Relationship Bonding, Trust and Cultural Distance in Strategic International Public-Private Partnerships in Africa

by

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Abstract

Strategic international public-private partnerships (SIPPPs) involve private multinational and public domestic sector parties. SIPPPs are a more complex but less studied form of international strategic alliance (ISA) and increasingly important in the development of emerging economies. A growing body of ISA research has suggested the importance of cultural differences in the often-reported failure of such cross-cultural relationships, but their exact nature remains unknown. This study examines the effects of both national and organisational cultural value systems on trust-building in SIPPPs. It uniquely also tests whether the two types of cultural values are accorded differently by the two types of partner, private and public.

The complex relationship building processes were studied through the combined lenses of social-exchange and cultural-exchange theories, providing a rich perspective on the phenomenon under study. The sample, based on purposive sampling, consisted of successful and unsuccessful SIPPS of various sizes, from different industries, operating in a number of African countries. Africa, with its challenging environment and increasing focus on SIPPPs, represented an "extreme context" within which hypotheses could be rigorously tested. The relationships were tested empirically using structural equation modelling.

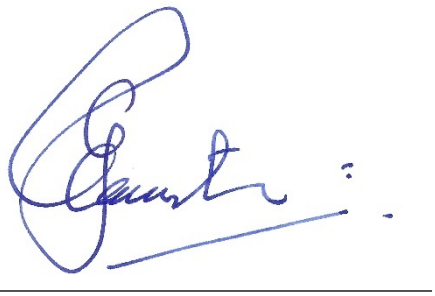
The study confirmed a strong relationship between partners' economic and collaborative interdependency on the one hand, and mutual trust-levels on the other. Cultural difference was shown to have both a negative direct effect as well as a positive moderating effect on trust building, providing support for the notion of a "cultural paradox". Strong evidence was provided that partners from opposite sides of the dyad, informed by their respective cultural backgrounds, have different perceptions of the relative importance of these relationships in building trust.

The findings have theoretical and practical significance, suggesting that SIPPP partners can improve trust levels and sustain their relationship by building ties of economic interdependence and engaging in collaborative actions to build their collaborative interdependence. The importance of partners being sensitive to each other's needs and perceptions, and of engaging in reciprocity to build mutual confidence and trust seems critical. The findings have important implications for SIPPP design and needed management skills, as well as for future cross-cultural dyadic research.

KEYWORDS: Strategic international public-private partnership, international strategic alliance, economic interdependence, collaborative interdependence, trust, national cultural distance, organisational cultural distance, Africa.

Declaration

I, Gerardus Jan van den Houten, declare that this thesis is my own work. It is submitted in partial fulfilment of the requirements for the degree of Doctor of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.



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Dedication

This thesis is dedicated to my family, who have supported me throughout this fascinating journey and who have always been my rock in life. To my wife, Helen, and to my children, Kristy, Peter, Robert (1986-2006), Adam and Claire, and their partners and children.

This research is also dedicated to the people of Africa who deserve a better economic deal than they care currently getting. I hope that this study will in some small way contribute to that quest.

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Last, but not least, to my wife, Helen, for believing in me and for stoically putting up with my many mental absences during the long hours working on this research, and for accepting the postponement of all the good things we still want to do together.

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List of Acronyms

AIC	Akaike Information Criterion
AVE	Average variance extracted
CB-SEM	Covariance based Structural Equation Modelling
CET	Cultural exchange theory
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CLF	Common latent factor
CMB	Common method bias
CR	Composite reliability
Coll_Int	Collaborative interdependency
Ec_Int	Economic interdependency
GDP	Gross domestic product
ISA	International strategic alliance
IJV	International joint venture
JV	Joint venture
LDC	Lesser developed country
ML	Most likely (method of estimation) – used in SEM
MSV	Maximum shared variance
NCD	National cultural distance
NGO	Non-governmental organisation=
OCD	Organisational cultural distance
PPP	Public-private partnership
RMSEA	Root mean squared error of approximation
SEM	Structural equation modelling
SET	Social exchange theory
SIPPP	Strategic International Public-Private Partnership
TLI	Tucker-Lewis index
Tr	Trust
VIF	Variance inflation factor

CHAPTER 1: INTRODUCTION

1.1. Introduction

The concept of the international strategic alliance (ISA) and the international joint venture (IJV), on which the strategic international public-private partnership or SIPPP, the focus of this research, is modelled, grew in popularity from the 1970's to the early 2000's. This growth was driven primarily by the forces of globalisation and the desire by large conglomerates and successful domestic companies to take on a more multinational character by engaging in fruitful cross-border alliances (Gomes, Barnes, & Mahmood, 2016; Choi, Hise, Bagozzi, & Fadil, 2010; Robson, Katsikeas, & Bello, 2008; Kaufman & O'Neil. 2007; Simonin, 2004; Todeva, & Knoke, 2005). Often such partnerships involved for profit organisations driven by economic benefits, including (but not limited to): the expansion of the firm's market base by entering new markets; the acquisition of unique and cheaper resources (new technology or labour); the development of new products; and the improvement of overall operational effectiveness (Choi *et al*., 2010). In simple terms, a firm engaged in a strategic alliance to obtain the resources that it needed but lacked, and then capitalised on the complementary resources provided by its partner (Das & Teng, 2000; Oliver, 1997; Simonin, 2004).

The reported high failure rate at the time of both IJVs and ISAs, estimated to be between 40 and 80 percent (Geringer & Herbert, 1991; Madhok, 1995a, 2006a, 2006b; Beamish, 1993) and reputed to be towards the top end of this range in the developing economies (Parkhe, 1993), generated a considerable volume of research into these institutional forms, starting in about 1985 and continuing to the early 2000's. Most of the important research advances into these two institutional forms dates back to this period of prolific cross-cultural research involving both ISAs and IJVs. Although there was a hiatus in this type of research in the intervening years, there has been a recent surge of new interest in strategic international alliances by scholars interested in and concerned by the ongoing "dismal failure" record of these cross-cultural institutions (Gomes *et al*., 2016; Gomes, Weber, Brown, & Tarba, 2011). Although frequently speculated on and often attributed to structural factors, the real reasons behind these high failure rates are still not that well understood, and remain obscure (Christoffersen, 2013; Gomes *et al*., 2016). However, from more recent research, with the focus moving to effective management of these alliances, cross cultural understanding and company performance (Ren, Gray, & Kim, 2009), it is becoming clearer that the failure of the partners to form sustainable trusting relationships in a multi-cultural context is invariably a major, if not the major, contributing factor (Gomes *et al*., 2016).

The strategic international public-private partnership or SIPPP is a special form of ISA or IJV, and is essentially a business partnership or alliance between a multinational private company and a local domestic government / state institution for a particular purpose. This form of alliance has attracted worldwide attention in recent years, its numbers growing exponentially since the early 1980's. Over the past two decades this institutional form has evoked new interest, particularly in the context of developing countries and emerging economies (Gomes *et al*., 2016; Gomes *et al*., 2011; Christoffersen, 2013; Claeye & Jackson, 2011; Tang, Shen, & Cheng, 2010; Valente, 2010; Kwak, Chich, & Ibbs, 2009), where this type of alliance form is estimated to have contributed up to 60 % of foreign direct investment in the last decade (Damanpour, Devece, Chen, & Pothukuchi, 2012).

The notion of utilising the private sector in partnership with government as a means of addressing some of the social, infrastructural and ecological issues in developing countries has a certain appeal and has become an area of focus in the international development and management literature (Gomes *et al*., 2016; Valente, 2010; Diao, Hazell, Resnick, & Thurlow, 2007). The popularity of this institutional arrangement in the development of emerging economies stems from its promise of efficiency savings and reduced burden on strained public resources, which are often held up as its main perceived benefits (Tang *et al*., 2010; Jamali, 2004). The growing appreciation of the importance of the market mechanism in emerging economies, coupled with the success of privatisation in various countries, has helped to raise the profile of the SIPPP, and this type of institution is increasingly being heralded as an innovative policy tool for remedying the lack of dynamism and capacity in traditional public service delivery (Dykes & Jones, 2016; Jamali, 2004). Several developing countries in SE Asia, Latin America, Eastern Europe and, more recently, in Africa, have initiated SIPPPs in various sectors of their economies, including infrastructure (Gomes *et al*., 2016; Tang *et al*., 2010; Farlam, 2005; Valente, 2010), manufacturing (Christoffersen, 2013; Jamali, 2004; Farlam, 2005; Valente, 2010), health (Claeye & Jackson, 2011) and services (Christoffersen, 2013; Jamali, 2004; Farlam, 2005).

Closer to home, African governments, most having only relatively recently emerged from a long period of fundamental socialism, are looking more and more to the public-private partnership model involving international partners to provide the capacity, skills and knowledge to radically improve the infrastructure in their countries (Farlam, 2005; Valente, 2010; Claeye & Jackson, 2011; Diao *et al*., 2007). Sadly, despite the strong argument that this type of socio-economic partnership between a domestic public-sector and international private enterprise can (and should) be beneficially applied in all sectors of the economy, it has, up to now, largely failed to become the catalyst for broad economic growth on the continent as

originally hoped (African Development Bank, 2017). In reality such partnerships have only found limited application outside of the traditional sectors in which they have been employed, namely infrastructure development, mining, services and health-care (Dykes & Jones, 2016; Farlam, 2005; African Development Bank, 2017). One of the possible reasons behind the reluctance of African governments to engage more in SIPPPs to address the development gap in their countries is, as already mentioned, the widely reported high failure rate of similar cross-cultural alliances globally. The statistic for SIPPPS in Africa is similar (Dykes & Jones, 2016; Farlam, 2005), and it is thought that the main reason behind the failures is similar to that posited for the ISA, i.e., the failure of the partners to form sustainable trusting relationships in a multi-cultural context. However, with the high projected growth rate for sub-Saharan Africa over the next five years and the growing priority of the infrastructural agenda, governments are showing increased interest in the SIPPP as the preferred tool for economic development and for contributing to their socio-economic agenda (African Development Bank, 2017, McKinsey Global Institute, 2016). This will ensure that the SIPPP takes its rightful place in the socio-economic development of the region over the next two decades. The future role of the SIPPP in sub-Saharan Africa is reviewed in Chapter 2.

For the purposes of this research, a SIPPP is defined as *a collaboration or co-operative arrangement between a local public entity and a multinational private sector entity in which the partners jointly plan and execute activities to accomplish agreed-upon objectives, while sharing the costs, resources, risks and benefits incurred in the process* (Spielman, Hartwich, & von Grebmer, 2010). A SIPPP can take on various organisational forms across a wide continuum: from the formal, contractual type (as for example the joint venture or JV), to the informal type based on an understanding between the partners (a loose alliance), the important factor being that the partnering between the public and private entities involves some form of collaboration in the pursuit of a common objective (Jamali, 2004).

The current chapter outlines the rationale for the study and provides the background to the research problem by arguing that, in the context of global and culturally diverse partnerships, the processes behind sustainable trust-forming relationships in these institutions and how they are impacted by differences in cultural values are not well understood. A case is made that, while this is relevant and important from a research perspective into cross-cultural alliances in general, it has specific theoretical and practical relevance for the SIPPP, arguably a more complex form of ISA and the focus of this study, because of its strategic role in the economic development of the lesser developed countries or LDCs, in particular those on the African continent. The context of the research problem is framed, the purpose and relevance of the study are discussed and its scope delineated. The chapter concludes with a summary of the thesis structure and the organisation of the chapters.

1.2. Background and Context

The popularity and proliferation of IJVs / ISAs has spawned a stream of rich literature examining all aspects of this institutional form, from formation to implementation, operation and performance (Christoffersen, 2013; Gomes *et al*., 2016; Robson *et al*., 2008). However, despite being the subject of intensive research during the entire period from the early 1980's until now, leading to a plethora of research literature, the core concepts of IJV / ISA operation and how relationships between culturally divergent partners develop are still largely clouded in mystery. This stems mainly from the inherent complexity of such partnerships / alliances and the involvement, by definition, of a mixture of different cultures (Ozorhon, Arditi, Dikmen, & Birgonul, 2008). Furthermore, researchers have tended to focus predominantly on the formation stage and performance of the ISA / IJV (often viewed through the theoretical lens of one of the economic frameworks, such as Resource Based View or Transaction Cost Theory), but less so on the implementation and operating phases (Gomes, *et al*., 2016; Beamish & Lupton, 2009; Choi *et al*., 2010). The latter requires more of a focus on the interactive (dynamic) relationship-building processes. This may, to a certain extent, explain the relatively high failure rate observed for ISAs / IJVs and our inability to offer a satisfactory explanation (Choi *et al*., 2010; Gomes *et al*., 2016). According to this perspective, more attention needs to be given to how the partners should develop their relationship after the ISA / IJV is created, especially how they should collaborate to build mutual trust so that the alliance's pooled resources can be effectively managed to drive value in the value chain in order to achieve the alliance's business objectives (Choi, *et al*., 2010).

The research literature points very strongly to the fact that most of the reported failures in these relationships are due in some way to such alliances experiencing complications caused by cultural differences between the partners (Dykes & Jones, 2016; Das & Teng, 1998, 2000; Ring & Van de Ven, 1994; Madhok, 1995a, 2006a, 2006b; Das, 2005; Das & Rahman, 2010). It clearly highlights the crucial importance of a sustainable and trusting relationship between participants in determining a successful outcome for the cross-cultural alliance (Tang *et al*., 2010; Chan, Chan, & Ho, 2003). However, despite frequent reference in the research literature pointing to cultural difference as the main factor behind the breakdown of relationships in these cross-cultural alliances, leading to the erosion of trust and the inevitable failure of the enterprise, only scant attention has been paid to cross-cultural interactions in multi-national alliances, with only limited research effort having gone into studying the phenomenon in any detail (Gomes *et al*., 2016; Claeye & Jackson, 2011).

Research into cross-cultural alliance processes, where one of the partners is from the public-sector, as is the case in the SIPPP, is even more sparse than in the case of IJVs / ISAs. Even

then, where research has been done on these institutions, the studies have generally been based on developed countries, with limited applicability in a developing country context (Gomes *et al*., 2016; Christoffersen, 2013). However, it seems reasonable to assume that, in the case of the SIPPP, such cultural differences will be exaggerated by the fact that the partners also have different organisational backgrounds (i.e., one from the public sector and the other from the private sector) with different organisational cultures in addition to their national cultural differences (Slater & Robson, 2012; Klijn & Teisman, 2002; Koppenjan, 2005; Trafford & Proctor, 2006).

An elucidation of the role played by cultural differences in the relationship-forming processes between culturally diverse partners (in terms of national as well as organisational culture) is called for. This may provide plausible explanations of the effect of these differences on the building of trusting relationships as a possible factor influencing alliance outcomes, including their success or failure.

1.3. The Research Problem

Strategic cross-cultural alliances, where partners agree to pool their resources to achieve a particular purpose, whether driven by profit or non-profit motives, are, by their nature, complex organisations (Slater & Robson, 2012; Choi *et al*., 2010; Inkpen & Beamish, 1997; Kaufman & O'Neil. 2007; Simonin, 2004; Robson *et al*., 2008; Koschmann, Kuhn, & Pfarrer, 2012). Studies have generally shown that the building of trust among the partners in such cross-cultural alliances is fundamental to achieving satisfactory outcomes for the alliance. This trust has been referred to by scholars as the relationship “building block” (Dash, Bruning, & Guin, 2007) or the “chemistry” (Inkpen & Birkenshaw, 1994) that ensures a successful outcome. Trust has been theorised to be the sentiment or expectation amongst the partners that each will perform actions that will result in positive outcomes for the other and not take opportunistic actions that would result in negative outcomes (Morgan & Hunt, 1994; Madhok, 1995a). A trust relationship is established when expectations are raised by one party and fulfilled by the other (Rodríguez & Wilson, 2002; Caceres & Paparoidamis, 2007).

The effective building of trust is important because it facilitates co-operation and co-ordination and assists in the building of interdependency between partners (Dash *et al*., 2007). It furthermore affects the bargaining power of the partners (Inkpen & Birkenshaw, 1994) and infuses the relationship with value by lowering transaction costs (Madhok, 1995a, 2006b, 2006a, 1995b), lowering the cost of co-ordination and control activities (Katsikeas, Skarmeas, & Bello, 2009) and reducing complexity and uncertainty (Rodríguez & Wilson, 2002). In virtuous combination these increase the level of knowledge transfer and potential for learning

(Liu, 2012; Nielsen, 2007) and become an important source of competitive advantage and performance (Robson *et al*., 2008).

The importance of a trusting relationship also lies in the fact that trust and commitment are closely related, the building of trust simultaneously generating commitment and ultimately performance (Madhok, 1995a, 2006b, 2006a, 1995b; Rodríguez & Wilson, 2002; Katsikeas *et al*., 2009; Inkpen & Currall, 2004; Beamish, 2006; Ng, Lau, & Nyaw, 2007; Caceres *et al*., 2007). Commitment is the "enduring desire to maintain a valued relationship" (Dash *et al*., 2007) and is a prerequisite for successful strategic alliances (Inkpen & Birkenshaw, 1994). This basically means that a committed partner wants the relationship to endure indefinitely (or at least for the time period envisaged for the fixed-term alliance), and is willing to put in maximum effort at maintaining it (Morgan & Hunt, 1994).

The relationship-building processes leading to trust as referred to above, which involve the resource- and knowledge-exchange so fundamental to the successful operation of the alliance, do not happen in a vacuum, but, by definition, in a multi-cultural environment, determined by national as well as organisational cultural differences. Cultural diversity adds a further level of complexity to the management of this type of alliance. Complications due to cultural differences between partners, have been shown in research to be a major factor in the breakdown of relationships and an important contributory factor to the high failure rate of ISAs (Gomes *et al*., 2016; Christoffersen, 2013; Dykes & Jones, 2016; Das & Rahman, 2010; Tang *et al*., 2010). Topping the list of complications are difficulties stemming from lack of trust (Das & Teng, 1998; Ring & Van de Ven, 1994; Madhok, 1995a, 2006b, 1995b), deceit and opportunism (Das, 2005; Das & Rahman, 2010; Madhok, 1995b).

Notwithstanding the above, there is a dearth of prior research into the complex relationship-building processes and the factors facilitating the development of trusting relationships in such cross-cultural alliances (Choi *et al*., 2010; Ozorhon *et al*., 2008). In particular, very few studies have examined in any depth the effects of national cultural differences on these complex trust-forming relationships, and even fewer have done so in combination with organisational cultural differences (Ryu, Lee, & Lee, 2011). Furthermore, large-scale empirical studies, particularly in transitional economies, on the role of cultural difference in the trust-building processes have rarely been conducted (Christofferson, 2013; Dykes & Jones, 2016; Ng *et al*., 2007), although the frequency has increased in recent years (Gomes *et al*., 2016).

It seems likely that relationships in these multicultural institutions will, at least in part, be influenced by cultural aspects, which affect attitudes and perceptions that feed into the building of trust (Liu, 2012). In the case of the SIPPP, national cultural differences that may exist are further accentuated by the fact that the partners are from different organisational forms,

imbued with their own particular cultures. It can therefore be speculated that the cultural difference between partners in a SIPPP is a major challenge to building sustainable trusting relationships in this form of institution. Such differences could also be a prime barrier to alliance performance, putting more emphasis on the "softer" side of the relationship, including attitudinal, perceptual and managerial differences. Therefore, how partners deal with cultural differences in their relationship becomes a salient factor in alliance management.

In summary, prior research into ISAs has provided overwhelming evidence implicating cultural differences between partners in the breakdown of their relationships, in turn reducing their trust levels and commitment and negatively affecting alliance outcomes. However, few studies have delved into the relationship-building processes in such alliances to provide satisfactory explanations of the observed phenomena. Specifically, there is a gap in our knowledge and understanding of exactly how national and organisational cultural differences between partners in a culturally diverse alliance such as a SIPPP, impact their relationships and to what extent they inhibit the building of sustainable and trusting relationships. It is hoped that new insights into these relational processes will further confirm the important role that these sustainable and trusting relationships play in determining alliance outcomes, including their ultimate success or failure.

1.4. Purpose and Objectives of the Research

The broad aim of the research was to elucidate the key role played by differences in cultural values on the complex relationship-building processes in a SIPPP. It also seeks to provide plausible explanations as to how these differences contribute to or inhibit the building of trust and the eventual alliance outcome. More specifically, the purpose of the study was to test the posited theory behind the trust-building relationships between multi-cultural partners in this type of alliance and understand how these relationships are affected by the partners' national and organisational cultural differences. In the process, the study examined the relationship-building processes between alliance partners that contribute to the building of sustainable trusting relationships and, ultimately, to alliance outcomes. The study first examined the role played by the partners' interdependency in building a trusting relationship: it distinguished between two types of interdependency - economic interdependency and collaborative interdependency. Economic interdependency refers to the partners' mutual dependence on each other's unique pooled resources, which are used in the enterprise's primary value creation activities. It may be viewed as the degree to which certain ties link and hold the partners in an economic, strategic and organisational sense, regardless of personal emotions (Rodriguez *et al*., 2002; Han, 1998). Collaborative interdependency, built on the back of the partners' economic interdependency, is created through their collaboration to sustain the

relationship. Building collaborative relationships essentially involves familiarity, friendship and confidence built through interpersonal exchange (Sambasivan, Siew-Phaik, Zainal, & Yee, 2011; Robson *et al*., 2008; Schreiner *et al*., 2009).

Secondly, the study examined the impact of national cultural differences and organisational cultural differences on these relationships to understand and explain their effects. Following prior research, cultural difference was represented in each case by the often-used concept of cultural distance, which measures differences in norms and values. In both cases the measurement scales were based on the cultural dimensions proposed by Hofstede (1980) and Hofstede, Neuijen, Okhayv, and Sanders (1990).

This study sought to address the research problem by using an integrated conceptual framework to study the phenomenon. The conceptual framework was developed by drawing together concepts from two theoretical traditions used in prior research, namely social exchange theory (SET), as the over-arching theory, and cultural exchange theory (CET). The aims of the research were captured in the following research question:

> *What is the effect of differences in cultural value systems as represented by the constructs of national cultural distance and organisational cultural distance on the relationship between perceived interdependency and the building of trust between multicultural partners in a SIPPP?*

In considering the primary research question, a secondary question arose as to whether these relationships are perceived differently across the two groups, namely the private-sector partner and the public-sector partner.

The research questions were framed in a series of hypotheses, which were tested empirically to find answers to these questions.

Sub-Saharan Africa (henceforth referred to as simply ‘Africa’), with its challenging environment and its increasing focus in recent years on the SIPPP as potentially an important tool for economic development, was chosen as the setting, representing an “extreme context” research example of an emerging economy. The motivation for choosing this research setting is given in Chapter 2.

1.5. Scope and Approach of the Research

No known research has been done into the relationship-building processes, their link to trust and the critical role of cultural difference between partners in a SIPPP in an African context. Furthermore, relatively few SIPPPs involved in sectors other than mining, infrastructure, health

and services on the continent are known to exist, and even fewer have been held up as success cases or have been documented in the research literature. It is also known that SIPPP experiences cannot simply be copied from one country and cultural setting to another, since different cultural settings drive divergent practices and policies (Sillars & Kangari, 2004; Tang *et al*., 2010). However, it can reasonably be posited that many of the factors and relationship-building processes found in successful alliances / joint ventures (JVs) in general, and international cross-cultural alliances in particular, will similarly apply to SIPPPs, with one important complicating difference, namely that one of the partners is from the public sector. Therefore, to address the problem posed by the paucity of published research into this phenomenon, the study was informed by the more extensive research on domestic alliances (JVs and PPPs) and multicultural international alliances (including ISAs and IJVs). A theory-guided deductive reasoning approach was then applied to bring in relevant aspects of the SIPPP and the African context.

Social exchange theory (SET) is presented as the over-arching theory supporting this research, since it is considered to be among the most influential conceptual paradigms for understanding relationship behaviour (Cropanzano & Mitchell, 2005). SET proposes that social behaviour is the result of an exchange process with the purpose of maximizing benefits and minimising costs. Social exchange involves a series of interactions that generate obligations. Within SET, these interactions are usually seen as interdependent and contingent on the actions of another person (Cropanzano & Mitchell, 2005). According to this theory, players weigh the potential benefits and risks of social relationships. When the risks outweigh the rewards, a player will terminate or abandon that relationship. SET proposes that these interdependent transactions have the potential, under certain circumstances, to generate high-quality relationships (Young-Ybarra & Wiersema, 1999; Cropanzano & Mitchell, 2005).

The theory is useful in evaluating how the partners in a SIPPP build their complex relationships, based on their mutual interdependency, leading to trust (Liu, 2012; Muthusamy & White, 2005; Sambasivan *et al*., 2011; Young-Ybarra & Wiersema, 1999; Cropanzano & Mitchell, 2005). However, given the posited more complex nature of the relationship dynamics in the SIPPP compared to the institutions studied in the prior research, it was felt that viewing the relationship-building processes through two theoretical lenses, rather than one, would provide a richer perspective of the phenomena being studied. The study, therefore, also drew on cultural exchange theory (CET), which overlaps with social exchange theory, to elucidate how both national and organisational cultural distance (representing differences in cultural values, norms and practices) can influence the partners' behaviours, their communication, knowledge sharing and their ability to build lasting trusting relationships (Fischer & Poortinga, 2012; Ozorhon *et al*., 2008; Das & Kumar, 2010; Kogut & Singh, 1988). It is argued that,

together, the two theoretical frameworks helped to provide deeper and more meaningful explanations of the relationship-building and exchange processes that occur in a multicultural environment such as the SIPPP, culminating in a trusting relationship and satisfactory alliance outcomes.

A quantitative design was selected for the study. A structured survey questionnaire was employed to measure the constructs of interest, and confirmatory analytic methods were used to empirically test the measurement scales for the constructs used for validity. The conceptual structural model and hypotheses were then empirically tested using a covariance-based structural equation modelling (CB-SEM) methodology.

The empirical study was conducted in three phases, namely (1) scale development (2) scale testing and validation (pilot study), and (3) model and hypotheses testing (main study). The purpose of the pilot study was to test the survey measuring instrument and to do a 'pre-check' on the reliability of the measuring instruments by pre-assessing the substantive or face validity of the constructs underpinning the conceptual model (Anderson & Gerbing, 1991).

A purposive sampling approach using various information sources was employed to compile a comprehensive data base of SIPPPs in Africa across a number of industries and across several countries (sampling frame). Random sampling and pseudo random sampling of the sampling frame was used to select the samples for the pilot study and the main study respectively.

1.6. Relevance of the Research

The research has theoretical as well as practical relevance. From a theoretical perspective, the research contributes new knowledge to the existing body of knowledge on relational processes in ISAs and IJVs. Very few research studies have been done on SIPPPs, and even fewer within an emerging country context. None could be found involving SIPPPs operating in Africa. This study is, therefore, unique, being the first study of its kind focused on Africa, and makes a meaningful contribution to the domain of cross-cultural research by extending the research scope to include the SIPPP, a more complex form of either the ISA or the IJV, and by extending the geographical context to Africa, thereby contributing to the generalisation of prior research findings.

The study further contributes to the theory base of cross-cultural research in a novel way by proposing social exchange theory and cultural exchange theory as the basis for a new integrated theoretical framework to assess and elucidate the interdependency-trust

relationships and to predict and clarify how cultural distance influences that relationship. While social exchange theory is recognised as being useful in assessing and explaining complex relationships, it has not found much application in ISA research.

Although there is a proliferation of research studies that have looked at the moderating effect of either national cultural distance or organisational cultural distance on ISA relationships leading to trust, very few studies have looked at both simultaneously, none involving SIPPPs.

On the methodological side, the study adopted a relatively rare approach in cross-cultural research by gauging partner relationships by soliciting perceptions from both sides of the partnership dyad. Generally, only one of the partners is surveyed, based on the supposition that this partner adequately represents the views of the other partner as well (Geringer & Herbert, 1991). While expediency and difficulty of access to the other partner are often given as reasons for this approach, it introduces an undesirable bias into cross-cultural alliance research. It is argued, therefore, that the current research provides a more balanced perspective of such cross-cultural relationships by surveying both sides of the dyad.

The study's approach to dealing with the common problem of paucity of prior research is relatively novel, and makes an important methodological contribution, particularly in areas where prior research is sparse, e.g., Africa.

This research study also provides some practical insights into the relationships between the SIPPP partners' interdependence and trust outcomes, and how these relationships are influenced by national and organisational cultural differences. From a practical perspective, application of the research findings is expected to have important implications for this institutional form in Africa and, consequently, on its role as a tool for economic development on the continent. In this regard, the study has practical significance for the policy-makers in Africa in their policy-making and decisions regarding the best tools to use to promote economic development in their countries and to attract international investment and know-how.

A strong argument is presented that private-sector and public-sector managers involved in setting up such alliances should consider the relationship aspects at least on par with the structural aspects when setting up a SIPPP. They should reflect this in their decision-making, particularly as regards the deployment of key skills and competences. It is hoped that this realisation alone will make a worthwhile contribution to improving alliance outcomes and reducing the risk and failure rate of these important institutions, thereby enhancing their role in the economic development of this continent.

The study results clearly point to the potentially important effects of national cultural differences on partnership relationships that must be appreciated by the management involved in such multi-national public-private partnerships in Africa in order to ensure successful outcomes. In particular, management needs to be sensitive to the perceptions of the other partner. As a guide, this study provides such managers with a better understanding of the relational mechanisms that contribute to the building of trust (and ultimately commitment) in the relationships in the SIPPP.

Finally, whilst the setting of this research is specifically SIPPPs in Africa and, therefore, any generalisation of the findings beyond this context is problematic, it is probable that the conclusions from this research may also find broad application to similar institutional forms in other emerging economies with similar contexts to Africa.

1.7. Summary and Structure of the Thesis

The thesis is structured in three parts:

Part 1: Defines and positions the research problem in World 1 terms (Babbie & Mouton, 2010) **and within the current body of knowledge**

Chapter 1: Introduction: outlines the rationale for the study and provides the background to the research problem. Outlining relevant research, the case is made that there is a gap in our knowledge and understanding of exactly how cultural differences between partners in a culturally diverse alliance, impact the trust-building relationships. The choice of the SIPPP as a particular form of ISA is motivated and the relevance of the African context is explained. The key research aims, chosen research design and methods employed are briefly outlined.

Chapter 2: The African Context: provides the African context as the backdrop to the research study and the challenges which this research faced in securing an adequate data base. It also provides a motivation for choosing sub-Saharan Africa as the research setting.

Chapter 3: Literature Review: provides a critical appraisal of the current body of knowledge on the phenomenon as contained in the extant research literature. The chapter expounds on current theories relevant to the research problem, providing a critical review of their underlying assumptions and weaknesses, and ultimately pointing to gaps in current knowledge that need to be addressed. Based on the knowledge gaps identified in the literature review, the research questions are formulated and the corresponding hypotheses are proposed to be tested empirically to provide answers

to the research questions. The conceptual framework used in the research is described and a model of the posited relationship-building processes against a backdrop of cultural differences is presented.

Part 2: Outlines research design & methodology

Chapter 4: Research Design and Method: outlines and motivates the chosen research design based on appropriate methodological principles. The research aims and scope are set out and the rationale for the research setting is offered. It further outlines the methodological choices made for the empirical study. The units of analysis and of measurement are defined and the choice of survey design as the research instrument is explained. A sampling strategy appropriate to the research question is described, including a description of the sampling frame, the study sample and the selection of respondents. The development of the measuring instruments and scales used in the empirical study are discussed, starting with a discussion of the principles of operationalisation of the constructs used in the conceptual model, followed by a definition of the variables in operational terms and a description of the measurement considerations involved. The survey design and questionnaire that were developed to answer the research questions, are presented, as well as the methods used in construct validation. The analytical methods employed in the pilot and main empirical studies are discussed, including measures that were taken to address common method bias and ethical considerations.

Part 3: Presents the results, analysis, discussion and conclusions

Chapter 5: Results: the results and relevant analyses are presented for the following sub-studies:

i. Pre-trial construct validation: assessing substantive validity

ii. Pilot study: limited testing of the survey instrument

iii. Main study

The analyses of the survey results and the hypotheses testing for the main study are reported. The results of the confirmatory factor analysis to establish the validity of the measurement scales of the measurement model are also presented. The results of the structural equation model (SEM), based on the conceptual model proposed in Chapter 3 as an acceptable representation of the relationship-building processes, are presented along with the results of the empirical tests of the hypotheses. Goodness-

of-fit criteria are calculated and the results of a post-hoc analysis to ensure adequacy of the final structural model, are presented and discussed. The results of the hypotheses tests are presented, along with statistical tests for power and effect size.

Chapter 6: Discussion: in this chapter, the study findings are integrated and summarised. A discussion of the overall results, in the context of the literature review and their relevance to the study objectives and the research questions, is presented, along with the implications of the findings. The results are also compared to other similar published research studies in the extant literature.

Chapter 7: Conclusion: the overall conclusions of the study are presented and the contribution of the research from a theoretical and a practical perspective is motivated. Limitations of the research study are highlighted and pointers for future research are given.

CHAPTER 2: THE AFRICAN CONTEXT

2.1. Introduction

This chapter presents the African context of this research. The broad macro-economic conditions of the sub-Saharan region are presented first to inform on its current status, its socio-economic challenges and its potential to become a leading business destination. Next, the role of the SIPPP in the socio-economic development of the sub-continent on the back of its rapid growth and dire need for new infrastructure and effective measures to address socio-economic demands is explored. This is followed by a discussion of the current status of SIPPP deployment in the sub-continent, and the opportunity gap is identified. Finally, the context of Africa as an extreme setting for conducting social research is set out.

2.2. Sub-Saharan Africa Macroeconomics and Socio-economic Demands

As a vehicle for growth and socio-economic development, the future of the SIPPP in sub-Saharan Africa is very much tied up with the growth of the region, particularly the public sector, and its macro-economic performance. The purpose of this section is, therefore, to give a broad overview of the region's current and future macro-economic performance to convincingly show that the sub-continent is well-positioned for strong growth in the future, with concomitant demand for new infrastructure and socio-economic challenges. It also shows that the SIPPP is expected to play an important role in supporting this growth in prosperity and simultaneously provide socio-economic benefits, such as contributing to poverty alleviation.

Africa is the second largest continent after Asia, having almost 70% of the latter's landmass. Sub-Saharan Africa is a diverse region on the continent comprising 46 countries south of the Sahara Desert ("About Sub-Saharan Africa", 2017). The population of the region in 2016 was estimated to be 1.033 billion (World Bank, 2017), almost double that of Latin America, and comparable to India and China. Growing at a rate of 2.3 % per annum, the UN (2017) expects sub-Saharan Africa to be the most populous region globally by 2050, with a population of between 1.5 and 2 billion - almost twenty percent of the world's population (McKinsey Global Institute, 2016). The population is still quite rural and youthful, with less than 40 % living in cities and with a median age of less than 25 years (UN, 2017). The total GDP (at purchaser's prices) of the sub-continent is US$ 3.63 trillion (World Bank, 2017), equivalent to about 40 % of Latin America and amounting to a nominal $ 3 320 per capita. However, the region is very fragmented and the statistics are distorted, with two countries - Nigeria and South Africa - accounting for approximately 30.4 % and 19.9 % of its GDP respectively (African Development Bank, 2017). Similarly, South Africa is home to 49 % of the continent's largest companies

(McKinsey Global Institute, 2016). This fragmentation is also reflected in its income distribution. Sub-Saharan Africa has one of the highest levels of income inequality in the world. The average Gini coefficient for the sub-continent is 0.43, compared to 0.39 for other developing countries (African Development Bank, 2017). Only Latin America exhibits greater inequality. This is of major concern because there is a strong relationship between inequality, economic growth and the rate of poverty reduction. High inequality lowers the poverty-reducing power of growth, so that the benefits accrue to a smaller proportion of the population. At present, half of the region's income goes to just ten percent of the population (African Development Bank, 2017).

The economy of the region consists mainly of trade and exports, natural resources and primary commodities, manufacturing and industry, agriculture, and human resources.

In recent years, sub-Saharan Africa, with a growth rate close to 5.4 %, has been one of the fastest developing regions in the world, with six of the world's ten fastest-growing economies over the previous decade, located in this geography (African Development Bank, 2017). Although the region's economic growth deteriorated in 2016, mainly due to lower commodity prices, which severely tested the "Africa Rising" (Economist, 2013) and the "Lions on the Move" (McKinsey Global Institute, 2016) narratives, the majority of non-commodity exporting countries maintained positive growth at 2.2 % on average (African Development Bank, 2017). Sub-Saharan Africa's growth outlook remains positive for the next five years, with the International Monetary Fund predicting a growth rate of 3.4 % for the sub-continent ("Growth to strengthen in sub-Saharan Africa: IMF", 2017), boosted by expected increases in commodity prices, domestic demand and increased infrastructure investment. Africa as a whole is projected by the International Monetary Fund to be the world's second-fastest growing economy between now and the early 2020's (McKinsey Global Institute, 2016).

One of the main drivers of the surge in consumer demand in the region is the continent's growing population and expanding middle class, currently estimated at 350 million (African Development Bank, 2017). Along with this is the increasing disposable income of this emerging middle class (Dykes & Jones, 2016). The region also has one of the fastest urbanisation rates in the world, and over the next decade the equivalent of ten cities the size of Cairo will be created. Urbanisation has a strong correlation with the rate of real GDP growth, because productivity in cities is more than double that in the rural areas (McKinsey Global Institute, 2016). Together, the dynamics of population growth, increased levels of disposable incomes and rapid urbanisation are expected to lead to a rise in consumer spending in the region from US$ 680 billion in 2008 to US$ 2.2 trillion by 2030 (African Development Bank, 2017; McKinsey Global Institute, 2016; Dykes & Jones, 2016). Increased spending power by

the middle class represents a major catalyst for African entrepreneurship (and an opportunity for SIPPPs) and a vast source of potential for future prosperity. Improved macroeconomic governance fundamentals and a friendlier business environment are also expected to assist growth. Within twenty years, sub-Saharan Africa is expected to have a larger workforce than either China or India, placing huge pressures on job creation.

With the growth rate, come socio-economic challenges such as poverty alleviation. Poverty is pervasive across the region and poverty alleviation is at the top of the socio-economic development agenda. More than 290 million people (almost 30 percent), live on less than US$ 1 per day. Almost 54 % of the region's population is considered poor (African Development Bank, 2017). With the region's rapidly growing population, five percent annual GDP growth is needed to keep the number of poor from increasing. According to the African Development Bank (2017), halving the incidence of poverty by 2035 would require annual per capita gross domestic product (GDP) growth rates of at least seven percent. Unsustainable external indebtedness has diverted scarce resources away from priority social needs. Waste in the public sector and weak governance structures continue to act as major constraints to development in many countries. It is estimated that between now and 2050, nearly three million people will become new entrants into the sub-continent's poverty matrix according to the African Development Bank (2017). Fortunately, investment in infrastructure can counter this trend and can be a major driver in alleviating poverty in the sub-region.

The rapid population growth and increasing rate of urbanisation in Sub-Saharan Africa have elevated the need for modern infrastructure and increased socio-economic pressures. A large portion of the sub-continent's existing infrastructure does not meet its current population growth needs, and it is estimated that 30 % of the region's current infrastructure is in need of repair (Dykes & Jones, 2016). This study found that Africa is also below many of its global counterparts in terms of infrastructure development. While these gaps create challenges for the region and its leaders, they also present opportunities for the SIPPP as a preferred policy instrument for infrastructural investment and socio-economic development on the sub-continent.

2.3. The Role of the SIPPP in Infrastructure and Socio-economic Development in Sub-Saharan Africa

One of the key constraints to economic growth in sub-Saharan Africa is the lack of adequate and well-maintained infrastructure. This has a major impact on productivity, and it is estimated that poor infrastructure, mainly electricity supply and transport, is reducing growth potential by as much as 40 % (McKinsey Global Institute, 2016). It also impacts socio-economic factors,

since it is well-known that growth is a major driver for poverty alleviation, health and education (Diao *et al*., 2007; Claeye & Jackson, 2011). While part of the reason for the gap in infrastructure is historical, the main driver is that investment in infrastructure has not kept pace with the burgeoning population and the rapid urbanisation rate. It is estimated that the current annual requirement for infrastructure investment in the region is close to US$ 150 billion annually over the next ten years (McKinsey Global Institute, 2016; African Development Bank, 2017). Although regional infrastructural spending has more than doubled from US$ 36 billion in 2001–2006 to US$ 80 billion in 2015 in nominal terms, as a share of GDP, infrastructure investment has remained at around 3.5 percent - less than the 4.5 percent that is deemed necessary (McKinsey Global Institute, 2016). In absolute terms, this means a further doubling of annual infrastructural investment in sub-Saharan Africa. While governments generally lack the financial capacity and skills to bridge this shortfall, private sector investment and know-how can play a major role, and the SIPPP can become the leading policy instrument in achieving this. Governments are therefore seeking ways to improve the prevailing state of infrastructure in the region through partnering with the private sector and sharing the risks and responsibilities associated with infrastructural investment and supplying public services. Using the SIPPP approach allows governments to achieve their infrastructural goals, while retaining ownership and avoiding political pitfalls linked to privatisation. Priorities for infrastructure investment are in the domains of energy (mainly electricity), transport, water, health, education and communication technology.

Top of the priority list is energy. About 645 million people in sub-Saharan Africa lack access to electricity, (UNCTAD, 2016), equating to roughly one in two inhabitants of the region. Without universal access to energy services of adequate quality and quantity, countries cannot sustain dynamic growth, build more inclusive societies and accelerate progress towards eradicating poverty. When health systems are unable to provide preventive and curative services, people who are already vulnerable face heightened risks. And when shortages of electricity hamper schooling, children lose a chance to escape poverty and build secure livelihoods. In July 2013, former US president Barak Obama launched the 'Power Africa' initiative aimed at supporting economic growth and development by increasing access to reliable, affordable and sustainable power in Africa. It is estimated that the energy sector accounts for over 65 % of the infrastructural deficit, or US$ 5 billion per year.

As a latecomer, the sub-continent can capitalise on the latest technologies, including renewable energy and “green-industrialisation”. Renewable energy, which helps to preserve the environment, is at the forefront of the changes sweeping Africa, which is registering some of the most remarkable advances in solar, geothermal and wind power technologies. A "quadruple win" is within the region's grasp, as renewable technologies create opportunities

to increase productivity and long-term growth, alleviate poverty, improve resilience to climate change, and contribute to the “greening” of the environment. Sub-Saharan Africa has huge untapped and renewable energy potential. Exploiting this potential will require concerted effort between governments and private-sector development partners.

Sustaining high economic growth levels also requires having the right transport infrastructure in place, including road networks, railway networks, ports and airports. Based on benchmark levels of spending, sub-Saharan Africa’s investment in transport infrastructure will need to increase from $21 billion in 2015 to $47 billion in 2025 (McKinsey Global Institute, 2016).

Water is another priority, with over 300 million having no access to a safe water supply (McKinsey Global Institute, 2016).

Information and communication technology change is transforming virtually every economy around the world (McKinsey Global Institute, 2016). The latter study has shown that access to the internet is a powerful driver of economic growth and productivity growth. The impact could be greater in sub-Saharan Africa than in any other region in the world. This is because the sub-continent is in the relatively early stages of adoption of the internet, digital technologies that offer fast processing power and unprecedented connectivity, and big data that is leading to new business models and improving business operation. Sub-Saharan Africa has already experienced exponential growth in this sector owing to mobile and internet penetration, with the latter being the fastest in the world (McKinsey Global Institute, 2016).

Health care presents another challenge to governments in sub-Saharan Africa as they grapple with rising healthcare costs and increased demand for healthcare services in the face of ongoing budget constraints. As governments struggle to stretch their healthcare funding and produce better results, many are increasingly turning to the private sector for support. HIV/Aids, in particular, is an ongoing challenge, with an estimated 22.5 million patients of the 30 million patients world-wide afflicted with the disease living in the region (Claeye & Jackson, 2011). Health care is a crucial element in the attainment of the poverty reduction goals that are at the core of the region’s development agenda. Private-sector partnerships are needed to boost the capacity of the sub-continent’s health-care system, which has long suffered from mismanagement (Claeye & Jackson, 2011).

Regionalisation too offers huge economic opportunities for the sub-continent to drive economies of scale, particularly important for large capital-intensive infrastructural projects. This provides opportunities for the mega-SIPPP. Regionalisation also has trade benefits. Unfortunately, poor infrastructure, particularly insufficient electricity provision and poor

transportation links, contribute to the lack of scale among Africa's companies and hinder regional integration.

In conclusion, governments in sub-Saharan Africa are looking more and more to public-private partnerships like the SIPPP, involving international partners, to provide the capacity to radically improve the infrastructure in their countries and to contribute to their socio-economic agendas. The SIPPP, as a new investment and knowledge-sharing business model, could meet that need and play a leading role in leap-frogging the sub-continent into a new era of modern infrastructure development based on the latest technologies that will drive growth as well as deliver much-needed socio-economic benefits. Furthermore, if properly formulated and managed, the SIPPP model can provide a number of additional benefits, including alleviating the financial burden on the public sector due to rising infrastructure development costs, more efficient execution and risk sharing.

2.4. Current Status of the SIPPP in Sub-Saharan Africa

As a result of the lack of public-sector funds, leveraging existing resources together with those of the private sector has become a popular means of alternative financing for governments in sub-Saharan Africa that are engaged in infrastructural and public service delivery projects - two of the major development priorities for the region. In this context, SIPPPs have started to play a more prominent role in financing development. The last two decades have witnessed a considerable increase in the amount of resources invested in such partnerships in the region. Several countries have initiated SIPPPs in various sectors of their economies, including infrastructure (Dykes & Jones, 2016; Farlam, 2005; Valente, 2010; African Development Bank, 2017; McKinsey Global Institute, 2016), manufacturing (McKinsey Global Institute, 2016; Farlam, 2005; Valente, 2010), health (Claeye & Jackson, 2011) and services (McKinsey Global Institute, 2016; Farlam, 2005). An aspiration of the African Union is to have a world class, integrative infrastructure that criss-crosses Africa (UNCTAD, 2016). In order to achieve this goal, the African Union Member States have committed to a series of actions to develop transport, energy and information and communications technology infrastructure, as well as a strong commitment to mobilising African resources to finance infrastructure development. In this regard, the SIPPP has been seen as a promising vehicle to attract private investors critical for Africa's infrastructure development.

A number of reasons have been advanced for the rising popularity of the SIPPP, including: the desire to improve the performance of the public sector by employing innovative operation and maintenance methods; better risk management leading to lower total cost of ownership; better access to skills and know-how; reducing and stabilising costs of providing services;

improving environmental protection by ensuring compliance with environmental requirements; reinforcing competition; and reducing government budgetary constraints by accessing private capital for infrastructure investments (Dykes & Jones, 2016; McKinsey Global Institute, 2016; African Development Bank, 2017). SIPPPs offer governments a more attractive mode of investment compared to privatisation (which generally tends to be a politically sensitive issue), since they do not need to relinquish control of the public service (McKinsey Global Institute, 2016). Private sector participation also helps to overcome the operating inefficiencies and bureaucratic inertia that epitomises many public-sector entities.

According to the World Bank Private Participation in Infrastructure database, infrastructure SIPPPs, in particular, are on the rise on the sub-continent - albeit from a low base - and account for approximately ten percent of the aggregate value of such partnerships globally. A total of some 500 SIPPP projects, worth close to US$ 157 billion, have reached financial closure since 1990 (UNCTAD, 2016; Dykes & Jones, 2016). However, the country distribution of these projects has been somewhat uneven, with Nigeria (US$ 37.9 billion) and South Africa (US$ 25.6 billion) topping the list (UNCTAD, 2016), and accounting for close to 50 % of the total investment.

Although the aggregate value of SIPPP investment across sub-Saharan Africa varies considerably, the sectoral distributions of such partnerships appear to be homogenous on the whole. Telecommunications rank first in most countries, accounting for roughly 68 percent of SIPPP infrastructure investment, followed by energy, which captures 21 percent, and the transport sector ranking third with ten percent of the total investment (UNCTAD, 2016). In most countries, the sector reporting the lowest value of cumulative investment at the country level is water and sanitation, with SIPPP investment less than of one percent of the total. The majority of these projects (more than 70 percent) have been greenfield investments. Partnering in telecommunications is particularly attractive to governments, since competitiveness depends on a high level of expertise and cutting-edge technology (McKinsey Global Institute, 2016). These investment trends are different to global trends and reflect the region's current priorities. Thus, while investments in the telecommunications and electricity sectors in the region represent 85 percent of total SIPPP investment, this compares to 69 percent worldwide. On the other side of the spectrum, investment in new road infrastructure in the region accounted for only one percent of the total SIPPP investment, compared to seventeen percent globally (UNCTAD, 2016).

As a result of the region's progress in increasing infrastructure investment through public-private participation, the share of sub-Saharan African households with access to electricity increased from 26 percent in 2000 to 32 percent in 2013, while those with access to running

water rose from 55 percent in 2000 to 68 percent in 2015. Over the same period, mobile phone penetration increased from 2 percent of the population to 77 percent (McKinsey Global Institute, 2016). The success of the SIPPP model has been demonstrated, and the pace of its implementation across the sub-continent is picking up rapidly, with a number of countries, including Tanzania, Nigeria, Mozambique, Uganda and Ghana, in the process of planning or executing multi-billion-dollar infrastructural projects in various sectors of their economies (Dykes & Jones, 2016).

However, while SIPPPs on the sub-continent have made a promising start, the experience of governments with them has not always been positive or the "silver bullet" that they may have expected (Farlam, 2005; Dykes & Jones, 2016). Experiences have been mixed and the process has been complex, with several SIPPP projects either held up or prematurely terminated. Structural reasons have generally been advanced for such failures, including wide gaps between public- and private-sector expectations, lack of clear government objectives and commitment, complex decision-making, poorly defined sector policies, inadequate legal / regulatory frameworks, poor risk management, low credibility of government policies, inadequate domestic capital markets, lack of mechanisms to attract long-term finance from private sources at affordable rates, poor transparency, and lack of competition (Farlam, 2005; UNCTAD, 2016; Dykes & Jones, 2016; McKinsey Global Institute, 2016; African Development Bank, 2017). These constitute clear obstacles to the effective implementation of the SIPPP business model.

In conclusion, the above analysis shows that the SIPPP has become an important vehicle for financing capital-intensive infrastructure development projects on the sub-continent, both at the national and at the regional level. Despite the challenges and obstacles, it is readily being used across the region and, with the growing priority of the infrastructural agenda, are expected to continue rising in popularity. Indeed, many new SIPPPs are under way and are financing infrastructure development projects across the region. Virtually all countries in sub-Saharan Africa have some experience in such partnerships. In addition, as indicated in many of the national development plans, several countries have or are in the process of developing public–private partnership related regulations and / or policies, to better harness this type of partnering investment and to overcome the obstacles mentioned (McKinsey Global Institute, 2016). Furthermore, there is a steady increase in regional SIPPPs, particularly in the energy sector, and it can be argued that such partnerships are becoming important vehicles to promote developmental regionalism (McKinsey Global Institute, 2016). SIPPPs also provide a balance between growth and socio-economic objectives, and, applied in agriculture and

manufacturing, for example, can provide a very effective solution for poverty alleviation (Diao *et al*., 2007).

However, the analysis has also shown that the SIPPP model is still very underutilised on the sub-continent and that there are potential opportunities for this type of partnering in other non-traditional sectors of the regional economy outside of the major infrastructural projects. Typical examples are manufacturing and agriculture, both engines of economic growth. Even in infrastructural investment, there are opportunities for its wider deployment: SIPPPs accounted for only 4.5 percent of sub-Saharan Africa's infrastructure projects by value between 2000 and 2014, compared with 8.6 percent in a group of emerging countries (McKinsey Global Institute, 2016). This suggests that the region could double its use of SIPPPs to match the level in other major emerging markets. Clearly, for this to happen, governments would need to ensure that their priorities are clear and that the obstacles that have been identified as impeding effective implementation of the SIPPP model, are effectively addressed.

It is hoped that, with further research into SIPPPs like the current study, this worthwhile vehicle will take its rightful place in the socio-economic development of the continent.

2.5. Africa as an Extreme Research Setting

In addition to being underdeveloped, the continent is also under-researched, with few research studies that truly embrace the uniqueness of Africa reported in the top academic journals (Klingebiel & Stadler, 2015; Barnard, Cuervo-Cazurra, & Manning, 2017). The dual effects of lack of support and incentives for local researchers and the difficulty of accessing data have been implicated in the paucity of research in the region (Barnard et al., 2017). However, under-researched areas and new contexts offer fresh opportunities for theory enhancement, and forays into such new settings have often revealed phenomena that have altered theory (Klingebiel & Stadler, 2015). Sub-Saharan Africa, as an underdeveloped and under-researched part of the world, presents such a new context and, in many ways, can be regarded as an extreme setting for this research (Barnard et al., 2017). Businesses in this region face a number of on-going challenges, including political instability, underdeveloped infrastructure, lack of formal institutions, weak and corrupt governments, economic inequalities, and critical skills shortages, to name but a few. Such business conditions may be considered an extreme test of theory, as argued by these authors, since they provide the opportunity for stress-testing hypotheses in a very non-ideal environment. This makes a valuable contribution to extending the validity and range of established theories developed in a stable and often ideal first-world context. However, the empirical challenges of conducting research in Africa are many (Klingebiel & Stadler, 2015).

Unfortunately, the setting also has drawbacks. With the paucity of research applying to the sub-continent comes the fact that virtually no established data bases exist in the region - certainly none to support the current study. For most firms, financials and other data are not easily accessible in a way that US and European data can be downloaded from Compustat, Datastream, or Orbis. A new data base of SIPPPs in the region, therefore, had to be set up from scratch. Further details are provided in Chapter 4.

CHAPTER 3: LITERATURE REVIEW

3.1. Introduction

Guided by the research question, the literature review outlines the main theoretical framework and constructs that underpin this research and the literature that has informed it. The review is organised around key themes identified in the literature that are related to the research question. These themes are: 1) trust (the outcome variable) 2) interdependency 3) different cultural value systems, and 4) between-groups differences.

The chapter starts off with a brief overview of the strategic international public-private partnership (SIPPP), introducing it as a complex organisation conceptually positioned between the public-private partnership (PPP) and the international strategic alliance (ISA). The implication of relational factors (in addition to the normally reported structural factors) in the high reported failure rate of this type of institution, is exposed and provides the *raison d'être* for this research. Following the argument of this research that relational factors need to be given due consideration in parallel with structural factors when assessing overall SIPPP performance, a conceptual framework is established for examining these complex relational factors. They are posited to contribute to the development of sustainable, collaborative relationships that in turn lead to the building of trust. The issues that challenge these relationships and those that act as enablers are also reviewed. Next, the methodology used in this literature review and the justification thereof in the context of the paucity of research on SIPPPs is presented.

Social exchange theory, recognised as being useful in assessing and explaining complex relationships (Muthusamy & White, 2005; Sambasivan *et al*., 2011), has been presented as the over-arching theory supporting this research. However, given the cultural context of this relational study, cultural exchange theory, often used in cross-cultural research, has also been drawn on as appropriate to provide an additional lens to inform the research. It is felt that, by drawing on both theories to elucidate these complex relationships, a richer perspective of the phenomena under study is provided. The above themes that have been identified as being relevant to the current research and to addressing the research questions, are in turn presented, and reviewed with reference to the extant research literature and with the two theoretical traditions as backdrop. Guided theory is used to provide an interpretation of each of these issues, and its relevance and importance within the current context, are highlighted. Gaps in the research literature are identified and the hypotheses emanating from this research, are presented.

3.2. The Strategic International Public-Private Partnership (SIPPP)

The strategic international public-private partnership (SIPPP), involving an international private-sector partner in partnership with a "local" domestic public-sector partner, can either be conceptualised as an across-border public-private partnership (PPP), or as an international strategic alliance (ISA) with one of the partners coming from the public sector, as depicted in Figure 3.1. This suggests that such an organisation, while sharing many features with both institutional forms, also exhibits important differences that define the relationship-building processes between partners in this type of institution. The SIPPP is, therefore, more complex in nature than either the PPP or the ISA, with additional dimensions of differences in cultural value systems between the partners and alternative political and social agendas competing with the economic agenda. This added complexity is expected to have important implications for relationship-building in the SIPPP compared to either the domestic PPP, where the national cultural values between the partners are the same (i.e., both partners are from the same country), or to the ISA, where both partners share a similar economic agenda. This introduces new dynamics into the relationship-building process, adding new areas of potential conflict and potentially magnifying differences between the partners.

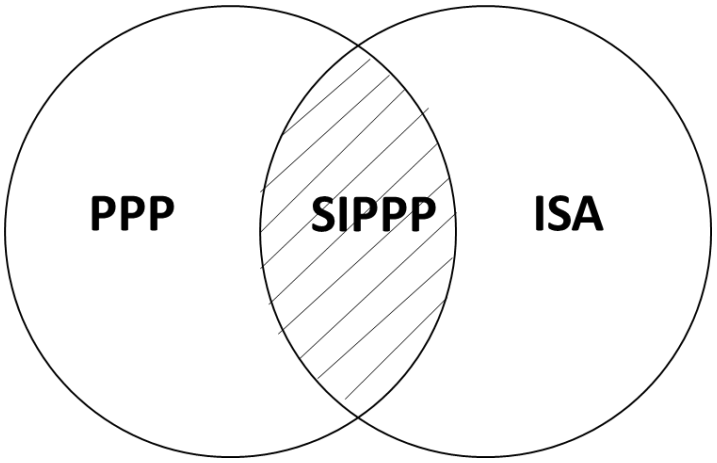


Figure 3.1. Conceptual positioning of the strategic international public-private partnership (SIPPP) in relation to the public-private partnership (PPP) and the international strategic alliance (ISA)

No universally accepted definition for the SIPPP has been found, and a review of the extant literature shows many definitions of the classic public-private partnership (PPP). Wang (2009) and Khanom (2010) have expressed the view that definitions of PPPs seem to vary depending on the angle from which they are looked at and the principles used by scholars, practitioners

and managers to study them. MacDonald (2012) and Wettenhall (2007) agree, asserting that the various definitions relate to how a PPP is operationalised. This can range from being a structural (contractual) arrangement at one end of a co-operative-collaborative continuum (e.g., a formal JV) to a highly trusting collaborative relationship at the other end of the continuum (i.e., an informal alliance). Such variations are also reflected in the classification used by Wettenhall (2003) based on whether the relationships between the partners are vertical (hierarchical, based on a contractual relationship), or horizontal (non-hierarchical, with consensual decision-making), where both parties are directly involved in the action and no single superior party is capable of invoking closure rules. The nature of the relationships within the partnership will be different along this continuum, and will drive different collaborative behaviours, increasing along the continuum. Khanom (2010) suggests that there may be several categories of PPPs defining different conceptual issues related to governance, management and policy design and purpose

For the purposes of this research and as already set out in Chapter 1, a SIPPP is defined as *a collaboration or co-operative arrangement between a local public-sector and a multinational private-sector entity in which the partners jointly plan and execute activities to accomplish agreed-upon objectives, while sharing the costs, resources, risks and benefits incurred in the process* (Spielman, Hartwich, & von Grebmer, 2010). This definition implies that a SIPPP can take on various organisational forms: from the formal, contractual type (as for example the JV), to the informal type based on an understanding between the partners (a loose alliance). The important factor in this definition is that the actual partnering between public and private entities involves collaboration in the pursuit of a common objective (Jamali, 2004). The definition covers all categories of SIPPPs, from the infrastructural type involving capital-intensive construction projects, through to those providing services and/ or products.

This definition establishes a framework for examining the concepts of developing collaborative relationships in a SIPPP, driven by the interdependency between the two partner groups (public-sector and private-sector), and facilitated by social interaction, communication and the desire to collaborate to achieve mutual goals through the building of mutual trust. At the same time, the pivotal roles played by differences in the partners' national culture and organisational culture (captured respectively by the constructs of national cultural distance and organisational cultural distance) in influencing these relationships are exposed.

Despite the tangible advantages that cross-cultural alliances potentially bring to their partners, the literature reports that they are particularly high risk, the process is complex, they frequently do not deliver on their promise and often fail (Sambasivan *et al*., 2011; Young-Ybarra & Wiersema, 1999, Cropanzano & Mitchell, 2005). There are reports that 40 to 80 percent of

these forms of partnership perform poorly or fail entirely (Geringer & Herbert, 1991; Madhok, 1995a, 2006a, 2006b; Beamish, 1993), and that the failure rate in the developing economies is towards the top end of this range (Parkhe, 1993). It is expected that the failure rates for SIPPPs are similar, if not worse, due to their increased complexity and inherent capacity for conflict.

In the majority of cases, the causes of failure have been attributed to structural issues, including lack of resources, inequality in apportionment of risk, mismanagement of pooled resources, and lack of accountability (Ariño & de la Torre, 1998; Gulati & Singh, 1998; Das & Teng, 2000; Kwak *et al*., 2009). As a result, structural issues often receive the most focus during the initiation and formation phases of the SIPPP, and are clearly reflected in the partnership design and specification of managerial key skills and competences. However, over the past ten years or so, scholars have increasingly focused on the failure on the part of the ISA partners to build sustainable, collaborative and trusting relationships. This failure is seen as an important contributing, if not the over-riding, cause of poor performance and failure of these institutions. The reasons for failing to build such relationships include difficulties in managing highly interdependent relationships (Meier, 2011; Madhok, 1995a, 2006a, 2006b; Das & Teng, 2000; Ring & Van de Ven, 1994), challenges presented by different cultural value systems (Das & Teng, 1998; Das, 2005; Das & Rahman, 2010; Ariño & de la Torre, 1998; Gulati & Singh, 1998; Lin & Germain, 1998), internal tensions that characterise an alliance (Das & Teng, 2000), lack of confidence in partner co-operation (Das and Teng, 1998), and the failure of alliance partners to achieve equity and efficiency (Ring & Van de Ven, 1994). Each of these challenges, taken alone, can inhibit collaboration, but, taken together, they tend to reinforce each other, magnifying their negative joint impact on the relationship-building process (Kumar & Das, 2010).

Despite being the subject of intensive research in recent years, the core concepts of ISA operation and how relationships between culturally divergent partners develop, are still largely clouded in mystery. This stems mainly from the inherent complexity of such alliances caused by their multicultural context (Ozorhon *et al*., 2008). The relationship-building process in a SIPPP is likely to be even more complex with the introduction of the public partner, who comes into the partnership with a very different institutional background to the private partner, and with a divergent agenda informed mainly by political and social issues. The probability for conflict to inhibit collaboration is, therefore, likely to be much higher (Kwak *et al*., 2009; Wettenhall, 2003; Parker & Bradley, 2000).

Since the SIPPP is a more complex form of the ISA, the research cited above suggests that a failure to build collaborative platforms and the consequential breakdown of trust in the

relationships is similarly likely to be implicated in the reported high failure rate of SIPPPs. It follows from this, therefore, that the reasons for the success or failure of a SIPPP, as for cross-cultural alliances in general, should be sought primarily in the success or failure of the relationship-building processes that occur between the partners leading to trust, and, as established by prior research, ultimately to commitment and performance (or lack thereof) (Das & Kumar, 2009; Robson *et al*., 2008; Luo, 2008; Sambasivan *et al*., 2011; Curral & Inkpen, 2002; Inkpen & Curral, 2004; Madhok, 2006b; Beamish, 1993, 2006; Luo & Park, 2004; Caceres et al., 2007).

To crystallise out the factors contributing to this eventual outcome, a deeper understanding of the complex and dynamic relationship-building processes that occur between culturally diverse alliance partners leading to the building of a trusting relationship is needed. The following section provides a thematic review of the research literature in relation to each of the identified enablers of and management challenges to relationship-building, namely, interdependency, different cultural value systems, and between-groups differences. The aim is to show how these enablers and challenges are (or are not) addressed in practice, how they impact on the building of sustainable collaborative and trusting relationships, and the key competences required by management to successfully manage them. The role played by these challenges in driving group differences (private-sector partner vs public-sector partner) in perceptions of these relationships will also be elucidated. This research has been informed by the gaps identified in the research literature and as encapsulated in the research question posed in Chapter 1 and supporting hypotheses, which are presented.

3.3. Methodology Employed in the Review

As evidenced by a preliminary scan of the literature, research pertaining to the process of developing collaborative, interdependent and trusting relationships in SIPPPs is very underdeveloped, particularly with a sub-Saharan Africa context. It is also known that SIPPP experiences cannot simply be copied from one country and cultural setting to another, since different cultural settings drive divergent practices and policies (Harrigan, 1988; Sillars & Kangari, 2004; Tang *et al*., 2010). On the other hand, the popularity and proliferation of PPPs and ISAs in recent years has spawned a stream of rich literature examining several aspects of both these institutional forms, mostly structural, but some relational, and covering the phases from formation – the predominant focus of prior research - to implementation, operation and performance (Gulati, 1998; Robson *et al*., 2008; Robson, Leonidou, & Katsikeas, 2002). Since it has been argued in this research that the SIPPP can be conceptualised as a more complex form of either the PPP or the ISA, it can reasonably be

posited that many of the factors and relationship-building processes that have been researched in these institutions will similarly apply to SIPPPs, but with important differences. Compared with the PPP, a national cultural perspective is introduced into the relationship with the introduction of an international partner, while compared to the ISA, the replacement of a private-sector partner with a public-sector partner introduces a whole new dynamic into the relationship, driven by a new socio-political agenda that has to compete with the business agenda. Consequently, to address the paucity of published research into the SIPPP phenomenon, this study has been informed by the relatively more extensive research on PPPs and ISAs (including international joint ventures or IJVs). A theory-guided deductive reasoning approach has then been applied to bring in relevant aspects of the SIPPP and African contexts.

3.4. Theoretical Framework

In past research into relationship-building in ISAs and PPPs, scholars have generally relied on a single theoretical paradigm to study and clarify the observed phenomena (Dash *et al.,* 2007; Nielsen, 2007). While a single theoretical framework can explain a particular part of the phenomenon, each tradition also has its limitations in providing a full and rich interpretation of the complex relational bonding processes occurring in a multi-cultural context.

It is the argument of this research that our understanding of the phenomenon has been constrained by the limited range of theoretical perspectives that have been applied in prior research studies. While multicultural relationships have usually been studied through the lens of cultural exchange theory, which is also the case in this study, social exchange theory is presented as the overarching theoretical paradigm supporting this research. Social exchange theory has not been used much in multicultural ISA research (Cropanzano & Mitchell, 2005), but it is acknowledged as one of the leading theoretical paradigms for elucidating complex relationships and behaviours, placing the interactions between people and organisation at the core of relationships (Sambasivan *et al*., 2011). Hence, social exchange theory was drawn on to help analyse and interpret the complex relationships between SIPPP partners, and offer plausible explanations of how their interdependency affects their mutual trust and, ultimately, alliance outcomes.

Therefore, while the social exchange framework helped to show how participants in a partnership build goodwill to enable them to gain access to vital resources, including financial, people, information, technology and legal rights (Muthusamy & White, 2005; Sambasivan *et al*., 2011; Young-Ybarra & Wiersema, 1999; Cropanzano & Mitchell, 2005), cultural exchange

theory was helpful in describing how cultural differences (both national and organisational) between the partners can influence their behaviours, their communication, and their ability to build lasting relationships (Fischer & Poortinga, 2012; Ozorhon *et al*., 2008; Das & Kumar, 2010; Kogut & Singh, 1988; Koschmann *et al.*, 2012). It is argued that, given the more complex nature of the relationship dynamics in a SIPPP compared to an ISA, the subject of prior research, studying these phenomena through two theoretical lenses in an integrated way rather than through a single lens provides a richer perspective of the cross-cultural relationship-building dynamics under study.

In the following section, the concept of trust - the outcome variable in this research - is explored within the context of building collaborative and sustainable relationships in a multicultural environment.

3.5. Trust

3.5.1. The concept of trust

Trust is a well-researched construct in the social and business sciences, particularly in relationship management research. However, its multidimensional and complex nature presents challenges in elucidating its precise nature and role in the relationship-building process, and it remains an important theoretical and empirical challenge for research scholars (Robson *et al*., 2008). Despite gaps in our knowledge, there is considerable support among these research scholars that trust is central to enduring, productive relational exchanges (Robson *et al*., 2008; Inkpen & Currall, 2004; Beamish & Lupton, 2009). Furthermore, there is also agreement that it is closely linked to co-operation and collaboration between partners aimed at goal achievement, strongly improving the effectiveness and the chances of success of these collaborative platforms (Luo & Park, 2004; Beamish & Lupton, 2009).

At the organisational level (as it applies to partners in a SIPPP), researchers believe that trust is a key element in forming co-operative relationships (Ring & Van de Ven, 1992; Sydow, 1998; Cacares, 2007). At the personal level, trust essentially refers to the belief that a relationship partner's word or promise is reliable and that the other party will fulfil its obligations in an exchange relationship. For the purpose of this study, trust will be defined as *"one party's belief that its needs will be fulfilled in the future by actions undertaken by the other party"* (Anderson & Narus, 1990). In line with this definition, trust is viewed as one partner's belief that the other partner will perform actions that will result in positive actions for the organisation and its stakeholders, as well as not take unexpected actions that would result in negative

outcomes (Dash *et al*., 2007), i.e., it is the perceived likelihood of the other not behaving in a self-interested manner (Madhok, 2006b).

Trust is fostered and sustained when partners inspire confidence regarding their reliability and integrity (Morgan & Hunt, 1994; Dwyer, Schurr, & Oh,1987). Trust supports beliefs that the actions of partners will lead to beneficial outcomes and that partners will not take unexpected actions that will result in detrimental outcomes (Anderson & Narus, 1990). Trust is, therefore, essentially the belief, sentiment or expectation amongst the partners that each will perform actions that will result in positive outcomes for the other as well as not take opportunistic actions that would result in negative outcomes (Dash *et al.,* 2007; Madhok, 1995a, 2006b, 1995b, 2006a; Morgan & Hunt, 1994). A trust relationship is established when expectations are raised by one party and fulfilled by the other (Rodríguez & Wilson, 2002). Reciprocity is key in building mutual trust relationships (Luo, 2008; Das & Kumar, 2009; Luo, 2002; Robson *et al*., 2008; Madhok, 1995a,1995b; Katsikeas *et al*., 2009).

Studies have shown that relationships founded on trust are more enduring (Bhaskaran & Gligorovska, 2009). They can withstand greater stress and adapt more strongly to challenges, being able to endure difficulties such as not being able to achieve agreed outcomes (provided partners believe that unforeseen circumstances inhibited the outcomes) (Anderson & Narus, 1991). Relationship trust increases when partner behaviours are perceived as consistent, competent, honest, fair, responsible, helpful and benevolent. Relationship trust diminishes when, because of implicit or explicit misrepresentations, partner behaviours are perceived as opportunistic (Morgan & Hunt, 1994; Madhok, 1995b). Han, Wilson, and Dant (1993) suggest that perceived mutual trust and satisfactory role performance are two principal factors that characterise a good relationship. Perceived competence and predictability of the partner are key considerations in establishing trusting relationships. They argue that trust is dependent on goal congruence and cultural similarity between partners' value systems and beliefs. One can conclude, therefore, that building trusting relationships in a SIPPP, where cultural difference between partners and conflicting goals resulting from competing agendas are likely to be key management challenges, is more difficult than in either the PPP or the ISA, and will require higher levels of collaboration and joint action.

