Modelling Relationship Quality across Organizational Cultures: an Empirical Investigation within the Logistics Outsourcing Industry

Tomas Palaima

A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Marketing

The University of Warwick

Warwick Business School

December 2012

DECLARATION

STATEMENT 1

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged giving explicit references.

Signed...(candidate)

Date..........................

STATEMENT 2

This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

Signed...(candidate)

Date..........................

ACKNOWLEDGMENTS

CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

Relationship quality is the cornerstone of relationship marketing. However, conceptualizations of relationship quality vary across studies indicating the absence of a general consensus. Consistent with the definition of Hennig-Thurau *et al.* (2002, p. 234), relationship quality most often refers to "a metaconstruct composed of several key components reflecting the overall nature of relationships between companies and consumers". However, "the only area of convergence is three major dimensions of RQ [relationship quality] (trust, commitment and satisfaction)" (Athanasopoulou, 2009, p. 603). This assumption is at odds with a growing body of research which calls to "expand the constructs and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges" (Palmatier *et al.*, 2006, p. 152). Moreover, there is a consensus that culture affects business relationships. Yet, to date, both the phenomena are under-researched. Owing to the fragmented insights into relationship quality and its links with organizational culture, calls for future research gather momentum each day.

This thesis forwards a study of relationship quality across organizational cultures. Consequently, the objective of the current study is to conceptualize rival models by amalgamating extant literature stemming from diverse theories in order to empirically corroborate (1) the dimensions of relationship quality, (2) the structural relationships between them and (3) the effects of organizational culture on relationship quality. In doing so, the current study constitutes the first attempt to evaluate the direct and moderating effects of organizational culture on relationship quality in a holistic manner.

Extensive synthesis of extant literature stemming from different theories reveals six dimensions of relationship quality: loyalty, reciprocity, co-operation, communication, trust and opportunism. Further synthesis of the literature identifies five dimensions or organizational culture relevant to relationship quality: individualism and collectivism, human orientation, power distance, assertiveness and uncertainty avoidance. Owing to the absence of a general consensus, two competing models of relationship quality are conceptualized.

A web-based survey was employed to collect data within the logistics outsourcing industry in the United Kingdom. This process resulted in two hundred and sixty six usable responses. Subsequently, structural equation modelling was employed to test the hypotheses of interest.

The findings demonstrate that the construct of relationship quality comprises five dimensions: action loyalty, reciprocity, co-operation, trust and opportunism. Moreover, four dimensions of organizational culture appear to have effects on relationship quality: individualism and collectivism, human orientation, power distance and assertiveness. The findings result in numerous theoretical contributions and practical implications.

CHAPTER 1

INTRODUCTION AND BACKGROUND TO RESEARCH

1.1 Introduction

This chapter introduces the theoretical and practical research context of the study and is organized into four sections. *Firstly*, the research context and precedent is discussed. *Secondly*, the research objective and aims are forwarded. Thirdly, the intended research contributions are contemplated. Finally, the chapter ends with an overview of the structure of this thesis.

1.2 Research Context and Precedent

The current section introduces the theoretical and practical research context and is organized into four sub-sections. *Firstly*, the gaps pertaining to conceptualizations of relationship quality are discussed. *Secondly*, the effects of culture on relationship marketing *per se* are reviewed in order to justify further discussion. *Thirdly*, calls for research of relationship quality and its links with organizational culture are contemplated. *Finally*, the context of the study is forwarded which demonstrates that the logistics outsourcing industry is an ideal context within which to study relationship quality across organizational cultures.

1.2.1 Relationship Quality

According to Palmatier *et al.* (2006, p. 136), "relationship marketing ... , both in business practice and as a focus of academic research, has experienced explosive growth in the past decade". Moreover, Vargo and Lusch (2004, p. 2) argue that "marketing has moved from a goods-dominant view, in which tangible output and discrete transactions were central, to a service-dominant view, in which intangibility, exchange processes, and relationships are central" (*ibid.*, p. 2). Relationship quality is the cornerstone of relationship marketing (Holmlund, 2008). Indeed, the meta-analysis by Palmatier *et al.* (2006, p. 149) demonstrates that "performance is influenced most by relationship quality (a composite measure of relationship strength) and least by commitment". Consequently, "a multidimensional perspective should be employed" because "no single or "best" relational mediator can capture the full essence or depth of a customer–seller relationship" (*ibid.*, p. 149).

Hennig-Thurau *et al.* (2002, p. 234) posit that relationship quality most often refers to "a metaconstruct composed of several key components reflecting the overall nature of relationships between companies and consumers". However, conceptualizations of relationship quality vary across studies indicating the absence of a general consensus (Holmlund, 2008; Athanasopoulou, 2009). Indeed, consistent with the previous studies (e.g., Palmatier *et al.*, 2006; Holmlund, 2008), "the only area of convergence is three major dimensions of RQ [relationship quality] (trust, commitment and satisfaction)" (Athanasopoulou, 2009, p. 603). However, Palmatier *et al.* (2006, p. 152) argue that "research should expand the constructs ... and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges".

Indeed, despite a consensus that loyalty comprises both attitudinal and behavioural elements (Jacoby, 1971; Olson and Jacoby, 1971; Harris and Goode, 2004; Oliver, 2010), the majority of studies are limited to relationship continuity. Moreover, there is strong evidence that relationship quality "should be adapted to include alternative mediated pathways" such as reciprocity (Palmatier *et al.*, 2006, p. 150). Indeed, reciprocity is very closely related to the concept of adaptation which is central to business-to-business industries (Håkansson, 1982; Ford *et al.*, 2003; Gummesson, 2008b) and is often present in the relationship marketing studies. Drawing on the work of Hallén *et al.* (1991), Brennan *et al.* (2003, p. 1658) relate adaptations to reciprocity and contend that reciprocal adaptations play a part in trust-building process whereas unilateral adaptations pertain to "a response to power imbalances within the relationship".

1.2.2 The Effects of Culture on Relationship Marketing

Håkansson (1982) contends that the social system affects the interaction process. Indeed, Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships".

Consistent with the service-dominant logic, Grönroos (2000, p. 357) posits that "the development and management of a service culture is a critical task" both for "service firms and manufacturers facing service competition". Hanges and Dickson (2004) relate values to organizational culture. According to Gummesson (2008b, p. 19), the gap between relationship marketing philosophy and actions "is also caused by marketers who have not internalized marketing values". Moreover, Gummesson (2008b, p. 20) argues that "inadequate basic values and their accompanying procedures − the wrong paradigm is the biggest obstacle to success in marketing". Hence, there will be no positive effect of relationship marketing unless relationship values are accepted as a natural vantage point (*ibid.*, p. 20).

Shah *et al.* (2006) argue that organizational culture, structure, processes and financial metrics are the organizational barriers to customer centricity. Buttle (2004, p. 46) concurs that "the degree to which an organizational culture is customer centric is expressed in leadership behaviours, formal systems and internal relationships. These, in turn, largely determine the experience of employees in the company .... , which in turn is reflected in their behaviour when interacting with customers".

According to Buttle (2009), organizational culture is regarded as a supporting condition of customer profitability. Indeed, empirical research demonstrates that customer relationship management implementations depend on organizational culture (Iriana and Buttle, 2008). That is, CRM achieves better performance in the presence of an externally-oriented culture (adhocracy or market) and are less effective when a culture is internally-oriented (hierarchy or clan). Gummesson (2008b) concurs that adhocracy and hierarchy (bureaucracy) are two extremes. The latter is characterized by rules, plans, repressions as well as "common sense and results ... overruled by rituals" whereas the former pertains to "sensitivity for the unexpected, quick action, high degree of freedom, support from management and colleagues, generosity ... and only the sky in the limit" (*ibid.*, p. 304). Finally, Gummesson (2008b, p. 311) calls for a new synthesis and a shift from "exclusive hierarchies to inclusive networks

and processes". He argues that "an organization exists, but not in a physical and tangible body. Its most important resources – its intellectual capital and core competency – ... show in the network" thus competition occurs between networks instead of individual companies (*ibid.,* p. 313). Grönroos (2000, p. 364) concurs that "a service oriented firm requires a relatively flat organizational structure with few hierarchical levels" in order to foster customer intimacy. Finally, Gummesson (2008b, p. 314) concludes that "the customer is integrated with the organization and the customer base is a central resource, sometimes the most important resource. In this way, the roles of supplier and customer become less obvious; value is co-created through their interaction".

Besides affecting the ability to build network relationships, culture appears to influence three general dimensions of customer experience which are central to services and relationship marketing as well as relationship quality: service expectations, service evaluations and reactions to service (Zhang *et al.*, 2008; Schumann, 2009a). Indeed, numerous studies have demonstrated that all the three dimensions are affected by culture (Liu *et al.*, 2001; Patterson *et al.*, 2006; Patterson and Mattila, 2008; Zhang *et al.*, 2008; Schumann, 2009a). Moreover, both national and organizational cultures moderate the effect of relationship quality (trust and commitment) on repurchase intentions in an industrial buyer-seller setting (Hewett *et al.*, 2002; 2006). However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605).

1.2.3 Calls for Research

Owing to the fragmented insights into relationship quality and its links with organizational culture, calls for future research gather momentum each day.

Conceptualizations of relationship quality vary across studies indicating the absence of a general consensus (Holmlund, 2008; Athanasopoulou, 2009). Indeed, consistent with the

previous studies (e.g., Palmatier *et al.*, 2006; Holmlund, 2008), "the only area of convergence is three major dimensions of RQ [relationship quality] (trust, commitment and satisfaction)" (Athanasopoulou, 2009, p. 603). However, Palmatier *et al.* (2006, p. 152) argue that "research should expand the constructs ... and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges".

The norm of reciprocity is the cornerstone of social exchange theory (Thibaut and Kelley, 1959; Gouldner, 1960; Blau, 1964; Kelley and Thibaut, 1978; Lambe *et al.*, 2001) and is regarded as having the potential for explanatory power in relationship marketing (Pervan *et al.*, 2009). Indeed, Bagozzi (1995, p. 275) argues that reciprocity "is at the core of marketing relationships" and refers to "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship". Hence, reciprocity provides "control over one's volitions and actions" (*ibid.*, p. 276). Palmatier *et al*. (2006) contend that, although commitment and trust have been important dimensions in relationship marketing, reciprocity along with relational norms, relationship satisfaction, exchange efficiency and equity, may play a critical role. Thus, Palmatier *et al*. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). This argument is supported by the meta-analysis (Palmatier *et al.*, 2006), which indicates that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has a substantial effect on seller objective performance.

Despite a consensus that loyalty comprises both attitudinal and behavioural elements (Jacoby, 1971; Olson and Jacoby, 1971; Harris and Goode, 2004; Oliver, 2010), the majority of relationship quality studies are limited to relationship continuity. The sequential chain of loyalty forwarded by Oliver (1999) "constitutes the most comprehensive evaluation of the construct" (Harris and Goode, 2004, p. 141). According to Oliver (1999), loyalty comprises four stages: cognitive, affective, conative and action loyalty. The conceptual framework of the

cognitive-to-action loyalty has been empirically tested by a number of studies (e.g., Eugene and Jamie, 2000; McMullan and Gilmore, 2003; McMullan, 2005; Harris and Goode, 2004; Evanschitzky and Wunderlich, 2006) in order to assess the sequence and distinctness of the stages. Having summarized the operationalizations of the sequential loyalty chain, Oliver (2010) calls for more intensive efforts to corroborate or refute his views and points out several potential weaknesses. Oliver (2010, p. 440) explains that "loyalty effects have been discussed largely in the context of product marketing" while "strong interpersonal character of services" requires "additional dimensions of a much more binding and even overriding nature". Indeed, the present operationalizations of the sequential chain are based on relatively transactional business-to-consumer samples: retail customers (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online shoppers (Harris and Goode, 2004) and restaurant visitors (McMullan and Gilmore, 2003; McMullan, 2005). Hence, it is important to assess validity of the sequential stages based on more complex business-to-business services samples.

Despite the evidence that multi-faceted loyalty, commitment, adaptation, co-operation, communication, trust and opportunism are critical dimensions in the business-to-business context, at present there is no study which integrates all the dimensions and explains the relationships between them. Indeed, Morgan and Hunt (1994, p. 26) forward the commitment-trust theory stating that "cooperation is the only outcome posited to be influenced directly by both relationship commitment and trust. A partner committed to the relationship will cooperate with another member because of a desire to make the relationship work". Communication is an important dimension of business to business relationships (Anderson and Narus, 1984; 1990; Crosby *et al.*, 1990; Athanasopoulou, 2009). As "channel members achieve coordination by sharing information through frequent two-way interchanges", "communications play an important role in realizing the mutual benefits" (Anderson and Weitz, 1992, p. 21). Opportunism along with trust and co-operation is related to the concept of atmosphere. According to Håkansson (1982, p. 21) "atmosphere can be described in terms

of the power–dependence relationship which exists between the companies, the state of conflict or co-operation and overall closeness or distance of the relationship as well as by the companies' mutual expectations".

Håkansson (1982) contends that the social system affects the interaction process. Indeed, Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships". However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605). Palmatier *et al.* (2006) posit that linkages between dimensions of relationship quality vary greatly in strength across studies. Consequently, this heterogeneity "demands research to determine other moderators that may influence RM [relationship marketing] effectiveness" (*ibid*., p. 152). The studies of Hewett *et al.* (2002; 2006) demonstrate that culture may be the moderator, which explains the phenomenon. Indeed, there is some evidence that both national and organizational cultures moderate the effect of relationship quality on repurchase intentions in the business-to-business context (Hewett *et al.*, 2002; 2006). Moreover, Hewett *et al.* (2002, p. 235) posit that "an understanding of the differences of the corporate cultures of buyers and sellers ... [is] an interesting area for future research. It is possible that certain relationship partners are more compatible than others". Indeed, Bucklin and Sengupta (1993) demonstrate that the compatibility of the partners affects the effectiveness of the relationship. Hence, there is "the need for compatibility in terms of partner culture, operations, goals and objectives" (*ibid*., p. 43). The meta-analysis by Palmatier *et al.* (2006, p. 138) denotes similarity as "the commonality in appearance, lifestyle, and status between individual boundary spanners or the similar cultures, values, and goals between organizations". The study demonstrates that similarity has effect on relationship quality. Hence, "selection and

training of boundary spanners is critical; expertise, communication, and similarity to customers are some of the most effective relationship-building strategies" (*ibid*., p. 151).

