit relaying information between different groups, including information flows between organisations (suppliers) and consumers (buyers) and information flows between academics and practitioners. Identifying the indicators of trust within the newspaper media required a process consisting of two parts.

The first part of the process addressed identifying the indicators, while the second part thematically grouped the indicators into clusters. Part 1 utilised an electronic database named

the Dow Jones Factiva Global News Database and Licensed Content, referred to as Factiva study in the study. A search was performed on the database utilising a search term adhering to the requirements selected for the analysis. The search identified 701 articles which were then filtered further to ensure 229 to remove articles that had the word trust not relating to the relational trust concept. For instance, articles referring to financial trust products such as living, testamentary, or family trusts. The newspaper articles were then examined, and the paragraphs that contained the word 'trust' isolated. To reduce any noise that could have skewed the analysis. While it would have been more expedient to isolate only the sentences in which trust instances occurred, the paragraphs were selected to ensure the context of the concepts' use was clear. The analysis of the Factiva articles led to the identification of 675 separate instances relating to trust indicators. The analysis of the instances to identify possible synonyms led to identifying the 51 indicators of trust (Seuring and Gold, 2012). The indicators of trust were then thematically grouped in the second part of the process. The indicators of trust within the thematic clusters formed the basis for identifying the indicators to be implemented in the TMS.

Identifying the indicators of trust in academia

The second sub-objective required to achieve the primary objective was to identify the indicators of trust as prevalent within academia. In identifying the indicators of trust within academia, it provided background information and support for the concepts identified in the Factiva newspaper media analysis, in other words, the concepts related to the indicators and the context surrounding these concepts. The process of identifying the indicators of trust within academia consisted of three phases. Phase 1 discussed the search term and the formulation of the search term. Phase 2 discussed the selection of peer-reviewed articles in the study. While Phase 3 discussed the analysis and findings of the study. Additionally, Phase 3 led to the thematic groupings of the Scopus indicators. In Phase 1, the search term entered into the Scopus database yielded a result of 76 documents. The articles were examined to identify which were fit for the purpose, leading to the removal of duplicates and articles not fitting the analysis requirements and resulting in the remaining 47 articles. The analysis of the peer-reviewed articles for the indicators of trust led to the identification of 122 instances. The

analysis of the instances led to the identification of the 48 Scopus indicators of trust. The indicators were then thematically grouped, utilising the Factiva clusters as a template.

To validate the indicators of trust

The TMS framework aims to support organisations in the industry to improve collaborative relationships utilising trust. It was essential to gather feedback from industry experts on the validity of the indicators of trust to be applied in the TMS framework. Moreover, the input from the expert's aid in informing scholars by examining theoretical concepts linked to trust from the perspective of supply chain experts. The interviews utilised a purposeful sampling selecting five interviewees based on their skill and experience within supply chain-related positions. The interviews consisted of two portions, a written portion and a verbal portion. The written portion asked the interviewees to complete a questionnaire concerning the indicators of trust as identified in the Factiva study. The interviewees were requested to assign values utilising a 5-point Likert scale to each of the indicators on the list. Where one represented that the indicator did not play a part at all in trusting a trade partner up to five, signifying that the indicator was crucial in trusting a trade-partner. This process gauged the importance of each of the trust indicators from the perspective of the intended demographic of the TMS. Moreover, it provided a means to calculate the agreement level of experts on the validity of the identified indicators for industry application.

The second part of the questionnaire required the interviewees to provide feedback on the trust indicators' thematic clustering. Providing valuable guidance on how the thematic clusters should be presented in the TMS to be most effective when utilised in practice. The interviewees were also asked to assign a designation (heading) to each of the clusters. This process provided more in-depth insight into the interviewees' context to the respective clusters and the indicators within the clusters. The final portion of the interviewees, the verbal portion, was based on asking the experts a set of predefined questions. As the interview was semi-structured, it allowed for follow-up questions. The findings from the interview data formed part of an analysis comparing the Factiva newspaper media analysis.

Comparison of the findings

Comparing the findings from the Factiva study and the feedback from the supply chain experts with theoretical support from the Scopus study allowed for methodological triangulation. Methodological triangulation of data improves the validity of a study by providing support from multiple data sources. The findings from the Factiva study and the Scopus study were ranked to allow for direct comparison. The findings of the studies were discussed from both a media perspective and an industry perspective. The findings of the content analyses led to the identification of the indicators of trust. These indicators and respective trust clusters were then validated and adjusted to align with the needs of the industry based on the feedback from the supply chain experts.

2. To develop the Trust Management System.

The conceptualisation of the TMS model

The conceptual model for the TMS emphasises the role of trust-based governance by allowing organisations in collaborative buyer-supplier relationships to focus on the indicators of trust as a means to signal relational behaviour. The conceptual model identified that supply chain relationships benefited from collaboration based on trust. It highlighted that trust played a significant role in collaborative relationships, which would allow for the application of trust-based governance. Finally, the conceptual framework illustrated that using the indicators of trust to signal relational behaviour could lead to trust and ultimately to the application of trust-based governance.

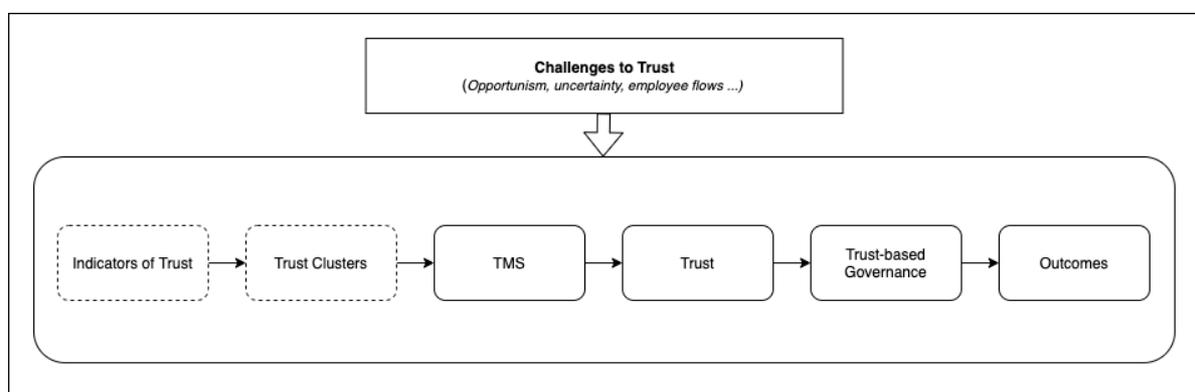


Figure 8-2 Conceptual Trust Management System Model

3. To create a framework to guide organisations when implementing the Trust Management System.

The TMS framework provides organisations with a 4-phase guide to apply the TMS. The framework work was based on the work of Naesens et al. (2007). The authors created their guide to help build and facilitate trust between organisations. The TMS capitalises on this guide by utilising it to apply a system to act as a mechanism to monitor and control trust between organisations. In other words, the TMS is applied to improve trust between organisations using a guide created to instil trust in organisations working together to reach a specific objective.

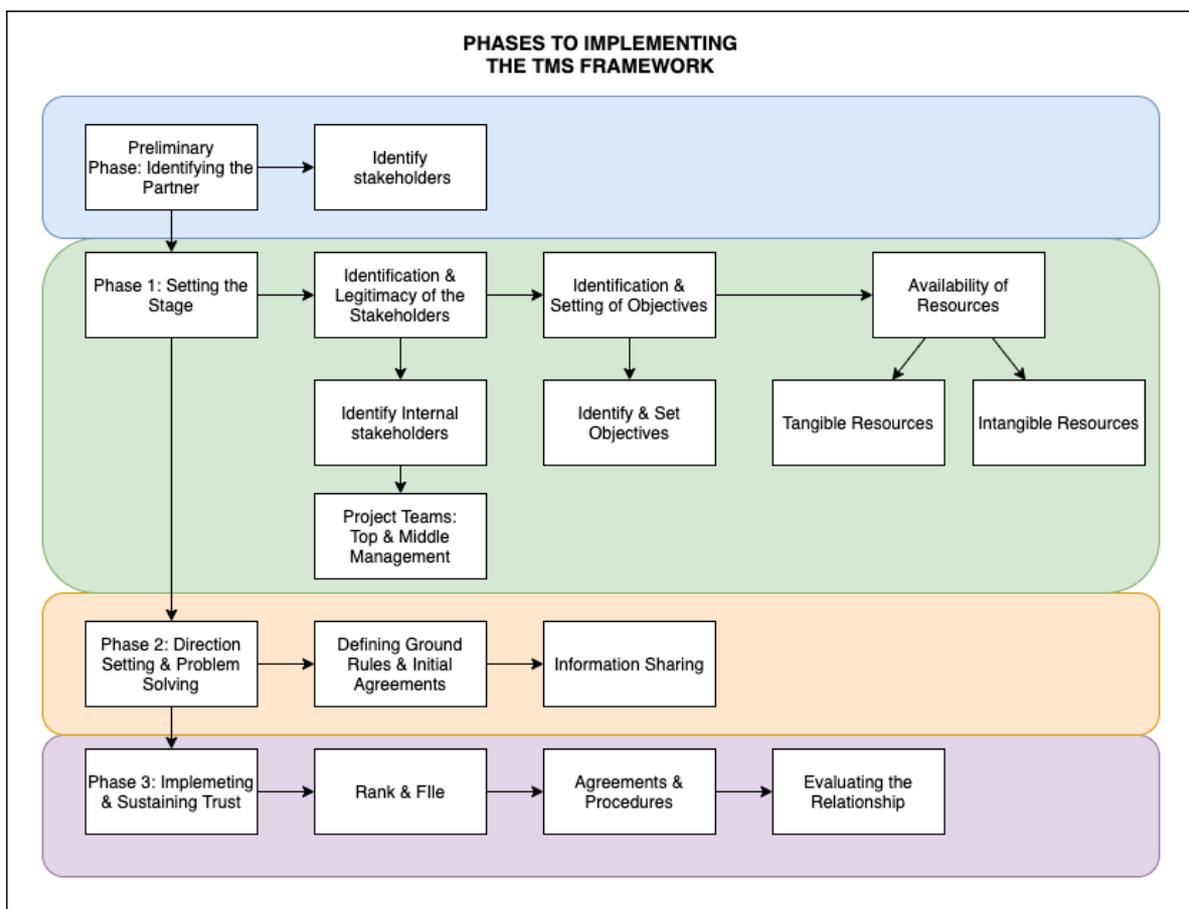


Figure 8-3 Phases for TMS framework adapted from Naesens et al. (2007)

8.4 Significance of the Trust Management System Model & Framework

The thesis presented the development of the conceptual Trusts Management Systems model. The purpose of which is to support organisations in strategic collaborative buyer-supplier relationships monitor and improve trust. Enhancing organisation's ability to capitalise on the benefits of trust, for instance, reducing their reliance on costly and inflexible contract-based governance mechanisms (Dyer, 1997; Wang, Yeung and Zhang, 2011; Herz *et al.*, 2016). The thesis identified generalisable indicators of trust, which supply chain experts subsequently validated.

8.5 Research Implications

8.5.1 Theoretical Implications

The thesis contributes to the overall understanding of supply chain management by examining supply chain relationship theory and relationship governance by focusing on collaborative buyer-supplier relationships that implement trust as a relationship governance mechanism. Traditionally, the supply chain management literature has focussed extensively on contract-based governance as the primary means of governing relationships between the buyers and suppliers (Krishnan, Geyskens and Steenkamp, 2016; Vitasek, 2016). However, as buyer-supplier relationships have developed over time, there has been a shift in focus towards implementing relational governance when considering collaborative relationships in the supply chain (Poppo and Zenger, 2002; Zhao *et al.*, 2019). This thesis contributes to the growing body of knowledge concerning relational governance by exploring trust and trust-based governance, developing a conceptualised mechanism (system), and presenting a framework to implement the system. Previous supply chain studies in trust have focussed on identifying trust indicators, as shown in the thesis. However, none have utilised the newspaper media as the primary source for the indicators. The indicators of trust identified in the newspaper media have then been successfully validated by industry experts, thereby providing an alternative perspective to scholars when considering trust. Moreover, the study

offers a comprehensive literature review focussed on supply chain management and trust adding to the existing theoretical body of literature.

8.5.2 Practical Implications

The study provides managerial significance by providing valuable insights into how trust is perceived within collaborative buyer-supplier relationships. The thesis provides managers with a comprehensive list of 51 behaviours to focus on to signal their trustworthiness to counterparts. For the managers unwilling or unable to implement the comprehensive list, the thesis provides a list of the 11 most influential behaviours to signal trust to a counterpart. Additionally, the thesis provides organisations with a framework to serve as a guide to implementing trust as a governance mechanism. The governance mechanism applied by the buyer and the supplier organisation would allow for both organisations to gauge and monitor trust in the collaborative buyer-supplier relationship. Allowing organisations to both respond and more importantly proactively control the relationship utilising trust. This increased level of relational control and transparency would allow for sustainable and more collaborative relationships which could be translated into cost-reductions, improved communication, and increased levels of profits for both the buyer and the supplier organisations (Akrouf and La, 2019; Jiang et al., 2016; Stahl et al., 2011). For instance, when considering the Henke, Stallkamp, and Yenyurt (2014) Chrysler case study (Section 2.4.5) it was shown that Chrysler failed to capitalise on roughly twenty-four billion dollars in profit over a period of twelve years due to its inability to optimise trust between itself and Chrysler's suppliers. The application of a system with the purpose of managing trust would allow organisations to manage supply chain relationships more effectively.

This increased level of stability in the buyer-supplier relationship could additionally benefit the members of the supply chain network as the stability of the two participating organisations would provide additional stability for the members of the interconnected supply chain network (Saleh et al., 2014). Furthermore, the TMS allows organisations in buyer-supplier relationships with the ability to increase communication and transparency within the relationship.

8.5.3 Research Limitations

The thesis contributes to both the theoretical and practical body of knowledge, as mentioned earlier in the chapter. However, the research is not without limitations. These limitations will be briefly discussed in this section. The first limitation may be the focus of the research to concentrate on middle-to-long term collaborative buyer-supplier relationships. By focussing on buyer-supplier relationships within longer-term relationships, the research may have neglected buyer-supplier relationships, engaging in arms-length relationships or short-term relationships. The trust indicators, conceptual model, TMS, and the framework to implement the system could theoretically be applied to arms-length relationships. However, given the time, dedication, and resources required, it would not be justified for the current thesis. The second limitation concerns the identification of the academic indicators of trust in the Scopus study. While the Scopus electronic database boasts an impressive seventy-one million records, twenty-three thousand seven hundred titles, and more than five thousand publishers (Elsevier, 2018), the research potentially could have benefitted from adding additional databases. The third limitation related to the research concerns the utilisation of content analysis for the Factiva study. Critiques of content analysis have identified author bias as a potential limitation of implementing the research methodology (Hazen et al. 2012, Seuring and Gold 2012 Mir et al. 2018). However, future research could benefit from building on the findings presented. Finally, the interviews conducted with the supply chain experts, as discussed in Chapter 5, all lived in Australia. This geographic focus may have limited the views of the experts to that of an Australian perspective. However, some of the experts, while living in Australia, had moved to Australia from abroad. Moreover, the experts interviewed had all been employees of large multinational organisations considered industry leaders, which may have limited the scope by ignoring organisations with limited access to resources. Additionally, the number of the interviewees that participated in the in the interviews were limited. While saturation was achieved concerning the inputs gathered from the interview process regarding the validation of the indicators of trust, future research may benefit from examining it further along other variables related to trust.