The importance of a trusting relationship also lies in the fact that trust and commitment are closely related - the building of trust simultaneously generating commitment and, ultimately, performance (Morgan & Hunt, 1994; Luo, 2002; Madhok, 1995a, 2006b, 2006a, 1995b; Whipple & Frankel, 2000; Rodríguez & Wilson, 2002; Katsikeas *et al*., 2009; Currall & Inkpen, 2002; Inkpen & Currall, 2004; Beamish 2006; Ng, Lau, & Nyaw, 2007). Commitment is the "enduring desire to maintain a valued relationship" (Dash *et al.,* 2007) and is a prerequisite for

successful strategic alliances (Inkpen & Birkenshaw, 1994). This basically means that a committed partner wants the relationship to endure indefinitely (or at least for the time period envisaged for the fixed-term alliance), and is willing to put in maximum effort at maintaining it (Morgan & Hunt, 1994). The linkage between trust and commitment is still not clearly understood (Madhok, 2006a, 1995b; Robson *et al.,* 2008), and remains clouded in controversy, with researchers coming up with discordant findings (Robson *et al.,* 2008). Nevertheless, several studies have confirmed that the building of trust among partners in cross-cultural alliances is fundamental to achieving satisfactory outcomes for the alliance, and can be seen as the relationship "building block" (Dash *et al*., 2007) or the "chemistry" (Inkpen & Birkenshaw, 1994) that allows partnerships to be successful. Beamish (1993, 2006) supports the view that trust is important for the success of joint ventures in developing countries, and as trust can be managed, it can be viewed as a means to facilitate the achievement of the objectives of an ISA (Ng *et al.,* 2007). However, large-scale empirical studies in transitional economies on the role of trust have rarely been conducted (Christoffersen, 2013; Gomes *et al*., 2016; Ng *et al*., 2007). In a study of US-Mexican alliances, Rodríguez and Wilson (2002) found a definite relationship between the level of trust engendered in the relationship and the level of commitment by the partners to the partnership.

The concepts of trust and commitment are thought to be closely related, making them emergent factors that may assist in incorporating characteristics of interdependency into the structure of exchange (Das & Teng, 1998). The effective building of trust is important because it facilitates co-operation and co-ordination and assists in the building of interdependency between partners (Dash *et al.,* 2007). It also enhances the relationship and performance under conditions of high interdependency (Katsikeas *et al*., 2009) as may exist in an alliance. High levels of trust between partners are conducive to collaborative behaviour and therefore high levels of interdependency, whereas low levels of trust lead to competitive behaviour (Madhok, 1995b, 2006b). A number of researchers have proposed models of partnership and co-operation that incorporate relationship concepts favouring the creation and maintenance of interdependency between the partners (Das & Kumar, 2009; Curral & Inkpen, 2002; Inkpen & Curral, 2004; Luo, 2008; Robson *et al*. 2008; Madhok, 2006b). Rodríguez and Wilson (2002) argue that perceived structural dependency - referring to the complementarity of pooled resources - is in fact a prerequisite to maintaining and developing social dynamics in a partnering relationship.

Trust, furthermore, affects the bargaining power of the partners (Inkpen & Birkenshaw, 1994) and infuses the relationship with value by lowering transaction costs (Madhok, 1995a, 2006b, 2006a, 1995b), lowering the cost of co-ordination and control activities (Katsikeas *et al.,* 2009) and reducing complexity and uncertainty (Rodríguez & Wilson, 2002). In virtuous combination

these increase the level of knowledge transfer and potential for learning (Nielsen, 2007; Meier, 2011), reduce complexity and risk, and become an important source of competitive advantage and performance (Robson *et al*., 2008).

3.5.2. Operationalising trust in a SIPPP

As a complex phenomenon, trust has multiple dimensions, which vary in their applicability to different contexts (Nielsen & Nielsen, 2009). The construct of trust has been conceptualised in multidimensional terms in several different ways by various research scholars (Barber, 1983; Lewicki, McAllister, & Bies, 1998; McAllister, 1995; Rempel, Holmes, & Zanna, 1985; Ring, 1996; Sheppard & Tuckinsky, 1996). Sheppard and Tuchinsky (1996) suggest that trust can be of three types - deterrence-based, knowledge-based, and identification-based, while Ring (1996) proposes that trust is of two types, one being fragile and the other resilient. Whereas fragile trust is more calculative, resilient trust is said to be based on a perception of goodwill. McAllister (1995) notes that trust is either cognition-based or affect-based. Cognition is calculative and affect is about goodwill and responsibility. Rempel *et al*. (1985) discuss the components of trust as predictability, dependability, and faith. Barney and Hansen (1994) suggest that interorganisational trust comes in weak form, semi-strong form, and strong form, depending upon the degree of vulnerability in the relationship.

Barber (1983) and Gabarro (1978) stress the importance of competence in trust. Competence trust refers to 'the expectation of technically competent role performance' (Barber, 1983). Competence is that group of skills, competencies, and characteristics that are significant to the alliance task, and allow a partner to have some influence within certain operational domains. Thus, competence highlights the task- and situation-specific nature of trust (Muthusamy & White, 2005; Nooteboom, 1996). Other terms that have been used to denote this competence include 'ability' and 'expertise' (Lin & Malhotra, 2011; Mayer, Davis, & Schoorman,1995). Competence trust is equally important for the partners in an alliance, because they have to rely on each other to carry out every specific task. In contrast to competence, the other dimension to trust has been called ‘goodwill’ (Ring & Van de Ven, 1992), ‘responsibility’ (Barber 1983), ‘dependability’ (Rempel *et al*. 1985), ‘benevolence’ (Mayer *et al*. 1995; Muthusamy & White, 2005) and ‘integrity’ (Mayer *et al*. 1995; Muthusamy & White, 2005). The latter authors define integrity as one partner’s perception that the other partner adheres to a set of principles that the first partner finds acceptable. The perception of integrity in a relationship is therefore judged by the consistency of the partner’s past actions, the extent to which these are congruent with promises made, and belief that the partner has a strong sense of justice (Muthusamy & White, 2005). Similarly, ‘benevolence’ is the perception of a positive orientation of one partner towards the other (Mayer *et al*.,1995).

Benevolence-based trust is based on the expectation that the other partner will not take excessive advantage, even when the opportunity is available, or at least will not knowingly hurt the other's interests (Mayer *et al*., 1995; Muthusamy & White, 2005). Combining these two broad notions, Nooteboom (1996) notes that "trust may concern a partner's ability to perform according to agreements (competence trust), or his intentions to do so (goodwill trust)". "*Goodwill*" trust and "*competence*" trust are independent (Pinnington & Scanlon, 2009), and present a clear distinction (Das & Teng, 2001). Goodwill trust is important for both partners in a SIPPP, since they have to work together as if it were a single firm - the joint venture – and a positive feeling about each other's goodwill and integrity is, therefore, essential.

The multidimensionality and complexity of the trust concept has been captured in this study in an integrated behavioural framework, which encapsulates and is consistent with the above arguments. This is presented in the next chapter.

The enablers of and the management challenges to this process, which have been identified and organised into themes, are reviewed next. These themes are: interdependency, different cultural value systems, and between-groups differences. The social exchange processes are also reviewed, since they will be shown to play a crucial role in the establishment of sustainable, collaborative and trusting relationships, as well as providing the linkage between these challenges.

The first to be reviewed is the role played by the partners' interdependency as a critical enabler of and antecedent to mutual trust.

3.6. Interdependency

Interdependency is used in the research literature to suggest the presence of mutual dependencies between two parties in a partnership. According to Sambasivan *et al*. (2011), interdependency refers to the belief that "the outcomes of a relationship depend heavily on both the individual and the joint actions that people in a dyad undertake". Prior research has shown that interdependency between alliance members plays an important role in fostering co-operation, generating synergies, accentuating reciprocity, and improving commitment (Luo, 2008). Two types of interdependency have been identified: the first type refers to the mutual dependency of the partners on each other's unique resources, which has been referred to in this research as *economic interdependency*. The second type refers to an interdependency created through collaboration to sustain the relationship, and has been referred to in this research as *collaborative interdependency*.

3.6.1. Economic interdependency

Prior research has shown that organisations drive competitive advantage through the application of their heterogeneous resources and capitalising on their imperfect mobility (Peteraf, 1993; Barney, 1991). Included in the definition of resources are all assets, capabilities, organisational processes, knowledge, intellectual property, firm attributes, and information controlled by the organisation that enable it to conceive of and implement strategies that improve its efficiency and effectiveness (Barney, 1991).

The literature suggests that the pooling of complementary resources - those that are not identical, yet are mutually supportive - is often necessary for alliances to optimise their primary value-creating activities (Das & Teng, 2000). The resource-dependent view, therefore, postulates that an organisation will engage in a strategic alliance to obtain the resources that it needs but lacks, and then capitalise on the resources provided by its partner to deliver competitive advantage (Das & Teng, 2000; Oliver, 1997). Such a strategic alliance between partners is initially developed through co-operative and collaborative economic strategies between the partners after the alliance is formed (Choi *et al*., 2010; Reuer, Zollo, & Singh, 2002; Yan & Zeng, 1999). This view holds that an alliance is initiated based on the assumption that each partner to the alliance contributes its unique resources to the partnership and that it should co-ordinate and manage these combined resources to achieve the necessary synergies to the maximum benefit of the alliance. This economic exchange is one of the first relational building processes that takes place during the formative stage of the alliance, which starts to create a mutual dependency between the partners on each other's' unique pooled resources, referred to in this research as *economic interdependency*.

Economic interdependency may be defined as '*the degree to which certain ties link and hold the partners in a SIPPP in an economic, strategic and organisational sense, regardless of personal (emotional) matters'* (Rodriguez *et al*., 2002; Han, 1998). Economic interdependency may, therefore, be viewed as the extent to which respective resources pooled by alliance members and subsequent operations utilising these resources have been effectively combined in an alliance's value chain system, such that, if one party withdraws, it will inflict great damage (economic and strategic) on the other party, and the alliance may not be able to survive (Luo, 2008).

Without achieving effective economic interdependency, the complementary resources contributed by alliance members may be left idle, misplaced, misused, or at least not fully exploited during alliance operations (Luo, 2008). Complementary resources allow an alliance to pursue opportunities for economies of scope and growth, while decreasing risk (Das & Teng, 2000). The complementarity of these joint resources forms the first structural

determinants of co-operation, and entails a multiplicity of economic, strategic and functional factors that develop during a relationship and involve explicit business benefits. Economic interdependency implies that both of the partners are dependent on the alliance specific investments that they have made. When these investments lead to a high degree of economic integration, i.e., the specific investments made by the alliance partners are well blended, the alliance partners' relationship is likely to be qualitatively transformed (Das & Kumar, 2009). As Luo (2008) observes, 'levels of commitment, forbearance, and reciprocity may increase with economic integration because of the increased convergence of interests and goals of the different parties.'

Economic and structural bonds created by their economic interdependency, which reflect the task orientation between the partners in an alliance (Dash, Bruning, & Guin, 2009), are, therefore, those forces that create impediments to termination of the relationship. These bonds may be seen as the degree to which certain ties link and hold the partners together in that relationship as a result of some mutually beneficial economic, strategic, technological or organisational objective (Williams, Han, & Qualls, 1998). The effect of such economic commitments, often specific to the relationship, is to create a locked-in condition (Katz, 1989), which in turn promotes behaviours that ensure the continuance and "mutual forbearance" of the partnership (Buckley & Casson, 1998). Specifically, economic constraints such as the investment of unique assets and hostage arrangements may be utilised to reduce the potential for opportunism by locking partners into a strategic alliance with the expected long-term gains from maintaining the relationship, exceeding the potential short-term gains from opportunism or defection (Parkhe 1993; Williamson, 1985).

Trust and interdependency in an ISA are closely related, since the interest of one partner cannot be achieved without reliance upon the other partner. Madhok and Tallman, (1998) argued that many alliances fail to achieve their goals, in part, because the partners underestimate the difficulty of working together and increasing their levels of economic interdependency. Several studies that have examined relational aspects of ISAs have concluded that trust emerges from interdependency, starting off with economic interdependency (Luo, 2008; Robson *et al*., 2008; Damanpour *et al*., 2012; Luo & Park, 2004; Das & Kumar, 2009; Madhok, 2006b). High levels of economic interdependency usually involve extensive personal interaction, information exchange, and resource integration, which in turn provide opportunities for the development of mutual trust (Madhok & Tallman, 1998). A generally-held view amongst scholars is that economic interdependency binds the two parties in long-term collaboration and co-operation, conflict resolution and forbearance (Parkhe, 1993; Buckley & Casson, 1988; Das & Kumar, 2009; Luo, 2008; Madhok, 2006b). The stronger the level of economic interdependency between the partners, the more opportunities and benefits

will be created for co-operation and building collaborative platforms leading to the building of mutual trust (Ring & Van de Ven, 1994; Yan & Gray, 1994). Rousseau, Sitkin, Burt, and Camerer (1998) argue that the influence of trust on performance is increasingly a function of interdependency and mutual reliance, while studies have shown that trust can be transmitted more smoothly in contexts of high economic interdependency (Luo, 2008; Das & Kumar, 2009). Based on several cross-cultural case studies, Yan and Gray (1994) observed an increasingly important role of trust in weakening the negative effects of self-interest and opportunism on ISA performance in situations where both parties are more reliant on each other's distinctive resources (Luo, 2002). As the level of interdependency between the parties increases, so does the need (and value) of trust. Economic interdependency in a sense creates an incentive structure that deters exploitation, which in turn lowers the transaction cost of exchange as the partners exchange and share valuable, unique resources (Katsikeas *et al*., 2009). It drives partnership stability and provides partners with the motivation to act in a trustworthy fashion and promotes the desire for conflict resolution (Huang, Hsieh, & Hsiao, 2012). The greater the economic interdependency between the partners, the greater will be their need for trust (Luo & Park, 2004; Damanpour *et al*., 2012).

It follows from the above that implementation of the alliance and the subsequent process of building trusting relationships to ensure satisfactory alliance outcomes, depends very much on how the combined resources that the partners bring to the alliance are managed. Given the heterogeneity of the SIPPP and the probable diverse objectives of the partners, the concept of how joint resources are managed will have particular relevance, since it will play a vital role in the alliance success, allowing the partners to optimise the use of the unique resources contributed by each (Dyer, Kale, & Singh, 2001; Grant, 1997). Taking a resource-dependent view, one concludes that, in order to lead successful alliance performance, the partners must recognise, share, exchange, and learn about each other's resources (Choi *et al*., 2010). The effective co-ordination and management of combined resources (“utilisation”) is greatly influenced by these collective learning processes between alliance partners, helping the alliance to productively use its collective resources (Choi *et al*., 2010; Das & Teng, 2000; Inkpen & Beamish, 1997; Cohen & Levinthal, 1990). These are complex processes and, in the case of SIPPPs, are further complicated by cultural issues and alternative agendas reflecting the fact that the public partner is not necessarily driven so much by the profit motive, but probably more by socio-political considerations. This has the inherent capacity for conflict.

Ties created through economic interdependency, therefore, reflect irretrievable investments made by both sides in the relationship, social pressures to maintain them and contractual barriers to protect them (Rodríguez & Wilson, 2002). They are linked fundamentally to economic exchange and defined by contractual negotiations and can be viewed as forces that

create impediments to the termination of the relationship as a result of certain mutually beneficial economic, strategic, technological or organisational objectives (Dash *et al*., 2007; Williams *et al*., 1998).

A high level of economic interdependency is expected to occur when a partner perceives the resources contributed by the other partner to the partnership to be critical for the partnership success (Das & Kumar, 2009). Economic interdependency facilitates understanding between the partners, who are more willing to collaborate and work closely, to share information and to build trust in each other, since they are keen to protect their investments and believe that greater benefits will come from such collaborative efforts (Sambasivan *et al*., 2011). Scholars generally agree that, for partnership stability, a balanced interdependency relationship that balances relative power is desired, since higher levels of interdependency lead to greater trust and commitment (Luo & Park, 2004; Damanpour *et al*. 2012). On the other hand, an un-balanced relationship, which results in power-imbalance, introduces the possibility of opportunism on the part of the more powerful partner (Hsieh, Rodrigues, & Child, 2010; Das, 2005; Das & Rahman, 2010; Madhok, 1995b; Connelly, Certo, Ireland, & Reutzel, 2011; Anderson & Narus, 1990), because weak economic interdependency ties cannot firmly tie together the motives and interests of all alliance members (Luo, 2008).

In conclusion, partners engage in alliance activities (including ISAs, JVs, PPPs and SIPPPs) to gain access to (external) resources that are unique and critical to performance and to provide competitive advantage (Das & Teng, 2000; Barney, 1991). Through such activities, an economic interdependency between the partners is created. Hence, economic interdependency provides, not only a useful connection to trust, but it underlines trust as an effective mechanism to gain access to and utilise external resources in order to improve performance and competitiveness.

There is, therefore, theoretical support as well as empirical evidence to propose the following hypothesis:

H1a: *Economic interdependency between the partners in a SIPPP positively influences the level of trust*

The relationship is depicted in Figure 3.2.

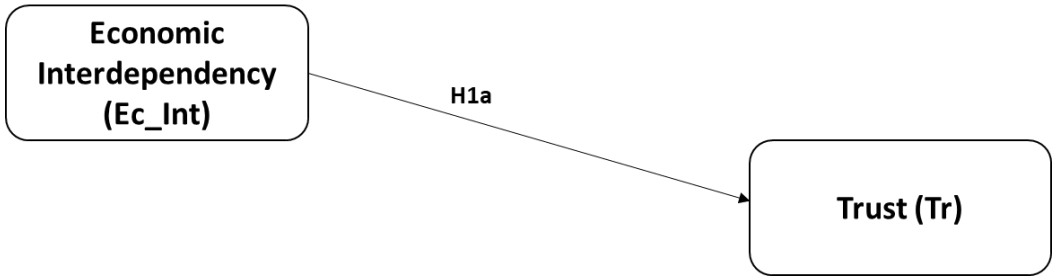


Figure 3.2. Hypothesised relationship between economic interdependency (Ec_Int) and trust (Tr)

Economic interdependency is a complex phenomenon and can be conceptualised in different ways. De Bruin (2004) and Houghton and Jinkerson (2007), conceptualised the construct as having three components: economic contribution, resource dependency and comparison of alternatives.

Economic contribution is essentially the economic investment - tangible, and intangible - made by alliance partners that is relationship-specific, largely non-transferable, limited to the life of the alliance and which leads to an increased commitment to the relationship (Parkhe, 1993; Williamson, 1985). Examples include finance, physical property (including land), intellectual property, human capital (including skills and know-how), technology, and legal rights (including license to trade and concessions). Thus, partners become increasingly locked into the alliance as they devote more and more assets to the relationship. If, furthermore, these investments are at least to some degree non-transferable and irretrievable or, as conceptualised in past research studies, can be regarded as “idiosyncratic, transaction-specific” investments (Han, 1991,1997; Liang, Chen, & Wang, 2008; Ng *et al*., 2007; Williamson, 1985), they may give rise to additional consequences for the long-term interaction development. In other words, such assets tie both the parties together and this close tie leads to the solidification of economic interdependency between them (Han, 1998).

The extent to which one partner comes to depend on certain types of resource exchanges with the other partner, may be defined as the resource dependency that the partner in question attaches to the other partner (Han, 1998). In general, researchers have argued that dependency may serve to commit partners in an alliance, thereby increasing the longevity of the relationship (Parkhe, 1993; Young-Ybarra & Wiersema, 1999). Resource dependency can be driven by the *uniqueness* of the resource exchange (i.e., the partner is the only organisation that can provide that resource), its *criticality* to the receiving partner (where criticality reflects the ability of the organisation to continue its functioning in the absence of the resource), and

by the *magnitude* of the resource exchange, or by a combination of the three (Bhaskaran & Gligorovska, 2009; Luo, 2002; Robson *et al*., 2008; Sambasivan, *et al*., 2011; Yen & Barnes, 2011). Examples from the private partner perspective would be the issuing of permits and concessions by government, without which the SIPPP would not be able to carry on its business. From a government perspective, the private partner may provide unique employment opportunities to the local population. Intangible assets in particular, such as managerial skills and proprietary technical know-how, are thought to have a significant influence on resource dependency, since such assets are typically difficult to duplicate (Young-Ybarra & Wiersema, 1999).

Grounded in social exchange theory (Kelley & Thibaut, 1978), the comparison level of alternatives is defined as *the quality of outcome that is available from the another possibly better alternative exchange relationship* (Han, 1998; Anderson & Narus, 1990). The results of interaction between the partners (termed "outcomes") represent the rewards and costs for each participant in the interaction. These results are evaluated against the quality of the possible outcome the participant expects to receive within a given relationship or the relative value of the outcome from the other attractive alternative relationship (Kelley &Thibaut, 1978; Anderson, Hakansson, & Johanson, 1994). Relationships that are rewarding are more likely to be stable, because a high level of outcomes reduces, in terms of expectations, the likelihood of a better alternative existing. However, asset specificity and lack of alternatives may serve to tie partners together by subverting the flexibility of pursuing other alternatives (Young-Ybarra & Wiersema, 1999; Anderson *et al*., 1994). Unsatisfactory relationships, therefore, may remain stable for the lack of a better alternative. The availability of alternatives and the quality of those alternatives consequently have a strong impact on the level of economic interdependency in an existing relationship in that, if there are better alternatives available, the affected partner will be more concerned with those alternatives and want to change the current partner and, therefore, the current relationship. This aspect distinguishes SIPPPs from other forms of partnerships and alliances in that alternatives, particularly for the private sector partner, tend to be somewhat limited.

Although this traditional economic model clarifies part of the relationship-building phenomenon between cross-cultural partners, particularly during the formative stage of the alliance, it is clear that, by itself, it does not explain the whole phenomenon. The main criticism is that, taking only a resource-dependence perspective of the cross-cultural relationship, there is a tendency to overlook trust and power and exaggerate the influence of opportunism in such partnerships (Das, 2005; Das & Rahman, 2010; Madhok, 2006a, 2006b, 1995a). In addition,

the impact of cultural difference is ignored (Das & Teng, 1998, 2000; Ring & Van de Ven, 1994; Madhok, 1995a, 2006a, 2006b; Das, 2005; Das & Rahman, 2010; Tang *et al;* 2010; Chan *et al.,* 2003), as is that of personal bonding (Rodríguez & Wilson, 2002). Furthermore, it envisages a linear relationship between economic bonding and the formation of a trusting relationship.

Therefore, while ties of economic interdependency are important to provide the structural foundation on which the relationship can be built and strengthened, such economic bonds alone are not sufficient for the maintenance and continuation of the relationship. This is so since, in the presence of weak bonds, there is always the possibility of opportunism by one of the partners who is in a position of power (Madhok, 1995b, 2006a, 2006b, 1995a). This tendency by an alliance member towards pursuing immediate benefits (i.e., to forgo forbearance) will frequently inhibit the other partner from developing a commitment to the relationship (Ryu *et al.,* 2011). To co-operatively manage pooled resources and achieve their alliance objectives, cross-cultural alliance partners need to communicate effectively and start to interact on the social level (Williams *et al.*, 1998; Rodríguez & Wilson, 2002). Other relational building processes are, therefore, necessary to drive economic interdependency to higher levels of interdependency forged by collaborative efforts to sustain a trusting relationship.

3.6.2. Collaborative interdependency

With the building of initial trust driven by their economic interdependency, the partners gain more knowledge about each other in the process, and deeper, personal ties develop that involve behavioural processes and encompass intangible resources that are emotional or affective in nature. Such bonds have invariably been referred to in the literature as "relationship-centred" bonds (Madhok, 1995a, 2006b, 2006a, 1995b) or "social" bonds (Williams *et al.,* 1998; Rodríguez & Wilson, 2002). They drive a higher level of interdependency between the partners that is different to economic interdependency, involving mutually rewarding collaborative behaviours, which promote joint action and build trust levels (Ring & van de Ven, 1994; Rempel *et al*., 1995; Sambasivan *et al*., 2011; Robson *et al*., 2008; Schreiner *et al*., 2009). This form of interdependency has been referred to in this research as *collaborative interdependency,* to signify the importance of collaboration as the basis of this relational building process and as an enhancer of trust.

Scholars acknowledge that, in addition to task integration, successful performance of a strategic alliance also requires social integration (Damanpour *et al*., 2012; Choi *et al*., 2010). Such business exchanges, however, do not happen in a vacuum, but rather in a series of

social networks (Fukuyama, 2001), and the literature often views ISAs and PPPs as complex social networking organisations that add further complexity to joint decision-making and management (Sambasivan *et al*., 2011; Robson *et al*., 2008). Social exchange theory provides a useful lens through which to view these relationship-building processes between partners. The theory suggests that relationships between partners have both a structural or economic dimension, as well as a social or collaborative dimension.

As shown above, economic interdependency refers to those structural ties that are created through the complementarity of the resources contributed by each of the partners in the alliance, which provides the basis for the exchange and the potential for value creation within it. The social or collaborative dimension happens in complex social networks, which are closely related to trust, and lead to higher levels of collaborative interdependency, which in turn leads to higher levels of trust, a virtuous cycle (Luo, 2008; Sambasivan *et al*., 2011; Inkpen & Curral, 2004; Beamish, 1993, 2006; Madhok, 2006; Luo & Park, 2004; Curral & Inkpen, 2002). The concept of social networks within a strategic partnership contributes to a deeper understanding of relationships between the participants and within a particular context, and helps to explain how collaborative and co-operative relations between them are established to their mutual advantage, as well as the benefits that accrue from their investment in social relations (Muthusamy & White, 2005).

The expected return on investment in social capital is co-operation between the partners that leads to effective collaboration and consequently the building of trusting relationships (Connelly *et al*., 2011). The literature suggests that the benefits that ultimately flow from the social capital accumulated between the partners during the process of building their collaborative interdependency may include more influence, more power, gaining easier access to information, easier access to key stakeholders, relationship satisfaction, and access to resources, (Muthusamy & White, 2008; Young-Ybarra & Wiersema, 1999, Sambasivan *et al*., 2011; Cropanzano *& Mitchell*., 2005; Robison, Schmid, & Marcelo, 2002). Social capital is also important to help overcome the differences that create conflict among SIPPP partners, including conflicting goals, differences in cultural values, distrust, power, politics, and external stakeholder engagement. It also fosters trust and collaborative relationships (Young-Ybarra & Wiersema, 1999; Muthusamy & White, 2008).

Collaborative ties, which are established in these social networks, develop on the back of economic ties, and reinforce the initial ties built between the partners on the basis of economic exchange (Williams *et al*., 1998). This is also reflected in the research study of Rodríguez and Wilson (2002), which showed that, when building a relationship, task-oriented “structural bonds” need to be developed before socially based collaborative bonds can be built. The

creation of collaborative ties that drive collaborative interdependency happen through a number of inter-related social exchange processes, including communication (formal and informal), co-operation and conflict resolution. Collaborative interdependency implies that there is a reluctance on the part of the partners to dissolve the relationship in the absence of a compelling strategic rationale, i.e., it drives trust and commitment (Das & Kumar, 2009).

Building collaborative relationships essentially involves familiarity, friendship and confidence built through interpersonal exchange. The strength of such a relationship may range from business to close personal ties. The maintenance of the relationship entails a great deal of self-disclosure, concern for the partner and perhaps even a personal liking for the partner. These interpersonal ties – built on a foundation of economic and collaborative interdependency – are a form of "social capital" (Rodríguez & Wilson, 2002; Nahapiet & Goshal, 1998) or "relationship capital" (Sambasivan *et al*., 2011), which counters pressures to dissolve the relationship, drive the level of satisfaction in the partnership and entails social commitments.

Such social capital, which refers to tangible and intangible resources, is exchanged between individuals or between groups working in social networks with the goal of enhancing or maintaining relationships or interactions (Auh, 2005). Social capital, which includes the social network, may therefore be viewed as the "glue" of the relationship that Damnapour *et al.* (2010) refer to, and is essentially "the ability of people to work together for common purposes in groups and organizations" or "simply as the existence of a certain set of informal values or norms shared among members of a group that permit co-operation among them" (Fukuyama, 1995). Furthermore, when co-operation is present, a structure of interdependency emerges with high levels of social capital (Nahapiet & Goshal, 1998) that facilitate the value-creation process between participants and the building of trust.

Central to the concept of social capital is the notion that it is enhanced over time through social interactions, driven by communication, and trust (Fukuyama, 1995). Social interactions, through formal and informal events, enable the partners to get to know each other and share resources and information. Thus, the relational dimension of social capital denotes the kinds and characteristics of social relationships between participants developed through their social networking and interactions over time, and how they influence their behaviours (Nahapiet & Goshal, 1998). The building of trust and trustworthiness is closely linked with effective social networking and the building of social capital (Nahapiet & Goshal, 1998; Sambasivan *et al*., 2011; Mohr & Spekman, 1994; Robson *et al*., 2002). The description is useful in understanding how social capital built up between partners in a SIPPP through their networks contributes to the building of trust and relational bonds between them.

Social exchange theory assumes that partners behave in ways that increase the outcomes they value positively and decrease those they value negatively in the relationship (Rodríguez & Wilson, 2002). Furthermore, it assumes that they will behave similarly when valuing money or knowledge, therefore making the theory robust across different contexts and cultures (Rodríguez & Wilson, 2002) - as one would find in a SIPPP. Outcomes can be partitioned into several components and may be influenced by the partner's own behaviour (independency), the other partner's behaviour (dependency), or some combination (interdependency). In a dependent relationship, the theory suggests that each participant's behaviour in the partnership produces a mutual benefit through exchange and that the final outcome is dependent on the other participant's behaviour, i.e., mutual benefit through exchange. Participants may also behave in ways that transform structural dependency into interdependency to reduce the presence of inequalities in power and uncertainty (Rodríguez & Wilson, 2002). Furthermore, when co-operation is present, a structure of interdependency emerges with high levels of social capital (Nahapiet & Goshal, 1998) that facilitate the value creation process between participants and the building of trust (Tsai & Goshal, 1998; Wilson & Jantrania, 1993). Social capital between the partners creates social ties that "bridge" social divides, including nationality, race, gender and religion, that can act as inhibitors of collaboration (Putnam, 1993). Such "weak" ties, which may not involve many shared norms, are likely to be associated with reciprocity and "thin trust" (Putnam, 1993), and may provide access to network resources outside of an individual's normal circles, providing significant individual (and group) benefits. The implication is that managers, who do not engage in collaborative activities and operate in "silos", will have few weak ties, and may be deprived of crucial information, placing them outside the loop on important issues (Connelly *et al*., 2011). This in turn will negatively impact trust levels.

One of the key drivers for participating in collaborative activities which lead to the forming of trusting relationships, is to reduce the information asymmetry in the alliance. Information asymmetry causes conflict (Muthusamy & White, 2005; Connelly *et al*., 2011; Meier, 2011). Decision-making processes are heavily dependent on the availability of quality information (Connelly *et al*., 2011). Management decision-making models are generally based on the assumption of perfect information, where such information asymmetries are ignored (Stiglitz, 2002). But, in the real world, such information asymmetries do exist, and can get in the way of building the very collaborative platforms that form the basis of trusting relationships. Such information can either be freely available in the public domain and accessible to all, or can be private information, available to only a subset of people and available through their social networks (Connelly et al., 2011). The sharing of information is a key component of social networking, and helps to reduce information asymmetry between the partners in two ways:

the quality of the information conveyed helps with joint decision-making, but simultaneously conveys information or provides cues to both parties on the behavioural intentions of the other (Stiglitz, 2002), the latter depending on how the relational signals or cues are interpreted (Connelly *et al*., 2011; Lindenberg, 2000). Both information characteristics are important in helping to build inter-party confidence (or not) and mutual trust.

For information exchange to take place, the party supplying the information must feel that there is benefit in doing so, which benefit is usually provided by the other party in terms of alternative decisions favouring the former. In this process there is, therefore, the opportunity for both parties to share information in a positive way and, in so doing, to remove an aspect of information asymmetry, thereby filling the knowledge gap, and improve the quality of decision-making to their mutual benefit and that of the alliance. This interdependency builds trust at the same time.

However, in a competitive situation, there is also the opportunity for deceit (Das, 2005; Das & Rahman, 2010; Madhok, 1995b) and the use of false signals and misinformation (Connelly *et al*., 2011) in the case where their interests are not aligned. In this situation, a successful deceit would benefit the original provider of the information at the expense of the receiver (Connelly *et al*., 2011). Trust is, therefore, two-sided, and, in the context of relational signalling (Lindenberg, 2000), the degree to which actions and behaviours of one party match the other party's pre-conceived frame of mind, will determine whether the signals or cues are interpreted positively and contribute to trust-building and an interdependent relationship, or whether they are interpreted negatively and detract from trust (Six, Nooteboom, & Hoogendoorn, 2010). This suggests that partners seeking to build trust would have to communicate trust during their social exchange interactions with one another. To do this would require "regularly performing actions that can be perceived by the other as sending unambiguous positive relational signals" (Six *et al*., 2010).

The above underlines the value of social capital generated by information exchange as a powerful enabler of building trust and collaborative interdependency between culturally distant partners. Sharing information freely and engaging in frequent social interaction with the other, conveys a desire to maintain the relationship and contributes to the building of social capital, in the process helping to attribute behaviour more accurately, and thereby reducing the risk of opportunism and deceit. Trust-building actions based on reciprocity of information stimulate trust development, because they help stabilise the relationship through the positive relational signals that are (usually) perceived from such collaborative actions (Six *et al.*, 2010).

Collaborative interdependency built through the social exchange processes as described is, therefore, a measure of the intrinsic quality of the relationship itself and has a strong impact

on the nature of exchange. Whereas relationship and structural investments are important predictors of economic interdependency, communication, co-operation and relationship investment are important predictors of collaborative interdependency (Dash *et al.,* 2007). Together, the elements of the two bonding processes constitute the "relationship atmosphere" (Dash *et al.,* 2007).

For the participants in a SIPPP, the expected return on investment in social capital is co-operation between the partners that leads to effective collaboration and consequently the building of trusting relationships (Connelly *et al*., 2011). This means gaining easier access to information between individuals and to key stakeholders, gaining respect, friendship, prestige, and, as a result, having influence. The development of social capital is important to help overcome the differences that create conflict among SIPPP partners, including conflicting goals, differences in cultural values, distrust, power, politics, and external stakeholder engagement. It is also important for fostering trust and collaborative relationships.

The above arguments strongly suggest that there is a direct link between levels of collaborative interdependency and trust, Furthermore, since collaborative interdependency is initially driven by economic interdependency and is built on the foundation that it provides, it is probable that it "intervenes" in the link between economic interdependency and trust, magnifying its overall effect. This further suggests that the intensity of the collaborative interdependency that follows (as perceived by the partners on both sides), may depend on the perceived strength of the foundation provided by their economic interdependency. These arguments are captured in the following three hypotheses:

H1b: *Economic interdependency between the partners in a SIPPP positively influences their level of collaborative interdependency*

H1c: *Collaborative interdependency between the partners in a SIPPP positively influences the level of trust*

H2: *Collaborative interdependency between the partners in a SIPPP mediates the relationship between economic interdependency (the predictor variable) and the building of trust (the outcome variable)*

The conceptual framework depicting the hypothesised relationships is shown in Figure 3.3.

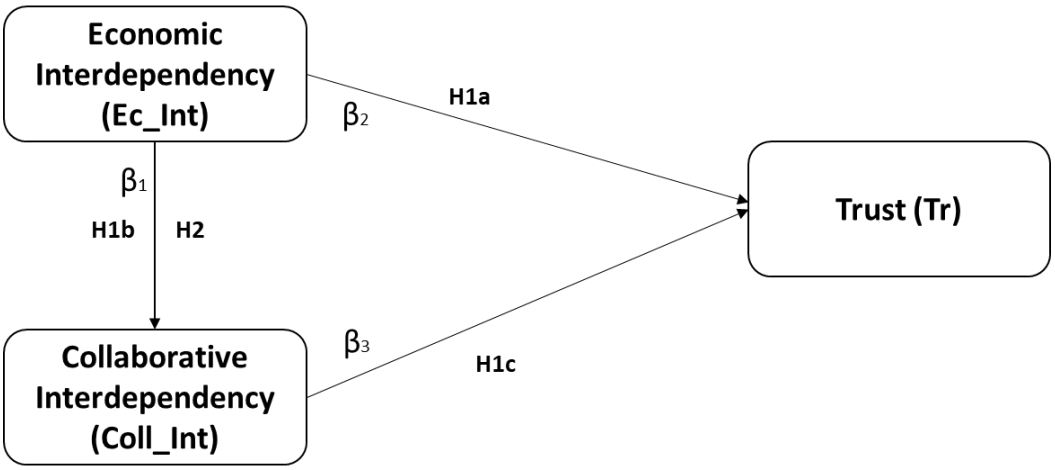


Figure 3.3. Conceptual framework showing hypothesised relationships between economic interdependency (Ec_Int), collaborative interdependency (Coll_Int) and trust (Tr).

Note: β1 to β3 are standardised regression weights denoting the relative strengths of the relationships.

Several dimensions are related to the concept of collaborative interdependency (Wilson, 1995; Dash *et al*., 2007; Rodriguez & Wilson, 2002), but prior research has shown that communication, co-operation, and relationship investment are important indicators of this construct (Dash *et al*., 2007; Smith, 1998). Based on prior alliance research, the construct can be conceptualised as having three main dimensions: communication, joint action, and satisfaction with the relationship (Liang *et al*., 2008; Mavondo & Rodrigo, 2001; Schreiner *et al*., 2009).

Communication is a social process of broadest relevance in the functioning of any group or organisation (Damanpour *et al*., 2012). It is particularly challenging in cross-cultural alliances, because partners from different cultural backgrounds tend to have different frames of reference, which lead to different ways of expressing and interpreting meanings (Damanpour *et al*., 2012). These authors further contend that there are also different preferences in verbal versus nonverbal communication and in style of assertiveness. Effective communication allows for the exchange of information, such as shared values, goals, and objectives and is an important part of any exchange relationship, the nature of communication that exists between exchange partners forming an important part of the relationship atmosphere (Young-Ybarra & Wiersema, 1999). It can influence co-operation, trust, and agreement on the critical issues of control and conflict resolution in cross-cultural partnerships (Damanpour *et al*., 2012; Schuler, 2001), and is critical to the success of the partnership (Dash *et al*., 2007; Schreiner *et al*., 2009).

Joint action or co-operation is the propensity for the partners to engage in co-ordinated action (or joint action) in areas of importance to the partnership to achieve mutual outcomes that are reciprocal (Dash *et al*., 2007). Reciprocity is an important measure of the degree of collaborative interdependency between the partners (Mavondo & Rodrigo, 2001; Schreiner *et al*., 2009), while goal congruency plays a key role in determining the propensity for joint action (Bhaskaran & Gligorovska,2009; Das & Teng, 2001; Evangelista & Hau, 2009; Leonidou, Katsikeas, & Hadjimarcou, 2002; Pak, Ra, & Park, 2009; Sambasivan *et al*., 2011; Young-Ybarra & Wiersema,1999).

During the building of collaborative interdependency ties, partners are bonded together via personal and social relationships. As the interactions go on, both partners assess their relationship (i.e., the outcomes of interactions) (Han, 1997). These assessments involve rewards and costs associated with the relationship in terms of the principle of the cost-benefit analysis. Such continual assessments of costs and benefits associated with a specific relationship lead to the basis for affective reactions of both the parties towards their relationship. In other words, such assessments determine the degree of satisfaction or dissatisfaction each participant feels towards that relationship. Satisfaction with the relationship plays an important role in developing collaborative interdependency bonds. Several researchers have noted the importance of personal and noneconomic satisfaction in a partnership relationship and have suggested that, as the relationship continues, partners in an alliance become more and more enmeshed in each other's social networks and their relationship becomes more binding, caring, stable, and predictable (Doney, Barry, & Abratt, 2007; Doney & Cannon,1997; Dwyer, Schurr, & Oh, 1987; Evangelista & Hau, 2009; Han,1991; Mavondo & Rodrigo, 2001; Sambasivan *et al*., 2011; Yen & Barnes, 2011).

The relationship-building processes in a SIPPP do not happen in a vacuum, but in a complex cultural environment. It follows, therefore, that in this type of environment, trust-building processes assume even greater importance, in part to off-set the potential negative influence of cultural difference (Lane & Beamish, 1990; Parkhe, 1991; Morgan & Hunt, 1994; Sarkar, Cavusgil, & Evirgen, 1997). This is further explored in the next section.

3.7. Different Cultural Value Systems

The cultural differences between two nations are the differences that exist due to their different cultural value systems, which drive different norms and influence the respective ways of thinking and acting of the population as a whole (Shenkar 2001, 2012; Liu & Fellows, 2008). Differences in cultural values are implicit in SIPPPs, where one of the partners comes from the public sector, rooted in the local (endogenous) national culture, while the other partner

comes from the private sector with an external (exogenous) international cultural background. Cultural differences are therefore experienced on two levels: the national level and the organisational level. However, organisational cultures do not develop independently of national cultures (del Mar Benavides-Espinosa & Roig-Dobón, 2011), and these two levels of cultural differences are, therefore, very intertwined (Ozorhon *et al*., 2008; Bhaskaran & Gligorovska,2009; Newman & Nollen, 1996; Lin & Malhotra, 2011). The literature suggests that cultural differences, unless managed, can thwart efforts for collaborative synergy and building trusting relationships (Lane, Salk, & Lyles, 2001; Parkhe, 1991, 1993; Pothukuchi, Damanpour, Choi, Chen, & Park, 2002; Ozorhon *et al*., 2008).

3.7.1. National cultural distance

The resource- and knowledge-exchange processes, so fundamental to the successful operation of a cross-cultural alliance and facilitated by the relational building and collaborative processes, do not happen in a vacuum, but, by definition, in a cultural environment. Studies have shown that cultural differences can disrupt collaboration and learning between alliance partners (Lane & Beamish, 1990; Parkhe, 1991; Lane *et al.*, 2001; Sirmon & Lane, 2004). Cultural diversity, therefore, adds a further level of complexity to the management of this type of alliance.

Despite the increasing convergence of national economies in terms of norms and practices in the wake of globalisation and increasingly complex linkages, national cultures are quite robust and persistent (Solberg, 2008). Cultural norms and beliefs are powerful forces shaping peoples' perceptions, dispositions, and behaviours, while a society's culture largely determines the way its people interact by establishing "appropriate" beliefs and behavioural standards (Dash *et al*., 2007). It is common to use country as a surrogate variable for culture in cross-cultural studies, since the convenience of national borders provides a defining unit of analysis for research (Lu, 2006). However, as the latter author points out, these studies are more accurately described as cross-national in nature, rather than cross-cultural.

The literature draws attention to the widely-reported high failure rate of cross-cultural alliances in general throughout the world (Christoffersen, 2013; Gomes *et al*., 2016; Geringer & Herbert, 1991; Madhok, 1995a, 2006a, 2006b; Beamish, 1993), but particularly in the lesser developed countries or LDCs (Dykes & Jones, 2016; Claeye & Jackson, 2011; Parkhe, 1993; Farlam, 2005). An estimated 37 % - 70 % of ISAs suffer from performance problems (Lin & Malhotra, 2011; Pothukuchi *et al.,* 2002). Complications caused by cultural differences between partners have been shown in research to be a major factor in this high failure rate (Christoffersen, 2013; Gomes *et al*., 2016; Pothukuchi *et al.*, 2002; Geringer & Herbert, 1991; Madhok, 1995a,

2006a, 2006b; Das & Teng, 1998, 2000; Ring & Van de Ven, 1994; Das, 2005; Das & Rahman, 2010; Tang *et al;* 2010; Chan *et al.,* 2003), but the mechanism is not well understood. Topping the list of complications are difficulties stemming from lack of trust (Das & Teng, 1998; Ring & Van de Ven, 1994; Madhok, 1995a, 2006b, 1995b) as well as deceit and opportunism (Das, 2005; Das & Rahman, 2010; Madhok, 1995b). Other causes have also been proposed, such as strategic incompatibility (Ariño & de la Torre, 1998), poor organisational integration (Gulati & Singh, 1998), ineffective management of internal tensions (Das & Teng, 2000), and other problems of cultural distance (Brown *et al*., 1989; Lane & Beamish, 1990).

In a complex cultural environment, it follows, therefore, that the trust and collaborative building processes discussed in the previous section, become more difficult and become even more important in cancelling the potential negative influence of cultural difference (Lane & Beamish, 1990; Parkhe, 1991; Morgan & Hunt, 1994; Sarkar et al., 1997). This further reinforces the strategic value of socially-driven networks and collaborative platforms that forge a higher level of interdependency in determining the overall success of such cross-cultural alliances (Tang *et al.,* 2010; Chan *et al*., 2003). This was also confirmed in a study of US-Mexican alliances (Rodríguez & Wilson, 2002).

Despite the generally acknowledged importance of cultural differences between partners in cross-cultural alliances on the collaborative and trust-building processes, prior research has not focused much on these complex issues and the factors facilitating the development of trusting relationships in culturally diverse environments (Choi *et al*., 2010; Berdrow & Lane, 2003; Ring & van de Ven, 1994; Das & Teng, 2000; Reuer *et al.*, 2002; Ozorhon *et al.,* 2008). No specific studies have been done on SIPPPs. Only relatively few studies have examined the influence of macro-environmental factors such as national culture, on alliance processes (Ryu *et al.*, 2011; Lane & Beamish, 1990; Claeye & Jackson, 2011), but large-scale empirical studies on the role of cultural difference in the trust-building processes have rarely been conducted, particularly in transitional economies like Africa (Christoffersen, 2013; Gomes *et al*., 2016; Dykes & Jones, 2016; Lane *et al*., 2001; Ng *et al*., 2007). Even then, most of the studies that have been done have had a distinct Western bias, which may explain some of the differences in published research findings, particularly between East and West (Kumar & Das, 2010; Ryu *et al*., 2011; Gomes *et al*., 2016).

As suggested in the literature, based on the limited research that has been done on the phenomenon, it seems likely that trust and cross-cultural alliance performance will, at least in part, be influenced by cultural aspects. These aspects affect the relational issues, such as attitudinal and managerial differences, communication and the propensity to collaborate, leading to trust (Chen, Chen, & Meindl, 1998). This is also supported in empirical research,

where studies have found that differences in national culture caused conflicts and barriers (Lane & Beamish 1990; Ozorhon *et al*., 2008). Researchers have identified at least four interrelated negative effects of cultural distance (representing cultural differences) on the building of trust in ISAs which inhibit partners from collaborating effectively. These are: (1) cultural distance can lead to communication problems, which may hinder knowledge exchange and interorganisational learning; (2) it can cause managerial conflicts due to misunderstandings, which may lead to additional costs; (3) it can influence approaches to conflict resolution, which may adversely impact operations; and (4) it can erode applicability of certain partner competencies, which may decrease the potential benefits of co-operation (Nielsen, 2007; Park & Ungson 1997; Parkhe 1991; Sirmon & Lane, 2004; Meier, 2011).

In the case of the SIPPP, such cultural differences as may exist are likely to be further exaggerated and accentuated due to the fact that the partners have different institutional backgrounds (i.e., one from the public sector and the other from the private sector), each imbued with their own particular cultures (Klijn & Teisman, 2002; Koppenjan, 2005; Trafford & Proctor, 2006). It can be speculated, therefore, that cultural difference between partners in a SIPPP can be a prime barrier to alliance performance, putting more emphasis on the emotional side of the relationship, including attitudinal, perceptual and resolution of managerial differences. How the partners deal with cultural differences becomes a salient factor in alliance management.

Viewing the complex social exchange processes in a cultural environment through the lens of cultural exchange theory adds another perspective. As suggested by the cultural exchange framework, cultural differences (whether nationally or organisationally based), can influence the nature of the exchange and the building of trust and commitment. There is no one all-encompassing definition of national culture – “culture is ubiquitous, multidimensional, complex, and all pervasive” (Das & Kumar, 2010). Hofstede (1980), in his seminal work, defined national culture, not as a characteristic of the individual, but as the *collective mental programming* that people have in common, driven by a common set of values. Culture essentially consists of the unwritten rules of the social game. This notion of culture has five dimensions to describe and make sense of cultural diversity: power distance, uncertainty avoidance, individualism-collectivism, masculinity-femininity, and long-term orientation. In 2011 Hofstede added a sixth dimension, namely indulgence versus restraint, which is related to gratification versus control of basic human desires associated with enjoying life (Hofstede, 2011).

All five of the original socio-cultural dimensions as defined by Hofstede (1980) are believed to influence, to a greater or lesser extent, the cross-cultural relations in a SIPPP between the

international private-sector partner and the “local” domestic public-sector partner. They do so through the internal work culture of the organisation, which in turn influences human resource management practices such as work design, performance management and reward system (Fischer, Ferreira, Assmar, Redford, & Harb, 2005). Unfortunately, cultural differences between East and West have strongly influenced the focus of prior research into multi-cultural alliance processes. Western studies have been preoccupied with alliance relationships developed on the basis of power structures, opportunism, trust, and conflict, largely overlooking the fact that relational processes can also be internally driven by deep-seated cultural values, such as collectivism, as one would typically find in Africa (Ryu *et al*., 2011).

Individualism-collectivism, which refers to the integration of individuals into primary groups and the degree to which people in a country prefer to act as individuals rather than as a member of a group, in particular, has been suggested to affect the nature of cross-cultural relationships (Chen *et al*., 1998; Kumar & Das, 2010). So, for example, whereas the USA-Europe cultures (representative of Western culture) tend to be more individualistic, the African cultures are generally more collectivist in nature as reflected in the prevalence of the extended family social network that characterises most of these societies (Williams *et al.*, 1998). For individualistic cultures, which would most probably characterise the international private-sector partner, individualism manifests as autonomy, individual responsibility and results, with tangible and economic benefits of the relationship having priority over social ties in transactional relationships (Newman & Nollen, 1996). Therefore, in these societies, people expect to be rewarded in-line with their individual contribution: individual performance appraisals are common, competition is important and organisations assume that employees are motivated by economic and material incentives (Fischer *et al*., 2005). Work is centred around individuals and not groups. The emphasis on tasks, rewards and outcomes can be accompanied by a concomitant neglect of people and the necessary support mechanisms. On the other hand, in collectivist cultures as one would typically find in Africa, a primary concern is to build personal relationships (Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994), and the emphasis is on work-unit solidarity and team-based rewards (Newman & Nollen, 1996).

Collaborative mechanisms will also be different between individualist and collectivist cultures because of the differences in their instrumental and expressive motives (Chen *et al.*, 1998; Pothukuchi *et al*., 2002). Similarly, in cultures with high power-distance - a measure of the degree of inequality between people accepted as the norm - again generally characteristic of African cultures, organisations will tend to be more hierarchical and centralised, with less direct employee involvement in decision-making. These hierarchical organisational structures are characterised by top-down communication, higher formalisation and central control, which is typical of this culture (Hofstede, Neuijen, Ohayv, & Saunders,1990). Managers from high

power-distance cultures are likely to view participative management with fear, distrust and disrespect, because participation is not consistent with their cultural norms. Encouraging participation would be seen as a sign of weakness and incompetence (Newman & Nollen, 1996).

Two other of the Hofstede dimensions that are likely to be important in an African context are the masculine-feminine dimension and the long-term orientation dimension. Masculine cultures, typical of certain Western cultures, which tend to emphasise “masculine” values like assertiveness, performance and success over more “feminine” values such as quality of life and maintaining warm personal relationships, are generally characterised by doing and acquiring rather than thinking and observing. They value achievement and abhor failure, while feminine cultures value affiliation and view failure as much less important (Newman & Nollen, 1996).

Long-term orientation is related to the focus that a society has on the short-term as opposed to the long-term. Long-term-oriented cultures, epitomised in certain African cultures, are characterised by patience, perseverance, respect for one's elders and ancestors, and a sense of obedience and duty toward the larger good. Management practices consistent with these norms include providing long-term employment and solving problems for the long term rather than making "quick fixes" (Newman & Nollen, 1996). In a sense, the orientation reflects on the philosophy of time and its importance in driving behaviours.

Uncertainty avoidance is related to the level of stress in a society in the face of an unknown future and its tolerance for uncertainty and ambiguity. It is reflected in the degree of preference of a structured over an unstructured situation. Scholars have noted that under conditions of uncertainty and ambiguity individual behaviour is often shaped by culturally-influenced responses (Kumar & Das, 2010). It is, therefore, expected to be a distinguishing factor between the cultures of the SIPPP partners.

Hofstede’s research was carried out in the late 1970s and early 1980s. Although several scholars have questioned the methodology, and the generalisability of Hofstede’s data (Kirkman, Lowe, & Gibson, 2006, 2017; Newman & Nollen, 1996), the seminal study remains a staple for current research on cross-cultural differences. A multitude of studies in a variety of disciplines have confirmed the significance of Hofstede’s national culture values to international collaborative outcomes, workplace behaviours and attitudes (Kirkman *et al*., 2006, 2017; Barkema & Vermeulen, 1997; Kogut & Singh, 1988; Morosini, Shane, & Singh, 1998). While it would seem likely that, over almost four decades covering a full generation, the combined forces of globalisation, the knowledge revolution and related trends would have rendered the data largely obsolete, a number of researchers working in this field in recent

times have used the original characterisations of national cultures in their research in the belief that they still hold true today (Barkema, & Vermeulen, 1997; Lin & Malhotra, 2011; Dash et al., 2009; Lu, 2006; Rodríguez & Wilson, 2002; Das & Kumar, 2010), although some have sought to improve on their relevance by extending the categories (Kogut & Singh, 1988; Pothukuchi *et al*., 2002; Ozorhon *et al*., 2008; Ryu *et al*., 2011; Shenkar, 2001, 2012).

Using the Hofstede model, Damanpour *et al (*2012) concluded that cultural differences increase the potential for conflict, in part due to the fact that co-operation-generating mechanisms vary between cultures, for example, between individualist and collectivist cultures. Das and Kumar (2010) argue that reality is socially constructed and is subject to multiple interpretations, and therefore we need to understand how alliance functioning is interpreted in different ways by alliance partners from different national cultures and the role of these interpretations in shaping their subsequent behaviours. Culture norms influence the development of trust in strategic alliances (Sarkar *et al.,* 1997), and it seems plausible that partners in a cross-cultural alliance will reflect their socio-cultural orientation in their relationships, just as firms in their respective home countries reflect the national cultural patterns in the way they transact business (Ryu *et al.,* 2011). Different cultural norms or practices will exist in Africa compared to the developed world. Each partner involved in the SIPPP will bring its own social and cultural norms to the partnership (Choi *et al.,* 2010). The partners need to be sensitive to each other's cultural norms and need to be aware of, understand, appreciate and accommodate cultural differences between them so as not to cause misunderstandings, misperceptions, suspicions and managerial conflicts (Lin & Malhotra, 2011). These, together with the conflict to which they give rise, contribute to poor trust and hinder positive interactions between the partners, fostering opportunistic tendencies and creating impediments to knowledge transfer (Kaufman & O'Neil, 2007; Madhok, 1995a, 2006b, 2006a, 1995b). Divergent expectations among alliance partners stemming from differences in cultural norms and practices leading to distrust, may either lead to opportunistic behaviour on the part of alliance partners or make the task of achieving inter-organisational coordination difficult (Das & Kumar, 2010; Madhok 1995a, 2006b, 1995b, 2006a). Cultural difference is therefore considered a major barrier to building trust, and the ability to adapt culturally is seen as a necessary skill to ensure a satisfactory partnership. This is captured in the following hypothesis:

H3: *National cultural distance between the partners in a SIPPP negatively influences the level of trust*

Alliance partners embedded in different national cultures rely on interpretive schemes to make sense of the conflicts, contradictions, and internal tensions that emerge in strategic alliances.

(Das & Kumar, 2010). In the trust-building process, "bonding" between partners can, therefore, be viewed as a process of interpersonal orientation that results in the partners acting in a unified manner towards a desired goal (Dash *et al.,* 2007). It is posited that trust evolves over the life cycle of an alliance, and depends on the availability of relevant information about the partner that can build trust about expectations of how that partner will act (Taylor, 2005). Generally, during the early stages of the alliance, this information is not available, and initial trust tends to be more calculative and transactional but, as the relationship progresses and the partners gain more knowledge about each other, deeper ties can develop (Inkpen, 1998).

As suggested by social exchange theory, communication is an important part of this process in developing trustful relationships, but, like trust itself, communication is heavily intertwined with culture (Plum, 2014). This composite relationship is embodied in the concept of intercultural communication (Plum, 2014). Scholars agree that communication is a complex process that involves the creation and exchange of meaning through verbal and non-verbal messages or signals (tone of voice, facial expressions, behaviour, and physical settings) that another person perceives and interprets (Das & Kumar, 2010). Most of the meaning being exchanged among people is often conveyed unconsciously (Das & Kumar, 2010; Plum, 2014), thereby contributing to the complexity of the communication process. Moreover, many factors can influence how and whether a message is received accurately and how it is interpreted. Das & Kumar (2010) refer to this process as "sense-making in and of chaos". Cultural norms, including values, beliefs and attitudes, will influence the interpretation of relational signals, adding further complexity to the process.

The role of cross-cultural differences (as represented by the construct of cultural distance) in the bonding process and the building of trust and commitment between the partners is still the subject of some controversy amongst researchers (Chen, Kirkman, Kim, Farh, & Tangirala, 2010; Nielsen, 2007; Katsikeas *et al.,* 2009; Sirmon & Lane, 2004; Orr, 2004). Some suggest that cultural distance, which typically engenders communication problems, is more likely to attenuate rather than amplify the beneficial bonding processes, causing a negative influence on the building of trust and commitment (Pothukuchi *et al.,* 2002; Mjoen & Tallman, 1997; Beamish, 1985; Lane & Beamish, 1990; Parkhe, 1991). The opposing argument, however, is that culturally distant partners work harder on their relationship to overcome cultural challenges than would be the case in a culturally congruent partnership. This involves adjusting behaviour to one that is more typical of the other culture and is essentially the ability to step outside one's cultural boundary, to adjust one's perspectives and to act accordingly. This has been referred to as the "acculturation" process involving "cultural adaptive behaviour" (Lin & Malhotra, 2011), but has also been called the *cultural paradox* (Ozorhon *et al*., 2008; del Mar Benavides-Espinosa & Roig-Dobón, 2011). Cultural adaptive behaviour is thereby

intensified and helps to improve the relationship between culturally distant partners through enhanced mutual understanding and communication, thus increasing the efficiency of the social bonding processes that build trust (Lin & Malhotra, 2011; Chen *et al.,* 2010). Therefore, cultural differences between partners have the potential for both synergy and disruption (Morosini *et al.*, 1998; Parkhe,1991).

There is also a school of thought that suggests that an awareness of differences in culture by itself is insufficient and can lead to stereotyping, which can exacerbate conflict in partnerships (Plum,2014). These scholars assert that the concept of the dominant culture paradigm based on national culture differences is outdated and has been overtaken by globalisation, which, they argue, has tended to drive standardisation and blur the differences between cultures, forcing them to converge. Africa is probably lagging in this process.

The concept of national culture, therefore, does not adequately address the cultural complexities of today's global environment, where people must function in different networks and with people from different cultural, ethnic and professional backgrounds, as well as diversity in gender, age and religion (Plum, 2014). This requires managers in cross-cultural alliances to have a cultural sensitivity as well as the capability to collaborate and build fruitful relationships with people who think and act differently. In this context intercultural communication and the ability to create effective social networks are key skills. These are personal attributes frequently associated with innovative leaders.

Either way, the above arguments supported by research findings suggest that cultural differences between the parties, as represented by cultural distance, can be expected to moderate (determine the strength and direction of) the relationship between both the resource exchange and knowledge exchange processes on the one hand and the building of trust on the other. The effect is either to attenuate the relationship or amplify it, depending on the cultural outlook of the respective parties, in turn influenced in part by their respective national and organisational backgrounds, and affecting the way each party perceives the SIPPP.

These arguments are captured in the following hypotheses:

H4a: *National cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*

H4b: *National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*

H4c: *National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust.*

The hypothesised relationships between national cultural distance and trust and between national cultural distance, economic interdependency, collaborative interdependency and trust, are shown in Figure 3.4.

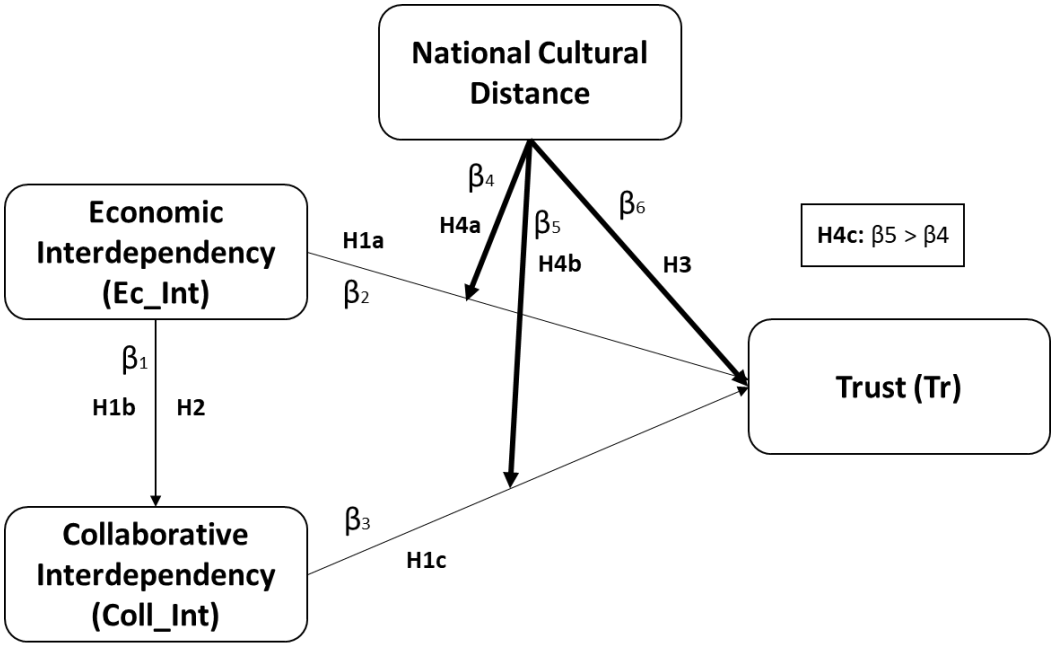


Figure 3.4. Conceptual framework showing hypothesised relationships in bold between national cultural distance (NCD) and trust (Tr), between national cultural distance and economic interdependency (Ec_Int) and trust, and between national cultural distance and collaborative interdependency (Coll_Int) and trust.

Note: β1 to β6 are standardised regression weights denoting the relative strengths of the relationships.

3.7.2. National vs organisational cultural distance

Organisational culture may be seen as a force that guides the behaviour of members within an organisation in such a way that consistency and prediction can be detected within it (del Mar Benavides-Espinosa & Roig-Dobón, 2011). Culture refers to the set of values, beliefs and attitudes, which are standard for the large majority of firm members. It is said that culture is strong if it is broad and accepted throughout the whole organisation, while a weak culture is neither diversified nor institutionalised (Hofstede 1980). A number of studies have examined the impact of national and corporate cultural differences in international strategic alliances, with insightful analyses and findings concerning the differences in the role of trust, commitment and partnership satisfaction (Das & Teng, 1998; Dong & Glaister, 2007; Gill & Butler, 2003;

Kauser & Shaw, 2004; Kwon, 2008; Lin & Wang, 2008; Robson *et al*., 2008). Certain of these studies have concluded that national culture is of over-riding importance (Barkema & Vermeulen, 1997; Meschi & Riccio, 2008), although some others question this importance vis-a`-vis corporate and organisational culture (Sirmon & Lane, 2004).

Culture is a multi-level construct: supra-national, national, organisational and individual (Fischer *et al*., 2005; Pothukuchi *et al*., 2002). These levels are thought to be nested within each other: individuals are nested within organisations and organisations are nested within countries. Organisations do not operate in a social vacuum, but are influenced by the socio-cultural context in which they operate (Hofstede *et al*., 1990), and are thought to be rooted in national culture (Benavides-Espinosa & Roig-Dobón, 2011; Bhaskaran & Gligorovska, 2009; Ali, 1995). Therefore, the socio-cultural dimensions at a national level, primarily driven by deep-seated values, are likely to influence practices at the organisational level (Fischer *et al*., 2005; Pothukuchi *et al*., 2002), relating primarily to shared beliefs in organisational practices and processes (Hofstede *et al*., 1990).

Some studies have suggested that differences in organisational culture (influenced by national culture) have more of an impact on ISA performance than national culture differences themselves (Pothukuchi *et al.,* 2002; Ozorhon *et al.,* 2008). This is likely to be even more true in the case of the SIPPP, where the partners hail from very disparate organisational forms. Das and Kumar (2010) argue that alliance partners embedded in different national cultures rely on interpretive schemes to make sense of the conflicts, contradictions, and internal tensions that emerge in strategic alliances. However, differences in core assumptions as embodied in national culture reflect cultural differences that are relatively enduring, whereas differences in organisational practices have a transient character (Das & Kumar, 2010). This implies that, while corporate culture may readily modify the behaviour of organisational members, it is unlikely to be able to redefine the basic assumptions of national culture (Das & Kumar, 2010).

Kumar and Das (2010) similarly argue that, while corporate and professional cultures may well influence some aspects of alliance evolution, they do so in the context of the national cultural distance that separates the partners. In other words, national cultural differences are the salient overriding factor within which the other differences may exert their own influence. Hence the influence of other variables may be less determinative relative to that of national culture. The same authors therefore recommend that researchers look primarily at the impact of national cultural differences among alliance members in shaping alliance evolution. Fischer and Poortinga (2012) argue that in the narrow sense, only individuals can have values, countries and organisations strictly speaking do not have values. Therefore, national and

organisational cultural differences come together and find expression in the individual, shaping his / her behaviour. Sirmon and Lane (2004) agree with this conclusion, arguing that differences in national culture increase the partners' organisational culture differences. For these reasons, experiences cannot simply be copied from one country and cultural setting to another, since different cultural settings drive divergent practices and policies (Harrigan, 1988; Sillars & Kangari, 2004; Tang *et al.,* 2010).

Organisational practices are variables at an organisational level that are closely related to organisational culture (Hofstede *et al*., 1990). They refer to the way things are done in an organisation (Fischer *et al*., 2005). Hofstede *et al*. (1990) argued that organisational culture differences should be operationalised in terms of core organisational practices rather than values and beliefs and suggested six core organisational practices that differentiate organisations in their management orientation: *process versus result*; *employee versus job*; *parochial versus professional*; *open versus closed system*; *loose versus tight control*; and *normative versus pragmatic*. The authors argue that culture dimensions outlined in these six practices identify managerial tendencies in an organisation, typified by a set of desirable and expected behaviours. Partners with dissimilar organisational cultures differ in their communication methods and power structures, and therefore lend themselves to differing sets of job roles and expectations (Damanpour *et al*., 2012; Park & Ungson, 1997; Pothukuchi *et al.*, 2002). These differences can also result in conflicting behaviours, leading to misunderstandings, interaction problems and a decline in inter-partner trust (Hofstede *et al*., 1990). Members of an organisation, therefore, share organisational beliefs, norms and values that are expressed in organisational behaviours and practices. These in turn influence the work attitudes and behaviours of individuals (Newman & Nollen, 1996). They can also influence cross-cultural alliance performance (Sirmon & Lane, 2004).

Different cultural norms or practices will exist in Africa compared to the developed world. It seems plausible that such differences will be exaggerated by the cultural differences inherent in public- and private-sector institutions. Each partner involved in the SIPPP will bring its own social and business practices to the partnership (Choi *et al.,* 2010).

Organisational culture differences, which translate into a firm's organisational practices and operations, can lead to conflicting expectations, misunderstandings, and communication problems that are dysfunctional to alliance performance (Fey & Beamish, 2001; Pothukuchi *et al*., 2002; Ren *et al.*, 2009). Katsikeas *et al*., (2009) argue that the exchange within an alliance is conducted through a social network of "employee-actors" who co-ordinate the flow of resources and information as they participate in the day-to-day work of exchange. The challenges discussed above may inhibit the effective interaction of individuals from different

cultures within an international alliance, which then decreases the likelihood that the alliance's pooled complementary resources will be shared, combined and leveraged in a manner that effectively achieves the alliance's primary value-creating activities (Sirmon & Lane, 2004).

Public-private sector differences are likely to be exaggerated in developing countries for, while the so-called “new age” public management has sought to achieve a greater orientation towards change, less bureaucracy, greater flexibility, entrepreneurialism, efficiency and productivity (Parker & Bradley, 2000), the public sectors in the developing countries have tended to lag behind in this process. Therefore, while prior research appears to suggest that national culture is over-riding in the case of global international alliances where both partners are from the private sector (Sirmon & Lane, 2004; Pothukuchi *et al.,* 2002; Ozorhon *et al.,* 2008), it may be argued that, in the case of the typical SIPPP set in a developing country context, the combined effect of national and organisational cultural differences will outweigh the purely national cultural differences. Although the separate effects of national and organisational culture are difficult to distinguish empirically, they conceptually offer helpful insights into the relative behaviours of the partners.

An organisational perspective, that aligns with the organisational cultural framework suggested by Hofstede *et al*. (1990) (Klijn & Teisman, 2002; Koppenjan, 2005; Trafford & Proctor, 2006), suggests that public-sector organisations have their own unique cultures, norms, traditions and values that are distinct from private-sector organisations and which exert an independent influence on the behaviour and decision-making of the members of those public entities (Christensen, Laegreid, Roness, & Rovik, 2007; Hofstede *et al.,* 1990). A key assumption is that these members’ organisational affiliations and organisational setting in which they act will influence their way of thinking, their behaviour, their values and their goals. Therefore, to understand this behaviour and the decision-making process, one needs to analyse the interplay between individual factors and organisational conditions. An approach based on an organisational perspective would therefore be that, to understand the behaviour and decision-making of members of a public organisation, one needs to gain some fundamental understanding of the political administrative system that underpins the public entity and its operation.

It is therefore the argument in this research that the influence of organisational cultural distance, representing differences in organisational practices that are culturally driven, cannot be ignored and needs to be considered in its own right. While it is accepted that national cultural distance informs organisational cultural distance, it is postulated that the latter exerts its own influence on trust-building processes in a similar fashion to national cultural distance,

albeit perhaps with a weaker effect. This proposition is encapsulated in the following hypothesis:

H5a: *Organisational cultural distance between the partners in a SIPPP negatively influences the level of trust*

Furthermore, organisational cultural differences (as represented by the construct of organisational cultural distance), which the evidence suggests have their roots in national cultural difference (as represented by the construct of national cultural distance), are expected to exhibit a similar moderating effect on the relationships as the latter, with the same supporting arguments applying. It is therefore posited that organisational cultural distance moderates (determines the strength and direction of) the relationship between both the resource exchange and knowledge exchange processes on the one hand and the building of trust on the other. The effect is either to attenuate the relationship or amplify it, depending on the cultural outlook of the respective parties, in turn influenced in part by their respective organisational backgrounds, and affecting the way each party perceives the SIPPP.

These arguments are captured in the following hypotheses:

H5b: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*

H5c: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*

H5d: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust.*

The hypothesised relationships between organisational cultural distance and trust and between organisational cultural distance, economic interdependency, collaborative interdependency and trust are shown in Figure 3.5.