In summary, social exchange theory (Homans, 1958; Thibaut and Kelley, 1959; Emerson, 1962; Blau, 1964) is one of the most popular theories of relationship marketing (Crosby *et al.*, 1990; Wulf and Odekerken-Schröder, 2001; Bruhn, 2003; Woo and Ennew, 2004). However, a fully developed conceptual framework is still lacking (Lambe *et al.*, 2001; Palmatier *et al.*, 2006). Indeed, Palmatier *et al.* (2006, p. 152) argue that "research should expand the constructs ... and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges". Moreover, the vast majority of authors call for research of other relationship quality constructs pertaining to social exchange theory (e.g. reciprocity, relational norms, relationship satisfaction, exchange efficiency and equity). Consequently, *the current study will rest mainly on social exchange theory in order to conceptualize the dimensions of relationship quality and structural relationships between them.* However, as social exchange theory has ties with other theories, they will be reviewed in order to enrich conceptualization of relationship quality. The rationale behind this decision rests on several arguments.

The norm of reciprocity is the cornerstone of social exchange theory (Thibaut and Kelley, 1959; Gouldner, 1960; Blau, 1964; Kelley and Thibaut, 1978; Lambe *et al.*, 2001) and is closely related to the model developed by the Industrial Marketing and Purchasing Group (IMP). According to Håkansson (1982, p. 18), "another important aspect of the relationship is *the adaptations* which one or other party may make in either the elements exchanged or the process of exchange". Drawing on the work of Hallén *et al.* (1991), Brennan *et al.* (2003, p. 1658) relate adaptations to reciprocity and contend that reciprocal adaptations is a part of trust-building process whereas unilateral adaptations is "a response to power imbalances within the relationship".

Another link between social exchange theory and the IMP model is related to co-operation. Drawing on social exchange theory, Lambe *et al.* (2001, p. 23) concludes that the concept of co-operation refers to "similar or complementary actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocity over time". According to Håkansson (1982, p. 21), "atmosphere can be described in terms of the power–dependence relationship which exists between the companies, the state of **conflict or co-operation** and overall closeness or distance of the relationship as well as by the companies' mutual expectations".

Another similarity between social exchange theory and the IMP approach is that both the theories acknowledge the importance of social systems or culture. On one hand, there is some evidence that both national and organizational cultures moderate the effect of relationship quality on repurchase intentions in the business-to-business context (e.g. Hewett *et al.*, 2002; 2006). On the other hand, Håkansson (1982) posits that the social system affects the interaction process. However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605).

Finally, it is evident that social exchange theory is related to several other theories. Consequently, they will be reviewed in order to broaden conceptualization of relationship quality. Indeed, although trust is the central dimension of social exchange theory (Blau, 1964; Cropanzano and Mitchell, 2005), it is also an important variable of commitment-trust theory (Morgan and Hunt, 1994), equity theory (Leventhal, 1980), transaction cost theory (Williamson, 1975), relational contracting theory (Macneil, 1980) and IMP theory (Håkansson, 1982).

1.2.4 Context of the Study and Spatial Boundaries

Consistent with Wilding and Juriado (2004, p. 628), the current study defines logistics outsourcing as third-party logistics services (3PLs) provided "by a vendor on a contractual

basis". The logistics outsourcing industry is an ideal context within which to study relationship quality across organizational cultures for four main reasons: economic importance, continuity, complexity and importance of relationships.

Firstly, the logistics industry is regarded as a vital component of the United Kingdom's economy. Moreover, the industry plays an important role in the global economy.

Secondly, relationships can be more transactional or "possess a high degree of embedded continuity" (Hougaard and Bjerre, 2003, p. 35). Relationship continuity or collaboration "is a process where a customer firm and supplier firm form strong and extensive social, economic, service, and technical ties over time, with the intend of lowering total costs and/or increasing value, thereby achieving mutual benefit" (Anderson and Narus, 1991, p. 96). According to McAfee *et al.* (2002, p. 4), supply chain members often develop "extremely close business-to-business relationships called a partnership". Indeed, the study by Jaafar and Rafiq (2005) demonstrate that more than 50% of the UK-based companies have at least five-years old relationships with logistics service providers.

Thirdly, "relationships differ in their degree of complexity", which is caused by the exchange, interaction and integration (Hougaard and Bjerre, 2003, p. 35). The exchange in the markets of "high involvement durable goods and services" is associated with very complex relationship management (*ibid*., p. 35). The interaction or "social contact in the context of extensive networks of personal communication between people in organizations makes industrial relationship rather complex" (*ibid*., p. 36). The integration or "contracts and regulating mechanisms in business-to-business relationships can be complicated, incomplete and inconsistent" (*ibid*., p. 36). Owing to the complexity of the logistics industry, it can be regarded as an appropriate context to study relationships.

Palmatier *et al.* (2006, p. 141) forward "three situations in which relationships may be more important for the success of an exchange". As services are intangible, inseparable, heterogeneous and perishable (Kasper *et al.*, 2006; Lovelock and Wirtz, 2011), "customer–

seller relationships [are] more critical for services, and the intangibility of the offering may make the benefits of trust more critical because evaluations often are ambiguous" (Palmatier *et al.*, 2006, p. 141). The second situation stems "from exchanges between channel partners", which "have higher levels of interdependence, require coordinated action, and rely on the prevention of opportunistic behaviour" (*ibid.*, p. 141). Consequently, strong relationships are critical in a channel context. Finally, success in business-to-business markets highly depends on relationships. Hence, "relationships should have a greater impact on exchange outcomes" in this type of markets (*ibid.*, p. 141).

Although collaborative culture is an essential element of supply chain strategy, "most existing corporate cultures are not capable of supporting collaboration either internally or externally" (Barratt, 2004, p. 35). Consequently, "functional thinking is rife, and is supported by organisational structures and performance measures that are aligned to functional activities, rather than supply chain processes" (*ibid*., p. 35). According to McAfee *et al.* (2002) managers developing a supply chain strategy should consider two aspects pertinent to organizational culture. *Firstly*, a company should evaluate the compatibility between the human resource management strategy and the organizational culture. If the two elements are inconsistent (e.g. transaction versus relationship oriented), it becomes "difficult, if not impossible, for a firm to develop and implement a successful supply chain strategy" (*ibid*., p. 12).

Secondly, the compatibility of the supply chain strategy with the organizational culture and human resource strategy of other supply chain members should be critically assessed. Although no study has empirically evaluated this issue yet, McAfee *et al.* (2002) argue that the compatibility influences supply chain strategy. Hence, "it is essential that firms examine this issue and determine the potential supply chain member's location on the transaction-relationship continuum" (*ibid*., p 12).

According to Bacharach (1989, p. 498), "the notion of boundaries based on assumptions is critical because it sets the limitations in applying the theory". Spatial boundaries refer to specific types of organizations or industries to which theories are applicable (*ibid*., p. 500). Bacharach (1989, p. 500) posits that "implied in the notion of generalizability are different levels on which one can theorize. This implicit continuum stretches from empirical generalizations (rich in detail but strictly bounded in space ...) to grand theoretical statements (abstract, lacking in observational detail, but relatively unbounded in space ...)". Most importantly, the failure to specify spatial boundaries makes it impossible to falsify theory (*ibid*., p. 502).

Although many individual variables and hypotheses (e.g. H_2, H_3, H_6, H_7, H_8; see Figure 5.1, p. 142) employed in the current study have been validated across different business-to-business contexts and thus demonstrate generalizability reciprocity is the construct which draws the spatial boundaries of the theory presented in the current study. That is, the construct is more specific to business-to-business service relationships demonstrating higher levels of continuity, complexity, interdependence and importance. As reciprocity is hypothesized to be the key mediating variable which is related to all the constructs of the model, it is significant enough to influence the spatial boundaries. Indeed, Bacharach (1989) concurs that the spatial boundaries of the variables embedded in the hypotheses have effects on the spatial boundaries of the theory.

In summary, the logistics outsourcing industry is a relevant context to study relationships. Indeed, the industry demonstrates complexity and continuity. Moreover, owing to the importance of collaborative culture in supply chain strategy, it is deemed necessary to model relationship quality across organizational cultures.

1.3 Research Objective and Aims

Previous research recognises that relationship quality is understudied. Specifically, researchers call for a more holistic approach to the study of relationship quality and its links

with organizational culture. Indeed, Håkansson (1982) contends that the social system affects the interaction process. Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships". However, the link between relationship quality and culture is still underexplored. Hence, "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605). Consequently, the objective of the current study is *to conceptualize rival models by amalgamating extant literature stemming from diverse theories in order to empirically corroborate (1) the dimensions of relationship quality, (2) the structural relationships between them and (3) the effects of organizational culture on relationship quality*. The study is guided by the following aims:

1. To synthesize extant literature stemming from different theories in order to deepen understanding of (a) relationship quality and (b) organizational culture.

2. To amalgamate extant literature in order to conceptualize competing models.

3. To test empirically the structural links of relationship quality and the effects of organizational culture on the former construct using structural equation modelling.

4. To draw implications for theory and practice pertinent to relationship quality and its links with organizational culture.

1.4 Intended Research Contribution

Through modelling relationship quality across organizational cultures, the current study intends to make both theoretical and practical contributions. Specifically, this research intends to;

1. Improve conceptual definition of relationship quality and develop a construct which reflects more precisely the overall nature of relationships between stakeholders in interactive networks.

2. Identify and conceptually define the missing dimensions of relationship quality and its structural links.

3. Synthesize relationship quality and organizational culture by "the development of additional theoretical linkages [research hypotheses] with their accompanying rationale" (Summers, 2001, p. 408). As corroboration of the linkages would constitute a new theory, this potential contribution may be the most significant.

4. Improve the construct validity of reciprocity "through the use of refined multiple-item measures" (Summers, 2001, p. 408). The improvement would constitute a methodological contribution.

5. Validate the GLOBE scales of organizational culture at the individual level of analysis. Although the GLOBE theory of culture constitutes a substantial contribution, there is no consensus whether the theory is valid at the individual level of analysis (Peterson and Castro, 2006). Hofstede (2001, p. 16) warns that ecological fallacy is committed when relationships found at a collective level (e.g. national or organizational culture) "are interpreted as if they apply to individuals" and contends that reverse ecological fallacy refers to construction of "ecological indexes from variables correlated at the individual level". Hence, validation of the GLOBE scales of organizational culture at the individual level of analysis would constitute a timely and important contribution.

1.5 Philosophical Assumptions Underpinning the Present Study

According to the Popper's logic of scientific discovery, the choice of methods or the way in which we deal with scientific statements depends on research objective (Popper, 2002b).

The position of Karl Popper is that there should be methodological unity between social and natural sciences. Looking from the positivistic perspective, the aim of research is to generate causal laws. Indeed, Johnson and Duberley (2000, p. 39) explain that "the aim of [positivistic] research should be to identify causal explanations and fundamental laws that

explain regularities in human social behaviour". Hence, social interactions should "be studied in the same way as physical elements – as a network of causal relations linking aspects of behaviour to context and stimuli in the external environment thus conditioning people to behave in in a certain way" (*ibid.*, p. 40). Consequently, the most suitable method for the previously formulated research objective and aim is structural equation modelling. There are two important aspects of this methodology: (1) it is possible to describe all causal processes using structural equations and, (2) relationships can be represented pictorially which helps to conceptualize a model (Byrne, 2009). Hair (2006) explains that SEM is the most appropriate analysis technique to deal simultaneously with series of regression equations.

The aim of this section is to integrate the concept of falsification as well as other elements of the logic of scientific discovery forwarded by Popper (1963) with all the steps of structural equation modelling process.

The structure of this section rests on Figure 1.1, which consists of two parts: the process of Popper's epistemological Darwinism (Johnson and Duberley, 2000) and the process of structural equation modelling (Diamantopoulos and Siguaw, 2000).

Model conceptualization

According to Popper (2002b), the logic of scientific discovery must be identical with deductive logic. An inference is called inductive when hypotheses or theories (universal statements) are based only on the results of observation or experiments (singular statements; *ibid.*, p. 27). Popper (2002b) argues that universal statements, which are based on experience, are not valid. Moreover, they result in the problem of induction (*ibid.*, p. 28). It is impossible to justify inductive inferences, because, in fact, there is no such thing as the principle of induction (*ibid.*, p. 29). Finally, Popper eliminated the principle of induction and this resulted in the demarcation problem – the absence of boundaries between science and pseudo-science (Smith, 1998b). According to Popper (1963), the criterion, which classifies a theory as scientific or pseudo-scientific is not verifiability, but falsifiability, refutability or testability.

Figure 1.1: The Relationships between Popper's Epistemological Darwinism and the Process of Structural Equation Modelling

```
┌─────────────────────┐                                    ┌─────────────────────┐
│ 1 Problem: refutation│ ───────────────────────────────▶  │ 1 Model             │
│ of existing theory A.│                                    │ conceptualization   │
└─────────────────────┘                                    └─────────────────────┘
           │                                                           │
           ▼                                                           ▼
┌─────────────────────┐                                    ┌─────────────────────┐
│ 2 Proposed solution: │                                    │ 2 Path diagram      │
│ from the development │ ──────────────────────────────▶    │ construction        │
│ of a new theory B    │                                    └─────────────────────┘
│ which is as yet      │                                               │
│ unfalsified.         │                                               ▼
└─────────────────────┘                                    ┌─────────────────────┐
           │                                                │ 3 Model             │
           ▼                                                │ specification       │
┌─────────────────────┐                                    └─────────────────────┘
│ 3 Deduction of       │                                               │
│ testable predictions │                                               ▼
│ aimed at the         │                                    ┌─────────────────────┐
│ falsification of new │                                    │ 4 Model             │
│ theory B.            │                                    │ identification      │
└─────────────────────┘                                    └─────────────────────┘
           │                                                           │
           ▼                                                           ▼
┌─────────────────────┐                                    ┌─────────────────────┐
│ 4 Empirical testing  │                                    │ 5 Parameter         │
│ aimed at the         │ ──────────────────────────────▶    │ estimation          │
│ falsification of new │                                    └─────────────────────┘
│ theory B.            │                                               │
└─────────────────────┘                                               ▼
           │                                                ┌─────────────────────┐
           ▼                                                │ 6 Assessment of     │
┌─────────────────────┐                                    │ model fit           │
│ 5 Preference         │                                    └─────────────────────┘
│ established between  │                                               │
│ theories A and B –   │                                               ▼
│ 'survival of the     │                                    ┌─────────────────────┐
│ fittest theory'.     │                                    │ 7 Model             │
└─────────────────────┘                                    │ modification        │
                                                            └─────────────────────┘
                                                                       │
                                                                       ▼
                                                            ┌─────────────────────┐
                                                            │ 8 Model             │
                                                            │ cross-validation    │
                                                            └─────────────────────┘
```

A theory should be carried out using four steps (Popper, 2002b):

1. Testing the internal consistency of the system. In this stage conclusions are tested among themselves using logical comparison.