8.6 Future Research

Though the research into trust has been thorough, there remain significant gaps in the trust-related supply chain management literature. For instance, there are many definitions for the concept of trust within peer-reviewed literature (Ganesan and Hess, 1997). Despite this abundance of definitions, minimal consensus exists on which interpretation or even interpretations of trust to be the most accurate when considering its application in a supply-chain context (Viitaharju and Lähdesmäki, 2012; Piricz, 2018). Future research may benefit from identifying a widely accepted interpretation of trust which meets the needs of reflecting trust between organisations when considering supply chain relationships. Moreover, future research may benefit from testing the indicators of trust identified in the paper to validate the indicators using longitudinal studies within the industry (Anand and Grover, 2015). For instance, by comparing the comprehensive list of indicators (51) with the application of the top 11 indicators. Given the significance of the top 11 indicators identified in the research, the author predicts the results to favour the top 11 indicators. They require fewer resources and provide an increased focus on implementing the indicators.

Furthermore, authors conducting future research may choose to further the research into the indicators of trust by exploring alternative databases than utilised for this research. Furthermore, the study provides a stepping-stone for future research focussed on quantifying trust in buyer-supplier relationships by identifying and illustrating the utility of the indicators of trust identified in the study. Given the generalisability of the trust indicators identified, others may choose to research their efficacy between individuals or organisations in other sectors. As mentioned above in the limitations section of the thesis, the interviews utilised interviewees domiciled in Australia. Future research may benefit the research by increasing the number of expert interviewees from a broader range of industries and geographic areas from small to large organisations. Additionally, future research into trust could utilise the variables identified in the thesis alongside a similar study identifying the indicators of commitment in collaborative buyer-supplier relationships to produce a trust-commitment model. The trust-commitment model could provide further research that would benefit trust research. Moreover, a trust-commitment model could benefit managers in industry by providing a framework or system focussed on trust and commitment. Finally, the

conceptualised TMS model presented in the thesis could be transformed from a concept into a software application given the time and resources. This application could then be utilised as a testing system that could later be developed into a real-world application to effectively gauge and manage buyer-supplier trust levels.

8.7 Summary

Researching the indicators of trust from both a theoretical and practical viewpoint suggests mechanisms could be designed to manage trust in collaborative buyer-supplier relationships that would facilitate performance increases (Jiang, Lu and Le, 2016; Singh and Teng, 2016), quality (Liao *et al.*, 2012), communication (Akrouf and La, 2019), and costs savings (Jiang, Lu and Le, 2016; Paparoidamis, Katsikeas and Chumpitaz, 2019a), whilst also reducing the risk to both the buyer and the supplier (Lee *et al.*, 2012). The increasing emphasis on the importance of the supply chain, especially during times of duress, further highlights the need for industry and academia to understand how to signal and interpret trust in buyer-supplier relationships using trust indicators. These indicators assist buyer-supplier relationships to improve their commitment toward one another (Stahl *et al.*, 2011; Saleh *et al.*, 2015) while also improving the quality of the relationship (Altinay *et al.*, 2014; Paparoidamis, Katsikeas and Chumpitaz, 2019a). It is especially significant during and post-Covid 19 in a period of history where commitment, trust, and healthy relationships are needed more than ever.

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Appendix

Appendix I

Peer-reviewed Definitions of Trust in the Literature

Author	Year	Page	Quote
Deutsch	(1958)	266	"An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behaviour which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed."
Rotter	(1967)	651	"Interpersonal trust is defined here as an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon."
Rotter	(1971)	444	"a generalized expectancy held by an individual that the word, promise, oral or written statement of another individual or group can be relied on"
Zand	(1972)	230	"Trust is an individual decision, based upon optimistic expectations or confidence about the outcome of an uncertain event, given personal vulnerability and the lack of control over the action of others."
Schlenker et al.	(1973)	419	"Trust is reliance upon information received from another person about uncertain environmental states and their accompanying outcomes in a risky situation".
Matthews and Shimoff	(1979)	538	"Level of trust was behaviourally defined by degree of "expansion" of exchange – that is, by how far ahead in earnings one party put the other."
Larzelere and Huston	(1980)	595	"Trust is most generally defined as a belief by a person in the integrity of another individual."
Cook and Wall	(1980)	39	"...the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people."
Johnson-George and Swap	(1982)	1306	"...willingness to take risks may be one of the few characteristics common to all trust situations."

Bialaszewski and Giallourakis	(1985)	207	"Trust has been defined as an attitude displayed in situations where the following characteristics may be evident: a person is relying on another person, a person is risking something of value, and/or a person is attempting to achieve a desired goal".
Schurr and Ozanne	(1985)	940	"Trust has been defined as the belief that a party's word or promise is reliable and that a party will fulfil his/her obligations in an exchange relationship."
Lewis and Weigert	(1985)	965	"...members of that system act according to and are secure in the expected futures constituted by the presence of each other or their symbolic representations"
Zucker	(1986)	54	"...a set of expectations shared by all those involved in an exchange."
Rempel and Holmes	(1986)	28	"...the degree of confidence you feel when you think about a relationship"
Koller	(1988)	266	"Trust is a person's expectation that an interaction partner is able and willing to behave promotively toward the person, even when the interaction partner is free to choose among alternative behaviors that could lead to negative consequences for the person."
Gambetta	(1988)	217	"...the probability that he will perform an action that is beneficial or at least not detrimental to us is high enough for us to consider engaging in some form of cooperation with him."
Anderson and Narus	(1990)	326	"...the firm's belief that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm. The strength of this belief may lead the firm to make a trusting response or action, whereby the firm commits itself to a possible loss, depending upon the subsequent actions of the other company".
Boon and Holmes	1991	194	"...positive expectations about another's motives with respect to oneself in situations entailing risk".
Renn and Levine	1991	181	"...the generalized expectancy that a message received is true and reliable and the communicator demonstrates competence and honesty by conveying accurate, objective, and complete information"
Moorman, Zaltman, and Deshpande	(1992)	315	"...a willingness to rely on an exchange partner in whom one has confidence."

Sabel	(1993)	1133	"Trust, the mutual confidence that no party to an exchange will exploit another's vulnerabilities, ..."
Morgan and Hunt	(1994)	23	"...one party has confidence in an exchange partner's reliability and integrity."
Ganesan	(1994)	3	"Trust is the willingness to rely on an exchange partner in whom one has confidence".
Barney & Hansen	(1994)	177	"...the mutual confidence that no party to an exchange will exploit another's vulnerabilities"
Mohr and Spekman	(1994)	138	"..., the belief that a party's word is reliable and that a party will fulfill its obligation in an exchange ...".
Mayer, Davis and Schoorman	(1995)	712	"...the willingness of a party to be vulnerable to actions of another party based on the expectations that the other will perform a particular action important to the trustor irrespective to the ability to monitor or control that other party"
Hosmer	(1995)	399	"Trust is the expectation by one (entity) of ethically justifiable behaviour — that is, morally correct decisions and actions based upon ethical principles of analysis—on the part of the other [entity] in a joint endeavor or economic exchange."
Nooteboom	(1996)	990	"Trust may concern a partner's ability to perform according to agreements (competence trust), or his intentions to do so (goodwill trust)."
Aulakh et al.	(1996)	1007-1008	"...trust in interpersonal relations is defined as the willingness of one person to increase his/her vulnerability to the actions of another person; in economic exchanges as the expectation that parties will make a good faith effort to behave in accordance with any commitments, be honest in negotiations, and not take advantage of the other, even when the opportunity is available; and in society as a collective attribute based upon the relationships in a social system."
Nelson and Cooprider	(1996)	413	"Mutual trust is defined as "the expectation shared by [participants] that they meet their commitments to one another".
Robinson	(1996)	576	"...trust is defined here as one's expectations, assumptions, or beliefs about the likelihood that another's future actions will be beneficial, favorable, or at least not detrimental to one's interests".
Doney and Cannon	(1997)	36	"...trust as the perceived credibility and benevolence of a target of trust".

Blomqvist	(1997)	282	"An actor's expectation of the other party's competence and goodwill".
Nooteboom, Berger and Noorderhaven	(1997)	311	"Trust may concern a partner's ability to perform according to the intentions and expectations of a relationship (competence trust) or his or her intentions not to defect (intentional trust)".
Ganesan and Hess	(1997)	440	"Trust has been conceptualized as (a) an expectancy held by an individual or group that the word, promise, verbal or written statement of another party can be relied on and, (b) a confidence in the motives of the other party in conditions involving risk or a belief in the benevolent intentions of the other party".
Ratnasingham	(1998)	314	"Trust is the calculation of the likelihood of future cooperation and is a defining feature of virtual cooperation".
Lewicki, McAllister, and Bies	(1998)	439	"... define trust in terms of confident positive expectations regarding another's conduct, and distrust in terms of confident negative expectations regarding another's conduct".
Rousseau, Sitkin, Burt, and Camerer	(1998)	395	"Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another".
Das and Teng	(1998)	494	"...trust is the degree to which the trustor holds a positive attitude to-ward the trustee's goodwill and reliability in a risky exchange situation".
Doney, Cannon and Mullen	(1998)	604	"...willingness to rely on another party and to take action in circumstances where such actions make one vulnerable to the other party".
Zaheer, McEvily and Perrone	(1998)	142	"The term inter- organizational trust is defined as the extent of trust placed in the partner organization by the members of a focal organization".
McKnight, Cummings, and Chervany	(1998)	474	"We define "trust" to mean that one believes in, and is willing to depend on, another party."
Geyskens et al.	(1999)	225	"Trust frequently is described as the extent to which a firm believes that its exchange partner is honest and/or benevolent".

Wicks, Berman, and Jones	(1999)	103	<p>"Optimal trust exists when one creates (and maintains) prudent economic relationships biased by a willingness to trust. That is, agents need to have stable and ongoing commitments to trust so that they share affect-based belief in moral character sufficient to make a leap of faith, but they should also exercise care in determining whom to trust, to what extent, and in what capacity.</p> <p>Optimal trust is an embedded construct, suggesting that it is determined in context and shaped by a variety of /actors, such as the trustworthiness of the agent, local and broader social norms regarding trust, and other features of the relevant social structure(s)".</p>
Plank, Reid and Pullins	(1999)	62	<p>"Trust is a global belief on the part of the buyer that the salesperson, product and company will fulfill their obligations as understood by the buyer".</p>
Young-Ybarra and Wiersema	(1999)	443	<p>"... defined trust as a state of mind, an expectation held by one trading partner about another, that the other will behave in a predictable and mutually acceptable manner".</p>
Gambetta	(2000)	4	<p>"... trust (or, symmetrically, distrust) is a particular level of the subjective probability with which an agent will perform a particular action, both before [we] can monitor such action (or independently of his capacity of ever to be able to monitor it) and in a context in which it affects [our] own action".</p>
Jennings, Artz, Gillin, Christodouloy	(2000)	26	<p>"Trust has been defined as mutual confidence that no party to an exchange will behave opportunistically and exploit another's vulnerabilities".</p>
Grazioli and Jarvenpaa	(2000)	396	<p>"Trust is defined here as the expectation that the promise of another can be relied upon and that, in unforeseen circumstances, the other will act in the spirit of goodwill and in a benign fashion toward the trustor".</p>
Armstrong and Yee		70	<p>"Trust, which has been conceived as confidence in the reliability and integrity of an exchange partner and a willingness to rely on that confidence, is thought to be a building block or foundation for satisfactory interactions."</p>
de Ruyter et al.	(2001)	282	<p>"Trust pertains to a customer's confidence and faith that the supplier will be reliable and willing to listen to the customer's wishes and act in his best interests."</p>
Nicholson et al.	(2001)	4	<p>"We define trust as confidence in the other party's reliability and integrity".</p>

Das and Teng	(2001)	255	"trust is about positive expectations regarding the other in a risky situation".
Chiou, Droge, and Hanvanich	(2002)	114	"trust is the belief that another party can be relied on with confidence to perform role responsibilities in a fiduciary manner".
Medlin	2002	5	"Trust can be viewed as a psychological construct, generated within social structures (i.e. firms and relationships) by individual and group interpretation of "past events"".
Luo	(2002)	159	"It is the belief that the other party will behave as expected in a socially responsible manner, and in doing so, it will fulfil the trusting party's expectations".
Boersma, Buckley, and Ghauri	(2003)	1032	"on expectation that a party can be relied on to keep to agreements (promissory), will perform its role competently (competence) and that the party will behave honourably even where no exploit promises or performance guarantees have been made (goodwill)."
Coote, Forrest and Tam	(2003)	32	"... trust exists when one party has confidence in the honesty, reliability, and integrity of their partner"
Huff and Kelley	(2003)	82	"...a collectively held trust orientation toward a partner firm"
Agarwal and Shankar	(2003)	325	"Trust is defined as the binding force in most buyer-supplier transaction".
Gefen, Karahanna and Straub	(2003)	74	"Trust was defined in this study as a set of specific beliefs, in accordance with other research on buyer-seller ongoing relationships that deal with integrity, benevolence, ability, and predictability".
Carson, Madhok, Varman and John	(2003)	46	"... we define trust as the confidence held by one party in its expectations of the behavior and goodwill of another party regarding business actions".
McEvily, Perrone, and Zaheer	(2003)	92	"At a general level trust is the willingness to accept vulnerability based on positive expectations about another's intentions or behaviors".
Perrone, Zaheer, and McEvily	(2003)	423	"...define trust as a supplier's expectation that a purchasing manager can be relied on to fulfill obligations will behave in a predictable manner, and will act and negotiate fairly when the possibility for opportunism is present".
Lee and See	(2004)	51	"... define trust as the attitude that an agent will help accomplish an individual's goals in a situation with uncertainty and vulnerability".

Pavlou and Gefen	(2004)	40	"Trust in the traditional dyadic (one-to-one) sense has been defined as a belief that the seller will behave in accordance with the consumer's confident expectations by showing ability, integrity, and benevolence".
Saparito, Chen, and Sapienza	(2004)	401	"According to a narrower conception of trust, the trusting party must perceive the trusted party to be acting out of a commitment to the relationship that goes beyond the instrumental motive of advancing self-interest".
Pavlou and Gefen	(2004)	40	"Trust in a community of sellers is defined as the buyer's subjective belief that online transactions with sellers in a specific marketplace will occur in a manner consistent with his/her expectations of trustworthy behavior".
Collins and Smith	(2006)	547	"...the collective set of norms, values, and beliefs".
Bstieler	(2006)	57	"...the willingness to accept vulnerability based upon positive expectations of the intentions or behavior of another within a particular context".
Möllering	2006	111	"Trust is an ongoing process of building on reason, routine and reflexivity, suspending irreducible social vulnerability and uncertainty as if they were favorably resolved, and maintaining thereby a state of favorable expectations toward the actions and intentions of more or less specific others".
Ries	(2007)	1600	"... trust is the well-founded willingness for a potentially risky engagement".
Sichtmann	(2007)	1001	"...as the belief which a consumer in a purchase situation characterised by uncertainty, vulnerability, lack of control and the independent-mindedness of the transaction partners relies on, to the effect that a company identified as a corporate brand will deliver a good or service at the quality which the consumer expects, on the basis of experiences which the consumer has made in the past."
Wasti, Tab, Brower, and Onder	(2007)	477	"Recent research has focused on trust as a psychological state that develops over time between two or more individuals developed as a result of a social exchange process".
Gulati and Nickerson	(2008)	1	"...interorganizational trust is an organization's expectation that another firm will not act opportunistically."
Rustagi et al.	(2008)	132	"trust is viewed as the opposite of opportunism".
Ke, Liu, Wei, Gu, and Chen	(2009)	841	"Inter-organizational trust refers to one party's intention or willingness to depend on another party, based on the anticipated beneficial behavior of that party".