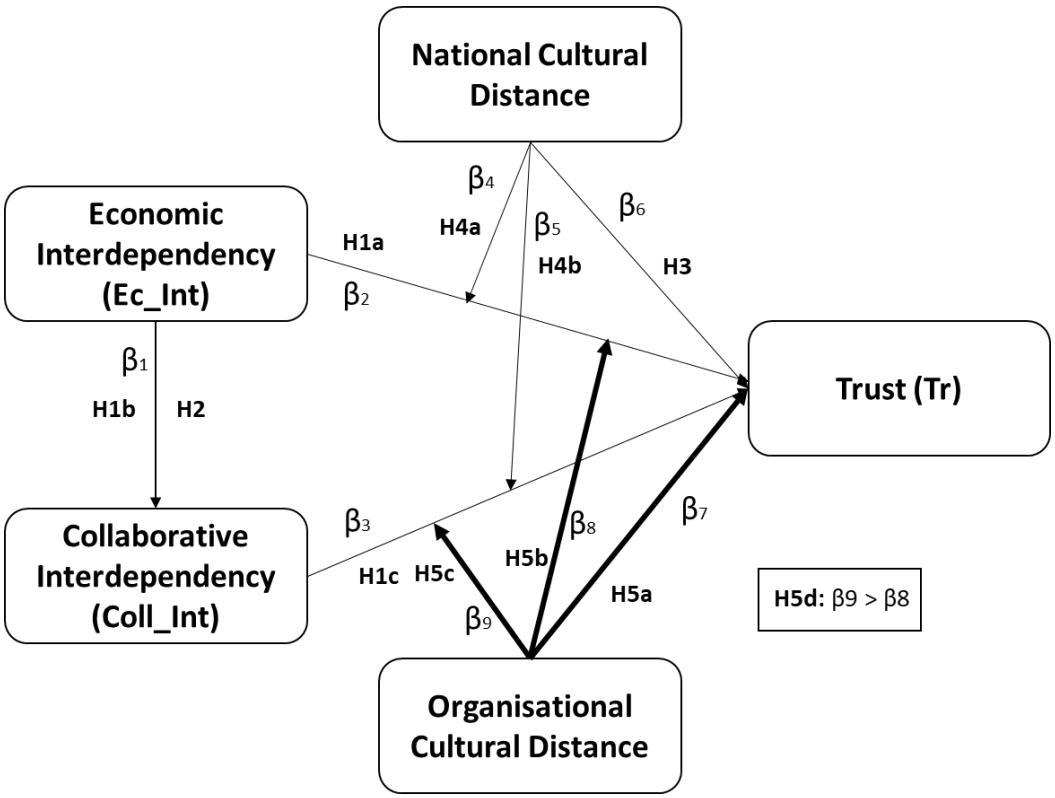


Figure 3.5. Conceptual framework showing hypothesised relationships in bold between organisational cultural distance (OCD) and trust (Tr), between organisational cultural distance and economic interdependency (Ec_Int) and trust, and between organisational cultural distance and collaborative interdependency (Coll_Int) and trust.

Note: β1 to β9 are standardised regression weights denoting the relative strengths of the relationships.

3.7.3. Conceptualising cultural distance

Complex, intangible and subtle, culture has been notoriously difficult to conceptualise (Shenkar, 2001). National cultural distance, defined in this study as *the extent to which the norms and values of the two partner organisations involved in the SIPPP differ because of their separate national characteristics* (Pothukuchi *et al*., 2002; Shenkar, 2001, 2012), is one of the measures commonly used in research to dimension cultural differences (Kogut & Singh, 1988). The construct has received a great deal of attention in the research literature (Barkema & Vermeulen 1997; Evans & Mavondo, 2002; Geringer & Hebert,1991; Hofstede, 1980; Kogut & Singh, 1988; Morosini *et al*.,1998; O'Grady & Lane 1996; Orr, 2004; Ozorhon *et al*., 2008; Park & Ungson, 1997; Shenkar, 2001, 2012; Solberg, 2008). The cultural distance scale essentially measures the extent of differences in both culture and language between partners (Evangelista & Hau, 2009).

Cultural distance is often examined in terms of the five well-known cultural dimensions put forward by Hofstede (1980), representing constructs used widely in academic research

(Solberg, 2008). Kogut and Singh (1988) extended Hofstede's (1980) work by developing a composite index of cultural distance using a Euclidian distance measure based on the first four dimensions of his framework. Many studies have subsequently used Kogut and Singh's (1988) index, or an adapted version, as a measure of national cultural distance (e.g., Agarwal 1994; Barkema & Vermeulen, 1997; Inglehart & Baker, 2000; Luo & Park, 2004; Morosini *et al*. 1998; Park & Ungson 1997; Trompenaars & Hampden-Turner,1998). However, Lu (2006) concluded, after evaluating a number of these studies, that this approach suffered from severe limitations, and recommended the use of Hofstede's (1980) original dimensions. Shenkar (2001, 2012) also argued that the Hofstede (1980) and Koghut and Singh (1988) scales produced mixed results in research, criticizing the concept of national cultural distance as being "illusory", and proposing a modified approach.

Some researchers have taken an alternative approach by conceptualising trust based on perceptions rather than indices. According to Barkema and Vermeulen (1997) and Barkema, Shenkar, Vermeulen, and Bell (1997), culture is a complex phenomenon and embodies a host of values, beliefs, and norms, many of which are subtle, intangible, and difficult to measure. They argue that the interpretation of culture as a unidimensional aggregate phenomenon, although popular in the research literature, oversimplifies the complex construct and may explain the mixed results studies have yielded regarding the impact of cultural distance on international alliance performance (Ozorhon *et al*.,2008). These researchers contend that it is not the simple presence of environmental factors which determines the distance between cultures, but rather the individual's perception and understanding of the differences between the two cultures being studied that form the basis of cultural distance (Lin & Germain, 1998; Orr, 2004; Solberg, 2006, 2008). It is therefore the collective managers' perceptions of differences in culture that inform the organisation's strategies regarding its overall relationship with its partner (Solberg, 2008). Such perceptual measures are deemed to lead to a more reliable measure of cultural distance in that particular context, than utilising country-based indices, since they are straightforward and do not suffer from "confounding issues" (Ng *et al.*, 2007).

In line with the arguments presented above and to overcome the limitations of the Kogut and Singh (1988) and Hofstede (1980) national cultural distance scales, the recommendations of Ozorhon *et al*. (2008) and Solberg (2008) were followed in this research. Rather than using published or computed indices, subjective perceptions of respondents were measured, but utilising the Hofstede (1980) framework and items adapted for context from previous studies (Mjoen & Tallman, 1997; Ng *et al.*, 2007; Ali, 1995). While perceptual measures have been criticized, with subjective bias being the primary concern (Geringer & Herbert, 1989), Orr

(2004) has argued that subjective measures have their advantages, including being able to measure complex phenomena and avoiding concerns of confidentiality around sensitive data.

Using a similar definition as national culture distance, organisational culture distance is defined in this study as *the extent to which the norms and values of the two partner organisations involved in a SIPPP differ because of the characteristics of their separate institutional forms, i.e., public-sector vs private-sector organisation*. The concept of organisational cultural distance has received a great deal of attention in the research literature (Damanpour *et al*.,2012; Hofstede *et al.*,1990). Organisational research has generally applied Hofstede's six core organisational practices to characterise the organisation. Culture dimensions outlined in these six practices identify managerial tendencies in an organisation, typified by a set of desirable and expected behaviours.

Pothukuchi and colleagues (2002) adapted the organisational cultural distance scale from Hofstede and colleagues (1990) based on the original six dimensions with relevance to joint ventures, but using partner perceptions (rather than indices) as the measures. They found that a modified three-dimensions scale based on "process versus result", "parochial versus professional" and "open versus closed" gave similar "goodness-of-fit" results to the original six dimensions scale. For the purposes of this study, the methodology proposed by Pothukuchi *et al*. (2002) and Damanpour *et al*. (2012) was used but employing all six dimensions originally proposed by Hofstede *et al*. (1990).

3.8. Differences Between Private-Sector and Public-Sector Partner Groups

Studies into ISA relationships have generally been done through the perceptions of a single partner, usually the more dominant Western partner. This has tended to view cultural differences from a single (generally Western) perspective, and has introduced a bias into the research, since between-groups differences in perceptions of these phenomena are ignored. This gap is evidenced by the increasing frequency in recent years of discordant findings between relational research emanating from the West and that from the East. A key distinction of the current research compared with the general international alliance research, is that one of the partners in the SIPPP comes from the public sector, rooted in the local (endogenous) national culture, while the other partner comes from the private sector with an external (exogenous) international cultural background. Following the approach of prior research by just looking at one side of the dyad would introduce an even bigger bias, since real between-groups differences in perceptions of the impact of national cultural differences and organisational cultural differences on relationships and trust, would be papered over.

Public-sector organisations are fundamentally different from their private sector counterparts. They are multifunctional (have conflicting demands), follow a political leadership, have different interests from those of the private sector (generally broader and often more qualitative and social in nature), and usually do not operate in competitive external markets (lack of market control) (Christensen et al., 2007; Parker & Bradley, 2000). A further feature of traditional public-sector organisations is that they are accountable to citizens and voters rather than to narrow interest groups, and consequently have to demonstrate greater transparency. Because of the political control element and their multifunctional nature, public-sector organisations often have blurred objectives, vague, conflicting and difficult-to-measure goals, creating flexibility, but also problems of responsibility leading to tensions (Christensen *et al.*, 2007). They tend to be motivated less by financial than political considerations, leading to decisions that may be interpreted by the private sector partner as "irrational" (Parker & Bradley, 2000). The public organisation is essentially woven into a complex political and social network of organised interests, citizens, user groups and customers. It experiences competing logics, loyalties and sources of influence that are rooted in the organisation's political and administrative leadership, as well as in its culture and external environment (Christensen *et al.*, 2007). The conclusion is that public organisations have more goal complexity and ambiguity than their private-sector counterparts.

There are conflicting research findings reported in the literature on the differences between public-sector organisations and private-sector organisations (Parker & Bradley, 2000), leading some researchers to question whether the differences that are often highlighted in theoretical propositions are in fact real (Wettenhall, 2003, 2007). Certainly, a process of public-sector reform has taken place in the Western world over the past two decades to change the operating model of public-sector organisations closer to that of the private sector. This is aimed at achieving similar cost-efficiencies, budget accountabilities and improved customer focus in service delivery, and has tended to blur these differences to an extent (Parker & Bradley, 2000). However, the reform of the public sector on the African continent is lagging far behind, and the assumption would be that these differences identified in the research literature, are still very pertinent in the context of the study setting.

It can be argued that between-groups differences in a SIPPP are likely to be driven by two main factors: (i) differences in culture, both national and organisational, respectively personified by different values systems and different organisational practices, and (ii) conflicting goals emanating from divergent agendas, namely, the business agenda versus the socio-political agenda. Not only will these differences drive different behaviours in and perceptions of the relational building processes, but they also introduce the propensity for conflict and possible opportunism. Several empirical studies have found that there is support

for the notion that goal congruency promotes the formation of trust, and vice versa (Madhok, 1995b; Pak *et al*., 2009).

Cultural distance as characterised in the Hofstede (1980) national culture model can therefore be expected to play a key role in the bonding process of multicultural strategic alliances. For example, collectivism vs. individualism will drive different behaviours. Thus, individualist cultures (typified by "Western" companies), are expected to emphasise structural ties or economic interdependency in the formation of trusting relationships, whereas collaborative relationship-building leading to higher levels of interdependency may be more relevant to collectivist cultures (Rodríguez & Wilson, 2002; Williams *et al.,* 1998) such as one would tend to find on the African continent (Fischer *et al.,* 2005; Hofstede, 1980). However, it is postulated that, while these cultural factors and conflicting goals drive different behaviours and perceptions between the two groups, the fundamental mechanisms on which these behaviours are based are the same for the two groups. In other words, between-groups differences in the perceptions of the fundamental relationships between economic interdependency, collaborative interdependency and trust all arise from the same model. This means that the differences can be interpreted in the same relationship model for both groups.

These arguments are captured in the following hypotheses:

H6a: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public-sector partners).*

H6b: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public-sector partners).*

H6c: *National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public-sector partners).*

H6d: *National cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public-sector partners).*

H7: *In the building of trust, the importance of economic interdependency compared with collaborative interdependency is viewed differently across the two levels of partner affiliation (private-sector partners vs public-sector partners).*

The hypothesised differences between the two groups, private- and public-sector partners are schematically shown in Figure 3.6, which compares the strengths of the relationships in question between the two partnership models.

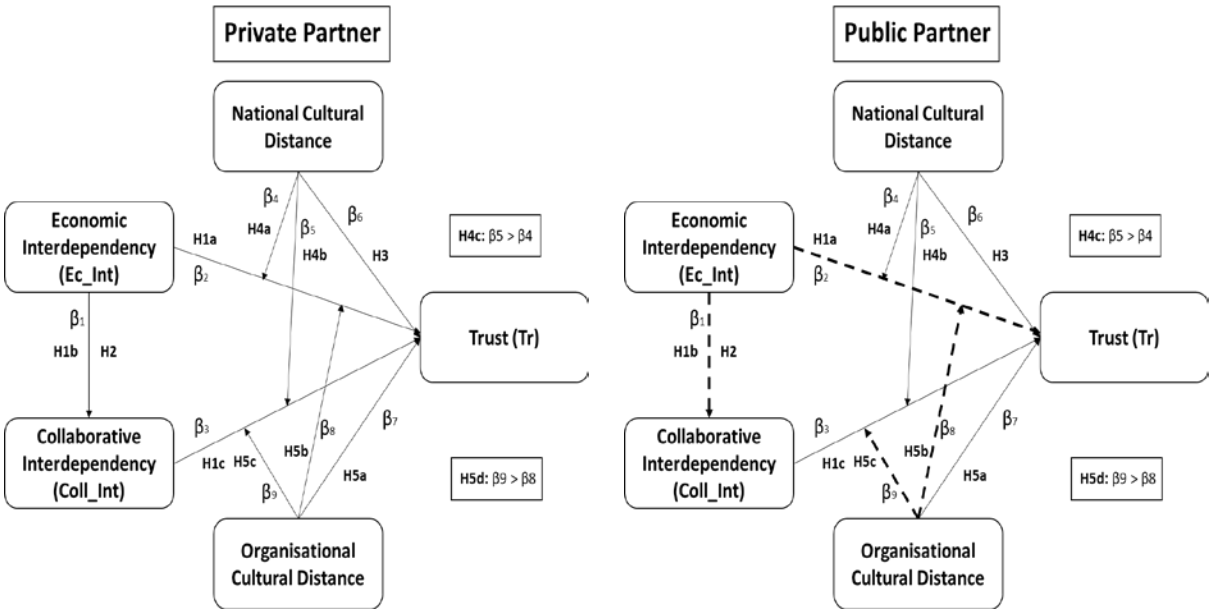


Figure 3.6. Conceptual framework showing the relationships that are hypothesised to be different between the two groups in a SIPPP, private- and public-sector partners (indicated by the dotted lines).

3.9. Conclusions from the Literature Review

A comparison of the SIPPP with its nearest relations, the domestic PPP and the ISA, has highlighted similarities, but also additional complexity, introducing a new cultural dynamic into the already complex relationship-building processes in these multi-cultural institutions. The research literature provides strong support for the notion that trust is central to an enduring and productive relationship, being seen as the relationship "building block" that ensures successful outcomes for the alliance. A relationship built on trust that facilitates open communication, information sharing and conflict management can withstand greater stress and adapt more strongly to challenges.

Despite being the subject of intensive research in recent years, the core concepts of ISA operation and how relationships between culturally divergent partners develop, are still largely clouded in mystery. This stems mainly from the inherent complexity of such alliances. No comparative studies have been done on SIPPPs, highlighting a gap in the research.

Prior research has shown that interdependency between alliance members, built through their social interaction, plays an important role in building mutual trust and sustaining the relationship by fostering collaboration, generating synergies and accentuating reciprocity. Collaborative relationships, which are inextricably linked to the building of trust and driven by the partners' mutual reliance, are first driven by the parties' economic interdependency and then, in a greater measure, by their collaborative interdependency, building greater levels of trust and, in turn, greater levels of collaborative interdependency, thereby moving in a virtuous cycle. The greater the partners' level of interdependency, the greater will be their need for trust. Interdependency creates an incentive structure that deters exploitation, which in turn, lowers the transaction cost of exchange and drives partnership stability, providing partners with the motivation to act in a trustworthy fashion and promoting the desire for conflict resolution. However, interdependency, if unbalanced and in the presence of weak ties, can also create opportunities for negative effects such as opportunism, conflict and power struggles. This will tend to inhibit the partners from developing a commitment to the relationship. Since trust is developed and reinforced via social interactions, the basis for trust in a multi-cultural partnership like the SIPPP, can be expected to be continually in transition (Nielsen & Nielsen, 2009; Rousseau *et al.*, 1998).

Social networking and the accumulation of social capital are key components of the collaborative interdependency relationship-building process. The social exchange dimension happens through a number of inter-related processes, including communication (formal and informal), building collaborative platforms and conflict resolution, and is generally considered to be the "glue" that holds the alliance together. The literature suggests that collaborative interdependency may deliver such benefits as more influence, more power and respect, relationship satisfaction, reduction of information asymmetry, and easier access to resources and to key stakeholders. Prior research also suggests that social capital is important to help overcome differences that create conflict among SIPPP partners, including conflicting goals, differences in cultural values, alternative agendas, distrust, power politics, and external stakeholder pressures.

Cultural differences further complicate the already complex relational processes which create greater levels of interdependency and trust. Such differences can conceptually be thought of as operating on two levels, namely national culture and organisational culture, but in practice they tend to be heavily intertwined. Both are thought to have a direct effect on trust as well as a moderating effect on the interdependency-generating processes leading to trust. Along with conflicting goals and alternative agendas, cultural differences are likely to drive different perceptions of the relationships by the two partner groups, i.e., the private -sector partner and the public-sector partner.

Despite the generally acknowledged importance of cultural differences between partners in cross-cultural alliances on the collaborative and trust-building processes, prior research has not focused much on these complex issues and the factors facilitating the development of trusting relationships in culturally diverse environments. Only relatively few studies have examined the influence of national culture or organisational culture on alliance processes, and even fewer have studied their combined effects. Furthermore, large-scale empirical studies on the role of cultural difference in the trust-building processes, have rarely been conducted, particularly in transitional economies like Africa. Even then, most of the studies that have been done have had a distinct Western bias. No studies have been done on SIPPPs in an African context. This highlights a gap in the research.

Prior research supports the conclusion that cultural difference may be considered to be a major barrier to building trust, and consequently how partners in a SIPPP deal with their cultural difference becomes a salient factor in alliance management. In particular, the ability to adapt culturally is seen as a necessary skill to ensure satisfactory outcomes for the partnership. The literature warns that, unless managed, cultural differences can thwart efforts for collaborative synergy and building trusting relationships. Divergent expectations among alliance partners stemming from differences in strategic objectives, culture (national or organisational), organisational practices or trust may either lead to opportunistic behaviour on the part of alliance partners or make the task of achieving inter-organisational coordination difficult.

In a complex cultural environment like the SIPPP, such cultural differences as may exist are assumed to be further exaggerated and accentuated due to the fact that the partners are from different institutional types (i.e., one from the public-sector and the other from the private-sector), imbued with their own particular cultures. In this context trust and collaborative building processes become more difficult and assume even greater importance, in part to provide a bulwark against the potential negative influence of cultural differences.

In conclusion, it is the argument of this research that the relational issues presented should receive at least equal focus to the structural issues in seeking reasons for the failure to build sustainable trusting relationships in SIPPPs (probably implicated in the high failure rate of these institutions), and that these should be reflected in the design and selection of managerial key competences.

The conceptual framework based on the literature review and drawn up to represent the posited relationships between the two forms of interdependency, economic interdependency and collaborative interdependency, on the one hand, and trust on the other, which are expected to be moderated by the two cultural distance orientations, national cultural distance

and organisational cultural distance, is shown in Figure 3.7. The research hypotheses, supporting the posited relationships and which were empirically tested to answer the research were presented earlier.

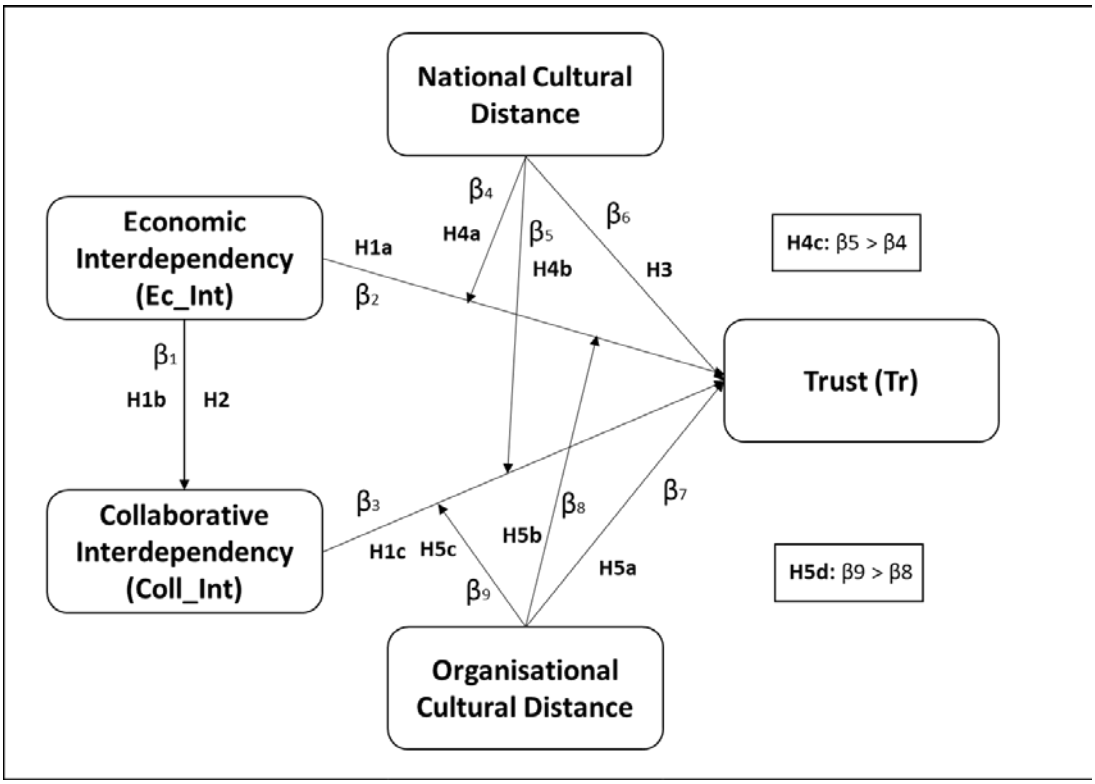


Figure 3.7. Conceptual framework showing the hypothesised relationships that were empirically tested.

Footnote: Although the links in the triangle of economic interdependency, collaborative interdependency and trust are shown in the conceptual model as recursive and uni-directional (a SEM requirement), it is recognised that in practice certain of the relationships may be bi-directional and non-recursive.

CHAPTER 4: RESEARCH DESIGN AND METHOD

This chapter presents the research design to address the research question posed in Chapter 3 and provides the motivating reasons. It sets the context for the choice of research methods described in the method section. Section 4.1 sets out the research aims and scope, followed by Section 4.2, which describes and gives the rationale for the research setting. Section 4.3 positions the research within the appropriate methodological paradigm, namely the quantitative research paradigm, and reviews the research design to test the hypotheses. This is followed by Section 4.4, which motivates the use of a survey design as the research instrument for this study.

This chapter also outlines the methodological choices made for the empirical study. The units of analysis and of measurement are defined in Section 4.5. The sampling strategy, including a description of the sampling frame, the study sample and the selection of respondents, is set out in Section 4.6. The development of the measuring instruments and scales used in the empirical study are discussed in Section 4.7, which starts with a discussion of the principles of operationalisation of the constructs used in the conceptual model, followed by a definition of the variables in operational terms and a description of the measurement considerations involved. The survey design and questionnaire are presented in Section 4.8. Section 4.9 deals with construct validation, while the analytical methods to be employed in the pilot and main empirical studies are discussed in Sections 4.10 and 4.11 respectively, including measures to be taken to address common method bias and ethical considerations.

4.1. Research Aims

The primary purpose of this research study is to test the conceptual model and hypotheses developed in Chapter 3. To achieve this purpose, the following research objectives were formulated:

- To develop and test a conceptual model of the posited relationships between economic interdependency, collaborative interdependency, and trust between the public- and private-sector partners in a typical SIPPP operating in Africa.
- To assess the mediating effect of collaborative interdependency on the economic interdependency-trust relationship.
- To assess the respective roles played by organisational cultural distance and national cultural distance between the parties to the SIPPP in moderating these relationships.

- To study these relationships for the full group of partners and across the two levels of partner affiliation (public-sector partner group vs private-sector partner group) to determine key differences in the perceptions of these relationships.

4.2. Research Setting

Sub-Saharan Africa (hereafter simply referred to as *Africa*), where SIPPPs are being called upon to play an increasingly important role in critical transformational interventions, has been chosen as the setting for this study. As shown in Chapters 2 and 3, despite the increasing importance of this institutional form in the economic development of the African continent, research into the phenomenon under study with reference to this particular geography, is extremely rare, giving it particular relevance. As motivated in Chapter 2, Africa, with its challenging environment, was chosen to represent an "extreme context" research example of an emerging economy.

4.3. Research Design

A research design is a plan of how the research is to be conducted (Babbie & Mouton, 2010). As such, the research design needs to be appropriate to the scope and aims of the study and must ensure effective collection of the evidence to test the research hypotheses. Babbie and Mouton (2010) classify three broad methodological paradigms in social research: quantitative, qualitative and participatory paradigms. Each of the paradigms has been linked to one of the metatheoretical traditions: the quantitative approach has been linked to positivism, the qualitative approach to phenomenology or interpretivism, and participatory action research to the critical paradigm in metatheory (Babbie & Mouton, 2010). Qualitative research attempts to study human behaviour from an "insider" perspective (the so-called "emic" perspective), focusing on describing and understanding, rather than on explanation and prediction (Babbie & Mouton, 2010). The quantitative paradigm, on the other hand, studies phenomena through quantitative measurement (Babbie & Mouton, 2010), and provides the means for theory testing by investigating relationships among measurable variables (Creswell, 2009). As evidenced by the review of the literature in Chapter 3, studies of alliance cross-cultural relationships have employed both quantitative and qualitative methodological paradigms. However, in research with an African context, owing to the sparseness of readily available quantitative data, the qualitative paradigm has been preferred by researchers. The choice of research design was strongly guided by the research question and the research hypotheses, which are empirical in nature and require the assessment of relationships in terms of strength and direction (Babbie & Mouton, 2010). A quantitative approach was judged to be the most appropriate for

answering the “what” type research questions posed in this study and for testing the hypotheses put forward, requiring an outcome-focussed variance logic analysis (van de Ven, 2007). It would also, to some extent, help to redress the imbalance between the two paradigms in African research.

The research study takes the form of a non-experimental, empirical, quantitative, cross-sectional, predictive variance logic modelling on a large sample of cases. This should allow generalisation of the findings to the broader SIPPP population as represented by the sampling frame. In line with the chosen methodological paradigm, the data collection was designed to minimise the influence of the researcher. A structured, self-administered, survey questionnaire was employed to measure the constructs of interest, and confirmatory analytic methods were used to test the conceptual model and hypotheses as formulated in Chapter 3. Some secondary (archival) but mostly primary (descriptive and perceptual) data were used in the study.

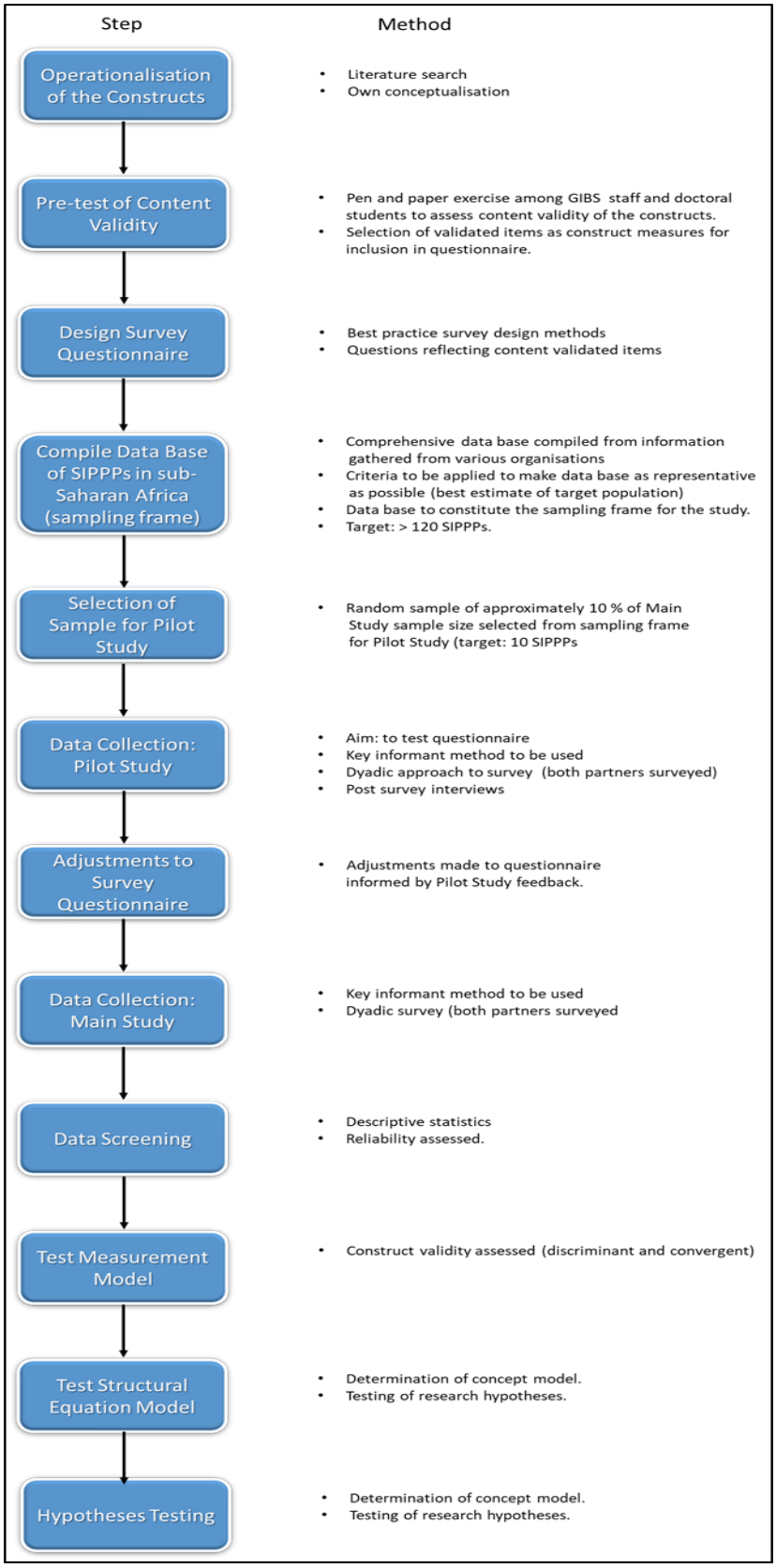
The empirical study was conducted in three phases, namely, scale development, scale testing and validation (pilot study), and model and hypotheses testing (main study). The purpose of the pilot study was to check on the reliability of the measuring instruments and to test the face validity of the constructs underpinning the conceptual model.

A schematic of the research design is shown in Figure 4.1.

4.4. Survey Design

A specially designed, self-administered survey questionnaire emailed to respondents was deemed an appropriate instrument to measure the research constructs. This type of measuring instrument is commonly employed in assessing phenomena that are not readily explicit, such as attitudes and perceptions (Czaja & Blair, 2005; Fink, 2012; Gall, Borg, & Gall, 2003; Rea & Parker, 2014), and has been used successfully before in cross-cultural alliance research (Bhaskaran & Gligorovska, 2009; Damanpour *et al.*, 2012; Dash *et al.*, 2007; Evangelista & Hau, 2009; Jamali, 2004; Katsikeas *et al.*, 2009; Ng *et al.*, 2007; Orr, 2004; Ozorhon *et al.*, 2008; Rodriguez & Wilson, 2002). It was chosen here rather than personal interviews, because it provides for an efficient, convenient (to the researcher and the respondent), and standardised way to solicit responses to the research question (Czaja & Blair, 2005), avoiding the logistical challenges inherent in attempting to sample individuals within the broad geographic span of the chosen population.

The design and structure of the questionnaire is presented in Section 4.8, and the operationalisation of the constructs and the items used to measure them are discussed in



Source: Author

Figure 4.1. Schematic of the research design

Section 4.7. The questionnaire was administered by email once the participation of the selected SIPPP had been solicited and contact made with the lead respondent in that SIPPP. A copy of the survey is reproduced in Appendix A.

4.5. Unit of Analysis

The unit of analysis refers to the *what* of the study: the object, phenomenon, entity, process or event which is to be the focus of the study in order to answer the research question (Babbie & Mouton, 2010). Specifically, the study will test the conceptual model and hypotheses developed in Chapter 3 using synchronic variance logic methods, with the aim of elucidating the relationships between economic interdependency, collaborative interdependency and the building of trust between public-sector and private-sector alliance partners in a cross-cultural SIPPP, and the roles played by organisational cultural distance and national cultural distance in influencing these relationships. This clearly points to the unit of analysis being the overall relationship between the public- and private-sector partners involved in the SIPPP. However, since only individuals can assess this dyadic relationship, its interpretation will be through purposely selected managers representing one party and their counterparts representing the other party. These managers (the units of response) bring their own particular cultural backgrounds to the alliance and, in effect, simultaneously serve as stimuli (contributing to the relationship) and subjects (through whose perceptions we measure the relationship). They were individually surveyed on their perceptions of the relationships between the parties in the SIPPP (such perceptions inevitably being informed by their own experiences of the relationship).

4.6. Sampling Strategy

A purposive sampling approach using various information sources was employed to compile a comprehensive data base of SIPPPs in Africa across all industries (sampling frame). Random sampling and pseudo random sampling of the sampling frame was used to select the samples for the pilot study and the main study respectively.

4.6.1. Sampling frame

SIPPPs in sub-Saharan African countries and across all industries were the target population for this research study, representing the population to which we wish to generalise. For the purposes of this research, a SIPPP is defined as noted in Chapters 1 and 3.

The lack of verifiable and accessible databases or mailing lists is a major handicap for many research studies in Africa. In the specific case of SIPPPs operating in Africa fitting the above description, no single data base or directory exists for the continent as a whole or by country, although a number of organisations involved in various ways with SIPPPs maintain their own private data bases. A typical list of such organisations is given in Table 4.1.

Table 4.1.

Typical organisations with private SIPPP data bases

- The World Bank
- The African Development Bank
- The Industrial Development Corporation
- OECD
- Nepad
- Commercial banks, e.g., Standard Bank, Barclays Bank
- Various NGO's involved in developmental work in Africa (particularly in agriculture), including Africa Enterprise Challenge Fund (AECF), DFID, USAid, IFDC, and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH)
- Country specific privatisation offices / government departments set up to deal with each country's privatisation programme, e.g., SAGCOT (Tanzania), Rwanda Development Board (Rwanda), and the Ghana Office of Privatisation (in the office of the Ghana prime minister)
- Government departments of trade
- Financial institutions involved in financing of SIPPPs, e.g., IFC, Norfund
- Private international companies involved in SIPPPs, e.g., SABMiller, MTN

These organisations tend to specialise in particular sectors, e.g., infrastructure, agriculture, telecommunications, food processing, general processing, etc., although some have a more general focus. In the absence of a ready-made data base, a one-off comprehensive data base of SIPPPs operating in sub-Saharan Africa was compiled based on information gathered from these and many other organisations involved with SIPPPs. This data base served as the sampling frame for this study. Organisations as described were approached telephonically and by email with a view to sharing names and contact details of potentially suitable SIPPPs to participate in the study. A snowball method was used in following leads. Internet searches were also conducted. A non-probability purposive sampling approach was used, based on certain criteria of selection and guided by the purpose of the study. To avoid any bias and to ensure that the data collected was as representative of SIPPPs in sub-Saharan Africa as possible (the target population), the criteria that were applied in setting up the study sampling frame are shown in Table 4.2.

Table 4.2.

Criteria for SIPPP selection for study sampling frame

- to be as comprehensive as possible
- to be representative of as many countries in sub-Saharan Africa as possible
- to be representative of as many economic sectors as possible. Sectors to include:
    - Agriculture & agro-processing industries
    - Education
    - Energy & Power
    - Financial
    - Food processing
    - General processing (including chemicals)
    - Environment
    - Health
    - Information and Communication Technology
    - Infrastructure
    - Transport
    - Water Supply and Sanitation
- to include SIPPPs of all sizes (based on employee numbers) (control variable)
- to include SIPPPs of all ages and stages of development (control variable)
- to include successful and unsuccessful SIPPPs (to control for survivor bias)
- to select SIPPPs of some substance with at least some published (archival) data

Compiling a new data base amidst the lack of institutional data bases presented a major challenge, and it took over six months to set up the data base. In the process, 309 SIPPPs were contacted and included in the data base. Once the data base was compiled, the next challenge was data collection, which took a further eight months to complete, with frequent follow-ups and referrals back to the lead respondents to address data errors and missing data. In the end, perseverance fortunately triumphed, and a quality data base was set up supporting this research. The dearth of easily accessible and reliable data in the region underlines the value of this data set to the current research.

The sampling frame comprised potential respondents from the SIPPPs recruited, representing both sides of the partnership dyad, i.e., the public-sector partner and the private-sector partner. A number of different countries, industries, SIPPP sizes and SIPPP types were represented in the sample. Since ten (private partner) respondents representing ten SIPPPs in the sampling frame were randomly selected for the pilot study, this left a pseudo-random sample of respondents (response units) representing the remaining SIPPPs that were used in the main study.

The characteristics of the sample are discussed next.

4.6.2. Sample size

While model parsimony was always a key consideration in specifying the structural model to represent the posited relationships owing, in part, to sample size constraints, appropriate tests based on rule-of-thumb criteria were carried out to ensure that the sample size was well above the minimum to ensure acceptable statistical power (i.e., reducing the probability of a type II error (Cohen, 1988) and improving estimating precision (Hair, Black, Babin, & Anderson, 2010; Brown, 2015)). The same authors recommend a minimum sample size of 100 for models with five or fewer constructs (the conceptual model described in Chapter 3 has five constructs), each with more than three items per construct. The target was to recruit over 150 potential SIPPPs to the study, with six respondents per SIPPP - three representing the private partner view and three representing the public partner view, totalling 900 response units. This was deemed more than adequate to provide for acceptable statistical power, while still allowing for the necessary provision for non-responses, attrition and lost data. A statistical power analysis was done to confirm that the final sample size gave adequate statistical power for the analysis.

For the pilot study to assess the measuring instrument, a sample of ten lead respondents, representing ten different SIPPPs in the sample frame, were randomly chosen, leaving the remaining respondents in the sampling frame to constitute a pseudo-random sample for the main study. This follows good research practice where pilot study samples are not re-used in the main study. Furthermore, pseudo-random sampling improves the generalisability of the results to the general population represented by the sampling frame.

A key requirement for the admission of a SIPPP to the study was the accessibility of key persons involved in the formation, implementation and / or operation of the SIPPP. These persons were identified through the following criteria: (a) possession of sufficient knowledge about the SIPPP's alliance activities, and (b) involvement at an adequate level in the issues under investigation. SIPPPs that did not meet these criteria were omitted. A senior boundary-spanning executive in each of the selected organisations was approached through a personalised email explaining the research study, its purpose and requesting the organisation's participation in the field research (Appendix B). This was generally the CEO, given that he / she would have the necessary authority to decide on participation, have the best access to the information sought and have familiarity with the parties concerned, but other senior managers were also used. To encourage participation, the addressee was assured that the identity of the organisation and the respondents would be kept confidential, to be represented in the research only by coded identifiers.

Besides their availability, a further reported problem when targeting top management representatives, is their willingness to participate in research and to complete surveys. To overcome this reticence, the relevance of the research to Africa and their own businesses was emphasised. As an additional incentive for their participation in the survey, respondents were offered full access to the results of the study in return for their co-operation. Vague initial responses and non-responses were persistently followed up to solicit a final positive response where possible. SIPPPs that were approached, but ultimately declined to participate in the study, were recorded in the "non-response" category. An assessment of non-response bias was made. Telephone interviews were held with each of the lead respondents and, following application of the above criteria, were either accepted for participation or omitted.

4.6.3. Selection of respondents

Most of the research done in the area of strategic alliances and international joint ventures has considered responses from only one side of the dyad (Bhaskaran & Gligorovska, 2009; Beamish, 1985, 1993, 2006; Chen *et al.*, 2010; Damanpour *et al.*, 2012; Dash *et al.*, 2007; Geringer & Herbert, 1991; Harrigan, 1988; Jamali, 2004; Katsikeas *et al.*, 2009; Ng *et al.*, 2007; Nielsen & Nielsen, 2009; Ozorhon *et al.*, 2008; Pothukuchi *et al.*, 2002; Robson, Katsikeas, & Bello, 2008). Implementation problems, accessibility and difficulties identifying and accessing the other partners in the relationship have been given as the main reasons for this approach.

Since it seems plausible that, at least in some respects, the perceptions of one party in the SIPPP will be different to that of the other party, driven partly by, amongst other things, national cultural distance and organisational cultural distance (public sector vs. private sector), measuring perceptions on both sides of the dyad is expected to provide a richer, more accurate and less biased measure of the relationship between the partners, and seems appropriate in this type of study. In line with this approach, responses were solicited from both sides of the alliance. However, in instances where this was not possible, the one partner's perception of the other partner's expected response was used as proxy. This approach, although not preferred for the reasons already stated, is supported by earlier research by Geringer and Herbert (1991), who found support for their hypothesis that the responses from any one of the partners would be a valid representation of joint venture performance. Nevertheless, every effort was made to limit such instances to a minimum to minimise unwanted biases (< 10 % of responses).

Multiple (at least two, but preferably three) respondents were selected from each of the two parties (public sector and private sector) in the SIPPP. Several researchers have advocated

the use of multiple informants to increase the reliability and validity of the data collected and to minimise common method variance (Anderson, 1985; Kumar, Stern, & Anderson, 1993; Van Bruggen, Lilien, & Kacker, 2002). The latter authors noted that, by reconciling discrepancies among multiple informants' reports, the validity of the final data can be improved. However, Kumar *et al*. (1993) have pointed to certain pitfalls to guard against when using multiple informants, including poor knowledge of informants and the method of aggregation of discrepant reports. The recommendations by these authors were followed, and particular care was taken to ensure that informants were properly selected. Using a simple random sample of employees of the SIPPP was not deemed appropriate in this study, since it would lead to the inclusion of respondents who may have little or no knowledge of the partnership and the subject of inquiry.

To ensure well-informed respondents, the *key (*or *lead) informant method* was used, where informants were not selected to be representative of the members of the organisation in any statistical sense, but because they are knowledgeable about the issues being researched and are able and willing to represent the views of that partner in the study (John & Reve, 1982; Kumar *et al*., 1993). Respondents, representing each of the parties (private sector and public sector) were selected after consultation with the lead respondent from that organisation during the pre-survey interview and using the following criteria: (1) proficiency in English, (2) possession of sufficient knowledge about the organisation's alliance activities, and (3) involvement at an adequate level in the issues under investigation (Schreiner *et al.*, 2009). The lead respondent in each SIPPP was asked to nominate at least one (preferably two) other executive colleagues who meet these criteria to also act as respondents.

Informant ignorance is a major source of inaccurate responses (Kumar *et al*., 1993). To ensure the quality of the data and to verify that the correct key informants had been identified, the recommendations of these researchers were followed regarding the use of key informants in interorganisational research, namely, the inclusion of several validation items in the instrument to test the quality of the informant. This is discussed further in Section 4.8: Survey Design. Every effort was made to ensure that the sample lists of each of the participating parties covered all phases of the SIPPP, from its conception through to its inception, implementation, operation and, if applicable, its demise. It is expected that these lists would include senior policymakers in government as well as their counterparts in the partnering private-sector organisation charged with responsibility for the SIPPP and with sufficient knowledge of its workings and performance.

While recruited SIPPPs had signalled their willingness to participate in the research, the process of chasing the responses and following up required considerable proactive

management. However, although management intensive, this process ensured that there were minimal missing responses in the final data base.

4.7. Measurement Scales

4.7.1. Principles of operationalisation of constructs and scale development

The conceptual model developed for the study in Chapter 3 showing the hypothesised relationships among the research constructs, is presented in Figure 3.7.

Since the latent constructs shown in the conceptual model by definition cannot be observed directly, they cannot be measured directly, and must, therefore, first be operationally defined in terms of the behaviour(s) they are believed to represent. Each of the latent constructs are linked to one or more variables that are observable, thereby making its measurement possible (Hair *et al*., 2010). Observed or manifest variables are measured directly, and serve as indicators (so-called measurement items) of the latent construct. The first step in operationalising each construct involved specifying its domain by delineating exactly what is included and excluded in its definition so as to avoid any ambiguities. Care was given to tap the appropriate domains of the constructs as closely as possible, and their definition was, whenever possible, based on previous research literature, as adapted / adopted for this study. Their operationalisation was accomplished by selecting and adapting to the context of this research, multiple appropriate indicators developed in previous alliance, inter-organisational and cross-cultural alliance research studies in the fields of management, construction and marketing (Jarvis, MacKenzie, & Podsakoff, 2003). Care was taken to ensure that, when adapting these measures, they retained content validity of the constructs under study.

Multiple scales or sub-scales were used for each construct to ensure suitable coverage of the construct domain (Churchill, 1979; Nunnally, 1978). Jarvis *et al*. (2003) and Hair *et al. (2010)* recommend at least three scales per construct and a similar number of items per scale as sufficient to attain reliable parameter estimates, the guiding premise being that multiple responses reflect the “true” response more accurately than does a single response (Hair *et al*., 2010). As part of the process of assessing construct validity (see Section 4.9), each scale was purified by assessing its substantive validity (a component of construct validity), in the sense that scales that do not have adequate substantive validity, cannot have adequate content validity (another component of construct validity) (Anderson & Gerbing, 1991). Substantive validity of a scale can be defined as the extent to which it is reflective of, or theoretically linked to, the construct of interest (Anderson & Gerbing, 1990). Appropriate

measures were taken to avoid common method bias (Podsakoff *et al*., 2003), which included the use of multiple sources (see Section 4.11.12).

In tandem with the multivariate measurement approach and where appropriate, multiple items, representing different facets of the same construct, were *parcelled* using established procedures (De Bruin, 2004; Houghton & Jinkerson, 2007). De Bruin (2004) showed that parcelling of items composing a unidimensional scale can improve the linearity and normality of that scale, arguing that when such items are aggregated, their shared variance is pooled, implying that the proportion of common variance increases relative to the proportion of unique variance. In effect, the method provides a means of partially overcoming measurement error inherent in all measured variables. His findings showed that this tends to lead to stronger factor loadings and communalities, and that the distributions of parcels are likely to be more normal (a requirement in factor analysis) than the distributions of individual items. These findings are further supported by Bandalos (2002), who demonstrated that, when items within a particular scale have a unidimensional structure, the factor analysis of parcels leads to improved model-data fit and less biased structural parameters. Besides improving the reliability of the measures and allowing a more well-rounded perspective of the concept being studied, parcelling also greatly facilitates data handling. Furthermore, the technique allows the researcher to accommodate richer descriptions of the constructs under study by using multiple variables, while still maintaining parsimony in the number of variables in the multivariate model.

A pre-test was conducted on the sets of items and constructs to ensure that the items tap into the constructs they are supposed to measure (see Section 4.9.2).

4.7.2. Developing the measuring instruments

This section describes the operationalisation of each construct and the specific measures for each of the study variables. The three latent exogenous constructs (*Economic Interdependency* (Ec_Int), *National Cultural Distance (NCD*) and Organisational Cultural Distance (OCD)) and the two latent endogenous constructs (*Collaborative Interdependency (Coll_Int)* and *Trust (Tr)*) in the conceptual model were first defined in operational terms and their measurement methods described. The two control variables, SIPPP size and SIPPP age, were similarly examined. The manifest variables representing the measures of the various constructs take the form of items in the questionnaire requiring responses based on subjective judgment, perception or attitude. Two response scales were used: One assessed “quality” (how good it is) and one assessed perceived “importance” (how important it is to building trust). A seven-point Likert-type response scale measuring the degree of agreement with a

statement was used to assess the "quality" dimension of the item. This was preferred to a five-point scale to address potentially troublesome response bias that may arise in different cultures. For example, so-called non-Western culture respondents have been reported in the literature to give average or noncommittal answers (central tendency), whereas, Western culture respondents tend to take strong, even extreme stands on issues (Orr, 2004). The scale was anchored on 1 = "*strongly disagree*" (or equivalent) and 7 = "*strongly agree*" (or equivalent), while a sharper 3-point scale (1 = "*not important*"; 2 = "*important*"; 3 = "*very important*") was used to assess perceived importance of the particular aspect. A seven-point scale also more closely represents interval data (See Section 4.11.9).

4.7.2.1. Economic interdependency

The concept of economic interdependency was discussed and defined in Chapter 3: Literature Review. Several dimensions are related to the construct as defined. No suitable scale to fit the context could be found in the research literature, and a composite scale was therefore constructed based on the work of different researchers. Operationalisation was achieved by combining or item-parcelling similar measures as used by De Bruin (2004) and Houghton and Jinkerson (2007), suitably modified to reflect the context of the study, using the techniques recommended by Gerbing and Anderson (1988) and Churchill (1979). In line with this approach, the construct, Economic Interdependency (Ec_Int), a second-order latent construct, was operationalised by using three scales (first-order latent constructs), each composed of a number of measured items parcelled to capture the key dimensions of this construct:

- Economic Contribution (EC)
- Resource Dependency (RD), and
- Comparison Level of Alternatives (CLAlt)

Descriptions of the three subconstructs are presented in Chapter 3: Literature Review, and the operationalisation of their scales is summarised in Table 4.3.

The hypothesised measurement model for this construct is shown in Appendix H (Figure H.1).

4.7.2.2. Collaborative Interdependency

The concept of collaborative interdependency was discussed and defined in Chapter 3: Literature Review. Several dimensions are related to the construct as defined. No suitable scale to fit the context could be found in the research literature, and a composite scale was therefore constructed based on the work of different researchers. The construct was operationalised through three scales that capture the quality of the communication in the

Table 4.3.

Operationalisation of the second-order construct, Economic Interdependency (Ec_Int)

Definition: *The degree to which certain ties link and hold the partners in a SIPPP in an economic, strategic and organisational sense, regardless of personal (emotional) matters*

First-order Construct	First-order Construct Definition	Measurement Items	Sources
Economic Contribution (EC)	The economic investment, tangible, and intangible made by alliance partners that is relationship specific, largely non-transferable and limited to the life of the alliance and which leads to an increased commitment to the relationship (Parkhe, 1993; Williamson, 1985)	• EC1: In an economic sense, a close relationship with our partner is desired • EC2: I would encourage our organisation to have a relationship with the partner irrespective of my personal feelings • EC3: Our partner has contributed substantial resources to the partnership • EC4: Our partner's investments in the partnership are specific • EC5: Our partner's investments in the partnership are largely irretrievable;	Adapted from De Bruin (2004) and Houghton and Jinkerson (2007) Further sources: Parkhe, 1993; Williamson, 1979, 1985; Han, 1991, 1997; Ng et al., 2007; Liang, Chen & Wang, 2008.
Resource Dependency (RD)	The extent to which one partner comes to depend on certain types of resource exchanges with the other partner	• RD1: The resources, skills and / or services which the partner provides are essential to the success of the business • RD2: The resources, skills and / or services that the partner brings to this alliance are unique and cannot easily be replaced • RD3: The relationship with the partner is important for the overall success of our business	Own scale Further sources: Han, 1998; Parkhe, 1993; Young & Wiersema, 1999; Bhaskaran & Gligorovska,2009; Luo, 2002; Robson et al., 2008; Sambasivan, Siew-Phaik, Zainal, & Yee, 2011; Yen & Barnes, 2011.
Comparison Level of Alternatives (CLAlt)	The quality of outcome that is available from another, possibly better alternative exchange relationship (Han, 1998; Anderson & Narus, 1990)	• CLAlt1: The partner is the only organisation known to us that can provide these skills, resources, and / or services • CLAlt2: We are extremely dependent on our partner • CLAlt3: Losing our partner would be very costly and and disruptive to our organisation • CLAlt4: Our partner cannot easily be replaced	Own scale Further sources: Kelley &Thibaut, 1978; Anderson, Hakansson, & Johanson, 1994; Young-Ybarra & Wiersema, 1999.

partnership, the propensity for joint action and the expressed overall satisfaction with the partnership, respectively:

- Communication (Com)
- Joint Action (JA), and
- Satisfaction with the Relationship (SatR)

Descriptions of the three subconstructs are presented in Chapter 3: Literature Review.

Each scale comprises a number of parcelled items that are included in the questionnaire. The three scales taken together reflect a partner's attentive, considerate, and supportive behaviour toward the other partner, such as unconditional readiness for dialogue, willingness to stand by the partner in difficult times, respect for the partner's viewpoint, propensity to socialise and overall attachment to the partnership. The items were selected on the basis of prior alliance research and organisational literature (Liang *et al*., 2008; Mavondo & Rodrigo, 2001; Schreiner *et al*., 2009), but adapted for the current context. Operationalisation of the scales is summarised in Table 4.4.

The hypothesised measurement model for this construct is shown in Appendix H (Figure H.2).

4.7.2.3. Trust

As a complex phenomenon, trust has multiple dimensions, which vary in their applicability to different contexts (Nielsen & Nielsen, 2009). No suitable scale to fit the context could be found in the research literature, and a composite scale was therefore constructed based on the work of a number of authors working in the area of international strategic alliance research. The multidimensionality and complexity of the trust concept was captured in this study in an integrated behavioural framework, which encapsulates and is consistent with the arguments presented in Chapter 3: Literature Review. Three models in particular have been combined to produce five scales to capture the construct:

(1) The three-component model proposed by Rempel *et al*. (1985) and Young-Ybarra and Wiersema (1999): dependability, predictability and faith, plus

(2) The two-component model proposed by Noteboom (1996) and Das and Teng (2001): goodwill trust and competence trust, but with the observed overlap between the "*faith*" and the "*goodwill*" components combined in a single component to be renamed "*benevolence*" trust (Lin & Malhotra, 2011), and

Table 4.4.

Operationalisation of the second-order construct, Collaborative Interdependency (Coll_Int)

Definition: *Collaborative interdependency is the bonding that takes place between partners which is reflective of the degree of mutual personal and social relationship shared by them (Wilson, 1995)*

First-order Construct	First-order Construct Definition	Measurement Items	Sources
Communication (Com)	A social process of broadest relevance in the functioning of any group or organisation (Damanpour et al., 2010): content or exchange in this study includes formal as well as informal sharing of meaningful and timely information between partners (Anderson, Lodish, & Weitz, 1987; Anderson & Narus 1990; Dash et al., 2007.	• Com1: Communication with our partner is open and honest • Com2 Even in difficult situations we signal readiness for discussion towards partner • Com3: We keep each other informed about events or changes that may affect the other or the organisation, avoiding surprises that may be harmful to the relationship • Com4: Problems are always discussed in an open and constructive way • Com5: Reviewing and providing feedback on performance takes place regularly • Com6: Exchange of needed, credible and relevant information takes place frequently, both formally and informally	Adapted from scales used by the following researchers: Caceres & Paparoidamis, 2007; Dahlstrom, McNeilly, & Speh, 1996; Heide & John, 1992; Kim & Frazier,1997; Mohr & Spekman, 1994; Sambasivan et al., 2011; Smith,1998; Yen & Barnes., 2011; Young-Ybarra & Wiersema, 1999; Yunus Ali, 1995)
Joint Action (JA)	The propensity for the partners to engage in coordinated action in areas of importance to the partnership to achieve mutual outcomes that are reciprocal (Dash et al., 2007)	• JA1: We work closely together with our partner in all areas of interest to the organisation • JA2: We understand and share common mutual goals and objectives with our partner • JA3: We cooperate and collaborate with our partner in whichever way we can • JA4: We often give advice to or seek advice from our partner	Own scale Further sources: Mavondo & Rodrigo, 2001; Schreiner et al., 2009; Bhaskaran & Gligorovska,2009; Das & Teng, 2001; Evangelista & Hau, 2009; Leonidou, Katsikeas, & Hadjimarcou, 2002; Pak, Ra & Park, 2009; Sambasivan et al., 2011; Smith,1998; Anderson & Narus, 1990; Young-Ybarra & Wiersema,1999
Satisfaction with Relationship (SatR)	The degree of satisfaction or dissatisfaction each partner feels towards the relationship	• SatR1: We are totally satisfied with the relationship with our partner • SatR2: We stand by each other's side even in difficult situations • SatR3: We have a well-formed social relationship with our partner which goes beyond business; • SatR4: We are fully committed to the relationship and want to maintain it	Own scale Further sources: Doney, Barry, & Abratt, 2007; Doney & Cannon,1997; Dwyer, Schurr, & Oh, 1987; Evangelista & Hau, 2009; Han,1991; Pfeffer & Salancik, 1978; Mavondo & Rodrigo, 2001; Sambasivan et al., 2011; Yen & Barnes, 2011.

(3) The single model of Cummings and Bromiley (1996) and Lane *et al.* (2001) measuring the overall confidence that one partner has in the other's trustworthiness.

The five proposed constructs are:

- Dependability (Dep)
- Predictability (Pred)
- Competence (Comp)
- Benevolence (Ben), and
- Trustworthiness (Trw)

Descriptions of the scales to measure these constructs and their operationalisation are presented in Table 4.5.

Each of the main *Trust* dimensions was examined in the context of a SIPPP relationship. It is accepted that, although all five measures are important to trust, each may vary independently of the others (Mayer *et al*., 1995), and may combine in idiosyncratic ways to reflect various levels of trust in a relationship. In some situations, for example, certain factors may assume more importance relative to the other factors (e.g., competency in a task-oriented relationship, or benevolence in a non-task-oriented alliance, where the partner is more concerned with the integrity of the other partner).

The hypothesised measurement model for this construct is shown in Appendix H (Figure H.3).

4.7.2.4. Cultural distance

Based on the research literature review and the conceptual framework developed, it is posited in this research that cultural differences are experienced by SIPPP partners on two distinct levels, namely, as a difference in national culture and as a difference in organisational culture.

National cultural distance (NCD)

The concept of national cultural distance was discussed and conceptualised in Chapter 3: Literature Review. National cultural distance was operationalised based on the five cultural dimensions put forward by Hofstede (1980), but adapted for context from previous studies (Mjoen & Tallman, 1997; Ng *et al.*, 2007; Ali, 1995). Although it could be argued that using the scales already developed by Hofstede (1980) would be most effective, only limited data are available for Africa, restricting the usefulness of these measurement indices in this research. Furthermore, the use of composite indices has produced contradictory findings in research

Table 4.5.

Operationalisation of the second-order construct, Trust (Tr)

Definition: *One party's belief that its needs will be fulfilled in the future by actions undertaken by the other party (Anderson & Narus, 1990).*

First-order Construct	First-order Construct Definition	Measurement Items	Sources
Dependability (Dep)	Refers to expectations that the partner will act in the alliance's best interest.	• Dep1: Our partner stands by his / her word • Dep2: We always feel confident when our partner promises to do something • Dep3: We like and identify with the partner's values and ideals • Dep4: In difficult times we can always get help from our partner • Dep5: We and our partner can always find appropriate solutions through compromise when conflicts arise • Dep6: Adjustments in the relationship are possible in order to react to changed circumstances	Adapted from scales used by the following researchers: Cummings & Bromiley, 1996; Lane, Salk, & Lyles, 2001; Lin & Malhotra, 2011; Luo, 2002; Robson et al., 2008; Muthusamy & White, 2005
Predictability (Pred)	Refers to consistency of actions by the partner	• Pred1: Our partner's behaviours are always very consistent • Pred2: Our partner can always be counted on to act as we expect • Pred3: Sound principles seem to guide our partner's actions • Pred4: Our partner always provides the information as agreed at the agreed times • Pred5: Because we have known our partner for a long time, we understand partner well; • Pred6: Our partner is always highly receptive to our recommendations	
Competence (Comp)	Refers to the belief or perception that the partner has the necessary competence or ability to deliver on its promises	• Comp1: The partner organisation is very capable of performing its role in the alliance • Comp2: The partner is known to be successful at the things it tries to do • Comp3: The partner organisation is well qualified for the alliance • Comp4: The partner organisation has much knowledge about the work that needs to be done in the alliance • Comp5: We are very confident about the partner organisation's skills • Comp6: The partner organisation has specialised capabilities that add value to the alliance	
Benevolence (Ben)	Refers to the belief that the other partner will not act opportunistically or harm its interests, even in unforeseen or novel situations.	• Ben1: While making important decisions, the partner organisation is always concerned about the alliance's welfare • Ben2: Our partner would not knowingly do anything to hurt our organisation • Ben3: The partnership's needs are important to our partner • Ben4: Our partner looks out for what is important to the alliance • Ben5: Our partner organisation will go out of its way to help the partnership • Ben6: Our partner has a strong sense of justice and is fair in business dealings with us • Ben7: Our partner will never use an opportunity that arises to profit at our expense	
Trustworthiness (Trw)	Refers to the overall confidence in each other's trustworthiness as the most essential indicator of perceived relational quality	• Trw1: Our partner is completely trustworthy • Trw2: We and our partner have a high level of mutual trust	

and the concept of national cultural distance has been criticised for being “illusory” (Shenkar, 2001, 2012). In line with the arguments presented in Chapter 3 and to overcome the limitations of the Kogut and Singh (1988) and Hofstede (1980) national cultural distance scales, the recommendations of Ozorhon *et al*. (2008) and Solberg (2008) were followed in this research. Rather than using published or computed indices, subjective perceptions of respondents were measured, but utilising the Hofstede (1980) framework.

Descriptions of the scales to measure these constructs and their operationalisation are presented in Table 4.6.

The hypothesised measurement model for this construct is shown in Appendix H (Figure H.4).

Organisational cultural distance

The concept of organisational cultural distance was discussed and conceptualised in Chapter 3: Literature Review. The six dimensions originally proposed by Hofstede *et al*. (1990) were used to operationalise this construct, together with the approach used by Pothukuchi and colleagues (2002), who adapted the original scale by using partner perceptions (rather than indices) as the measures.

Requesting respondents to rate their own organisation as well as that of their partner in terms of the above dimensions not only gave insight into the perceptions that respondents held as regards their partners’ organisational culture, but was also useful in the event when no public-partner respondent was available, i.e., the perceived response could be used as a proxy for the public-partner’s response (Geringer & Herbert, 1991). It was assumed that this would apply to less than ten percent of the cases.

Note that PvR2 and LvT3 (management style) are similar but opposites of each other, and the additional item was included to test for consistency in respondent’s answers.

Descriptions of the scales to measure the constructs and their operationalisation are presented in Table 4.7.

Distance scales for each dimension (designated by ‘D’ at the end of the scale label, e.g., PvRD1) were calculated by taking the difference on that item between the partner organisations as perceived by the respondent.

The hypothesised measurement model for this construct is shown in Appendix H (Figure H.5).

Table 4.6.

Operationalisation of the second-order construct, National Cultural Distance (NCD)

Definition: *The extent to which the norms and values of the two partner organisations involved in the SIPPP differ because of their separate national characteristics*

First-order Construct	First-order Construct Definition	Measurement Items	Sources
Individualism (Ind)	The degree to which the society reinforces individual or collective, achievement and interpersonal relationships	• Ind1: Individual achievement versus team achievement • Ind2: The basis of employee reward • Ind3: Employment of family members in senior positions • Ind4: Individual responsibility and accountability for results; • Ind5: Fostering an environment in which employee creativity and productivity are encouraged, recognised, valued, and rewarded	Adapted from Hofstede's (1980) and Hofstede and Hofstede (2005) Further sources: Ozorhon et al. (2008); Solberg (2008); Mjoen & Tallman, 1997; Ng, Lau, & Nyaw, 2007; Ali, 1995.
Power Distance (PD)	The degree of equality, or inequality, between people in the country's society	• PD1: Participation of subordinates in the decision-making process; • PD2: Superior-subordinate relationship based on mutual trust and openness • PD3: The importance of hierarchical structures in enforcing decisions • PD4: Managers often seek the opinions of their subordinates • PD5: Disagreements between non-managerial employees and management	
Uncertainty Avoidance (UA)	The level of tolerance for uncertainty and ambiguity within the society, i.e., preference for unstructured vs structured situations	• UA1: Planning as a means of managing future outcomes • UA2 Management of change (e.g., search for new processes, adopting new technologies, etc.) • UA3: Degree of adherence to budgets, schedules, and procedures • UA4: Dealing with external uncertainty • UA5: Breaking of organisational rules if employee deems it to be in the organisation's interest	
Masculinity/ Femininity (MF)	The degree to which the society reinforces, or does not reinforce, the traditional masculine work role model of male achievement, control, and power	• MF1: Management driven performance • MF2: Terms and conditions of employment (e.g., hiring and firing, etc.) • MF3: Rewards based on merit instead of loyalty and seniority • MF4: Attitude to time (punctuality, timeliness of events, meeting deadlines, etc.) • MF5: Men and women have equal opportunity to progress to senior management	
Long-term Orientation (LTO)	The degree to which the society embraces, or does not embrace long-term commitment to traditional, forward thinking values	• LTO1: Use of long-term contracts and agreements in business • LTO2: Need for a long-term planning horizon • LTO3: Solving problems for the long-term rather than short-term "quick fixes" • LTO4: Employment security - keeping people employed even under adverse business conditions • LTO5: Long-term results versus short term results	

4.7.2.5. Control variables

To extract possible confounding effects of other variables, SIPPP size and SIPPP age, which may have spurious influences on the results, were also measured and treated in the analysis as control variables.

SIPPP size: The size of the SIPPP may influence the dependent variable, i.e., the larger the size of the SIPPP, the greater may be the inter-partner trust (Heide & John, 1992). Size may also reflect the investment that is at stake, affecting the extent of partners' involvement and control (Osland, 1994).

SIPPP size was measured in terms of categories determined by the number of employees as follows:

- Small (< 50 employees)
- Small-to-Medium (51 - 100 employees)
- Medium (101 – 500 employees)
- Large (501 - 1000 employees)
- Very Large (> 1001 employees)

SIPPP age: This is indicative of the relationship duration. With increasing relationship duration, parties have more opportunities to learn about each other, develop personal relations, consolidate routines and work procedures and develop better mutual understanding (Lin & Germain, 1998; Swierczek & Dhakal, 2004). A longer relationship may have passed through a critical shake-out period characterised by conflict and / or attempts by both sides to exert their influence. Furthermore, partners in an enduring joint venture often become more patient and comfortable in daily interactions and are more tolerant of short-term imbalances. In each case this indicates that, with greater duration, parties may develop a relatively high level of joint action (Parkhe,1993, Schreiner *et al*., 2009). Age may also be linked to size, since it is plausible that a (successful) SIPPP will grow over the years, drawing in more investment and resources.

Relationship duration was measured by counting the number of years since the SIPPP was formed and according to the following categories:

- Short-term (< 1 year)
- Mid-term (1 - 5 years)
- Mid-long-term (6 - 10 years)
- Long-term (> 10 years)
-

Table 4.7.

Operationalisation of the second-order construct, Organisational Cultural Distance (OCD)

Definition: *The extent to which the norms and values of the two partner organisations involved in an SIPPP differ because of the characteristics of their separate institutional forms, i.e., public-sector vs private-sector organisation.*

First-order Construct	First-order Construct Definition	Measurement Items	Sources
Process vs Result (PvR)	The extent to which the organisation is process orientated versus results orientated, i.e., routines/ process vs achievement/tasks	• PvR1: In our (partner's) organisation employees are encouraged to take the initiative • PvR2: In our (partner's) organisation the management style is casual • PvR3: In our (partner's) organisation the typical employee is comfortable with taking risk	Adapted from Hofstede (1990) using methodology proposed by Pothukuchi et al. (2002) and Damanpour et al. (2010)
Employee vs Job (EvJ)	The extent to which the organisation is employee versus job focussed, i.e., concern for employee vs concern for the job	• EvJ1: In our (partner's) organisation decisions are centralised at the top • EvJ2: In our (partner's) organisation there is little concern for employees' personal problems • EvJ3: Our (partner's) organisation management is only interested in the work of the employee	
Parochial vs Professional (PvP)	The extent to which employees derive their identity from the organisation or from their professional affiliation/ career	• PvP1: In our (partner's) organisation a person's private life is treated as his / her own business; • PvP2: In our (partner's) organisation job competence is the only criterion in hiring people; • PvP3: In our (partner's) organisation people are encouraged to think / plan at least three years ahead	
Open vs Closed (OvC)	Reflects the communication climate of the organisation, i.e., the extent to which the organisation is open or closed in welcoming outsiders/ new employees	• OvC1: Only specific kind of people fit in our (partner's) organisation • OvC2: Our (partner's) organisation is closed and secretive • OvC3: In our (partner's) organisation new people take a long time to settle	
Loose vs Tight (LvT)	Refers to the amount of internal structuring in the organisation	• LvT1: In our (partner's) organisation everyone is cost conscious • LvT2: In our (partner's) organisation meeting times are kept punctually • LvT3: In our (partner's) organisation the management style tends to be formal and hierarchical	
Normative vs Pragmatic (NvP)	Refers to the notion of customer orientation, i.e., whether the organisation is market driven or focussed on organisational procedures	• NvP1: In our (partner's) organisation employees tend to be pragmatic in matters of ethics • NvP2: In our (partner's) organisation major emphasis is on meeting customer needs • NvP3: In our (partner's) organisation results are more important than procedures	

4.8. Survey Design

This research required five second-order latent constructs to be measured: *Economic Interdependency* (Ec_Int), *Collaborative Interdependency* (Coll_Int), *Trust* (Tr), *National Cultural Distance* (NCD) and *Organisational Cultural Distance* (OCD). In addition, 22 first-order constructs related to the second-order constructs needed to be measured by 96 item measures.

The widespread use of survey instruments in social research has underlined the need for care to be taken in its overall design and administration, with particular cognisance to be given to the characteristics of the target population, most notably language, education standard, and culture (Blair & Czaja, 2005; Rea & Parker, 2005; Fink, 2009). The following precautions were taken in the design and administration of the survey to ensure the integrity of the questionnaire and the data gathered:

- Items were expressed as clearly as possible: questions were kept as short as possible, and double-barrelled, negatively-phrased and potentially biased items were avoided (Babbie & Mouton, 2010; Blair & Czaja, 2005; Fink, 2012; Rea & Parker, 2005).
- Respondents were assessed on a number of criteria to be competent to respond and their voluntary consent to participate was given (in addition to the consent from the management of the SIPPP).

Short pre-survey telephonic interviews were conducted with the main representative (*lead respondent*) of each recruited SIPPP to introduce the research project, assess the nature of the alliance and to guide the design and structure of the survey. The pre-survey interviews were intended to build trust and rapport with each participating SIPPP, thereby enhancing response rate and response quality. The key informant method was used to collect the data, and the pre-interviews were used to identify these experts in the participating SIPPPs. Given the reliance on perceptual responses with reference to complex constructs such as relationships within the SIPPP, trust and cultural variables, these pre-survey interviews with the lead respondents were considered desirable to facilitate openness and response integrity. It was hoped that they would also contribute to reducing the non-response statistic.

The administration of the final survey questionnaire was done via e-mail. Each unit of response received two formats of the questionnaire: an Excel spreadsheet version and a PDF version. Depending on their level of computer literacy, informants had the choice of either completing the survey directly in the Excel spreadsheet or “manually” on a printout of the PDF version. In the case of the latter, the responses were then transcribed by the researcher into the Excel

spreadsheet on receipt of the completed questionnaire. Along with the two copies of the questionnaire and a check-list containing instructions for completing the questionnaire (also discussed in the pre-survey telephonic interview), each respondent also received a personalised letter introducing the researcher and the study, explaining the survey, outlining how the data were to be used, requesting his / her voluntary consent to participate and guaranteeing anonymity.