2. The investigation of the logical form of the theory. In this stage it is essential to determine if the theory is scientific. It means that such criteria as falsifiability, or refutability, or testability are evaluated.

3. The comparison with other theories. In this stage the aim is to determine if the theory will result in a scientific advance and will survive various tests.

4. Empirical testing of the theory.

The four steps of theory testing forwarded by Popper (2002b) are related to the second, third and fourth stages of the Popper's epistemological Darwinism and the corresponding steps of

SEM process (see Figure 1.1). However, the former process starts with refutation of theory A. It means that prior to proceeding to theory B, theory A should be evaluated and its weaknesses must be identified. Consequently, conceptualization of a new theory begins with evaluation of existing theories.

Theories can be evaluated using the framework (see Table 1.1) suggested by Bacharach (1989). He explains that a theory is "a statement of relationships between units observed or approximated in the empirical world" (Bacharach, 1989, p. 498). Furthermore, "a theory may be viewed as a system of constructs and variables in which the constructs are related to each other by propositions and the variables are related to each other by hypotheses" (*ibid.*, p. 498). Propositions relate more abstract constructs, while hypotheses are built from specific variables and "are more concrete and operational statements of these broad relationships" (*ibid.*, p. 500).

According to Bacharach (1989), a theory can be evaluated using two groups of criteria: falsifiability and utility (see Table 1.1). Falsifiability refers to possibility of empirical refutation (Popper, 1963), while utility is defined as the ability to explain and predict (Bacharach, 1989). Explanation is related to the substantial meaning of three elements: constructs, variables and linkages. Prediction tests the substantive meaning of these three elements "by comparing it to empirical evidence" (*ibid.*, p. 501).

Path diagram construction and model specification

A path diagram represents graphically the relationships between the various elements of the model (Diamantopoulos and Siguaw, 2000). Although this stage is optional, it is too important to omit because it helps to comprehend systems of hypotheses and to evaluate falsifiability of relationships as well as logical adequacy (*ibid.*, p. 22). In model specification stage, the relationships are described by systems of linear equations (Diamantopoulos and Siguaw, 2000). Mistakes in this stage may result in just-identified model and non-falsifiability.

Table 1.1: Criteria for Evaluating Theories

	Falsifiability	Utility

Variables	Operationally defined?
	Measurement issues:
	    Face and content validity
	    Noncontinuousness
	    Reliability
		Variable scope

Constructs	Clarity and Parsimony
	Construct validity:
	    Convergent validity
	    Discriminant validity
		Construct scope

Relationships	Logical adequacy:
	    Nontautological
	    Specified nature of relationship
	
	Empirical adequacy:
	    More than one object or time
	    frame
		Explanatory Potential:
		    Specificity of assumptions
		    regarding objects
		    Specificity of assumptions
		    regarding relationships
		    Scope and parsimony of
		    propositions
		Predictive adequacy:
		    Probabilistic versus theory-based

Source: adapted from Bacharach (1989, p. 510)

Identification

Identification is closely related to falsifiability (Hoyle, 1995). Structural equation models can be unidentified, under-identified, just-identified and over-identified (Diamantopoulos and Siguaw, 2000). If a model is just-identified, there is a single unique solution thus it is unfalsifiable. According to Mulaik and James (1995), a rival model demonstrating adequate goodness-of-fit and more degrees-of-freedom should be preferred because such model is more falsifiable.

Parameter estimation

The essence of parameter estimation is to get parameter values with minimal discrepancy between the sample covariance matrix and the population matrix (Byrne, 2009). It is possible to use seven parameter estimation methods, but default estimation method is maximum likelihood (ML), which must meet the assumption of multivariate normality (Diamantopoulos and Siguaw, 2000). Using ML, it is possible to calculate "a whole range of statistics which

can be used to assess the extent to which one's model is in fact consistent with the data" (*ibid.*, p. 56).

According to Mulaik and James (1995), SEM models must satisfy the assumption of linearity or additivity of effects. Linearity and multivariate normality are the assumptions, which refer to falsifiability of a model. In management research, SEM is used very often and has become a common research language. However, the vast majority of authors tend to protect their models from falsification ignoring the assumptions of multivariate normality and linearity. The result of multivariate non-normality can be spuriously small standard errors, which result in statistical significance of path coefficients, although they may be not significant in the population (Byrne, 2009).

Assessment of model fit

Model's fit refers to "the degree to which a model *as a whole* is consistent with the empirical data at hand" (Diamantopoulos and Siguaw, 2000, p. 82). According to Robles (1996, p. 74), confirmation bias refers to "a "Popperian-inverse" inference strategy: it tries to confirm models instead of verifying them, thus functioning as the inverse of the principles of falsifiability and parsimony". There are three (nonexcluding) groups of solutions to tackle this problem (Robles, 1996):

1. The first group of solutions stresses the importance "the evaluation of the parsimony of the model as a central issue" (*ibid*., p. 75).

2. According to Robles (1996, p. 75), "the second group of solutions promotes the comparative evaluation of models and results in a widely used operationalization of fit".

3. Finally, "the third general strategy insists on the proper use and evaluation of stand-alone fit indexes and test statistics" (*ibid.*, p. 75).

The first two options act against confirmation bias and refer to the Popperian logic of theories evaluation thus parsimony and comparative evaluation are the most important (Robles, 1996). Consequently, "it is evident that the two alternatives to stand-alone estimation of fit share a

philosophical basis that opposes the prejudice in favor of the null hypothesis. If these positions lead to the use of post hoc model modification strategies as a solution for the problems associated with the fit indexes, they might result in a conceptual contradiction" (*ibid*. p. 75). Hence, assessment of goodness-of-fit should encompass all the three elements: evaluation of parsimony, comparative analysis and proper use of standalone fit statistics.

Model modification

Model modification in SEM is defined as "alterations to the model specification via the addition/deletion of certain parameters" in order to improve interpretability by better fit and parsimony (Diamantopoulos and Siguaw, 2000, p. 102). According to Robles (1996), model modification may result in three dangerous situations: (1) exploratory models, (2) non-falsifiability, (3) implausibility. Exploratory or data-driven models may result in capitalization of chance when characteristics of the sample may influence modifications (Diamantopoulos and Siguaw, 2000). Consequently, such models may fail when applied to other samples (*ibid*., p. 102.). Popper warns (2002) that it is possible to evade falsification by introduction of ad-hoc and auxiliary hypotheses. Exploratory modification may result in shift from the deductive logic to the inductive development of hypotheses.

1.6 Structure of the Thesis

To achieve the research objective defined in section 1.3, the thesis is organized into ten chapters.

Chapter One has already introduced an outline of the context and precedent, the research objective and aims and the intended research contribution.

Chapter Two reviews the extant literature on relationship marketing. In particular, this chapter attempts to emphasize that the values of relationship marketing must be embedded in organizational culture. Moreover, this chapter compares various schools of relationship marketing and stresses the importance of service as the primary unit of exchange.

Chapter Three proceeds with an examination of relationship quality. Consequently, it is organized into three parts: the fundamental principles of relationship quality, previous conceptualizations of relationship quality and the theoretical bases and dimensions of relationship quality.

Chapter Four continues with organizational culture. *Firstly*, five paradigms of organizational culture are discussed in order to identify their strengths, weaknesses and relevance to relationship marketing. *Secondly*, extant conceptualizations of organizational culture are reviewed. Finally, having identified the most relevant paradigm and conceptualization of organizational culture, Chapter 4 reviews five dimensions of organizational culture: *individualism and collectivism, human orientation, power distance, assertiveness* and *uncertainty avoidance*.

Chapter Five builds upon the literature review presented in Chapter Four and comprises two parts. Firstly, two competing models of relationship quality are introduced. Secondly, the effects of organizational culture on relationship quality are conceptualized based on the two rival models.

Chapter Six focuses on the research methodology and comprises seven parts. Firstly, the chapter begins with the research design adopted in the current study. Secondly, the sampling procedure is described. Thirdly, the problems related to common method bias are discussed. Fifthly, the issues pertinent to level-of-analysis in cultural research are contemplated. Sixthly, the process of structural equation modelling is reviewed. Finally, the chapter ends with a comparison of the methods to test moderating effects in structural equation modelling.

Chapter Seven forwards the results of confirmatory factor analyses and evaluates construct validity of relationship quality and organizational culture. Besides that, common method bias and the assumptions of structural equation modelling are assessed.

Chapter Eight presents the results of structural equation modelling pertinent to relationship quality. Consequently, the two competing models are evaluated in respect with explanatory power, total effects and goodness-of-fit.

Chapter Nine demonstrates the effects of organizational culture on relationship quality. As the study comprises the two competing models of relationship quality, both of them are employed to model the effects of organizational culture. The results are summarized using the same order as the hypotheses are developed in Chapter 5: (1) individualism and collectivism, (2) human orientation, (3) power distance, (4) assertiveness and (5) uncertainty avoidance.

Finally, *Chapter Ten* contemplates the conclusions of the current study and is organized into five parts. Firstly, the conclusions pertinent to the study objective and conceptualization and the results of structural equation modelling are discussed. Secondly, the contributions are identified. Thirdly, managerial implications are forwarded. Fourthly, the limitations of the study are revealed. Finally, the avenues for future research are presented.

CHAPTER 2

RELATIONSHIP MARKETING

2.1 Introduction

Having stated the research aim of the current study and demonstrated the need for broader research into relationship quality and its links with organizational culture, Chapter Two reviews the existing literature on relationship marketing. In particular, this chapter attempts to emphasize that the values of relationship marketing must be embedded in organizational culture. Moreover, this chapter compares various schools of relationship marketing and stresses the importance of service as the primary unit of exchange.

Consequently, Chapter Two comprises three parts: *the service-dominant logic of marketing* (2.2), *the fundamental principles of relationship marketing* (2.3) and *the origins of relationship marketing* (2.4).

Firstly, *the service dominant logic* forwarded by Vargo and Lusch (2004) is introduced as a framework operating at a paradigm level. This section presents ten foundational premises of the service-dominant logic, which are contrasted to the traditional good-dominant logic.

Secondly, *the fundamental principles of relationship marketing* are discussed. The discussion starts with the comparison of relationship marketing definitions in order to hint at the essence of the phenomenon and provide initial guidance. Having selected the definition to guide further research into relationship quality, the section proceeds with the link between culture and relationship marketing. This part provides some evidence that relationship marketing is a culture-dependent phenomenon and points out the need for further research. In acknowledging the link between relationship marketing and culture, the section continues with the fundamental values of relationship marketing.

Finally, Chapter Two ends with the comparison of four schools of relationship marketing: the Nordic School of Service, the Industrial Marketing and Purchasing School (IMP), the Anglo-Australian School and the North American School. The four approaches are compared and contrasted in order to identify the common themes. Concluding remarks summarize various approaches and provide theoretical lenses for further research.

2.2 The Service-Dominant Logic of Marketing

Although the service-dominant logic forwarded by Vargo and Lusch (2004) does not constitute a theory *per se*, it can be regarded as a useful framework operating at a paradigm level (Vargo, 2011). According to Vargo and Lusch (2004, p. 1), "marketing inherited a model of exchange from economics, which had a dominant logic based on the exchange of "goods," which usually are manufactured output. The dominant logic focused on tangible resources, embedded value, and transactions". Moreover, "the dominant, goods-centered view of marketing not only may hinder a full appreciation for the role of services but also may partially block a complete understanding of marketing in general" (*ibid.*, p. 1). Vargo and Lusch (2004) argue that "marketing has moved from a goods-dominant view, in which tangible output and discrete transactions were central, to a service-dominant view, in which intangibility, exchange processes, and relationships are central" (*ibid.*, p. 2). The most important difference between the good-dominant and service-dominant logic is inherent in the definition of service (Vargo and Lusch, 2008b) stating that it is "the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself" (Vargo and Lusch, 2004, p. 2). According to S-D logic, goods are vehicles for providing services (Lusch and Vargo, 2006b).

To unravel the changing logic of marketing, Vargo and Lusch (2008a, p. 7) forward ten foundational premises of the emerging service-dominant logic:

FP1: "Service is the fundamental basis of exchange".

FP2: "Indirect exchange masks the fundamental basis of exchange".

FP3: "Goods are a distribution mechanism for service provision".

FP4: "Operant resources are the fundamental source of competitive advantage".

FP5: "All economies are service economies".

FP6: "The customer is always a cocreator of value".

FP7: "The enterprise cannot deliver value, but only offer value propositions".

FP8: "A service-centered view is inherently customer oriented and relational".

FP9: "All social and economic actors are resource integrators".

FP10: "Value is always uniquely and phenomenologically determined by the beneficiary".

FP1 states that "service is the fundamental basis of exchange" (Vargo and Lusch, 2008a, p. 7). Vargo and Lusch (2004) distinguish between operand and operant resources and argue that they help to discriminate between the goods-dominant and service-dominant logic (see Table 2.1). Operand resources are defined "as resources on which an operation or act is performed to produce an effect" (Vargo and Lusch, 2004, p. 2). In contrast, operant resources produce effects themselves (*ibid.*, p. 2). In the goods-dominant logic, the primary resources are operand which refer to land, plant life, natural resources, materials, equipment and other physical objects including customers affected by the manipulative 4P approach and treated as most valuable resource (Gummesson, 2008b). Moreover, "customers, like resources, became something to be captured or acted on ... ; we "segment" the market, "penetrate" the market, and "promote to" the market all in hope of attracting customers. Share of operand resources and share of (an operand) market was the key to success" (Vargo and Lusch, 2004, p. 2). On the other hand, the service-dominant logic is based on operant resources or "the skills and knowledge how to do something" (*ibid.*, p. 11). Moreover, operant resources may be "organizational (e.g., controls, routines, cultures, competences), informational (e.g., knowledge about market segments, competitors, and technology), and relational (e.g., relationships with competitors, suppliers, and customers)" (Day *et al.*, 2004, p. 22). Hence, "the application of operant resources (knowledge and skills), "service," as defined in S-D logic, is the basis for all exchange. Service is exchanged for service" (Vargo and Lusch, 2008a, p. 7). Moreover, producers and consumers "reciprocally cocreate value, with each party bringing their own unique resource accessibility and integrability into that process" thus the producer-consumer distinction is eliminated (Vargo and Lusch, 2008b, p. 257).