Ke, Liu, Wei, Gu, and Chen	(2009)	843	"...we define trust as confidence in a trading partner's reliability and integrity".
Cook and Schilke	(2010a)	101	"Trust can be defined in relational terms as the belief that the trustee will take one's interests to heart."
Ennew, Kharouf, and Sekhon	(2011)	66	"... trust is the belief that is held by an individual and that belief can be influenced by signaling trustworthiness".
Mashinchi, Orgun and Wang	(2011)	1953	"Conceptually, trust is the measure taken by one party on the willingness and ability of another party to act in the interest of the former party in a certain situation".
Costa e Silva, Bradley, and Sousa	(2012)	294	"... trust is considered as a belief, confidence or expectation about an exchange partner's trustworthiness that results from the partner's expertise, reliability, or intentionality".
Fulmer and Gelfand	(2012)	1174	"...a psychological state comprising willingness to accept vulnerability based on positive expectations of a specific other or others, trust in an interpersonal referent at the team level as a shared psychological state among team members comprising willingness to accept vulnerability based on positive expectations of a specific other or others".
La and Choi	(2012)	112	"...defines customer trust as a willingness to rely on a service provider or a firm, ...".
Bunduchi	(2013)	5	"...trust is defined as the willingness to accept vulnerability based on positive expectations about another's intentions or behaviours".
Azadeh and Sadri	(2014)	1	"Trust in a mutual relationship refers to the subjective belief of one agent about another".
Chang, Ouzrout, Nongaillard, Bouras, and Jiliu	(2014)	363	"Trust is the belief of a participant that the other participant will fulfill its promise, given the possibility that the participant might defect to get higher benefits."
Jain, Khalil, Johnston, and Cheng	(2014)	313	"...trust is defined as the extent to which a firm believes that its exchange partner is honest (the belief that the partner fulfills promises, stands by its words, and is reliable) and/or benevolent (the belief that the partner is interested in one's welfare and joint gain)".

Azadeh, Pourmohammad Zia, Saberi, Khadeer Hussain, Yoon, Khadeer Hussain, and Sadri	(2015)	500	"The belief that the Trusting Agent has in the Trusted Agent's willingness and capability to deliver a mutually agreed service in a given context and in a given timeslot".
Cherry	(2016)	15	"The SME client's confidence that the public accountant will act proactively in their interests and not exploit their vulnerabilities".
Vanneste	(2016)	8	"Trust is the willingness to be vulnerable to the actions of another party based on an expectation that one will not be taken advantage of".
Abdallah A.B., Abdallah M.I. and Saleh	(2017)	695	"In essence, trust is a two-way relationship between partners that implies high level of faith in each other's decency as well as fulfillment of promises it facilitates the willingness of partners to disregard the minimum requirements of the partnerships in order to increase the chances of success for all parties and to behave altruistically".
Usman, Tjiptoherijanto, Balqiah and Agung	(2017)	164	"...trust is defined as when one party trusts the reliability and integrity of the other parties".
Van Esterik- Plameijer and van Raaij	(2017)	100	"Trust is the willingness of consumers as trustors to depend on the trustee, to cooperate with the trustee, and, more generally, the adoption of trusting behavior".
Paparoidamis, Katsikeas and Chumpitaz	(2019b)	11	"Trust is an expectation held by an individual that one's speech is reliable and a trustworthy group needs to have high integrity and be trustworthy".

Appendix II

Examples of Theoretical Perspectives associated with Trust Research

Theory	Article
Agency Theory	(Jap and Anderson, 2003; Schoorman, Mayer and Davis, 2007)
Attachment Theory	(La and Choi, 2012)
Attribution Theory	(Johnson and Grayson, 2005)
Behavioural Approach	(Costa e Silva, Bradley and Sousa, 2012)
Business-to-business Marketing Theory	(Gounaris and Venetis, 2002)
Buyer-Seller Literature	(Plank, Reid and Pullins, 1999)
Cognitive Psychology	(Anderson <i>et al.</i> , 2017)
Commitment Theory	(Aulakh, Kotabe and Sahay, 1996)
Commitment-Trust Theory	(Morgan and Hunt, 1994; Cai <i>et al.</i> , 2013; Brinkhoff, Özer and Sargut, 2015; Usman <i>et al.</i> , 2017)
Contingency Theory	(Wang, Yeung and Zhang, 2011; Michalski, Montes and Narasimhan, 2019)
Coopetition Theory	(Yu, 2019)
Cultural Distance Hypothesis	(Stahl <i>et al.</i> , 2011)
Dependency Theory	(Gassenheimer and Manolis, 2001)
Economic Perspective	(Gulati and Singh, 1998; Dyer and Chu, 2000b; Adler, 2001; Saporito, Chen and Sapienza, 2004; Suh and Kwon, 2006)
Exchange Theory	(Jap and Anderson, 2003; Lau and Rowlinson, 2009)
Functionalist Theory	(van Esterik-Plasmeijer and van Raaij, 2017)
Fuzzy Set Theory	(Ayadi, Halouani and Masmoudi, 2016)
Game Theory	(Sako and Helper, 1998; Carson <i>et al.</i> , 2003; Arai <i>et al.</i> , 2005; Oba and Semerciöz, 2005; Voigt and Inderfurth, 2012; Jiang, Lu and Le, 2016; Yu, 2019)
General Branding Theory	(Lymeropoulos, Chaniotakis and Rigopoulou, 2010)
Industrial Marketing and Purchasing Theory	(Meqdadi, Johnsen and Johnsen, 2017)

Information Systems Theory	(Ke <i>et al.</i> , 2009)
Institution Theory	(Ho, Ghauri and Larimo, 2018; Elliot, Zhu and Wang, 2019)
Interactionist Theory	(Heide and John, 1990)
Internationalization Process Theory	(Bianchi and Saleh, 2010; Saleh, Ali and Quazi, 2013; Saleh, Ali and Mavondo, 2014)
Inter-organisational Literature	(Dyer and Chu, 2000b)
International Business Theory	(Altinay <i>et al.</i> , 2014)
Knowledge-based Theory	(Nielsen and Nielsen, 2009; Herz <i>et al.</i> , 2016)
Learning Theory	(Ojha, Shockley and Acharya, 2016)
Marketing Channel Research	(Ganesan, 1994; Nootboom, Berger and Noorderhaven, 1997; Leonidou, Talias and Leonidou, 2008; Ke <i>et al.</i> , 2009; Jain <i>et al.</i> , 2014)
Marketing Research	(Ball, Simões Coelho and Machás, 2004; Johnston <i>et al.</i> , 2004; Franklin and Marshall, 2019)
Network Theory	(Vanneste, 2016; Yin and Jahanshahi, 2018)
Operations Literature	(Johnston <i>et al.</i> , 2004)
Organisation Behaviour	(Jain <i>et al.</i> , 2014)
Organisation Theory	(Heide and John, 1990; Aulakh, Kotabe and Sahay, 1996; Gulati and Singh, 1998; Young-Ybarra and Wiersema, 1999; Adler, 2001; Gulati and Sytch, 2008; Jones <i>et al.</i> , 2014; van Esterik-Plasmeijer and van Raaij, 2017; Yuan, 2018)
Organisational Information-processing Theory	(Carson <i>et al.</i> , 2003)
Patronage Behaviour Theory	(Usman <i>et al.</i> , 2017)
Power-dependence Theory	(Altinay <i>et al.</i> , 2014)
Process-based Perspective	(Dyer and Chu, 2000b)
Rational Choice Perspective Theory	(Laequddin <i>et al.</i> , 2010)
Reasoned Action Theory	(Stewart, 2003; Pavlou and Gefen, 2004)
Relational Theory	(Wagner, Coley and Lindemann, 2011; Fawcett, Jones and Fawcett, 2012; Day <i>et al.</i> , 2013; Jones <i>et al.</i> , 2014; Krishnan, Geyskens and Steenkamp, 2016; Ho, Ghauri and Larimo, 2018; Yuan, 2018)

Relational Contract Theory	(Nooteboom, Berger and Noorderhaven, 1997; Coote, Forrest and Tam, 2003; Doloi, 2009)
Relational Exchange Theory	(Zaheer, McEvily and Perrone, 1998; Doney, Barry and Abratt, 2007; Paparoidamis, Katsikeas and Chumpitaz, 2019a)
Relational Governance	(Mohr and Puck, 2013; Singh and Teng, 2016)
Relationship Literature	(Gassenheimer and Manolis, 2001)
Relationship Marketing Theory	(Morgan and Hunt, 1994; de Ruyter, Moorman and Lemmink, 2001; X. Luo, 2002; Coote, Forrest and Tam, 2003; Coulter and Coulter, 2003; Jap and Anderson, 2003; Doney, Barry and Abratt, 2007; Naesens, Pintelon and Taillieu, 2007; Wright and Grace, 2011; La and Choi, 2012)
Resource-based View	(Bianchi and Saleh, 2010; Fawcett, Jones and Fawcett, 2012; Liao <i>et al.</i> , 2012; Stuart, Verville and Taskin, 2012; Day <i>et al.</i> , 2013; Jain <i>et al.</i> , 2014; Ojha, Shockley and Acharya, 2016; Fawcett <i>et al.</i> , 2017)
Resource Dependence Theory	(Nooteboom, Berger and Noorderhaven, 1997; Young-Ybarra and Wiersema, 1999; Handfield and Bechtel, 2002; Cai <i>et al.</i> , 2013; Abdallah Ayman Bahjat, Abdullah Mais Issam and Mahmoud Saleh Firas Izzat, 2017)
Role Theory	(Perrone, Zaheer and McEvily, 2003)
Sales Literature	(Plank, Reid and Pullins, 1999)
Shopping Preference Theory	(Usman <i>et al.</i> , 2017)
Signalling Theory	(Wagner, Coley and Lindemann, 2011)
Social Psychology	(Johnson and Grayson, 2005; Naesens, Pintelon and Taillieu, 2007; La and Choi, 2012; Jain <i>et al.</i> , 2014)
Sociological Theory	(Gulati, 1995; Poppo and Zenger, 2002; Poppo, Zheng Zhou and Zenger, 2003; Saporito, Chen and Sapienza, 2004; Franklin and Marshall, 2019; Szromek and Naramski, 2019)
Social Capital Theory	(McEvily, Perrone and Zaheer, 2003; Mäkelä, Barner-Rasmussen and Björkman, 2008; Nielsen and Nielsen, 2009; Arranz and Arroyabe, 2012; Liao <i>et al.</i> , 2012)

Social Exchange Theory	(Anderson and Narus, 1990; Ganesan, 1994; Zaheer and Venkatraman, 1995; Sako and Helper, 1998; Young-Ybarra and Wiersema, 1999; Dirks and Ferrin, 2001; X. Luo, 2002; Cavusgil, Deligonul and Zhang, 2004; Gounaris, 2005; Kwon and Suh, 2005; Adobor, 2006; Faems <i>et al.</i> , 2008; Lau and Rowlinson, 2009; Wagner, Coley and Lindemann, 2011; Altinay <i>et al.</i> , 2014; van der Valk <i>et al.</i> , 2016; Fainshmidt and Frazier, 2017; Khalid and Ali, 2017; Minerbo <i>et al.</i> , 2018; Piricz, 2018; Paparoidamis, Katsikeas and Chumpitaz, 2019a; Staniskiene, Stankeviciute and Daunoriene, 2019; Wang, Fu and Fang, 2019)
Social Identity Theory	(Aulakh, Kotabe and Sahay, 1996; Nicholson, Compeau and Sethi, 2001; Stahl <i>et al.</i> , 2011)
Social Information Processing Theory	(Fainshmidt and Frazier, 2017)
Social Interaction Perspective	(Dyer and Chu, 2000b)
Socio-political Theory	(Ke <i>et al.</i> , 2009)
Stakeholder Theory	(Boström, 2015; Staniskiene, Stankeviciute and Daunoriene, 2019)
Standard Theory	(Voigt and Inderfurth, 2012)
Strategic Management Theory	(Gulati and Nickerson, 2008)
Strategy Theory	(Gulati and Sytch, 2008)
Transaction Cost Economics	(Heide and John, 1990; Ganesan, 1994; Gulati, 1995; Zaheer and Venkatraman, 1995; Aulakh, Kotabe and Sahay, 1996; Nootboom, Berger and Noorderhaven, 1997; Sako and Helper, 1998; Zaheer, McEvily and Perrone, 1998; Young-Ybarra and Wiersema, 1999; Handfield and Bechtel, 2002; Poppo and Zenger, 2002; Boersma, Buckley and Ghauri, 2003; Dyer and Chu, 2003; Jap and Anderson, 2003; Poppo, Zheng Zhou and Zenger, 2003; Cavusgil, Deligonul and Zhang, 2004; Kadefors, 2004; Lui and Ngo, 2004; Mayer and Argyres, 2004; Saparito, Chen and Sapienza, 2004; Kwon and Suh, 2005; Adobor, 2006; Faems <i>et al.</i> , 2008; Doloi, 2009; Katsikeas, Skarmeas and Bello, 2009; Lau and Rowlinson, 2009; Bianchi and Saleh, 2010; Arranz and Arroyabe, 2012; Costa e Silva, Bradley and Sousa, 2012; Mohr and Puck, 2013; Saleh, Ali and Quazi, 2013; Saleh, Ali and Mavondo, 2014; Brinkhoff, Özer and Sargut, 2015; Herz <i>et al.</i> , 2016; Krishnan, Geyskens and Steenkamp, 2016; Ojha, Shockley and Acharya, 2016; Singh and Teng, 2016; van der Valk <i>et al.</i> , 2016; Khalid and Ali, 2017; Minerbo <i>et al.</i> , 2018; Shi <i>et al.</i> , 2018; Cho, Bonn and Terrell, 2019; Wang, Fu and Fang, 2019; Yu, 2019; Zhang, Chen and Fu, 2020)
Transaction Value	(Mohr and Puck, 2013)

Trust Theory

(Gounaris and Venetis, 2002; Kadefors, 2004; Jiang, Lu and Le, 2016; Elliot, Zhu and Wang, 2019)

Appendix III

Examples of Industries discussed in Trust Literature

Industry	Articles
Accounting field	(McMillan, 2004; Rezaee, 2004; Busco, Riccaboni and Scapens, 2006; 2014; Cherry, 2016; Cherry, McGrath and Baumann, 2018)
Airline industry	(Emsley and Kidon, 2007)
Automotive sector	(Sako and Helper, 1998; Zirpoli and Caputo, 2002; Dyer and Chu, 2011)
Banking sector	(Saparito, Chen and Sapienza, 2004; Bülbül, 2013; van Esterik-Plasmeijer and van Raaij, 2017)
Construction industry	(Shi <i>et al.</i> , 2018; Wang, Fu and Fang, 2019)
Communication	(Giffin, 1967; Bialaszewski and Giallourakis, 1985; Hiltz, Johnson and Turoff, 1986; Lee, Padmanabhan and Whang, 1997; Welty and Becerra-Fernandez, 2001; Voigt and Inderfurth, 2012; Cheung, Yiu and Lam, 2013; Inderfurth, Sadrieh and Voigt, 2013; Brinkhoff, Özer and Sargut, 2015)
E-commerce	(Ratnasingham, 1998; Lee and Turban, 2001, 2001; X. Luo, 2002; McKnight, Choudhury and Kacmar, 2002, 2002; Pavlou, 2003; Riegelsberger, Sasse and McCarthy, 2003; Pavlou and Gefen, 2004; Ratnasingam, 2005; Kim, Ferrin and Rao, 2008; Adamopoulou and Symeonidis, 2014)
Economics	(Dahlstrom and Nygaard, 1995; Chiles and McMackin, 1996; Bhattacharya, Devinney and Pillutla, 1998; Arai <i>et al.</i> , 2005; Raiser <i>et al.</i> , 2007)
E-government	(Luo, 2002)
Electronic supply chain management systems	(Ke <i>et al.</i> , 2009)
Health sector	(Meyer <i>et al.</i> , 2013; Ozawa and Sripad, 2013)
Information technology (IT)	(Lee and See, 2004; Mayer and Argyres, 2004; Saunders <i>et al.</i> , 2004; Riegelsberger, Sasse and McCarthy, 2005; Wang and Singh, 2010; Cho, Swami and Chen, 2011)
Leadership	(Podsakoff <i>et al.</i> , 1990; Pillai, Schriesheim and Williams, 1999; Adobor, 2006; Wasti <i>et al.</i> , 2007; Dayan and Di Benedetto, 2010; Zeffane, 2010; Cater and Kidwell, 2014)