It was estimated that the questionnaire would take about 45 - 60 minutes to complete, and a number of respondents commented that they were able to complete the survey within this time-frame.

The survey contained a number of workings hidden from the respondent to automatically process the responses once the completed survey was received and to format the data to conform to the SPSS data base set up. This greatly facilitated loading of the data into the SPSS data-base, avoiding transcription errors and saving time.

The survey questionnaire is divided into seven sections as follows:

Section 1: Respondent's / SIPPP biographics

To ensure the quality of the data and to verify that the correct key informant had been identified, several validation items were included in the instrument to test the quality of the informant. The following were obtained by means of a self-report questionnaire survey: (1) how long the informant had been working for the organisation (measured in years), (2) the informant's position in the partnership, with a selection of seven positions defined in descending order of seniority (seniority being deemed a necessary, albeit not sufficient, condition for knowledge of the partnership), and (3) knowledge of the partnership's performance and overall success (measured on 5-point and 6-point Likert scales, respectively).

Section 2: Contribution made to the partnership by the partner

This section focuses on the economic contribution by the partner.

Section 3: Relationship with the partner

This section focuses on the relationship with the partner, assessing the quality of communication and information-flow between them. It also looks at the readiness of the partner to assist in difficult times and goal congruency.

Section 4: Similarity of our and partner views on particular issues

This section assesses the "cultural fit" with the partner, and questions the similarity between their views on a number of issues.

Section 5: Organisational "fit" with our partner

This section assesses the organisational "cultural fit" with the partner, and assesses the similarity (or dissimilarity) between their respective organisational practices.

Section 6: Trustworthiness and dependability of partner

This section assesses the trustworthiness, dependability and reliability of the partner, and whether the partner stands by his / her word.

Section 7: Initiation of the partnership

Looks at the sequence of initiation of the SIPPP.

Automatic checks were included in the survey to confirm that all questions had responses. In the event of a missing response, the respondent was gently reminded by automatic messaging of this fact and encouraged to complete the response. This helped to cut down on missing responses. A set of instructions on how to complete the questionnaire and a consent form precedes the sections above.

A copy of the survey questionnaire is presented in Appendix A.

4.9. Construct Validation

Given that the aim of the research was to determine the statistical relationships among research constructs in order to test the hypotheses, it was imperative that the scales used were reliable and valid (Churchill, 1979; Hair et al., 2010). Construct validity refers to the extent to which the scales used measure the intended constructs (Gall, Borg, & Gall, 2003). Various tests of validity are used by researchers to validate the scales used.

4.9.1. Internal consistency reliability

Reliability is a necessary but not sufficient condition for convergent validity (Hair et al., 2010, p. 709). For the survey to be reliable, it needs to have internal consistency, i.e., it must be capable of eliciting the same or similar response from the same individuals in identical or similar situations. To achieve internal consistency, the questions in the survey must be framed

to elicit consistent interpretation and response from each respondent. Inconsistency would introduce random error. The internal consistency for each of the multiple item scales was examined to establish reliability for each of the variables.

The most common measure of internal consistency of a questionnaire employing a Likert-type scale is coefficient alpha (often referred to as *Cronbach's alpha*). Coefficient alpha represents the proportion of a scale's total variance that is attributable to a common source, i.e., the latent construct being measured (Hair *et al.*, 2010). Determining coefficient alpha involves assessing the average correlations among items within each variable (Nunnally, 1978), and is used to estimate the proportion of variance within a set of items to determine if individuals provide similar responses to related items (Gall *et al.*, 2003). High internal consistency indicates that the items are measuring the same construct (Hair *et al*., 2010).

Although Cronbach's alpha remains a commonly applied estimate of reliability, it is thought to underestimate reliability in certain instances. Hair et al. (2010, p. 710), therefore, recommend the use of *composite reliability* (CR) (the authors refer to it as "*construct reliability*"), computed from the squared sum of factor loadings (L_i) for each construct and the sum of the error variance terms for a construct (e_i) (Hair et al., 2010, p. 710).

In both cases, internal consistency is deemed acceptable if coefficient alpha or composite reliability (CR) exceeds a threshold of 0.7 (Nunnally, 1978; Hair et al., 2010).

Cronbach's alpha values and composite reliability (CR) values were calculated for all the scales and are reported in Chapter 5: Results.

4.9.2. Substantive and content validity

Pre-testing provides a means of reducing ambiguity and bias in the meaning of measures (Churchill 1979). The proposed measures were pretested to assess the substantive validity of the scales, i.e., the extent to which the measures are reflective of, or theoretically linked to, the construct of interest (Anderson & Gerbing, 1991). By definition, measures that do not have adequate substantive validity, cannot have adequate content validity and vice versa (Anderson & Gerbing, 1991). To avoid this potential problem, and to examine the substantive validity of the measures, the recommendation proposed by these two authors was followed, namely a pre-test validation which allowed the assessment of content validity of the items prior to collection of the data in the field.

This methodology involves a paper and pencil item-sort task where a convenience sample of between 12 and 30 (Hunt, Sparkman, & Wilcox, 1982) 'naive' respondents are given the definitions of all the constructs on one sheet of paper, and, on another sheet, all the (randomly

listed) items to be included in the field of study. They are then asked to study the definitions of the constructs and to assign each of the item measures to its appropriate construct. In this case the cohort consisted of twenty doctoral students at GIBS, University of Pretoria, who were asked first to assign each of the 22 first-order constructs to one of the 5 second-order constructs as appropriate, and then to assign each of the 96 manifest items to the appropriate first-order construct.

Substantive validity is evaluated using two indicators developed by Anderson and Gerbing (1991). The first measures the proportion of substantive agreement (Psa), i.e., the proportion of correct assignments of an item to its intended construct. It is calculated as follows:

$$Psa = \frac{(n_c)}{(N)} \qquad \text{(range 0 to 1.0)}$$

where N = total number of respondents

n_c = number of respondents assigning an item to its posited construct

The second measures the substantive validity coefficient (Csv), which reflects the extent to which respondents assign an item to its posited construct more than to any other construct, and is measured as the difference between the number of correct assignments of the item and the highest number of assignments to any other construct in the set, expressed as a proportion of the total number of respondents. The index is calculated as follows:

$$Csv = \frac{(n_c - n_0)}{(N)} \qquad \text{(range -1.0 to 1.0)}$$

where n_0 = the highest number of assignments of the item to any other construct

In a pre-main study setting, the indices are based on judgments about measures rather than on actual responses to the measures and are posited to predict the extent to which a measure is related to its intended construct and is not also tapping other unintended constructs in the set. Psa ranges between 0 and 1 (with larger values indicating greater substantive validity of the item), while Csv can range from -1 to + 1 - larger absolute values indicating greater substantial validity, with negative indices indicating that the measure is tapping more into another construct from the intended construct, and a value of zero indicating “ambiguity”, i.e., an index of + 1 points to a perfect loading onto the posited construct, while an index of -1 indicates that the item does have high substantive validity, but for a construct other than the

one theorised. Csv is considered to be a more stringent measure of substantive validity than Psa alone.

Based on the methodology proposed by Anderson and Gerbing (1991) and under a "worst case" scenario in which a measure is assumed to tap the intended construct (n_c) and one other construct (n_0) in the set of constructs (which means that a binomial test of significance can be used, i.e., H_0: $P(a) \leq 0.5$ // H_1: $P(a) > 0.5$), critical values of Csv were calculated at the .05 level of significance. If Csv values ≥ Ccrit, we can reject the null hypothesis with 95% confidence and conclude that the measure is tapping into the intended construct. For Csv values < Ccrit, the null hypothesis cannot be rejected and we conclude that there is "ambiguity" or that the measure should be rejected / needs to be re-defined.

4.10. Pilot Study

4.10.1. Pilot testing of survey questionnaire

For the survey to be valid, the answers to each question posed should reflect what the question aims to investigate, i.e., measure what is intended to be measured. Prior to conducting the main field study, the survey instrument was pre-tested on a randomly selected sample of respondents from ten SIPPPs with follow-up post-survey interviews with the respondents. This procedure was considered important to test the proper understanding of the questions in the survey and to get a pre-view of the reliability and validity of the scales used to measure the constructs, since they were designed based partly on own conceptualisation and a literature review. In the post-survey interviews, respondents were asked for critical comments on the survey. Based on this analysis and the feedback from the interviews, the necessary changes were made to the questionnaire to improve clarity and understanding.

4.11. Main Study

4.11.1. Analytical procedure

Structural equation modelling (*SEM*), is an established theoretically-driven analytical approach that tests the plausibility and strengths of patterns of relationships among variables, both latent and manifest (Anderson & Gerbing, 1991; Kline, 2011). The technique has wide application in the social sciences (Anderson, & Gerbing, 1991; Chen *et al.*, 2010; Damanpour *et al.*, 2012; Dash *et al.*, 2007, 2009; Han, 1998; Mjoen, & Tallman, 1997; Robson *et al.*, 2008; Nielsen, & Nielsen, 2009; Rodríguez, & Wilson, 2002), and a useful introduction on the history and development of the technique is given in the book by Kline (2011). Essentially a technique of

covariance structure analysis, SEM refers to a family of related procedures, rather than designating a single statistical technique. Combining multiple regression (MR), path analysis (PA), and factor analysis (FA), the methodology allows for the simultaneous testing of relationships among latent variables, while providing statistical efficiency, thereby providing a comprehensive method for the quantification and testing of substantive theories (Hair *et al*., 2010; Kline, 2011; Nachtigall, Kroehne, Funke, & Steyer, 2003).

Covariance based structural equation modelling (CB-SEM or simply SEM) was chosen as the preferred methodology to test the research hypotheses, since it caters well for the testing of newly-developed conceptual models containing latent as well as observed variables. The technique provides a more robust approach to testing and examining these complex theoretical relationships among the variables when compared with multiple regression. A further notable advantage of both CFA and SEM compared to traditional multivariate procedures, is that they explicitly take into account measurement error that is ubiquitous in all measurements (Kline, 2011), providing explicit estimates of these error variance parameters and providing a stronger analytic framework than traditional methods (e.g., multiple regression) that do not account for measurement error (Brown, 2015). Given the complex relationships between the constructs as posited in the conceptual model and for all the aforementioned reasons, SEM is considered the ideal technique to test the main hypotheses. It was employed in a confirmatory design to test the postulated conceptual model of the underlying latent variable structure (Hair *et al*., 2010; Kline, 2011), with scope for exploration of alternative model specifications.

The model consists of two parts: The *measurement model* and the *structural equation model*. The measurement model defines relations between the observed and unobserved variables (or latent variables) and is used to describe the measurement properties (reliabilities and validities) of the observed variables, thereby representing the correspondence rules by which the unobservable constructs are related to the observed variables. In other words, it specifies how these hypothetical constructs are measured in terms of the observed variables, providing the link between scores on a measuring instrument (i.e., the observed indicator variables) and the underlying constructs they are designed to measure (i.e., the unobserved latent variables or factors). The measurement model, then, represents the CFA model described earlier in that it specifies the pattern by which each measure loads on a particular factor. Validation of the measurement model was achieved through confirmatory factor analysis (CFA).

The structural equation model specifies the hypothesised causal relationships among the latent variables and, supported by the theory, was used to elucidate these relationships. *Specification* and *identification* of the model are two critical steps in the SEM process (Kline,

2011). Three of the latent variables in the conceptual model (Economic Interdependence, National Cultural Distance and Organisational Cultural Distance) are designed as independent (exogenous) variables, while the remaining constructs (*Collaborative Interdependency* and *Trust*) are dependent (or endogenous) variables. The β-coefficients in the structural equation model represent the strength of the hypothesised cause and effect relations among the unobservable constructs.

4.11.2. CFA and SEM methodology

The CFA for the hypothesised scale was performed on the IBM SPSS AMOS version 24 (Arbuckle, 2016). As per the congeneric assumption, each item was assumed to load on only one of the sub-scale factors that it was posited to measure.

In line with the traditional CB-SEM approach, a four-step method was used (Schumacker & Lomax, 2016) to separate measurement issues from structural issues. In the first step, the data were screened and the measurement scales for each of the three constructs shown in the conceptual model and the posited two moderators were hypothesised, and the scale measurement model specified. This approach is also in line with the sequence recommended by Brown (2015) for CFA-based higher-order factor analysis (in this case second-order factors), i.e., to first test the first-order model for fit, parameter estimates and correlation patterns, and then to assess the second-order model as justified on conceptual and empirical grounds.

In the second step, following testing of the relevant item-level data for normality, skewness and kurtosis, confirmatory factor analysis (CFA) was used to test the hypothesised theoretical measurement model by determining whether the hypothesised measurement model yields a variance–covariance matrix similar to the sample variance–covariance matrix. Measurement model fit, reliability and validity (particularly convergent validity) were assessed for the overall scale. To simplify the analysis and because the overall measurement model contained some complex constructs, this second step was conducted in two parts: first the individual scales were tested and, following confirmation of the acceptability of each scale, the measurement scales (except the two posited moderators) were then combined in a single measurement model, and CFA was used to confirm construct validity and adequate fit for the overall measurement model (Brown, 2015). In the CFA for each individual scale, error variances and one of the paths were constrained to 1 (Byrne, 2010).

In the third step, the data was screened again for multicollinearity and non-normality for the full measurement model, and the confirmed measurement scales were then combined in a structural model as hypothesised. This model was then tested for fit against the data.

For some of the steps an iterative process was followed.

In the fourth step the research moved from a confirmatory to an exploratory focus when the hypothesised structural model was re-specified to improve model fit. The re-specified model was then used as a basis to test the research hypotheses. To simplify the model, an imputed model was developed using factor scores calculated from the item-level indicator loadings in the verified model. The objective of the latter was to simplify the structural model by substituting factor scores, calculated as weighted combinations of the item-level scores per respondent, in lieu of the full measurement model, which would result in a high level of detail and model complexity. Adding in the moderators at this level of detail would contribute further complexity to the model and would tend to obscure the main results from the model. Factor scores were calculated using the impute facility in AMOS (Arbuckle, 2016). The imputed model was used to test the hypotheses.

4.11.3. Goodness-of-fit

Fit refers to the ability of the specified model to reproduce the data (i.e., usually the variance-covariance matrix). Fit statistics are based on the amounts of variance and covariance in the data that belong to the model and to the residual. It is generally agreed that there is no one goodness-of-fit statistic that satisfies all the fit criteria (Hair *et al*., 2010; Brown, 2015), and therefore a number of goodness-of-fit criteria are used to get an overall assessment of how well the hypothesised model fits the data. The goodness-of-fit indicators used are those most commonly reported on in the research literature and reputed to show good performance (Brown, 2015; Byrne, 2010; Schumacker & Lomax, 2016; Hair *et al*., 2010), namely chi square (χ^2) along with its *p*-value and degrees of freedom (df), χ^2 / df, RMSEA (Root Mean Square Error Approximation) and its 90% confidence interval, GFI (Goodness-of-fit Index), CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index). Recommended threshold values or cut-off points for these indicators are as follows:

Absolute fit indicators:

χ^2 as small as possible with *p* not significant (> 0.05), but affected by sample size

χ^2 / df < 5 (< 3 = good)

RMSEA < 0.085 (preferably < 0.05) – includes a penalty for poor model parsimony

GFI > 0.90

Comparative fit indices:

CFI > 0.90 (preferably >0.95)

TLI > 0.90 includes features correcting for model parsimony/ complexity

Although a non-significant ($p > 0.05$) $\chi 2$ statistic is the primary indicator of a good fit, it is well known that, for large sample sizes, it is very difficult to get an insignificant $\chi 2$ (the $\chi 2$ indicator is actually a "badness-of-fit" indicator) (Hair *et al*., 2010; Brown, 2015; Byrne, 2010). Given the large sample size in this research (461), the $\chi 2$ indicator provided very little guidance on model fit. The $\chi 2$ / df statistic is considered a better measure of fit than the stand-alone $\chi 2$ in the case of large sample sizes, since the inclusion of the degrees of freedom (df), to some extent, normalises the statistic.

Brown (2015) points out that cut-off points cannot always be unequivocal, since they are often differentially affected by various aspects of the analytic situation, amongst others, sample size, model complexity, estimation method used and normality of data. The author, furthermore, cautions that, although fit indices may point to a lack of fit or model misspecification, they should not be used in isolation from other information to support the conclusion of a good-fitting model. A good-fitting model is, therefore, one that is reasonably consistent with the data - a requirement before interpreting the causal paths of the structural model. However, a good-fitting model does not necessarily indicate a valid model – the parameter estimates together with the fit statistics were, therefore, carefully examined to determine if the conceptual model provides an acceptable explanation of the theory.

4.11.4. Residuals

Residuals, which refer to the individual differences between observed covariance terms and the "best fit" (estimated) covariance terms, provide a useful diagnostic cue to the assessment of model fit and specification (Hair *et al*., 2010; Brown 2015). Thus, while the goodness-of-fit statistics provide a global summary of the differences between the sample and model-implied matrices, the residual matrix provides specific information on how well each variance and each covariance are reproduced by the model's parameter estimates. Residuals are therefore indicators of local "misfit". Standardised residuals (raw residuals divided by their standard errors) are particularly useful in diagnosing measurement model problems, since they are independent of measurement scale range. Hair *et al* (2010) recommend that a consistent pattern of standardised residuals greater than |4| appearing on particular items should raise concern with those items

4.11.5. Modification indices

Modification indices are useful in providing indicators as to how the model fit can be improved. A modification index is attached to each fixed parameter and states by how much the $\chi 2$-value is expected to be reduced if that parameter is set free (Blunch, 2013). In this regard, covariances in error terms are of particular interest. While the initial assumption rested on a congeneric model where no covariances of item measurement errors were allowed, the theory would suggest that, in certain cases, it would be a reasonable assumption that certain errors on the same construct would covary, since the items related to these errors in question, measure the same construct and the same Likert scale is used to measure each item (Blunch, 2013; Schumacker & Lomax, 2016). Brown (2015) suggests that part of this covariance may be due to method effect introduced by the measurement method (i.e., systematic rather than random error effects). Questionnaires that elicit social and acquiescent responses, and contain a combination of both positively and negatively worded items are particularly prone to this. These are, therefore, in essence, mis-specified error variances. Blunch (2013) cautions that changes to the hypothesised model simply to improve fit constitute poor research practice, but that changes based on substantive theory are acceptable. However, it must be realised that, once the model is re-specified in any way, the analysis effectively becomes framed within an exploratory rather than confirmatory mode (Byrne, 2010; Brown, 2015).

Following Blunch's (2013) recommendation, all model changes in the CFA were fully justified on the basis of theory. In cases where possible changes were suggested by high modification indices, but lacked substantive evidence, these were not implemented, even though model fit would have been improved. Where changes referred to within-sub-construct error covariance, the construct validity of that sub-construct should not be affected (Hair *et al*., 2010; Brown, 2015). Precautions were taken to ensure that the models were not over-fitted and that the focus remained on model parsimony (Byrne, 2010).

4.11.6. Testing for convergent and discriminant validity

To assess convergent validity of the measurement model Hair *et al* (2010) suggest that, as a first step, the factor loadings be scrutinised. All the factor loadings should be above 0.5 and be statistically significant.

While these are minimum requirements for convergent validity, the next step is to look at the composite reliabilities (CR) (reliability is a necessary but not sufficient condition for convergent validity (Hair et al., 2010, p. 709)) and average variance extracted (AVE). Hair *et al* (2010, p. 709) suggest that for convergent validity, the following criteria should hold:

CR > 0.70

CR > AVE

AVE > 0.5

CR values were calculated as part of the scale reliability assessment, while AVE values, representing the mean variance extracted for the items loading onto a construct, were calculated using the formula proposed by Hair et al. (2010, p.709).

To assess discriminant validity, Hair *et al.* (2010) and Fornell and Larker (1981) suggest that the AVE for any two constructs be compared with the square of the correlation between them: the square root of the AVE should be greater than the correlation. Also, values for maximum shared variance (MSV) should be less than the corresponding AVE (Gaskin, 2016a). In the results, values for each construct are produced in a table with $\sqrt{AVE}$ shown on the diagonal in bold and the corresponding correlations below the diagonal.

In the case of certain of the first-order constructs, slight problems with discriminant validity may be experienced. However, since all the sub-constructs measure the same overall construct, namely the second-order construct of which they are part, the lack of discriminant validity is not surprising. Since these first-order constructs are part of a second-order construct, absolute discriminant validity at the first-order level is not deemed to be of paramount importance, provided that discriminant validity can be demonstrated for the second-order construct (Yale, Jensen, Carcioppolo, Sun, & Li, 2015). In all cases, this was confirmed in the overall measurement where all the constructs are combined.

4.11.7. Nomological validity

The measurement of constructs should also have face validity and nomological validity (Hair *et al*., 2010, p 710). Face validity and a preliminary assessment of nomological validity of the constructs was confirmed in the second pilot study as reported above. A re-confirmation of nomological validity of the overall measurement model and the sub-scales was done by examining the correlations among the constructs and ensuring that they made theoretical sense. The correlations were all shown to be in support of the posited relationships among the constructs.

4.11.8. Data screening

The data were screened for missing data, unengaged responses, and outliers, and assessed for normality (skewness and kurtosis).

Unengaged responses: an "unengaged response" refers to the situation where a respondent fills in responses which are all the same or very similar, resulting in little or no variance in the data. Since SEM is a co-variance-based methodology, "unengaged responses" have a highly negative impact and need to be removed by checking the standard deviations for all the responses and rejecting those showing very low or zero standard deviation.

Outliers: outliers or influential data points are defined as data values that are extreme or atypical on either the independent or dependent variables, or both (Schumacker & Lomax, 2016). Because outliers affect the mean, the standard deviation, and correlation coefficient values, they need to be addressed beforehand. Although Likert scales were used for all the constructs, outliers can still occur as a result of extreme values from self-report data. The IBM SPSS AMOS version 24 (Arbuckle, 2016) software was used to check for extreme values of the Mahalanobis distances, which measure distances from the centroid. The data was also checked for observation errors, data entry errors or instrument errors based on layout or instructions, which can all contribute to outliers. Similarly, the data was checked for incorrect responses and typographical errors resulting in responses outside of the range of the Likert scale.

Appropriate action was taken in each case.

Normality checks: inferential statistics assumes data are normally distributed (Schumacker & Lomax, 2016). Data that are skewed (lack of symmetry) often occur in Likert scales, and affect the variance–covariance among variables. In addition, kurtosis (peakedness) in data will impact statistics. The Most Likely (ML) method of estimation normally used in SEM relies on normal or near normal data, particularly with respect to skewness and kurtosis.

Non-normality issues when using Likert scales are not uncommon, since it is known that Likert scales are not or tend not to be normal (Hancock & Liu, 2012; Byrne, 2010), although Finney and DiStefano (2006) found that the impact of non-normality on Likert scales with more than five categories (in this case seven), was minimal. Furthermore, methodological research has shown that non-normality of data items tends to have little impact on the parameter estimates themselves, which remain fairly unbiased (Finch, West, & MacKinnon, 1997).

Nevertheless, although one can quantify the degree of univariate and multivariate non-normality in one's data, it is much more difficult to foretell the impact of that non-normality in the context of a specific model (Hancock & Liu, 2012). Statistical research has shown that, whereas skewness tends to impact tests of means, kurtosis severely affects tests of variances and covariances (Byrne, 2010). Prior research has also shown that significant problems with model and parameter test statistics are likely to arise when univariate distributions have

skewness exceeding |2| and kurtosis exceeding |7| relative to a normal distribution, where skewness and kurtosis are defined as 0 (Chou & Bentler, 1995; Curran, West, & Finch, 1996; Muthén & Kaplan, 1985; Byrne, 2010). The occurrence of such cases influences the decision on the method of estimation to use. The most popular method of estimation used in SEM is Maximum Likelihood (ML), which describes the statistical principle that underlies the derivation of parameter estimates: the estimates are the ones that maximize the likelihood (the continuous generalisation) that the data (the observed covariances) were drawn from this or the postulated population (Kline, 2011). While the ML is the preferred method for multivariate normal continuous data (Brown, 2015), it is not robust enough to handle extreme non-normality in the data (although Brown suggests that it can still handle mild violations of these assumptions).

One method of dealing with non-normal endogenous variables is to use the normal theory method of estimation, Maximum Likelihood, but with nonparametric bootstrapping, which assumes only that the population and sample distributions have the same shape (Hancock & Liu, 2012; Kline, 2011). Bootstrapping is a resampling procedure, in which the original sample serves as the population. In this approach, multiple samples, with the same sample size as the original sample, are randomly drawn from this population, with replacement, and parameters, standard errors, and model test statistics are estimated on the basis of these large sample empirical sampling distributions (Brown, 2015). Thus, bootstrapping is based on the notion that, when the distributional assumptions of multivariate normality are violated, an empirical sampling distribution can be relied upon to describe the actual distribution of the population sample on which the parameter estimates are based. Results of a computer simulation study by Nevitt and Hancock (2001) indicate that bootstrap estimates for a measurement model were generally less biased compared with those from standard ML estimation under conditions of non-normality and for sample sizes of $N \geq 200$. With a sample size of 461 (455 excluding outliers), this criterion is easily met. In cases where non-normality was found to be a problem, ML with non-parametric bootstrapping was chosen as the preferred estimating method.

Multivariate normality checks, including skewness and kurtosis checks, were done for each of the constructs.

Multicollinearity: this is the extent to which a construct can be explained by other constructs in the model (Hair et al., 2010, p 93). High levels of multicollinearity are not desired in SEM analysis since it means that the variances that the predictor variables explain in the predicted variables, are overlapping with each other, and therefore not explaining unique variances in the predicted variables.

Multicollinearity was checked for by running multiple linear multivariate regressions between each variable in turn and the other variables and calculating a variance inflation factor (VIF) and the tolerance value (reciprocal of VIF) for each item in the model and comparing this to certain critical rule-of-thumb values proposed by Hair et al. (2010, p. 162) as follows:

VIF < 3: not a problem

VIF > 3; potential problem

VIF > 5; very likely a problem

VIF > 10) definitely a problem
Tolerance >0.1)

4.11.9. The treatment of Likert scales

Although Likert scales are strictly ordinal, the practice of treating them as if they represent continuous distributions has been the norm for many years in social research (Byrne, 2010). This allows the use of more powerful statistical methods than the non-parametric methods recommended. It has been strongly argued that Likert scales can approximate interval scales if the scale is perceived to be symmetrical (Byrne, 2010; Muthen & Kaplan, 1985). This notion is supported by prior research, which shows that, if the number of categories is large (in this case a 7-point scale) and the data exhibit reasonable multivariate normality, failure to address the ordinality of the data is likely to be negligible (Byrne, 2010; Muthen & Kaplan, 1985). The Likert scales were therefore treated in this research as if they represented continuous data, which allowed the use of normal multivariate statistical techniques, including Maximum Likelihood estimation in CFA (Hair *et al*., 2010).

4.11.10. Testing for mediation and moderation

The posited mediating effect of Collaborative Interdependency (Coll_Int) on the relationship between Economic Interdependency (Ec_Int) and Trust (Tr) was formally tested using the Baron and Kenny (1986) approach, which consists of fitting three different models to the data. Firstly, the direct effect between the predictor variable (Ec_Int) and the outcome variable (Tr) was looked at for pathway strength and significance. Next, the pathway between the predictor variable and the posited mediator (Coll_Int) was assessed for pathway strength and significance. Finally, the pathway between the posited mediator and the outcome variable was assessed for strength and significance. According to the Baron and Kenny (1986) test, mediation is supported if both the pathway from the predictor variable to the posited mediating variable and that from the mediating variable to the outcome variable are significant and

material, and the direct pathway between the predictor variable and the outcome variable is insignificant and weakened in the presence of the mediating variable.

Although still often referred to, the Baron and Kenny (1986) approach is considered to have low statistical power compared to more modern methods for testing mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Biesanz, Falk, & Savalei, 2010). The bootstrapping method to construct a confidence interval for the indirect effect is one such recommended approach (Gaskin, 2013) that was used in this analysis.

Organisational cultural distance (OCD) and national cultural distance (NCD) are posited to moderate the relationships between economic interdependency (EC_Int) and trust (Tr) on the one hand, and between collaborative interdependency (Coll_Int) and trust on the other. This means that organisational cultural distance and national cultural distance are thought to influence the strength and / or direction of these relationships, the magnitude of the impact being dependent on the level of the particular moderator (Hair *et al*., 2010, p. 690).

Hair *et al* (2010) caution that moderating variables must be chosen with strong theoretical support, since the assumption of causality by the moderator(s) cannot be tested directly and may become confounded as the moderator(s) become correlated with other variables in the model. The moderator effects of the two variables were assessed using the Baron and Kenny (1986) approach of assessing both the main (direct) effects of the proposed moderators as well as their interaction effects. The hypothesis of moderation is supported if the interaction pathway is significant. Standardised values were calculated for the imputed factor scores in the model. A post-hoc analysis of statistical power was done, confirming sufficient statistical power in the analysis.

4.11.11. Testing for between-groups differences

In order to carry out inter-group comparisons between the private partner and the public partner groups with respect to the perceived relationships in the SIPPP, it was first necessary to show *measurement equivalence* (or *invariance*) and *structural equivalence* of the models across the two groups (Byrne, 2010; Brown, 2015; Kline 2011). These respectively test whether the components of the CFA measurement model and the structural model are equivalent (i.e., invariant) across the two groups. According to this process, the single-group CFA measurement model was re-tested separately for the private group and the public group, and the results compared. Byrne, Shavelson, and Muthén (1989) emphasise the importance of first confirming the fit of the measurement model for each group separately before alternative hypotheses can be investigated. A similar exercise was done for the structural model to show structural equivalence.

Following the procedure proposed by Byrne (2010) and by Brown (2015), a multi-group CFA was then conducted to test for measurement equivalence (invariance) at construct, measurement and structural levels across the three groups (i.e., total, private-sector partner and public-sector partner groups) in a series of hierarchically nested models at increasingly stringent levels achieved by successively increasing the number of equality constraints. A key advantage of multiple-group CFA is that all aspects of measurement invariance and population heterogeneity can be examined simultaneously (i.e., factor loadings, intercepts, residual variances, factor variances, factor covariances and latent means) (Brown, 2015). The pattern of factor loadings for each observed measure was tested for its equivalence across the three groups. The parameters for the measures identified as being group-invariant were constrained equal, while subsequent tests of the structural parameters were conducted. As parameters were successively tested for group-invariance by this step process, those identified as being group-invariant were successively and cumulatively constrained equal. The $\chi 2$ differences determined whether the difference between the models was significant, a statistically significant $\chi 2$ being indicative of the non-equivalence of the two models across the groups. Group differences were thereby identified in a step-by-step process of elimination. The multi-group utility function in IBM SPSS AMOS version 24 (Arbuckle, 2016) was used to test the individual pathways.

4.11.12. Limiting common method bias

Common method bias (CMB) is the spurious "variance that is attributable to the measurement method rather than to the constructs the measures are assumed to represent" (Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003). It therefore refers to the systematic error variance shared among measured variables and introduced as result of the use of a same method and / or common source.

Gathering cross-sectional data from key informants in a self-administered survey using perceptual measures creates the potential for common method bias (or variance) to be an explanation for the relationships observed in the study. Care was taken to limit and assess the effects of so-called common method bias (CMB) by following the recommendations made by Podsakoff *et al*. (2003), and the following precautionary measures were taken:

(1) *Use of multi-sources:* three respondents from the private-sector partner and three respondents from the public-sector partner were used to obtain the item measures.

(2) *Careful construction and clarity of the scale items:* this was achieved by using a systematic questionnaire and measure development process.

(3) *Anonymity:* this was granted to all respondents and their organisations. Respondents were urged to answer questions as honestly as possible considering that there are no right or wrong answers. Certain questions were inserted to test the consistency of a respondent's responses.

(4) *Non-grouping of construct items:* construct items were not grouped together by variable but, instead, were placed together within general topic categories. The logic is that respondents will be unable to detect readily which items belong to which constructs or guess the relationship between predictor and criterion constructs.

(5) *Validation of perceptual performance data:* relevant primary objective performance data were collected where available in order to validate perceptual performance measures.

To check for CMB, the Common Latent Factor (CLF) method was used (Podsakoff *et al*., 2003; Hair *et al*., 2010; Gaskin, 2016b), whereby a first-order common latent factor is added to the measurement model and connected to all the item measures. The CLF captures any systematic error common to all the measurement items and allows the estimation of the level of common method bias.

4.11.13. Calculation of effect size

For chi-square analyses, the effect sizes are phi (Φ) calculated as follows (Cohen, 1988):

$$\phi = \sqrt{\frac{\chi^2}{N}}$$

Cohen (1988) interpreted the following effect sizes:

0.1 = small effect
0.3 = medium effect
0.5 = large effect

4.11.14. Calculation of statistical power

A post-hoc power analysis was done to check if the analysis that was used has the necessary statistical power (> 0.80) to reject null hypothesis on the sole basis of insignificant pathways. The concept of power in statistical theory is defined as the probability of rejecting the null hypothesis when there is a real effect in the population (Cohen, 1988; Cohen, Cohen, West, & Aiken, 2003). Statistical software (Soper, 2017), using the Cohen (1988) approach, was used to calculate the statistical power for the model on the basis of the number of exogenous predictors, the explained variance of the outcome variable, the desired α (.05) and the sample size.

4.12. Ethical Considerations

The study was conducted in a professional manner and according to the strictest ethical standards applied to social science research. Respondents were fully informed of the scope and purpose of the study and their role in it to ensure that participation was voluntary and on the basis of informed consent (an informed consent form was included in the questionnaire and had to be completed by the respondent for the questionnaire to be accepted). No incentives were offered in exchange for participation bar that the results of the study would be shared with all participating organisations. The anonymity of respondents and their organisations was guaranteed on the basis that all names were immediately coded on receipt of the questionnaire and would be excluded from any research publication.

CHAPTER 5: RESULTS

5.1. Introduction

The purpose of this chapter is to present the results of the two pilot studies, the main empirical study and tests of the hypotheses. The chapter commences with the results of the first pilot study to pre-test the content and substantive validity of the constructs operationalised in the Method section using the Anderson and Gerbing (1991) methodology as described. Next, the results of the second pilot study to test the research instrument, the survey questionnaire, among a randomly selected sample of respondents are presented. The chapter then moves on to present the results of the main study, starting off with a presentation of the descriptive demographics of the study sample, followed by the results of the reliability and the convergent and discriminant validity tests on the measurement scales for the individual constructs used, through a series of confirmatory factor analyses (CFA). Following confirmation of satisfactory reliability and convergent and discriminant validity for all the measurement scales, these are then integrated into a single measurement model, and the specified model tested for construct validity (convergent and discriminatory) of all the measurement scales in a combined analysis. Finally, the measurement model and posited structural model are combined into a single structural equation model, which is tested for fit, re-specified and then used to examine the posited relationships between the constructs and to test the research hypotheses. In the final section, the new theoretical models, revised in the light of the empirical results, are presented.

5.2. First Pilot Study

A pilot study was carried out to pre-test the face validity of the scales, i.e., the extent to which the measures are reflective of, or theoretically linked to, the construct of interest (Anderson & Gerbing, 1991), using the methods suggested by these researchers and as outlined in the Method section of Chapter 4.

In line with this methodology, questionnaires were sent to the twenty doctoral students, provided with a list of operational definitions for the second-order constructs (5) and asked to assign each of these to a particular second-order construct that, in their judgement, the construct best reflected, based on the definitions provided. In the second part, respondents were asked to assign each of the 96 measurement items in turn to one of the 22 first-order constructs which, in their opinion, reflected best fit. The returned questionnaires included three with errors, resulting in seventeen usable responses (still within the range of 12 - 30 proposed by the authors.

Based on the methodology outlined in Chapter 4, a critical value of Csv was calculated (assuming seventeen respondents) as 0.41 at the .05 level of significance. For values of the Csv ≥ 0.41 we can reject the null hypothesis with 95 % confidence and conclude that the measure is tapping into the intended construct. For Csv values < 0.41, the null hypothesis cannot be rejected and we conclude that there is "ambiguity" or that the measure should be rejected / needs to be re-defined.

In line with previous research, four categories were defined based on the Csv values generated, namely:

	Critical Value C_{sv}
Strong	≥ 0.75
Moderate	0.41 - 0.74
Ambiguous	0 - 0.40
Useless	< 0

Each of the five second-order constructs and each of the 22 first-order constructs (96 manifest items) were examined based on the responses received. Measures that fell into the "ambiguous" or "useless" category were either considered for rejection or re-defined / refined to remove any ambiguity. Certain measures in the "moderate" range, where the calculated Csv values were close to the 0.41 cut-off point, were also re-examined for ambiguity and reworded as necessary. The overall results for the second- and first-order constructs are shown in Tables 5.1 and 5.2 respectively.

In the case of the second-order constructs (Table 5.1), all the constructs were classed at the "moderate" level (indicating reasonably good "fit"), with only construct 3 (National Cultural Distance) at the "ambiguous" level, showing significant overlap with construct 4 (Organisational Cultural Distance). The latter result was to be expected, given that the two constructs are most probably related. A significant strengthening in the overall Csv value resulted when these two cultural components were grouped, whereupon all four constructs were classed at the "moderate" level. As a result of the pre-test, none of the second-order construct items were rejected, but eight (36.4 %) were slightly reworded / refined to remove any potential ambiguity.

In the case of the first-order constructs (Table 5.2), there was again substantial overlap between construct 3 (National Cultural Distance), classed as "ambiguous", and construct 4 (Organisational Cultural Distance). As before, grouping the items belonging to these two components strengthened the overall Csv value for this grouping to the "strong" level. As a

result of the pre-test, none of the first-order constructs items were rejected, but 22 (22.9 %) were reworded / refined to remove any potential ambiguity.

Table 5.1.

Face validity test results: correct assignment of the first-order constructs to the second-order constructs

	Construct Average Loading		Classification
Construct	P_{sa}	C_{sv}	
1	0.69	0.53	Moderate
2	0.69	0.43	Moderate
3	0.56	0.34	Ambiguous
4	0.78	0.63	Moderate
5	0.76	0.59	Moderate
Average	**0.70**	**0.51**	**Overall: Moderate fit**

Table 5.2.

Face validity test results: correct assignment of the manifest measurement items to the first and second-order constructs

	Construct Average Loading		Classification
Construct	P_{sa}	C_{sv}	
1	0.61	0.40	(Slightly) Ambiguous
2	0.72	0.58	Moderate
3	0.52	0.30	Ambiguous
4	0.71	0.52	Moderate
5	0.73	0.60	Moderate
Average	**0.66**	**0.48**	**Overall: Moderate fit**

Based on their performance on the above two indices, the face validities of all the constructs, (with some re-wording of items as indicated) were confirmed. This exercise helped to assure, prior to the empirical field research, that each item had face validity, i.e., it appeared to sample the domain of the intended construct.

5.3. Second Pilot Study

The re-formulated questionnaire, based on the results of the first pilot study, was pre-tested with a sample of respondents from ten SIPPPs randomly selected from the sample frame, leaving a pseudo-random sample for use in the main study (the respondents / SIPPPs were

not replaced). An interview was also held with each respondent to assess the experience in completing the questionnaire. An analysis of the responses and critical feedback from the interviews contributed to the necessary changes made to the wording of certain items in the questionnaire prior to empirical field research.

5.4. Data Collection and Sample Demographics

Although the SIPPPs had signalled their willingness to participate in the research, responses were still very slow in coming in, and the average time for receiving a fully completed questionnaire was 75.4 days (minimum: 1 day; maximum: 194 days). This process required considerable proactive management, and, on average, each questionnaire was followed up 8.2 times to address missing and / or incorrect data, and to expedite the final response. Although management intensive, this process ensured that there were virtually no missing responses in the final data base and minimal "unengaged" responses (see Section 5.5).

A total of 309 SIPPPs were approached to participate: 34 declined to participate, 118 did not reply and 157 SIPPS indicated willingness to participate (final sample frame). From this targeted sample of 157 SIPPPs, representing a sampling universe of 942 respondents (three private-sector respondents and three public-sector respondents per SIPPP) that had indicated their intention to participate in the research study, 117 ultimately participated. This gives a response rate at the SIPPP level of 37.9 % on the original number of SIPPPs approached, and 74.5 % on the final sample frame. A sample of ten SIPPPs was randomly drawn from this sample frame (without replacement) to conduct the second pilot study (to test the research measuring instrument), leaving a pseudo-random sample of 107 SIPPPs participating in the main study, potentially represented by 642 potential response units (reduced sampling frame). A total of 493 responses were finally received (only 7 in PDF format – 6 from private partners - which were transcribed into the Excel format as explained in the Research Design), but 22 surveys had to be rejected due to missing responses and ten due to "unengaged" responses, leaving 461 useable responses, representing a final response rate of 48.9 % on the sampling universe and 71.8 % on the reduced sampling frame. These response rates are deemed to be very satisfactory for this type of research.

A breakdown of the final responses by partner type affiliation (private sector or public-sector) is as follows:

- Private partner respondents: 283 respondents, equivalent to a response ratio of 2.64 private sector respondents per SIPPP, representing a response rate of 88.2 % on the reduced sample frame and 60.1 % on the sampling universe.

- Public partner respondents: 178 respondents, equivalent to a response ratio of 1.66 public-sector respondents per SIPPP, representing a response rate of 55.5 % on the reduced sample frame and 37.8 % on the sampling universe.

A total of 86 SIPPPs (80%) had private partners originating from Western countries, represented by 235 respondents (83%). The remainder hailed from India, China, Africa and Latin America.

A distribution of the respondents' partner type affiliation is shown in Table 5.3. Response categories are defined as the number of private-sector respondents and number of public-sector respondents in each category, the numbers in the body of the table indicating the number of instances of each response category. A total of sixteen SIPPPs (13.7 %) had no public partner representation at all, equivalent to 6.5 % of the respondents' sample. This is significantly below the ten percent maximum public-sector non-response rate set in the Research Design and is considered manageable. In the main study, the responses of the missing public-sector respondents were imputed from the responses of their private-sector colleagues as part of the same dyad.

Table 5.3.

Sample distribution of two levels of partnership affiliation (public-sector vs private sector respondent) across the respondents' sample (in number of respondents and percentages) before removal of outliers

Number of Private Sector Respondents	Number of Public Sector Respondents					
	0	1	2	3	4	5
1	8	18	0	0	0	0
2	6	39	20	0	0	0
3	12	52	90	120	0	0
4	4	5	6	42	16	0
5	0	0	7	16	0	0

Note: Figures in the body of the table indicate the number of instances (N=461) in that response category (before removal of 6 outliers - 5 private and 1 public - see 5.5.3)

Number of Private Sector Respondents	Number of Public Sector Respondents					
	0	1	2	3	4	5
1	1.7%	3.9%	0.0%	0.0%	0.0%	0.0%
2	1.3%	8.5%	4.3%	0.0%	0.0%	0.0%
3	2.6%	11.3%	19.5%	26.0%	0.0%	0.0%
4	0.9%	1.1%	1.3%	9.1%	3.5%	0.0%
5	0.0%	0.0%	1.5%	3.5%	0.0%	0.0%

Note: Figures in the body of the table indicate the % of instances (N=461) in that response category (before removal of 6 outliers - 5 private and 1 public - see 5.5.3)

The important demographics referring to the final respondents' sample are presented in Table 5.4 and Figures 5.1 and 5.2 below. A graphical representation of the data in Table 5.4 is given in Appendix C. Salient points are as follows:

- *Country representation* (Figure 5.1): respondents are from 26 different countries in sub-Saharan Africa. Based on the United Nations Development Programme report

("About Sub-Saharan Africa", 2017), sub-Saharan Africa comprises 46 countries in all, and this, therefore, represents a 56.5 % country coverage.

- *Industry representation* (Figure 5.2): respondents are from fifteen different industry categories. Good industry coverage was one of the criteria of SIPPP selection and this was deemed to have been achieved.

- *Management level distribution* (Table 5.4): 40.2 % of respondents are at director level / members of the board with 14.8% occupying the position of CEO. Just over 57.5% of respondents hail from the ranks of senior management, while a total of 68.8 % represent general management (which includes the prior categories). It can therefore be concluded that the respondents are representative of the management cohort of the SIPPP, which was a critical criterion for selection of respondents.

- *Age and gender distribution* of respondents (Table 5.4): the vast majority of respondents are males (83.5 %) within the 35 - 45 age bracket (42.1 %). This seems to be in line with the management level sample distribution discussed above and the distribution of tenure discussed below, since it seems plausible that most of the senior managers within SIPPPs will be males, in the age bracket 40 - 45 and have spent at least five years with the organisation. It is interesting to note the increasing distribution of females in the younger age groups, highlighting recent trends on the continent in gender representation in the workplace.

- *Tenure distribution* (Table 5.4): the bulk of the respondents (95.5 %) have been with the particular SIPPP for longer than a year (part of the respondents' selection criteria), with 54.1 % of respondents showing a tenure of between one and five years, and a further 21.7 % showing a tenure of between six and ten years. The combination of high tenure and senior management levels inherent in the sample distribution raises confidence of the cohort's knowledgeability of the key issues that underpin relationships within the SIPPP.

- *English proficiency* (Table 5.4): this was one of the key criteria for the selection of respondents as set in the Research Design. In total, 94.1 % of respondents put their proficiency in the English language as better than "good", with only 0.2 % registering a poor proficiency in the language.

- *Education levels* (Table 5.4): 31.2 % of respondents have a tertiary education, with a further 67 % reporting a post-tertiary qualification.

- *Functional distribution* (Table 5.4)*:* 46.4 % of respondents are in general management, with a reasonable spread amongst the professional functions*.*

- *Perceptions of SIPPP performance and success* (Table 5.4): respondents were asked to rate the perceived "success" of the SIPPP on two levels, "performance" and "overall success". Likert scales were used for both assessments: the first measure used a 5-point scale anchored on 1 = "very strong" and 5 = "very poor", while the second measure used a 6-point scale anchored on 1 = "very successful" and 6 = "very unsuccessful". It is noted that 4.6 % of the respondents' sample falls within the "unsuccessful" to "very unsuccessful" range. This was deemed important from the perspective of controlling for "survivor bias" by ensuring a reasonable representation of unsuccessful and failed SIPPPs in the sample.

- *Partnership Type* (Table 5.4): this shows a good spread in the sample between formal type partnerships (JVs and formal alliances) and informal type partnerships.

- Partnership Size (Table 5.4): this shows a good spread of SIPPP size (as measured by number of employees) in the sample.

The sample satisfies all the selection criteria as set out in the Research Design, including level of management, tenure and English proficiency. It was, therefore, concluded that the respondents are representative of the senior management structures of the participating SIPPPs, adequately represent both sides of the dyad, have acceptable tenure and can be expected to have reasonable insight into the relationships between the parties in the SIPPP.

From inspection, the above demographics appeared similar to the sampling universe, and it was therefore concluded that the final sample of respondents was representative and free from systemic bias. However, a non-response bias test was undertaken since this type of bias affects the interpretation of the variables and subsequently affects the overall conclusions resulting from the data analysis. Evidence from the research literature has established that the non-respondents sometimes differ systematically from the respondents both in attitudes, behaviours, personalities, motivations, demographics and/or psychographics, any or all of which might affect the results of the study (Malhotra, Hall, Shaw, & Oppenheim, 2006).

Non-response bias was assessed by comparing the demographic data (e.g., SIPPP age) of the responding SIPPPs and the non-responding SIPPPs, using *t tests* where appropriate. No significant non-response bias was found.

5.5. Data Screening

Data were screened for missing data, unengaged responses, outliers, and assessment of normality (skewness and kurtosis), using the methods described in Chapter 4: Research Design and Method.

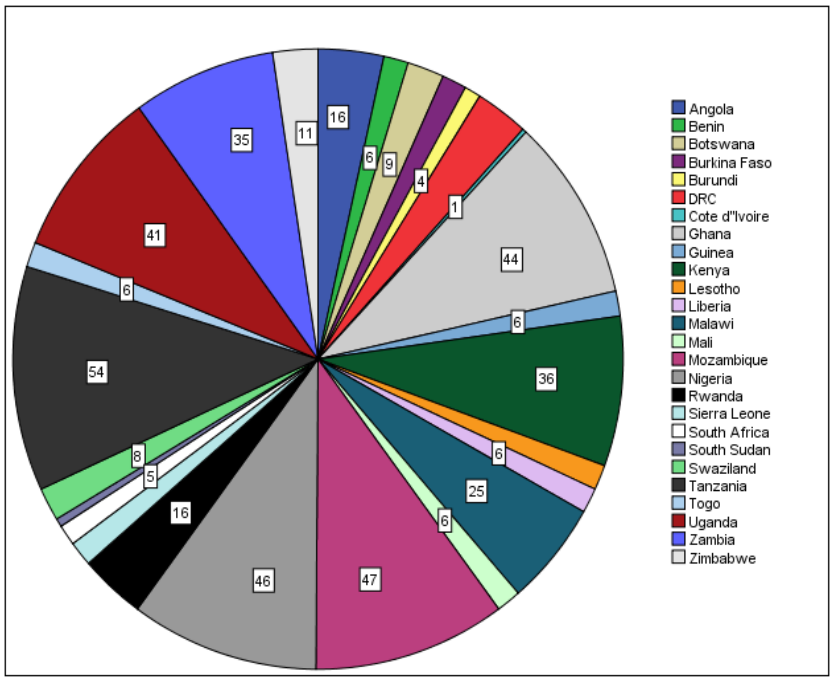


Figure 5.1. Country distribution

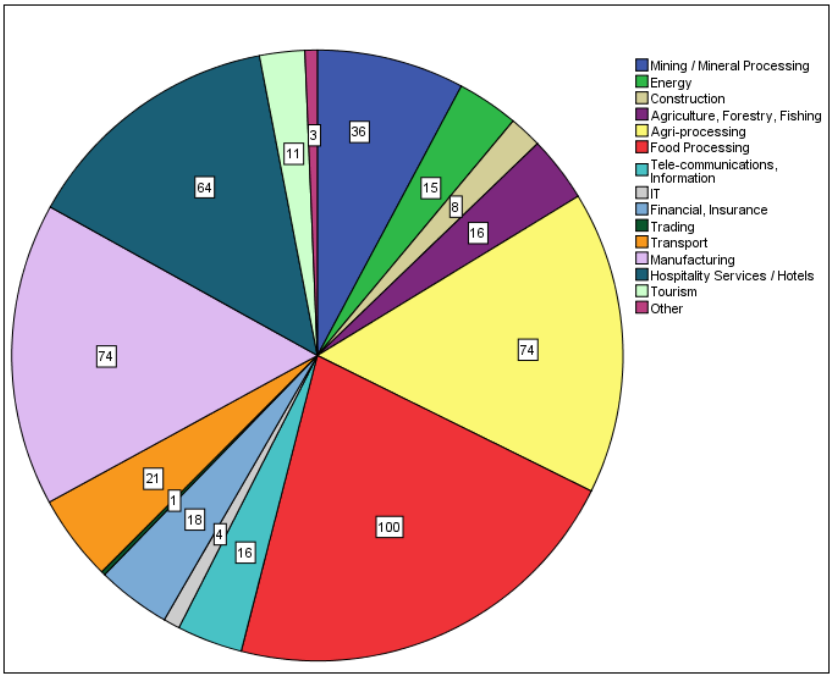


Figure 5.2. Industry distribution

Table 5.4.

Sample demographics

Demographic		Result			
Management level distribution:		**Number of respondents**	**%**	**Cumulative %**	
	CEO	68	14.8	14.8	
	Director	117	25.4	40.2	
	Senior Management	80	17.4	57.6	
	General Management	52	11.3	68.9	
	Supervisory Managent	19	4.1	73	
	Advisor	20	4.3	77.3	
	Other	105	22.8	100	
	Total	461	100		
Age & gender:		**Total**		**Male**	**Female**
	Age (years)	**Number**	**%**	**%**	**%**
	<35	31	6.7	3.7	3.0
	35-45	194	42.1	33.2	8.9
	46-55	119	25.8	22.3	3.5
	56-65	92	20.0	19.1	0.9
	>65	25	5.4	5.2	0.2
	Total	461	100	83.51	16.49
Tenure (years)		**Number**	**%**	**Cumulative %**	
	<1	19	4.1	4.1	
	1-5	251	54.4	58.6	
	6-10	100	21.7	80.3	
	>10	91	19.7	100	
	Total	461	100		
English proficiency		**Number**	**%**	**Cumulative %**	
	Excellent	187	40.6	40.6	
	Very good	180	39.0	79.6	
	Good	67	14.5	94.1	
	Fair	26	5.6	99.8	
	Poor	1	0.2	100.0	
	Total	461	100		
Education levels		**Number**	**%**	**Cumulative %**	
	High school	8	1.7	1.7	
	Tertiary	144	31.2	33.0	
	Post tertiary	309	67.0	100.0	
	Total	461	100		

Table 5.4. (cont'd)

Sample demographics

Demographic		Result		
Functional distribution:		**Number of respondents**	**%**	
	General Management	214	46.4	
	Production	7	1.5	
	Marketing/ Sales	13	2.8	
	Finance	41	8.9	
	Technical	27	5.9	
	R&D	6	1.3	
	HR	7	1.5	
	Supply Chain	29	6.3	
	Other	117	25.4	
	Total	461	100	
Perceptions of SIPPP performance & success:		**Number**	**%**	**Cumulative %**
Performance rating:	Very strong	109	23.6	23.6
	Strong	203	44.0	67.7
	Acceptable	98	21.3	88.9
	Poor	43	9.3	98.3
	Very poor	8	1.7	100.0
	Total	461	100	
Success rating:	Very successful	154	33.4	33.4
	Successful	208	45.1	78.5
	Slightly successful	57	12.4	90.9
	Slightly unsuccessful	21	4.6	95.4
	Unsuccessful	18	3.9	99.3
	Very unsuccessful	3	0.7	100.0
	Total	461	100	
Partnership type		**Number**	**%**	**Cumulative %**
	JV	130	28.2	28.2
	Formal alliance	148	32.1	60.3
	Informal alliance	183	39.7	100.0
	Other	0	0.0	100.0
	Total	461	100	
Partnership size	Number of employees	**Number**	**%**	**Cumulative %**
	< 50	45	9.8	9.8
	51-100	73	15.8	25.6
	101-500	98	21.3	46.9
	501-1000	118	25.6	72.5
	> 1000	127	27.5	100.0
	Total	461	100	
Partnership age	Partnership age (years)	**Number**	**%**	**Cumulative %**
	1 - 2	5	4.7	4.7
	3 - 5	18	16.8	21.5
	6 - 10	26	24.3	45.8
	> 10	58	54.2	100.0
	Total	107	100	

5.5.1. Missing Data

A total of 181 surveys (28.2 % of the potential sample) were not returned. Just on 40 % of the returned surveys had some form of missing data, ranging from missing demographic data and missing weightings, to single or multiple missing responses. In the first instance, such surveys were returned to the respondents in question or to the lead respondent for correction and / or completion. An intense follow-up procedure was in place to ensure the return of the surveys. Of the surveys returned to respondents for updating, 34 surveys (just over 7.0 % of the sample) were not returned. In the case of twelve (2.5 %) of these, where the missing data was minimal, missing responses were imputed from the median for those missing responses, but 22 surveys (4.6 %), where the number of missing responses were high, were deemed unusable and rejected.

5.5.2. Unengaged responses

Unengaged responses were checked for by the method described. In all, ten surveys were rejected due to this consideration.

5.5.3. Outliers

Outliers were checked for by the method described. All in all, six such cases were discovered (five private-sector responses and one public-sector response), and were removed from the data set. Observation errors, data entry errors, instrument errors (based on layout or instruction) and typographical errors were corrected where possible.

5.5.4. Normality

Multivariate normality checks, including skewness and kurtosis, were checked for by the method described, and are reported on separately for each construct in the CFA section which follows.

After screening the sample data for missing data, unengaged responses and outliers, 455 responses were left, 278 from private-sector respondents and 177 from public-sector respondents.

5.5.5. Multicollinearity

Multicollinearity was checked for by the method described and is reported separately in the results.

5.6. Individual Scales Confirmatory Factor Analysis (CFA)

The recursive CFA measurement model is specified to have 53 observed variables (reflexive indicators), with three latent variables (Economic Interdependency (Ec_Int), Collaborative Interdependency (Coll_Int) and Trust) being hypothesised. Two additional latent factors (Organisational Cultural Distance (OCD) and National Cultural Distance (NCD)) are hypothesised as moderators. As dictated by good practice, each construct or sub-construct has a minimum of three indicators to provide minimum coverage of the construct's theoretical domain and to provide adequate identification for the construct (Hair *et al*., 2010). The conceptual model is shown in Figure 3.7. In hypothesizing each of the measurement scales, a congeneric approach was used as recommended by Hair *et al*. (2010), whereby each observed variable is hypothesised to measure (load on) only a single construct, with all cross-loadings and between- and within-construct error covariances constrained to zero. Congeneric measurement models are considered to be sufficiently constrained to represent good measurement properties (Carmines & McIver, 1981).

5.6.1. Economic Interdependency (Ec_Int)

The CFA measurement model for this construct is specified as a second-order construct with twelve observed variables and three hypothesised latent variables (Economic Contribution (EC), Resource Dependency (RD) and Comparative Level of Alternatives (CLAlt). The item data relating to each of the sub-constructs and for the construct as a whole were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.5 (normal distribution defined by skewness = 0 and kurtosis = 0).

Table 5.5.

Assessment of normality: Economic Interdependency (Ec_Int) items

Item	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
EC1	461	6	1	7	6.25	0.909	-2.256	8.143
EC2	461	6	1	7	6.35	0.902	-2.756	11.616
EC3	461	6	1	7	5.73	1.385	-1.580	2.246
EC4	461	6	1	7	5.49	1.333	-1.255	1.345
EC5	461	6	1	7	4.45	1.610	-0.439	-0.979
RD1	461	6	1	7	6.20	1.165	-2.363	6.350
RD2	461	6	1	7	5.14	1.517	-0.871	0.013
RD3	461	6	1	7	5.87	1.262	-1.606	2.509
CLAlt1	461	6	1	7	4.67	1.696	-0.443	-0.944
CLAlt2	461	6	1	7	5.07	1.600	-0.830	0.055
CLAlt3	461	6	1	7	5.41	1.474	-1.250	1.165
CLAlt4	461	6	1	7	5.19	1.532	-1.070	0.371
Note	The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively							

The table indicates that several of the items exhibit signs of non-normality, with values for skewness and / or kurtosis >|1|. Based on the criteria set out in the method section, only EC1, EC2 and RD1 could potentially be problematic. Since the normal Maximum Likelihood (ML) is not robust enough to deal with non-normal data, Maximum Likelihood with nonparametric bootstrapping was used as the preferred estimation method, as motivated in the method section.

Multicollinearity of the items making up this scale was checked for by the method described. Most of the values were at 3 or below (no problem) with a small number between 3 and 3.8 (possible problem). Based on the rule-of thumb maximum limit of VIF > 10 and tolerance < 0.1 as set out in the methods section, it was concluded that multicollinearity was not a major problem.

Reliability of the scale was established using the method described. Both the traditional Cronbach's alpha and composite reliability (CR) values are reported in Table 5.6. A value > 0.7 suggests acceptable reliability (Hair *et al*., 2010). All three sub-scales and the combined scale meet this criterion and we can therefore conclude that they all have internal consistency, meaning that the measures all consistently represent the same latent construct.

Table 5.6.
Assessment of reliability: Economic Interdependency (Ec_Int) scale

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*	Composite Reliability (CR)
EC	Economic Contribution	5	0.733	0.719
RD	Resource Dependency	3	0.739	0.74
CLAlt	Comparison Level of Alternatives	4	0.885	0.899
	Complete Economic Interdependency (Ec_Int) scale	12	0.88	

The results of the initial CFA of the Economic Interdependency scale are shown in Figure 5.3 and the standardised loadings are presented in Table 5.7. The model was fully identified with 51 degrees of freedom (df). Error loadings were constrained to 1 and one of the paths for each sub-construct was constrained to 1 (Byrne, 2010). Item loadings are all above the 0.6 threshold (above 0.7 preferred) considered acceptable in a CFA, and are significant at the *p*

= 0.001 level, except for EC5, which shows a low loading of 0.38. It appears that the question regarding the irretrievability of the partner's investments may have been misinterpreted or the degree of irretrievability may have been difficult to assess. This is also reflected in the EC scale reliability, where the reliability of the scale minus this item improved from 0.733 to 0.735, and the overall Cronbach's alpha of the scale improved from 0.880 to 0.882. This item was therefore removed, still leaving four reflective measures for the construct - more than the minimum of three generally recommended as a necessary but not sufficient condition for construct validity - which was assessed for the overall measurement model.

All the goodness-of-fit indicators (Figure 5.3 and Table 5.9) compared to the limits set in the method section suggest a poor fit of the model to the data. The low $\chi 2$ is significant, indicating a poor fit, but with the high sample size (455) it is known that an insignificant $\chi 2$ is difficult to achieve (Hair *et al*., 2010; Brown, 2015, Byrne, 2010). The $\chi 2$ / df statistic (also affected by sample size) as well as RMSEA are both above their critical threshold, while CFI and TLI are both below their respective thresholds for good fit.

Removing EC5 as justified above, improved the fit marginally (CFI improved from 0.865 to 0.880, and TLI moved from 0.826 to 0.839).

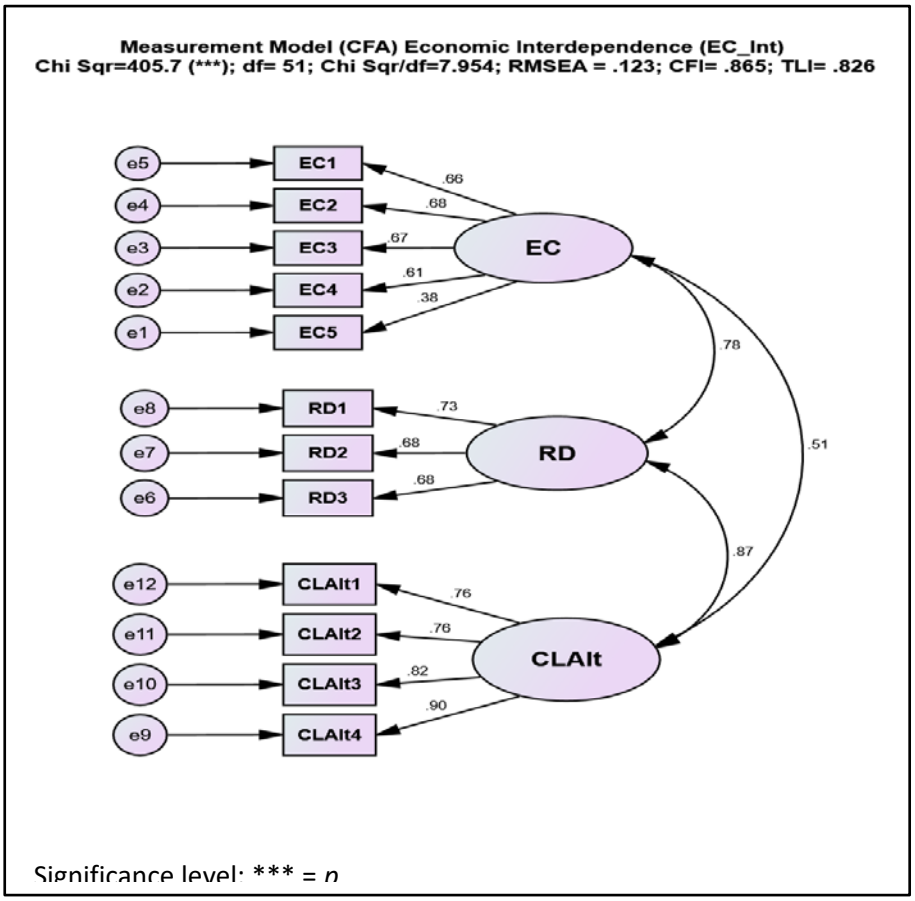


Figure 5.3. Initial measurement model CFA of the Economic Interdependency scale

Table 5.7.

Standardised factor loadings and p values: Economic Interdependency (Ec_Int) scale

Item			Standardised Regression Wt	P
EC4	<---	EC	0.687	
EC3	<---	EC	0.784	***
EC2	<---	EC	0.508	***
EC1	<---	EC	0.503	***
RD3	<---	RD	0.686	***
RD2	<---	RD	0.668	***
RD1	<---	RD	0.737	***
CLAlt4	<---	CLAlt	0.879	***
CLAlt3	<---	CLAlt	0.865	***
CLAlt2	<---	CLAlt	0.769	***
CLAlt1	<---	CLAlt	0.808	***

Note: Significance level: *** = p<0.001

Reference to the modification indices and the residuals indicated that model fit and loadings could be improved by removing redundant items. This also contributed to model parsimony. Items EC3 and EC4 were shown to be linear combinations of EC1 and EC2 respectively, and, therefore, redundant. Similarly, RD2 was shown to be a linear combination of RD1, and, therefore, redundant. All three items were removed and the fit reassessed. Although EC and RD now only have two items each, which is less than the recommended three items for scale reliability, the overall re-specified scale has seven items and shows good reliability, with a Cronbach's alpha at 0.869.

The modification indices also suggested that error terms e10 and e12 (error terms of CLAlt3 and CLAlt1 respectively) be allowed to co-vary. Theory provided support for this suggestion, since both items refer to the consequences of losing the partner and the perceived difficulty in replacing that partner.

The re-specified CFA model for Economic Interdependency is shown in Figure 5.4. The factor loadings and levels of significance are shown in Table 5.8. All loadings are above 0.7 and all are significant at the $p < 0.001$ level. The goodness-of-fit parameters for the re-specified measurement model are shown in Table 5.9. RMSEA and $\chi 2$ / df are below their respective critical thresholds, while CFI and TLI are above their threshold, indicating a very good fit of the data.

For the purposes of this research, the fit was accepted as satisfactory, although the final goodness-of-fit was reassessed in the overall measurement model.

The reliability of the re-specified scale was re-assessed and the composite reliabilities and Cronbach's alpha for the sub-constructs are shown in Table 5.8. The Cronbach's alpha for the consolidated scale is 0.869.

To assess convergent validity of the measurement model, the factor loadings were first scrutinised (Table 5.8). All the factors are above 0.7, well above the 0.5 minimum recommended (Hair *et al*., 2010), and all are statistically significant at the $p < 0.001$ level. Convergent validity could be confirmed.

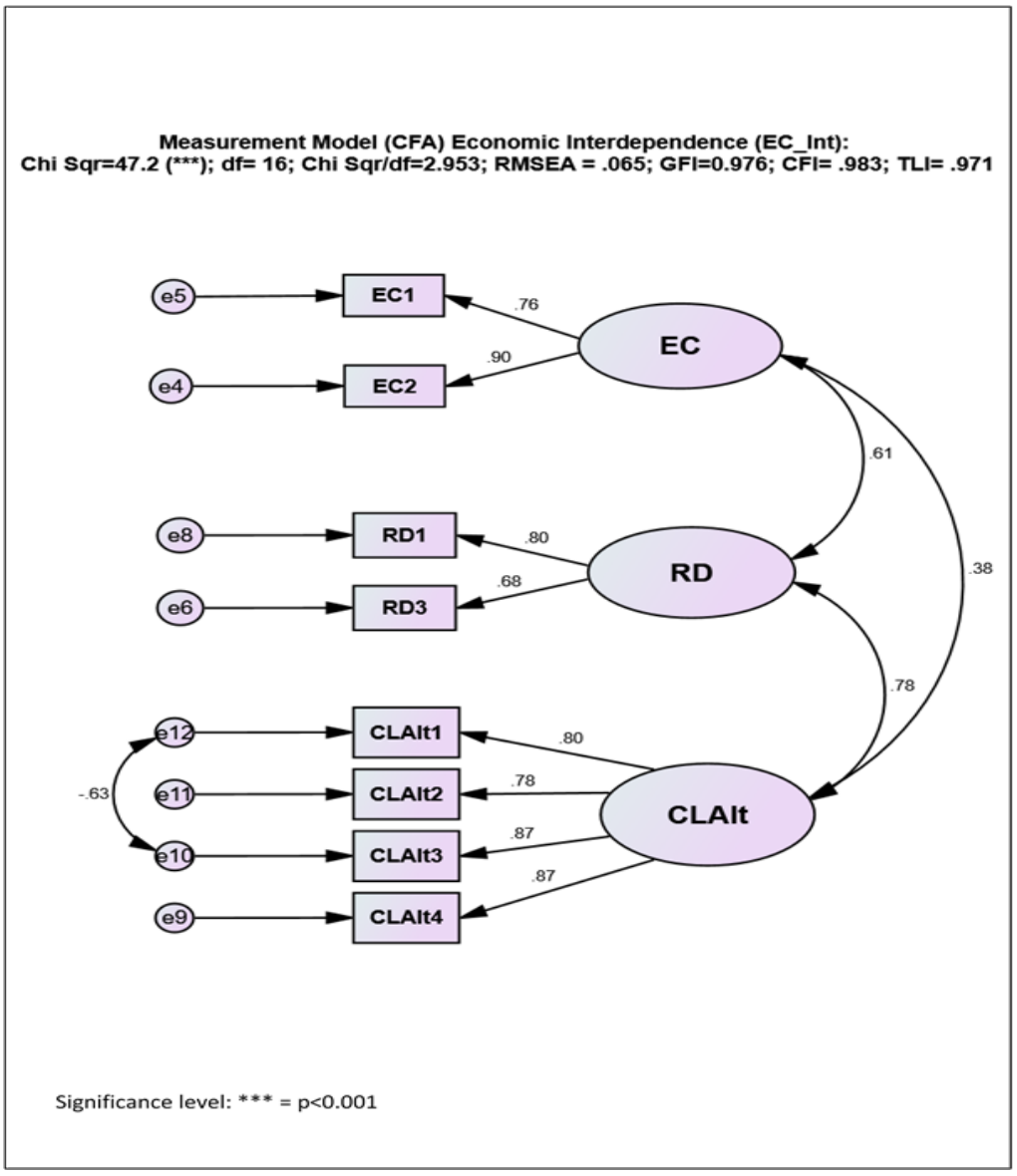


Figure 5.4. Re-specified measurement model CFA of the Economic Interdependency scale

AVE and CR values are reflected in Table 5.8, which confirm that all the criteria suggested by Hair *et al* (2010) and as set out in the method section (CR > 0.70; CR > AVE; AVE > 0.50) are satisfied. This confirms the convergent validity of the scale.

To assess discriminant validity, the method as described was used. AVE values are produced in Table 5.8, with $\sqrt{AVE}$ shown on the diagonal in bold and the corresponding correlations below the diagonal. Values for maximum shared variance (MSV) are also shown. The test for discriminant validity shows that EC and CLAlt exhibit satisfactory discriminant validity, but that there is a slight problem with RD, where the square root of the AVE is marginally less than its correlation with CLAlt and the MSV is marginally higher than the AVE. However, as described in the Method section, since the RD sub-construct is part of a second-order construct, namely Economic Interdependency, absolute discriminant validity at the first-order level is not of paramount importance, provided that discriminant validity can be demonstrated for the second-order construct (Yale *et al*., 2015). This was later confirmed in the overall combined measurement model, where all the constructs are combined, and excellent discriminant validity between the second-order constructs was demonstrated.

The conclusion is that the Economic Interdependency measurement model is satisfactory for research purposes, exhibiting acceptable reliability, goodness-of-fit and construct validity (in particular convergent validity).

Table 5.8.