Table 2.1: Operand and Operant Resources as Differentiators of the Service- and Goods-Dominant Logic

	Traditional Goods-Centered Dominant Logic	Emerging Service-Centered Dominant Logic
Primary unit of exchange	People exchange for goods. These goods serve primarily as operand resources.	People exchange to acquire the benefits of specialized competences (knowledge and skills), or services. Knowledge and skills are operant resources.
Role of goods	Goods are operand resources and end products. Marketers take matter and change its form, place, time, and possession.	Goods are transmitters of operant resources (embedded knowledge); they are intermediate "products" that are used by other operant resources (customers) as appliances in value-creation processes.
Role of customer	The customer is the recipient of goods. Marketers do things to customers; they segment them, penetrate them, distribute to them, and promote to them. The customer is an operand resource	The customer is a coproducer of service. Marketing is a process of doing things in interaction with the customer. The customer is primarily an operant resource, only functioning occasionally as an operand resource.
Determination and meaning of value	Value is determined by the producer. It is embedded in the operand resource (goods) and is defined in terms of "exchange-value."	Value is perceived and determined by the consumer on the basis of "value in use." Value results from the beneficial application of operant resources sometimes transmitted through operand resources. Firms can only make value propositions.
Firm-customer interaction	The customer is an operand resource. Customers are acted on to create transactions with resources.	The customer is primarily an operant resource. Customers are active participants in relational exchanges and coproduction.
Source of economic growth	Wealth is obtained from surplus tangible resources and goods. Wealth consists of owning, controlling, and producing operand resources.	Wealth is obtained through the application and exchange of specialized knowledge and skills. It represents the right to the future use of operant resources.

Source: adapted from Vargo and Lusch (2004, p. 7)

Indeed, Day *et al.* (2004, p. 18) concur that "there is a two-way interaction that results in mutual commitments, ranging from information exchanges to cross-firm coordination and

even relation-specific investments". Finally, operant resources are the main sources of competitive advantage (Lusch *et al.*, 2007).

FP2 states that "indirect exchange masks the fundamental basis of exchange" (Vargo and Lusch, 2008a, p. 7). Indeed, "service is provided through complex combinations of goods, money, and institutions ... [thus] service basis of exchange is not always apparent" (*ibid.*, p. 7). Moreover, "most marketing personnel (and employees in general) stopped interacting with customers" because of industrial society, division of labour, vertical marketing systems and bureaucratic hierarchies (*ibid.*, p. 8). Consequently, the masked fundamental basis of exchange results in ignorance of internal and external customers as well as quality.

FP3 states that "goods are a distribution mechanism for service provision" thus "goods (both durable and non-durable) derive their value through use – the service they provide" (Vargo and Lusch, 2008a, p. 7). According to Vargo and Lusch (2004, p. 9) "knowledge and skills can be transferred (1) directly, (2) through education or training, or (3) indirectly by embedding them in objects. Thus, tangible products can be viewed as embodied knowledge or activities".

FP4 states that "operant resources are the fundamental source of competitive advantage" because "the comparative ability to cause desired change drives competition" (Vargo and Lusch, 2008a, p. 7). Indeed, "a maintainable advantage usually derives from outstanding depth in selected human skills, logistics capabilities, knowledge bases, or other service strengths that competitors cannot reproduce and that lead to greater demonstrable value for the customer" (Vargo and Lusch, 2004, p. 9). Moreover, "the use of knowledge as the basis for competitive advantage can be extended to the entire "supply" chain, or service-provision chain" (*ibid.*, p. 9). Finally, Vargo and Lusch (2004, p. 10) posit that management of operant resources encompasses "three core business processes: (1) product development management, (2) supply chain management, and (3) customer relationship management".

FP5 postulates that "all economies are service economies" (Vargo and Lusch, 2008a, p. 7). Hence, "the fundamental economic exchange process pertains to the application of mental and physical skills (service provision), and manufactured goods are mechanisms for service provision" (Vargo and Lusch, 2004, p. 10).

FP6 states that "the customer is always a cocreator of value" (Vargo and Lusch, 2008a, p. 7). Whereas goods and services remain a value proposition, "value actualization is in the hands of the customer and consequently suppliers and customers co-create value" (Gummesson, 2008b, p. 11). In other words, *the sixth foundational premise* is related to the *seventh* stating that "*the enterprise can only offer value propositions ...* [thus] the consumer must determine value and participate in creating it through the process of coproduction" (Vargo and Lusch, 2004, p. 10). Finally, the two foundational premises are connected with the tenth stating that "value is always uniquely and phenomenologically determined by the beneficiary" (Vargo and Lusch, 2008a, p. 7).

FP8 postulates that "a service-centered view is inherently customer oriented and relational" because customer-determined and co-created benefit is central to service (Vargo and Lusch, 2008a, p. 7). Indeed, "interactivity, integration, customization, and coproduction are the hallmarks of a service-centered view and its inherent focus on the customer and the relationship" (Vargo and Lusch, 2004, p. 11). Although some authors highlights the importance of customer centricity (Barabba, 1995; Shah *et al.*, 2006), Gummesson (2008a) forwards the concept of balanced-centricity and argues that "in long-term relationships and a well functioning marketplace all stakeholders have the right to satisfaction of needs and wants" (Gummesson, 2008b, p. 20).

FP9 states that "all social and economic actors are resource integrators" and implies that "the context of value creation is networks of networks (resource integrators)" (Vargo and Lusch, 2008a, p. 7).

2.3 The Fundamental Principles of Relationship Marketing

Gummesson (2008b, p. 329) warns that being labels of a phenomenon "short definitions are never complete or unambiguous, but they hint at the core of a phenomenon and thus provide initial guidance". Hence, the initial discussion identifies the definition of relationship marketing which will be the basis of relationship quality analysis in the following chapters. In acknowledging the importance of the service dominant logic, further discussion connects it with relationship marketing, culture and values.

Berry's (1983) definition originates from the services marketing literature and stresses the importance of balanced customer acquisition and retention (see Table 2.2). Morgan and Hunt (1994) forward a broader perspective which includes all marketing activities encompassing not only customers, but also development and maintenance of all relational exchanges. Sheth and Parvatiyar (2000, p. 9) posit that relationship marketing is "the ongoing process of engaging in cooperative and collaborative activities and programs" which involves various parties and creates "economic value, at reduced cost". Indeed, customer retention has emerged as an opportunity to reduce costs (Christopher *et al.*, 2002). Drawing on the service-dominant logic of marketing, Lusch and Vargo (2006a, p. xvii - xviii) concur that "marketing is the process in society and organizations" that fosters collaborative relationships, voluntary exchange and reciprocity-based value stemming from "the application of complementary resources". According to Bagozzi (1995, p. 275), reciprocity is "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship". Nevertheless, reciprocity is still an under-researched element of both relationship marketing and relationship quality (Palmatier *et al.*, 2006). Grönroos (2007, p. 29) argues that "(the purpose of) ... marketing is to identify and establish, maintain and enhance, and when necessary terminate relationships with customers (ant other parties) so that" economic and other reciprocal objectives of all parties involved in the relationships are achieved through reciprocity-based exchange and fulfilment of promises.

Table 2.2: Definitions of Marketing, Relationship Marketing and CRM: Differences and Similarities

Source	Definition
Berry (1983, p. 25)	"Relationship marketing is attracting, maintaining and – in multi-service organizations – enhancing customer relationships".
Morgan and Hunt (1994, p. 22)	"Relationship marketing refers to all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges".
Sheth and Parvatiyar (2000, p. 9)	Relationship marketing is "the ongoing process of engaging in cooperative and collaborative activities and programs with immediate and end user customers to create or enhance mutual economic value, at reduced cost".
Lusch and Vargo (2006a, p. xvii - xviii)	"Marketing is the process in society and organizations that facilitates voluntary exchange through collaborative relationships that create reciprocal value through the application of complementary resources".
Grönroos (2007, p. 29)	"(The purpose of) ... marketing is to identify and establish, maintain and enhance, and when necessary terminate relationships with customers (ant other parties) so that objectives regarding economic and other variables of all parties are met. This is achieved through a mutual exchange and fulfilment of promises".
Gummesson (2008b, p. 5)	"Relationship marketing is interaction in networks of relationships".
Gummesson (2008b, p. 7)	"CRM is the values and strategies of RM – with special emphasis on the relationship between a customer and a supplier – turned into practical application and dependent on both human action and information technology".
Gummesson (2008b, p. 14)	"Marketing is a culture, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders".
Buttle (2009, p. 15)	"CRM is the core business strategy that integrates processes and functions, and external networks, to create and deliver value to targeted customers at a profit. It is grounded on high quality customer-related data and enabled by information technology".
Baron *et al.* (2010, p. 10)	"Relationship Marketing (RM) draws attention to the importance of retaining as well as attracting customers, with emphasis being placed on the development of long-term relationships with customers. The primary goal of RM is to build and maintain a base of committed customers who are profitable for the organization".

Representing the Nordic School of Service, Gummesson (2008b, p. 5) posits that relationship marketing comprises three elements and defines it as "interaction in networks of relationships". Although Baron *et al.* (2010) highlight the importance of customer retention and equity, they ignore networks and focus on relationships with customers neglecting the other stakeholders.

According to Buttle (2009, p. 15), the acronym CRM represents both customer relationship management and customer relationship marketing. Although Buttle (2009) explains that "CRM is the core business strategy that integrates processes and functions, and external networks", Gummesson (2008b, p. 7) argues that "CRM is the values and strategies of RM − with special emphasis on the relationship between a customer and a supplier − turned into practical application" (see Table 2.2).

Finally, Gummesson (2008b, p. 14) concludes that "marketing is a culture, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders". The definition harmonizes with the service-dominant logic with respect to the four elements: culture, operant resources, interaction and focusing on stakeholders instead of just concentrating on customers.

Firstly, "marketing is not solely confined to one of a series of compartmentalized silos in organizational hierarchy. It is also a state of mind, a culture and the collective consciousness of an organization" (*ibid*., p. 13). *Secondly*, operant resources are the most important in the service-dominant logic thus marketing should focus on *interaction in networks of relationships* instead of managing customer relationships (operand resources). *Finally*, interaction in networks of relationships should focus on all stakeholders instead of concentrating on customers. Based on the above arguments, the current study employs the definition forwarded by Gummesson (2008b). It is employed as a vantage point for further discussion of relationship marketing and relationship quality in the following chapters.

Having selected the culture-based definition of relationship marketing, further discussion relates culture, values and marketing and provides more arguments for the employment of the definition suggested by Gummesson (2008b).

The Link between Relationship Marketing and Culture

Consistent with the service-dominant logic, Grönroos (2000, p. 357) posits that "the development and management of a service culture is a critical task" for both "service firms and manufacturers facing service competition". According to Gummesson (2008b, p. 19), the gap between relationship marketing philosophy and actions "is also caused by marketers who have not internalized marketing values" which is an element of organizational culture (Hanges and Dickson, 2004). Moreover, Gummesson (2008b, p. 20) argues that "inadequate basic values and their accompanying procedures – the wrong paradigm is the biggest obstacle to success in marketing". Hence, there will be no positive effect of relationship marketing unless relationship values are accepted as a natural vantage point (*ibid.*, p. 20). Although cultures have many facets, "at the deepest levels are values that express enduring preferences" (Shah *et al.*, 2006, p. 115). Shah *et al.* (2006) argue that organizational culture along with structure, processes and financial metrics are the organizational barriers to customer centricity. Buttle (2004, p. 46) concurs that "the degree to which an organizational culture is customer centric is expressed in leadership behaviours, formal systems and internal relationships. These, in turn, largely determine the experience of employees in the company .... , which in turn is reflected in their behaviour when interacting with customers". However, Gummesson (2008b, p. 19) argues that *customer centricity* is not the only driver of success and calls for *balanced centricity* because "a balance of interests can only be actualized in a context of many stakeholders". Indeed, Buttle (2009) concurs that the SCOPE of relationship marketing should comprise five elements of a focal organization's network: suppliers **(S)**, customers **(C)**, owners / investors **(O)**, partners, **(P)** and employees **(E)**. Further, Buttle (2009) forwards the customer relationship management value chain and posits that it comprises

primary stages and *supporting conditions*. *The primary stages* encompass customer portfolio analysis, customer intimacy, **network development (SCOPE)**, value proposition development and management of customer lifecycle. *The supporting conditions* include **leadership and culture**, data and information technology, people and processes. Hence organizational culture is regarded as a supporting condition of customer profitability. Indeed, empirical research demonstrates that customer relationship management implementations depend on organizational culture (Iriana and Buttle, 2008). That is, CRM achieves better performance in the presence of an externally-oriented culture (adhocracy or market) and are less effective when a culture is internally-oriented (hierarchy or clan). Gummesson (2008b) concurs that adhocracy and hierarchy (bureaucracy) are two extremes. The latter is characterized by rules, plans, repressions as well as "common sense and results ... overruled by rituals" whereas the former pertains to "sensitivity for the unexpected, quick action, high degree of freedom, support from management and colleagues, generosity ... and only the sky in the limit" (*ibid.*, p. 304). Finally, Gummesson (2008b, p. 311) calls for a new synthesis and a shift from "exclusive hierarchies to inclusive networks and processes". He argues that "an organization exists, but not in a physical and tangible body. Its most important resources – its intellectual capital and core competency – ... show in the network" thus competition occurs between networks instead of individual companies (*ibid.,* p. 313). Grönroos (2000, p. 364) concurs that "a service oriented firm requires a relatively flat organizational structure with few hierarchical levels" in order to foster customer intimacy. Finally, Gummesson (2008b, p. 314) concludes that "the customer is integrated with the organization and the customer base is a central resource, sometimes the most important resource. In this way, the roles of supplier and customer become less obvious; value is co-created through their interaction".