Marketing	(Moorman, Deshpande and Zaltman, 1993; Aulakh, Kotabe and Sahay, 1996; Doney and Cannon, 1997; Geyskens, Steenkamp and Kumar, 1998, 1999; Garbarino and Johnson, 1999; Chaudhuri and Holbrook, 2001; Atuahene-Gima and Li, 2002; Farrelly and Quester, 2005; Darke and Ritchie, 2007; Sichtmann, 2007; Maniscalco, Daniloski and Brinberg, 2010)
Personality psychologists	(Bhattacharya, Devinney and Pillutla, 1998)
Psychology	(Mellinger, 1956; Schlenker, Helm and Tedeschi, 1973; Cook and Wall, 1980; Johnson-George and Swap, 1982; Koller, 1988)
Restaurant industry	(Cho, Bonn and Terrell, 2019)
Service providers	(Berry, 1995; Coulter and Coulter, 2002; Mashinchi <i>et al.</i> , 2011; La and Choi, 2012; Khalifa and Saad, 2017)
Social psychologists	(Bhattacharya, Devinney and Pillutla, 1998)
Supplier relationship management	(Doney and Cannon, 1997; Zaheer, McEvily and Perrone, 1998; de Ruyter, Moorman and Lemmink, 2001; Nicholson, Compeau and Sethi, 2001; Caniëls and Gelderman, 2007; Katsikeas, Skarmeas and Bello, 2009; Panayides and Venus Lun, 2009; Cannon <i>et al.</i> , 2010; Guenzi and Georges, 2010; van der Valk <i>et al.</i> , 2016)
Supply chain management	(Welty and Becerra-Fernandez, 2001; Akkermans, Bogerd and van Doremalen, 2004; Kwon and Suh, 2005; Ireland and Webb, 2007; Panayides and Venus Lun, 2009; Jones <i>et al.</i> , 2010, 2014; Voigt and Inderfurth, 2012; Cai <i>et al.</i> , 2013; Chang <i>et al.</i> , 2014; Brinkhoff, Özer and Sargut, 2015; Ojha, Shockley and Acharya, 2016; Susanty Aries, Sirait Norma Mustiana and Bakhtiar Arfan, 2018)
Tourism	(Gregori, Daniele and Altinay, 2014; Czakon and Czernek, 2016)

Appendix IV

The Antecedents of Trust

THE ANTECEDENTS OF TRUST
ABILITY (KNOWLEDGE)
Mayer, Davis, and Schoorman (1995), Schoorman, Mayer, and Davis (2007), Saleh, Ali, and Quazi (2013)
ADAPTABILITY (CUSTOMISE, FLEXIBILITY)
Aulakh et al. (1996), Doney and Cannon (1997), Luo (2002), Coulter and Coulter (2003), Sharif et al. (2005), Kwon (2008),
BENEVOLENCE
Mayer, Davis, and Schoorman (1995), Doney, Barry, and Abratt (2007), Schoorman, Mayer, and Davis (2007), Lohtia et al. (2009), Franklin and Marshall (2019)
CO-CREATION
Franklin and Marshall (2019)
COLLABORATION
De Ruyter, Moorman, and Lemmink (2001), Nielsen and Nielsen (2009)
COMMITMENT
Anderson and Narus (1990), Anderson and Narus (1990), Morgan & Hunt (1994), Sako and Helper (1998), Selnes (1998), Jennings (2000)
COMMUNICATION
Anderson and Weitz (1989), Anderson and Narus (1990), Hyvönen (1993), Moorman, Deshpande, and Zaltman (1993), Morgan & Hunt (1994), Sapienza and Korsgaard (1996), Geyskens, Steenkamp, and Kumar (1998), Selnes (1998), Young-Ybarra & Wierseman (1999), Sharma and Patterson (1999), De Ruyter, Moorman, and Lemmink (2001), Coote, Forrest, and Tam (2003), Ball, Simões Coelho, and Machás (2004), Bstieler (2006), Doney, Barry, and Abratt (2007), Nes, Solberg, Silkoset (2007), Bstieler and Hemmert (2008), Kwon (2008), Styles, Patterson, and Ahmed (2008), Costa e Silva, Bradley, and Sousa (2012), Saleh, Ali, and Quazi (2013), Saleh, Ali, and Mavondo (2014), Kadefors (2004), Oba and Semerciöz (2005), Katsikeas, Skarmeas, and Bello (2009), Altinay et al. (2014), Jiang, Lu, and Le (2016), Khalid and Ali (2017), Franklin and Marshall (2019)
CONCERN
Wong, Then, and Skitmore (2000)
CO-LOCATION
Carson et al. (2003)
COMPETENCE
Coulter and Coulter (2003), Theron, Terblanche, and Boshoff (2011), Sariola and Martinsuo (2016), Jiang, Lu, and Le (2016), Franklin and Marshall (2019)
CONFIDENTIALITY
Moorman, Deshpande, & Zaltman (1993)

CONFLICT HANDLING
Selnes (1998)
CONTINUITY EXPECTATION (COMMITMENT, EXPECTED LONGEVITY)
Heide & John (1990), Aulakh et al. (1996), Maurer (2010), Liao et al. (2012), Khalid and Ali (2017)
CONSISTENCY
Dyer and Chu (2000b)
COOPERATION (ASSISTANCE)
Anderson & Narus (1990), Heide & John (1990)
CULTURE (SIMILARITY, SENSITIVITY)
Mehta et al. (2006), Kwon (2008), Styles, Patterson, and Ahmed (2008), Lohtia et al. (2009), Saleh, Ali, and Mavondo (2014), Bianchi and Saleh (2010), Altinay et al. (2014), Khalid and Ali (2017)
CUSTOMER ORIENTATION
Doney, Barry, and Abratt (2007)
DEMOGRAPHICS (AGE, DIALECT FLUENCY, GEOGRAPHIC PROXIMITY)
Gulati (1995), Gulati and Singh (1998), Dyer and Chu (2000b), Armstrong and Yee (2001),
INTERDEPENDENCE (Functional, POWER, AUTONOMY)
Hyvönen (1993), Simpson and Mayo (1997), Oba and Semerciöz (2005), Sharif et al. (2005), Lee et al. (2012), Liao et al. (2012), Anderson et al. (2017)
ECONOMIC HOSTAGE
Young-Ybarra & Wierseman (1999)
EMPATHY
Coulter and Coulter (2003)
EXPERIENCE (with one another, HISTORY)
Larson (1992), Gulati (1995), Poppo, Zhou, and Zenger (2003), Oba and Semerciöz (2005), Khalfan, McDermott, and Swan (2007), Saleh, Ali, and Quazi (2013), Saleh, Ali, and Mavondo (2014), Khalid and Ali (2017)
EXPERTISE
Moorman, Deshpande, & Zaltman (1993), Johnson and Grayson (2005), Oba and Semerciöz (2005), Lohtia et al. (2009)
GOALS SHARING (REWARD, BENEFIT)
Anderson and Weitz (1989), Geyskens, Steenkamp, and Kumar (1998), Jennings (2000), Khalfan, McDermott, and Swan (2007), Maurer (2010)
GOVERNANCE MECHANISMS (CONTRACT)
Dahlstrom and Nygaard (1995), Gounaris and Venetis (2002), Poppo and Zenger (2002), Zhou, and Zenger (2003), Mayer & Argyres (2004), Jiang, Lu, and Le (2016)
GOVERNANCE MECHANISMS (SOFT CONTRACT)
Oba and Semerciöz (2005)

INFORMATION SHARING (OPEN)
Aulakh et al. (1996), Jennings (2000), Coulter and Coulter (2003), Sharif et al. (2005), Anderson et al. (2017)
INTEGRITY (HONESTY, CREDIBLE, FAIRNESS)
Moorman, Deshpande, & Zaltman (1993), Mayer, Davis, and Schoorman (1995), Kumar (1996), Geyskens, Steenkamp, and Kumar (1998), Jennings (2000), Wong, Then, and Skitmore (2000), Bstieler (2006) Doney, Barry, and Abratt (2007), Khalfan, McDermott, and Swan (2007), Schoorman, Mayer, and Davis (2007), Bstieler and Hemmert (2008), Robson, Katsikeas, and Bello (2008), Jiang, Lu, and Le (2016), Franklin and Marshall (2019)
INTERACTION (FREQUENCY)
Gulati (1995), Gulati and Singh (1998), Sariola and Martinsuo (2016)
INVESTMENT (PARTNER SPECIFIC)
Heide & John (1990), Larson (1992), Ganesan (1994), Sharif et al. (2005), Suh and Kwon (2006), Katsikeas, Skarmeas, and Bello (2009)
KNOWLEDGE (Sharing)
Nielsen and Nielsen (2009), Saleh, Ali, and Mavondo (2014)
LIKABILITY
Styles, Patterson, and Ahmed (2008)
MANAGEMENT PRACTICES
Dahlstrom and Nygaard (1995)
MONITORING MECHANISMS (REDUCED)
Nielsen and Nielsen (2009)
OPPORTUNISM (LACK)
Geyskens, Steenkamp, and Kumar (1998), Nielsen and Nielsen (2009), Saleh, Ali, and Mavondo (2014)
PERFORMANCE
Geyskens, Steenkamp, and Kumar (1998), Wong, Then, and Skitmore (2000), De Ruyter, Moorman, and Lemmink (2001), Johnson and Grayson (2005), Altinay et al. (2014)
POLITENESS
Coulter and Coulter (2003)
PROFESSIONAL BEHAVIOUR
Khalfan, McDermott, and Swan (2007)
PROBLEM-SOLVING
Bstieler (2006), Khalfan, McDermott, and Swan (2007)
PROMPTNESS
Coulter and Coulter (2003)
QUALITY
Heide & John (1990), Sharma and Patterson (1999), Gounaris and Venetis (2002), Gounaris (2005), Doney, Barry, and Abratt (2007), Ian Stuart, Verville, and Taskin (2012)

RECIPROCITY
Khalfan, McDermott, and Swan (2007), Jiang, Lu, and Le (2016)
RELATIONSHIP (BILATERAL, BONDING, SOCIAL)
Gulati and Singh (1998), Armstrong and Yee (2001), Gounaris and Venetis (2002), Zhang, Cavusgil, and Roath (2003), Gounaris (2005), Doney, Barry, and Abratt (2007), Kwon (2008),
RELIABILITY
Coulter and Coulter (2003), Ian Stuart, Verville, and Taskin (2012)
REPUTATION
Ganesan (1994), Anderson and Weitz (1989), Jennings (2000), Coulter and Coulter (2003), Oba and Semerciöz (2005), Sharif et al. (2005), Lee et al. (2012), Jiang, Lu, and Le (2016), Khalid and Ali (2017)
RESOURCES (COMPLEMENTARY, ASSET SPECIFICITY, FIRM SIZE)
Doney and Cannon (1997), Kwon (2008), Bianchi and Saleh (2010), Khalid and Ali (2017)
RESPONSIVENESS (TIMELINESS)
Moorman, Deshpande, & Zaltman (1993)
RISK SHARING
Jennings (2000)
RULES
Jennings (2000)
SALESPERSON
Swan, Trawick, and Silva (1985), Doney and Cannon (1997), Nicholson and Sethi (2001), Coulter and Coulter (2003)
SATISFACTION
Selnes (1998), Johnson and Grayson (2005), Leonidou C., Talias, and Leonidou C.N. (2008), Theron, Terblanche, and Boshoff (2011), Franklin and Marshall (2019)
SERVICE (SUPPORT)
Geyskens, Steenkamp, and Kumar (1998), Anderson and Weitz (1989), De Ruyter, Moorman, and Lemmink (2001), Chiou, Droge, and Hanvanich (2002), Gounaris and Venetis (2002)
SHARE OF PURCHASES
Johnson and Grayson (2005)
SKILL
Carson et al. (2003)
SIMILARITY
Armstrong and Yee (2001), Johnson and Grayson (2005), Robson, Katsikeas, and Bello (2008)
SINCERITY
Moorman, Deshpande, & Zaltman (1993)
TACT

Moorman, Deshpande, & Zaltman (1993)
TASK TEACHABILITY
Carson et al. (2003)
TEAM BUILDING
Kadefors (2004)
TECHNICAL ASSISTANCE
Coulter and Coulter (2003)
UNCERTAINTY
Saleh, Ali, and Mavondo (2014)
VALUES (SHARED)
Morgan & Hunt (1994), Young-Ybarra & Wierseman (1999), Sirdeshmukh, Singh, and Sabol (2002), Theron, Terblanche, and Boshoff (2011), Costa e Silva, Bradley, and Sousa (2012) Franklin and Marshall (2019)
VULNERABILITY (IN BUYER INCREASES SUPPLIER TRUST)
McEvily, Zaheer, & Perrone (2003)

Appendix V

The Consequences of Trust

THE CONSEQUENCES OF TRUST	
Consequences of Trust	Article
Positive Consequences of Trust	
Ability (expertise)	Geyskens et al. (1998), Armstrong and Yee (2001)
Adaptability (Flexibility)	Young-Ybarra and Wiesema (1999), Stahl et al. (2011)
Agreement	Schurr and Ozanne (1985), Geyskens et al. (1998)
Anticipation (for future interaction)	Crosby et al. (1990), Doney and Cannon (1997), Geyskens et al. (1998), Armstrong and Yee (2001), Gounaris and Venetis (2002), Johnson and Grayson (2005)
Attitude	Schurr and Ozanne (1985)
Commitment	Moorman, Zaltman, & Deshpande (1992), Morgan and Hunt (1994), Geyskens et al. (1998), Sako and Helper (1998), Sharma and Patterson (1999), Gounaris (2005), Doney, Barry, and Abratt (2007), Leonidou C., Talias, and Leonidou C.N. (2008), Styles, Patterson, and Ahmed (2008), Tian, Lai, and Daniel (2008), Saleh, Ali, and Mavondo (2014), Stahl et al. (2011)
Communication	Anderson and Weitz (1989), Geyskens et al. (1998), Sako and Helper (1998), Seppänen, Blomqvist and Sundqvist (2007), Huang and Wilkinson (2013), Sekhon et al. (2013), Ho, Ghauri and Larimo (2018), Akrouit and La (2019)
Competitiveness	Jap and Anderson (2003), Zhang, Cavusgil, and Roath (2003)
Conflict (reduces conflict, functional conflict)	Anderson and Narus (1990), Morgan and Hunt (1994), Geyskens et al. (1998), Lau and Rowlinson (2009),
Continuity	Schurr and Ozanne (1985), Anderson and Weitz (1989), Geyskens et al. (1998), Selnes (1998), Armstrong and Yee (2001), Coulter and Coulter (2003), Jap and Anderson (2003), Lau and Rowlinson (2009), Bianchi and Saleh (2010),
Collaboration / Cooperation / Coordination	Moorman, Zaltman, & Deshpande (1992), Morgan and Hunt (1994), Andaleeb (1995), Geyskens et al. (1998), Dirks and Ferrin (2001), Vélez, Sánchez, and Álvarez (2008), Lau and Rowlinson (2009), Huang and Wilkinson (2013), Anderson et al. (2017), Akrouit and La (2019)
Cost (-)	Dyer and Chu (2003), Narayanan, Narasimhan and Schoenherr (2015), Jiang, Lu and Le (2016), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Efficiency	Johnson and Grayson (2005), Kwon (2008), Katsikeas, Skarmeas, and Bello (2009), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Information sharing	Maurer (2010), Stahl et al. (2011)
Innovation	Maurer (2010), Liao et al. (2012)
Investment	Anderson, Chang, Cheng, and Phua (2017)
Mediator	Saparito, Chen, and Sapienza (2004), Bstieler (2006), Nielsen and Nielsen (2009)