Standardised factor loadings, p values and construct validity: Economic Interdependency (Ec_Int) scale

Construct	Construct Label	p-value		Composite reliability CR	Cronbach's alpha	AVE	MSV	EC	RD	CLAlt
EC	**Economic Interdependency**			0.816	0.81	0.691	0.361	**0.831**		
EC1		0.75	***							
EC2		0.91	***							
RD	**Resource Dependency**			0.711	0.706	0.553	0.593	0.601	**0.743**	
RD1		0.8	***							
RD3		0.68	***							
CLALT	**Comparison Level of Alternatives**			0.898	0.883	0.688	0.593	0.383	0.77	**0.829**
CLAlt1		0.8	***							
CLAlt2		0.76	***							
CLAlt3		0.88	***							
CLAlt4		0.87	***							

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

Table 5.9.

Goodness-of-fit indices: Economic Interdependency (Ec_Int) scale

Fit Index		Initial Model		Respecified Model	
Absolute:	χ^2	405.7	***	47.2	***
	df	51		16	
	χ^2 / df	7.954		2.953	
	RMSEA	0.123		0.065	
	GFI	0.869		0.976	
Incremental	CFI	0.865		0.983	
	TLI	0.826		0.971	

Note: Significance level: *** = p<0.001

5.6.2. Collaborative Interdependency (Coll_Int)

The CFA measurement model for this construct is specified as a second-order construct with fourteen observed variables and 3 hypothesised latent variables, Communication (Com), Joint Action (JA) and Satisfaction with the Relationship (SatR). The item data relating to each of the sub-constructs and for the construct as a whole were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.10 (normal distribution defined by skewness = 0 and kurtosis = 0).

Table 5.10.

Assessment of normality: Collaborative Interdependency (Coll_Int) items

Item	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Com1	461	6	1	7	5.57	1.337	-1.495	1.995
Com2	461	6	1	7	5.65	1.160	-1.421	2.448
Com3	461	6	1	7	4.93	1.515	-0.659	-0.462
Com4	461	6	1	7	5.39	1.377	-1.324	1.272
Com5	461	6	1	7	4.61	1.637	-0.399	-1.003
Com6	461	6	1	7	4.89	1.452	-0.700	-0.356
JA1	461	6	1	7	5.53	1.368	-1.291	1.316
JA2	461	6	1	7	5.41	1.204	-1.312	1.917
JA3	461	6	1	7	6.01	0.955	-1.753	5.195
JA4	461	6	1	7	5.20	1.345	-0.844	0.178
SatR1	461	6	1	7	5.10	1.514	-1.066	0.386
SatR2	461	6	1	7	5.02	1.321	-0.823	0.301
SatR3	461	6	1	7	4.41	1.620	-0.353	-0.988
SatR4	461	6	1	7	6.24	0.840	-1.939	7.825

Note: The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively

The table indicates that several of the items exhibit signs of non-normality, with values for skewness and / or kurtosis >|1|. Based on the criteria defined in the method section, only SatR4 (kurtosis) is likely to be problematic. Maximum Likelihood estimation with nonparametric bootstrapping was selected in the CFA analysis.

Multicollinearity of the items making up this scale were checked for by the method described. Most of the values were at 3 or below (no problem), with a small number between 3 and 4.9 (possible problem). It was concluded that multicollinearity was not a major problem in the scale.

Reliability of the scale was established using the method described. Both the traditional Cronbach's alpha and composite reliability (CR) values are reported in Table 5.11. All values are above the 0.7 threshold (Hair *et al*., 2010), and we can therefore conclude that they all have internal consistency, meaning that the measures all consistently represent the same latent construct.

Table 5.11.

Assessment of reliability: Collaborative Interdependency (Coll_Int) scale

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*	Composite Reliability (CR)
Com	Communication	6	0.909	0.895
JA	Joint Action	4	0.824	0.812
SatR	Satisfaction with Relationship	4	0.85	0.853
	Complete Collaborative Interdependency (Coll_Int) scale	14	0.947	

The results of the initial CFA of the hypothesised Collaborative Interdependency scale are shown in Figure 5.5. The model was fully identified with 74 degrees of freedom (df). Error loadings were constrained to 1 and one of the paths for each sub-construct was constrained to 1 (Byrne, 2010). Item loadings are all above the 0.6 threshold considered acceptable in a CFA and are significant at the $p < 0.001$ level. All the goodness-of-fit indicators (Figure 5.5 and Table 5.12) suggest a poor fit of the model to the data. The low $\chi 2$ is significant indicating a poor fit but is expected due to the high sample numbers which make it difficult to get an insignificant $\chi 2$. The $\chi 2$ / df statistic as well as RMSEA are above their critical threshold of 5 and 0.085 respectively, while CFI and TLI are all below the threshold of 0.90 for good fit.

Reference to the modification indices and the residuals indicated that model fit and loadings could be improved by removing redundant items. This also contributed to model parsimony. Item Com4 was shown to be a linear combination of item Com1, and was therefore considered redundant and removed, still leaving five items in the sub-scale. Similarly, SatR1 and Satr4 were shown to be linear combinations of SatR2 and Satr3, while Satr4 also had a loading < 0.7. The two items were considered redundant and were removed. Although this left only 2 items in the SatR sub-scale, less than the recommended three items for scale reliability, the overall re-specified scale has eleven items and shows good reliability, with a Cronbach's alpha of 0.931.

The modification indices also suggested that Com1 and Com5 error terms and Com5 and Com6 error terms should be allowed to co-vary. Similarly, the error terms between JA1 and JA3. Theory provided support for these suggestions as indicated in Table 5.12.

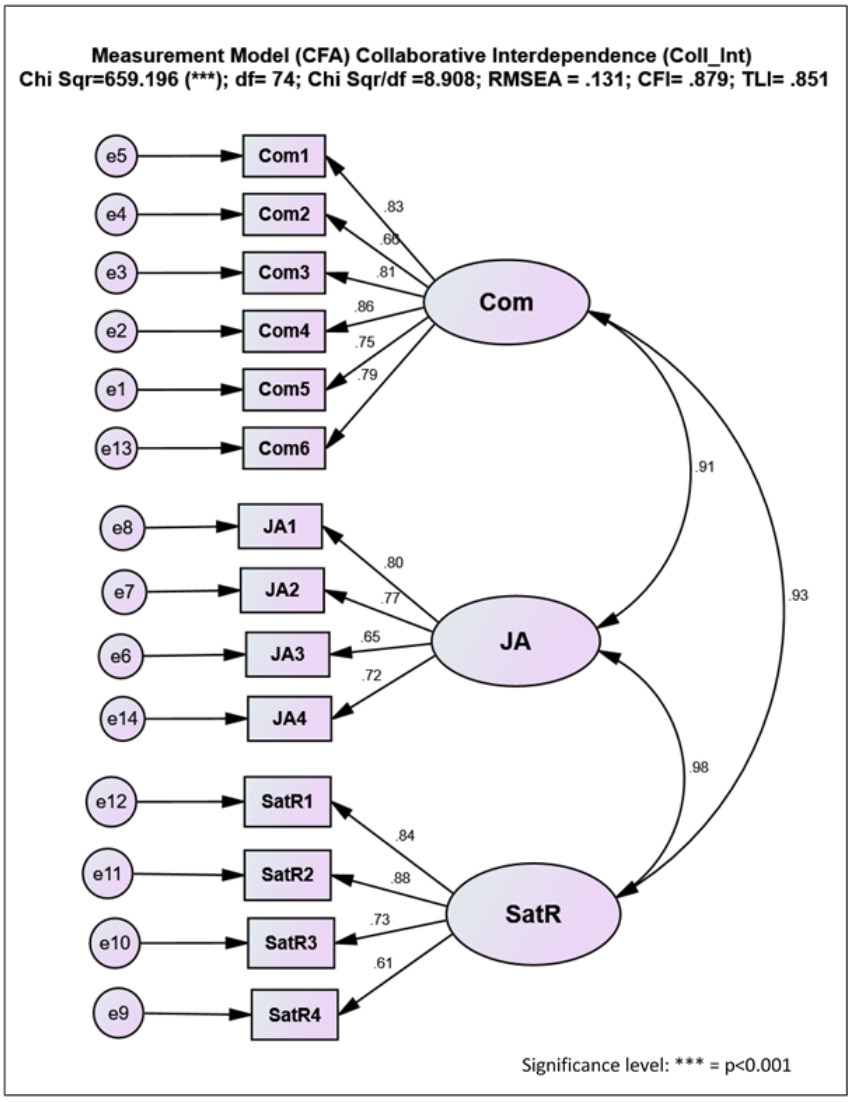


Figure 5.5. Initial measurement model CFA of the Collaborative Interdependency scale

The re-specified CFA model for the hypothesised Collaborative Interdependency measurement scale is shown in Figure 5.6. The factor loadings and levels of significance are shown in Table 5.13. All loadings, except one (Com2 β-value = 0.68), are above 0.7 and all are significant at the $p < 0.001$ level.

The goodness-of-fit parameters for the re-specified measurement model are shown in Table 5.14. RMSEA and $\chi 2$ / df are below their respective critical thresholds, while CFI and TLI, are above their threshold, indicating a very good fit of the data.

For the purposes of this research, the fit was accepted as satisfactory, although the final goodness-of-fit was reassessed in the overall measurement model.

Table 5.12.
Substantive theory for model changes: Collaborative Interdependency (Coll_Int)

Error Covariance	Main Construct	Sub Construct	Theoretical Justification of Change
Com1 & Com5	Collaborative Interdependency	Communication	• Com1 deals with open and honest communication Com5 deals with reviewing and providing regular feedback Conclusion: the two items are theoretically related
Com5 & Com6	Collaborative Interdependency	Communication	• Com6 deals with frequent exchange of information - related to Com5 (reviewing & providing regular feedback) Conclusion: the two items are theoretically related
JA3 & JA1	Collaborative Interdependency	Joint Action	• JA1 refers to partners working closely together JA3 refers to co-operation and collaboration between the partners Conclusion: the two items are theoretically related

The reliability of the re-specified scale was re-assessed and the composite reliabilities and Cronbach's alpha for the sub-constructs are shown in Table 5.13. The Cronbach's alpha for the consolidated scale is 0.931.

To assess convergent validity of the measurement model, the factor loadings were first scrutinised (Fig 5.6). All the factor loadings are above 0.6, which is above the recommended threshold of 0.5, with several above 0.7 and 0.8. All are statistically significant at the $p < 0.001$ level. Referring to Table 5.13, all CR's are above the minimum threshold of 0.7 and average variance extracted (AVE) in all cases are above the recommended minimum threshold of 0.50 (Hair *et al*., 2010).

In accordance with the same recommendations, all CRs are above the corresponding AVE values. The AVE value for the whole scale is also above the minimum threshold of 0.5. It was therefore concluded that the Collaborative Interdependency scale exhibited satisfactory convergent validity.

To assess discriminant validity the method as described was used. AVE values are produced in Table 5.13, with $\sqrt{AVE}$ shown in bold on the diagonal and the corresponding correlations below the diagonal. The test for discriminant validity shows that all three subconstructs exhibit slightly poor discriminant validity. However, as described in the method section, since these

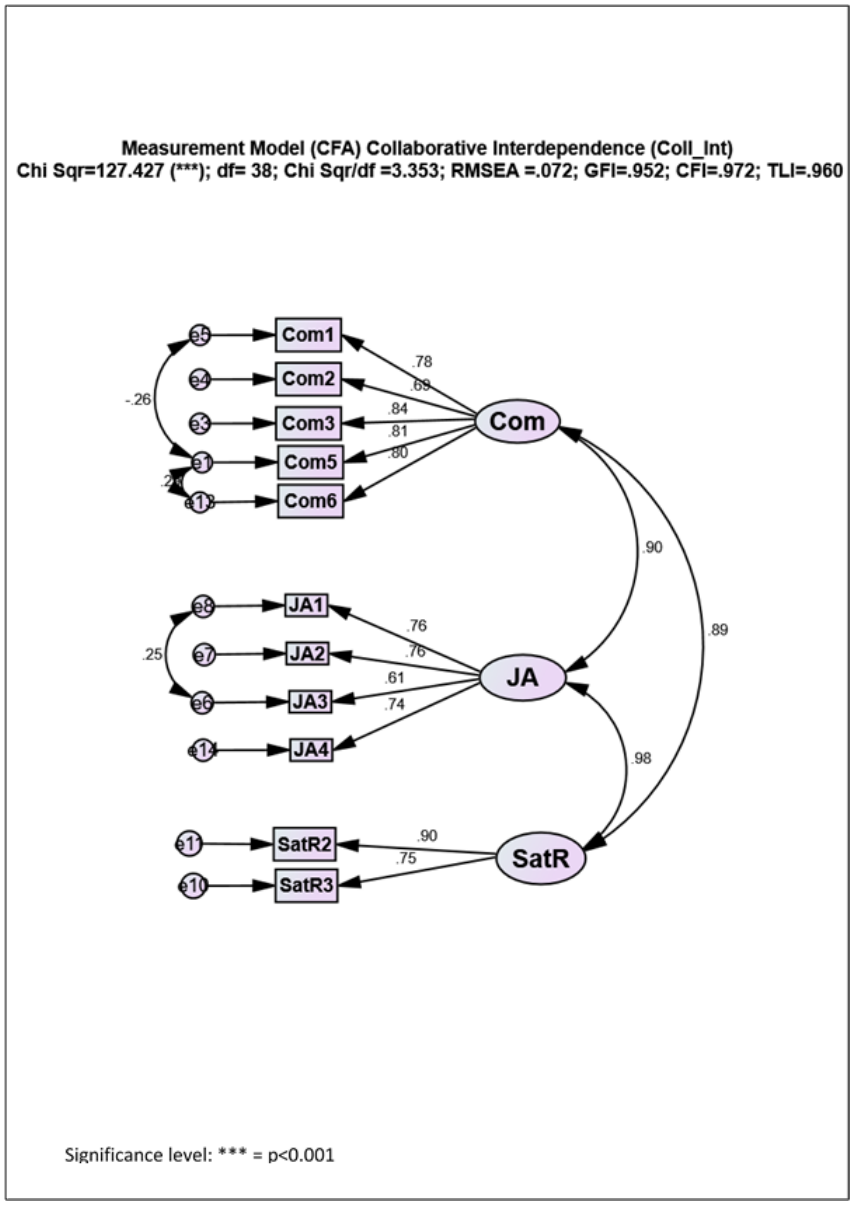


Figure 5.6. Re-specified measurement model CFA of the Collaborative Interdependency scale

Table 5.13.

Standardised factor loadings, p values and construct validity: Collaborative Interdependency (Coll_Int) scale)

Construct	Construct Label	p-value		Composite reliability CR	Cronbach's alpha	AVE	MSV	Com	JA	SatR
Com	**Communication**			0.889	0.887	0.616	0.823	**0.785**		
Com1		0.79	***							
Com2		0.68	***							
Com3		0.84	***							
Com5		0.81	***							
Com6		0.8	***							
JA	**Joint Action**			0.810	0.818	0.518	0.957	0.907	**0.72**	
JA1		0.76	***							
JA2		0.76	***							
JA3		0.61	***							
JA4		0.74	***							
SatR	**Satisfaction with Relationship**			0.817	0.798	0.692	0.957	0.978	0.888	**0.832**
SatR2		0.91	***							
SatR3		0.75	***							

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

Table 5.14.

Goodness-of-fit indices: Collaborative Interdependency (Coll_Int) scale

Fit Index		Initial Model		Respecified Model	
Absolute:	χ^2	659.196	***	127.427	***
	df	74		38	
	χ^2 / df	8.908		3.353	
	RMSEA	0.131		0.072	
	GFI	0.862		0.952	
Incremental	CFI	0.879		0.972	
	TLI	0.851		0.960	

Note: Significance level: *** = p<0.001

first-order sub-constructs are all part of a second-order construct, namely Collaborative Interdependency, absolute discriminant validity at the first-order level is not of paramount importance, provided that discriminant validity can be demonstrated for the second-order construct (Yale *et al*., 2015). This was later confirmed in the overall combined measurement model where all the constructs are combined, and excellent discriminant validity between the second-order constructs was demonstrated.

The conclusion is that the Collaborative Interdependency measurement model is satisfactory for research purposes, exhibiting acceptable reliability, goodness-of-fit and construct validity (in particular convergent validity).

5.6.3. Trust (Tr)

The CFA measurement model for this construct is specified as a second-order construct with 27 observed variables and five hypothesised latent variables, namely Dependability (Dep), Predictability (Pred), Competence (Comp), Benevolence (Ben) and Trustworthiness (Trw). The item data relating to each of the sub-constructs and for the construct as a whole were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.15 (normal distribution defined by skewness = 0 and kurtosis = 0).

Table 5.15 indicates that several of the items exhibit some signs of non-normality, with values for skewness and / or kurtosis >|1|. However, based on the criteria set out in the method section, none of the items appear to be problematic. Maximum Likelihood estimation with no bootstrapping was therefore deemed appropriate for the CFA analysis.

Multicollinearity of the items making up this scale were checked for by the method described. Most of the values were at 3 or below (no problem), with a number between 4 and 5 (possible problem), and a small number between 5 and 6.4 (likely problem). It was concluded that multicollinearity was not a major problem for the scale as a whole, but the issue needed to be monitored.

Reliability of the scale was established using the method described. Both the traditional Cronbach's alpha and composite reliability (CR) values are reported in Table 5.16. All values are above 0.90 and well above the 0.7 threshold (Hair *et al*., 2010). It was therefore concluded that all the subscales as well as the overall scale exhibited very good internal consistency, i.e., the measures all consistently represent their individual posited latent constructs.

The results of the initial CFA of the hypothesised Trust scale are shown in Figure 5.7. The model was fully identified with 314 degrees of freedom (df). Error loadings were constrained to 1 and one of the paths for each sub-construct was constrained to 1 (Byrne, 2010). Item loadings are all above the 0.6 threshold considered acceptable in a CFA and are significant at the $p < 0.001$ level, except for Pred6 (β-value = 0.57, $p < 0.001$). In the interests of model parsimony, this item was dropped from the scale, still leaving five items to measure this sub-scale.

All the goodness-of-fit indicators (Figure 5.7) suggest a poor fit of the model to the data. The low $\chi 2$ is significant indicating a poor fit but is expected due to the high sample numbers which make it difficult to get an insignificant $\chi 2$. The $\chi 2$ / df statistic as well as RMSEA are slightly above their critical values of 5 and 0.085 respectively, while CFI and TLI are all below the 0.90 threshold for good fit.

Table 5.15.

Assessment of normality: Trust (Tr) items

Item	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Dep1	461	6	1	7	5.24	1.501	-1.058	0.278
Dep2	461	6	1	7	5.04	1.546	-0.857	-0.341
Dep3	461	6	1	7	5.16	1.341	-1.030	0.571
Dep4	461	6	1	7	4.49	1.435	-0.362	-0.642
Dep5	461	6	1	7	4.91	1.397	-0.936	0.078
Dep6	461	6	1	7	4.84	1.323	-1.024	0.408
Pred1	461	6	1	7	4.84	1.360	-0.958	0.069
Pred2	461	6	1	7	4.82	1.383	-0.902	-0.011
Pred3	461	6	1	7	5.27	1.442	-1.042	0.482
Pred4	461	6	1	7	4.44	1.509	-0.486	-0.836
Pred5	461	9	1	10	5.27	1.169	-1.278	2.188
Pred6	461	6	1	7	4.61	1.336	-0.663	-0.297
Comp1	461	6	1	7	5.59	1.476	-1.369	1.255
Comp2	461	6	1	7	5.24	1.573	-0.961	0.082
Comp3	461	6	1	7	5.81	1.373	-1.606	2.325
Comp4	461	6	1	7	5.54	1.281	-1.444	2.095
Comp5	461	6	1	7	5.34	1.590	-1.081	0.243
Comp6	461	6	1	7	5.76	1.385	-1.605	2.334
Ben1	461	6	1	7	4.56	1.414	-0.620	-0.469
Ben2	461	6	1	7	5.11	1.282	-1.095	0.824
Ben3	461	6	1	7	5.45	1.115	-1.643	2.848
Ben4	461	6	1	7	5.21	1.271	-1.055	0.602
Ben5	461	6	1	7	4.94	1.314	-0.921	0.211
Ben6	461	2	1	3	2.17	0.552	0.060	-0.051
Ben7	461	6	1	7	4.91	1.352	-1.009	0.528
Trw1	461	6	1	7	5.43	1.439	-1.080	0.505
Trw2	461	6	1	7	5.44	1.438	-1.366	1.424

Note The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively

Table 5.16.

Assessment of reliability: Trust (Tr) scale

Construct	**Construct Label**	**Number of Items**	**Cronbach's alpha** ***(standardised items)***	**Composite Reliability (CR)**
Dep	Dependability	6	0.926	0.92
Pred	Predictability	6	0.902	0.903
Comp	Competence	6	0.94	0.905
Ben	Benevolence	7	0.945	0.942
Trw	Trustworthiness	2	0.904	0.942
	Complete Trust (Tr) scale	27	0.979	

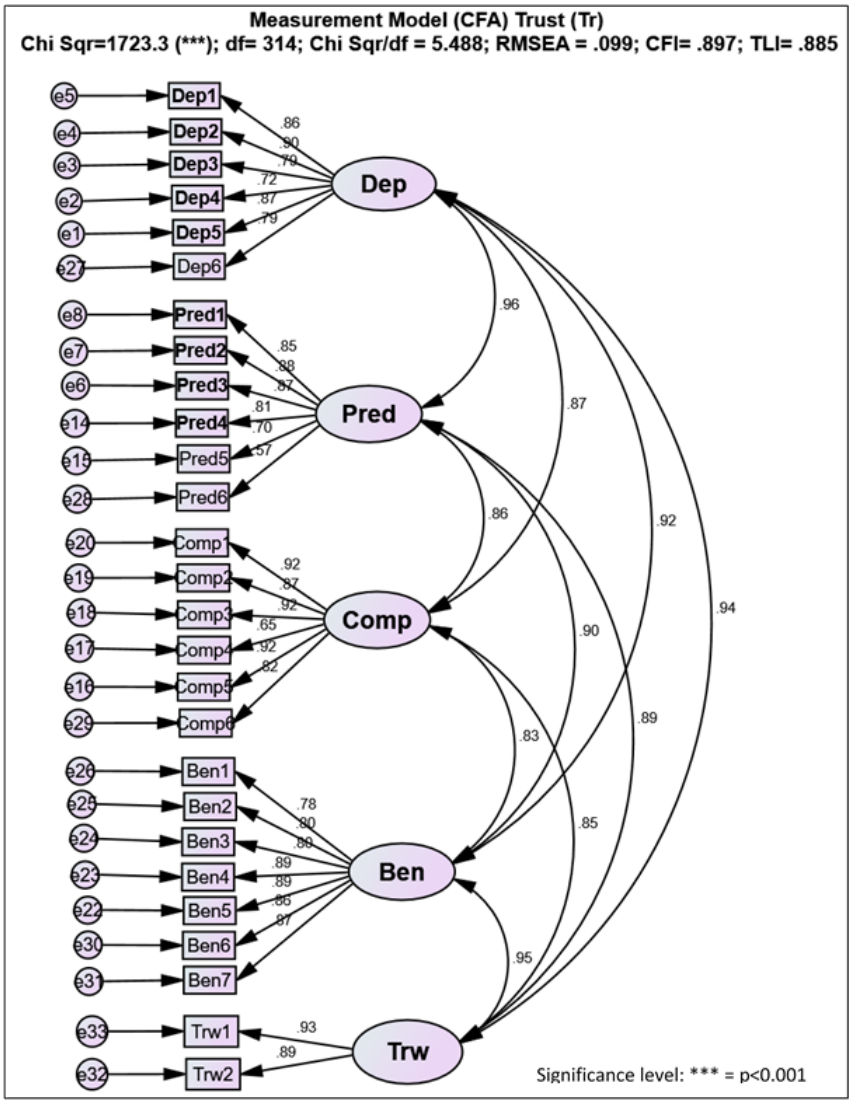


Figure 5.7. Initial measurement model CFA of the Trust scale

Reference to the modification indices and the residuals indicated that model fit and loadings could be improved by removing redundant items. This also contributed to model parsimony. Item Pred3 was shown to be a linear combination of the other items of this sub-scale and was, therefore, considered redundant and dropped from the scale. Similarly, Ben3 and Ben6 were shown to be linear combinations of the other items of this sub-scale, and were, therefore, considered redundant and dropped from the scale. In each case a sufficient number of indicators were left so as not to impact negatively on construct reliability or validity.

The modification indices also suggested that certain error terms be allowed to covary: error terms relating to Dep1 and Dep2, to Dep5 and Dep6, and to Pred1 and Pred2. Theory provided support for these suggestions as indicated in Table 5.17.

The re-specified CFA model for the hypothesised Trust measurement scale is shown in Figure 5.8. The factor loadings and levels of significance are shown in Table 5.18. All factor loadings,

except two (Comp4 β = 0.64 and Comp6 β = 0.62), are above 0.7, and all are significant at the $p < 0.001$ level.

Table 5.17.
Substantive theory for model changes: Trust (Tr)

Error Covariance	Main Construct	Sub Construct	Theoretical Justification of Change
Dep1 & Dep2	Trust	Dependability	• Dep2 deals with confidence in promises to do something while Dep1 assesses whether partner stands by his/her word Conclusion: the two items are theoretically related
Dep5 & Dep6	Trust	Dependability	• Dep6 relates to adjustments in the relationship to cater for changed circumstances, which relates to Dep5 (conflict resolution through compromise). Conclusion: the two items are theoretically related
Pred1 & Pred2	Trust	Predictability	• Pred1 assesses consistency in partner's behaviour, while Pred2 assesses partner's propensity to act as we expect, Conclusion: the two items are theoretically related

The goodness-of-fit parameters for the re-specified measurement model are shown in Table 5.19. RMSEA and $\chi 2$ / df are below their respective critical thresholds, while CFI and TLI, are above their respective thresholds, indicating a very good fit of the data.

For the purposes of this research, the fit was accepted as satisfactory, although the final goodness-of-fit was reassessed in the overall measurement model.

To assess convergent validity of the measurement model, the factor loadings were first scrutinised (Table 5.18). All the factor loadings are above 0.6, which is above the recommended threshold of 0.5, with several above 0.70, 0.8 and 0.9. All are statistically significant at the $p < 0.001$ level. Referring to Table 5.18, all CR's are well above the minimum threshold of 0.7 and average variance extracted (AVE) in all cases are above the recommended minimum threshold of 0.50 (Hair *et al*., 2010). In accordance with the same recommendations, all CRs are above the corresponding AVE values. The AVE value for the whole scale is also above the minimum threshold of 0.5. It was therefore concluded that the Trust scale exhibited satisfactory convergent validity.

To assess discriminant validity, the method as described was used. AVE values are produced in Table 5.18, with $\sqrt{AVE}$ shown on the diagonal in bold and the corresponding correlations below the diagonal. The test for discriminant validity shows that all five subconstructs exhibit

slightly poor discriminant validity. However, as described in the method section, since these sub-constructs are all part of a second-order construct, namely Trust, absolute discriminant validity at the first-order level is not of paramount importance, provided that discriminant validity can be demonstrated for the second-order construct (Yale *et al*., 2015). This was later confirmed in the overall combined measurement model where all the constructs are combined, and excellent discriminant validity between the second-order constructs was demonstrated.

The conclusion was that the Trust measurement model is satisfactory for research purposes, exhibiting acceptable reliability, goodness-of-fit and construct validity (in particular, convergent validity).

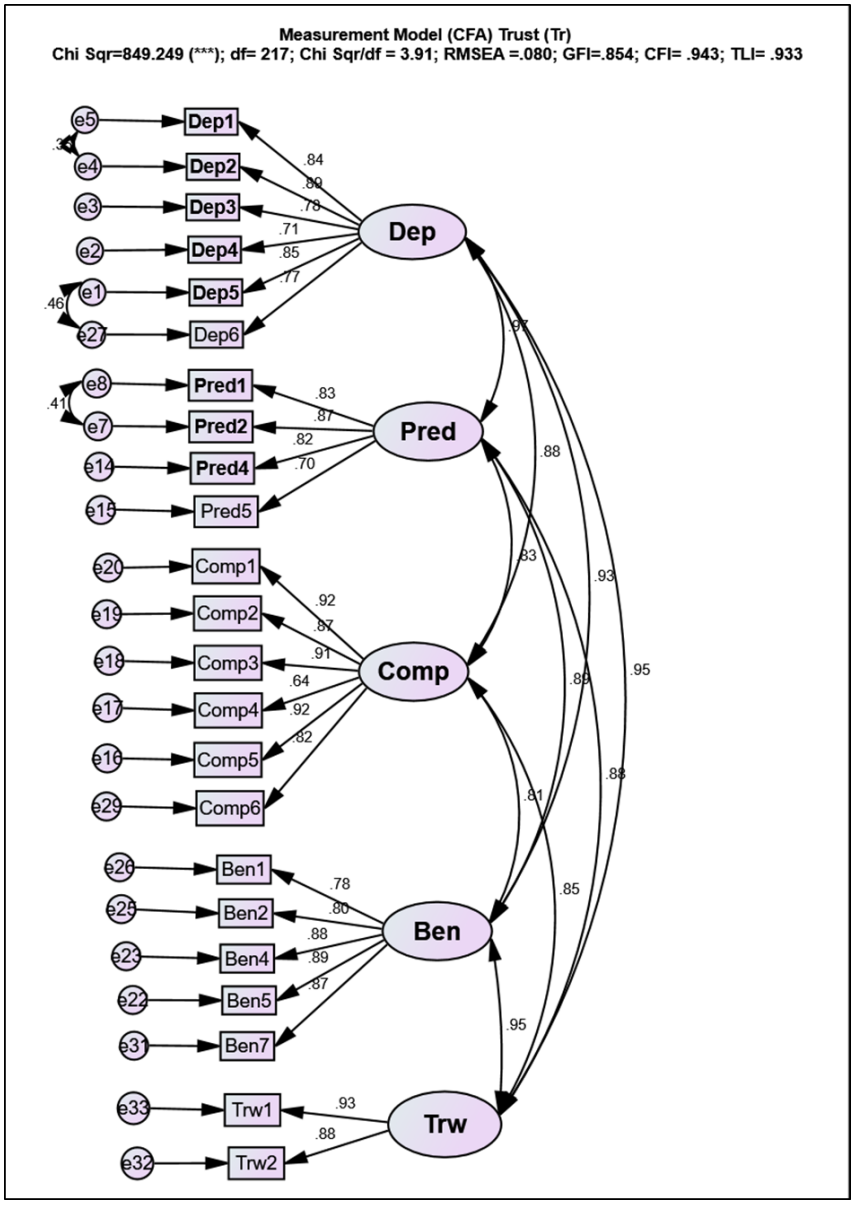


Figure 5.8. Re-specified measurement model CFA of the Trust scale

Table 5.18.

Standardised factor loadings, p values and construct validity: Trust (Tr) scale

Construct	Construct Label	p-value		Composite reliability CR	Cronbach's alpha	AVE	MSV	Trw	Pred	Dep	Comp	Ben
Trw	**Trustworthiness**			0.906	0.903	0.829	0.901	**0.910**				
Trw1		0.93	***									
Trw2		0.88	***									
Pred	**Predictability**			0.883	0.889	0.656	0.947	0.877	**0.810**			
Pred1		0.83	***									
Pred2		0.87	***									
Pred4		0.82	***									
Pred5		0.70	***									
Dep	**Dependability**			0.921	0.923	0.66	0.947	0.949	0.973	**0.813**		
Dep1		0.84	***									
Dep2		0.89	***									
Dep3		0.78	***									
Dep4		0.71	***									
Dep5		0.85	***									
Dep6		0.77	***									
Comp	**Competence**			0.941	0.938	0.728	0.773	0.852	0.832	0.879	**0.853**	
Comp1		0.92	***									
Comp2		0.87	***									
Comp3		0.91	***									
Comp4		0.64	***									
Comp5		0.92	***									
Comp6		0.62	***									
Ben	**Benevolence**			0.927	0.926	0.719	0.899	0.948	0.89	0.936	0.814	**0.848**
Ben1		0.78	***									
Ben2		0.8	***									
Ben4		0.88	***									
Ben5		0.89	***									
Ben7		0.87	***									

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

Table 5.19.

Goodness-of-fit indices: Trust (Tr) scale

Fit Index		Initial Model		Respecified Model	
Absolute:	χ^2	1723.3	***	849.249	***
	df	314		217	
	χ^2 / df	5.488		3.914	
	RMSEA	0.099		0.080	
	GFI	0.807		0.854	
Incremental	CFI	0.897		0.943	
	TLI	0.885		0.933	

Note: Significance level: *** = p<0.001

5.6.4. National Cultural Distance (NCD)

The National Cultural Distance scale is hypothesised in terms of the five well-known cultural dimensions put forward by Hofstede (1980), representing constructs used widely in academic research (Solberg, 2008): Individualism (Ind), Power Distance (PD), Uncertainty Avoidance (UA), Masculinity / Femininity (MF) and Long-Term Orientation (LTO). The CFA measurement model is specified as a second-order construct with 25 observed variables and the five latent variables already mentioned. The item data relating to each of the sub-constructs and for the construct as a whole were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.20 (normal distribution defined by skewness = 0 and kurtosis = 0).

Table 5.20 indicates that only a small number of items exhibit slight signs of non-normality, with values for skewness and / or kurtosis >|1|. However, based on the criteria in the Method section, none of the items appear to be problematic. Maximum Likelihood estimation with no bootstrapping was therefore deemed appropriate for the CFA analysis.

Table 5.20.

Assessment of normality: National Cultural Distance (NCD) items

Item	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Ind1	461	6	1	7	4.44	1.733	-0.270	-1.186
Ind2	461	6	1	7	5.28	1.542	-0.973	0.096
Ind3	461	6	1	7	3.82	1.976	0.265	-1.318
Ind4	461	6	1	7	4.30	1.853	-0.177	-1.405
Ind5	461	6	1	7	4.27	1.708	-0.171	-1.178
PD1	461	6	1	7	4.33	1.621	-0.090	-1.197
PD2	461	6	1	7	4.26	1.670	-0.133	-1.173
PD3	461	6	1	7	4.89	1.733	-0.724	-0.731
PD4	461	6	1	7	4.10	1.628	0.076	-1.143
PD5	461	6	1	7	4.74	1.438	-0.394	-0.565
UA1	461	6	1	7	3.48	1.841	0.594	-0.988
UA2	461	6	1	7	4.73	1.618	-0.570	-0.776
UA3	461	6	1	7	3.39	1.888	0.642	-0.921
UA4	461	6	1	7	4.61	1.512	-0.520	-0.800
UA5	461	6	1	7	4.80	1.667	-0.507	-0.748
MF1	461	6	1	7	4.18	1.693	-0.012	-1.229
MF2	461	6	1	7	5.27	1.721	-1.029	-0.087
MF3	461	6	1	7	5.14	1.572	-0.932	0.013
MF4	461	6	1	7	4.09	1.809	0.139	-1.298
MF5	461	6	1	7	2.93	1.670	0.857	-0.377
LTO1	461	6	1	7	2.77	1.401	1.325	1.208
LTO2	461	6	1	7	3.08	1.558	0.925	-0.075
LTO3	461	6	1	7	4.29	1.666	-0.270	-1.068
LTO4	461	6	1	7	5.17	1.581	-1.050	0.183
LTO5	461	6	1	7	4.41	1.734	-0.289	-1.207

Note The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively

Multicollinearity of the items making up this scale was checked for by the method described. All the values were at or below 3, indicating minimal collinearity. It was concluded that multicollinearity was not a problem for the scale as a whole.

Reliability of the scale was established, and both Cronbach's alpha and composite reliability (CR) values are reported in Table 5.21. All values are above the 0.7 threshold for acceptable scale reliability (Hair *et al*., 2010). The overall scale had a Cronbach's alpha of 0.942. It was therefore concluded that all the subscales as well as the overall scale exhibited satisfactory internal consistency, i.e., the measures all consistently represent their individual posited latent constructs.

Table 5.21.

Assessment of reliability: National Cultural Distance (NCD) scale

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*	Composite Reliability (CR)
Ind	Individualism	5	0.805	0.805
PD	Power Distance	5	0.835	0.856
UA	Uncertainty Avoidance	5	0.767	0.812
MF	Masculinity / Femininity	5	0.777	0.832
LTO	Long Term Orientation	5	0.78	0.809
	Complete National Cultural Distance (NCD) scale	25	0.942	

The results of the initial CFA of the hypothesised National Cultural Distance (NCD) scale are shown in Figure 5.9. The model was fully identified with 265 degrees of freedom (df). Error loadings were constrained to 1 and one of the paths for each sub-construct was constrained to 1 (Byrne, 2010). The following item loadings are below the minimum 0.6 threshold considered acceptable in a CFA: Ind3, PD5, UA5, MF5 and LTO1. The substantive theory to drop these items from the model is presented in Table 5.22. All the remaining items exhibit loadings above or close to 0.60 and are significant at the $p < 0.001$ level.

All the goodness-of-fit indicators (Figure 5.9) suggest a poor fit of the model to the data. The low $\chi 2$ is significant indicating a poor fit, but is expected due to the high sample numbers, which make it difficult to get an insignificant $\chi 2$. The $\chi 2$ / df statistic as well as RMSEA are above their critical values of 5 and 0.085 respectively, while CFI and TLI are all below the 0.90 threshold for good fit.

Reference to the modification indices and the residuals indicated that model fit and loadings could be improved by removing redundant items. This also contributed to model parsimony. Item Ind2 was shown to be a linear combination of Ind1, and was, therefore, considered redundant and dropped from the scale. Similarly, PD3 was shown to be a linear combination of other items in the sub-scale, and was also considered redundant and dropped from the scale. In each case, a sufficient number of indicators were left so as not to impact negatively on construct reliability or validity. Items UA1, UA3, MF2, MF4, LTO2 and LTO4 were problematic and were shown to be linear combinations of other items in their particular sub-scales. They were, therefore, considered redundant and dropped from the scale, leaving only two items per sub-scale. While this is below the minimum of three as a necessary but not sufficient requirement for a reliable scale, the overall scale contained twelve measurement items and with a Cronbach's alpha of 0.924.

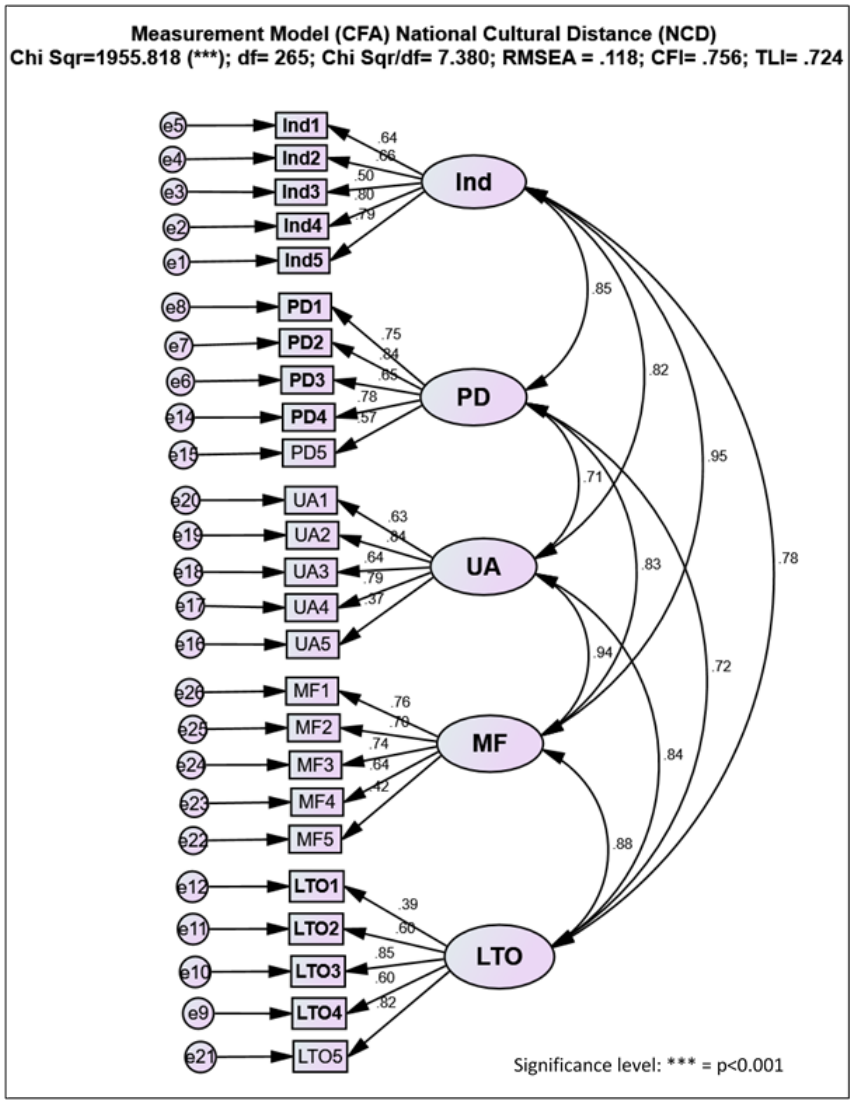


Figure 5.9. Initial measurement model CFA of the National Cultural Distance (NCD) scale

The re-specified CFA model for the hypothesised National Cultural Distance measurement scale with the above items removed is shown in Figure 5.10. The factor loadings and levels of significance are shown in Table 5.23. All factor loadings, except one (Ind1 β = 0.62), are above 0.7, and all are significant at the $p < 0.001$ level.

Table 5.22.

Substantive theory for dropping low loading items from the measurement model: National Cultural Distance (NCD)

Item	Sub Construct	Item Loading (Standardised)	Parameter Description	Theoretical Justification for Dropping Item
Ind3	Individualism	0.5	Employment of family members in senior positions	• Loading < 0.6 • Question may have aroused sensitivities and respondents avoided answering honestly • 4 reflective measures left > 3 minimum recommended as a necessary but not sufficient condition for construct reliabilty and validity.
PD5	Power-Distance	0.58	Disagreements between non-managerial eployees and management	• Loading < 0.6 • Question may have aroused sensitivities and respondents avoided answering honestly • 3 reflective measures left = 3 minimum recommended as a necessary but not sufficient condition for construct reliabilty and validity.
UA5	Uncertainty Avoidance	0.37	Breaking of organisational rules if employee deems it to be in the organisational interest	• Respondents appeared to have difficulty assessing or relating to the question. May have evoked sensitivities and respondents avoided answering question honestly • 4 reflective measures left > 3 minimum recommended as a necessary but not sufficient condition for construct reliabilty and validity.
MF5	Masculinity/ Femininity	0.42	Men and women have equal opportunity to pro-gress to senior management	• May have been a sensitive question in certain male dominated cultures in Africa or in male dominated industries e.g. mining • 4 reflective measures left > 3 minimum recommended as a necessary but not sufficient condition for construct reliabilty and validity.
LTO1	Long-Term Orientation	0.39	Use of long term contracts and agreements in business	• Not clear why this item had a low loading. • 4 reflective measures left > 3 minimum recommended as a necessary but not sufficient condition for construct reliabilty and validity.

The goodness-of-fit parameters for the re-specified measurement model are shown in Table 5.24. RMSEA and $\chi 2$ / df are below their respective critical thresholds of 0.085 and 5 respectively, while CFI and TLI, are above their threshold of 0.90, indicating a very good fit of the data.

For the purposes of this research, the fit was accepted as satisfactory, although the final goodness-of-fit was reassessed in the overall measurement model.

To assess convergent validity of the measurement model, the factor loadings were first scrutinised (Table 5.23). All the factor loadings are above the recommended minimum threshold of 0.5, with several above 0.7 and 0.8. All are statistically significant at the $p < 0.001$ level. Referring to Table 5.23, all CR's are above 0.7, considered to be the minimum threshold, and average variance extracted (AVE) in all cases are above the recommended minimum threshold of 0.5 (Hair *et al*., 2010). In accordance with the same recommendations, all CRs are above the corresponding AVE values. The AVE value for the whole scale is also above the minimum threshold of 0.5. It was therefore concluded that the National Cultural Distance scale exhibited satisfactory convergent validity.

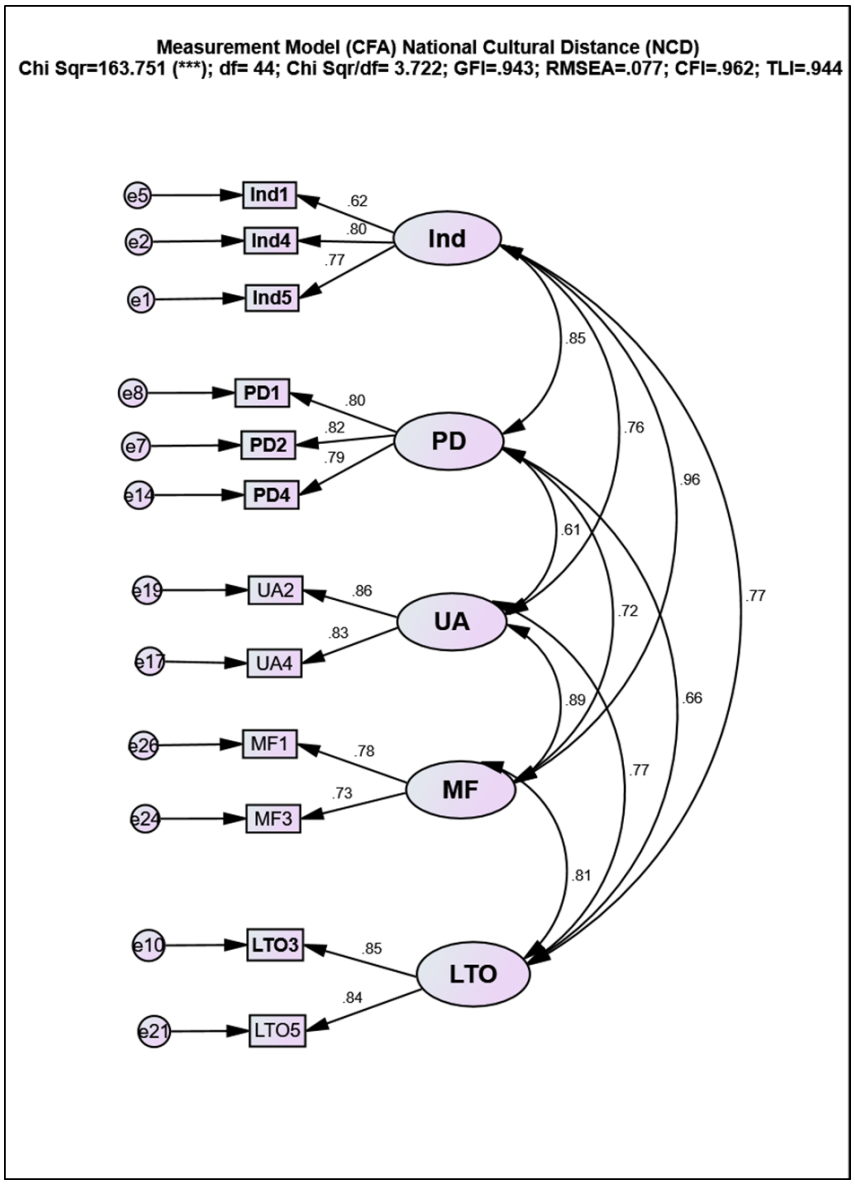


Figure 5.10. Re-specified measurement model CFA of the National Cultural Distance(NCD) scale

Table 5.23.

Standardised factor loadings, p values and construct validity: National Cultural Distance (NCD) scale

Construct	Construct Label	p-value		Composite reliability CR	Cronbach's alpha	AVE	MSV	Ind	PD	LTO	UA	MF
Ind	**Individualism**			0.78	0.774	0.544	0,912	**0.738**				
Ind1		0.62	***									
Ind4		0.80	***									
Ind5		0.77	***									
PD	**Power-Distance**			0.845	0.845	0.645	0.726	0.852	**0.803**			
PD1		0.8	***									
PD2		0.82	***									
PD4		0.79	***									
LTO	**Long Term Orientation**			0.829	0.828	0.708	0.658	0.665	0.886	**0.841**		
LTO3		0.85	***									
LTO5		0.84	***									
UA	**Uncertainty Avoidance**			0.835	0.834	0.717	0.785	0.766	0.772	0.811	**0.847**	
UA2		0.86										
UA4		0.83										
MF	**Masculinity-Femininity**			0.727	0.724	0.571	0.912	0.607	0.758	0.721	0.955	**0.756**
MF1		0.78	***									
MF3		0.73										

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

Table 5.24.

Goodness-of-fit indices: National Cultural Distance (NCD) scale

Fit Index		Initial Model		Respecified Model	
Absolute:	χ_2	1955.818	***	163.751	***
	df	265		44	
	χ_2 / df	7.38		3.722	
	RMSEA	0.118		0.077	
	GFI	0.723		0.943	
Incremental	CFI	0.756		0.962	
	TLI	0.724		0.944	

Note: Significance level: *** = p<0.001

To assess discriminant validity, the method as described was used. AVE values are produced in Table 5.23, with $\sqrt{AVE}$ shown on the diagonal in bold and the corresponding correlations below the diagonal. The test for discriminant validity shows that four of the five sub-constructs exhibit slightly poor discriminant validity – only Long-Term Orientation shows sufficient discriminant validity. However, as described in the method section, since the sub-constructs

are all part of a second-order construct, namely National Cultural Distance, absolute discriminant validity at the first-order level is not of paramount importance, provided that discriminant validity can be demonstrated for the second-order construct (Yale *et al*., 2015). This was later confirmed in the overall combined measurement model where all the constructs are combined, and excellent discriminant validity between the second-order constructs was demonstrated.

The conclusion was that the National Cultural Distance measurement model is satisfactory for research purposes, exhibiting acceptable reliability, goodness-of-fit and construct validity (in particular convergent validity).

5.6.5. Organisational Cultural Distance (OCD)

The Organisational Cultural Distance scale is hypothesised in terms of the six well-known cultural dimensions proposed by Hofstede *et al* (1990) and adapted by Pothukuchi *et al* (2002) and Damanpour *et al* (2012), representing the following constructs used widely in academic research: Process vs Result (PvRD), Employee vs Job (EvJD), Parochial vs Professional (PvPD), Open vs Closed (OvCD), Loose vs Tight (LvTD) and Normative vs Pragmatic (NvPD). Distances were calculated for each dimension based on the respondent's perceptions of the differences on each observed item between the partner organisations. The CFA measurement model is specified as a second-order construct with eighteen observed variables and the six latent variables already mentioned. The item data relating to each of the sub-constructs and for the construct as a whole were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.25 (normal distribution defined by skewness = 0 and kurtosis = 0).

Table 5.25 indicates that only a small number of items exhibit slight signs of non-normality, with values for skewness and / or kurtosis >|1|. However, based on the criteria set out in the method section, none of the items appear to be problematic. Maximum Likelihood estimation with no bootstrapping was, therefore, deemed appropriate for the CFA analysis.

Multicollinearity of the items making up this scale was checked for by the method described. All the values were at or below 3, indicating minimal collinearity. It was concluded that multicollinearity was not a problem for the scale as a whole.

Reliability of the scale was established and both Cronbach's alpha and composite reliability (CR) values are reported in Table 5.26. While the overall scale exhibited satisfactory reliability, with Cronbach's alpha above the 0.7 threshold for acceptable scale reliability (Hair *et al*., 2010), the sub-scales were all below this threshold, with PvPD, OvCD and NvPD being

particularly low. Reference to the items making up the sub-scales indicated that poor reliability could be traced to specific items as follows:

EvJD: EvJD1 impacts negatively on sub-scale reliability

PvPD: All items are problematic

LvTD: LvTD3 impacts negatively on sub-scale reliability

NvPD: All items are problematic

Removing these items from the scale, reduced overall reliability of the scale from 0.771 to 0.652, but improved the reliabilities of the sub-scales as shown in Table 5.27, and resulted in a more parsimonious scale. This was considered to be a reasonable trade-off, and the subscales as well as the overall scale were accepted as exhibiting satisfactory internal consistency.

Table 5.25.

Assessment of normality: Organisational Cultural Distance (OCD) items

Item	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
PvRD1	461	6	1	7	2.77	1.704	0.640	-0.793
PvRD2	461	6	1	7	3.01	1.725	0.378	-1.139
PvRD3	461	6	1	7	2.78	1.584	0.578	-0.805
EvJD1	461	6	1	7	2.88	1.730	0.519	-0.988
EvJD2	461	6	1	7	1.84	1.228	1.666	2.523
EvJD3	461	6	1	7	1.80	1.169	1.662	2.461
PvPD1	461	5	1	6	1.95	1.185	1.025	0.090
PvPD2	461	6	1	7	3.08	1.761	0.467	-0.907
PvPD3	461	6	1	7	2.07	1.283	1.400	1.806
OvCD1	461	6	1	7	2.50	1.529	0.750	-0.612
OvCD2	461	5	1	6	2.15	1.292	1.138	0.820
OvCD3	461	4	1	5	1.88	1.058	1.314	1.229
LvTD1	461	6	1	7	2.64	1.696	0.750	-0.639
LvTD2	461	6	1	7	2.40	1.810	0.996	-0.397
LvTD3	461	6	1	7	2.69	1.572	0.654	-0.667
NvPD1	461	5	1	6	2.52	1.522	0.657	-0.864
NvPD2	461	6	1	7	2.49	1.782	1.017	-0.297
NvPD3	461	6	1	7	2.86	1.613	0.555	-0.808

Note The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively

The results of the initial CFA of the hypothesised Organisational Cultural Distance (OCD) scale are shown in Figure 5.11. The model was fully identified with 29 degrees of freedom (df). Error

loadings were constrained to 1 and one of the paths for each sub-construct was constrained to 1 (Byrne, 2010).

Table 5.26.

Assessment of reliability: original Organisational Cultural Distance (OCD) scale (18 items)

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*
PvRD	Process v Result	3	0.555
EvJD	Employee v Job	3	0.567
PvPD	Parochial v Professional	3	0.287
OvCD	Open v Closed	3	0.358
LvTD	Loose v Tight	3	0.442
NvPD	Normative v Pragmatic	3	0.238
	Complete Organisational Cultural Distance (OCD) scale	18	0.771

Table 5.27.

Assessment of reliability: reduced Organisational Cultural Distance (OCD) scale (10 items)

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*
PvRD	Process v Result	3	0.555
EvJD	Employee v Job	2	0.727
OvCD	Open v Closed	3	0.358
LvTD	Loose v Tight	2	0.561
	Complete Organisational Cultural Distance (OCD) scale	10	0.652

All the goodness-of-fit indicators suggest a satisfactory fit of the model to the data: RMSEA (0.062) and $\chi 2$ / df (2.746) are well below their respective thresholds of 0.085 and 5 respectively, while CFI (0.917) is greater than 0.9. Item loadings are shown in Table 5.28 and

appear to be variable, which is a concern: four items had factor loadings less than 0.5 (LvTD2 (0.492), PvRD2 (0.492), OvCD2(0.38) and OvCD3 (0.31)). However, all the item loadings are significant at the $p < 0.001$ level as indicated in Table 5.28. All the low loading items were retained for now to preserve content validity, pending the assessment of construct validity.

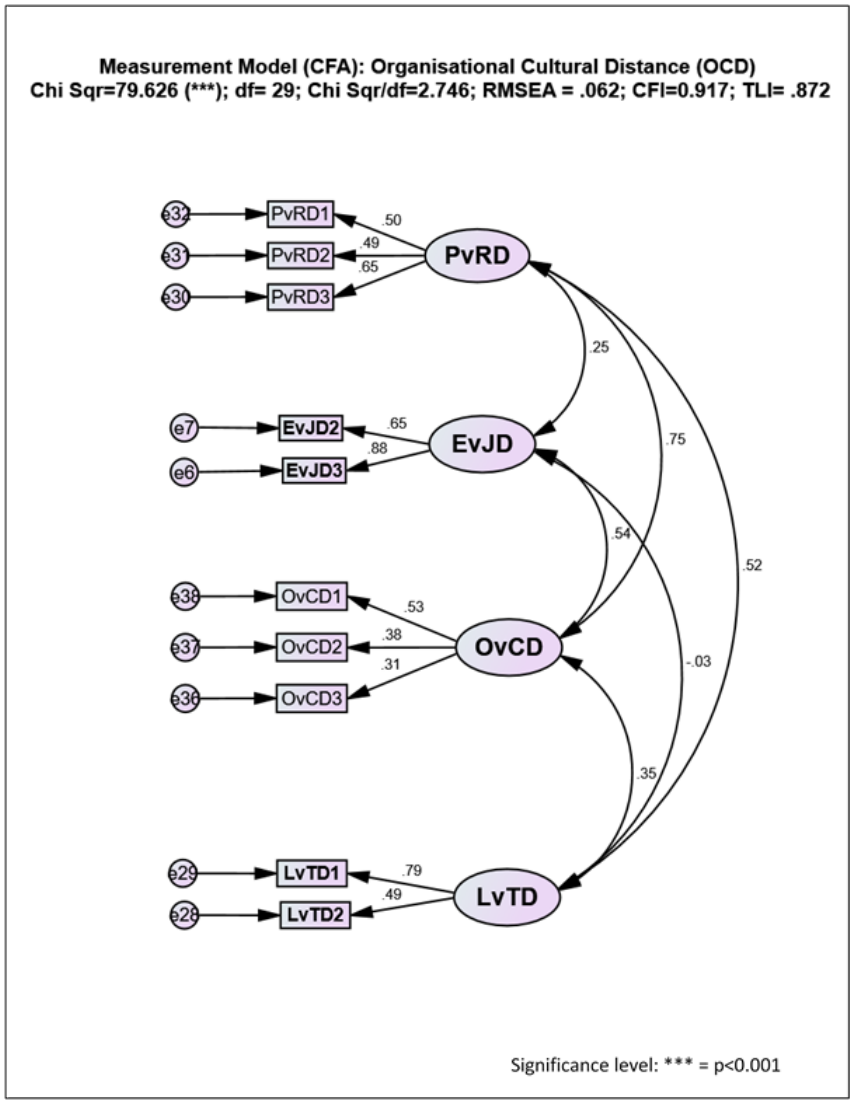


Figure 5.11. Initial measurement model CFA of the Organisational Cultural Distance (OCD) Scale (10 items)

Modification indices suggested that model fit could be improved by introducing an error covariance between LvTD2 and PvRD1. However, since there was no substantive evidence that these items should be linked, the suggestion was ignored.

To assess convergent validity of the measurement model, the factor loadings were first scrutinised (Figure 5.11 and Table 5.28). Four factor loadings are below the recommended minimum threshold of 0.5, namely LvTD2, PvRD2, OvCD3 and OvCD2, which may indicate

convergent validity issues. All are statistically significant at the $p < 0.001$ level. Referring to Table 5.29, as expected, the OvCD construct, which exhibited poor reliability, also showed very poor convergent validity (CR < 0.7, AVE < 0.5, although CR > AVE), and the sub-construct was therefore removed from the scale. It appears that the items making up this sub-construct (only specific people fit in; organisation is closed and secret; new people take a long time to settle) were too abstract for the respondents, who had difficulty answering them. Loose v Tight and Process v Result also exhibited poor convergent validity (CR < 0.7, AVE < 0.5, although CR > AVE). It is interesting to note that similar problems with partial fit of this scale have been reported for other countries, the cause being attributed to different contexts from the original Hofstede (1990) research (Bös, Dauber, & Springnagel, 2011).

Table 5.28.

Standardised factor loadings and p values: Organisational Cultural Distance (OCD) scale (10 items)

Item			Standardised Regression Wt	P
EvJD3	<---	EmployeevJob	0.883	***
EvJD2	<---	EmployeevJob	0.647	***
LvTD2	<---	LoosevTight	0.492	***
LvTD1	<---	LoosevTight	0.792	***
PvRD3	<---	ProcessvResults	0.655	***
PvRD2	<---	ProcessvResults	0.492	***
PvRD1	<---	ProcessvResults	0.502	***
OvCD3	<---	OpenvClosed	0.31	***
OvCD2	<---	OpenvClosed	0.379	***
OvCD1	<---	OpenvClosed	0.53	***

Note: Significance level: *** = p<0.001

Table 5.29.

Construct Validity: Organisational Cultural Distance (OCD) scale (10 items)

Construct	CR	AVE	MSV	Loose v Tight	Employee v Job	Process v Results	Open v Closed
Loose v Tight	0.593	0.435	0.267	**0.659**			
Employee v Job	0.745	0.599	0.292	-0.031	**0.774**		
Process v Results	0.567	0.308	0.560	0.517	0.255	**0.555**	
Open v Closed	0.375	0.174	0.560	0.346	0.540	0.748	**0.417**

Note: $\sqrt{AVE}$ values are shown on the diagonal & item correlations are shown underneath

A factor analysis was conducted on all the original items of this scale to see whether alternative factor groupings would make more practical and theoretical sense and provide a more reliable scale. The CFA showed that only three significant factors emerged: (1) Process v Result (2) Employee vs Job, and (3) Loose vs Tight. Furthermore, LvTD3 and NvPD2 loaded onto the PvRD and LvTD constructs respectively. LvTD3 deals with organisational formality, and, therefore, in theory, would also fit in with Process vs Result construct. NvPD2 deals with customer focus and, therefore, in theory, would also fit in with the Loose-Tight construct.

The modification indices also suggested that certain error terms be allowed to co-vary: error terms relating to PvRD2 and PvRD3, and error terms relating to PvRD3 and LvTD3. Theory provided support for these suggestions as indicated in Table 5.30.

The re-specified measurement model is shown in Figure 5.12. The factor loadings and levels of significance are shown in Table 5.31. All factor loadings are above 0.6, and all are significant at the $p < 0.001$ level.

The goodness-of-fit parameters for the re-specified measurement model are shown in Table 5.32. RMSEA and $\chi 2$ / df are below their respective critical thresholds of 0.085 and 5 respectively, while CFI and TLI, are above their threshold of 0.90, indicating a very good fit of the data.

For the purposes of this research, the fit was accepted as satisfactory, although the final goodness-of-fit was reassessed in the overall measurement model.

Table 5.30.
Substantive theory for model changes: error covariances: Organisational Cultural Distance (OCD)

Error Covariance	Main Construct	Sub Construct	Theoretical Justification of Change
PvRD2 & PvRD3	Organisational Cultural Distance	Process v Result	• PvRD2 deals with organisational formality PvRD3 deals with taking risk <u>Conclusion:</u> the two items are theoretically related
PvRD3 & LvTD3	Organisational Cultural Distance	Process v Result	• PvRD3 deals with taking risk LvTD3 deals with organisational hierarchy <u>Conclusion:</u> the two items are theoretically related

To assess convergent validity of the re-specified measurement model, standardised regression weights for all the factors were scrutinised for loadings and significance (Table 5.31). All the factor loadings are above the recommended minimum threshold of 0.5, with

several above 0.65 and 0.8. All are statistically significant at the $p < 0.001$ level. Referring to Table 5.31, CR's for two of the sub-constructs are above 0.7, considered to be the minimum threshold (PvRD 0.804 and EvJD 0.792), while the CR for the third construct is marginally below 0.7 (LvTD 0.691). Average variance extracted (AVE) for PvRD and EvJD are above the recommended minimum threshold of 0.50 (Hair *et al*., 2010), but marginally below this threshold for LvTD. In accordance with the same recommendations, all CRs are above the corresponding AVE values. The AVE value for the whole scale is also above the minimum threshold of 0.5. It was therefore concluded that the Organisational Cultural Distance scale exhibited satisfactory convergent validity, although marginally so for the LvTD sub-construct.

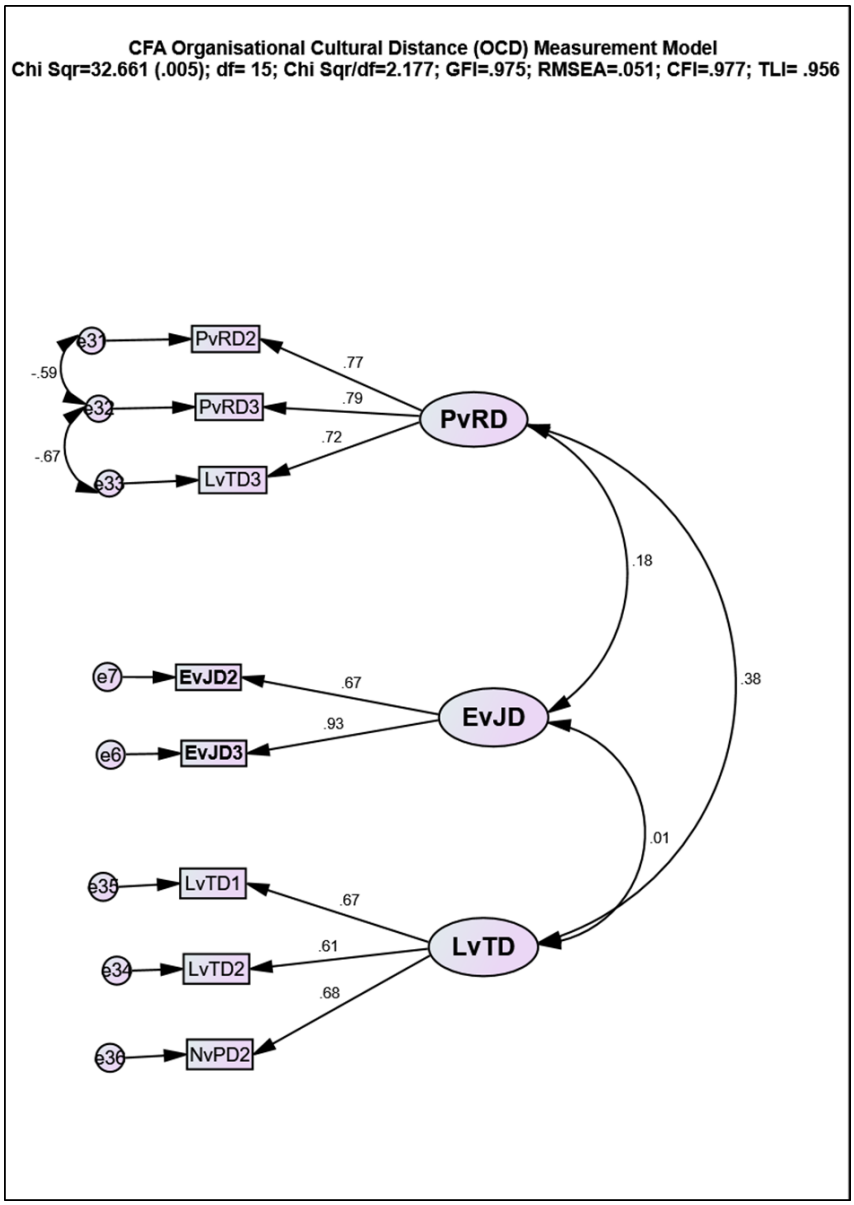


Figure 5.12. Re-specified measurement model CFA of the Organisational Cultural Distance (OCD) Scale (8 items)

To assess discriminant validity, the method as described was used. AVE values are produced in Table 5.31, with $\sqrt{AVE}$ shown on the diagonal in bold and the corresponding correlations below the diagonal. The test for discriminant validity shows that all three sub-constructs exhibit adequate discriminant validity. This was later also confirmed for the overall combined measurement model where all the constructs are combined and excellent discriminant validity between the second-order constructs was demonstrated.

The conclusion was that the Organisational Cultural Distance measurement model is satisfactory for research purposes, exhibiting acceptable reliability, goodness-of-fit and construct validity (in particular convergent validity).

Table 5.31.

Standardised factor loadings, p values and construct validity: Organisational Cultural Distance (OCD) scale

Construct	Construct Label	p-value		Composite reliability CR	Cronbach's alpha	AVE	MSV	PvRD	EvJD	LvTD
PvRD	**Process vs Result Distance**			0.804	0.673	0.577	0.147	**0.760**		
PvRD2		0.77	***							
PvRD3		0.79	***							
LvTD3		0.72	***							
EvJD	**Employee vs Job Distance**			0.792	0.77	0.662	0.032	0.179	**0.814**	
EvJD2		0.67	***							
EvJD3		0.93	***							
LvTD	**Loose vs Tight Distance**			0.69	0.691	0.426	0.147	0.012	0.383	**0.653**
LvTD1		0.67	***							
LvTD2		0.61	***							
NvPD2		0.68	***							

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

Table 5.32.

Goodness-of-fit indices: Organisational Cultural Distance (OCD) scale

Fit Index		Initial Model		Respecified Model	
Absolute:	χ^2	79.626	***	32.661	p=0.005
	df	29		15	
	χ^2 / df	2.746		2.177	
	RMSEA	0.062		0.051	
	GFI	0.899		0.975	
Incremental	CFI	0.917		0.977	
	TLI	0.872		0.956	

Note: Significance level: *** = p<0.001

5.7. Full Measurement Model Confirmatory Factor Analysis (CFA)

5.7.1. Initial Measurement Model

The individual scales for the three constructs, Economic Interdependency (EC_Int), Collaborative Interdependency (Coll_Int) and Trust (Tr), which were previously tested by confirmatory factor analysis (CFA), were brought together in a single measurement scale, depicted in Appendix I (Figure I.1).

The model was fully identified with 795 degrees of freedom (df). The goodness-of-fit indicators are shown in Table 5.35. All the goodness-of-fit indicators suggest a reasonably satisfactory fit of the model to the data: RMSEA (0.069) and $\chi 2$ / df (3.146) are well below their respective thresholds of 0.085 and 5 respectively, while CFI (0.903) and TLI (0.895) are respectively slightly above and slightly below their minimum threshold of 0.90. The $\chi 2$ is significant but, as mentioned previously, is considered a poor indicator of model fit for large sample numbers (>200) (Hair *et al*., 2010; Brown, 2015; Byrne, 2010). Furthermore, all the item loadings are significant at the $p < 0.001$ level.

5.7.2. Re-specified Measurement Model

An inspection of the modification indices suggested that model fit could be further improved by allowing error covariances between certain items, as per the process described in the Method section. A comprehensive justification for these changes based on substantive evidence is given in Table 5.33. Since the suggested changes refer to within-sub-construct or within-construct error covariance, the construct validity of that sub-construct or construct should not be affected (Hair *et al*., 2010). Several error covariances suggested by the modification indices were not implemented, since they lacked substantive evidence even though including them would have improved the model fit. Precautions were taken to ensure that the model was not over-fitted and that the focus remained on model parsimony (Byrne, 2010).

The re-specified full CFA measurement model is shown in Figure 5.13. The factor loadings and levels of significance are shown in Table 5.34. All loadings, except one (Ec_Int – CLAlt $\beta = 0.442$), are above 0.6 and all are significant at the $p < 0.001$ level.

Table 5.33.