Besides affecting the ability to build network relationships, culture appears to influence three general dimensions of customer experience which are central to services and relationship marketing as well as relationship quality: service expectations, service

evaluations and reactions to service (Zhang *et al.*, 2008; Schumann, 2009a). Indeed, numerous studies have demonstrated that all the three dimensions are affected by culture (Liu *et al.*, 2001; Patterson *et al.*, 2006; Patterson and Mattila, 2008; Zhang *et al.*, 2008; Schumann, 2009a). Moreover, both national and organizational cultures moderate the effect of relationship quality (trust and commitment) on repurchase intentions in an industrial buyer-seller setting (Hewett *et al.*, 2002; 2006). However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605).

The Fundamental Values of Relationship Marketing

Although the most important values of relationship marketing are embedded in the service dominant logic discussed previously, Gummesson (2008b) posits that they can be reclassified into four basic values:

1. "Marketing management should be broadened into marketing-oriented company management" (*ibid.*, p. 20). Gummesson (2008b) explains that marketing and sales should be a function permeating every part of an organization instead of being limited to the marketing and sales department. As both full-time and part-time marketers influence the relationship with customers and other stakeholders, marketing orientation should encompass the whole company.

2. "Long-term collaboration and win-win: the core values of RM are found in its emphasis on collaboration and the creation of mutual value" (*ibid.*, p. 20). It means that all stakeholders should be treated as co-creators of value instead of viewing them as opposite parties. Hence, relationship marketing should be more win-win game, during which the stakeholders increase value for each other.

3. "All parties should be active and take responsibility" (*ibid.*, p. 21). Relationship should be interactive thus "the initiative to action cannot be left to a supplier or a single party of a network; everyone in a network can, and should, be active" (*ibid.*, p. 21).

4. Finally, marketing should be based on "relationship and service values instead of bureaucratic-legal values" (*ibid.*, p. 21). Indeed, culture is inherent in the marketing definition employed by this study (see p. 33). The link between relationship marketing and culture was discussed previously (see p. 34).

2.4 The Origins of Relationship Marketing

According to Buttle (2009), relationship marketing originates from five schools of thought: the Nordic School of Service, the Industrial Marketing and Purchasing School (IMP), the Anglo-Australian School, the North American School and the Asian (Guanxi) School. However, Christopher *et al.* (2002, p. xi) combine the Nordic and IMP schools into the Nordic Approach to Relationship Marketing because they both are "founded on the interactive network theory ... services marketing concepts and customer relationship economics". Indeed, Gummesson and Grönroos (2012, p. 485) concur that "service research and IMP arrived at similar results, which [can be] ... condensed [into] the concepts of relationships, networks and interactions".

As was stated previously, the current study adopts the service dominant logic, the definition of marketing and the fundamental values proposed by the Nordic School of Service which are discussed in detail in the previous sections. Hence relationship marketing is regarded as a culture and service is treated as the primary unit of exchange. Having selected the Nordic School of Service as a starting point, this section reviews the remaining schools and provides the arguments for a broader synthesis of approaches to analyze and conceptualize relationship quality.

The Industrial Marketing and Purchasing School (IMP)

According to Ford *et al.* (2003), the Industrial Marketing and Purchasing (IM) approach can be characterized by the following facets:

1. "Business markets do not consist of active suppliers and passive customers" (*ibid.*, p. 3). Consistent with the service dominant logic (Vargo and Lusch, 2004), "buyers and sellers are both active participants in transactions, pursuing solutions to their problems rather than simply reacting to the other party's influence" (Buttle, 2009, p. 50). Thus both suppliers and customers are operant resources and co-producers of value.

2. "Customers are not looking for a product from a manufacturer. Instead they seek a solution to their problem from a supplier" (Ford *et al.*, 2003, p. 3). In other words, service is the primary unit of exchange. Hence, "people exchange to acquire the benefits of specialized competences (knowledge and skills), or services. Knowledge and skills are operant resources" (Vargo and Lusch, 2004, p. 7).

3. "Lots of people from different functions in both companies are likely to be involved in the processes of developing and fulfilling the offering that is traded between them" (Ford *et al.*, 2003, p. 3). In other words, "marketing management should be broadened into marketing-oriented company management" because all employees are part-time marketers (Gummesson, 2008b, p. 20).

4. "Each business sale and purchase is not an isolated event, but part of a continuing relationship" (Ford *et al.*, 2003, p. 4). According to the service dominant logic, indirect exchange should not mask the fundamental basis of exchange (service) which should be not transactional, but relational (Vargo and Lusch, 2008a).

5. "Many business relationships are close, complex and long term" (Ford *et al.*, 2003, p. 4). Indeed, relationship marketing "is more effective when relationships are more critical to customers (e.g., service offerings, channel exchanges, business markets)" (Palmatier *et al.*, 2006, p. 136).

6. "Each relationship is part of a network of relationships" (Ford *et al.*, 2003, p. 4). Consistent with the service dominant logic (Vargo and Lusch, 2004), marketing should focus on *interaction in networks of relationships* instead of managing customer relationships (operand resources).

7. "The management process in any company is interactive, evolutionary and responsive" (Ford *et al.*, 2003, p. 6). Thus relationship marketing comprises relationships, networks and *interactions* (Gummesson, 2008b). Moreover, customer is a co-producer of service and value emerges in the process of interaction (Vargo and Lusch, 2004).

8. "A company's "position" is based on its total set of relationships" (Ford *et al.*, 2003, p. 7). It "changes and develops through interaction with other companies" (*ibid.*, p. 8). Consistent with Gummesson (2008b, p. 313), the most important resources of an organization " - its intellectual capital and core competency – ... show in the network".

9. Finally, relationships comprise actor bonds, activity links and resource ties (Håkansson and Snehota, 1995; Gummesson, 2008b; Buttle, 2009).

According to Buttle (2009, p. 51), "actor bonds are interpersonal contacts between actors in partner firms that result in trust, commitment and adaptation" – the core properties of business relationships (Gummesson, 2008b). Activity links are interlocking behaviours (Ford *et al.*, 2003) which are "commercial, technical, financial, administrative and other connections that are formed between companies in interaction" (Buttle, 2009, p. 51). Finally, "resource ties include exchanging and sharing resources which are both tangible, such as machines, and represent intellectual capital, such as knowledge" (Gummesson, 2008b, p. 29).

The Anglo-Australian School of Relationship Marketing

The Anglo-Australian approach to relationship marketing comprises three elements: quality management, services marketing concepts and customer relationship economics (Christopher *et al.*, 2002). This view can be summarized as (*ibid.,* p. xi-xii):

- A shift to cross-functional marketing;

- Balanced centricity or six key markets;

- A shift to marketing activities which emphasizes both customer acquisition and retention.

According to Buttle (2009) the six markets model comprises customer markets, internal markets, referral markets, influence markets, recruitment markets and supplier / alliance markets. Consistent with the concept of balanced centricity proposed by Gummesson (2008b), the six-markets model highlights the importance of various network relationships.

The North American School of Relationship Marketing

Finally, the North American School of relationship marketing focuses on the dyad between buyer and relationship manager influenced by organizational environment (Christopher *et al.*, 2002). This approach focuses on "the connection between successful inter-firm relationships and excellent business performance" (Buttle, 2009, p. 54). One of the seminal contributions of the North American School is the commitment-trust theory of relationship marketing forwarded by Morgan and Hunt (1994).

2.5 Concluding Remarks

Firstly, the literature review indicates that the service-dominant logic of marketing contributes to a paradigm shift. Hence, operant resources are dominant, service is the primary unit of exchange and all economies can be regarded as service economies.

Secondly, the current study employs the definition of marketing forwarded by Gummesson (2008b, p. 14) which states that "**marketing is a culture**, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders". Indeed, this contention is supported by numerous studies demonstrating that culture affects the ability to build networks of

relationships and has effects on the core dimensions of relationship marketing and relationship quality: service expectations, service evaluations and reactions to service. However, the link between relationship quality and culture is still under-explored.

Thirdly, the fundamental values of relationship marketing correlate with the service dominant logic and comprise four facets: (1) marketing as marketing-oriented company management, (2) long-term collaboration and mutual value co-creation involving all stakeholders, (3) interactivity and active participation of all stakeholders, (4) relationship and service values instead of hierarchy culture.

Fourthly, the main principles of The Industrial Marketing and Purchasing School (IMP) concur with the ten foundational premises of the services dominant logic as well as the four values of the Nordic School of Service. Hence, the three frameworks will be employed as the theoretical lenses for further analysis and conceptualization of relationship quality. Moreover, the interaction model of the Industrial Marketing and Purchasing Group (IMP) provides the fundamental principles of relationship quality thus it will guide further research. The model is discussed in detail in the beginning of the following chapter. In addition, the contribution of the North American School is also significant. Indeed, such seminal works as the commitment-trust theory (Morgan and Hunt, 1994) and the sequential chain of loyalty (Oliver, 2010) provide invaluable insights therefore the North American approach will also contribute to conceptualization of relationship quality.

CHAPTER 3

RELATIONSHIP QUALITY

3.1 Introduction

Having selected the culture-based definition of marketing and the theoretical lenses for further analysis and conceptualization of relationship quality (see Chapter 2), this chapter examines the latter construct. Consequently, it is organized into three parts: *the fundamental principles of relationship quality* (3.2), *previous conceptualizations of relationship quality* (3.3) and *the theoretical bases and dimensions of relationship quality* (3.4).

Firstly, the interaction model of the Industrial Marketing and Purchasing Group (IMP) is introduced discussing its elements as the *fundamental principles of relationship quality* (3.2). As the current study draws both on the Industrial Marketing and Purchasing School (IMP) and the Nordic School of Service, the interaction model is compared to the Liljander-Strandvik model of relationship quality representing the latter approach. Indeed, Gummesson and Grönroos (2012, p. 485) concur that "service research and IMP arrived at similar results, which [can be] ... condensed [into] the concepts of relationships, networks and interactions".

Secondly, the literature review proceeds with *previous conceptualizations of relationship quality* (3.2) and demonstrates that the extant research suffers from fragmentation. Indeed, the relationship quality research comprises "many constructs with similar definitions that operate under different aliases and constructs with similar names but different operationalizations" (Palmatier *et al.*, 2006, p. 137). Although the issue has been addressed by meta-analytic studies (e.g. Palmatier *et al.*, 2006), they also have limitations inherent in this type of research. For example, data unavailability often prevents inclusion of effects. Consequently, *previous conceptualizations of relationship quality* are analyzed using a combined approach which involves elements of meta-analysis and systematic review.

Thirdly, as meta-analytic or similar studies cannot be regarded as "exhaustive list or even a list of the most important constructs" (Palmatier *et al.*, 2006, p. 151), the constructs are expanded by a thourough examination of five theories: services marketing literature, social exchange theory, commitment-trust theory, equity theory and trascation-cost theory.

3.2 The Fundamental Principles of Relationship Quality

According to the model developed by the Industrial Marketing and Purchasing (IMP) Group, the industrial marketing comprises four basic elements: the interaction process, the participants, the environment and "the atmosphere affecting and affected by the interaction" (Håkansson, 1982, p. 15; see Figure 3.1). The four elements and their sub-divisions will be discussed more extensively.

The Interaction Process: the Industrial Marketing and Purchasing (IMP) Group Perspective

The model distinguishes "between the individual 'episodes' in a relationship ... and the longer-term aspects of that relationship which both affects and may be affected by each episode" (*ibid.*, p. 16; see Figure 3.1). The episodes of an industrial market relationship comprise four types of exchange: (1) *product or service exchange*, (2) *information exchange*, (3) *financial exchange* and (4) *social exchange*.

According to Holmlund (2008, p. 44), "the model suggests that, from a relationship and dynamic point of view, perceptions may concern both the process and outcome aspects of the interactions in the relationship". Hence, "relationship quality consists of how different processes and outcomes of a technical, social and economic nature are perceived" (*ibid.*, p. 15). The technical dimension or the core offering (Holmlund, 2008) refers to *product or service exchange* (Håkansson, 1982). Thus "the characteristics of the product or service involved are likely to have a significant effect on the relationship as a whole" (*ibid.*, p. 16).

Håkansson (1982, p. 181) contends that "the objective of *information exchange* is mainly to keep each other informed about the development of abilities and needs". Information exchange encompasses several important aspects: the content (technical, economic and organizational), width and depth, information formality and mode of transfer (personal or impersonal). Finally, information exchange may comprise individuals "operating in different functional departments and transmitting different messages of a technical, commercial, or reputational nature" (*ibid.*, p. 17).

Figure 3.1: The Interaction Model of the Industrial Marketing and Purchasing Group (IMP)

ENVIRONMENT:

Market structure
Dynamism
Internationalization
Position in the manufacturing channel
Social system

ATMOSPHERE:

Power / dependence
Co-operation
Closeness
Expectations

Organization:

Technology
Structure
Strategy

Individual:

Aims
Experience

Short-term Exchange Episodes:

Product or service exchange
Information exchange
Financial exchange
Social exchange

INTERACTION PROCESS

Long-Term Relationships:

Institutionalization
Adaptations

Organization:

Technology
Structure
Strategy

Individual:

Aims
Experience

Source: adapted from (Håkansson, 1982, p. 24)

Financial exchange is the third element of short-term exchange episodes. The higher the value of financial exchange, the greater "the economic importance of the relationship" (*ibid.*, p. 17). Indeed, "economic aspects are considered important and may represent the main reason for the original establishment of the [business-to-business] relationship (Holmlund, 2008, p. 58). Moreover, "conceptualisations of relationships concern a longer time frame, encompassing economic aspects" (*ibid.*, p. 58). Finally, "the counterparts tend to evaluate the economic contribution of the focal relationship in relation to their other counterparts and relationships" (*ibid.*, p. 58).