Monitoring (reducing cost)	Jennings (2000), Dyer and Chu (2003), Anderson, Chang, Cheng, and Phua (2017), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Long-term orientation	Ganesan (1994), Geyskens, Steenkamp, and Kumar (1998), Sako and Helper (1998), Sharif et al. (2005)
Loyalty	Schurr and Ozanne (1985), Geyskens et al. (1998), De Ruyter, Moorman, and Lemmink (2001), Tian, Lai, and Daniel (2008), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Objective (strategic)	Kwon (2008)
Opportunism (reduce)	Jap and Anderson (2003)
Performance	Dahlstrom and Nygaard (1995), Kumar (1996), Aulakh, Kotabe, and Sahay (1996), Geyskens et al. (1998), Zaheer, McEvily, and Perrone (1998), Cullen, Johnson and Sakano (2000), Jennings (2000), Dirks and Ferrin (2001), Lane, Salk, and Lyles (2001), Poppo and Zenger (2002), Carlson et al. (2003), Dyer and Chu (2003), Jap and Anderson (2003), Zhang, Cavusgil and Roath (2003), Lui and Ngo (2004), Kadefors (2004), Kauser and Shaw (2004), Bstieler (2006), Doney, Barry, and Abratt (2007), Seppänen, Blomqvist and Sundqvist (2007), Hald, Córdón and Vollmann (2009), Katsikeas, Skarmeas, and Bello (2009), Lau and Rowlinson (2009), Bianchi and Saleh (2010), Ian Stuart, Verville, and Taskin (2012), Costa e Silva, Bradley, and Sousa (2012), Saleh, Ali, and Quazi (2013), Jain, Khalil, Johnston, and Cheng (2014), Narayanan, Narasimhan and Schoenherr (2015), Singh and Teng (2016), Wu (2015), Jiang, Lu, and Le (2016), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Profit	Jennings (2000), Jap and Anderson (2003), Stahl et al. (2011)
Quality improvement	Lau and Rowlinson (2009), Liao et al. (2012)
Relationship (+)	Moorman, Zaltman, & Deshpande (1992), Selnes (1998), Armstrong and Yee (2001), Dyer and Chu (2003), Zhang, Cavusgil, and Roath (2003), Johnson and Grayson (2005), Kwon (2008), Katsikeas, Skarmeas, and Bello (2009), Bianchi and Saleh (2010), Sekhon et al. (2013), Paparoidamis, Katsikeas, and Chumpitaz (2019b)
Risk taking	Mayer, Davis, Schoorman (1995), Nooteboom, Berger, & Noorderhaven (1997)
Satisfaction	Anderson and Narus (1990), Armstrong and Yee (1994), Mohr and Spekman (1994), Geyskens, Steenkamp, and Kumar (1998), Bianchi and Saleh (2010), Stahl et al. (2011), Ian Stuart, Verville, and Taskin (2012), Alitinay et al. (2014), Paparoidamis, Katsikeas, and Chumpitaz (2019)
Stability	Geyskens et al. (1998)
Time allocation (partner)	Anderson (1987), Geyskens et al. (1998)
Time savings	Lau and Rowlinson (2009),
Uncertainty (decision making) (-)	Morgan and Hunt (1994)
Negative Consequences of Trust	
Commitment (calculative)	Geyskens et al. (1998)
Control (-)	Andaleeb (1995)
Distributive bargaining	Schurr and Ozanne (1985)

Influence stance (threats)	Andaleeb (1995)
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Appendix VI

Trust Indicators identified in Peer-Reviewed Literature

The Variables of Trust

Trust Indicators in Literature		
Variables of Trust		
Article	Type	Variables of Trust
Usman et al. (2017)	Organisation and end-consumer trust	religion
Wright and Grace (2011)	Inter-organisational trust	transparency communication contractual safeguards behaviour first impressions emotional involvement experience attitude passion dependence respect communication
Leek et al. (2006)	Cross-cultural trust	problem solution
Nel et al. (2000)	Organisation and end-consumer trust	justice
Cook and Wall (1980)	Intra-organisational trust (staff)	commitment reputation collaboration loyalty confidence (in peers) confidence (in management) faith (in management)
Saleh, Ali, Quazi, and Wickramasekera (2015)	Inter-organisational trust	knowledge experience communication opportunism (lack of)
Burkink (2002)	Inter-organisational trust	satisfaction commitment

Lymperopoulos, Chaniotakis, and Rigopolou (2010)	Organisation and end-consumer trust	performance quality
Sunarish (2018)	Organisation and end-consumer trust	quality reputation

The Indicators of Trust

Trust Indicators in Literature		
Indicators of Trust		
Article	Type	Indicators of Trust
Cater and Kidwell (2014)	Interpersonal trust Inter-organisational trust	leadership competition cooperation acceptance decision making governance
Brock and Zhou (2012)	Organisation and end-consumer trust	relationship
Faems et al. (2007)	Inter-organisational trust	expectation
Czaban et al. (2003)	Inter-organisational trust	frequency dependence relationship competence resources sharing risk sharing contractual safeguards communication pricing practices
Ozawa and Sripad (2013)	Organisation and end-consumer trust	communication confidence competence honesty

The Components of Trust

Trust Indicators in Literature		
Components of Trust		
Article	Type	Determinants of Trust
Perrone, Zaheer, and McEvily (2003)	Inter-organisational trust	reliability predictability fairness

The Proponents of Trust

Trust Indicators in Literature		
Drivers of Trust		
Article	Type	Determinants of Trust
Schumann et al. (2010)	Inter-organisational trust	ability benevolence integrity predictability

Appendix VII

Trust Indicators identified in Peer-Reviewed Literature (sorted by concept)

Black	Determinants of trust
Green	Variables of Trust
Orange	Components of Trust
Blue	Drivers of Trust
Purple	Indicators of Trust

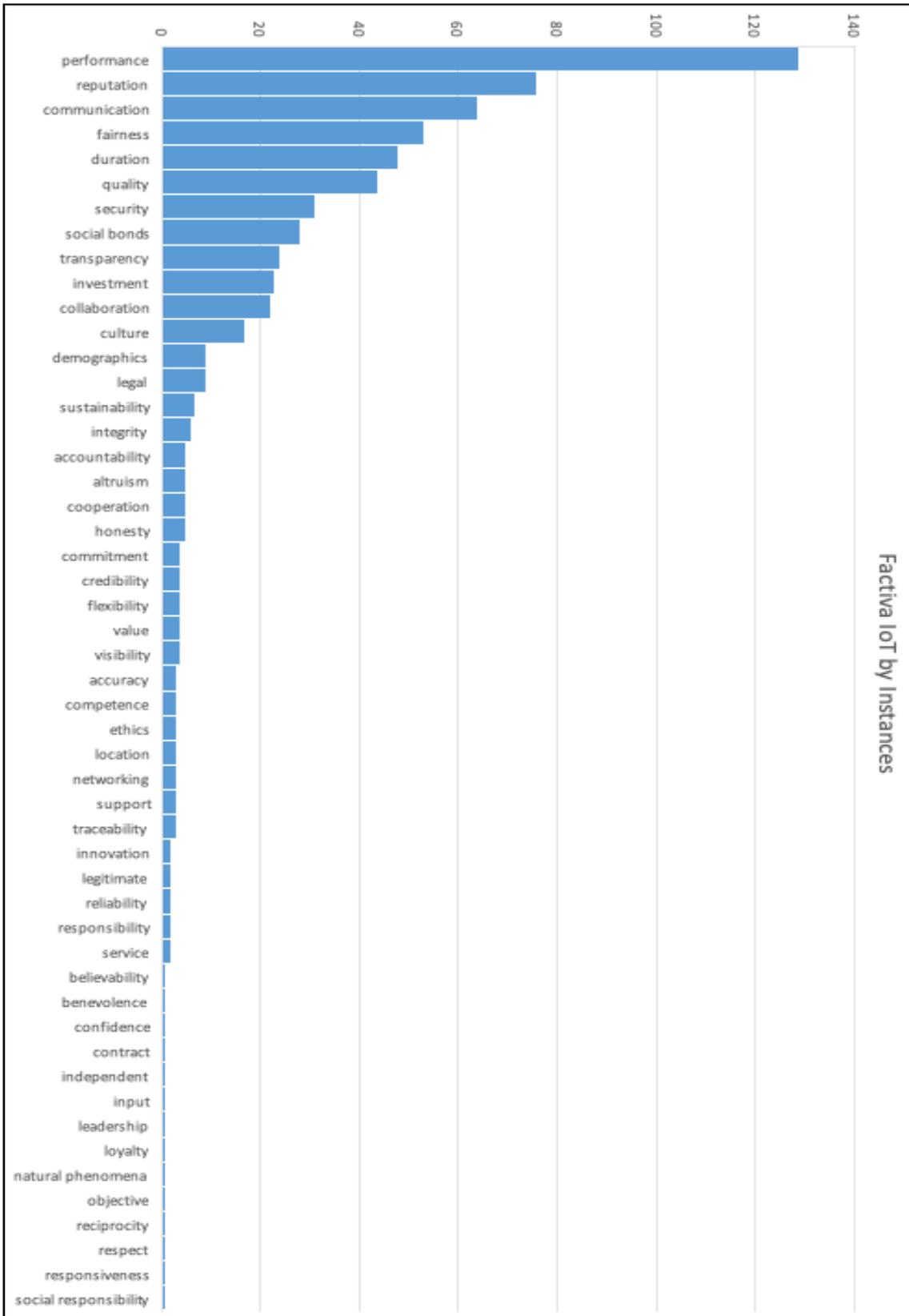
ability	Cook and Schilke (2010), Schumann et al. (2010)
acceptance	Cater and Kidwell (2014)
ambition	Zeffane (2010)
attitude	Wright and Grace (2011)
behaviour	Wright and Grace (2011)
benefit sharing	Jennings et al. (2000)
benevolence	Cook and Schilke (2010), Schumann et al. (2010), Gamero et al. (2011)
collaboration	Cook and Wall (1980)
commitment	Sako and Helper (1998), Jennings et al. (2000), Dave et al. (2018), Cook and Wall (1980), Burkink (2002)
communication	Fisman and Khanna (1999), Pérez and Descals (1999), Armstrong and Yee (2001), Sharif et al. (2005), Howorth and Moro (2006), Mäkelä et al. (2008), Khalifa and Saad (2017), Dave et al. (2018), Wright and Grace (2011), Saleh, Ali, Quazi, and Wickramasekera (2015), Czaban et al. (2003), Ozawa and Sripad (2013)
competence	Zeffane (2010), Van Esterik-Plasmeijer and van Raaij (2017), Czaban et al. (2003), Ozawa and Sripad (2013)
competition	Cater and Kidwell (2014)
confidence (ability)	Zeffane (2010), Ozawa and Sripad (2013)
confidence (management)	Cook and Wall (1980)
confidence (peers)	Cook and Wall (1980)
continuity	Dave et al. (2018)
contractual safeguards	Cook and Schilke (2010), Wright and Grace (2011), Czaban et al. (2003)
cooperation	Cater and Kidwell (2014)
courage	Zeffane (2010)
credibility	Dave et al. (2018)

culture	Sako and Helper (1998), Arai et al. (2005)
customer-orientation	Van Esterik-Plasmeijer and van Raaij (2017)
decision making	Cater and Kidwell (2014)
demographic	Diwakara (2006)
duration	Sako and Helper (1998), Mäkelä et al. (2008)
economic	Diwakara (2006)
education	Arai et al. (2005)
emotional involvement	Wright and Grace (2011)
empathy	Coulter and Coulter (2002)
empowerment	Roberts et al. (2010)
expectation	Payne and Clark (2003), Faems et al. (2007) ,
experience	Payne and Clark (2003), Wright and Grace (2011) , Saleh, Ali, Quazi, and Wickramasekera (2015) ,
expertise	Maniscalco et al. (2010), Gamero et al. (2011)
fairness	Zeffane (2010), Gamero et al. (2011), Perrone, Zaheer, and McEvily (2003)
faith	Cook and Wall (1980)
first impressions	Wright and Grace (2011)
flexibility	Sharif et al. (2005), Roberts et al. (2010)
frequency (interaction)	Czaban et al. (2003)
governance	Cater and Kidwell (2014)
honesty	Jennings et al. (2000), Ozawa and Sripad (2013)
information sharing	Sako and Helper (1998), Jennings et al. (2000), Gamero et al. (2011)
innovation	Zeffane (2010)
integrity	Jennings et al. (2000), Cook and Schilke (2010), Gamero et al. (2011), Khalifa and Saad (2017), Schumann et al. (2010)
intention	Armstrong and Yee (2001)
interdependence	Sako and Helper (1998), Pérez and Descals (1999), Wright and Grace (2011) , Czaban et al. (2003)
investment	Sako and Helper (1998)
justice	Nel et al. (2000)
knowledge	Saleh, Ali, Quazi, and Wickramasekera (2015)
leadership	Cater and Kidwell (2014)
legal reliance	Raiser et al. (2007)

loyalty	Cook and Wall (1980)
mediator	Harms et al. (2016)
openness	Jennings et al. (2000)
opportunism (lack of)	Saleh, Ali, Quazi, and Wickramasekera (2015)
order	Zeffane (2010)
passion	Wright and Grace (2011)
performance	Mohr and Puck (2013), Lymperopoulos, Chaniotakis, and Rigopolou (2010)
politeness	Coulter and Coulter (2002)
power	Roberts et al. (2010), Khalifa and Saad (2017)
predictability	Perrone, Zaheer, and McEvily (2003) , Schumann et al. (2010)
pricing practices	Czaban et al. (2003)
problem-solving	Roberts et al. (2010), Dave et al. (2018), Burkink (2002) , Leek et al. (2006) , Sunarish (2018)
quality	Lymperopoulos, Chaniotakis, and Rigopolou (2010) , Sunarish (2018)
reciprocity	Dave et al. (2018)
relationship	Sako and Helper (1998), Adobor (2006), Maniscalco et al. (2010), Khalifa and Saad (2017), Czaban et al. (2003) , Brock and Zhou (2012)
reliability	Perrone, Zaheer, and McEvily (2003)
religion	Usman et al. (2017)
reputation	Jennings et al. (2000), Sharif et al. (2005), Howorth and Moro (2006), Khalifa and Saad (2017), Cook and Wall (1980) , Sunarish (2018)
resource-sharing	Czaban et al. (2003)
respect	Dave et al. (2018), Wright and Grace (2011)
responsiveness	Roberts et al. (2010)
risk-sharing	Jennings et al. (2000), Czaban et al. (2003)
rules	Jennings et al. (2000)
satisfaction	Khalifa and Saad (2017), Burkink (2002)
similarity	Coulter and Coulter (2002)
stability	Van Esterik-Plasmeijer and van Raaij (2017)
technical assistance	Sako and Helper (1998)
transparency	Van Esterik-Plasmeijer and van Raaij (2017), Wright and Grace (2011)
uncertainty	Sako and Helper (1998), Adobor (2006)
values	Armstrong and Yee (2001), Van Esterik-Plasmeijer and van Raaij (2017)