Substantive theory for including error covariances in the overall measurement model

Error Covariance	Sub Construct(s)	Main Construct	Theoretical Justification of Change
Within same sub-construct			
Ben1 & Ben2	Benevolence	Trust	• Ben1: partner's concern about the alliance Ben2: partner would not knowingly hurt the alliance Conclusion: items are theoretically linked
Within same construct			*Note: all items measured on same 1-7 Likert scale*
RD1 & EC1	Resource Dependency Economic Contribution	Economic Interdependency	• RD1: resources provided by partner essential for success of the partnership EC1: in an economic sense, a close relationship with the partner is desired Conclusion: items are theoretically linked
Ben2 & Trw2	Benevolence Trustworthiness	Trust	• Ben2: partner would not knowingly do anything to hurt the partnership TrW2: we and partner have high level of mutual trust. Conclusion: items are theoretically linked
Dep4 & Pred4	Dependability Predictability	Trust	• Dep4: in difficult times get help from partner Pred4: partner always provides information as agreed at agreed times Conclusion: items are theoretically linked
Dep & Pred	Dependability Predictability	Trust	• Dep: dependability of the partner Pred: predictability of the partner Conclusion: items are theoretically linked
Dep & Comp	Dependability Competence	Trust	• Dep: dependability of the partner Comp: professional competence of the partner i.e depend-ability Conclusion: items are theoretically linked
Pred5 & Trw2	Predictability Trustworthiness	Trust	• Pred5: because we have known partner for a long time, we understand partner well TrW2: high level of mutual trust Conclusion: items are theoretically linked
Pred4 & Trw2	Predictability Trustworthiness	Trust	• Pred4: partner always provides information as agreed at agreed times TrW2: high level of mutual trust Conclusion: items are theoretically linked

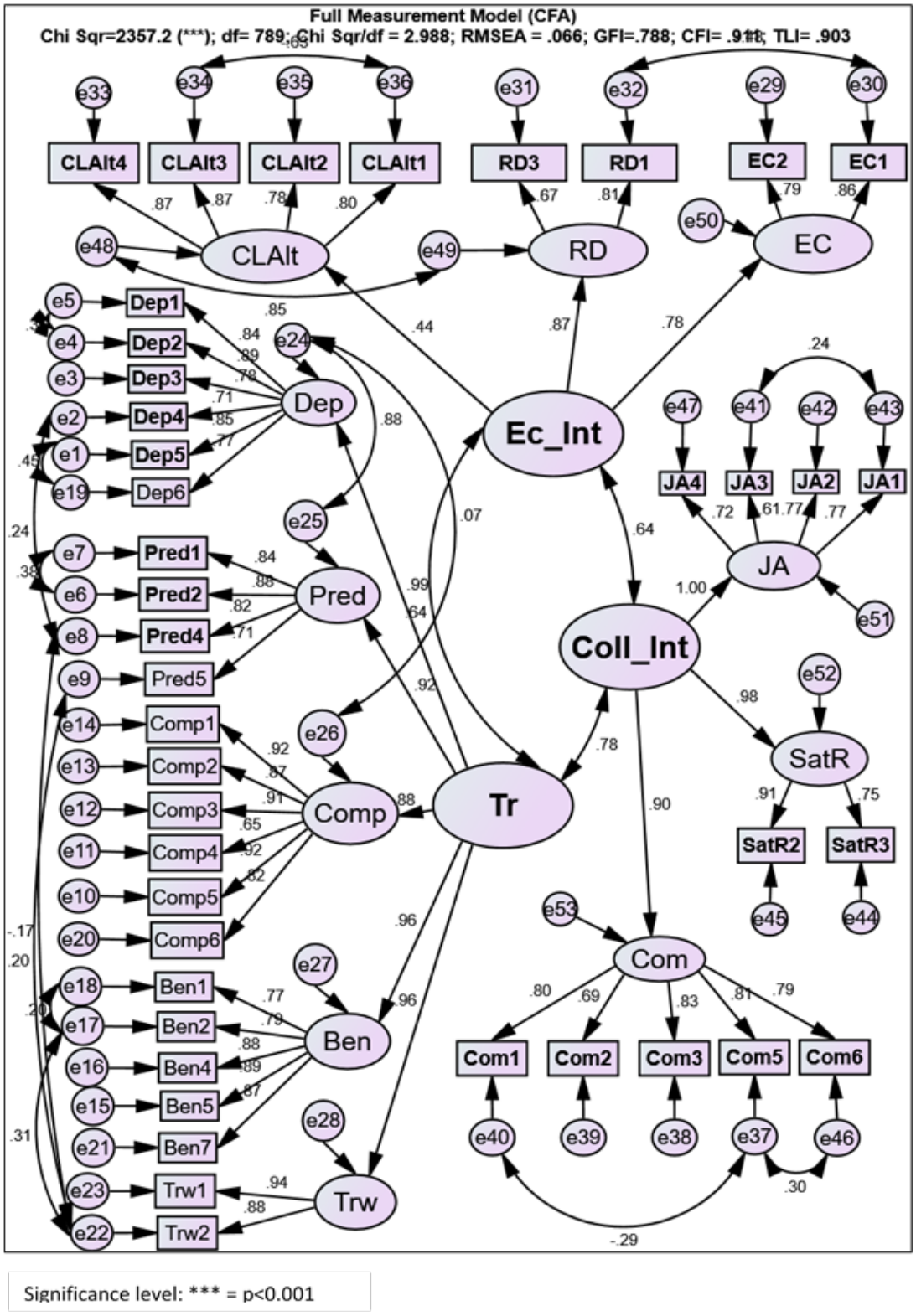


Figure 5.13. Re-specified full measurement model CFA

Table 5.34.

Standardised factor loadings and p values: Re-specified full measurement model

Item			Standardised Regression Wt	P
Dependability	<---	Tr	0.985	***
Predictability	<---	Tr	0.915	***
Competence	<---	Tr	0.877	***
Benevolence	<---	Tr	0.957	***
Trustworthiness	<---	Tr	0.963	***
CLAlt	<---	Ec_Int	0.442	***
RD	<---	Ec_Int	0.867	***
EC	<---	Ec_Int	0.775	***
JointAction	<---	Coll_Int	0.999	***
SatisfactionRelationship	<---	Coll_Int	0.978	***
Communication	<---	Coll_Int	0.898	***
Dep5	<---	Dependability	0.846	***
Dep4	<---	Dependability	0.711	***
Dep3	<---	Dependability	0.781	***
Dep2	<---	Dependability	0.891	***
Dep1	<---	Dependability	0.836	***
Pred1	<---	Predictability	0.841	***
Pred4	<---	Predictability	0.817	***
Pred5	<---	Predictability	0.71	***
Comp5	<---	Competence	0.92	***
Comp4	<---	Competence	0.647	***
Comp3	<---	Competence	0.913	***
Comp2	<---	Competence	0.868	***
Comp1	<---	Competence	0.915	***
Ben5	<---	Benevolence	0.895	***
Ben4	<---	Benevolence	0.879	***
Ben2	<---	Benevolence	0.79	***

Note: Significance level: *** = p<0.001

Table 5.34. continued

Standardised factor loadings and p values: Re-specified full measurement model

Item			Standardised Regression Wt	P
Ben1	<---	Benevolence	0.769	***
Dep6	<---	Dependability	0.774	***
Comp6	<---	Competence	0.817	***
Ben7	<---	Benevolence	0.873	***
Trw2	<---	Trustworthiness	0.885	***
Trw1	<---	Trustworthiness	0.938	***
Pred2	<---	Predictability	0.876	***
EC2	<---	EC	0.785	***
EC1	<---	EC	0.864	***
RD3	<---	RD	0.673	***
RD1	<---	RD	0.812	***
CLAlt4	<---	CLAlt	0.867	***
CLAlt3	<---	CLAlt	0.874	***
CLAlt2	<---	CLAlt	0.783	***
CLAlt1	<---	CLAlt	0.802	***
Com5	<---	Communication	0.808	***
Com3	<---	Communication	0.827	***
Com2	<---	Communication	0.686	***
Com1	<---	Communication	0.803	***
JA3	<---	Joint Action	0.614	***
JA2	<---	Joint Action	0.772	***
JA1	<---	Joint Action	0.768	***
SatR3	<---	Satisfaction with Relationship	0.748	***
Com6	<---	Communication	0.792	***
JA4	<---	Joint Action	0.719	***
SatR2	<---	Satisfaction with Relationship	0.907	***

Note: Significance level: *** = p<0.001

5.7.3. Model Fit

An assessment of the model parameter values and directions confirms that they are all statistically viable (no out of range values (*Heywood cases)*, negative variances or standardised factor correlations >1), and make substantive sense. The goodness-of-fit parameters for the final measurement model are presented in Table 5.35. RMSEA (0.066) and $\chi 2$ / df (2.988) are below their respective critical thresholds of 0.085 and 5, indicating reasonably good fit. CFI (0.911) and TLI (0.903) are above their respective thresholds (0.9), indicating satisfactory fit of the data.

The base measurement model and the re-specified model are "nested" models (i.e., they contain the same constructs and the one is derived from the other simply by altering relationships (Hair *et al*., 2010)). They can therefore be tested on the basis of the $\chi 2$ differential statistic together with the difference in df (Hair *et al*., 2010). As shown in Table 5.35, $\Delta \chi 2 > \Delta \chi 2_{\text{critical}}$ ($\alpha = .005$, df = 6), and it can therefore be concluded that the re-specified measurement model provides a significantly better fit of the data than the base model. However, although the differential fit parameters indicate that the re-specified measurement model appears to fit the data better than the base model, they do not necessarily confirm that these estimates are of a magnitude to be substantively meaningful (Brown, 2015). Since statistically significant differences are more likely to occur with large sample sizes as is the case here, the calculation of an effect size was deemed helpful to understand if the difference is really meaningful.

The change from base model to final measurement model has an effect size of 0.56, which can be interpreted as a large effect.

The final check was to assess model parsimony. The parsimony adjusted indicators are shown in Table 5.36. Parsimony indicators are generally lower than comparative fit indices, but values > 0.60 indicate acceptable parsimony. It was concluded, therefore, that the re-specified model exhibited good parsimony.

Based on the evidence above, it was concluded that the change from base model to the final measurement model was significant. For the purposes of this research, the fit was accepted as satisfactory.

Table 5.35.

Goodness-of-fit indices for the final measurement model

Fit Index		**Initial Model**		**Respecified Model**		Δ	Δ $\chi 2$ crit @ 0.005 & 6 df
Absolute:	$\chi 2$	2500.9	***	2357.2	***	143.7	18.548
	df	795		789		6	
	$\chi 2$ / df	3.146		2.988			
	RMSEA	0.069		0.066			
	GFI	0.774		0.788			
Incremental	CFI	0.903		0.911			
	TLI	0.895		0.903			

Note: Significance level: *** = p<0.001

Table 5.36

Parsimony indicators: Re-specified full measurement model

Model	PRATIO	PNFI	PCFI
Default model	.916	.800	.835
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

5.7.4. Residuals

Hair *et al* (2010) recommend that a consistent pattern of standardised residuals greater than |4| appearing on particular items should raise concern with those items. All residuals are well below |1|, again confirmation of a satisfactory model fit.

5.7.5. Construct Validity

Although the sub-scales were tested individually for reliability and for convergent and discriminant validity, the construct validity of the final measurement model was retested to confirm overall construct validity.

5.7.5.1. Convergent Validity

To assess convergent validity of the measurement model, Hair *et al* (2010) suggest that, as a first step, the factor loadings be scrutinised. As shown in Table 5.34, all the factor loadings, except one (Ec_Int – CLAlt β = 0.442), are above 0.5, with several above 0.70, and all are statistically significant at the $p < 0.001$ level.

The Cronbach's alpha for the final measurement model was determined and the individual alphas for each scale and for the overall scale are shown in Table 5.37. All the Cronbach's alpha values for the sub-scales and for the overall scale are well above 0.7, indicating good scale reliability. Composite reliabilities (CR), as proposed by Hair *et al* (2010) as a preferred alternative in SEM because of the tendency of coefficient alpha to understate reliability, were also calculated and are shown in the same table for comparative purposes. The CR values give rise to the same conclusion as above. All three sub-scales and the combined scale meet the Cronbach's alpha and composite reliability criteria, and it was therefore concluded that all the scales exhibit internal consistency, meaning that the measures all consistently represent the same latent construct.

Table 5.37.

Cronbach's alpha reliability: final measurement model scale and individual scales (42 items)

Construct	Construct Label	Number of Items	Cronbach's alpha *(standardised items)*	Composite Reliability (CR)
EC_Int	Economic Interdependence	8	0.869	0.749
Coll_Int	Collaborative Interdependence	11	0.931	0.972
Tr	Trust	23	0.975	0.974
	Final overall mesurement model	42	0.970	

AVE and CR values together are reflected in Table 5.38, which confirm that all the criteria suggested by Hair *et al* (2010) are satisfied. This confirms that the measurement model has convergent validity.

From the evidence presented above, it was concluded that the measurement model has acceptable convergent validity.

Table 5.38.

Construct validity: final measurement model scale (42 items)

Construct	Construct Label	p-value	Composite reliability CR	Cronbach's alpha	AVE	MSV	Tr	Coll_Int	Ec_Int
Tr	Trust		0.974	0.975	0.884	0.608	**0.940**		
Coll_Int	Collaborative Inter dependency		0.972	0.931	0.92	0.608	0.78	**0.959**	
Ec_Int	Economic Interdependency		0.749	0.869	0.516	0.407	0.638	0.636	**0.718**

Note: AVE Average variance extracted $\sqrt{AVE}$ on the diagonal & correlations below the diagonal
*** p<.001

5.7.5.2. Discriminant Validity

The test for discriminant validity as set out in the method section shows that all three subconstructs exhibit very good discriminant validity and all the above criteria are comfortably met.

Based on the evidence presented above, it was concluded that the measurement model has acceptable discriminant validity.

5.7.5.3. Nomological Validity

Nomological validity was assessed as set out in the method section.

The overall conclusion was that the measurement model and the sub-scales all exhibited satisfactory convergent, discriminant and nomological validity, and were accepted for the purposes of this research.

5.7.6. Common Method Bias

Common method bias (CMB) was checked using the Common Latent Factor (CLF) method described in the Method section (Podsakoff *et al*., 2003; Gaskin, 2016b), and the result is shown in Appendix D. The test showed non-standardised loadings of 0.5 on all the CLF pathways, indicating a systematic variance of $0.5^2 = 0.25$ %. This confirms that CMB is not a problem in the measurement model, and that the precautions taken in the research design were successful.

5.8. Structural Model

In this step the measurement model tested above and the posited structural model are brought together into an integrated structural model, which was used for hypotheses testing. The process of testing the structural model is set out in the Method section.

5.8.1. Data Screening and Processing

The data was screened again for multicollinearity and non-normality for the full measurement model, after which factor scores were calculated from the item-level indicator loadings in the verified model as a basis for the imputed model, as set out in the Method section. Adding in the moderators at this level of detail would contribute further complexity to the model and would tend to obscure the main results from the model.

Multicollinearity was tested as set out in the Method section. Variance inflation factors (VIF) and tolerance factors were calculated for each of the three constructs making up the structural model (Economic Interdependency (Ec_Int), Collaborative Interdependency (Coll_Int) and Trust (Tr)), and the values are shown in Table 5.39. The figures are acceptable and suggest that multicollinearity should not present too much of a problem in the structural model.

The imputed variables relating to the three constructs making up the final measurement model were tested for normality and the degree of skewness and kurtosis, and the results are shown in Table 5.40. Although there is evidence of some skewness and kurtosis, based on the criteria

set out in the method section, it was concluded that skewness and kurtosis should not be a concern in the structural model with imputed variables.

Table 5.39.

Multicollinearity testing of the final measurement model: variance inflation factors (VIF) and tolerance factors

Construct		Collinearity Indicators	
Predictor	**Predicted**	**VIF**	**Tol**
Ec_Int	**Coll_Int**	3.514	0.285
	Trust	3.514	0.285
Coll_Int	**Ec_Int**	3.173	0.315
	Trust	3.173	0.315
Trust	**Ec_Int**	2.974	0.336
	Coll_Int	2.974	0.336

Table 5.40.

Tests for normality (skewness and kurtosis) of the final measurement model.

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Ec_Int	461	4.26	0.75	5.01	4.054	0.630	-1.424	2.415
Coll_Int	461	5.78	1.30	7.08	5.334	1.037	-1.073	1.025
Tr	461	6.03	1.10	7.13	5.248	1.163	-1.144	0.683

Note The standard errors for skewness and kurtosis are 0.114 and 0.227 respectively

5.8.2. Base Structural Model

The base structural model reflecting the hypothesised relationships between the three latent constructs - Economic Interdependency (Ec_Int), Collaborative Interdependency (Coll_Int) and Trust (Tr) - is shown in Figure 5.14 (excluding control variables). The posited combined moderating effects of Organisational Cultural Distance and National Cultural Distance have been left out of the model for now and will be examined separately. However, this hybrid model is a cumbersome model to use for hypotheses testing, and an imputed model was, therefore, developed as set out in the Method section. The equivalent imputed model is shown in Figure 5.15. The constructs use the imputed factor scores as measurement variables, and are therefore shown as rectangles instead of ellipses. The control variables, SIPPP size and SIPPP age, have been added in to account for potential influences on the predicted variable, Trust. The control variables were allowed to co-vary with the following rationale: as SIPPP age increases, successful SIPPPS tend to grow, and therefore there is a plausible link between SIPPP size and its age.

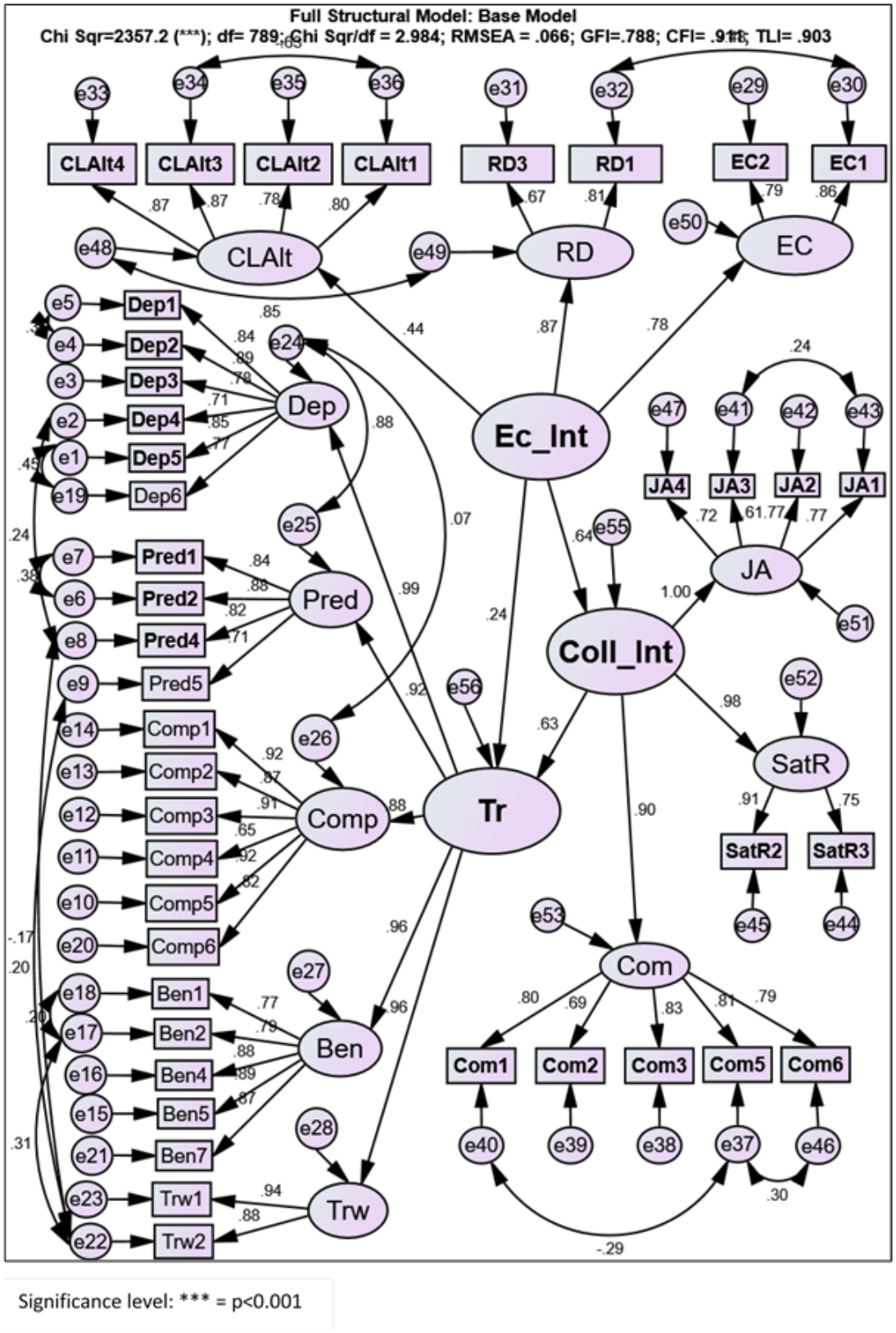


Figure 5.14. Base structural hybrid model (control variables excluded)

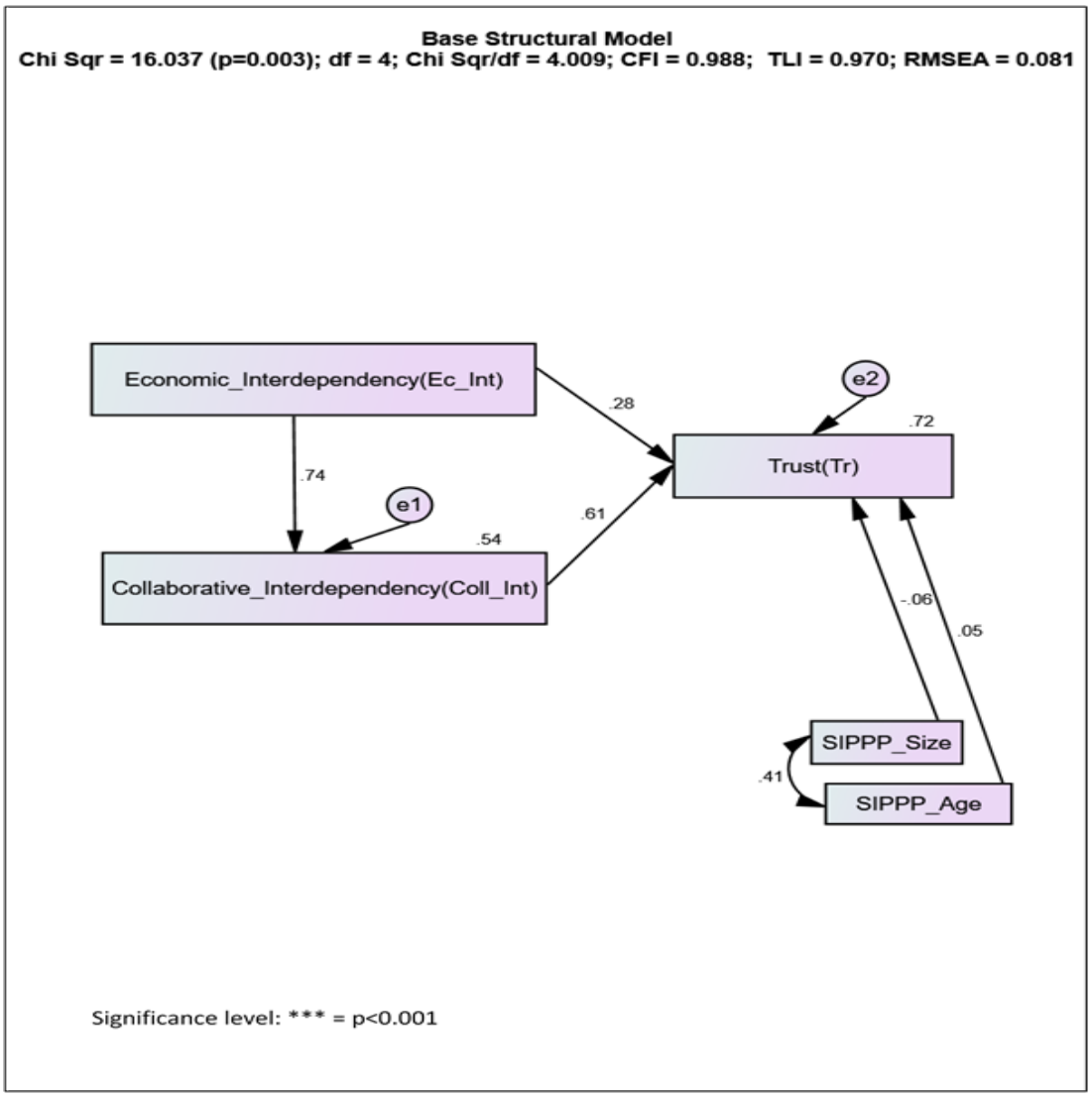


Figure 5.15. Base structural imputed model (control variables included)

Model fit parameters are shown in Table 5.41. The model fit is very good, with all the fit indicators well above or below their critical limits indicative of a good fit. The $\chi 2$ statistic is not significant at $p < 0.001$, indicating a good fit. This is supported by the Bollen-Stine bootstrap *p*-value at 0.022, not significant at $p < .01$, and therefore indicating good fit.

All the factor loadings shown in Table 5.42 are significant at the $p < 0.001$ level. The bootstrap upper and lower limits for these factor loadings are shown in Table 5.43 with corresponding *p*-values – all are significant at $p < .01$. Furthermore, the squared correlations shown in Table 5.44 and Figure 5.15 show that 71.7 % of the variance in the outcome, variable, Trust (Tr), is explained by the model, while 54.1 % of the variance in the mediator variable, Collaborative Interdependency (Coll_Int), is explained.

On balance, the conclusion was that the model exhibited good fit, which was expected to improve further with the introduction of the posited moderator variables, Organisational Cultural Distance and National Cultural Distance. No further re-specification of the model was deemed necessary at this stage, but it was revisited once the moderators were added. The base structural model was used to test the hypotheses.

Table 5.41.

Goodness-of-fit indices for the base structural model

Goodness of Fit Index	**Value**		
Absolute Fit Indices:	**Base Model**	**Model 1**	**Model 2**
χ^2	16.037 (p=.003)	134.712 (***)	92.617 (***)
degrees freedom (df)	4	22	10
χ^2 / df	4.009	6.123	9.265
RMSEA	0.081	0.106	0.135
GFI	0.986	0.953	0.948
Bollen-Stine Bootstrap	0.022	0.002	0.002
Incrmental Fit Indices			
CFI	0.988	0.953	0.935
TLI	0.97	0.897	0.864
PNFI		0.381	0.442
AIC		222.712	128.647
R^2			
Trust	0.72	0.74	0.74
Collaborative Interdependence	0.54	0.54	0.54

Note: Significance level: *** = p<0.001

Table 5.42.

Standardised factor loadings and p values: base structural model

Item			Standardised Regression Wt	P
Coll_Int	<---	Ec_Int	0.735	***
Tr	<---	Coll_Int	0.615	***
Tr	<---	Ec_Int	0.282	***
Tr	<---	SIPPP_Size	-0.061	0.03
Tr	<---	SIPPP_Age	0.049	0.073

Note: Significance level: *** = p<0.001

Table 5.43.

Standardised factor loadings showing bootstrap upper and lower limits and p values: base structural model

Parameter			Estimate	Lower	Upper	P
Coll_Int	<---	Ec_Int	0.735	0.685	0.784	0.003
Tr	<---	Coll_Int	0.615	0.54	0.692	0.006
Tr	<---	Ec_Int	0.282	0.208	0.365	0.002
Tr	<---	SIPPP_Size	-0.061	-0.107	0	0.046
Tr	<---	SIPPP_Age	0.049	-0.003	0.103	0.083

Table 5.44

Squared multiple correlations: base model

Parameter	Estimate	Lower	Upper	P
Coll_Int	0.541	0.469	0.615	0.003
Tr	0.717	0.648	0.764	0.008

Table 5.45

Implied correlations: base model

	SIPPP_Age	SIPPP_Size	Ec_Int	Coll_Int	Tr
SIPPP_Age	1				
SIPPP_Size	0.409	1			
Ec_Int	0	0	1		
Coll_Int	0	0	0.735	1	
Tr	0.024	-0.04	0.734	0.822	1

5.9. Model Results and Testing of Hypotheses

In this section the results from the base model are studied and used to test the hypotheses.

5.9.1. Base Model

The relationships between the three constructs, Economic Interdependency (Ec_Int), Collaborative Interdependency (Coll_Int) and Trust (Tr) as shown in Figure 5.15 are all reasonably strong and significant at the $p < 0.001$ level. Specifically, we can conclude that a significant positive relationship between Economic Interdependency and Trust exists, through a direct effect (0.282, $p < 0.001$), and as an indirect effect via Collaborative Interdependency

(Coll_Int) (0.735 x 0.615 = 0.44, $p < 0.001$), resulting in a total effect of 0.72, $p < 0.001$. Variations in Economic Interdependency explained 54.3 % of the variation in the outcome variable, Trust (Appendix F). This gives a Cohen's $f^2 = 1.174$, which is a large effect size, being > 0.8 (Cohen, 1988).

From this we conclude that the trust between partners in a SIPPP is positively influenced by their economic interdependency. H1a is therefore supported:

H1a: *Economic interdependency between the partners in a SIPPP positively influences the level of trust*

The pathway between Economic Interdependency and Collaborative Interdependency is significant with a β-value = 0.735. From this we can conclude that a strong positive link exists between the partners' economic interdependency and collaborative interdependency, i.e., H1b is supported:

H1b: *Economic interdependency between the partners in a SIPPP positively influences their level of collaborative interdependency*

Also, it was concluded that a significant relationship exists between Collaborative Interdependency and Trust (0.615, $p < 0.001$), and that, therefore, the trust between partners in a SIPPP is positively influenced by their collaborative interdependency. H1c is therefore supported.

H1c: *Collaborative interdependency between the partners in a SIPPP positively influences the level of trust*

5.9.2. Mediation Effects

The posited mediating effect of Collaborative Interdependency (Coll_Int) on the relationship between Economic Interdependency (Ec_Int) and Trust (Tr) appears to exist, judging by the relative strengths of the respective pathways and the level of significance attached to their loadings ($p < 0.001$) as shown in Figure 5.15 and Table 5.42. However, the relationship was formally tested using the Baron and Kenny (1986) approach as set out in the method section. The results are shown in Table 5.46. According to the Baron and Kenny test, it was concluded that Collaborative Interdependency strongly mediates the relationship between Economic Interdependency and Trust at a significance level of $p < 0.001$.

Table 5.46.

Mediation test results: Collaborative Interdependency (Coll_Int) on the Economic Interdependency (Ec_Int) - Trust (Tr) relationship

Relationship	Direct Effect Without Mediator	Direct Effect With Mediator	Indirect Effect
Ec_Int - Coll_Int - Trust	0.734 (***)	0.282 (***)	0.005

Note: Significance level: *** = p<0.001

The alternative mediation check to the Baron and Kenny approach, namely the bootstrapping interval method as set out in the method section, was run and the result is shown in Table 5.46 as the *p*-value for the indirect effect, which is significant at the $p < 0.005$ level, indicating the presence of a mediating effect. The two methods are, therefore, in accordance.

Based on the above evidence, it was concluded that collaborative interdependency between partners in a SIPPP significantly mediates the relationship between their economic interdependency and their level of mutual trust. H2 is therefore supported:

H2: *Collaborative interdependency between the partners in a SIPPP mediates the relationship between economic interdependency and the building of trust*

5.9.3. Moderating Effects

Organisational Cultural Distance (OCD) and National Cultural Distance (NCD) are posited to have a direct effect on Trust (Tr), but also a moderating effect on the relationships between Economic Interdependency (EC_Int) and Trust (Tr) on the one hand, and between Collaborative Interdependency (Coll_Int) and Trust on the other. This means that organisational cultural distance and national cultural distance are thought to influence the strength and/ or direction of these relationships, the magnitude of the impact being dependent on the level of the particular moderator (Hair *et al*., 2010, p 690).

The hypothesised relationships are shown in Figure 5.16, where the two proposed moderators are added as exogenous variables, together with their respective interaction terms formed from the products of the moderator(s) and the respective predictor variables, namely, NCDxEC_Int, NCDxColl_Int, OCDxEc_Int and OCDxColl_Int (Baron & Kenny, 1986). This model is referred to as Model 1 to distinguish it from the base model. It can be seen from Table 5.41 that, adding the hypothesised moderators to the model, marginally decreases the overall

model fit of the data, as indicated by the slight drop in all the fit indices compared with the base model. However, the model still exhibits good fit notwithstanding the added complexity of the moderating relationships.

The moderator effects of the two variables were assessed using the Baron and Kenny (1986) approach as set out in the Method section. The factor loadings for the moderator model are shown in Table 5.47. Correlations are shown in Appendix G.

The following conclusions are drawn from these results:

National Cultural Distance (NCD) has a direct effect on Trust (Tr). The effect is negative and reasonably strong (β-value = -0.21) and is significant at p <0.001. This provides support for hypothesis H3:

H3: *National cultural distance between the partners in a SIPPP negatively influences the level of trust*

National Cultural Distance (NCD) also moderates the relationship between Collaborative Interdependency (Coll_Int) and Trust (Tr). The effect is positive, is reasonably strong (β-value = 0.183) and is significant at the $p < 0.001$ level. The magnifying effect of high levels of national cultural distance on the collaborative interdependency–trust relationship can be seen in the interaction plot shown in Figure 5.17 (Aiken & West, 1991; Gaskin, 2016c). This means that at high levels of collaborative interdependency and high levels of national cultural distance, trust levels are actually enhanced compared with the situation where there is a low level of national cultural distance. The converse is also true at low levels of collaborative interdependency, i.e., at low levels of collaborative interdependency and high levels of national cultural distance, trust levels are negatively impacted compared with the situation where there is a low level of national cultural distance.

This suggests that the partners recognise the potential negative effects of national cultural distance between them on their relationship, and, to protect the alliance and their investments, are, therefore, prepared to collaborate more to build trust as a bulwark against the anticipated negative impact. This phenomenon has been referred to in the literature as the “cultural paradox” (Ozorhon *et al*., 2008; del Mar Benavides-Espinosa & Roig-Dobón, 2011; Sirmon & Lane, 2004; Brouthers & Brouthers, 2001). This provides support for hypothesis H4b:

H4b: *National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*

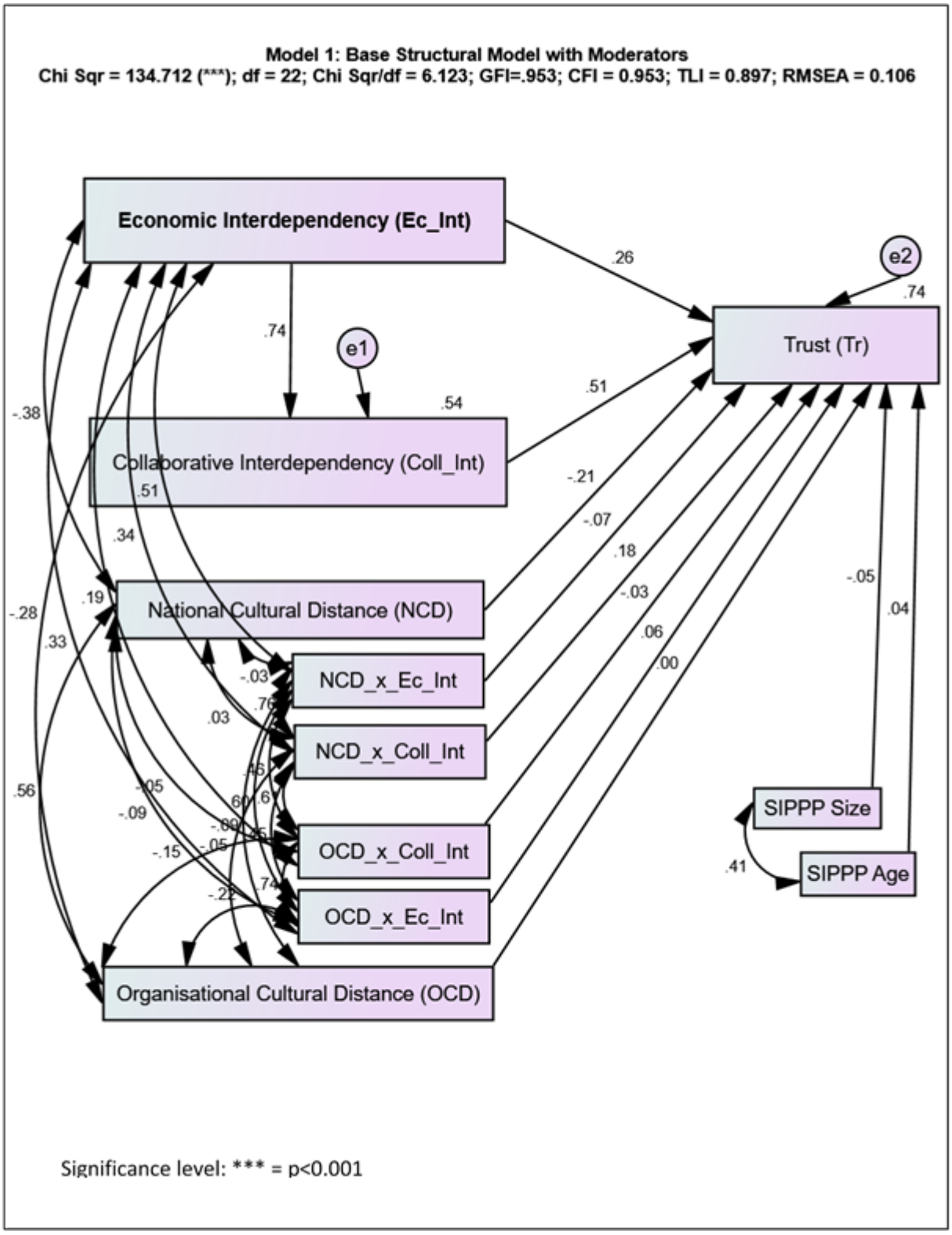


Figure 5.16. Model 1: Moderating effects of organisational cultural distance and national cultural distance on the economic interdependency (Ec_Int) – trust (Tr) and collaborative interdependency (Coll_Int) – trust (Tr) relationships.

Table 5.47.

Standardised factor loadings showing the effects of moderation by organisational cultural distance (OCD) and national cultural distance (NCD) on the economic interdependency (Ec_Int) – trust (Tr) and collaborative interdependency (Coll_Int) – trust (Tr) relationships.

Item			Standardised Regression Wt	P
ZColl_Int	<---	ZEc_Int	0.735	***
ZTr	<---	ZColl_Int	0.511	***
ZTr	<---	ZEc_Int	0.26	***
ZTr	<---	ZNCD	-0.208	***
ZTr	<---	NCD_x_Ec_Int	-0.075	0.124
ZTr	<---	ZOCD	-0.004	0.897
ZTr	<---	OCD_x_Coll_Int	-0.03	0.503
ZTr	<---	OCD_x_Ec_Int	0.062	0.171
ZTr	<---	NCD_x_Coll_Int	0.183	***
ZTr	<---	ZSIPPP_Size	-0.047	0.075
ZTr	<---	ZSIPPP_Age	0.038	0.148

Note: Significance level: *** = p<0.001

There is no moderating effect of National Cultural Distance (NCD) on the Economic Interdependency (Ec_Int) - Trust (Tr) relationship as evidenced by the low β-value of the pathway (-0.075) and the fact that it is not statistically significant (p = 0.124). There is therefore no support for hypothesis H4a:

> **H4a:** *National cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*

It follows from the above that national cultural distance moderates the relationship between collaborative interdependency (Coll_Int) and trust (Tr) more than the relationship between economic interdependency (Ec_Int) and trust (Tr). There is, therefore, support for hypothesis H4c:

H4c: *National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust.*

Organisational Cultural Distance (OCD) has a direct effect on Trust (Tr). The effect is negative, but very weak (β-value = -0.004) and is insignificant (*p* = 897). There is, therefore, no support for hypothesis H5a:

H5a: *Organisational cultural distance between the partners in a SIPPP negatively influences the level of trust*

There is no moderating effect of Organisational Cultural Distance (OCD) on the Economic Interdependency (Ec_Int) - Trust (Tr) relationship or on the Collaborative Interdependency (Coll_Int) - Trust (Tr) relationship as evidenced by the low β-values of both pathways and the fact that neither is statistically significant (β = 0.062, *p*= *0*.171 and β = -0.03, *p*= 0.503 respectively). There is therefore no support for hypotheses H5b and H5c:

H5b: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*

H5c: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*

It follows from the above that, in the absence of any moderating effect by organisational cultural distance, there is no support for hypothesis H5d:

H5d: *Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust*

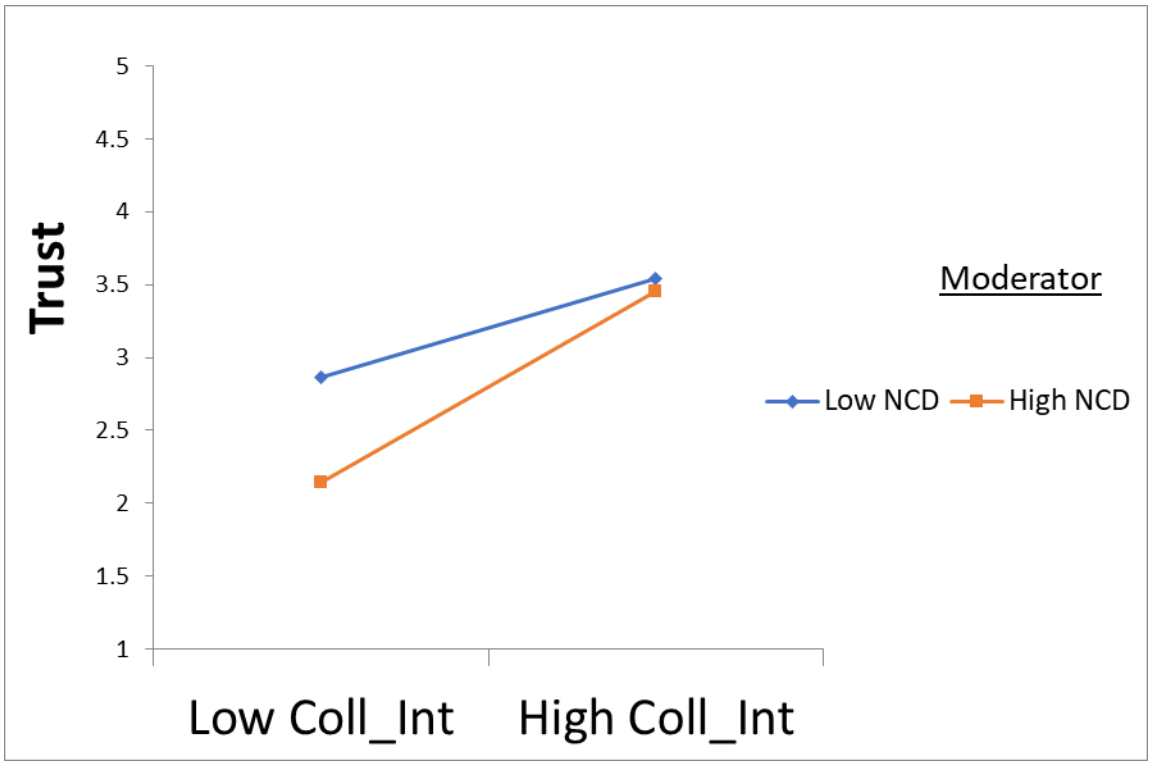


Figure 5.17. The moderating effect of national cultural distance (NCD) on the economic interdependency (Ec_Int) – trust (Tr) relationship.

A post-hoc power analysis was done as set out in the method section to check if the analysis has the necessary statistical power (> 0.80) to reject the above hypotheses on the sole basis of insignificant pathways. Statistical software (Soper, 2017), using the Cohen (1998) approach, was used to calculate the statistical power for the model shown in Figure 5.16 on the basis of the number of exogenous predictors (8), the explained variance (0.74) of the outcome variable, Trust, the desired α (.05) and the sample size (455). This predicted a statistical power of 1.0, confirming sufficient statistical power to draw the conclusions above.

Model parsimony suggests that the non-significant pathways identified in Model 1 be removed, giving rise to the Model 2, or the so-called "parsimony model". This model is depicted in Figure 5.18, and the goodness-of-fit parameters are compared with Model 1 in Table 5.41. Inspection of the comparable goodness-of-fit parameters indicates that there is only a marginal deterioration in fit, but that the predictive abilities of the two models are equivalent as shown by the R^2 values for the outcome and mediating variables. The Parsimonious Normed Fit or PNFI index, which incorporates a penalty for non-parsimony, indicates that the Model 2 is the preferred model from the perspective of model parsimony and predictive equivalence. The models are not "nested", i.e., they contain different numbers of constructs, and can therefore not be compared in the traditional way of comparing the significance of the $\chi 2$ difference and the df difference using standard $\chi 2$ tables at say 95% confidence level. However, the Akaike

Information Criterion (AIC) can be used as a comparative goodness-of-fit indicator where the two models being compared are not nested (Kline, 2011), the model with the smaller AIC showing the better fit. Again, Model 2 was indicated to be the preferred model.

Based on the above evidence Model 2 was accepted as the preferred model.

5.9.4. Between-Groups Comparisons

In order to carry out inter-group comparisons between the private partner and the public partner groups with respect to the perceived relationships in the SIPPP, it was first necessary to show *measurement equivalence* (or *invariance*) and *structural equivalence* of the models across the two groups (Byrne, 2010; Brown, 2015; Kline 2011). These respectively test whether the components of the CFA measurement model and the structural model are equivalent (i.e., invariant) across the two groups. According to this process, the single-group CFA measurement model tested earlier was re-tested separately for the private group (278 respondents) and the public group (177), and the results were compared with those for the total group as reported earlier in Table 5.35. Byrne, Shavelson, and Muthén (1989) emphasise the importance of first confirming the fit of the measurement model for each group separately before alternative hypotheses can be investigated. The comparative results are shown in Table 5.48. A similar exercise was done for the structural model (Model 1), and these results are shown in Table 5.49. Model 1 (the full model) was used in preference to Model 2 (the "parsimony" model), since it seemed advisable not to assume that the redundant pathways applied equally across the two groups. The structural models for the total group, the private-sector group and the public-sector group are shown in Appendix E and a comparison of their respective factor loadings is shown in Table 5.50.

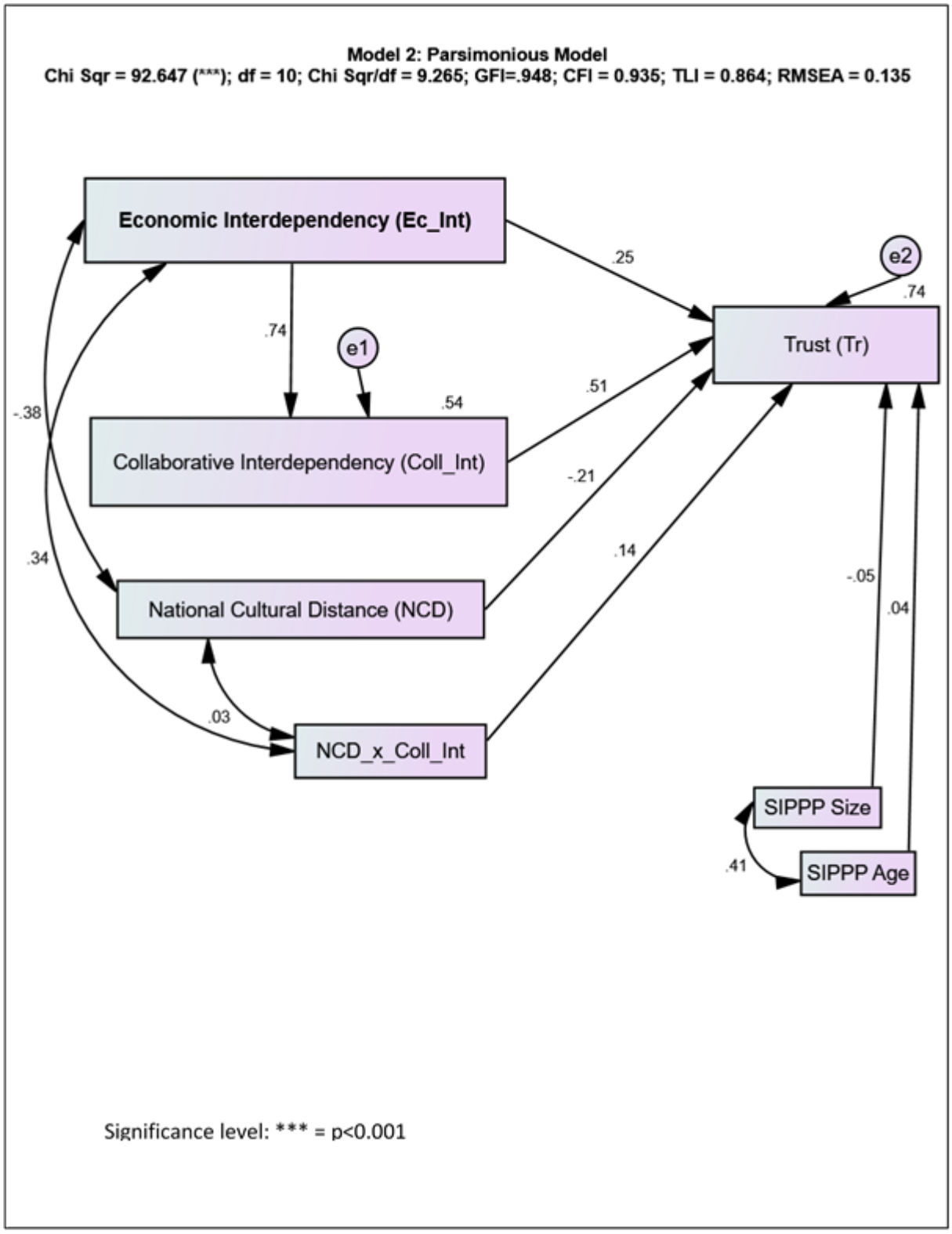


Figure 5.18. Model 2: The "parsimony model" showing only significant pathways and moderating effects

Table 5.48.

Fit of the group measurement model CFA for the three groups, total group, private-sector partners and public-sector partners

Goodness of Fit Index	Value		
Absolute Fit Indices:	**Total Group**	**Private Group**	**Public Group**
Number of respondents	455	278	177
χ^2	2357.2 (***)	1960.0 (***)	1490.0 (***)
Degrees freedom (df)	789	789	789
χ^2 / df	2.988	2.483	1.889
RMSEA	0.066	0.073	0.071
GFI	0.788	0.753	0.72
Incrmental Fit Indices			
CFI	0.911	0.895	0.875
TLI	0.903	0.886	0.863

Note: Significance level: *** = p<0.001

Table 5.49.

Fit of the group structural model (Model 1) for the three groups, total group, private-sector partners and public-sector partners

Goodness of Fit Index	Value		
Absolute Fit Indices:	**Total Group**	**Private Group**	**Public Group**
Number of respondents	455	278	177
χ^2	134.712 (***)	154.293 (***)	35.375 (036)
Degrees freedom (df)	22	22	22
χ^2 / df	6.123	7.013	1.607
RMSEA	0.106	0.147	0.059
GFI	0.953	0.92	0.966
Incrmental Fit Indices			
CFI	0.959	0.931	0.988
TLI	0.897	0.827	0.970

Note: Significance level: *** = p<0.001

Table 5.50.

Factor loadings of the group structural model (Model 1) for the three groups, total group, private-sector partners and public-sector partners

			Total Group		Private Partner		Public Partner	
Item			Standardised Regression Wt	P	Standardised Regression Wt	P	Standardised Regression Wt	P
ZColl_Int	<---	ZEc_Int	0.735	***	0.758	***	0.742	***
ZTr	<---	ZColl_Int	0.511	***	0.639	***	0.656	***
ZTr	<---	ZEc_Int	0.26	***	0.157	***	0.052	0.481
ZTr	<---	ZNCD	-0.208	***	-0.197	***	-0.202	0.02
ZTr	<---	NCD_x_Ec_Int	-0.075	0.125	-0.021	0.71	0.002	0.989
ZTr	<---	ZOCD	-0.004	0.897	-0.072	0.034	0.106	0.18
ZTr	<---	OCD_x_Coll_Int	-0.03	0.504	0.031	0.543	-0.104	0.281
ZTr	<---	OCD_x_Ec_Int	0.062	0.172	-0.006	0.915	0.044	0.712
ZTr	<---	NCD_x_Coll_Int	0.183	***	0.076	0.153	0.205	0.053
ZTr	<---	ZSIPPP_Size	-0.047	0.075	-0.044	0.133	0.004	0.938
ZTr	<---	ZSIPPP_Age	0.038	0.148	0.001	0.972	0.094	0.072

Following the procedure proposed by Byrne (2010) and by Brown (2015) and as set out in the Methods section, a multi-group CFA was then conducted to test for measurement equivalence (invariance) at construct, measurement and structural levels across the three groups (i.e., total, private-partner and public-partner groups) in a series of hierarchically nested models at increasingly stringent levels, achieved by successively increasing the number of equality constraints. The results are presented in Table 5.51.

The following conclusions were drawn from these results:

The pathway from Economic Interdependency (Ec_Int) to Collaborative Interdependency (Coll_Int) is statistically and significantly different for the two partnership groups at $p < 0.001$. Referring to the respective structural models (Model 1) for the two partner groups (Appendix E) and the respective path loadings for the two groups (Table 5.50), it is seen that the β-values for the private-sector partner and the public-sector partner are 0.758 ($p < .001$) and 0.742 ($p < .001$) respectively. Also, the pathway from Economic Interdependency (Ec_Int) to Trust (Tr) is statistically and significantly different for the two partnership groups at $p < 0.05$. In the case of the private-sector group, this pathway is significant (β = 0.157, $p < 0.001$), but for the public-partner it is not significant (β = 0.052, ns).

On the basis of these findings it was concluded that the public-sector partner group viewed the importance of collaborative interdependency vs economic interdependency in the building

of trust more highly than their private-sector partner group counterparts. This evidence lends support to H7:

H7: *In the building of trust, the importance of economic interdependency compared with collaborative interdependency is viewed differently across the two levels of partner affiliation (private-sector partners vs public-sector partners).*

The only other relationship that was perceived differently between the two partner groups at $p < 0.05$ significance was the Organisational Cultural Distance – Trust relationship. This was perceived to be negative and significant by the private-sector partner group ($\beta = -0.072$, $p < 0.05$), and as positive but insignificant by the public-sector group ($\beta = 0.106$, ns).

All the remaining pathways are not statistically significantly different between the two partner groups, and it was therefore concluded that there was no support for hypotheses H6a, H6b, H6c, and H6d, which dealt with perceived differences in the moderating effects of national cultural distance and organisational cultural distance on the relationships. The null hypotheses that there are no perceived differences between the partner groups regarding the moderating effects of national cultural distance and organisational cultural distance on their relationships must, therefore, be retained.

Table 5.51.

Results of the multi-group analysis: private partner group vs public partner group

Pathway: Ec_Int-Coll_Int

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	25.83	0	0.004	0.004	0.007	0.007

Result: CMIN ($\chi 2$) is significant at P<0.001
Conclusion: The pathway is statistically significantly different for the two groups, public vs private partners

Pathway: NCDxColl_Int - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	2.738	0.254	0	0	-0.003	-0.003

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Pathway: NCDxEc_Int - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	0.687	0.709	0	0	-0.004	-0.004

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Table 5.51. continued

Results of the multi-group analysis: private partner group vs public partner group

Pathway: OCDxEc_Int - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	1.107	0.575	0	0	-0.004	-0.004

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Pathway: OCDxColl_Int

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	1.817	0.403	0	0	-0.003	-0.003

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Pathway: Coll_Int - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	3.654	0.161	0.001	0.001	-0.003	-0.003

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Pathway: Ec_Int - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	5.692	0.048	0.001	0.001	-0.002	-0.002

Result: CMIN ($\chi 2$) is significant at P<0.05
Conclusion: The pathway is statistically significantly different for the two groups, public vs private partners

Pathway: NCD - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	0.277	0.871	0	0	-0.004	-0.004

Result: CMIN ($\chi 2$) is not significant at P<0.001
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Pathway: OCD - Tr

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	2	5.191	0.045	0.001	0.001	-0.002	-0.002

Result: CMIN ($\chi 2$) is not significant at P<0.05
Conclusion: The pathway is not statistically significantly different for the two groups, public vs private partners

Note: In all cases it is assumed that the unconstrained model is correct

5.10. Summary of Findings

A summary of the results of the hypotheses testing is presented in Table 5.52, which lists each of the hypotheses, the evidence collected in respect of each hypothesis, the β-value and the ρ-value, and whether the evidence supports it or not.

The results confirm a significant positive relationship between the partners' economic interdependency and trust, through both a direct effect and an indirect effect via collaborative interdependency, resulting in a strong combined effect of 0.72, $p < 0.001$. Variance in economic interdependency explained 53.9 % in the variance of the outcome variable, trust, with a Cohen's $f^2 = 1.168$, indicative of a large effect size (Cohen, 1988). From this we conclude that the trust between partners in a SIPPP is positively influenced by their economic interdependency, providing support for hypothesis H1a.

The pathway between the partners' economic interdependency and their collaborative interdependency was found to be strong and significant with a β-value = 0.735, $p < 0.001$. The variance in economic interdependency explained 54.1 % of the observed variance in collaborative interdependency, with Cohen's $f^2 = 1.179$, indicating a large effect size. The conclusion is that a strong positive link exists between partners' economic interdependency and their collaborative interdependency, providing support for H1b.

Also, it was shown that a strong and significant relationship exists between the partners' collaborative interdependency and trust (β = 0.615, $p < 0.001$). Therefore, the trust between partners in a SIPPP is positively influenced by their collaborative interdependency. Variance in collaborative interdependency explained 67.6% of the observed variance in trust, with a Cohen's $f^2 = 2.086$, indicating a large effect size. H1c is therefore supported.

Based on evidence provided, it was concluded that the partners' collaborative interdependency significantly mediates the relationship between their economic interdependency and their level of mutual trust. Together, variances in economic interdependency and collaborative interdependency explain 72 % of the observed variance in trust (Table 5.41), compared with the individual contributions from economic interdependency and collaborative interdependency of 54.1 % and 67.6 % respectively (Table 5.45). The incremental R^2 of 6.9 % for the relationship between economic interdependency and trust is as a result of the mediating effect of collaborative interdependency on this relationship. This provides evidence in support of H2.

National cultural distance was found to have a direct effect on trust – the effect is negative, moderate (β-value = -0.21) and significant at $p < 0.001$. The variance in national cultural

distance explained twenty percent of the observed variance in trust (Appendix G), giving a Cohen's f^2 = 0.14, indicating a small to medium effect size. This provides support for hypothesis H3.

At the same time, national cultural distance was also shown to positively moderate the relationship between the partners' collaborative interdependency and trust. The effect is moderate (β-value = 0.183) and is significant at the $p < 0.001$ level. The variance in national cultural distance explained 12 % of the observed variance in the outcome variable, trust (Appendix G), giving a Cohen's f^2 = 0.20, which indicates a small to medium effect size. This suggests that the partners recognise the potential negative effects of national cultural distance between them on their relationship, and are thereby driven to greater levels of collaboration, providing evidence for the so-called "cultural paradox" phenomenon and support for hypothesis H4b.

No moderating effect of national cultural distance on the economic interdependency - trust relationship was found and there was, therefore, no support for hypothesis H4a.

It follows from the above that national cultural distance moderates the relationship between collaborative interdependency and trust more than it moderates the relationship between economic interdependency and trust. There is, therefore, support for hypothesis H4c.

Organisational cultural distance was found to not have a significant direct negative effect on trust, and there was, therefore, no support for hypothesis H5a.

There was no moderating effect found of organisational cultural distance on the partners' economic interdependency – trust relationship or on their collaborative interdependency - trust relationship. There was, therefore, no support for hypotheses H5b and H5c.

It follows from the above that, in the absence of any moderating effect by organisational cultural distance, there was also no support for hypothesis H5d.

On the basis of the findings, it was concluded that the public-sector partner group viewed the importance of collaborative interdependency vs economic interdependency in the building of trust more highly than their private-sector partner group counterparts. This evidence lends support to H7.

The between-groups analysis showed that there was no statistically significant difference in the perceptions of the two partner groups of the moderating effects of national cultural distance and organisational cultural distance on their relationships. It was therefore concluded that there was no support for hypotheses H6a, H6b, H6c, and H6d.

The significance of these findings is discussed in Chapter 6: Discussion

5.11. Revised Conceptual Model

The conceptual model from the literature survey (Figure 3.7) was revised based on the empirical results from the study, and the new theoretical model for the total group is presented in Figure 5.19. Significant relationships are indicated in bold, while the relationships that are perceived differently by the private-sector partner group and the public-sector partner group are also indicated. Similarly, the theoretical model as it applies to each partner group is shown in Figure 5.20 (private-sector partner) and Figure 5.21 (public-sector partner).

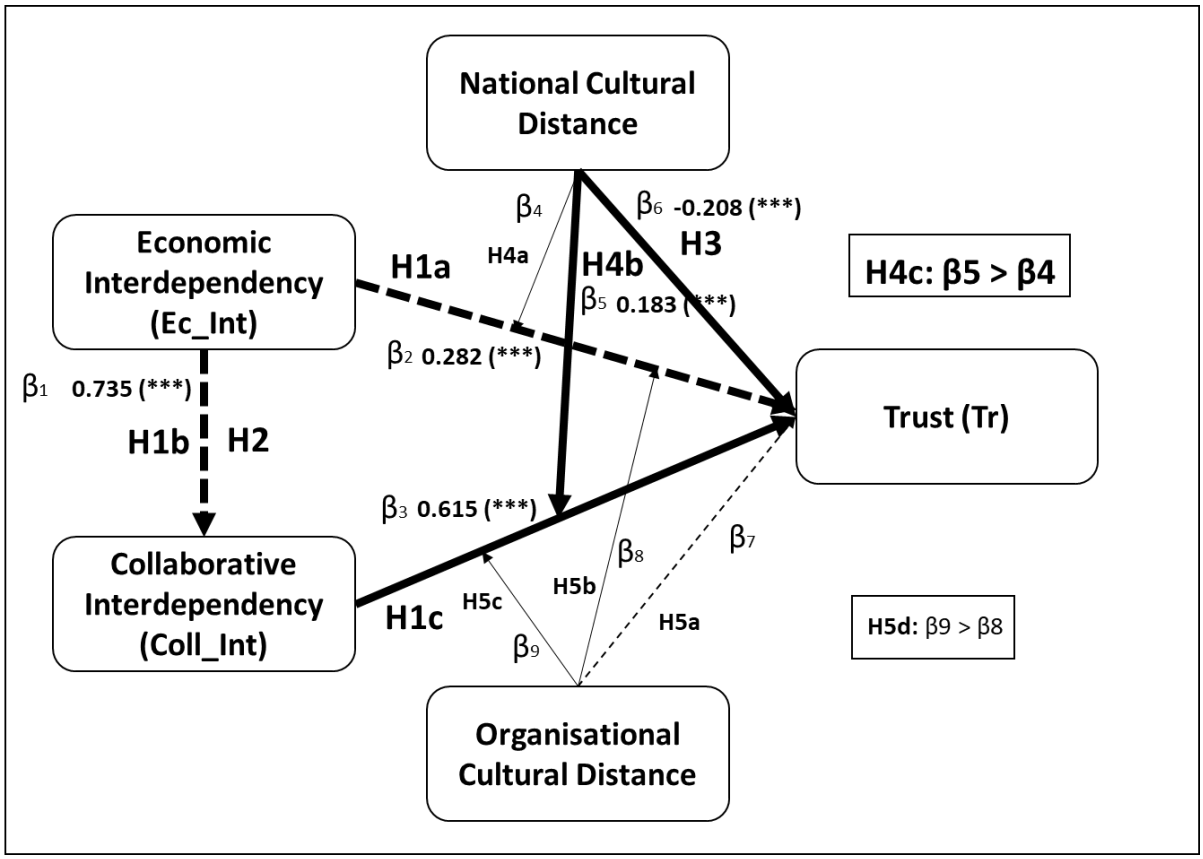
Table 5.52. Summary of hypotheses testing

	Research Hypothesis	Evidence β-value (ρ -Value)	Findings
H1a:	*Economic interdependency between the partners in a SIPPP positively influences the level of trust*	*Direct effect: 0.282 (***)* *Indirect effect: 0.440 (***)* *Total effect: 0.722 (***)*	Supported (p<0.001)
H1b:	*Economic interdependency between the partners in a SIPPP positively influences their level of collaborative interdependency*	*0.735 (***)*	Supported (p<0.001)
H1c:	*Collaborative interdependency between the partners in a SIPPP positively influences the level of trust*	*0.615 (***)*	Supported (p<0.001)
H2:	*Collaborative interdependency between the partners in a SIPPP mediates the relationship between economic interdependency (the predictor variable) and the building of trust (the outcome variable)*	*mediation proven (**)* *0.735 (***) & 0.615 (***)*	Supported (p<0.01)
H3:	*National cultural distance between the partners in a SIPPP negatively influences the level of trust*	*-0.208 (***)*	Supported (p<0.001)
H4a:	*National cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*	*-0.075 (ns)*	Not supported (p<0.01)
H4b:	*National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*	*0.183 (***)*	Supported (p<0.001)
H4c:	*National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust.*	0.183 (***) vs -0.075 (ns)	Supported (p<0.001)
H5a:	*Organisational cultural distance between the partners in a SIPPP negatively influences the level of trust*	*0.024 (ns)*	Not supported (p<0.01)
H5b:	*Organisational cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust.*	*0.062 (ns)*	Not supported (p<0.01)
H5c:	*Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust.*	*-0.03 (ns)*	Not supported (p<0.01)
H5d:	*Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust more than the relationship between economic interdependency and trust.*	ns	Not supported (p<0.01)

Table 5.52. (cont'd). Summary of hypotheses testing

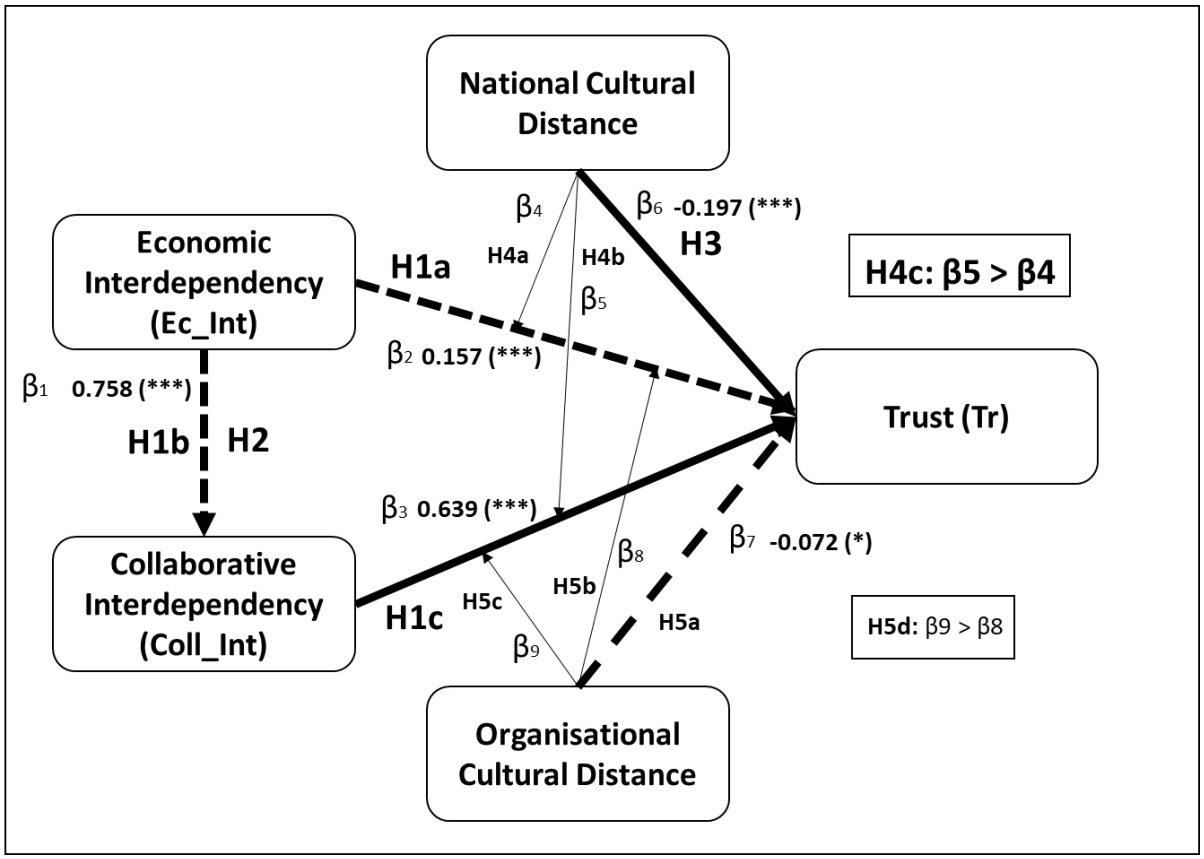
	Research Hypothesis	Evidence β-value (ρ -Value)	Findings
H6a:	*Organisational cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public sector partners).*	*No significant difference between private & public groups (***)*	Not supported (p<0.001)
H6b:	*Organisational cultural distance between the partners in a SIPPP moderates the relationship between economic interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public sector partners).*	*No significant difference between private & public groups (***)*	Not supported (p<0.001)
H6c:	*National cultural distance between the partners in a SIPPP moderates the relationship between collaborative interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public sector partners).*	*No significant difference between private & public groups (***)*	Not supported (p<0.001)
H6d:	*National cultural distance between the partners in a SIPPP will moderates the relationship between economic interdependency and trust differently across the two levels of partner affiliation (private sector partners vs public sector partners).*	*No significant difference between private & public groups (***)*	Not supported (p<0.001)
H7:	*In the building of trust, the importance of economic interdependency compared with collaborative interdependency will be viewed differently across the two levels of partner affiliation (private-sector partners vs public-sector partners).*	*Difference between private & public groups significant (***)* *public: 0.758 (***)* *private: 0.742 (***)*	Supported (p<0.001)

Note: *** ρ<0.001; *** ρ<0.01; ns= not significant



**** p < 0.001 * p < 0.05

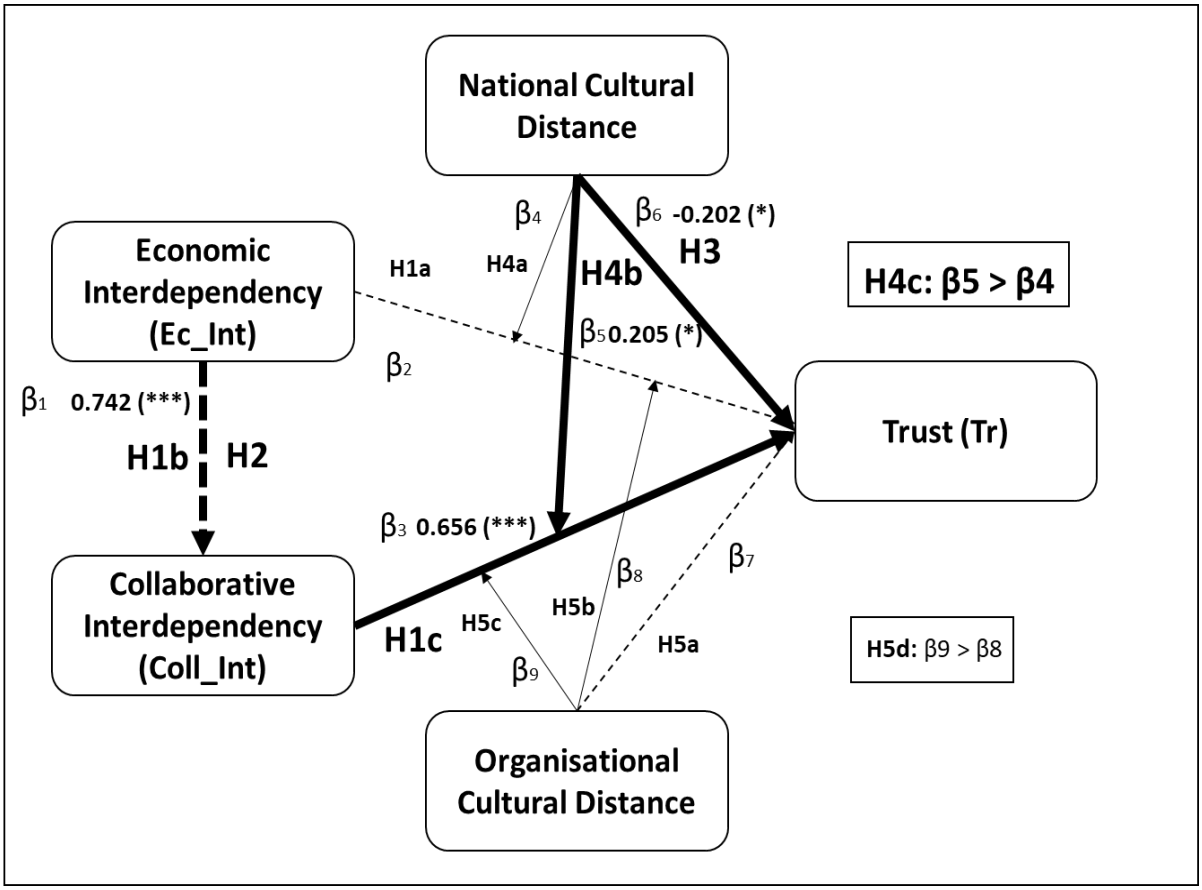
Figure 5.19. Revised theoretical model based on empirical results for the total partner group.
Note: Significant relationships and supported hypotheses are shown in bold. Relationship where there are significant differences between the private-sector partner group and the public-sector partner group are shown as broken lines.