Social exchange is the last element of short-term exchange episodes. As a relationship may involve spatial or cultural distances, social exchange plays an important role in decreasing uncertainties between the relationship parties (Håkansson, 1982). Moreover, social exchange helps to maintain a relationship between the periods of transactions (*ibid.*, p. 17). According to Håkansson (1982), "the most important function of social exchange is in the long term process by which successive social exchange episodes gradually interlock the two firms with each other". Many aspects of the legal agreements between the relationship parties cannot be fully formalized (*ibid.*, p. 17) because of bounded rationality which "refers to rate and storage limits on the capacities of individuals to receive, store, retrieve, and process information without error" (Williamson, 1973, p. 317). Hence, trust plays the key role in relationship contracting (Macneil, 1980).

The other dimension of the interaction process is *long-term relationships* which comprise two important aspects: *institutionalization* of relationships and *adaptation* (see Figure 3.1). Although successful management of all types exchange episodes contributes to building-up of long-term relationships, social exchange is critical (Håkansson, 1982). That is, "the routinization of these exchange episodes over a period of time leads to clear expectations in both parties of the roles or responsibilities of their opposite numbers" (*ibid*, p. 17). Hence, "eventually these expectations become *institutionalized* to such an extent that they may not be

questioned by either party and may have more in common with the traditions of an industry or a market than rational decision making by either of the parties" (*ibid*, p. 17) . Halinen (1997, p. 49) contends that "institutionalisation is the process through which various norms - patterns of behaviour and expectations of behaviour on the part of others – become established. It refers to the emergence of various rules, customs and standard operating procedures in a business relationship". Hence, institutionalisation is regarded as a part of coordination process (*ibid.*, p. 49). Woo and Ennew (2004, p. 1257) argue that coordination and co-operation terms are used for similar activities and explain that "cooperative behaviour includes the coordination tasks which are undertaken jointly and singly to pursue common and/or compatible goals and activities undertaken to develop and maintain the relationship".

According to Håkansson (1982, p. 18), "another important aspect of the relationship is *the adaptations* which one or other party may make in either the elements exchanged or the process of exchange" (see Figure 3.1). "Although adaptations by either party can occur in an unconscious manner as a relationship develops, it is important to emphasize the conscious strategy which is involved in many of these adaptations. Thus, modifications to product, delivery, pricing, information routines and even the organization itself" are important parts of both seller's and buyer's marketing strategies (*ibid.*, p. 18). In other words, buyer-seller adaptations refer to "behavioural or structural modifications, at the individual, group or corporate level, carried out by one organization, which are initially designed to meet specific needs of one other organization" (Brennan and Turnbull, 1998, p. 31). Drawing on the work of Hallén *et al.* (1991), Brennan *et al.* (2003, p. 1658) relate adaptations to reciprocity and contends that reciprocal adaptations is a part of trust-building process whereas unilateral adaptations is "a response to power imbalances within the relationship". Indeed, Holma (2009) posits that adaptation comprises three dimensions: (1) content, (2) the scale of adaptations and (3) progression of adaptations. The scale of adaptations refers to reciprocity or the nature of adaptations. Hallén *et al.* (1991, p. 34) contend that "adaptations are

reciprocal demonstrations of commitment and trust in the relationship". Indeed, Woo and Ennew (2004, p. 1258) conclude that "the presence of adaptation between buyers and sellers indicates the existence of a relationship, whereas the absence of it indicates a transactional approach to purchasing and marketing".

The Interaction Process: the Perspective of the Nordic School of Service

Having reviewed the interaction process from the perspective of Industrial Marketing and Purchasing (IMP) Group, it will be compared to the Nordic School of Service. According to Gummesson and Grönroos (2012, p. 485), "service research and IMP arrived at similar results, which [can be] ... condensed [into] the concepts of relationships, networks and interactions". Indeed, interaction is also the central concept of the Nordic School of Service. Holmlund (2008, p. 42) concurs that "service management and the IMP approach have much in common and are easily combined in order to conceptualise quality in a business relationship setting".

Grönroos (2000, p. 81) posits that a service encounter "is a process which includes a series of moments of truth and the customer's quality perception develops in a dynamic fashion throughout this interaction process" whereas "most service quality models and instruments ... are static". According to the Nordic School perspective, "relationship quality can be described as the dynamics of long-term quality formation in ongoing customer relationships" (*ibid.*, p. 81). Indeed, "service quality can be considered a necessary, but not sufficient, condition for relationship quality" (Crosby *et al.*, 1990, p.68). Indeed, later empirical research demonstrates that service quality and relationship quality are related, but distinct constructs (Keating *et al.*, 2003; Roberts *et al.*, 2003).

Liljander and Strandvik (1995) forwards the relationship quality model which "offers a good description of relationship quality" formation (Grönroos, 2000, p. 89). The model comprises four important ideas (Liljander and Strandvik, 1995; see Figure 3.2):

Figure 3.2: The Liljander-Strandvik Relationship Quality Model
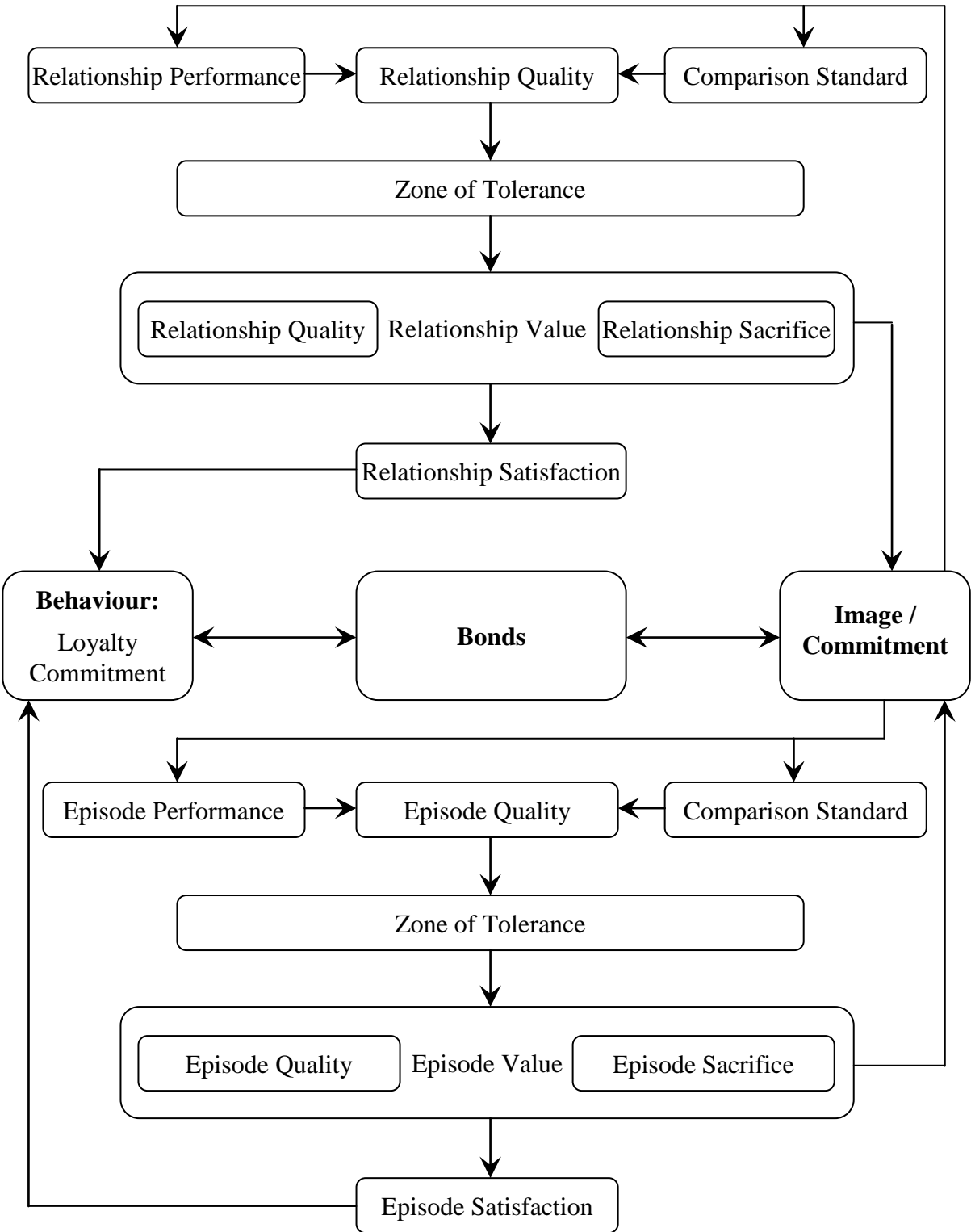
Source: adapted from Grönroos (2000, p. 86)

- The model distinguishes between episode-level quality and relationship level quality;

- The model integrates service quality, satisfaction and customer perceived value;

- The model includes a range of comparison standards and extends "the traditional limited disconfirmation notion used in static models of service quality" (Grönroos, 2000, p. 85);

- The model encompasses variables of customer behaviour.

The lower part of the model demonstrates the perception of service quality in a single service episode (Grönroos, 2000) which comprises several interactions (acts) related to one or several types of exchange consistent with the IMP group model and discussed previously: (1) the core product exchange (product or service), (2) information exchange, (3) financial exchange, (4) social exchange (Liljander and Strandvik, 1995).

Episode performance refers to "the service experienced in one service encounter [which] can be compared to any comparison standard, not only to predictive expectations as is traditionally the case in service quality models" (Grönroos, 2000, p. 85). The zone of tolerance denotes "an accepted variation in performance levels" (*ibid.*, p. 85). The episode value emerges by comparing the episode quality with the episode sacrifice and has effect on the episode satisfaction which in turn affects customer behaviour. Customer behaviour encompasses loyalty and commitment which are reciprocally related to two types of bonds: barriers of exiting and positive relational bonds. Bonds as well as episode value have effect on image which "incorporates the customers' old and recent experiences with a firm and builds a bridge to the relationship level of the model" (*ibid.*, p. 88). Moreover, the image filters the perception of the next service episode. Following the logic of the episode level, perceptions of episodes accumulate to relationship quality which affects behaviour, bonds and image.

The Interacting Parties

Having compared the interaction process from the IMP Group and the Nordic School of Service perspectives, the discussion will continue with the remaining elements of the

interaction model suggested by the Industrial Marketing and Purchasing (IMP) Group (see Figure 3.1).

The interaction process depends on four characteristics of the parties involved in the relationship (see Figure 3.1): (1) technology, (2) organizational size, structure and strategy, (3) organizational experience and (4) individuals. The four elements will be discussed more extensively.

Technology is often a central element in industrial markets. Indeed, "the aims of the interaction process can be interpreted as tying the production technology of the seller to the application technology of the buyer. Thus the characteristics of the two technological systems and the differences between them give the basic conditions for the interaction" (Håkansson, 1982, p. 18).

The larger an organization is, the greater possibility it has to dominate its suppliers and customers. *Structure* influences the interaction process in several ways. Firstly, it affects the number and categories of persons involved in the relationship. Secondly, it has effect on exchange procedures. Thirdly, it impacts the selection of the communication media and formalization of the interaction. Finally, structure has effect on the core product and financial exchange. Hence, "organizational structures can be considered as the frameworks within which interaction takes place" (Håkansson, 1982, p. 19). *Organizational experience* "may be the result of many other similar relationships" and may help the company to manage these types of relationships (*ibid.*, p. 19).

Individuals "exchange information, develop relationships and build up strong social bonds which influence the decisions of each company in the business relationship" (Håkansson, 1982, p. 19). Hence, "their reactions in individual episodes could condition the ways in which the overall relationship builds up" (*ibid.*, p. 19).

The Interaction Environment

Short-term exchange episodes as well as long-term relationships are surrounded by the interaction environment which comprises five elements: (1) market structure, (2) dynamism, (3) internationalization, (4) position in the manufacturing channel and (5) the social system. The five elements will be discussed more extensively.

Market structure refers to concentration of buyers and sellers and stability or rate of change (Håkansson, 1982). As "the extent of buyer or seller concentration determines the number of alternatives available to any firm", it may result in "the pressure to interact with a certain counterpart within the market" (Håkansson, 1982, p. 20) . Indeed, Hallén *et al.* (1991, p 34) demonstrate that absence of reciprocity characterised by unilateral adaptations is a result of power imbalances stemming from the market structure ("i.e., degree of buyer concentration and market share of the supplier firm").

Dynamism affects the interaction in two opposite to each other ways. On one hand, "a close relationship increases the knowledge of one party of the likely actions of the other party and hence its ability to make forecasts based on this inside information" (Håkansson, 1982, p. 20). On the other hand, "in a dynamic environment the opportunity cost of reliance on a single or small number of relationships can be very high when expressed in terms of the developments of other market members" (*ibid*., p. 20).

Internationalization has effect on firm's motivation to develop international relationships, organizational structure and the special knowledge required to operate successfully. Hence, it is an important element which impacts the interaction process (Håkansson, 1982).

Position in the manufacturing channel is another important element of the environment having effect on the interaction process. Indeed, importance of business relationships depends on position in the manufacturing channel (Håkansson, 1982). Palmatier *et al.* (2006, p. 141) concur that "exchanges between channel partners have higher levels of interdependence,

require coordinated action, and rely on the prevention of opportunistic behaviour". Hence, "coordination improvements and the reduction of opportunistic behaviors through strong relationships should be more important in a channel context" (*ibid.*, p. 141).

Finally, the *social system* affects the interaction process (see Figure 3.1). Håkansson (1982, p. 21) posits that "attitudes and perceptions ... can be important obstacles when trying to establish an exchange process with a certain counterpart. An example of this is nationalistic buying practices or generalized attitudes to the reliability of buyers or customers from a particular country". Hence, "it is necessary ... to see the organization in relation to the larger system" (*ibid.*, p. 12). Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships". Relationship marketing encompasses three important dimensions of consumer experience: service expectations, service evaluations and reactions to service (Zhang *et al.*, 2008; Schumann, 2009a). Numerous studies have demonstrated that all the three dimensions are affected by culture (Liu *et al.*, 2001; Patterson *et al.*, 2006; Patterson and Mattila, 2008; Zhang *et al.*, 2008; Schumann, 2009a). Moreover, both national and organizational cultures moderate the effect of relationship quality (trust and commitment) on repurchase intentions in an industrial buyer-seller setting (Hewett *et al.*, 2002; 2006). However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on cross-border relationship quality" (Athanasopoulou, 2009, p. 605).