Appendix VIII

Factiva Indicators of Trust Chart



Appendix IX

Unique Instances identified in Factiva Analysis

accountability (5)	contract (1)	independent (1)	natural phenomena (1)	responsiveness (1)
accuracy (3)	cooperation (5)	innovation (2)	networking (3)	security (31)
altruism (5)	credibility (4)	input (1)	objective (1)	service (2)
believability (1)	culture (17)	integrity (6)	performance (129)	social bonds (28)
benevolence (1)	demographics (9)	investment (23)	quality (44)	social responsibility (1)
collaboration (22)	duration (48)	leadership (1)	reciprocity (1)	support (3)
commitment (4)	ethics (3)	legal (9)	reliability (2)	sustainability (7)
communication (64)	fairness (53)	legitimate (2)	reputation (76)	traceability (3)
competence (3)	flexibility (4)	location (3)	respect (1)	transparency (24)
confidence (1)	honesty (5)	loyalty (1)	responsibility (2)	value (4)
				visibility (4)

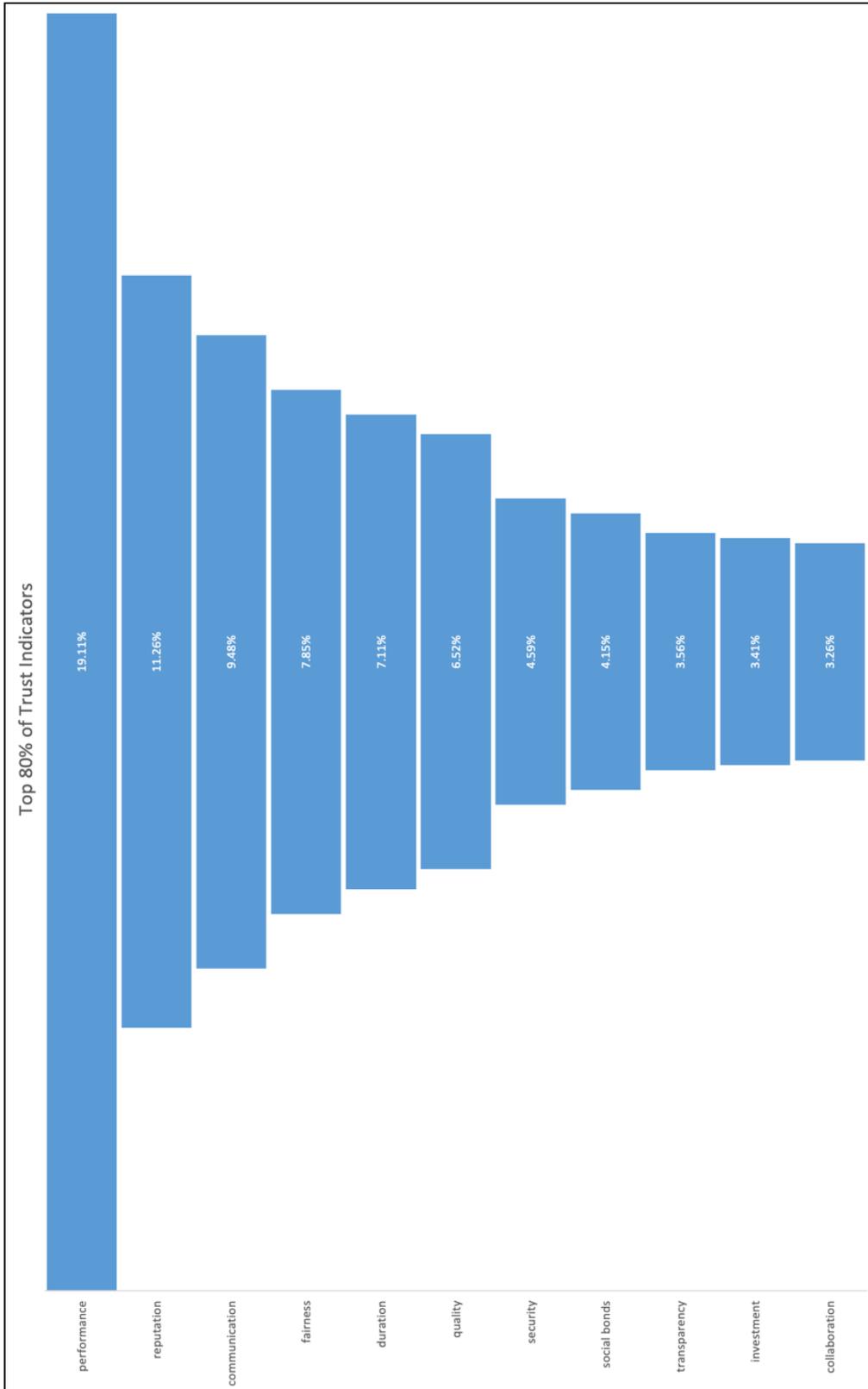
Appendix X

Factiva Thematic Clusters

Ability	Accountability	Commitment	Communication	Demographics	Investment	Relationships	Reputation	Values
Accuracy (3)	Accountability (5)	Reliability (2)	Networking (3)	Corporate Culture (17)	Innovation (2)	Input (1)	Reputation (76)	Credibility (4)
Competence (3)	Contract (1)	Responsibility (2)	Communication (64)	Location (3)	Investment (23)	Support (3)	Respect (1)	Believability (1)
Objective (1)	Legality (9)	Commitment (4)	Transparency (3)	Demographics (9)		Collaboration (22)		Confidence (1)
Performance (129)	Legitimacy (2)	Loyalty (1)	Visibility (4)	Natural Phenomena (1)		Responsiveness (1)		Leadership (1)
Quality (44)	Security (31)	Duration (48)				Social Bonds (28)		Ethics (3)
Service (2)	Social Responsibility (1)	Sustainability (7)				Cooperation (5)		Altruism (5)
Value (4)	Traceability (3)					Independent (1)		Fairness (53)
						Flexibility (4)		Reciprocity (1)
								Benevolence (1)
								Honesty (5)
								Integrity (6)
186	52	64	74	30	25	65	77	81

Appendix XI

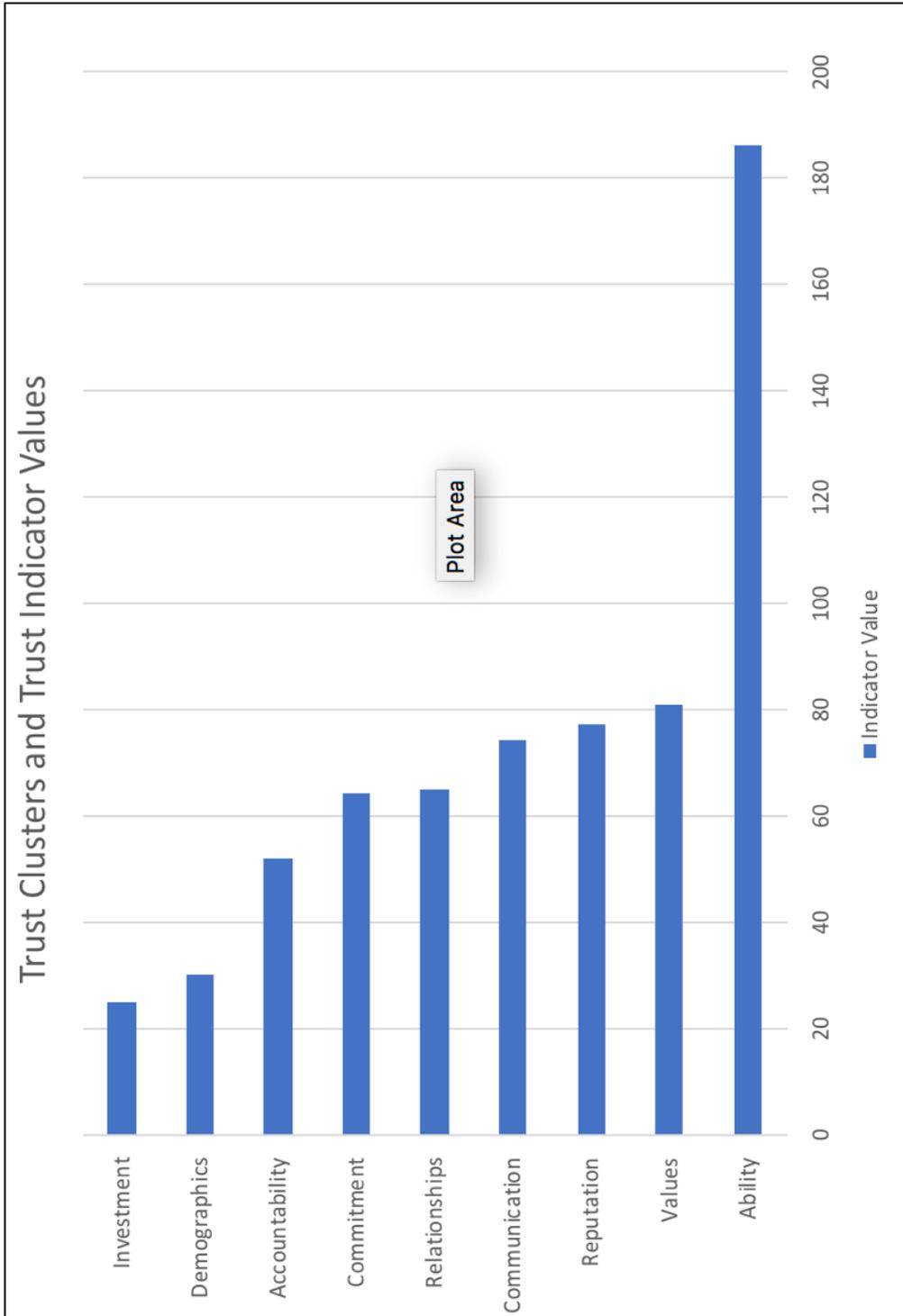
Factiva Top 11 Indicators of Trust



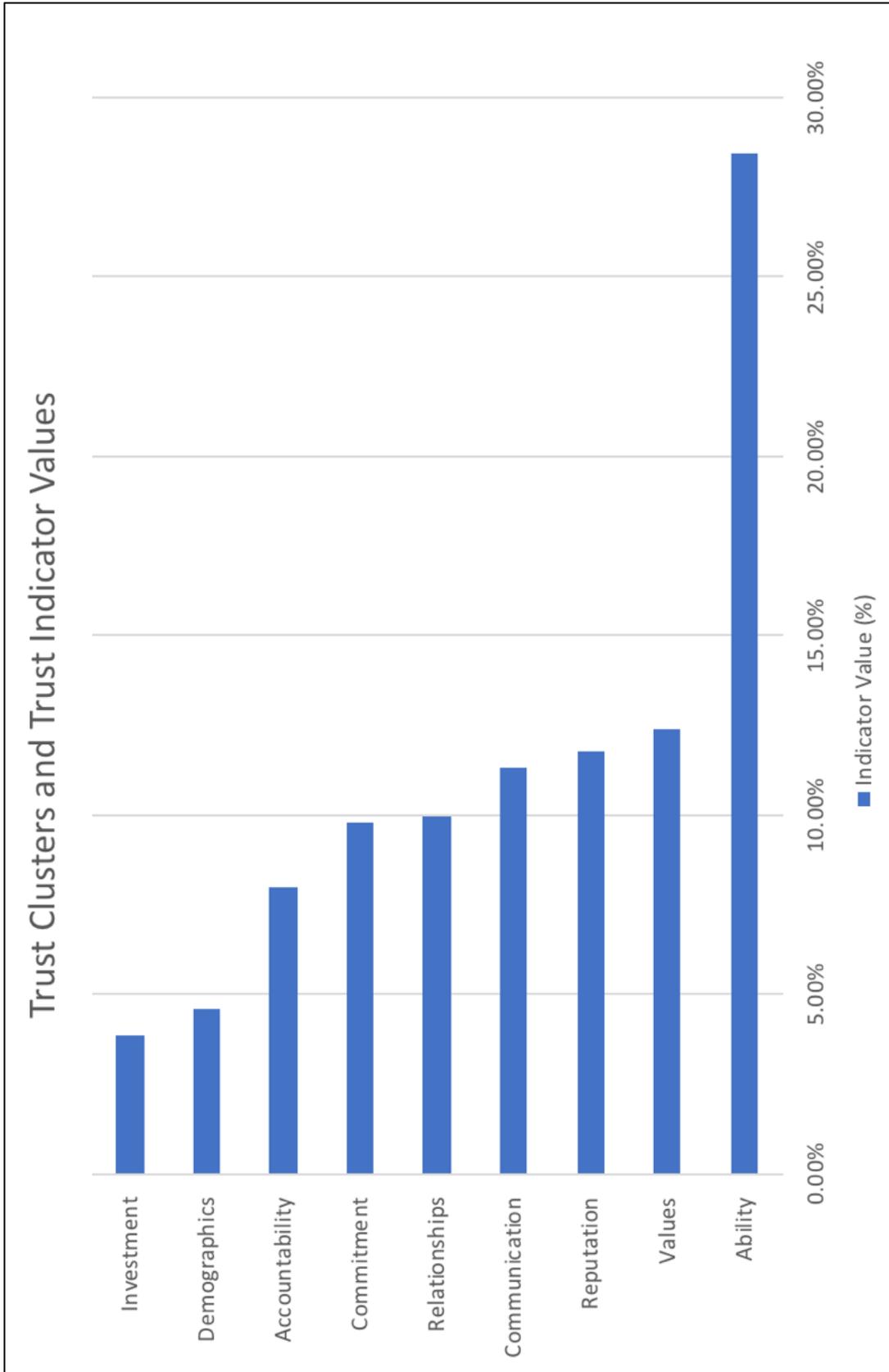
Appendix XII

Factiva Thematic Clusters

Factiva Thematic Clusters – Indicator Values



Factiva Thematic Clusters – Percentage Values



Appendix XIII

The Factiva Indicators of Trust Clusters



Appendix XIV

Scopus Articles for the Indicators of Trust (Filtered)

Authors	Title	Year	Source title	Volume	Issue	Source
Susanty A., Sirait N.M., Bakhtiar A.	The relationship between information sharing, informal contracts and trust on performance of supply chain management in the SMEs of batik	2018	Measuring Business Excellence	22	3	Scopus
Suparjo, Sunarshih E.S.	The role of service quality and institutional image in establishing relational commitment between private universities and the student	2018	Journal of Entrepreneurship Education	21	3	Scopus
Dave G., Frerichs L., Jones J., Kim M., Schaal J., Vassar S., Varma D., Striley C., Ruktanonchai C., Black A., Hankins J., Lovelady N., Cene C., Green M., Young T., Tiwari S., Cheney A., Cottler L., Sullivan G., Brown A., Burke J., Corbie-Smith G.	Conceptualizing trust in community-academic research partnerships using concept mapping approach: A multi-CTSA study	2018	Evaluation and Program Planning	66		Scopus
Cherry M., McGrath D., Baumann C.	Client intimacy & performance advice: determinants of trust in the public accountant SME client relationship	2018	Australasian Accounting, Business and Finance Journal	12	1	Scopus