**** p < 0.001 * p < 0.05

Figure 5.20. Revised theoretical model based on empirical results for the private-sector partner group.

Note: Significant relationships and supported hypotheses are shown in bold. Relationship where there are significant differences between the private-sector partner group and the public-sector partner group are shown as broken lines



**** p < 0.001 * p < 0.05

Figure 5.21. Revised theoretical model based on empirical results for the public-sector partner group.

Note: Significant relationships and supported hypotheses are shown in bold. Relationship where there are significant differences between the private-sector partner group and the public-sector partner group are shown as broken lines.

CHAPTER 6: DISCUSSION

6.1. Introduction

The purpose of this chapter is to present and integrate the results of the literature review, the two pilot studies, the main empirical study and tests of the hypotheses, and to compare the findings with those of similar published research studies. Further insights into the findings are offered, and the resulting implications are assessed. The aim of the chapter is to answer the research question and sub-questions as set out in Chapter 3. The performances of the new measurement scales are reviewed first, followed by a discussion and explanation of the various relationships in the light of the empirical results and prior research.

6.2. Measurement Scales

All the measurement scales, except the organisational culture distance scale, performed reasonably well, albeit in some cases after re-specification to address redundancy and low loadings inherent in the original scales. The former scales, derived and adapted from prior research, showed satisfactory reliability, convergent and discriminant validity, and exhibited satisfactory fit of the data.

As far as can be ascertained, this is the first time that the national cultural distance and the organisational cultural distance scales, based on the Hofstede national cultural model (Hofstede, 1980) and on the Hofstede organisational cultural dimensions (Hofstede *et al*., 1990) respectively, but using cognitive perceptions rather than empirical scores, have been applied in an African context. The national cultural distance scale performed satisfactorily, and all the Hofstede dimensions were confirmed. This is contrary to the findings in certain published cultural research studies, in which only some of the dimensions could be replicated (Shenkar, 2001, 2012; Potukuchi *et al*., 2002; Newman & Nollen, 1996; Barkema & Vermeulen, 1997).

However, the organisational cultural distance scale proved to be problematic and had to be re-specified. In the end, only 3 of the original organisational cultural dimensions could be replicated, namely, process v result, employee vs job, and loose vs tight. It is interesting to note that similar problems with partial fit of this scale have been reported in the literature for studies done in other countries, notably in Europe, the cause being attributed to different contexts from the original Hofstede study. For example, in the study conducted by Bös, Dauber, and Springnagel (2011), it was reported that the Hofstede organisational culture questionnaire, encompassing the five dimensions used in this study, could only be partly replicated for Austria, with only two of the five dimensions capable of being replicated, namely

process vs result and employee vs job. The remaining dimensions were not reliable. The authors believe that the reason for the Hofstede dimensions not being reproducible in Austria, can be found in the basic underlying assumption of the model, namely that organisational culture should be measured through “practices” rather than through “values”. This stands in direct contrast to later studies (e.g., Dauber, Fink, & Yolles, 2010), which envisage “practices” as linked to “values”. They argue, therefore, that cultural context should be taken into account when evaluating organisational practices. If replication of the model dimensions is a problem in European countries, where many cultural values are shared, it is likely to be an even bigger challenge in a context of extreme cultural distance e.g., Africa. This raises the question whether the described practices of Hofstede *et al*. (1990) truly reflect organisational culture values?

6.3. Discussion of Relationships

The study used CB-SEM to test seventeen hypotheses on the relationships between economic interdependency, collaborative interdependency and trust between private-sector and public-sector partners in a SIPPP, and the interaction effects of national cultural distance and organisational cultural distance on these relationships. The study findings provided support for eight of the hypotheses, but nine were not supported. The following section provides further insights into these findings and their implications and elucidates how they fit in with published prior research in this area or represent new research breakthroughs.

6.3.1. Economic interdependency and trust

The study findings provide support for a strong link between the SIPPP partners’ economic interdependency and the level of trust between them. This is the first study of its kind to empirically confirm that in a SIPPP levels of trust between the two partner groups - the private-sector partner and the public-sector partner - are directly influenced by their levels of economic interdependency. The linkage can be explained by the argument that trust and economic interdependency are closely related, since the interest of one partner cannot be achieved without reliance upon the other partner. High levels of economic interdependency usually involve extensive personal interaction, information exchange, and resource integration, which collaborative platforms require and in turn, provide opportunities for the development of mutual trust.

Economic interdependency in a sense creates an incentive structure that builds positive synergies and deters negative actions based on self-interest and opportunism. The greater

the economic interdependency between the SIPPP partners, the greater will be their need for trust.

This finding is significant, because it suggests that the partners in a SIPPP start the trust-building process to the extent that they have pooled their unique economic resources. Furthermore, it underlines the importance of them effectively managing their joint resources to achieve the necessary synergies to the maximum benefit of the alliance. This helps to build their mutual confidence in each other which, in turn, contributes to trust. In a way, the finding suggests that economic interdependency facilitates understanding between the partners, who are more willing to work together, to share information and to build trust in each other, since they are keen to protect their investments and believe that greater benefits will come from such collaborative efforts. This gives us an important insight into the trust-building process in a SIPPP, suggesting that the economic exchange, which is normally part of the formation of the partnership, is an important relationship-building block, and effectively provides the all-important foundation on which the other relationships leading to trust are built. In a way, the partners' economic interdependency and the way that they manage it, sets the scene for their relationship and a successful outcome (or otherwise) for the alliance.

No comparable studies could be found that examined the relationship between a private-sector partner and a public-sector partner in a cross-cultural alliance. However, it is interesting to note that the findings are not too dissimilar to those from private sector cross-cultural studies involving partners from more collectivist cultures, e.g., Rodríguez & Wilson (2002), who studied USA-Mexican alliances and the relationship between USA managers and their Mexican counterparts. The findings are also consistent with those from more general ISA studies that have examined similar relational aspects between cross-cultural private partners and have concluded that trust emerges from the partners' interdependency, starting off with their economic interdependency (Luo, 2008; Robson *et al*., 2008; Damanpour *et al*., 2012; Luo & Park, 2004; Das & Kumar, 2009). Similar findings were also reported by Yan and Gray (1994), who conducted a number of cross-cultural case studies, observing that trust played an increasingly important role in weakening the negative effects of self-interest and opportunism on ISA performance in situations where both parties were more reliant on each other's distinctive resources (Luo, 2002). Luo (2008) also noted that, when economic integration and dependency are stronger, other dyadic variables, including communication, procedures and governance, tend to have a greater effect on trust and alliance performance. However, Young-Ybarra and Wiersema (1999) cautioned that, while economic interdependency drives trust, economic commitment created through too much asset specificity, may create organisation inertia and undermine flexibility. Consequently, they recommend that asset specificity and dependence be kept at a minimal level to achieve more

flexibility in the relationship, and to ensure a highly versatile and flexible alliance, built on a foundation of collaboration, particularly important during uncertain times.

6.3.2. Economic interdependency and collaborative interdependency

The study findings provide strong support for the hypothesis that there is a positive link between the SIPPP partners' economic interdependency and their collaborative interdependency. Furthermore, the results indicate that the strength of this relationship is stronger than the economic interdependency-trust relationship. These findings suggest that collaborative interdependency between the partners in a SIPPP is built on the back of their economic interdependency, which exerts a strong influence. This is the first study to provide empirical evidence for such a relationship in a SIPPP, and gives us a deeper understanding of how these relationships are built and their importance in the overall process of securing a trusting relationship.

The linkage between economic interdependency and collaborative interdependency can be explained as follows: with the building of trust driven by their economic interdependency, the partners gain more knowledge about each other in the process, and deeper, personal ties develop that involve behavioural processes and encompass intangible resources that are emotional or affective in nature. The building of collaborative relationships essentially involves familiarity, friendship and confidence built through interpersonal exchange. Such collaborative platforms are created through the partners' economic interdependency, which incentivises them to work together, creating personal ties in the process. These personal ties are further strengthened on the back of the partners' economic interdependency, comprising tangible and intangible resources, generating social capital, which starts to provide the "glue" that holds the relationship together. The intensity of the collaborative interdependency that follows, as perceived by the partners on both sides, will depend on the perceived strength of the foundation provided by their economic interdependency. The social capital formed in the process helps to counter pressures to dissolve the relationship, drives the level of satisfaction in the partnership and, in turn, entails further social commitments, generating increasing levels of social capital, collaboration and collaborative interdependency. The conclusion is that collaborative ties, established through the partners' social networks, develop on the back of their economic ties, and reinforce the initial ties built between them on the basis of their economic exchange.

Again, the findings appear to confirm the importance of high levels of economic interdependency, based on their exchange of unique resources, to provide a solid basis for building collaborative platforms and trusting relationships. The study findings, therefore,

suggest that collaborative interdependency, built through social exchange, is a measure of the intrinsic quality of the relationship itself, and has a strong impact on how such a relationship develops. Together, economic interdependency and collaborative interdependency constitute the "relationship atmosphere" in the SIPPP.

The study findings reflect the findings from similar studies reported in the literature, albeit none with the involvement of a cross-cultural public-sector partner. Williams *et al*. (1998) reported the findings of their study on ISAs that social ties (similar in concept to collaborative ties) were built on the back of structural ties (similar in concept to economic ties), and that the latter reinforced the initial ties built between the partners on the basis of economic exchange. This conclusion was also supported by Rodríguez and Wilson (2002), who showed in their study of USA-Mexican alliances that structural (economic) bonding preceded social (collaborative) bonding, but that the former exerted a strong, positive influence on the latter.

6.3.3. Collaborative interdependency and trust and its role as mediator

The study has provided new empirical evidence to support the conclusion that collaborative interdependency between the partners in a SIPPP, already linked to their economic interdependency, is also directly linked to trust. The study further confirms a strong mediating effect by the partners' collaborative interdependency on their economic interdependency-trust relationship, effectively magnifying or augmenting this relationship. The results show that, for the partnership seen as a whole, the relative strength of the economic interdependency–collaborative interdependency–trust mediating relationship is more than one-and-a-half times that of the direct relationship of economic interdependency and trust, suggesting the dominance of this mediation effect in building partnership trust levels. This underlines the overall importance of the partners' collaborative interdependency in building trusting relationships.

The study promotes a better understanding of the relational processes supporting the building of collaborative based trust, suggesting that the relationships between the partners in a SIPPP have both an economic dimension, defining their economic interdependency, as well as a collaborative dimension, which determines their level of collaborative interdependency and propensity for co-operation and joint action. The findings suggest that collaborative interdependency, built on the foundation of the partners' economic interdependency, plays a vital role in sustaining and strengthening the relationship and building collaborative trust. Without establishing a satisfactory level of collaborative interdependency built on a sound foundation of economic interdependency, the relationship will not grow and cannot be sustained.

The findings also suggest that building collaborative ties happens in complex social networks, involving ties of familiarity, friendship and confidence built through interpersonal exchange. All are closely related to trust and lead to higher levels of collaborative interdependency, in turn leading to higher levels of trust. The social capital that is built up by the partners as a result of these processes helps to enhance and sustain the relationship, and a virtuous cycle ensues. It is suggested that the benefits that ultimately flow from the social capital accumulated between the partners during the process of building their collaborative interdependency include more influence, more power, gaining easier access to information, easier access to key stakeholders, relationship satisfaction, and access to resources. Social capital is also important in reducing information asymmetry to aid decision-making and to help overcome the differences that create conflict among SIPPP partners, for example, differences in their respective agendas. However, in the absence of or in the presence of low levels of collaborative interdependency, the ties between the partners are weakened, and there is a likelihood of opportunism by the stronger partner, leading to distrust and failure to commit to the relationship, thereby establishing a vicious circle.

The implication of this result is that it underlines the importance of the partners in a SIPPP creating a solid foundation of economic interdependency, based on their pooled unique resources, on which strong collaborative platforms can be built. The partners' collaborative efforts build up their collaborative interdependency, creating positive synergies in the process that strengthen the relationship, promote joint action, and drive further mutually rewarding collaborative behaviours, leading to even higher levels of trust. The greater the collaborative interdependency between the SIPPP partners, the greater will be their need for trust. This suggests that the partners may use their collaboration to transform their economic interdependency into a collaborative interdependency that reduces the presence of inequalities in power that may have been introduced as a result of their economic exchange.

While comparable studies involving cross-cultural private-sector and public-sector partners could not be found, the findings are generally in line with those from similar ISA studies reported in the literature (Williams *et al*., 1998; Rodríguez & Wilson, 2002). The link between interdependency and trust is also supported by the findings of Katsikeas *et al.* (2009) in their study of ISAs involved in imports-exports, although only economic interdependency was considered. Furthermore, studies by Dash *et al*. (2007, 2009) on the antecedents of long-term buyer-seller relationships and banking relationships respectively revealed similar relationships between trust and co-operation/ interdependency. The studies also reported similar mediation effects of the partners' social ties on their structural ties leading to trust.

6.3.4. Effect of national cultural distance

The study has provided new empirical evidence to show that national cultural distance affects the relationship between partners in a SIPPP in two ways: a direct negative effect on trust and a positive moderating effect on the relationship between collaborative interdependency and trust. The direction of the direct effect is as expected, i.e., as national cultural distance between the partners in a SIPPP increases, so do the challenges to their relationship (misunderstandings, distrust, and conflict), which impact negatively on their trust levels.

However, national cultural distance was also shown to have a moderating effect on the relationship between collaborative interdependency and trust, i.e., it influences the magnitude and direction of this relationship depending on the level of national cultural distance. The effect is moderate, as expected, but, contrary to expectations, the direction of the effect is positive. This means that at high levels of collaborative interdependency and high levels of national cultural distance, trust levels are actually enhanced compared with the situation where there is a low level of national cultural distance. The converse is also true i.e., at low levels of collaborative interdependency and high levels of national cultural distance, trust levels are negatively impacted compared with the situation where there is a low level of national cultural distance.

These findings, at first glance, appear to be contrary to conventional wisdom and to the findings of the majority of cross-cultural studies. For example, Stahl and Tung (2015) reported that a content analysis of 1141 articles on cross-cultural management research in international business studies over a 24-year time period revealed a 17:1 ratio in favour of research that made negative theoretical assumptions surrounding cultural distance over those that made positive ones, supporting the conclusion that there is an overwhelming emphasis in prior research on the liabilities associated with cultural distance on inter-relationships. Studies referred to generally reported on the negative effects of cultural misunderstandings, rooted in cultural distance, that inhibit the flow of information and learning, thereby detracting from trust (Lane *et al*., 2001; Evangelista & Hau, 2009; Pak *et al*., 2009). The findings of the current study, however, suggest that the partners in a SIPPP, recognising the potential negative effects of national cultural distance between them on their relationship, are prepared to work together and collaborate more to build their mutual trust as a bulwark against the potential negative effects of high levels of national cultural distance, and to protect their joint investments and the alliance. Furthermore, it may also be that the partners recognise the positive aspects of their cultural diversity, as reflected in their different knowledge bases and decision-making styles, as a potential source for enhancing decision-making and creativity in the alliance, thereby driving competitive value. The moderating effect is opposite to the direct

effect and of slightly lower magnitude, but it implies that the partners can at least partly offset the initial negative effects of their cultural distance on their relationship by purposefully increasing their level of collaboration, the fuel ironically being provided by the high levels of national cultural distance. The opposite side of the same coin would suggest that low cultural diversity, as indicated by small cultural distance, which in effect reduces uncertainty, leads to complacency between partners, removing the incentive to try harder to accommodate each other. This further suggests that close cultures can run into difficulties because they do not expect differences, and therefore do not actively manage their cultural differences.

This phenomenon has been recognised in a few studies reported in the literature, albeit in somewhat different contexts to the current study, and has often been referred to as the "cultural paradox" (Ozorhon *et al*., 2008; del Mar Benavides-Espinosa & Roig-Dobón, 2011; Pesch & Bouncken, 2017; Sirmon & Lane, 2004; Brouthers & Brouthers, 2001; O'Grady & Lane, 1996). Some researchers even claim that their cultural distance may be a source of admiration to the partners, enhancing their mutual trust (Park & Ungson,1997; Evans & Mavondo, 2002) or serve as a strategic differentiator to local stakeholders, providing a source of competitive advantage (Stahl, Tung, Kostova, & Zellmer-Bruhn, 2016; Stahl, Miska, Lee, & de Luque, 2017; Christoffersen, Globerman, & Nielsen, 2013; Pesch & Bouncken, 2017). Similarly, del Mar Benavides-Espinosa and Roig-Dobón (2011), in their study of learning in ISAs, found that greater levels of cultural distance did indeed make co-operative learning more difficult, but, once the obstacle was recognised by the alliance partners and overcome, results improved and the partners in the ISA developed their capacity for learning. This phenomenon may also help to explain some of the inconsistent findings as reported in prior ISA research regarding the empirical effect of national cultural distance on the trust-building relationships, its impact and direction, according to the findings of the current study, being dependent on the relative levels of national cultural distance and collaborative interdependency (Pothukuchi *et al.*, 2002; Mjoen & Tallman, 1997; Beamish, 1985; Lane & Beamish, 1990; Parkhe, 1991).

The study results failed to find any evidence of a moderating effect of national cultural distance on the partners' economic interdependency-trust relationship. From this we conclude that national cultural distance does not significantly impact on the economic interdependency-trust relationship, but preferentially affects the "softer" part of the relationship, i.e., the economic interdependency-collaborative interdependency-trust relationship.

Despite the increasing convergence of national economies in terms of norms and practices in the wake of globalisation, the study found that cultural diversity in the form of national cultural difference, remains an important influence on cross-cultural alliance relationships, and adds a further level of complexity to the management of the SIPPP type of alliance. How the partners

manage their cultural differences then becomes a salient factor in the management of the alliance and their ability to build sustainable trusting relations.

6.3.5. Effect of organisational cultural distance

Contrary to expectations, the study results provided no support for the hypothesis that organisational cultural distance between the partners in a SIPPP negatively influences the level of trust, either directly or in a moderating role. This suggests that organisational cultural distance plays a less important role in influencing the interdependency-trust relationship in a SIPPP than national cultural distance.

This is a significant finding that is somewhat contrary to the ISA research findings reported by several researchers, including Ozorhon *et al* (2008), Pothukuchi *et al*. (2002) and Brown *et al*. (1989), who all concluded that organisational cultural distance tends to exert a bigger influence on partner relationships than national cultural distance. The latter scholars argued that the reason why organisational cultural distance exerts more influence on trust and alliance performance than national cultural distance is because organisational culture is seemingly more proximal and salient to the behaviours of the partners that drive the alliance. Sirmon and Lane (2004) concurred, noting that their study showed that organisational culture differences were more disruptive than national culture differences to the building of trust and value creation. Further, Pothukuchi *et al*. (2002) noted that, while organisational culture distance generally has a negative impact on organisational outcomes like trust, national culture distance can have either a positive or a negative effect.

The current study is unique, in the sense that very few scholars have simultaneously focused on both organisational and national cultural distance in their research, and there are, therefore, few comparative studies in the research literature. However, the reason for the discrepancy in prior ISA research findings as reported above may be two-fold. Firstly, it may be the African context, where national cultural differences with the West (where most of the private partners originated from) tend to be more extreme than organisational cultural differences. This is so despite the expectation that public-private sector differences would be exaggerated in Africa, because the continent has been lagging in the so-called “new age” public management process that has swept through the developed world over the past two decades, seeking to achieve greater orientation of the public institutions towards their private sector counterparts and bringing them closer together in an organisational cultural sense (Parker & Bradley, 2000). Secondly, it may be that the current research was somewhat compromised by a relatively weak organisational distance scale that may have underestimated its effect on the trust-building relationships. As noted later, this may well be a fruitful area for future research.

6.3.6. Between-groups comparisons: private-sector partner vs public-sector partner perceptions

An important sub-question of the research question was whether the two partner affiliation groups - the private-sector partner group and the public-sector partner group - had significantly different perceptions of the relationships that may influence their individual behaviours in the SIPPP. The results of the between-groups comparison showed that the perceived relationship between economic interdependency and collaborative interdependency is statistically and significantly different for the two partnership groups, providing evidence to support the conclusion that the two partner affiliation groups did indeed hold different perceptions of these relationships.

The study findings suggest that the public-sector partner group viewed the importance of collaborative interdependency vs economic interdependency in the building of trust more highly than their private-sector partner group counterparts. Furthermore, the private-sector partner appeared to put more store in economic interdependency than collaborative interdependency to drive trust. These findings are in substantial agreement with the collectivist orientation of the African culture (Hofstede, 1980), and representative of the domestic public-sector culture, on the one hand, and the individualistic orientation of the Western culture (Hofstede, 1980), generally representative of the private-sector partner culture, on the other.

The between-groups comparison also highlights the differences in perceptions of the two partner groups as regards the “cultural paradox” phenomenon described earlier. While this phenomenon is significant for the relationship as a whole (Figure 5.19), it takes on very different dimensions when the lens is focused at individual partner level. The results show that the public-sector partner is more influenced by the moderating effects of national cultural distance on their economic interdependency – collaborative interdependency – trust relationship than is the private-sector partner, with the relative weighting being similar to that for the group as a whole (Figure 5.20 & Figure 5.21). In the case of the private-sector partner, the results show that the moderating effect of national cultural distance on these relationships is not even significant. An explanation for this unexpected finding may lie in the fact that, contrary to the assumption of symmetry implicit in the concept of cultural distance, it is known that the perceived effects of the construct are actually asymmetrical – the cultural distance between cultures A and B as perceived by the partner representing culture A, for example, is not the same as that perceived by the partner representing culture B (Shenkar, 2001, 2012; Yildiz & Fey, 2016; Håkanson & Ambos, 2010). Furthermore, it may be that certain cultural characteristics make one side of the partnership naturally more adept at learning about the other, thereby further skewing the development of trust.

The only other relationship that was perceived differently between the two partner groups at $p < 0.05$ significance was the organisational cultural distance – trust relationship, which was insignificant for the total group, but perceived to be weakly negative and significant by the private-sector partner group, and as moderately positive, but insignificant by the public-sector group. Otherwise, the study found that the two partner groups had similar perceptions of the effects of national cultural distance and organisational cultural distance on their relationships.

Comparing the relative strengths of each of the relationships between the two partner affiliation groups, we see that, in the case of the private partner, more than three quarters of the total effect of economic interdependency on trust is generated through collaborative interdependency, the mediated indirect effect. For the public-sector partner group this is closer to 100%, i.e., virtually all the trust generated by economic interdependency is through the mediation of collaborative interdependency. This is in line with the conclusion regarding their individual perceptions of the relative importance of collaborative interdependency and economic interdependency in building trust.

These findings have several important implications, both as regards expected behavioural differences between the two partner affiliation groups in a SIPPP with respect to the building of trust, and for future research in this area. The findings suggest that we can expect that the public-sector partner will put more effort into building collaborative relationships that emphasise co-operation, joint action and the building of social capital, and will be less reliant on their economic interdependency with their private-sector partner to build up trust levels. The private-sector partner, on the other hand, while not ignoring collaborative activities and still recognising the importance of collaboration and building collaborative interdependency with their public-sector partner as a way to build trust, is likely to put relatively more focus on the economic interdependency of the relationship to enhance trust levels compared to their public-sector colleagues. These results also suggest that, as far as the overall relationship is concerned, the public-partner will tend to take a longer-term view than the private counterpart, with the building of mutual trust going hand-in-hand with the building of a strong and sustainable collaborative relationship.

These findings imply that the public-sector partner will show more concern for building long-term social relationships, preferring to drive more strongly those processes that build their collaborative interdependency, including platforms for joint action, communication, social interaction and information sharing. Reciprocity will be important in building its confidence level in the private-sector partner. The private-sector partner, on the other hand, while not ignoring the importance of building collaborative ties, will tend to be more task-centred and concerned about short-term progress, preferring to focus more on emphasising and leveraging

their economic ties. Furthermore, the findings also suggest that both partner groups will tend to stress those values that are consistent with their respective orientations. Therefore, we can expect the public-sector partner to emphasise values, such as open and honest communication, an employee-centred approach, employment security, loyalty and reciprocity, while the private-sector partner is likely to put more store in punctuality, long-term planning as a means of managing risk, adherence to budgets, and management of change. In the case of the public-sector partner, those values are extended outside of the business relationship, since the latter is unlikely to fulfil the context for social interaction, whereas the private-sector partner derives satisfaction from the business relationship itself, preferring to keep external relationships separate.

It is important for a successful alliance outcome that the partners recognise and are sensitive to each other's needs and to accommodate the different views. They need to focus on turning their differences, which would normally reduce mutual trust, into complementary strengths through collaborative actions that can build and sustain the relationship. For example, the SIPPP needs to be structured and designed appropriately to reflect the long term as well as the short-term view. Thus, the private-sector partner will tend to focus on building the long-term perspective through, for example, long-term investment and planning, while measuring progress based on short- to medium-term results. The public-partner's cultural orientation, on the other hand, may be more short-term focused in terms of business processes such as planning, but will tend to be more long-term focused in respect of the relationship. Both views are extremely relevant to the future of the SIPPP and complement each other. The partners need to understand these perspectives and learn to manage their differences to convergence. Senior partners from both sides of the dyad need to jointly influence the predominant leadership style embedded in the SIPPP to achieve this (a common managerial style). Partner cultural "fit" is, therefore, of key importance.

The study finding also has important implications for future cross-cultural management research. The usual practice of only surveying one side of the dyad (normally the Western private-sector partner), on the assumption that its views are representative of the dyad as a whole, now has to be strongly questioned, since the results from this study show that significant differences in perceptions between the two groups do exist, which, if ignored, can introduce bias and call into question any research findings.

The study highlights distinct differences in perception between the two partner groups as regards the relative values that they place in the trust-building relationships, with the public-sector partner clearly ascribing a greater level of importance to a collaborative strategy for building trust, and the private-sector partner focusing more on the structural aspects of the

relationship. Such between-groups differences assessed through specific tests of mean perceptions using a between-groups SEM are largely unaddressed in prior research where ISA studies have tended to study these relationships from the perspective of the Western (private) partner only, introducing a certain amount of bias into the findings.

CHAPTER 7: CONCLUSION

7.1. Introduction

This research study set out to investigate the interdependency – trust relationship between the private-sector partner and the public-sector partner in a SIPPP, and how this relationship is impacted by differences in their cultural value systems as represented by cultural distance. This aim was framed in the research question: *what is the effect of differences in cultural value systems, as represented by the constructs of national cultural distance and organisational cultural distance, on the relationship between perceived interdependency and the building of trust between multicultural partners in a SIPPP?* In answering the primary research question, a secondary question arose as to whether these relationships are perceived differently across the two partner affiliation groups and, if so, how this may affect their respective behaviours. In answer to both research questions and informed by the literature review, a set of research hypotheses was formulated and subjected to empirical evaluation.

Sub-Saharan Africa, with its challenging environment and its focus on the SIPPP as an increasingly more important tool for economic development, was chosen as the setting, representing an "extreme context" research example of an emerging economy. Despite the increasing importance of the SIPPP in the economic development of the African continent, research into this type of institution with reference to this particular geography is extremely rare, giving the current study particular relevance. Furthermore, as an underdeveloped and under-researched part of the world, this region offers a new context and new opportunities for theory enhancement and generalisation of prior research findings. Its challenging business conditions may be considered an extreme test of theory (Barnard et al., 2017), since it provides the opportunity for stress-testing hypotheses in a very non-ideal environment. This makes a valuable contribution to extending the validity and range of established theories developed in a stable and often ideal first-world context.

To answer the research question, a quantitative design was selected for the study, taking the form of a predictive, cross-sectional variance logic modelling of a large sample of cases. Given that qualitative research tends to be the paradigm of choice for research with an African context, it was hoped that the choice for this study would, to some extent, help to redress the imbalance between the two paradigms in African research. The aim of the research design was to test and confirm statistically significant relationships between, on the one hand, the predictor variables, economic interdependency, collaborative interdependency (simultaneously a predictor and an outcome variable), national cultural distance and organisational cultural distance, and, on the other hand, the outcome variable, trust.

Measures were obtained for each of the variables through a structured survey questionnaire conducted in a sampling universe of SIPPPs from various industries and of various sizes, operating in a number of sub-Saharan African countries, and recruited to the study through purposive sampling, as described in Chapter 4. Random sampling and pseudo-random sampling of the sampling frame were used to select the samples for the pilot study (to test the research instrument) and the main study, respectively. The study used measurement scales for the latent constructs that were adapted from prior research studies as reported in the literature, and which were validated in a CFA as reported in Chapter 5. The validated overall measurement model was then incorporated in a CB-SEM structural model to empirically test the conceptual model in predicting the outcome variables, trust and collaborative interdependency, and, once confirmed, to test the hypotheses. The results were reported in Chapter 5 and discussed in Chapter 6, where they were interpreted, related to prior research findings and further insights were provided. At the same time, new contributions to the existing body of knowledge resulting from this research were highlighted and acknowledged.

7.2. Summary of Findings

This study set out to understand and clarify the relationships between the partners' interdependency and the building of mutual trust, and how these relationships are moderated by the two dimensions of cultural distance, namely national cultural distance and organisational cultural distance. Specifically, it aimed to answer both the primary and the secondary research questions set out in Chapter 1.

In answer to the primary research question, the study confirmed the important relationships leading to the building of mutual trust amongst the partners in a SIPPP.

The empirical results confirmed the posited strong relationship between the partners' levels of economic interdependency and the levels of trust between them. The relationship is direct, but also partially mediated by their collaborative interdependency. Economic interdependency is, therefore, a strong predictor of trust in a SIPPP. Economic interdependency between the two partner affiliation groups in a SIPPP - the private-sector partner group and the public-sector partner group - creates positive synergies which encourage collaboration and discourage opportunism and deceit. Therefore, the greater their economic interdependency, the greater will be the level of trust between the partners. The implication is that partners in a SIPPP start the trust-building process in the presence of their pooled unique economic resources. This underlines the importance of effective joint-management of these resources to ensure that they are fully utilised in the SIPPP's value-creation activities. The study confirms the importance of economic exchange between the partners - normally part of the

formation of the partnership - as an important relationship-building block, effectively providing the foundation on which the other defining relationships leading to trust are built.

Economic interdependency was also shown to have a strong positive link to collaborative interdependency. The study found that collaborative interdependency, built through the partners' social exchange, is built on the foundation of economic interdependency, creating social capital in the process, which becomes the "glue" that holds the relationship together. The partners' economic interdependency essentially incentivises them to work together, creating collaborative platforms and social ties that enhance their trust. The intensity of their collaborative interdependency as perceived by each partner will depend on the perceived strength of the foundation provided by their economic interdependency. The level of collaborative interdependency was shown to be a measure of the intrinsic quality of the relationship itself, and has a strong impact on how such a relationship develops and is sustained.

The strong posited link between collaborative interdependency and trust was also confirmed by the study. Like economic interdependency, on which it is based, collaborative interdependency creates positive synergies within the SIPPP that strengthen the relationship and drive mutually rewarding collaborative behaviours, which in turn promote joint action and build trust levels. The greater the collaborative interdependency between the SIPPP partners, the greater will be their need for trust.

Besides acting on trust in its own right, collaborative interdependency was demonstrated to also mediate (intervene in) the economic interdependency – trust relationship, amplifying the direct effect that economic interdependency has on trust. The social capital that is built up by the partners as a result of building their collaborative interdependency helps to enhance and sustain the relationship. Social capital was also shown to be important in reducing information asymmetry to aid decision-making and to help overcome the differences that create conflict among SIPPP partners. However, if not properly managed, low levels of collaborative interdependency weaken the ties between the partners and create opportunities for opportunism and deceit, establishing a vicious circle.

Together, economic interdependency and collaborative interdependency contribute to the relationship atmosphere in the SIPPP and are strong determinants of trust.

The study confirmed that national cultural distance has a direct negative effect on partnership trust levels as well as exerting a positive moderating effect on the collaborative-trust relationship. The latter finding predicts that, at high levels of collaborative interdependency and high levels of national cultural distance, trust levels are actually enhanced compared with

the situation where there is a low level of national cultural distance. This finding supports the notion of a "cultural paradox", which posits that partners with high levels of cultural distance between them compensate for this by working harder at their relationship, using collaboration as a bulwark against its potentially negative effects. It suggests that the partners recognise the positive aspects of their cultural diversity, as reflected in their different knowledge bases and decision-making styles, as a potential source for enhancing decision-making and creativity in the alliance, thereby driving competitive value. This finding may help to clarify some of the inconsistent conclusions as reported in prior ISA research regarding the empirical effect of national cultural distance on the trust relationship, its impact and direction being dependent on the relative levels of national cultural distance and collaborative interdependency (Pothukuchi *et al.*, 2002; Mjoen & Tallman, 1997; Beamish, 1985; Lane & Beamish, 1990; Parkhe, 1991).

National cultural distance was shown not to have a moderating effect on the economic interdependency – trust relationship.

The study further showed that, contrary to expectations, organisational cultural distance, as measured on the Hofstede *et al*. (1990) cultural dimensions, has no significant relationship with partner trust, either as a direct effect or as a moderating effect on the economic interdependency – trust and collaborative interdependency – trust relationships. This was found to be so, despite the fact that scholars have argued that organisational cultural distance was more likely to be disruptive to the trust-building processes in a cross-cultural alliance because of its proximal nature and effect on the behaviours of the partners that drive the alliance.

In answer to the secondary research question as to whether these relationships are perceived differently across the two partner affiliation groups, the study found definite evidence that between-groups perceptions of certain key relationships were statistically and significantly different between the two partner groupings. Specifically, the public-sector partner group placed more emphasis and value on the collaborative-trust relationship for building trust than did their private-sector counterparts, who tended to put their focus on the economic interdependency – trust relationship. It has been argued in this study that these findings are in substantial agreement with the collectivist orientation of the African culture (Hofstede, 1980), as represented by the domestic public-sector culture, on the one hand, and the individualistic orientation of the Western culture (Hofstede, 1980), generally representative of the private-sector partner culture, on the other. Thus, the collectivist culture, typically embodying the traditional African culture, favours personal relationships and team-based work-unit solidarity, while the individualist culture, typically embodying typical Western culture, favours tangible

and economic benefits of the relationship over social ties. This will drive different behaviours amongst the partners, depending on their affiliation.

Leading on from the above, the study also highlighted differences in perceptions between the two partner groups as regards the “cultural paradox” phenomenon described earlier. While this phenomenon was found to be significant for the relationship as a whole, it takes on very different dimensions when the lens is focused at individual partner level. The results showed that the public-sector partner appeared to be more influenced by the moderating effects of national cultural distance on their trust-building relationship than the private-sector partner, with the relative importance being similar to that for the group as a whole. In the case of the private-sector partner, the results showed that the moderating effect of national cultural distance on these relationships was hardly significant.

These important conclusions around between-groups perceptions, which drive new insights into the trust-building processes within a SIPPP, have typically been overlooked in prior cross-cultural management research, since it has been accepted practice to only focus on one side of the partnership-dyad, generally the private partner from Western origins, introducing a certain amount of bias into the research findings. These findings, in particular, underline the importance of the partners recognising and being sensitive to each other’s needs and of partners going out of their way to accommodate the different views to ensure a successful alliance outcome.

7.3. Importance and Benefits of Study

The study findings have important implications for both theory and practice.

7.3.1. Theoretical contribution

Studies of cross-cultural alliances have predominantly been done on ISAs and IJVs. Very few have been done on SIPPPs, a related but different partnership institution, and even fewer within an emerging country context. None could be found involving SIPPPs operating in Africa. This study is, therefore, unique, being the first study of its kind focused on Africa. It makes a meaningful contribution to the domain of cross-cultural management research by extending the research scope to include the SIPPP, a far more complex form of either the ISA or the PPP, and by extending the geographical context to Africa, thereby contributing to the generalisation of prior research findings. The study findings will also help to close the knowledge gap in this area of research by, for the first time, elucidating and providing plausible explanations for the complex relationship dynamics in this type of cross-cultural, cross-institutional alliance.

The study has, for the first time, provided strong empirical evidence in support of the cultural paradox phenomenon in SIPPPs, demonstrating that increasing levels of national cultural distance, rather than forming a barrier to co-operation between the partners, as proposed in a large body of prior research, actually acts as a motivator for driving greater collaboration, joint-action and team-work. This may help to explain some of the seemingly disparate and often contradictory findings in other areas of cross-cultural management research conducted at different levels of national cultural distance as reported in the literature, and provides a caution to future scholars in this field to take this phenomenon into consideration when considering explanations for their own research findings.

This study also makes a contribution in helping to correct the imbalance in the reporting of research findings in favour of the negative rather than the positive consequences of cultural diversity in cross-border alliances, which have created a pessimistic perspective of this phenomenon. It can be argued that the overemphasis of prior research on the negative outcomes associated with cultural differences on cross-cultural relationships has hindered, rather than helped, our understanding of these very processes that underpin the building of trust.

Although there is a proliferation of research studies that have looked at the moderating effect of either national cultural distance or organisational cultural distance on ISA relationships leading to trust, very few studies have looked at both simultaneously, none involving SIPPPs. This study addresses this gap in a novel way and, by doing so, has to a large extent avoided the contradictory research findings often reported in the research literature. The focus was on the relative effects of organisational cultural distance and national cultural distance on the economic interdependency – trust relationship and on the collaborative interdependency – trust relationship, and the study has managed to apply a lens to each, even though researchers have sometimes found it difficult to distinguish national and organisational culture empirically. Including the two cultural distance dimensions as separate constructs in the model has provided new and useful insights into their relative effects on the trust-building relationships and the different behavioural patterns that they drive in the two partnership groups.

While the results of this study have shown that, contrary to the findings reported in a large body of prior research, organisational cultural distance takes a back-seat role to national cultural distance and is largely over-shadowed by the latter when looking at the SIPPP alliance relationship as a whole, the picture changes significantly when the theoretical lens is focussed on the individual partners. The between-groups comparison findings suggest that, contrary to the overall group result, the perception of the private-partner *is* mildly affected by

organisational cultural distance, showing that this construct cannot be entirely ignored. Furthermore, since it is the private-sector (generally Western) partner who has traditionally been the focus in previous cross-cultural management studies, this finding is in line with the conclusions reached by these scholars, but, at the same time, illustrates a certain level of bias in the prior research results introduced by the research methodology used in these studies (see below). The study findings, therefore, suggest that future researchers active in this arena would be strongly advised to include both cultural distance constructs in their studies, particularly where it is known beforehand that national cultural distance is towards the low end of the spectrum (and, therefore, unlikely to overshadow the effects of organisational cultural distance).

The study further contributes to the theory base of cross-cultural management research by proposing social exchange theory and cultural exchange theory as the basis for a new integrated theoretical framework to assess and elucidate the interdependency-trust relationship, and to predict and elucidate how cultural distance influences that relationship. Cultural exchange theory has been widely applied in cross-cultural management and ISA research, but, while social exchange theory is recognised as being useful in assessing and providing plausible explanations for complex relationships, it has not found much application in ISA research. This research study, therefore, takes a relatively novel approach by applying the theory in conjunction with cultural exchange theory in clarifying SIPPP relationships, thereby providing a richer and deeper perspective of the multifaceted trust-building processes within a cross-cultural alliance. In the process, the study makes an important contribution to the body of knowledge in both social exchange theory and cross-cultural theory. In particular, it is hoped that this study, having demonstrated the beneficial role of social exchange theory in cross-cultural management research in providing more plausible interpretations of the relationship-building processes that accord with the empirical evidence gathered, will be instrumental in encouraging future researchers in this field to make more use of this theoretical lens to provide new insights in cross-cultural management research.

The study findings extend the way in which we think about trust in these multifaceted multicultural settings. Trust between partners is a complex multidimensional outcome variable that is not only created by qualitative relationship outcomes (Morgan & Hunt, 1994), but is further enhanced in the presence of high mutual interdependencies, both economic and collaborative, and is moderated by their cultural distance.

By conceptualising the multidimensional constructs of economic interdependency and collaborative interdependency, and empirically validating their measurement scales, the study has provided a foundation for future research in this area.

Whilst the setting of this research is specifically SIPPPs in Africa and, therefore, any generalisation of the findings beyond this context is problematic, it is probable that the conclusions from this research conducted in an extreme setting may also find broad application in the case of similar institutional forms in other emerging economies with similar contexts to Africa.

To conclude, this study takes an important step forward in the domain of cross-cultural alliance research by developing a comprehensive picture of the relationships between interdependency and trust, and the roles played simultaneously by the two levels of cultural distance in influencing these relationships. The picture is further enhanced by explanations of how differences may occur in the perceptions of the two partner affiliation groups of these relationships and how these ultimately influence their behaviours and the implications for future cross-cultural management research.

7.3.2. Methodological contribution

The study makes a number of methodological contributions. Firstly, the approach adopted in the research, whereby partnership relationships are gauged based on opinions solicited from both sides of the partnership dyad, is somewhat novel in cross-cultural research. Generally, only one of the partners is surveyed, usually the Western private partner, based on the supposition that this partner can represent the views of the other partner (Geringer & Herbert, 1991). Expediency and difficulty in accessing the other (generally non-Western) partner, are often given as reasons for this approach. This introduces a distinct Western bias into cross-cultural alliance research. The study finding, that significant differences in perceptions between the two groups do exist, driving different behaviours, therefore, has important implications for future cross-cultural management research. The accepted supposition now needs to be strongly questioned in the light of this finding. If ignored, it can introduce further bias of consequence into the cross-cultural management research, casting serious doubt on the research findings. Learnings from this study, therefore, highlight the importance of future researchers working in this field focussing on both sides of the dyad to ensure that the perceptions of both partners are reflected in the research. Although this finding is specific to SIPPPs in Africa, it is likely that it will equally apply to ISA's and IJVs, particularly those with partners from very different cultural backgrounds. It is argued, therefore, that this research provides a more balanced perspective of such cross-cultural relationships. Furthermore, it suggests that the conclusions from prior research studies, particularly those that produced seemingly disparate or contradictory results, may need to be re-interpreted in the light of the cultural paradox phenomenon identified in this study.

To address the problem posed by the paucity of published research on the phenomenon under study, it was posited that many of the factors and relationship-building processes that have been studied in domestic alliances and JVs in general, and in international cross-cultural alliances in particular, would similarly apply to SIPPPs, but with some important differences emanating from the fact that one of the partners is from a local public-sector. The study has, therefore, been informed by this prior research and applied a theory-guided deductive reasoning approach to bring in relevant aspects of the SIPPP and the African context. This approach makes a significant methodological contribution, particularly in areas where prior research is sparse, e.g., Africa.

The study makes an important empirical contribution to cross-cultural ISA, IJV and PPP research in Africa by providing difficult-to-obtain empirical data to test the research hypotheses.

The Hofstede models applied to the measurement of national cultural distance (Hofstede, 1980) and to organisational cultural distance (Hofstede *et al*., 1990) have been based on cognitive perceptions of cultural diversity rather than the original indices proposed, as recommended by Shenkar (2001, 2012) and Kirkman *et al*. (2006). Although much of the cross-cultural management research has used such indices based on objective demographic data as convenient measures of cultural diversity, recent research into team diversity has highlighted the value of using the perceptions of team members as regards their diversity as a more promising predictor of relationship-building processes and outcomes (Shemla, Meyer, Greer, & Jehn, 2016). This methodology overcomes many of the weaknesses in the Hofstede models as highlighted by Kirkman *et al*. (2006). As far as can be ascertained, this is the first time that these models have been applied in an African context. This study has shown that the Hofstede (1980) national cultural dimensions based on perceptual measures rather than on empirical indices can be applied in new geographies not covered in the original research, thereby greatly extending the scope of cross-cultural management research.

In the research literature consulted for this study, it was found that very few studies reported on the statistical power (the probability of detecting a result if it is present) or effect size (whether or not the significant effect detected is important or not) in their analysis (Boomsma, 2000). This is a major omission in these studies, since the statistical significance of a result indicated by its *p*-value does not tell the full story. In this study, careful attention was paid to ensuring that the statistical analysis had the necessary statistical power to ensure that the probability of making a Type II error was low ($\alpha = .05$) and that an effect would be detected if present. The effect size based on Cohen's f^2 test (Cohen, 1988) determined the magnitude

of the observed effect and whether or not it was important. The study, therefore, used best practice in the statistical analysis of data.

7.3.3. Practical management contribution

This research study provides some practical insights into the relationships between the SIPPP partners' interdependency and trust outcomes, and how these relationships are influenced by national and organisational cultural differences.

From a practical perspective, application of the research findings is expected to have important implications for this institutional form in Africa and, consequently, for its role as a tool for economic development on the continent. In this regard, the study has practical significance for the policy-makers in Africa in their strategic planning and decisions regarding the best tools to use to promote economic development in their countries and to attract international investment and know-how. The study has demonstrated empirically the importance of economic interdependency and collaborative interdependency on trust levels in a SIPPP. The fact that together they predict most of the variance in trust, should provide a strong pointer to managers of such institutions and to practitioners involved in their implementation. It is also a *cri de cœur* to private-sector and public-sector executives involved in setting up such alliances, to consider the relationship aspects at least on par with the structural aspects, and to reflect this in their decision-making, particularly as regards the key skills and competences to be deployed to ensure fitness for purpose.

The cultural paradox phenomenon demonstrated in this study highlights the opportunities that exist for culturally-distant partners to exploit their cultural diversity to beneficial effect. Unfortunately, the "distance" metaphor generally raises the spectre of barriers, difficulties and costs, rather than opportunities for working together. At the same time, a "small" distance conveys the (mis)impression of closeness and similarity, and the tacit assumption that these are beneficial for the alliance. However, this study clearly shows that cultural distance is not a barrier *per se* to the building of strong alliance relationships and trust, provided the partners can leverage culture-specific complementarities. Diversity offers greater access to new knowledge and sources of learning that drive innovation and improve the quality of decision-making. Policy makers should, therefore, encourage, rather than deter, their government officials charged with driving public-private development programmes from seeking out potentially beneficial partners that at first sight may appear to be too culturally diverse (and hence challenging), and allow such partnerships to fully benefit from this diversity. Cultural diversity in these cross-border alliances, notwithstanding its challenges, should be seen as a valuable asset ("value in diversity").

The potentially important effects of national cultural differences on partnership relationships must be appreciated by the management involved in such multi-national public-private partnerships in Africa, who need to be sensitive to the perceptions of the other partner. Essentially, the management of such cross-cultural alliances, irrespective of their form, boils down to the management of perceptions driven by the partners' national cultural distance (and, to a lesser extent, their organisational cultural distance). This study provides such managers with a better understanding of the relational mechanisms that contribute to building trust and commitment in the relationship within the SIPPP. In their appreciation of the differences between the two cultures (typically one individualist and the other collectivist), they must learn that business relationships in such multicultural settings are driven by economic and material benefit as well as social ties that build on acceptance and closeness between partners. Collectivist management styles emphasise personal ties in building the relationship, stressing the social aspects of the exchange, and demand this understanding from their individualist partners. Individualist management styles, on the other hand, approach the development of trust by emphasising economic, material, and strategic benefits. Managers need to be aware that when reciprocated, these tangible benefits have a positive effect on the perception of value in the relationship.

The findings of this study suggest that managers of a SIPPP should pay particular attention to their partner's cultural practices when anticipating how they might adapt in the alliance. The partner's ability to adapt to cultural differences is contingent upon the specific contexts in which the alliance operates; that is, managers from certain cultures may view adaptation in the alliance as positive and satisfactory, while others may view adaptation as undesirable. Therefore, managers should be careful in deciding how to collaborate and should view their partner's cultural practices closely. As such, managers of SIPPPs need to be cautious when developing trusting relationships, and need to have the requisite skills and competences to leverage their interdependence and to build collaborative relationships that foster stronger ties, build deeper commitment and transgress cultural divides. This needs to be reflected in their communication, sharing of information, providing support and joint decision-making that together contribute to higher levels of mutual confidence and trust. This is critical because trust, when nurtured, generates manifest collaborative behaviour, long-term commitment, and less uncertainty in the relationship.

This study also suggests that managers and practitioners need to be aware that national culture is always in a state of transition, and, in a globalising world, particularly in Africa, the younger generation are stepping away from their traditional cultures and are trying to emulate more and more Western values. This will have the effect of shrinking the differences indicated by Hofstede's (1980) dimensions. The implication is that managers of cross-cultural alliances

need to keep abreast of such developments and adjust their partnership strategies accordingly.

In conclusion, business and public-sector executives involved in the setting up of SIPPPs need to fully realise that the success (or failure) of the alliance depends as much, if not more, on relationship-building and cultural management as it does on the structural aspects, not only during the formation phase, but during its entire life-cycle. This needs to be reflected in their joint-decision-making, including the allocation of resources and appointment of managers with the requisite competences in these key areas of management to mitigate against the potential adverse effects of national and organisational cultural differences on trust and alliance performance. In fact, this study shows that these potential adverse effects of cultural difference can be readily capitalised on to drive beneficial collaboration between the partners to the overall benefit of the alliance. It is hoped that this realisation alone will make a worthwhile contribution to the building of sustainable and trusting relationships in this type of institution, in turn reducing its inherent risk and failure rate, and thereby enhancing its role in the economic development of the African continent.

7.4. Limitations of the Study

Although this study produced several relevant findings for the management of SIPPPs, they should be evaluated and the implications tempered in the light of the following limitations:

The study employed Hofstede's (1980) dimensions of national and organisational cultural values (Hofstede *et al*., 1990), which differ from cultural values discussed by other researchers. While the use of cognitive perceptual data collected from both sides of the dyad represents a major step forward in the application of the Hofstede cultural models, weaknesses persist, and the measures have been criticized for methodological weaknesses and cultural biases (Kirkman *et al*., 2006 & 2017). It is the view of some researchers that cultural differences between partners may be better represented by the concept of psychic distance (or perhaps perceived psychic distance), which goes beyond examining simple cultural differences between countries and includes additional factors such as structural and language differences (Evans & Mavondo, 2002; O'Grady & Lane, 1996; Beugelsdijk, Kostova, & Roth, 2017; Katsikeas *et al*., 2009). The study has also demonstrated certain weaknesses in both cultural distance scales, but in particular in the organisational cultural distance scale, as applied to an African context. Expanding the analysis to include additional cultural dimensions would provide managers and researchers with more incisive insights into the dynamics of cultural differences.

Use of the subjective Likert scale to record perceptions on such complex constructs as trust and cultural distance is another limitation of the study. The potential for social desirability to bias the survey results cannot be ignored. Thus, it may be that, even if partners from different cultures perceive performance in similar ways, they may report it differently on survey questionnaires, guided by culturally-supported values and norms about how a partner should respond on a survey. It is known that some cultures are more openly forthright and honest, while others are more diffident and harmonious in their responses. For example, Western partners, who are among the most individualistic, most performance oriented, least power distant and accustomed to an autonomous leadership style, might be more confident to provide candid and critical responses if they feel a partnership is performing poorly. In contrast, the African-region partners, who are more collectivist, less performance oriented, more power distant, and less attuned to an autonomous leadership style, might refrain from open judgment on the more sensitive survey items. The possibility of a certain amount of cultural bias in the survey responses can, therefore, not be excluded, although it is hoped that the guarantees of anonymity and confidentiality would have minimised this effect.

Another limitation concerns the cross-sectional nature of the study, which limits its ability to make causal inferences. Though the ordering of the variables in the conceptual model reflects the likely chain of events in the relationship-building process leading to trust, certain of the relationships portrayed may be reciprocal, in that one variable might impact a second variable, and, over time, the second may affect the first. Furthermore, it is reasonable to expect that over time, trust and the partners' changing levels of interdependency will affect their perceptions of their relationships and of their economic, structural and emotional investments in the alliance. As such, a longitudinal study that assesses non-recursive links in the study model would provide more insights and contribute to a deeper understanding of the relationship dynamics.

The concept of substituting country boundaries for national culture is a limitation of this study. Furthermore, it is recognised that cultural values are not only nationality based, but may also be influenced by sub-cultures within the larger national setting. It may be that the current study assumes greater homogeneity within cultures than actually occurs in practice, and that the possible impact of ethnic and / or linguistic diversity within a country - referred to by Luiz (2015) as "ethno-linguistic fractionalization" - on cultural measures, such as cultural distance, should be considered. Any future studies should explore the effects of such sub-cultures within the dominant national culture in order to confirm the generalisations of the current study.

Self-reporting bias may be an issue. Since the SIPPPs in the sample frame were generally not listed publicly, it was not possible to access strategic and confidential information from

secondary sources. Furthermore, there was no reliable, published firm-level secondary database. In the absence of such data, the study relied on self-reporting by the managers of the SIPPPs. While precautions were taken against self-reporting bias by using multiple respondents for matching data, access to independent third-party data would have strengthened the study data base.

The study did not consider the specific phase of development of the SIPPP or the nationality of the private partner, and the age distribution reported in Table 5.4 indicates that the SIPPPs in the sample frame were at different stages of development when the survey was conducted. However, previous studies have reported that partner choice and early relationship factors (who was involved, country of origin, how long they took to get together etc) can have an impact on future trust and performance.

Despite these potential limitations, the study has some notable strengths, which have already been discussed in the previous sections. However, it is noted that these limitations may offer fruitful avenues for future research.

7.5. Recommendations for Future Research

This study found that the role of organisational cultural distance in influencing the interdependency-trust relationships in a SIPPP was not significant compared to the overall effect of national cultural distance on these relationships. This is contrary to published ISA research findings (Ozorhon *et al*., 2008; Pothukuchi *et al*., 2002; Brown *et al*., 1989) and to initial expectations. While this research has offered a plausible explanation of this finding, it would be interesting to look at this phenomenon in more detail to confirm the result and to seek better explanations.

Using a between-groups comparison methodology, this study showed that the two partner groups within the SIPPP (public and private partner) held very different perceptions of the relative importance of the trust-building relationships. Future research could profitably investigate this phenomenon further, specifically whether *partner-type* can be viewed as a *bona fide* moderator, moderating those relationships which the partners viewed differently, namely, the economic interdependency – trust relationship, the organisational distance – trust relationship, as well as the effect of national cultural distance on the collaborative interdependency – trust relationship (i.e., moderator-on-moderator effect) – see Figures 5.20 and 5.21. This would allow for a generic model of the trust-building relationships within a cross-cultural SIPPP to be put forward.

This study used a definition of the SIPPP which ranged from a structural (contractual) arrangement at one end of a co-operative-collaborative continuum (e.g., a formal JV) to a highly trusting collaborative relationship at the other end of the continuum (i.e., an informal alliance). It can be argued that the importance of driving a collaborative platform will probably vary along this continuum from low importance in the case of the contractual JV, where relationships will tend to be regulated by the contractual understanding between the partners, to critical importance in the case of the informal alliance, where the relationship is likely to be totally based on the partners' collaborative efforts. It would be interesting to investigate the effect of *partnership type* on the study conclusions.

Both the mediating effect of collaborative interdependency and the moderating effect of national cultural distance on the interdependency-trust relationships are complex phenomena, rooted in social exchange and cultural exchange processes. While this study has, to an extent, promoted a better understanding of these complex relationships and has offered plausible explanations of the observed results, further research into these phenomena to provide more in-depth explanations would be of benefit to SIPPP research in particular and to cross-cultural management research in general.

This study looked at between-groups differences, ignoring country effects, but it may be informative in future studies to also look at possible between-country effects to see whether cultural differences between African countries play a meaningful role in determining the nature of the relationships between the partners. The same applies to SIPPP age and size, both of which were controlled for in the study. The results did point to a statistically significant relationship between SIPPP age and economic interdependence levels, for example, which was explained on the basis that older SIPPPs would have had time to grow and draw in more investment.

In a similar vein, most of the SIPPPs included in this study involved an international private-sector partner from a first world Western country (83% of the respondents represented Western interests – see Section 5.4). However, more and more SIPPPs lately are involving partners from South East Asia (mainly India and China) as well from other African nations. It would be interesting and informative to repeat this study involving SIPPPs with predominantly non-Western private partners to see whether the conclusions are similar or different.

A cross-sectional study, such as this one, only scratches the surface of these relationships and provides interesting indications but not a complete understanding of the phenomena under study. A longitudinal study of SIPPPs would establish causality and would provide useful insights into the dynamic evolution of the processes involved in the building of trust between multi-cultural partners.

Lastly, the critique of cultural distance as a measure of cultural diversity is well-known, notwithstanding its wide use in cross-cultural management research (Shenkar, 2001, 2012). In particular, the assumption of symmetry in cultural distance has been questioned. Future research could profitably look at the implications of cultural distance asymmetry on the conclusions of this study.

7.6. Conclusion

The study was done against a backdrop of the increasing importance of SIPPPs as a development tool in Africa and their reported high failure rate, posited in this research to be at least partly attributable to the failure to establish sustainable trusting relationships in an environment of cultural diversity. The findings of the study suggest that the partners in a SIPPP can improve their levels of mutual trust by building on their ties of economic interdependency and engaging in collaborative actions to build their collaborative interdependency to grow and sustain the relationship. The study findings further suggest that the partners, because of their different national and organisational backgrounds, will have different perceptions regarding the relative importance of these relationships to building trust, which, in turn, will influence their partnering behaviours. Thus, while the private-sector partner will tend to stress its economic interdependency as a foundation for trust, the public-sector partner would prefer to engage in collaborative trust-building activities and joint actions. The partners need to be sensitive to each other's needs and perceptions and engage in reciprocity to build mutual confidence and trust. What is of critical importance is that the managers on both sides of the partnership dyad possess the necessary skills and competences to deal with these complex situations. This needs to be taken into account at the formation stage of the SIPPP and be reflected in its structural components, including the allocation of strategic resources that are necessary for the value chain and the senior management appointments.

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APPENDICES

APPENDIX A – Survey questionnaire

The following is a copy of the self-administered survey questionnaire sent to respondents.

Gordon Institute of Business Science
University of Pretoria

Research Study:

Cultural Distance, Relationship Bonding and Trust in Strategic International Public-Private Partnerships (SIPPPs)

QUESTIONNAIRE

Researcher: G J van den Houten

Supervisor: Prof. J Verster

Date: November 2016

Gordon Institute of Business Science
University of Pretoria

INFORMED CONSENT

Dear Participant

We are conducting research into the role played by cultural differences between partners engaged in strategic international public-private partnerships or SIPPPs (both formal and informal) and, in particular, how such cultural differences may influence their social interaction and bonding necessary for the building of bi-lateral trust and ultimately commitment and performance. You will be requested to complete the attached survey (to be discussed with you in more detail), which should take approximately 45 minutes. We may also request a short follow-up telecom interview with you to clarify and / or expand on some of your answers. Your survey answers and the interview will help us to obtain a better understanding of the role that cultural difference has played in your organisation. ***By completing the survey, you are indicating that you are voluntarily participating in the research study. However, you can withdraw at any time without penalty.*** *Although your name (optional) and that of your organisation will be requested at the bottom of this form, these names will be not be revealed in any published form and will be coded to preserve privacy and confidentiality. Similarly, all data supplied will be kept strictly confidential. If you have any concerns, please contact me or my supervisor - our details are below.*

We thank you for your participation in this research study.

Principal Researcher: *Gerry J van den Houten*	Research Supervisor Name: *Prof J Verster*
Email: gerryv@mweb.co.za	Email: john.verster@musselriver.co.za
Phone: *+27 83 633 2379*	Phone: *+27 83 250 0134*

Signature of Researcher:  *Date: 1 December 2016*

Signature of Supervisor:  *Date: 1 December 2016*

Signature of Participant: _____ *(signed)* *Date:* _____

Name of Participant: (Optional) _____

Email address: _____

Name of your organisation: _____

Name of "partner" organisation: _____

Assigned Company Code: 100000000
Assigned Respondent Code: 100010000

(Do not complete - office use only)

QUESTIONNAIRE INSTRUCTIONS & CHECK-LIST

Please read the introduction to the questions and each question carefully.
There are no right or wrong answers; please give your immediate reaction.
Remember that your responses are absolutely confidential and all data will only be presented in summary form without the name or affiliation of the respondent.
Please check off the following by placing an "X" in the box - pl complete this section and the following Biographics fully before proceeding to Part 1:

		Check
[1]	You have kindly agreed to participate in this research study and have **completed and signed** the **Informed Consent** form.	☐
[2]	You are representing:	
	The **private "partner"** to the alliance, ***or***	☐
	The **public "partner"** to the alliance	☐
[3]	You have received the questionnare (which you are asked to complete) in two different formats: as an Excel spreadsheet and as a PDF document. You may choose to complete the questionnaire in either format.	☐
[4]	Should you choose to complete the questionnaire directly in the Excel spreadsheet, please indicate your response to each question **by typing an "X" in the appropriate box (do not enter the number)**.	☐
[5]	Should you choose to complete the questionnaire in hard copy format, please print the PDF document and indicate your response to each question by writing an "X" in the appropriate box (please use a black pen).	☐
[6]	The questionnaire is in 7 parts (including the biographics). **Please answer all the questions in each of the parts.**	☐
[7]	**Only one answer per question.**	☐
[8]	When complete, please **save the completed Excel spreadsheet** or scan the completed hard copy of the questionnaire, and email to: gerryv@mweb.co.za **ideally within 7 days of receiving it**	☐

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY - YOUR VALUED CONTRIBUTION IS GREATLY APPRECIATED

PLEASE PROCEED TO BIOGRAPHICS

Biographical Data

Please provide the fotlowing personal Informatlon about yourself and your position in the "partnership"
This data will be used purely for classification purposes and Is completely confIdentlal - all biographical data will be coded as soon as the questionnaire is received back. Please place an 'X' in the relevant box opposite each question.
Only one response per question. Please answer all the questions.

		< 35	35 - 45	46 - 55	56 - 65	> 65
1	Your age (years)					

2	Gender: Male	
	Female	

		High School	Tertiary	Post Tertiary
3	Education			

		< 1 year	1 - 5	6 - 10	> 10
4	Number of years associated with the "partnership"				

		CEO	Director	Senior Management	General Management	Supervisory Management	Advisor	Other
5	Position in the "partnership"							

		General Management	Production	Marketing / Sales	Finance	Technical	R & D	HR	Supply Chain	Other
6	Functional Area									

		Excellent	Very Good	Good	Fair	Poor	None
7	Proficiency in English						

		< 50	51 - 100	101 - 500	501 - 1000	> 1000
8	Number of employees in the "partnership"					

		< 1 year	1 - 2	3 - 5	6 - 10	> 10
9	Age of the "partnership"					

		Mining	Energy	Infra-structure	Construction	Agriculture, Forestry, Fishing	Agri - processing	Food Processing	Chemical Processing
10	Industry Sector								

		Telecommuni - cations	Services	IT	Financial	Trading	Transport	Retail / Wholesale	Manufacturing

		Utilities / Water	Hospitality Services / Hotels	Education	Health Care / Hospitals	Entertainment	Tourism	Other

		Very Strong	Strong	Acceptable	Poor	Very Poor
11	You consider the "partnership" performance to be:					

		Very Successful	Successful	Slightly Successful	Slightly Unsuccessful	Unsuccessful	Very Unsuccessful
12	You consider the "partnership" to be:						

		JV	Formal Alliance / Partnership	Informal Alliance / Partnership	Informal Relationship	Other
13	"Partnership" type					

		Yes	No
14	Is your organisation or "partner's" organisation international ?		

15	Country of operation (click on cell & choose from drop down list and enter code)	None (0)	Code:

All questions completed ? -

PLEASE PROCEED TO PART 1

PART 1: Contribution Made to the "Partnership" by the "Partner"

The questions in this section are designed to test your perceptions regarding your "partner's" contribution to the business. In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement, you would place an 'X' under number 1 next to that statement; If you strongly agree you would place an 'X' under number 7. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).

When completing part 1 it is best to "freeze" cell D14 and scroll

		Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Importance of Item to the Relationship: Not Important	Important	Very Important
		1	2	3	4	5	6	7	1	2	3
1	In a strictly economic sense, based on our "partner's" valued contribution, a close relationship with our "partner" is desired										
2	Based soley on the economic contribution made (direct or indirect), I would encourage our organisation to have a relationship with the "partner" irrespective of my personal feelings										
3	Our "partner" has contributed substantial resources to the "partnership" *("Resources" can be tangible or intangible, and include financial investments, land, skills, people, permits, concessions, intellectual property, know-how, technology, licenses etc)*										
4	Our "partner's" investments in the "partnership" are specific										
5	Our "partner's" investments in the "partnership" are largely irretrievable										
6	The resources, skills and / or services which the "partner" provides are essential to the success of the business										
7	The material resources, skills and / or services that the "partner" brings to this "partnership" as its economic contribution are unique and cannot easily be replaced										
8	The relationship with our "partner" is important for its material contribution to the overall success of our business										
9	In comparison, the "partner" is the only organisation known to us that can provide these skills, economic resources, and / or services										
10	We are extremely dependent on our "partner"										
11	Losing our "partner" would be very costly and disruptive to our organisation										
12	Our "partner's" contribution to the "partnership" is unique and cannot easily be replaced										
	All questions completed ?		-								

PLEASE PROCEED TO PART 2

PART 2: Relationship with the "Partner"

The questions in this section are designed to test your perceptions regarding the relationship with your "partner". In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement, you would place an 'X' under number 1 next to that statement; If you strongly agree you would place an 'X' under number 7. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).

When completing part 4 it is best to "freeze" cell D13 and scroll

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Importance of Item to the Relationship: Not Important	Important	Very Important
	1	2	3	4	5	6	7	1	2	3
13 Communication with our "partner" is open and honest										
14 Even in difficult situations we signal readiness for discussion towards "partner"										
15 We keep each other informed about events or changes that may affect the other or the organisation, avoiding surprises that may be harmful to the relationship										
16 Problems are always communicated and discussed in an open and constructive way										
17 Reviewing and / or providing feedback on important mutual issues takes place regularly										
18 Exchange of needed, credible and relevant information takes place frequently, both formally and informally;										
19 We work closely together with "partner" in all areas of interest to the organisation										
20 We understand and share common mutual goals and objectives with our "partner"										
21 We cooperate and collaborate with our "partner" in whichever way we can										
22 Our relationship is such that we often give advice to or seek advice from our "partner"										
23 We are totally satisfied with the relationship with our "partner";										
24 In recognition of our special relationship with our "partner", we support each other's side even in difficult situations										
25 We have a well-formed social relationship with our "partner" which goes beyond business										
26 We are fully committed to the relationship and want to maintain it										

All questions completed ? -

PLEASE PROCEED TO PART 3

PART 3: Cultural "Fit" with the "Partner"

The questions in this section are designed to test your perceptions regarding the cultural "fit" with your "partner". In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement, you would place an 'X' under number 1 next to that statement; If you strongly agree you would place an 'X' under number 7. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).

When completing part 4 it is best to "freeze" cell D13 and scroll

The similarity between our views and those of our "partner" on the following issues:	Very Similar	Similar	Slightly Similar	Neither Similar Nor Different	Slightly Different	Different	Very Different	Importance of Item to the Relationship: Not Important	Important	Very Important
	1	2	3	4	5	6	7	1	2	3
27 Individual achievement versus team achievement										
28 The basis of employee reward										
29 Employment of family members in senior positions										
30 Individual responsibility and accountability for results										
31 Fostering an environment in which employee creativity and productivity are encouraged, recognised, valued, and rewarded										
32 Participation of subordinates in the decision-making process										
33 Superior-subordinate relationship based on mutual trust and openness										
34 The importance of hierarchical structures in enforcing decisions										
35 Managers often seek the opinions of their subordinates										
36 Disagreements between non-managerial employees and management										
37 Planning as a means of managing future outcomes										
38 Management of change (e.g., search for new processes, adopting new technologies etc.)										
39 Necessity for adherence to budgets, schedules, and procedures										
40 Dealing with external uncertainty										
41 Breaking of organisational rules if employee deems it to be in the organisation's interest										
42 Our view (vs our partner's view) on the importance of management driven performance in the organisation										
43 Terms and conditions of employment (e.g., hiring and firing etc.)										
44 Rewards based on merit instead of loyalty and seniority										
45 Attitude to time (punctuality, timeliness of events, meeting, deadlines etc.										
46 Men and women have equal opportunity to progress to senior management										
47 Use of long term contracts and agreements in business										
48 Need for a long term planning horizon										
49 Solving problems for the long term rather than short term "quick fixes"										
50 Employment security - keeping people employed even under adverse business conditions;										
51 Long term results versus short term results										
All questions completed ?		-								

PLEASE PROCEED TO PART 4

PART 4: Organisational "Fit" with the "Partner"

The questions in this section are designed to test your perceptions regarding the organisational "fit" with your "partner" (business processes, procedures, policies etc.). You will be asked about business processes, management style etc ***in your organisation*** *and that of* ***your "partner's"****. In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement as it refers to* **your organisation**, *you would place an 'X' under number 1 next to that statement in the section headed* ***"In Our Organisation"****; If you strongly agree you would place an 'X' under number 7. Do likewise for your* ***"partner's" organisation****. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).*

When completing part 4 it is best to "freeze" cell D15 and scroll

	In Our Organisation							In Our "Partner's" Organisation							Importance of Item to the Relationship		
	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Not Important	Important	Very Important
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3
52 Employees are encouraged to take the initiative																	
53 The management style is informal																	
54 The typical employee is comfortable with taking risk																	
55 Decisions are centralised at the top																	
56 There is little concern for employees' personal problems																	
57 Management is only interested in the work of the employee																	
58 A person's private life is treated as his / her own business																	
59 Job competence is the only criterion in hiring people																	
60 People are encouraged to think / plan at least three years ahead																	
61 Only specific kind of people fit in																	
62 The organisation is closed and secretive																	
63 New people take a long time to settle																	
64 Everyone is cost conscious																	
65 Meeting times are kept punctually and times are strictly adhered to.																	
66 The management style tends to be formal																	
67 Employees tend to be pragmatic in matters of ethics																	
68 Major emphasis is on meeting "customer" needs																	
69 Results are more important than procedures																	
All questions completed ?		-								-							

PLEASE PROCEED TO PART 5

PART 5: Trustworthiness and Dependability of the "Partner"

The questions in this section are designed to test your perceptions regarding the trustworthiness and dependability of your "partner". In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement, you would place an 'X' under number 1 next to that statement; If you strongly agree you would place an 'X' under number 7. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).