The Atmosphere

According to Håkansson (1982, p. 21), "atmosphere can be described in terms of the power–dependence relationship which exists between the companies, the state of conflict or co-operation and overall closeness or distance of the relationship as well as by the companies' mutual expectations". Atmosphere comprises various variables which encompass environmental, company specific and interaction elements (*ibid.*, p. 21; see Figure 3.1).

Drawing on transaction-cost theory (Williamson, 1975), Håkansson (1982) posits that the atmosphere comprises the economic and control dimensions. On one hand, a closer relationship may facilitate reduction of transaction costs related to distribution, negotiations, administration and other aspects of a relationship. On the other hand, a closer relationship may help "to reduce the uncertainty associated with that input or output by increasing ... control over the other company" (*ibid.*, p. 22). However, the study by Heide and John (1992, p. 32) demonstrates that "in the absence of supportive norms, it is not possible for parties whose specific assets are at risk to acquire vertical control as per the transaction cost prescription. Instead, those parties lose control because of their dependence". Contrary to transaction-costs theory, investments in buyer specific assets have negative effect on buyer control.

According to Heide and John (1992), the extent of buyer control depends on the interaction of norms with specific assets. While the transaction cost framework is preoccupied with "*the conditions* that motivate a firm to structure relationships", relationship norms "provide the ability to implement the desired structures" (Heide and John, 1992, p. 40). Hence, norms of trust (Chiles and McMackin, 1996) solidarity, information exchange and flexibility (Heide and John, 1992) play the key role in management of business relationships.

Managing Relationships within a Network

According the model developed by the Industrial Marketing and Purchasing (IMP) Group, an organization is regarded as a part of an interacting network of organizations. Hence, in order to obtain necessary resources, an organization must enter into a network and develop relationships with a number of other organizations. According to Holmlund (1997, p. 306) "embeddedness relates to the fact that economic action and outcomes, like all social action and outcomes, are affected by the actors' dyadic relations and by the overall structure of network relations. Relationships are embedded in a network and connected to other relationships in that particular network".

3.3 Previous Conceptualizations of Relationship Quality

According to Bagozzi (1984, p. 20), "three types of definitions can be seen to contribute to the conceptual meaning of a theoretical concept: attributional, structural, or dispositional". Firstly, "an attributional definition specifies the attributes, characteristics, or properties of a concept" (*ibid*, p. 20) and is closely related to content validity or "the degree to which elements of a measurement instrument are relevant to and representative of the targeted construct" (Netemeyer *et al.*, 2003b, p. 86). Secondly, a structural definition indicates a set of elements and relationships between them. Hence, it gives meaning to the concept through the entire network (Bagozzi, 1984). Structural definition is linked to nomological validity or "the extent to which the measure fits "lawfully" into a network of relationships" and "operates within a set of theoretical constructs" (Netemeyer *et al.*, 2003b, p. 86). Finally, a dispositional definition demonstrates the antecedents and specifies the explanatory power with respect to the outcomes (Bagozzi, 1984). Consequently, it is similar to predictive validity which refers to utility (Bacharach, 1989) or "the ability of a measure to effectively predict some subsequent and temporally ordered criteria" (Netemeyer *et al.*, 2003b, p. 86).

Although a number of broad-scope studies followed the similar approach to analysis of relationship quality trying to identify the dimensions, antecedents and outcomes (e.g., Palmatier *et al.*, 2006; Athanasopoulou, 2009), further research should address several limitations. Firstly, systematic reviews suffer from fragmentation. Indeed, relationship quality research comprises "many constructs with similar definitions that operate under different aliases and constructs with similar names but different operationalizations" (Palmatier *et al.*, 2006, p. 137). However, no adequate attempt has been made to identify common themes (e.g. Holmlund, 2008; Vieira, 2008; Athanasopoulou, 2009). Although the issue has been addressed by meta-analytic studies (e.g. Palmatier *et al.*, 2006), they also have limitations inherent in this type of research. Firstly, data unavailability often prevents inclusion of effects. Secondly, meta-analytic studies cannot be regarded as "exhaustive list or even a list of the

most important constructs" (Palmatier *et al.*, 2006, p. 151). Hence, "research should expand the constructs ... and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges" (*ibid.*, p. 152). Finally, "a major issue in conducting ... [a meta-analysis] involves developing reliable and valid coding procedures for extracting data from the research literature" (Brown *et al.*, 2003, p. 205).

Owing to the fragmentation issues of systematic reviews and the limitations of meta-analytic research, this study takes a different approach. Firstly, the coding scheme employed in the meta-analysis by Palmatier *et al.* (2006) was reviewed and has been updated to include other important variables (value, quality and opportunism; see Table 3.1). Secondly, the definition of satisfaction as well as the common aliases of satisfaction and adaptation (relationship investment) has been modified.

Palmatier *et al.* (2006, p. 138) define satisfaction as "customer's affective or emotional state toward a relationship, typically evaluated cumulatively over the history of the exchange" and explain that its common alias is "satisfaction with the relationship, but not overall satisfaction". However, the representative papers indicate that satisfaction is both relational (e.g., Crosby *et al.*, 1990) and overall (e.g., Reynolds and Beatty, 1999). Indeed, it is similar to the definition of Oliver (1997, p. 33) who posits that satisfaction is pleasurable fulfilment or "the consumer senses that consumption fulfills some need, desire, goal, or so forth". Hence, it was deemed necessary to re-define the construct as "both an evaluative and emotion-based response to a service encounter" (Cronin *et al.*, 2000, p. 204).

As adaptation is inseparable from relationship investments, the common aliases of the later dimension have been expanded to encompass various elements of adaptation (see Table 3.1). The logic of this decision will emerge later in this section when comparing adaptation and relationship investment.

Having updated the coding scheme, the studies of relationship marketing were coded using the definitions in Table 3.1 to reduce fragmentation and identify common themes.

Table 3.1: Review of Construct Definitions, Aliases, and Representative Studies

Constructs	Definitions	Common Aliases	Representative Papers
Relationship Quality	"Overall assessment of the strength of a relationship, conceptualized as a composite or multidimensional construct capturing the different but related facets of a relationship".	Higher-order construct comprised of trust, commitment, satisfaction etc.	Crosby *et al.* (1990); De Wulf *et al.* (2001); Lova and Jasmin (2009); Walter *et al.* (2003)
Commitment	"An enduring desire to maintain a valued relationship".	"Affective, behavioral, obligation, and normative commitment".	Cahill (2007); Jap and Ganesan (2000); Moorman *et al.* (1992); Morgan and Hunt (1994)
Trust	"Confidence in an exchange partner's reliability and integrity".	"Trustworthiness, credibility, benevolence, and honesty".	Doney and Cannon (1997); Harris and Goode (2004); Morgan and Hunt (1994)
Satisfaction	"Satisfaction with a service provider is … both an evaluative and emotion-based response to a service encounter" (Cronin *et al.*, 2000, p. 204).	Emotion-based and evaluative sets of satisfaction.	Cronin *et al.* (2000); Crosby *et al.* (1990); Harris and Goode (2004); Woo and Ennew (2004)
Relationship Benefits	"Benefits received, including time saving, convenience, companionship, and improved decision making".	"Functional and social benefits and rewards".	Gwinner *et al.* (1998); Hennig-Thurau *et al.* (2002); Palaima and Auruskeviciene (2007)
Dependence	"Customer's evaluation of the value of seller-provided resources for which few alternatives are available from other sellers".	"Relative and asymmetric dependence, switching cost, and imbalance of power".	Hallén *et al.* (1991); Kumar *et al.* (1995a); Kumar *et al.* (1995b); Morgan and Hunt (1994)
Adaptation / Relationship Investment	"Investment of time, effort, spending, and resources focused on building a stronger relationship".	Support, resources and investment. Adaptations of product, process, planning and stockholding.	Cahill (2007); De Wulf *et al.* (2001); Hallén *et al.* (1991); Woo and Ennew (2004)
Expertise	"Knowledge, experience, and overall competency of seller".	"Competence, skill, knowledge, and ability".	Boles *et al.* (2000); Crosby *et al.* (1990); Doney and Cannon (1997)
Communication	"Amount, frequency, and quality of information shared between exchange partners".	"Bilateral or collaborative communication, information exchange, and sharing".	Crosby *et al.* (1990); Goodman and Dion (2001); Morgan and Hunt (1994)
Similarity	"Commonality in appearance, lifestyle, and status between individual boundary spanners or similar cultures, values, and goals between buying and selling organizations".	Similarity of individuals "or cultural similarity, shared values, and compatibility".	Crosby *et al.* (1990); Deepen (2007); Morgan and Hunt (1994)
Relationship duration	"Length of time that the relationship between the exchange partners has existed".	"Relationship age or length, continuity, and duration with firm or salesperson".	Jap and Ganesan (2000); Kumar *et al.* (1995b)

Source: adapted from Palmatier *et al.* (2006, p. 138-139)

Interaction frequency	"Number of interactions or number of interactions per unit of time between exchange partners".	"Frequency of business contact and interaction intensity".	Crosby *et al.* (1990); Doney and Cannon (1997)
Conflict	"Overall level of disagreement between exchange partners".	"Manifest and perceived conflict or level of conflict, but not functional conflict".	Roberts *et al.* (2003); Van Bruggen *et al.* (2005)
Expectation of continuity	"Customer's intention to maintain the relationship in the future, which captures the likelihood of continued purchases from the seller".	"Purchase intentions, likelihood to leave (reverse), and relationship continuity".	Čater and Čater (2010); Hewett *et al.* (2002); Ulaga and Eggert (2006)
Word of Mouth	"Likelihood of a customer positively referring the seller to another potential customer".	"Referrals and customer referrals".	Hennig-Thurau *et al.* (2002); Lova and Jasmin (2009); Rauyruen and Miller (2007)
Customer loyalty	"Composite or multidimensional construct combining different groupings of intentions, attitudes, and seller performance indicators".	"Behavioral loyalty and loyalty".	Harris and Goode (2004); Roberts *et al.* (2003)
Performance	"Actual … performance enhancements including sales, share of wallet, profit performance, and other measurable changes to the … business".	"Sales, share, sales effectiveness, profit, and sales performance".	Fynes *et al.* (2004); Fynes *et al.* (2005); Ramaseshan *et al.* (2006)
Co-operation	"Coordinated and complementary actions between exchange partners to achieve mutual goals".	"Coordination and joint actions".	Deepen (2007); Fynes *et al.* (2005); Woo and Ennew (2004)
Value	Value is "overall assessments of product and service utility based on what is exchanged" (Harris and Goode, 2004, p. 145).	Value-for-money, benefits compared to sacrifices, rewarding / costly relationship.	Harris and Goode (2004); Vieira (2008)
Quality	"Customers' cognitive evaluation of the service of one episode compared to some explicit or implicit comparison standard" (Grönroos, 2000, p. 87).	Technical and functional quality, SERVQUAL dimensions or similar industry-specific operationalizations of reliability, responsiveness, assurance, empathy, and tangibles.	Harris and Goode (2004); Palaima and Auruskeviciene (2007); Roberts *et al.* (2003)
Opportunism	Opportunism is "deceit-oriented violation of implicit or explicit promises about one's appropriate or required role behavior" (Morgan and Hunt, 1994, p. 25).	Distortion of information, not fulfilment of obligations, altering the facts etc.	Deepen (2007); Dwyer and Oh (1987); Morgan and Hunt (1994)

Source: adapted from Palmatier *et al.* (2006, p. 138-139)

The literature search generated 63 articles, which were evaluated for methodological (e.g. discriminant validity) and conceptual rigour. Moreover, a dimension is included in the coding scheme (see Table 3.1) if at least five studies have empirically corroborated its existence or there is a consensus that a theoretical construct may have the potential for explanatory power. The review resulted in 50 articles ranging from 1987 to 2012 and spanning 25 years. The majority of the studies are business-to-business empirical research (80%). However, the review encompasses 9 business-to-consumer articles and 1 conceptual paper. All the variables were assigned to one of the three categories: antecedent (A), mediator (M) or outcome (O; see Table 3.2). The first row of Table 3.2 (Relationship Quality) indicates if relationship quality is operationalized as a higher-order construct and demonstrates its type: antecedent, mediator or outcome. In cases where relationship quality is a higher-order construct, its first-order dimensions are classified into one of the same three types: dimension of antecedent (DA), dimension of mediator (DM) or dimension of outcome (DO). If a study comprises other variables which are not included in the coding scheme (see Table 3.1), they are listed in the bottom row of Table 3.2 indicating their types. Finally, the second column of Table 3.2 (Total) shows the extent to which a construct is included in the relationship marketing studies.

Relationship Quality as a Higher-Order Construct

Definitions of relationship quality vary across studies indicating the absence of a general consensus (see Table 3.3). Consistent with the definition of Hennig-Thurau *et al.* (2002, p. 234), relationship quality most often refers to "a metaconstruct composed of several key components reflecting the overall nature of relationships between companies and consumers" (see Table 3.3). Indeed, the review demonstrates that 19 out of 50 studies (38%) conceptualize relationship quality as a higher-order construct (see Table 3.2).

Table 3.2: A Review of Relationship Quality: Dimensions, Antecedents, Mediators and Consequences

Construct / Dimension	Total	Dwyer and Oh (1987)	Crosby et al. (1990)	Hallén et al. (1991)	Moorman et al. (1992)	Morgan and Hunt (1994)	Kumar et al. (1995b)	Kumar et al. (1995a)	Bejou et al. (1996)	Doney and Cannon (1997)	Leuthesser (1997)
		E	E	E	E	E	E	E	E	E	E
		B2B	B2C	B2B	B2B	B2B	B2B	B2B	B2C	B2B	B2B
Relationship Quality	19	**O**	**M**				**O**				**M**
Trust	44	DO	DM		A	M	DO	O	O	M	DM
Commitment	36				M	M	DO	O			
Satisfaction	28	DO	DM						O		DM
Expectation of Continuity	20		O				DO			O	O
Communication	18		A			A					A
Adaptation / Relationship Investment	18			O			DO			A	A
Dependence / Power	16	M		A	A	A	A	A			
Co-operation	15										
Quality	9										
Performance	8										
Opportunism	7	DO				A					
Relationship Benefits	5					A					
Expertise	5		A							A	
Similarity	5					A				A	
Conflict	5						DO	O			
Word of mouth	5										
Customer Loyalty	5										
Value	5										
Other	26	A			O, M	A, O	A		A	A	A

Note: A – Antecedent, **M** – Mediator, **O** – Outcome; **E** – Empirical Paper, **C** – Conceptual Paper.