Khalifa A.H., Saad M.	The determinants of trust in the customer-service provider relationship: The case of Tunisian small and medium sized enterprises (SMEs)	2017	International Journal of Technology Management and Sustainable Development	16	3	Scopus
van Esterik-Plasmeijer P.W.J., van Raaij W.F.	Banking system trust, bank trust, and bank loyalty	2017	International Journal of Bank Marketing	35	1	Scopus
Usman H., Tjiptoherijanto P., Balqiah T.E., Agung I.G.N.	The role of religious norms, trust, importance of attributes and information sources in the relationship between religiosity and selection of the Islamic bank	2017	Journal of Islamic Marketing	8	2	Scopus
Harms P.D., Bai Y., Han G.H.	How leader and follower attachment styles are mediated by trust	2016	Human Relations	69	9	Scopus
Cherry M.	Accounting for trust: A conceptual model for the determinants of trust in the Australian public accountant – SME client relationship	2016	Australasian Accounting, Business and Finance Journal	10	2	Scopus
Hartman L.P., Gedro J., Masterson C.	Navigating the Life Cycle of Trust in Developing Economies: One-size Solutions Do Not Fit All	2015	Business and Society Review	120	2	Scopus
Saleh M.A., Ali M.Y., Quazi A., Wickramasekera R.	A critical appraisal of the relational management paradigm in an international setting: A future research agenda	2015	Management Decision	53	2	Scopus
Cater J.J., III, Kidwell R.E.	Function, governance, and trust in successor leadership groups in family firms	2014	Journal of Family Business Strategy	5	3	Scopus

Bülbül D.	Determinants of trust in banking networks	2013	Journal of Economic Behavior and Organization	85	1	Scopus
Mohr A., Puck J.	Revisiting the Trust-performance Link in Strategic Alliances	2013	Management International Review	53	2	Scopus
Brock J.K.-U., Zhou J.Y.	Customer intimacy	2012	Journal of Business and Industrial Marketing	27	5	Scopus
La S., Choi B.	The role of customer affection and trust in loyalty rebuilding after service failure and recovery	2012	Service Industries Journal	32	1	Scopus
Wright O., Grace A.	Trust and commitment within franchise systems: an Australian and New Zealand perspective	2011	Asia Pacific Journal of Marketing and Logistics	23	4	Scopus
Gamero N., Espluga J., Prades A., Oltra C., Solá R., Farré J.	Institutional dimensions underlying public trust in information on technological risk	2011	Journal of Risk Research	14	6	Scopus
Dyer J.H., Chu W.	The determinants of trust in supplier-automaker relationships in the US, Japan, and Korea	2011	Journal of International Business Studies	42	1	Scopus
Maniscalco C., Daniloski K., Brinberg D.	The impact of relationship stage on the determinants of trust in the pharmacist-client relationship: Results from a social marketing campaign	2010	Social Marketing Quarterly	16	4	Scopus
Roberts J., Merrilees B., Herington C., Miller D.	Building retail tenant trust: Neighbourhood versus regional shopping centres	2010	International Journal of Retail and Distribution Management	38	8	Scopus

Cook K.S., Schilke O.	The role of public, relational and organizational trust in economic affairs	2010	Corporate Reputation Review	13	2	Scopus
Zeffane R.	Towards a two-factor theory of interpersonal trust: A focus on trust in leadership	2010	International Journal of Commerce and Management	20	3	Scopus
Lymperopoulos C., Chaniotakis I.E., Rigopoulou I.D.	Acceptance of detergent-retail brands: The role of consumer confidence and trust	2010	International Journal of Retail and Distribution Management	38	9	Scopus
Sánchez J.Á.L., Vijande M.L.S., Gutiérrez J.A.T.	The impact of relational variables on value creation in buyer-seller business relationships	2010	Journal of Business-to-Business Marketing	17	1	Scopus
Liao L.-F.	Knowledge-sharing in R&D departments: A social power and social exchange theory perspective	2008	International Journal of Human Resource Management	19	10	Scopus
Mäkelä K., Barner-Rasmussen W., Björkman I.	Drivers of interpersonal and inter-unit trust in multinational corporations	2008	Progress in International Business Research	3		Scopus
Faems D., Janssens M., Van Looy B.	The initiation and evolution of interfirm knowledge transfer in R and D relationships	2007	Organization Studies	28	11	Scopus
Adobor H.	Optimal trust? Uncertainty as a determinant and limit to trust in inter-firm alliances	2006	Leadership and Organization Development Journal	27	7	Scopus
Leek S., Turnbull P.W., Naudé P.	Classifying relationships across cultures as successful and problematic: Theoretical perspectives and managerial implications	2006	Industrial Marketing Management	35	7	Scopus

Howorth C., Moro A.	Trust within entrepreneur bank relationships: Insights from Italy	2006	Entrepreneurship: Theory and Practice	30	4	Scopus
Diwakara H.	Determinants of trust and cooperation: Case study of self-managed tubewell organizations in north Gujarat, India	2006	International Journal of Rural Management	2	2	Scopus
Arai K., Oskarsson S., Yamauchi I., Öberg F., Svensson T., Hirano S.	The structure and determinants of trust: The cases of Japan and Sweden	2005	Hitotsubashi Journal of Economics	46	2	Scopus
Sharif K.J., Kalafatis S.P., Samouel P.	Cognitive and behavioural determinants of trust in small and medium-sized enterprises	2005	Journal of Small Business and Enterprise Development	12	3	Scopus
Payne R.L., Clark M.C.	Dispositional and situational determinants of trust in two types of managers	2003	International Journal of Human Resource Management	14	1	Scopus
Czaban L., Hocevar M., Jaklic M., Whitley R.	Path dependence and contractual relations in emergent capitalism: Contrasting state socialist legacies and inter-firm cooperation in Hungary and Slovenia	2003	Organization Studies	24	1	Scopus
Burkink T.	Independent Grocery Retailers and Their Primary Wholesalers: Survey and Implications	2002	Journal of Food Products Marketing	8	2	Scopus
Coulter K.S., Coulter R.A.	Determinants of trust in a service provider: The moderating role of length of relationship	2002	Journal of Services Marketing	16	1	Scopus

Armstrong R.W., Yeein S.M.	Do Chinese trust Chinese? A study of Chinese buyers and sellers in Malaysia	2001	Journal of International Marketing	9	3	Scopus
Nel D., Athron T., Pitt L.F., Ewing M.T.	Customer evaluations of service complaint experiences in the public sector	2000	Journal of Nonprofit and Public Sector Marketing	7	3	Scopus
Dyer J.H., Chu W.	The determinants of trust in supplier-automaker relationships in the U.S. Japan and Korea	2000	Journal of International Business Studies	31	2	Scopus
Jennings D.F., Prof., Artz K., Prof., Gillin L.M., Prof., Christodouloy C., Prof.	Determinants of trust in global strategic alliances: AMRAD and the Australian biomedical industry	2000	Competitiveness Review	10	1	Scopus
Sánchez Pérez M., Mollá Descals M.	Insights into closeness of relationship as determinant of trust within marketing channels	1999	Journal of Marketing Channels	7	43132	Scopus
Fisman R., Khanna T.	Is trust a historical residue? Information flows and trust levels	1999	Journal of Economic Behavior and Organization	38	1	Scopus
Sako M., Helper S.	Determinants of trust in supplier relations: Evidence from the automotive industry in Japan and the United States	1998	Journal of Economic Behavior and Organization	34	3	Scopus
Zaheer A., Venkatraman N.	Relational governance as an interorganizational strategy: An empirical test of the role of trust in economic exchange	1995	Strategic Management Journal	16	5	Scopus

COOK J., WALL T.	New work attitude measures of trust, organizational commitment and personal need non-fulfilment	1980	Journal of Occupational Psychology	53	1	Scopus
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Appendix XV

The Scopus Indicators of Trust

ability (1)	credible (1)	faith (1)	justice (1)	reputation (4)
acceptance (1)	cultural values (similarity) (1)	flexibility (2)	leadership (1)	respect (2)
ambition (1)	culture (1)	Frequency (order) (1)	loyalty (1)	responsiveness (1)
asset specificity (1)	customer orientation (1)	governance mechanism (4)	mediator (1)	satisfaction (1)
attitude (1)	customization (product) (1)	honesty (1)	need (fulfillment) (1)	similarity (1)
behaviour (1)	decision making (1)	identity (organisation) (1)	openness (1)	stability (1)
benefit & risk sharing (2)	demographics (1)	implicit & explicit rules (1)	order (discipline) (1)	sustainability (1)
benevolence (1)	duration (2)	impressions (first) (1)	passion (1)	technical assistance (1)
brand (1)	economic attributes (1)	information sharing (3)	performance (1)	transparency (1)
commitment (4)	education (1)	innovation (2)	politeness (1)	uncertainty (2)
communication (9)	empathy (1)	integrity (3)	power (2)	values (similarity) (3)
competence (4)	empowerment (1)	intention (perceived) (1)	problem solving (3)	
competition (4)	expectation (2)	interdependence (2)	promptness (2)	
confidence (2)	experience (2)	intimacy (1)	reciprocity (1)	
cooperation (1)	expertise (2)	investment (1)	relationship (5)	
courage (1)	fairness (2)	involvement (2)	religion (1)	

Appendix XVI

Industry Feedback – Introduction / Invitation Letter



Interview Invitation

Dear (name),

We are currently conducting a study into trust in the buyer and supplier relationship. The objective of the study would be to examine the correlation of trust indicators as interpreted by the media in comparison to trust indicators as interpreted by supply chain professionals.

We would like to invite you to participate by conducting a 30 minute interview. The interview would utilise a combination of a questionnaire and a set of predetermined questions. The interview will be conducted at a time and a venue convenient to you.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2019-0356).

We look forward to your reply.

Best regards,

Nicolas van der Nest
PhD Student Supply Chain Management at Curtin University

Adil Hammadi
Lecturer – Curtin University

Torsten Reiners
Lecturer - Curtin University

Appendix XVII

Industry Feedback – Verbal Interview Questions



Interview Questions (verbal)

The interview questions below define a framework and will be covered in the interview following the previous parts. The order of the questions is not necessarily presented in the below stated order.

1. In your industry are there any indicators of trust that you find particularly helpful in building trust with a trade-partner?
2. In your industry are there any indicators of trust that you find burdensome in building trust with a trade-partner?
3. Do you have experience with any trade partner that is especially trustworthy? Why do you think that is the case? (Interviewer makes sure that the trade partner is not named)
4. Do you think there is something that the organisation can do to improve their current trust level even more?
5. When thinking of the all your trade-partners is there an organisation that you feel is especially untrustworthy? (Interviewer makes sure that the trade partner is not named). Why do you think that is the case?
6. What can an organisation do to improve their status of they are identified as untrustworthy?

Background:

Appendix XVIII

Industry Feedback – Consent Form

Trust Indicators used Industry



Curtin University

CONSENT FORM

HREC Project Number:	HRE2019-0356
Project Title:	Trust indicators used in the industry
Chief Investigator:	Dr. Torsten Reiners, Senior Lecturer, Curtin University, PhD IS/Edu, Dipl. IS, Ba CS.
Contact Details:	t.reiners@curtin.edu.au
Student researcher:	Nicolas van der Nest, PhD Student
Version Number:	A
Version Date:	25/10/2018

<input type="checkbox"/> I do	<input type="checkbox"/> I do not	consent to you using any data I provided before withdrawing from the study
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<input type="checkbox"/> I do	<input type="checkbox"/> I do not	consent to being audio-recorded
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<input type="checkbox"/> I do	<input type="checkbox"/> I do not	consent to be identified in the research thesis by name
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<input type="checkbox"/> I do	<input type="checkbox"/> I do not	consent to be identified in the research thesis by my organisational title
-------------------------------	-----------------------------------	--

- I have read, the Participant Information Statement Version A and I understand its contents including possible risks and inconvenience.
- I believe I understand the purpose, extent and possible risks of my involvement in this project.
- I voluntarily consent to take part in this research project and understand I can withdraw at any time.
- I have had enough time and opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007) updated March 2014.
- I understand I will receive a copy of the Information Statement and Consent Form.

Participant Name	
Participant Signature	
Date	

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project.

Researcher Name	
Researcher Signature	
Date	

Appendix XIX

Industry Feedback Executive Summary & Questionnaire



Executive Summary

Trust between the buyer and the supplier remains to be a pivotal element in the creation and maintenance of a sustainable supply chain. However, not all research agrees to which trust indicators are essential to trust relationships and which are 'nice' to have yet not essential. The study focusses on a list of fifty-one trust factors identified in a prior stage of the research.

Purpose

The objective of the study would be to examine the correlation of trust indicators as interpreted by the media in comparison to trust indicators as interpreted by supply chain professionals.

Scope

The concepts utilised representing the various trust factors should be interpreted by the interviewee to represent their own interpretation of the concepts. Similarly, the importance of the trust factors should represent the importance each trust factor plays in the interviewee's related field. Due to the ambiguous nature of some of the concepts further clarification may be provided by the interviewers provided that the interviewers take great care in not projecting their own bias when doing so.

Methodology

The interview consists of three sections; firstly, a list of trust factors, the interviewee is provided with a list of trust factors (Appendix A) where they must rate the importance of each trust factor on a scale from 1 to 5, where one indicates extremely poor and five extremely well.

The second section utilises multiple tables consisting of concepts grouped by theme by the authors (Appendix B). The interviewee is required to identify then whether they agree or disagree with the groupings.

Each choice should be circled clearly for identification. The interviewee is then asked to suggest a title for each grouping that best describes it. If the interviewee indicated that they did not agree with the contents of the table, they are asked to provide the reasoning for the choice. The final stage of the interview consists out of the question and answer section where the interviewee is asked to provide insight on multiple questions on trust in relation to their field or industry (questions not provided before the interview).

Conclusion

In conclusion, the interview process is straight forward in consisting of three sections. The first section where the interviewee is asked to provide in their opinion the importance of each concept for creating trust in their field or industry. The second section, where the interviewee is asked to provide insight whether the groupings of concepts are correct or not. While being asked to contribute a title for each grouping. The final section, consists of a short question and answer sections. Where the interviewers ask general questions on the topic of trust and their interpretation of trust in their respective areas.

Appendix A

Trust Factors

On a scale between 1 and 5 how important do you find the concept to trust a trade-partner?
(1 not at all, 5 extremely important)

Concept	Rating (1 - 5)	Concepts	Rating (1 - 5)
accountability		legal	
accuracy		legitimate	
altruism		location	
believability		loyalty	
benevolence		natural phenomena	
collaboration		networking	
commitment		objective	
communication		performance	
competence		quality	
confidence		reciprocity	
contract		reliability	
cooperation		reputation	
credibility		respect	
culture		responsibility	
demographics		responsiveness	
duration		security	
ethics		service	
fairness		social bonds	
flexibility		social responsibility	
honesty		support	
independent		sustainability	
innovation		traceability	
input		transparency	
integrity		value	
investment		visibility	
leadership			

Appendix B

Groupings

Do you agree with the grouping of the terms? (Circle choice)

Group 1

YES / NO

Credibility	Fairness
Believability	Reciprocity
Confidence	Benevolence
Leadership	Honesty
Ethics	Integrity
Altruism	

What would you title the grouping?

If NOT, why?

Group 2

YES / NO

Traceability	Social Responsibility
Accountability	Legitimacy
Contract	Security

What would you title the grouping?

If NOT, why?

Group 3

YES / NO

Corporate culture	Demographics
Location	Natural Phenomena

What would you title the grouping?

If NOT, why?

Group 4

YES / NO

Reliability	Responsibility	Commitment
Loyalty	Duration	Sustainability

What would you title the grouping?

If NOT, why?

Group 5

YES / NO

Networking
Communication
Transparency
Visibility

What would you title the grouping?

If NOT, why?