When completing part 4 it is best to "freeze" cell D13 and scroll

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Importance of Item to the Relationship: Not Important	Important	Very Important
	1	2	3	4	5	6	7	1	2	3
70 Our "partner" stands by his / her word										
71 We always feel confident when our "partner" promises to do something										
72 We like and identify with the "partner's" consistent values and ideals										
73 In difficult times we can always get help from our "partner"										
74 We always have faith in our "partner" to help find appropriate solutions through compromise when conflicts arise										
75 We have faith in our "partner" to agree to adjustments in the relationship in order to react to changed circumstances when necessary										
76 Our "partner's" behaviours are always very consistent										
77 Our "partner" can always be counted on to act as we expect										
78 Sound principles seem to guide our "partner's" actions										
79 Our "partner" can be counted upon to always provides the information as agreed at the agreed times										
80 Because we have known our "partner" for a long time, we find "partner" predictable and understand "partner" well.										
81 Our "partner" almost always trusts our recommendations										
82 The "partner" organisation is very capable of performing its role in the alliance										
83 The "partner" is known to be successful at the things it tries to do										
84 The "partner" organisation is well qualified for the "alliance"										
85 The "partner" organisation has much knowledge about the work that needs to be done in the "alliance"										
86 We are very confident about the "partner" organisation's skills										
87 The "partner" organisation has specialised capabilities that add value to the "alliance"										
88 While making important decisions, the "partner" organisation is always concerned about the "alliance's" welfare;										
89 Our "partner" would not knowingly do anything to hurt our organisation										
90 Our "partner" shows goodwill to the "partnership" and genuinely finds its needs important.										
91 We can trust our "partner" to look out for what is important to the "alliance"										
92 Our partner organisation will not act opportunistically, always going out of its way to help the "partnership"										
93 Our "partner" has a strong sense of justice and is fair in business dealings with us										
94 Our "partner" will never use an opportunity that arises to profit at our expense										
95 Our "partner" is completely trustworthy										
96 We and our "partner" have a high level of mutual trust										
All questions completed ?		-								

PLEASE PROCEED TO PART 6

PART 6: Initiation of the "Partnership"

The questions in this section are designed to test your perceptions regarding the conditions and time sequence of events surrounding the initiation of the "partnership". In each case, please indicate with an 'X' the extent to which you agree or disagree with each statement. For example, if you strongly disagree with a particular statement, you would place an 'X' under number 1 next to that statement; If you strongly agree you would place an 'X' under number 7. On the right hand side, in a similar way, please rate the importance of this particular item to the relationship by placing an 'X' in the appropriate box (1 = not important, 2 = important or 3 = very important).

When completing part 4 it is best to "freeze" cell D13 and scroll

		Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree	Importance of Item to the Relationship: Not Important	Important	Very Important
		1	2	3	4	5	6	7	1	2	3
97	Our "partner" contributed substantial resources, skills and / or services to the "partnership" at the start *("Resources" can be tangible or intangible, and include financial investments, land, skills, people, permits, concessions, intellectual property, know-how, technology, licenses etc)*										
98	The resources, skills and / or services which the "partner" provided at the start of the "partnership" were essential to the setting up of a successful business										
99	We view the exchange of resources with our "partner" at the start as the initiation of the relationship within the "partnership"										
100	A working relationship with our "partner" was formed at the start of the "partnership" before any significant resources, skills and / or services were committed by either party										
101	Our "partner's" contribution of resources was particularly important for the relationship at the start of the partnership										
102	Our relationship with our "partner" has developed and become deeper over time										
103	Communication, working together and our overall satisfaction with the "partnership" have grown over time;										
104	We have a better understanding now of our "partner" than at the start of the "partnership"										

All questions completed ?

COMMENTS: (***Please write below any comments you may have on the survey or additional information you may wish to add***)

THIS COMPLETES THE SURVEY - PLEASE CHECK THAT ALL THE QUESTIONS HAVE BEEN ANSWERED.
PLEASE SAVE YOUR COMPLETED EXCEL FILE AND EMAIL BACK TO : gerryv@mweb.co.za
THANK YOU VERY MUCH FOR YOUR PARTICIPATION - GREATLY APPRECIATED !

APPENDIX B – Typical personalised solicitation letter sent to potential participants

The following is a typical personalised letter that was used to solicit participation of key SIPPP executives in the research. In each case the solicitation letter was followed up with a personal telephone call to reinforce the message and request in the letter.

Attention: Mr XXX: CEO XXX

Dear Mr XXX

I trust that you will excuse this intrusion, but I'm hoping that you may be of some assistance in an academic research study I'm conducting into strategic international public-private partnerships (SIPPPs) in Africa. Your name was very kindly furnished to me by xxx as someone who could be of assistance in my research project.

The research, which forms part of my Doctor Business Administration (DBA) degree programme at GIBS University (part of University of Pretoria), is a study of a wide number of SIPPPs in Africa (formal and informal) and the role they can potentially play in the economic development of the continent. The research is specifically focussed on the cultural aspects of such partnerships / alliances, operating in an African context across different industries and countries, and the role that cultural differences between the "partners" play in the building of trust and subsequently in the success or failure of these enterprises. I have completed the theoretical basis for the research (setting up the theoretical framework, developing testable theories and designing the field research), and am now in the process of conducting empirical field studies to test the theories developed. The attached survey questionnaire is part of that field research.

I am hoping that, as one of the leading SIPPPs in Africa, you will agree to your company and its subsidiaries participating in this pioneering research. If you agree, I would ask you to please oversee the completion of the attached survey questionnaire. Ideally, I am looking for 3 independent respondents per company. The questionnaire is really not onerous and should take no more than 45 minutes to complete. You will see that the survey does not request any company confidential information – it merely seeks the perceptions of the respondents on aspects of the relationship of the company with your public partner, national or local government. Also, it does not require any written answers – only a rating on a 1-7 scale based on your perception of certain issues which form part of the research. Instructions on the completion of the questionnaire are contained in the document itself. Respondents should save the completed survey and return to me together with a signed copy of the "*Informed Consent*" form (see attached) asap at the above email.

Please will you also identify ideally two other knowledgeable respondents in your company to complete the short survey and to share their independent perceptions. Kindly forward a blank copy of the attached survey to each respondent, together with the cover letter from me (see attached "Covering Letter Private Partner") and a copy of the "Informed Consent" form, and ask him / her to save a copy of the completed survey and return to me asap together with the signed off consent form at the above email address.

As a last request, please will you also suggest the names of three potential respondents on the "public / government" side (possibly current or past board members or senior government people who deal extensively with your businesses) and let me have their contact details (or, if you prefer, you can pass a copy of the blank survey and a copy of the "informed Consent" form on to each of the potential respondents along with a copy of the cover note that I have attached for this purpose (see attached "Covering Letter Public Partner"), and ask them to return the completed questionnaire and signed off consent form direct to me).

Strict confidentiality will be observed: a unique code known only to me will be assigned to the organisation and the respondents, and no specific company or respondent will be identified in any way in the research. Also, only aggregate data from a number of companies (about 150) will be used in the research – no data relating to a specific company will be identified. As a participating organisation, you will, of course, have full access to the results of the research.

Just to explain a few things about the questionnaire. I am interested in looking at the *relationship* between the private "partner" and the public" partner in the SIPPP. In the case of your company and its subsidiaries, I imagine that some will fall into the category of "*formal" partnership*" (i.e., a legal formal "partnership" or "alliance") and others into the category of "informal" partnership (i.e., a non-legal informal "partnership" or "alliance"), involving your parent company / other partners/ the local subsidiary on the one hand as the (international) private "partner", and the government entity as the public "partner" on the other. The survey, therefore, focuses on the "relationship" of the "private" partner in the SIPPP with the local public "partner", the nature of this "relationship" and its importance to the company. Therefore, where the questionnaire refers to "partner", "partnership" or "alliance", it is referring to the "relationship" between the "private" partner and its local public "partner" in the SIPPP.

The questionnaire is looking for each **respondent's perceptions** in relation to the questions asked and from his/ her perspective – there are no right or wrong answers. Respondent's initial perception is often the true one, so it is important not to ponder the questions too long. Even if the respondent feels that he / she does not know the answer, it is important that he / she enter his / her best perception.

Although it is preferred that the questionnaire be completed in the attached Excel workbook provided, a hard copy of the questionnaire is attached for those respondents who feel more comfortable with this format. In this case, the respondent is requested to send me a scanned copy of the completed questionnaire at the above email address along with the signed consent form.

I know that you are a very busy person and I'm sorry to impose on you, but your participation is vital to my research. I'm therefore hoping that you and your management will find the 45 minutes or so of time to complete the survey (you may even find it relaxing, but certainly I hope that you will find it interesting!). I am happy to fit in with your time schedule.

Your company's participation in this study is not only very important to my research, given your experience on the ground and the fact that your company is an African icon, but your support will also help to advance cutting-edge research on our continent.

I look forward very much to receiving your response and the completed questionnaires as soon as possible.

Again, my grateful thanks to you for assisting me in this research project.

Kind regards

Gerry

Gerry J van den Houten

Tel **+27 (0) 32 538 1048**
Fax **+27 (0) 86 579 8287**
Mobile **+27 (0) 83 633 2379**

APPENDIX C – Sample Demographics: Schematics

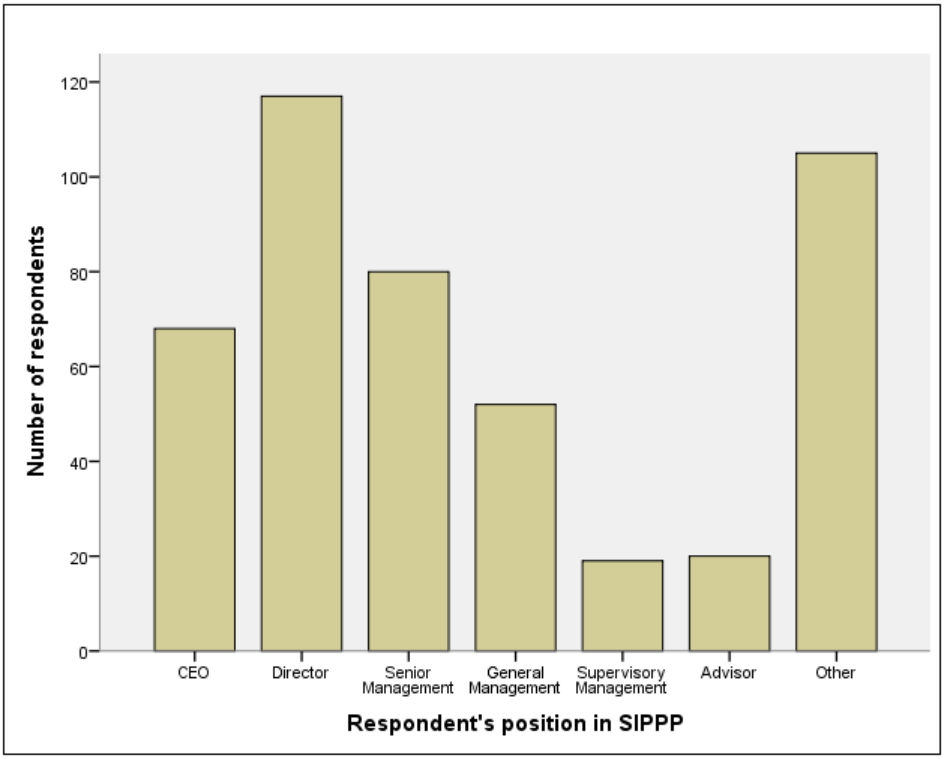


Figure C.1. Management levels distribution

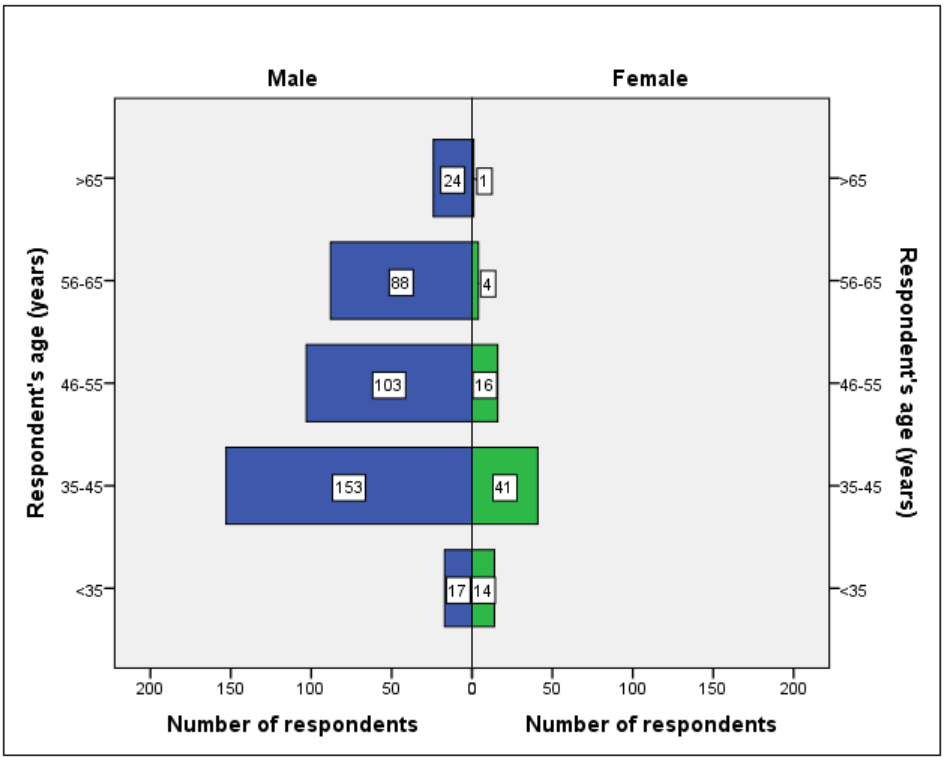


Figure C.2. Age and gender distribution

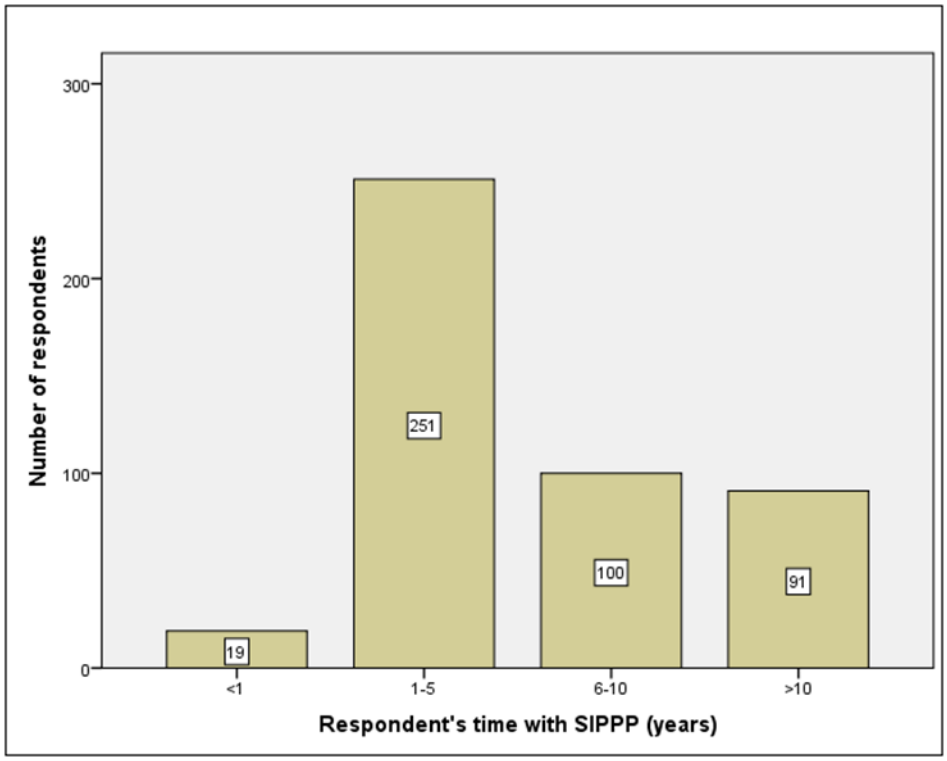


Figure C.3. Tenure with SIPPP distribution

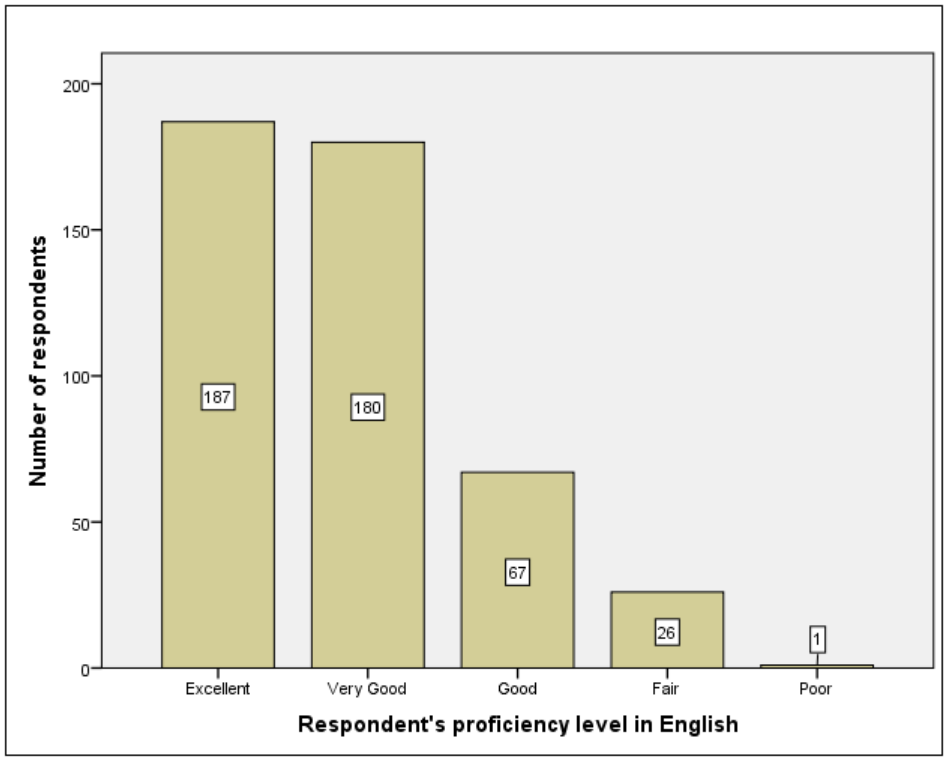


Figure C.4. English proficiency distribution

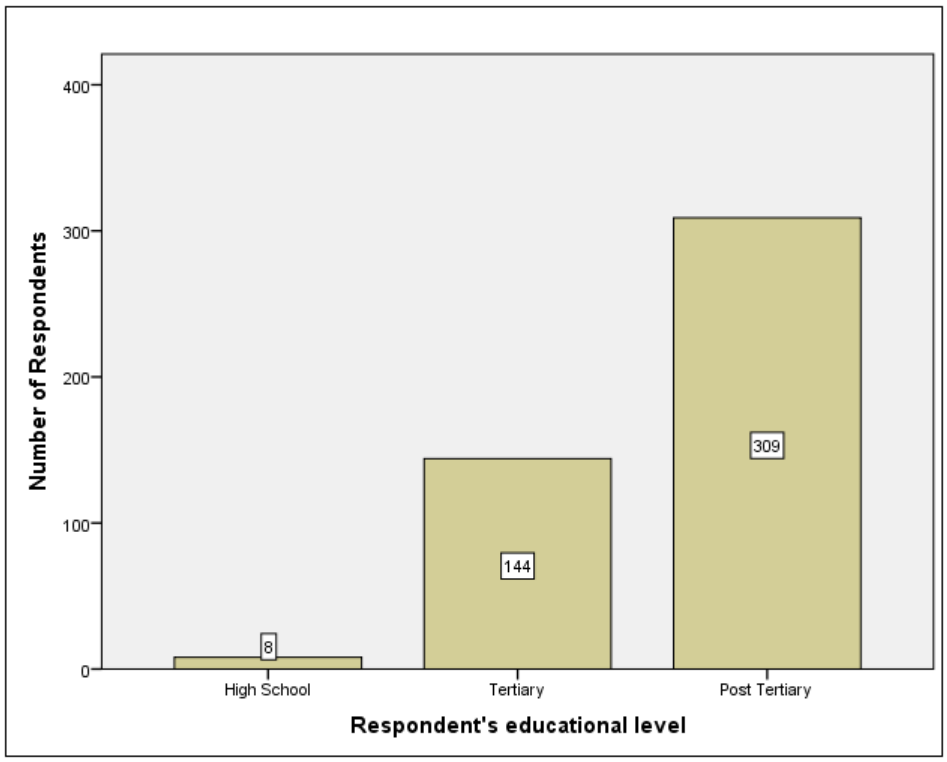


Figure C.5. Level of education distribution

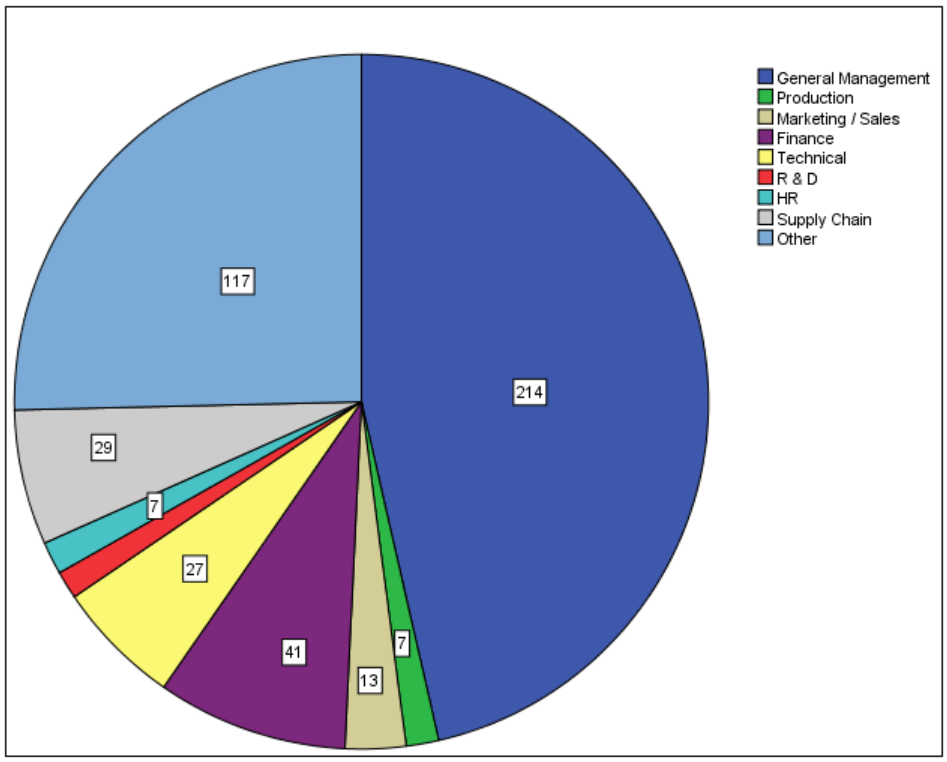


Figure C.6. Distribution of respondents' functional affiliation

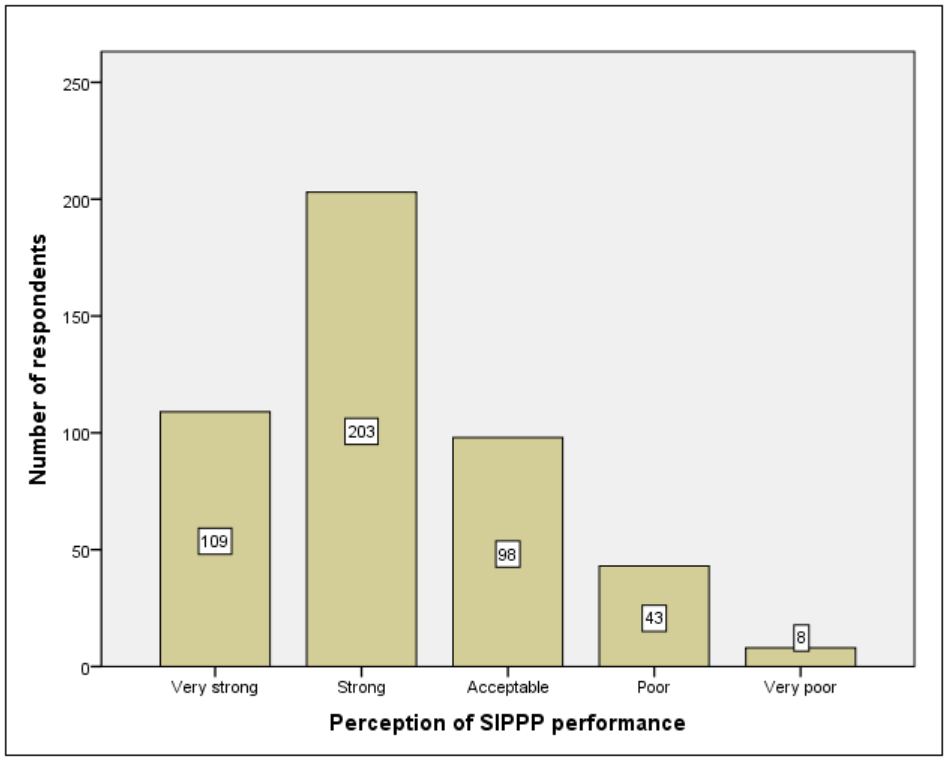


Figure C.7. Perceived SIPPP performance rating distribution

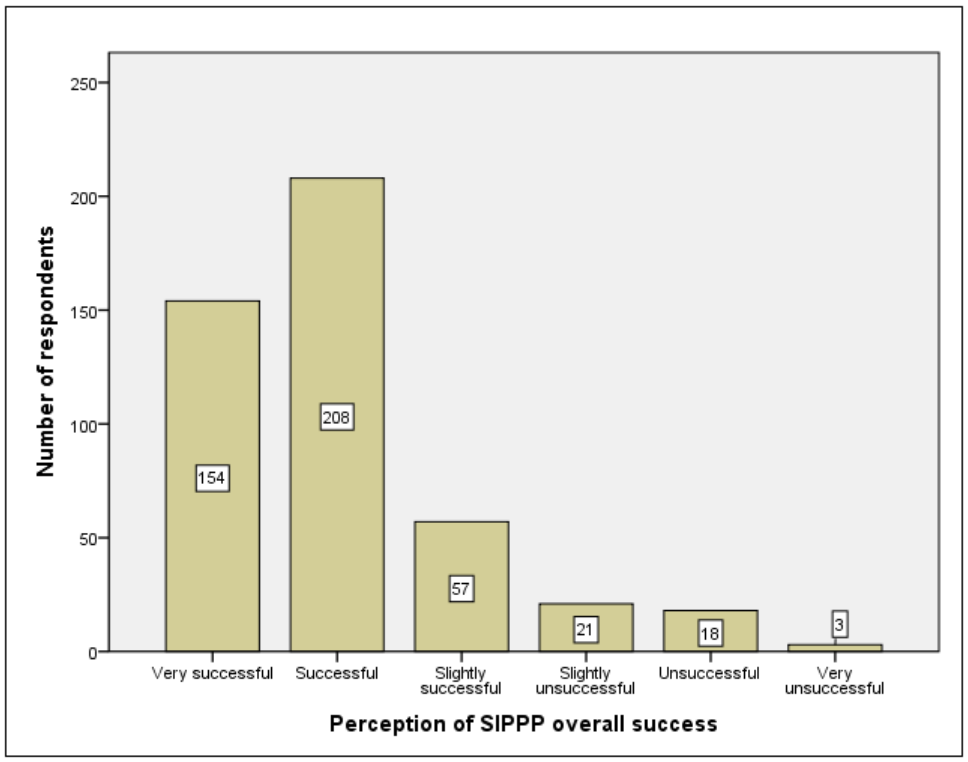


Figure C.8. Perceived SIPPP overall success rating distribution

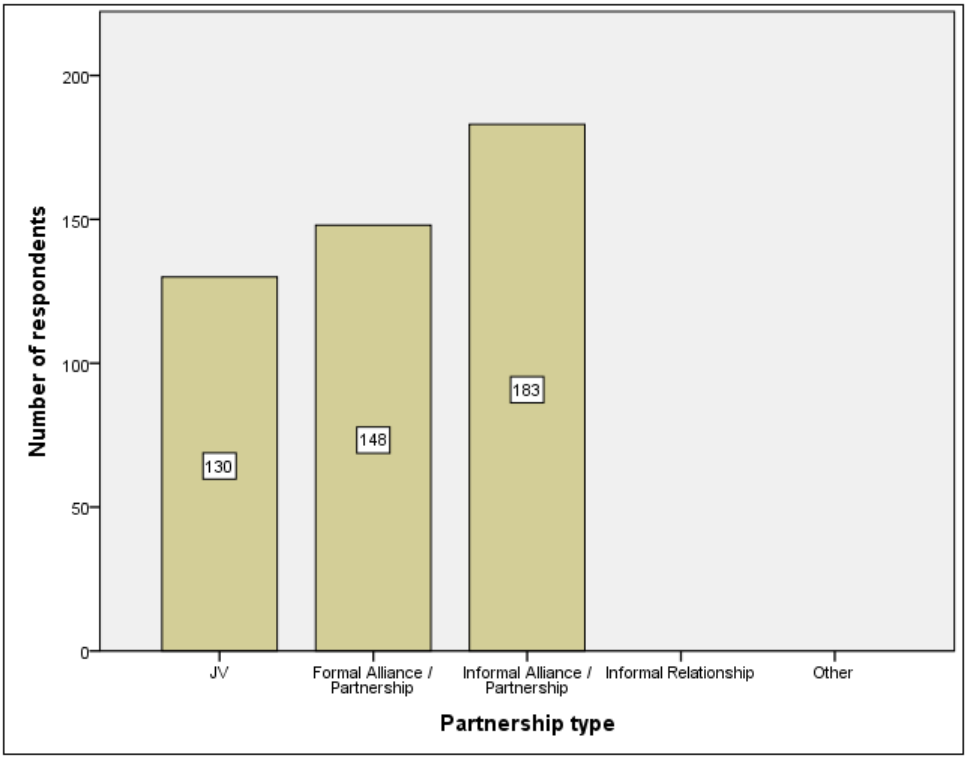


Figure C.9. SIPPP type distribution

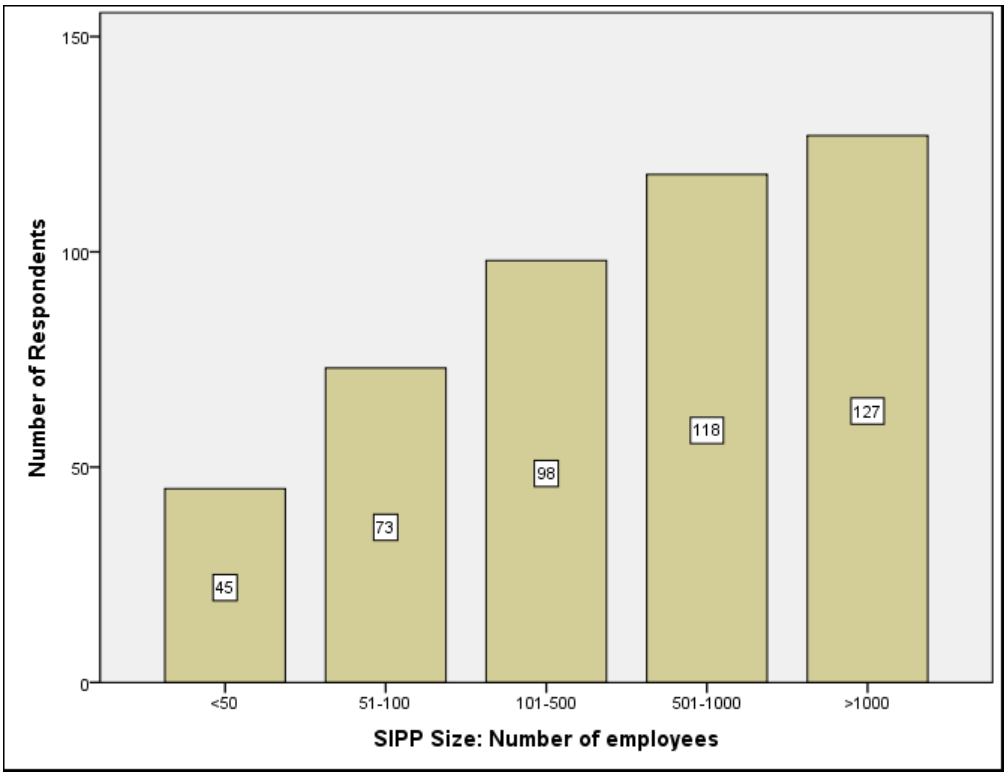


Figure C.10. SIPPP size distribution (based on employee numbers)

APPENDIX D – Test for Common Method Bias

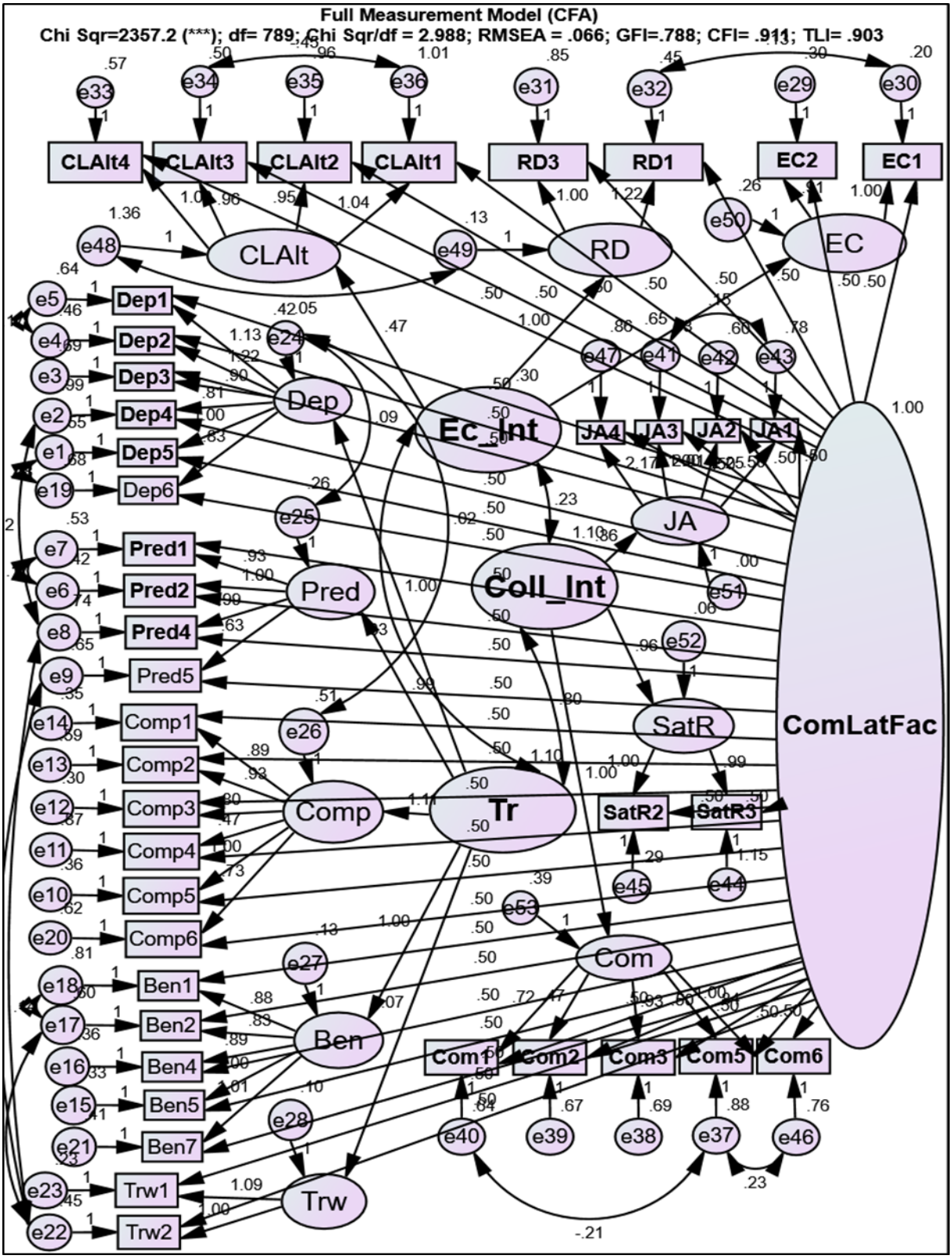
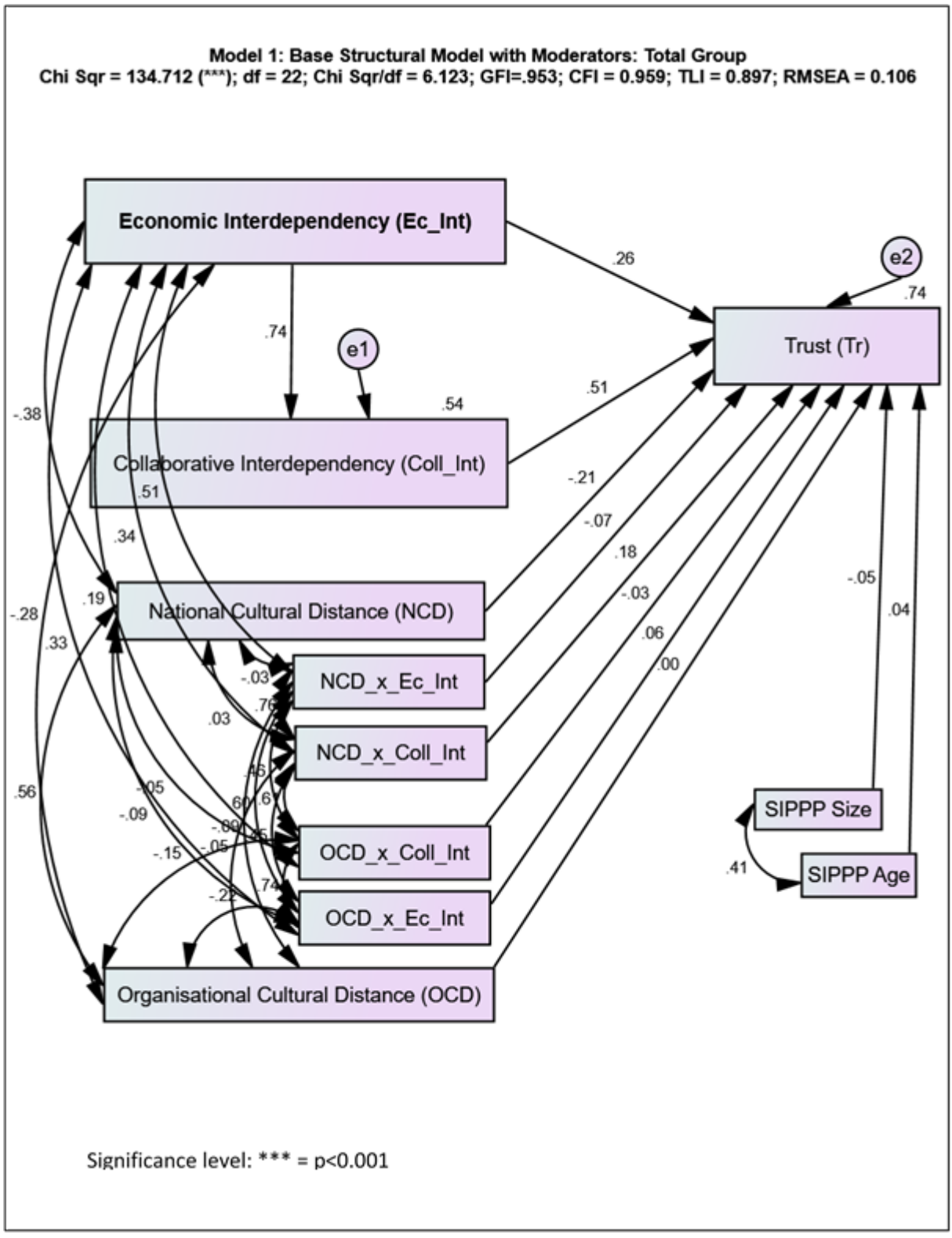


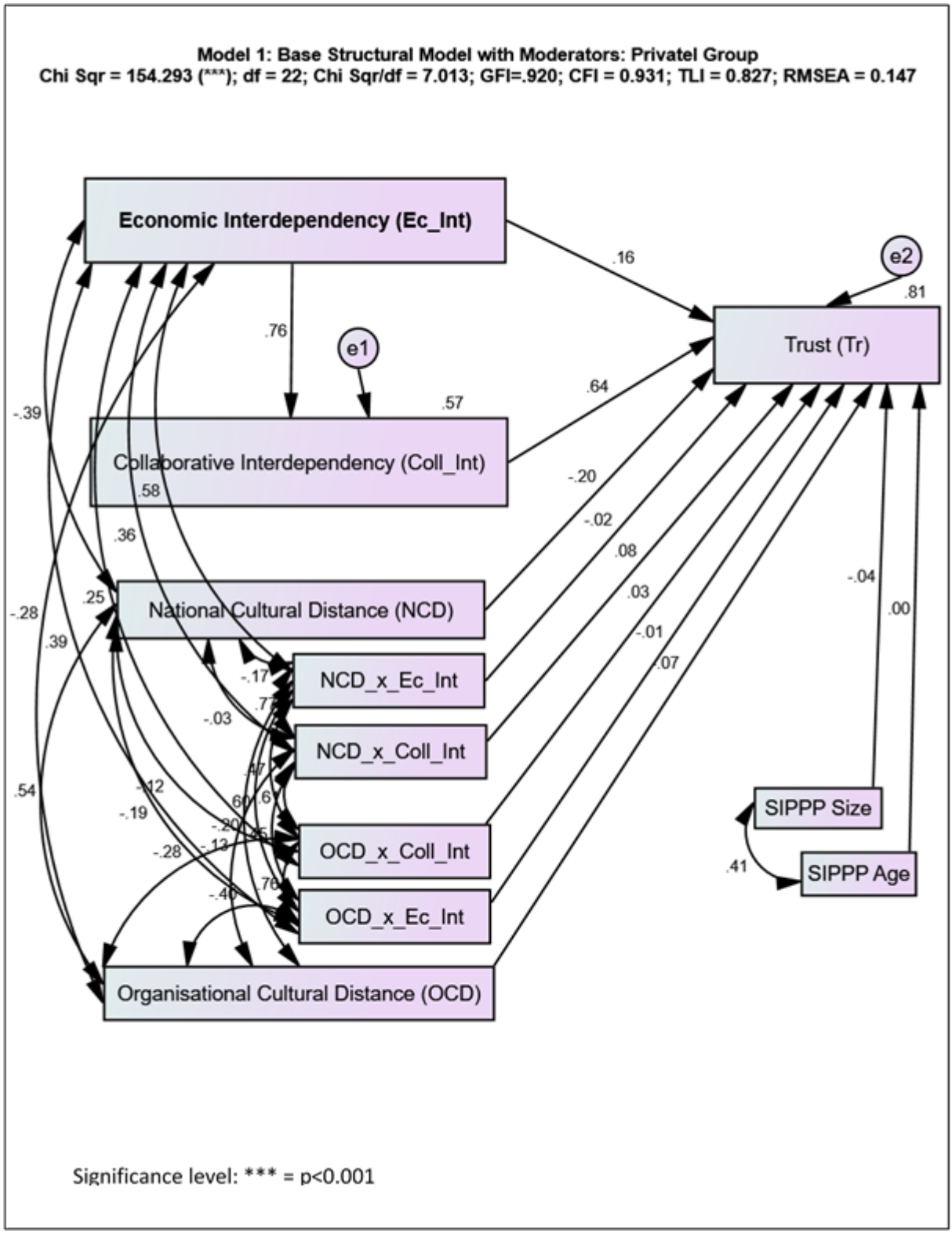
Figure D.1. Common method bias (CMB) test on final measurement model using a common latent factor (CLF)

APPENDIX E – Between-Groups Differences

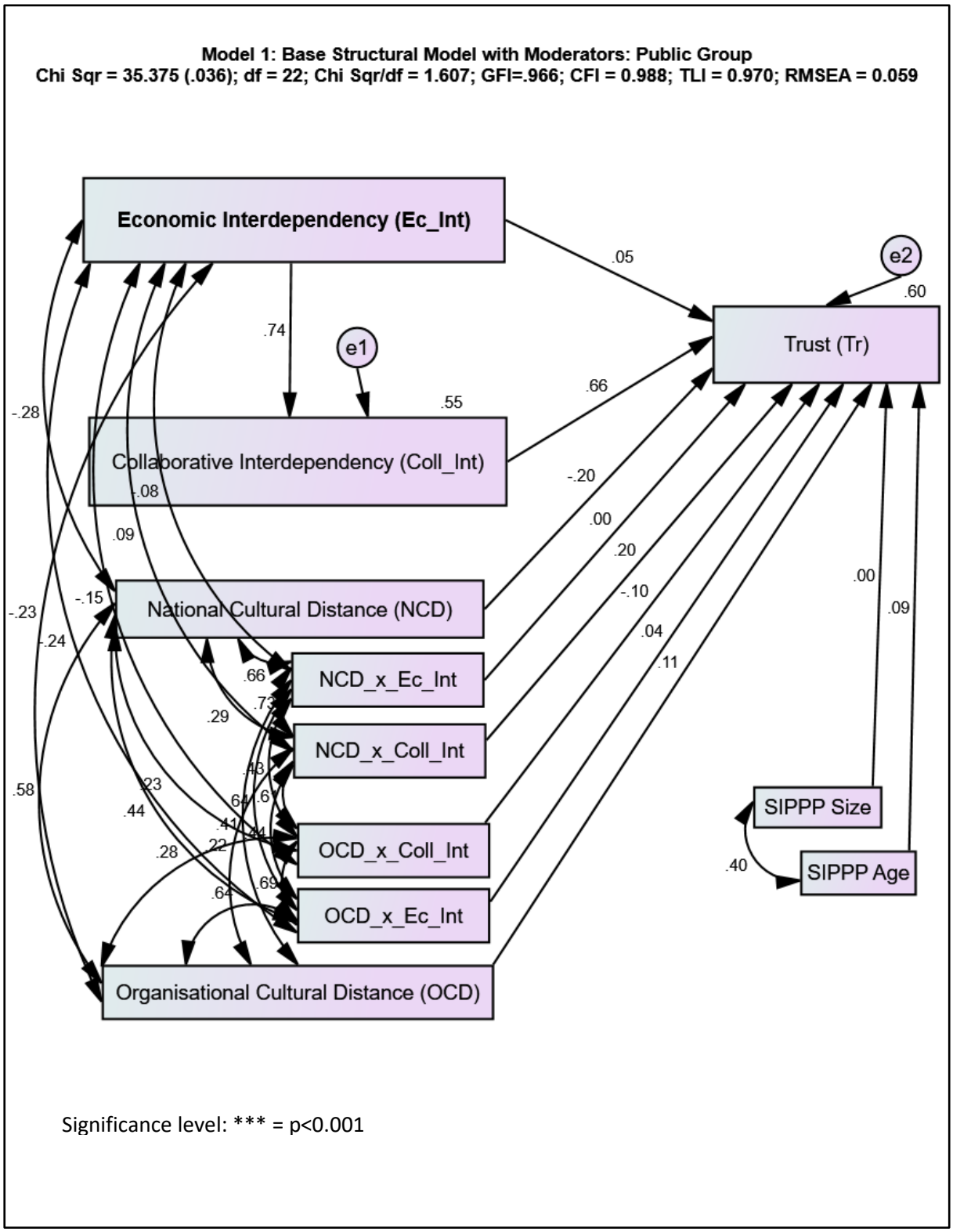
Total Group



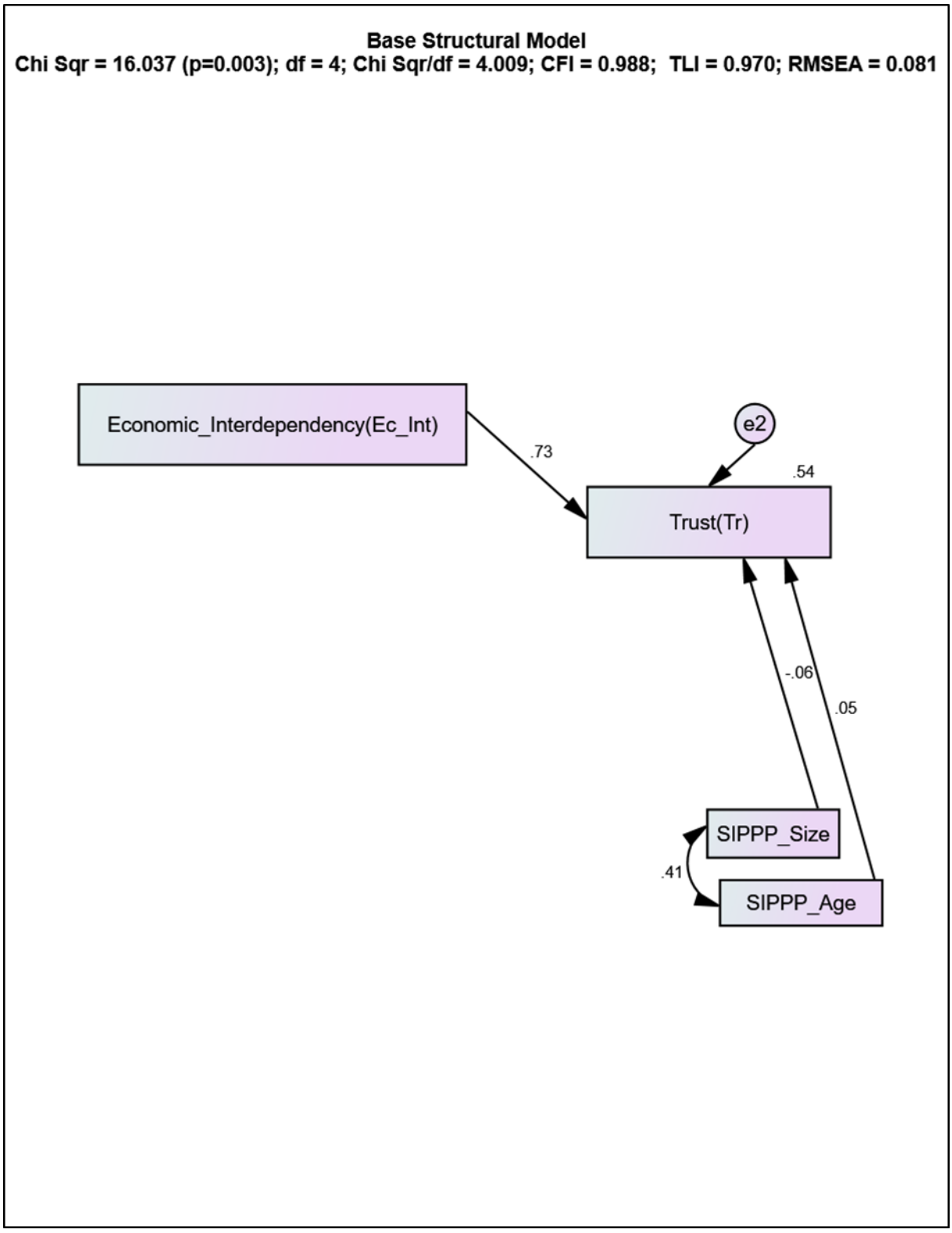
Private-sector Group



Public-sector Group



APPENDIX F – Effect of Economic Interdependency on Trust



APPENDIX G – Correlations: Moderating Effects of National Cultural Distance and Organisational Cultural Distance on Relationships

Correlations

			Estimate
ZSIPPP_Size	<-->	ZSIPPP_Age	0.409
ZEc_Int	<-->	ZNCD	-0.379
ZNCD	<-->	ZOCD	0.555
ZNCD	<-->	NCD_x_Ec_Int	-0.031
ZNCD	<-->	OCD_x_Coll_Int	-0.046
ZNCD	<-->	OCD_x_Ec_Int	-0.088
NCD_x_Ec_Int	<-->	ZOCD	-0.092
NCD_x_Ec_Int	<-->	OCD_x_Coll_Int	0.464
NCD_x_Ec_Int	<-->	OCD_x_Ec_Int	0.605
OCD_x_Ec_Int	<-->	NCD_x_Coll_Int	0.448
ZOCD	<-->	OCD_x_Coll_Int	-0.154
ZNCD	<-->	NCD_x_Coll_Int	0.029
ZOCD	<-->	NCD_x_Coll_Int	-0.049
ZOCD	<-->	OCD_x_Ec_Int	-0.222
ZEc_Int	<-->	OCD_x_Ec_Int	0.329
ZEc_Int	<-->	OCD_x_Coll_Int	0.192
ZEc_Int	<-->	NCD_x_Coll_Int	0.341
ZEc_Int	<-->	NCD_x_Ec_Int	0.506
ZEc_Int	<-->	ZOCD	-0.279
NCD_x_Ec_Int	<-->	NCD_x_Coll_Int	0.76
OCD_x_Coll_Int	<-->	NCD_x_Coll_Int	0.606
OCD_x_Coll_Int	<-->	OCD_x_Ec_Int	0.744

Implied Correlations

	NCD_x_Coll_Int	OCD_x_Ec_Int	OCD_x_Coll_Int	ZOCD	ZSIPPP_Age	ZSIPPP_Size	NCD_x_Ec_Int	ZNCD	ZEc_Int	ZColl_Int	ZTr
NCD_x_Coll_Int	1										
OCD_x_Ec_Int	0.448	1									
OCD_x_Coll_Int	0.606	0.744	1								
ZOCD	-0.049	-0.222	-0.154	1							
ZSIPPP_Age	0	0	0	0	1						
ZSIPPP_Size	0	0	0	0	0.409	1					
NCD_x_Ec_Int	0.76	0.605	0.464	-0.092	0	0	1				
ZNCD	0.029	-0.088	-0.046	0.555	0	0	-0.031	1			
ZEc_Int	0.341	0.329	0.192	-0.279	0	0	0.506	-0.379	1		
ZColl_Int	0.251	0.242	0.141	-0.205	0	0	0.372	-0.278	0.735	1	
ZTr	0.347	0.305	0.225	-0.308	0.019	-0.031	0.416	-0.447	0.755	0.789	1

APPENDIX H – Hypothesised Measurement Models

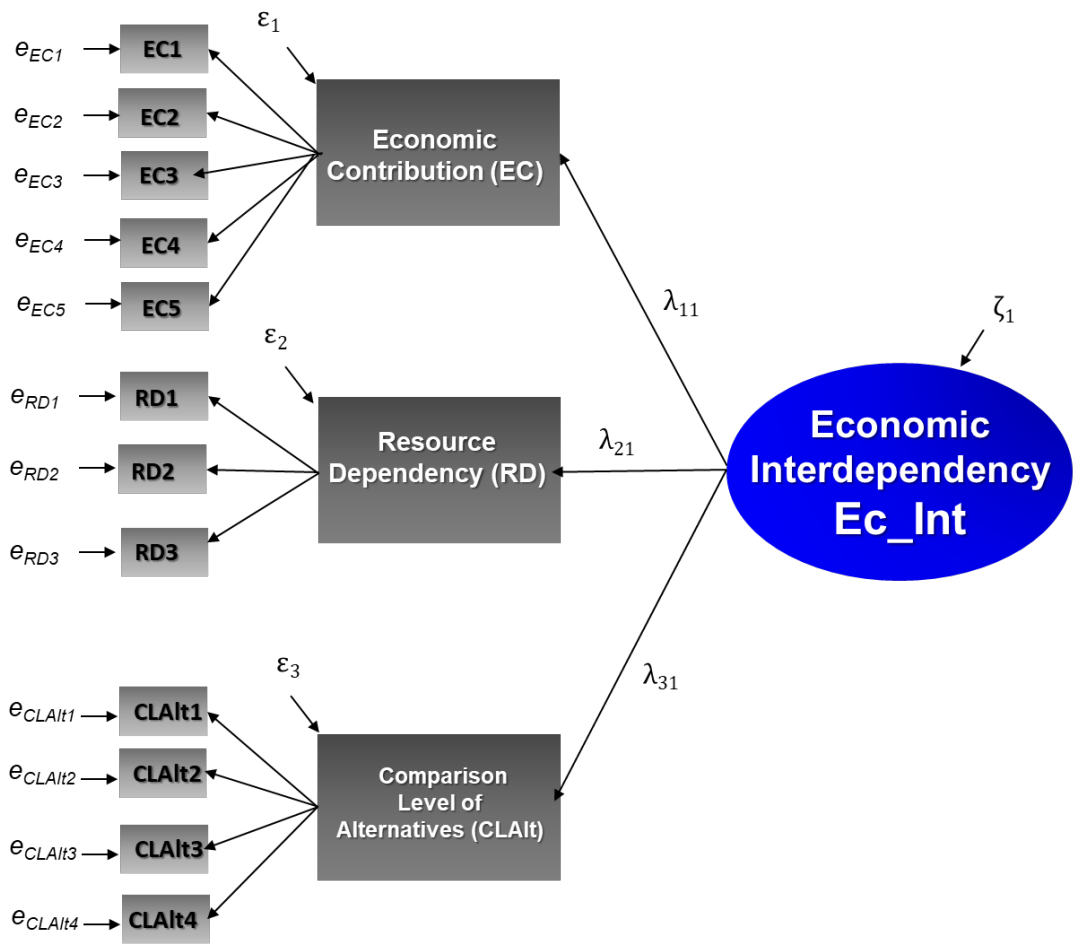


Figure H.1. Measurement model for the latent construct Economic Interdependency (Ec_Int), showing the three scales Economic Contribution (EC), Resource Dependency (RD) and Comparison of Alternatives (CLAlt), and their corresponding measurement twelve items (EC1-5; RD1-3 & CLAlt1-4). Standard SEM notation is used to denote the loadings on the construct (λ_{i1}), its disturbance (ζ_1), and measurement errors (ε_i and e).

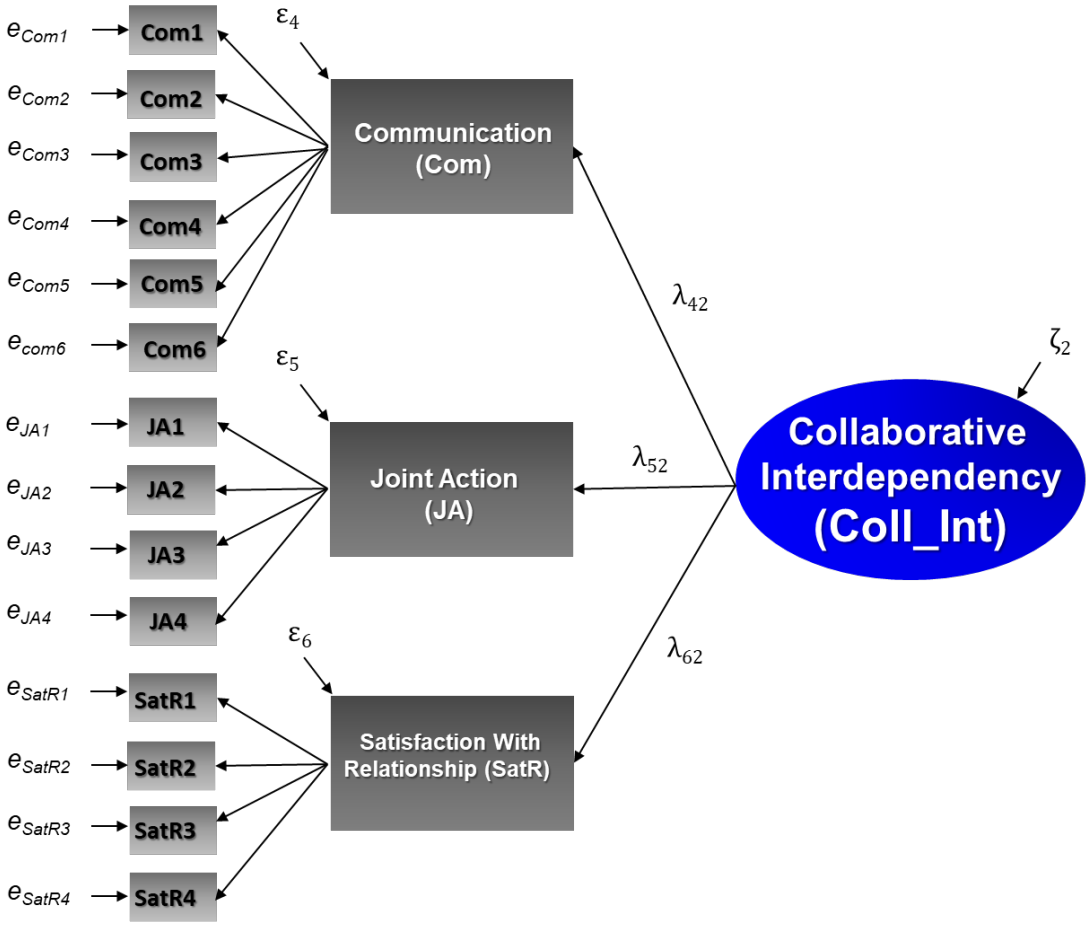


Figure H.2. Measurement model for the latent construct Collaborative Interdependency (Coll_Int), showing the three scales Communication (Com), Joint Action (JA), and Satisfaction with the Relationship (SatR), together with their corresponding fourteen measurement items (Com1-6; JA1-4 & SatR1-4). Standard SEM notation is used to denote the loadings on the construct (λ_{i2}), its disturbance (ζ_2), and measurement errors (ε_i and e).

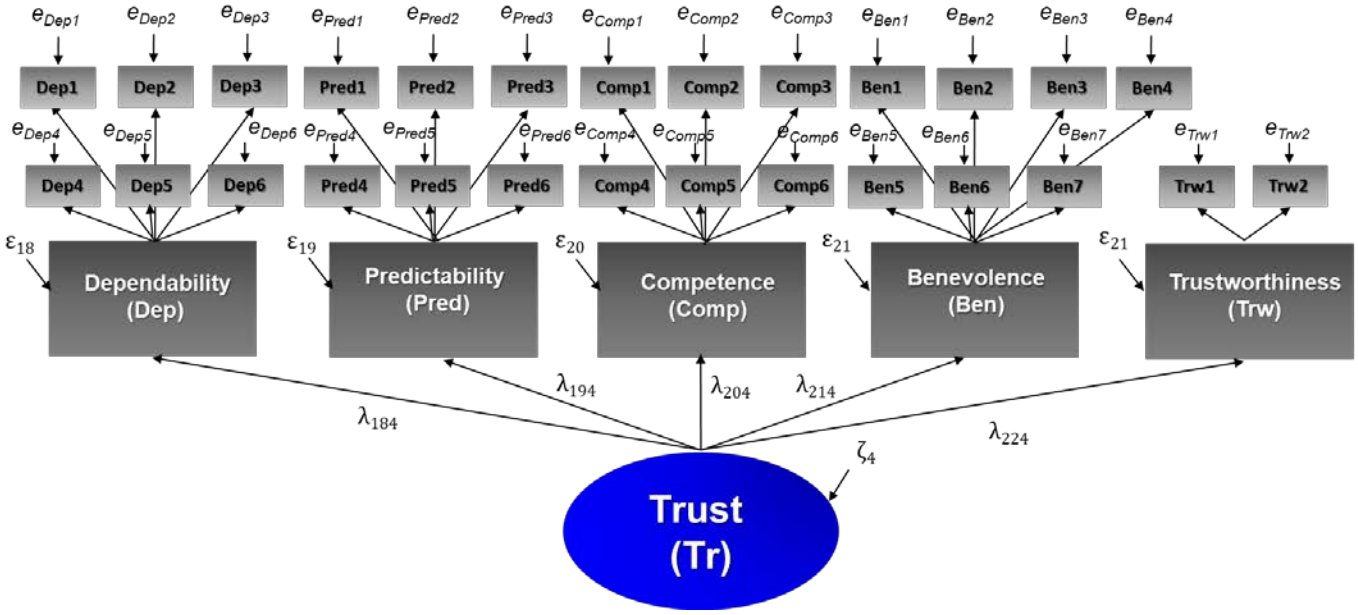


Figure H.3. Measurement model for the latent construct Trust, showing the five scales Dependability (Dep), Predictability (Pred), Competence (Comp), Benevolence (Ben), and Trustworthiness (Trw), together with their 27 corresponding measurement items (Dep1-6; Pred1-6; Comp1-6; Ben1-7 & Trw1-2). Standard SEM notation is used to denote the loadings on the construct (λ_{i2}), its disturbance (ζ_2), and measurement errors (ε_i and e).

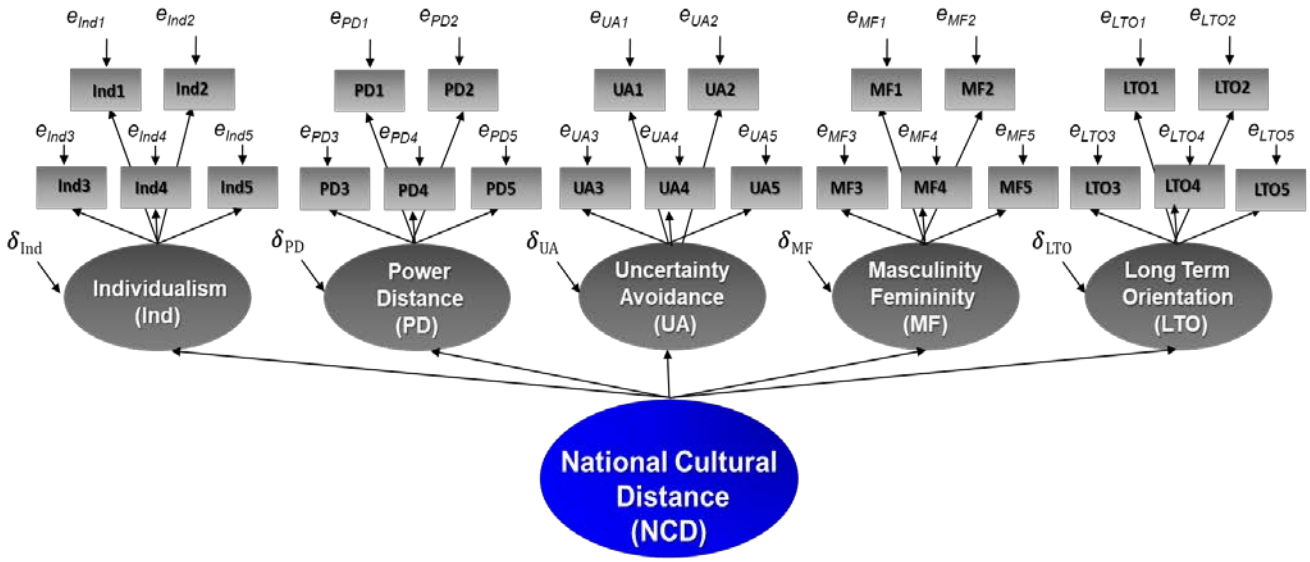


Figure H.4. Measurement model for the latent construct National Cultural Distance, showing the scale and its corresponding measurement items: Hofstede's (1980) five National Cultural Distance sub-scales: (Individualism (Ind), Power Distance (PD), Uncertainty Avoidance (UA), Masculinity Femininity (MF), and Long-term Orientation (LTO). Standard SEM notation is used to denote the loadings on the construct (λ_{i2}), its disturbance (ζ_2), and measurement errors (ε_i and e).

Figure H.5 Measurement model for the latent construct Organisational *Cultural Distance*, showing the scale and its corresponding measurement items. Distances calculated based on Hofstede et al. (1990) six core organisational practices that differentiate organisations in their management orientation: (*Process vs Results* (PvR), *Employee vs Job* (EvJ), *Parochial vs Professional* (PvP), *Open vs Closed* (OvC), *Loose vs Tight* (LvT), and *Normative vs Pragmatic* (NvP). Standard *SEM* notation is used to denote the loadings on the construct (λ_{i2}), its disturbance (ζ_2), and measurement errors (ε_i and e).

APPENDIX I – CFA Combined Measurement Scale

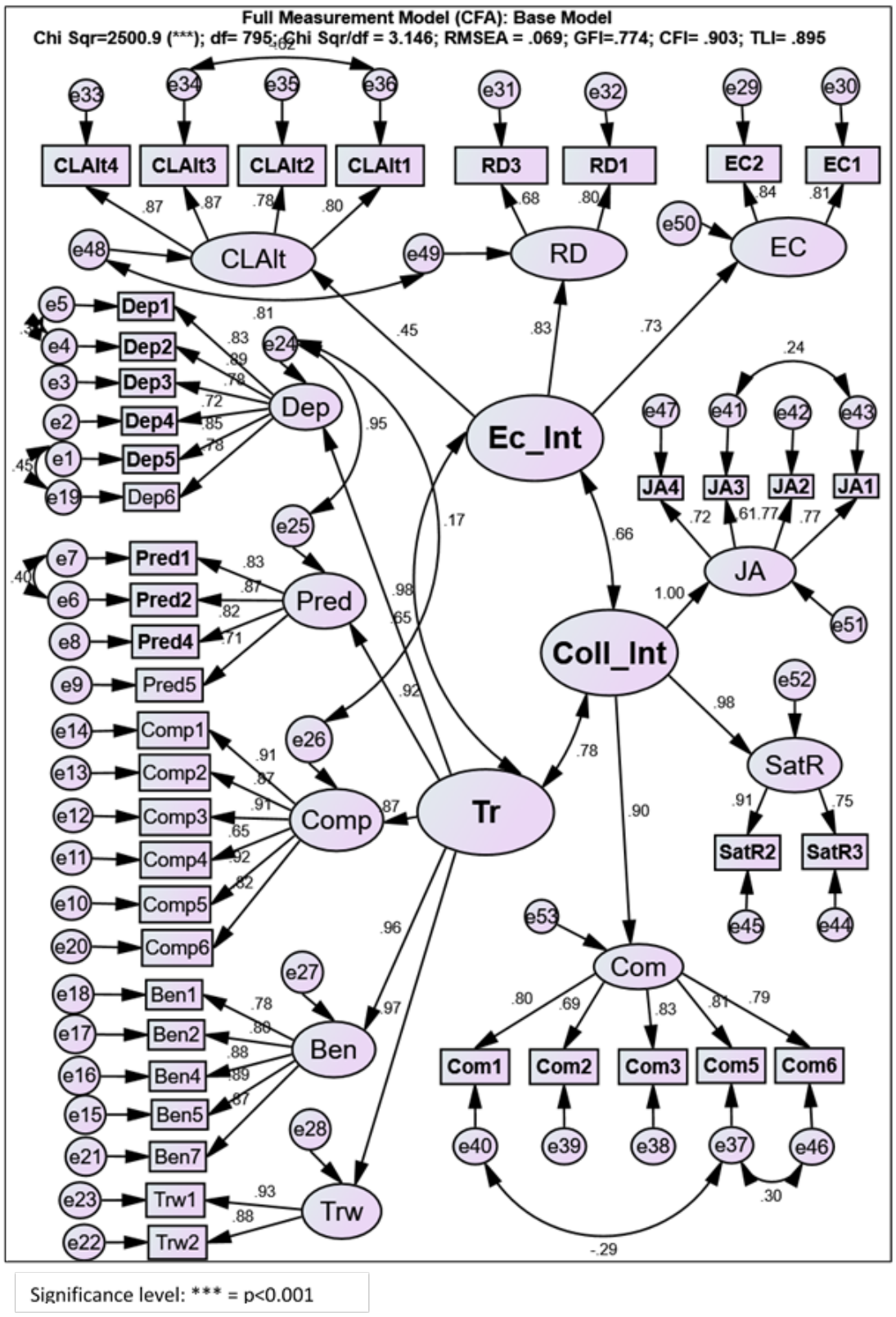


Figure I.1. Initial full measurement model CFA: overall combined measurement scale