Group 6

YES / NO

Competence	Accuracy
Objective	Quality
Performance	Value
Service	

What would you title the grouping?

If NOT, why?

Group 7

YES / NO

Innovation
Investment

What would you title the grouping?

If NOT, why?

Group 8

YES / NO

Reputation
Respect

What would you title the grouping?

If NOT, why?

Group 9

YES / NO

Input from other	social bonds
support	cooperation
collaboration	independent
responsiveness	flexibility

What would you title the grouping?

If NOT, why?

Appendix XX

Industry Feedback – 5 – Point Likert Scale

	IOT1	IOT2	IOT3	IOT4	IOT5	Total Received	Maximum Total	Standard Deviation
accountability	5	4	5	5	5	24	25	0.400
accuracy	5	5	5	5	4	24	25	0.400
altruism	3	3	4	3	3	16	25	0.400
believability	5	4	3	5	2	19	25	1.166
benevolence	4	4	3	1	3	15	25	1.095
collaboration	3	4	4	5	5	21	25	0.748
commitment	4	4	5	4	5	22	25	0.490
communication	5	4	5	5	4	23	25	0.490
competence	5	5	4	5	4	23	25	0.490
confidence	4	4	3	5	3	19	25	0.748
contract	4	5	4	5	4	22	25	0.490
cooperation	3	5	4	5	5	22	25	0.800
credibility	4	5	3	5	5	22	25	0.800
culture	3	3	3	4	4	17	25	0.490
demographics	3	3	3	3	3	15	25	0.000
duration	3	4	1	5	1	14	25	1.600
ethics	5	5	5	5	5	25	25	0.000
faimess	3	5	4	5	5	22	25	0.800
flexibility	5	4	4	5	4	22	25	0.490
honesty	4	5	4	5	5	23	25	0.490
independent	3	4	2	5	3	17	25	1.020
innovation	4	5	2	5	4	20	25	1.095
input	3	4	3	5	5	20	25	0.894
integrity	5	5	4	5	5	24	25	0.400
investment	5	3	1	5	4	18	25	1.497
leadership	3	3	4	5	5	20	25	0.894

legal	5	5	5	5	3	23	25	0.800
legitimate	4	5	4	5	5	23	25	0.490
location	4	3	5	5	3	20	25	0.894
loyalty	4	4	4	4	4	20	25	0.000
natural phenomena	3	3	3	3	3	15	25	0.000
networking	3	3	3	4	3	16	25	0.400
objective	3	3	3	5	3	17	25	0.800
performance	4	5	4	5	4	22	25	0.490
quality	4	5	4	5	4	22	25	0.490
reciprocity	4	3	3	3	4	17	25	0.490
reliability	4	5	5	5	5	24	25	0.400
reputation	4	5	3	5	4	21	25	0.748
respect	4	5	4	5	5	23	25	0.490
responsibility	4	5	5	5	5	24	25	0.400
responsiveness	5	5	5	5	4	24	25	0.400
security	4	3	3	5	3	18	25	0.800
service	4	5	4	5	5	23	25	0.490
social bonds	4	3	3	2	1	13	25	1.020
social responsibility	3	3	5	5	3	19	25	0.980
support	4	3	3	4	5	19	25	0.748
sustainability	4	5	5	5	4	23	25	0.490
traceability	5	5	5	5	3	23	25	0.800
transparency	5	5	4	5	4	23	25	0.490
value	4	5	4	5	5	23	25	0.490
visibility	4	5	3	4	3	19	25	0.748

Appendix XXI

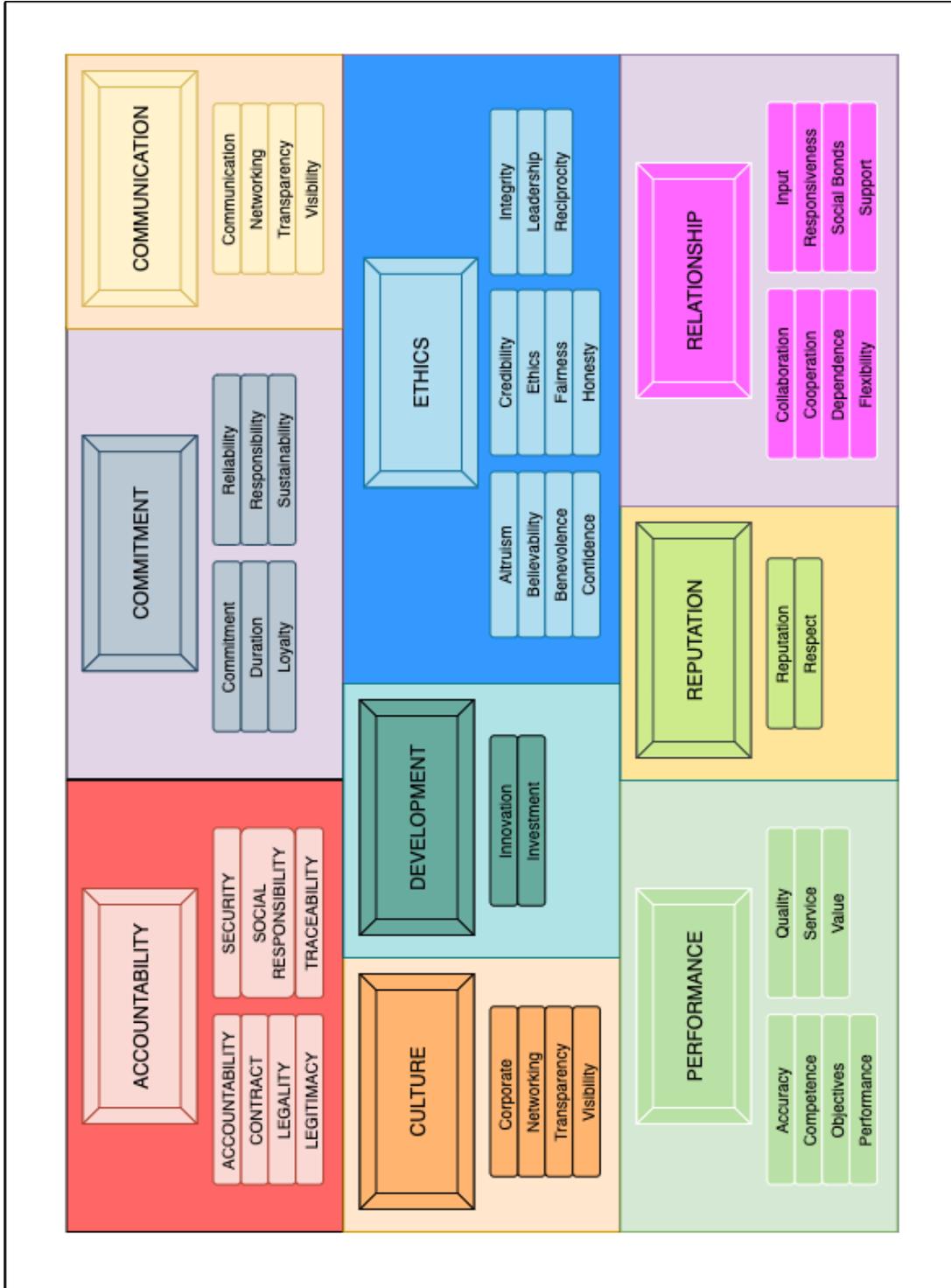
Interview Likert data and Factiva data

FACTIVA				INTERVIEWS			
Indicators	Instances	Rank	Total %	Interview Likert	Total [25 Max]	Rank	Total %
performance	129	1	19.111%	ethics	25	1	100%
reputation	76	2	11.259%	accountability	24	2	96%
communication	64	3	9.481%	accuracy	24	2	96%
faimess	53	4	7.852%	integrity	24	2	96%
duration	48	5	7.111%	reliability	24	2	96%
quality	44	6	6.519%	responsibility	24	2	96%
security	31	7	4.593%	responsiveness	24	2	96%
social bonds	28	8	4.148%	communication	23	3	92%
transparency	24	9	3.556%	competence	23	3	92%
investment	23	10	3.407%	honesty	23	3	92%
collaboration	22	11	3.259%	legal	23	3	92%
culture	17	12	2.519%	legitimate	23	3	92%
demographics	9	13	1.333%	respect	23	3	92%
legal	9	14	1.333%	service	23	3	92%
sustainability	7	15	1.037%	sustainability	23	3	92%
integrity	6	16	0.889%	traceability	23	3	92%
accountability	5	17	0.741%	transparency	23	3	92%
altruism	5	17	0.741%	value	23	3	92%
cooperation	5	17	0.741%	commitment	22	4	88%
honesty	5	17	0.741%	contract	22	4	88%
commitment	4	18	0.593%	cooperation	22	4	88%
credibility	4	18	0.593%	credibility	22	4	88%
flexibility	4	18	0.593%	faimess	22	4	88%
value	4	18	0.593%	flexibility	22	4	88%
visibility	4	18	0.593%	performance	22	4	88%

accuracy	3	19	0.444%	quality	22	4	88%
competence	3	19	0.444%	collaboration	21	5	84%
ethics	3	19	0.444%	reputation	21	5	84%
location	3	19	0.444%	innovation	20	6	80%
networking	3	19	0.444%	input	20	6	80%
support	3	19	0.444%	leadership	20	6	80%
traceability	3	19	0.444%	location	20	6	80%
innovation	2	20	0.296%	loyalty	20	6	80%
legitimate	2	20	0.296%	believability	19	7	76%
reliability	2	20	0.296%	confidence	19	7	76%
responsibility	2	20	0.296%	social responsibility	19	7	76%
service	2	20	0.296%	support	19	7	76%
believability	1	21	0.148%	visibility	19	7	76%
benevolence	1	21	0.148%	investment	18	8	72%
confidence	1	21	0.148%	security	18	8	72%
contract	1	21	0.148%	culture	17	9	68%
independent	1	21	0.148%	independent	17	9	68%
input	1	21	0.148%	objective	17	9	68%
leadership	1	21	0.148%	reciprocity	17	9	68%
loyalty	1	21	0.148%	altruism	16	10	64%
natural phenomena	1	21	0.148%	networking	16	10	64%
objective	1	21	0.148%	benevolence	15	11	60%
reciprocity	1	21	0.148%	demographics	15	11	60%
respect	1	21	0.148%	natural phenomena	15	11	60%
responsiveness	1	21	0.148%	duration	14	12	56%
social responsibility	1	21	0.148%	social bonds	13	13	52%

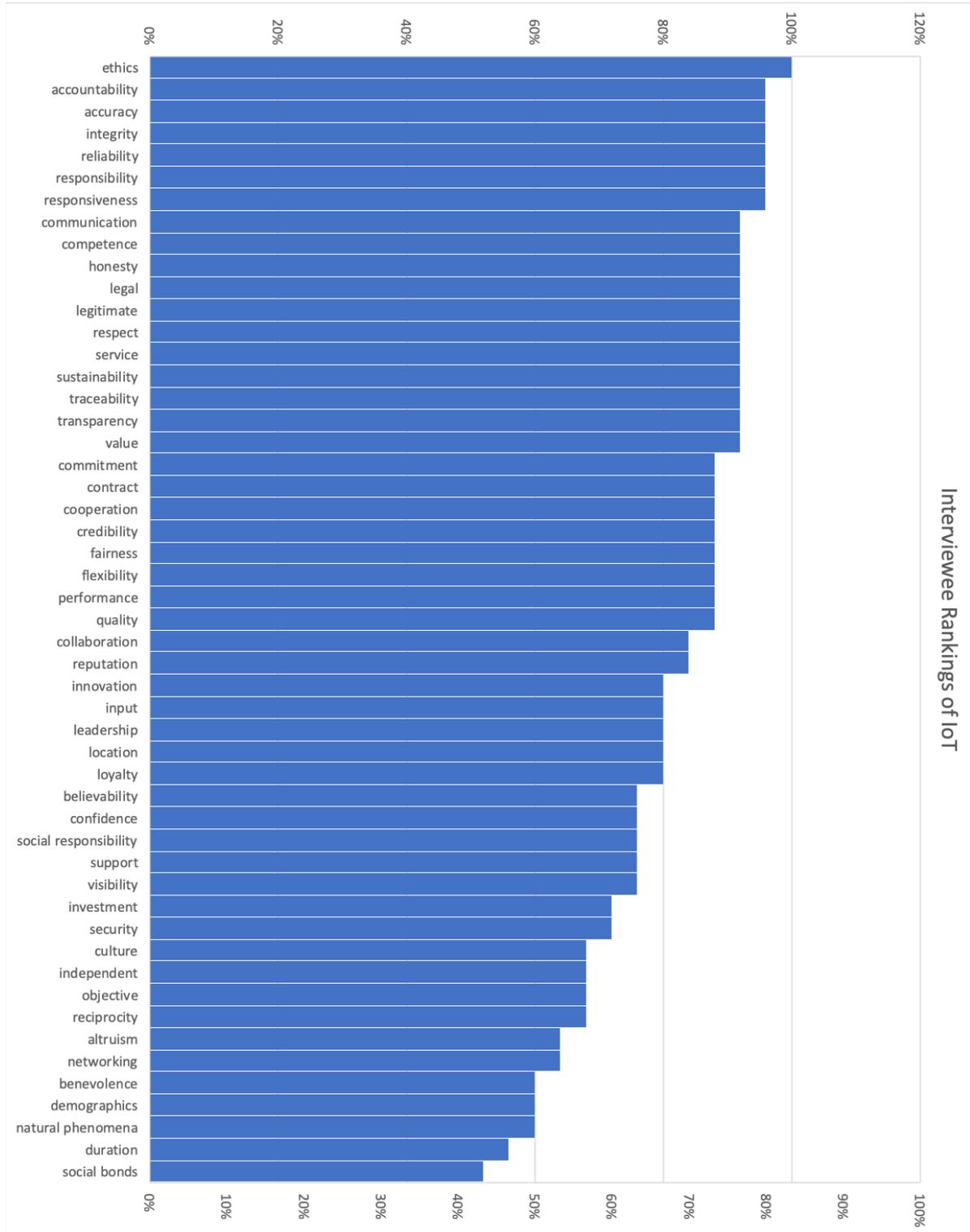
Appendix XXII

TMS Trust Clusters



Appendix XXIII

Indicators of Trust Interview Rank



Appendix XXIV

TMS Phase 2:C Problem Solving Guide

TRUST MANAGEMENT SYSTEM			
PHASE 2: C PROBLEM SOLVING Guide			
ACCOUNTABILITY			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Accountability	Supplier	Delay	<i>Inform buyer & provide new delivery date. If delay is substantial offer a discount.</i>
Contract			
Legality			
Legitimacy			
Security			
Social Responsibility			
Traceability			
COMMITMENT			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Commitment			
Duration			
Loyalty			
Reliability			

Responsibility			
Sustainability			
COMMUNICATION			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Communication			
Networking			
Transparency			
Visibility			
CULTURE			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Corporate Culture			
Location			
Demographics			
Natural Phenomena			
DEVELOPMENT			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Innovation			

Investment			
ETHICS			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Altruism			
Believability			
Benevolence			
Confidence			
Credibility			
Ethics			
Fairness			
Honesty			
Integrity			
Leadership			
Reciprocity			
PERFORMANCE			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Accuracy			
Competence			
Objectiveness			
Performance			

Quality			
Service			
Value			
REPUTATION			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Reputation			
Respect			
RELATIONSHIP			
Indicators of Trust	Stakeholder	Potential Problems	Steps to Resolve
Collaboration			
Cooperation			
Dependence			
Flexibility			
Input			
Responsiveness			
Social Bonds			
Support			

Appendix XXV

The Literature Review

The Literature Review		
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