DA, DM, DO – Dimension of a higher-order construct, which is (**A**) an antecedent, (**M**) a mediator and (**O**) an outcome respectively.

Construct / Dimension	Selnes (1998)	Dorsch *et al.* (1998)	Smith (1998a)	Garbarino and Johnson (1999)	Naudé and Buttle (2000)	Boles *et al.* (2000)	Jap and Ganesan (2000)	De Wulf *et al.* (2001)	Hibbard *et al.* (2001)	de Ruyter *et al.* (2001)
	E	E	E	E	E	E	E	E	E	E
	B2B	B2B	B2B	B2C	B2B	B2B	B2B	B2C	B2B	B2B
Relationship Quality						**M**		**M**	**O**	
Trust	M	D	M	A	D	DM		DM	DO	M
Commitment	A	D	O	M			M	DM	DO	M
Satisfaction	M	D	M		D	DM		DM		
Expectation of Continuity	O			O		O		O		O
Communication	A		M			A		A		
Adaptation / Relationship Investment			M					M		
Dependence / Power					D		A		A	
Co-operation					D					
Quality										
Performance						O	O			
Opportunism		D								
Relationship Benefits										
Expertise						A				
Similarity			A							
Conflict	A									
Word of mouth										
Customer Loyalty										
Value					D					
Other	M	D				A	A	A	A, M	A

Note: A – Antecedent, **M** – Mediator, **O** – Outcome; **E** – Empirical Paper, **C** – Conceptual Paper.

DA, DM, DO – Dimension of a higher-order construct, which is (**A**) an antecedent, (**M**) a mediator and (**O**) an outcome respectively.

Table 3.2: Continued

Construct / Dimension	Goodman and Dion (2001)	Friman et al. (2002)	Hewett et al. (2002)	Hennig-Thurau et al. (2002)	Walter et al. (2003)	Roberts et al. (2003)	Karin and Pervez (2004)	Woo and Ennew (2004)	Fynes et al. (2004)	Bansal et al. (2004)
	E	E	E	E	E	E	E	E	E	E
	B2B	B2B	B2B	B2C	B2B	B2C	B2B	B2B	B2B	B2C
Relationship Quality			**A**		**O**	**M**		**A**	**A**	
Trust	A	M	DA	A	DO	DM	A		A	A
Commitment	O	M	DA	M	DO	DM	M			M
Satisfaction				M	DO	DM		M		A
Expectation of Continuity		O	O	O			O			O
Communication	A	A							A	
Adaptation / Relationship Investment	A							DA	A	
Dependence / Power	A				A					A
Co-operation								DA	A	
Quality						A	A	M		
Performance									O	
Opportunism		A								
Relationship Benefits		A		A						
Expertise										
Similarity		A								
Conflict						DM				
Word of mouth				O						
Customer Loyalty						O		O		
Value										
Other	A	A			A		A	DA		A

Note: A – Antecedent, **M** – Mediator, **O** – Outcome; **E** – Empirical Paper, **C** – Conceptual Paper.

DA, DM, DO – Dimension of a higher-order construct, which is (**A**) an antecedent, (**M**) a mediator and (**O**) an outcome respectively.

Table 3.2: Continued

Construct / Dimension	Harris and Goode (2004)	Van Bruggen et al. (2005)	Fynes et al. (2005)	Ulaga and Eggert (2006)	Leonidou et al. (2006)	Ramaseshan et al. (2006)	Cahill (2007)	Rauyruen and Miller (2007)	Palaima and Auruskeviciene (2007)	Deepen (2007)
	E	E	E	E	E	E	E	E	E	E
	B2C	B2B	B2B	B2B	B2B	B2B	B2B	B2B	B2B	B2B
Relationship Quality		**O**	**A**							
Trust	M	DO	DA	M	O		M	A	M	M
Commitment	O	DO	DA	M	O	M	M	C	M	M
Satisfaction	M	DO	O	M	O	M	M	A		
Expectation of Continuity				O			O	O		
Communication			DA		O					M
Adaptation / Relationship Investment			DA		O		M			M
Dependence / Power		A	DA			A	A			
Co-operation			DA		O					M
Quality	A						M	A	A	
Performance			M			O				O
Opportunism										M
Relationship Benefits									M	
Expertise										
Similarity										A
Conflict		DO								
Word of mouth							O	O		
Customer Loyalty	O								O	
Value	M			A						
Other		A			A, O				A	M

Note: A – Antecedent, **M** – Mediator, **O** – Outcome; **E** – Empirical Paper, **C** – Conceptual Paper.

DA, DM, DO – Dimension of a higher-order construct, which is (**A**) an antecedent, (**M**) a mediator and (**O**) an outcome respectively.

Table 3.2: Continued

Construct / Dimension	Vieira et al. (2008)	Vieira (2008)	Su et al. (2008)	Deepen et al. (2008)	Lova and Jasmin (2009)	Ashnai et al. (2009)	Čater and Čater (2010)	John et al. (2011)	Vieira et al. (2011)	Yongtao et al. (2012)
	C	E	E	E	E	E	E	E	E	E
	-	B2B	B2B	B2B	B2C	B2B	B2B	B2B	B2B	B2B
Relationship Quality	**O**	**O**	**A**		**M**					**M**
Trust	DO	DO	DA		DM	D	A	A	M	
Commitment	DO	M			DM		M	A	M	
Satisfaction	DO	DO			DM	D		A		
Expectation of Continuity					O		O		O	
Communication	A	A	DA	A					O	
Adaptation / Relationship Investment		A	DA	M			A			DM
Dependence / Power		A				D				
Co-operation	A	M	DA	M		D	A	M	O	DM
Quality							A		A	
Performance				O						O
Opportunism		A							A	
Relationship Benefits		A								
Expertise	A				A					
Similarity										
Conflict										
Word of mouth					O		O			
Customer Loyalty								O		
Value	A					D				
Other			DA, C		A					A, DM

Note: A – Antecedent, **M** – Mediator, **O** – Outcome; **E** – Empirical Paper, **C** – Conceptual Paper.

DA, DM, DO – Dimension of a higher-order construct, which is (**A**) an antecedent, (**M**) a mediator and (**O**) an outcome respectively.

Table 3.3: A Review of Relationship Quality Definitions

Dwyer and Oh (1987)	Relationship quality comprises satisfaction, minimal opportunism and trust.
Crosby *et al.* (1990)	Relationship quality is a higher-order construct which encompasses trust and satisfaction.
Kumar *et al.* (1995a)	Relationship quality is a higher order construct consisting of conflict, trust and commitment.
Kumar *et al.* (1995b)	Relationship quality is a higher order construct which includes trust, commitment, conflict and expectation of continuity.
Bejou *et al.* (1996, p. 137)	"Relationship quality … is viewed as a higher order construct composed of at least two dimensions: (1) trust in the salesperson and (2) satisfaction with the salesperson".
Leuthesser (1997, p. 246)	"Relationship quality is a composite measure including both buyer satisfaction and buyer trust" (p. 246)
Dorsch *et al.* (1998)	Relationship quality is a higher-order construct comprising commitment, trust, satisfaction, opportunism, ethical profile caring and customer orientation.
Naudé and Buttle (2000, p. 360)	None. "There is not one explanation of this construct: rather, there are different views of what determines a good relationship, and managers need to take this into account in planning the operationalization of their supply chain relationships".
Boles *et al.* (2000)	The same as in Crosby et al. (1990).
De Wulf *et al.* (2001)	Relationship quality is a higher-order construct including relationship satisfaction, trust and relationship commitment.
Hibbard *et al.* (2001)	Relationship quality is a higher-order construct consisting of trust and commitment.
Hewett *et al.* (2002)	Relationship quality is a higher order construct encompassing trust and satisfaction.
Hennig-Thurau *et al.* (2002, p. 234)	"Relationship quality can be regarded as a metaconstruct composed of several key components reflecting the overall nature of relationships between companies and consumers". "The three core variables of satisfaction, trust, and commitment are treated as interrelated rather than independent".
Walter *et al.* (2003)	Relationship quality is a higher order construct comprising trust, satisfaction and commitment.
Roberts *et al.* (2003, p. 191)	Relationship quality "is defined as a measure of the extent to which consumers want to maintain relationships with their service providers" (p. 191). Relationship quality is a higher-order construct which is composed of commitment, trust, satisfaction and conflict.
Woo and Ennew (2004, p. 1266)	"Relationship quality [is] … a higher-order construct representing cooperation, adaptation, and atmosphere surrounding the transacting parties".

Fynes *et al.* (2004)	Relationship quality describes a higher-order construct formed from trust, adaptation, communication and co-operation.
Van Bruggen *et al.* (2005)	Relationship quality is a higher-order construct comprising commitment, trust, satisfaction and conflict.
Fynes *et al.* (2005, p. 342)	Relationship quality is defined "as the degree to which both parties in a relationship are engaged in an active, long-term working relationship". The second-order construct consists of communication, trust, adaptation, commitment, interdependence, and co-operation.
Ulaga and Eggert (2006)	The study focuses on three dimensions of relationship quality: commitment, trust and satisfaction.
Leonidou *et al.* (2006, p. 578)	Relationship quality is "is a multidimensional concept, encompassing all those behavioral parameters that help to maintain a smooth, stable, and productive working relationship". Relationship quality comprises commitment, trust, satisfaction, communication, adaptation and co-operation.
Rauyruen and Miller (2007)	Relationship quality consists of four dimensions: trust, commitment, satisfaction and service quality.
Palaima and Auruskeviciene (2007)	Relationship quality encompasses loyalty, commitment, confidence benefits, social benefits, special treatment benefits and service quality.
Vieira *et al.* (2008, p. 273)	Relationship quality is "the cognitive evaluation of business interactions by key individuals in the dyad, comparatively with potential alternative interactions".
Vieira (2008)	The same as in Vieira *et al.* (2008).
Su *et al.* (2008)	Relationship quality is a higher-order construct consisting of trust, communication, adaptation, atmosphere and co-operation.
Lova and Jasmin (2009)	Relationship quality is a multidimensional construct encompassing commitment, trust and satisfaction.
Ashnai *et al.* (2009, p. 88)	Relationship quality is "a higher-order construct consisting of distinct, yet related dimensions [which] can be considered as an overall assessment of the strength or success of a particular relationship". The construct encompasses trust, satisfaction, power (or dependence), co-operation (or supply chain integration) and profit (or value).
Čater and Čater (2010)	Relationship quality is a construct consisting of product quality, knowledge transfers, adaptation, co-operation and trust. Commitment is not regarded as a part of relationship quality, but is treated as a relational mediator.
John *et al.* (2011)	Relationship quality comprises trust, commitment and satisfaction.
Yongtao *et al.* (2012, p. 290)	Relationship quality is defined as "the degree to which the parties in a relationship are engaged in an active, long-term working relationship". The construct comprises adaptation, atmosphere and co-operation.

Consistent with previous studies (e.g., Palmatier *et al.*, 2006; Holmlund, 2008; Athanasopoulou, 2009), "the only area of convergence is three major dimensions of RQ [relationship quality] (trust, commitment and satisfaction)" (Athanasopoulou, 2009, p. 603), which have been conceptualized as higher-order dimensions by 32%, 20% and 22% of the studies respectively (see Table 3.2). The other higher-order indicators of relationship quality comprise adaptation / relationship investment (10%), co-operation (8%), conflict (6%), communication (4%), expectation of continuity (2%), dependence (2%) and opportunism (2%).

The majority of the studies employ trust (56%), commitment (52%), satisfaction (34%) and other variables as individual dimensions of relationship marketing. However, Palmatier *et al.* (2006, p. 149) demonstrate that "that objective performance is influenced most by relationship quality (a composite measure of relationship strength) and least by commitment". Consequently, "a multidimensional perspective should be employed" because "no single or "best" relational mediator can capture the full essence or depth of a customer–seller relationship".

Trust and Commitment

Harris and Goode (2004) posit that "the variable most universally accepted as a basis of any human interaction or exchange is trust". Indeed, 88% of relationship marketing studies comprise a first-order dimension of *trust* (see Table 3.2). Moreover, trust is an antecedent of commitment which refers to "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it" (Morgan and Hunt, 1994, p. 23). As "commitment is central to relationship marketing" (*ibid.*, p. 23), 72% of the studies involve this dimension.

Satisfaction

Cronin *et al.* (2000, p. 204) posits that "satisfaction with a service provider is … both an evaluative and emotion-based response to a service encounter". Oliver (2010, p. 8) concurs

that "satisfaction is the consumer's fulfillment response. It is a judgment that a product/service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over fulfilment". In other words, "satisfaction is a fairly temporal postusage state for one-time consumption or a repeatedly experienced state for ongoing consumption that reflects how the product or service has fulfilled its purpose" (Oliver, 1999, p. 40). Although satisfaction is frequently conceptualized as a relationship quality dimension as well as employed as an individual relational variable (56% of the studies; see Table 3.2), "the aforementioned data show that satisfaction is an unreliable precursor to loyalty" (Oliver, 1999, p. 34). Indeed, "high satisfaction often correlates with declining market share" (Eggert and Ulaga, 2002, p. 109). Moreover, "unlike low relational customers, whose future intentions are driven by overall satisfaction", high relational customers "are driven by trust and commitment" (Garbarino and Johnson, 1999, p. 82). Hence, "overall satisfaction has no significant influence on future intentions" for the latter type of customers (*ibid.*, p. 82). Verhoef (2003, p. 41) concurs that "commitment is an antecedent of both customer retention and customer share development" whereas satisfaction has no effects on the two outcomes. Finally, Oliver (1997, p. 36) explains that action loyalty is "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" overcoming obstacles. Hence, instead of focusing on temporal state of satisfaction, future studies should concentrate on commitment and its antecedents.

Loyalty

Following the suggestion of Day (1969), later studies (Jacoby, 1971; Olson and Jacoby, 1971) have empirically identified attitudinal and behavioural elements of loyalty. Oliver (1997, 1999) has re-conceptualized loyalty as the sequential chain comprising the four phases: cognitive loyalty, affective loyalty, conative loyalty and action loyalty. However, only 10% of studies conceptualize loyalty as "composite or multidimensional construct combining

different groupings of intentions, attitudes, and seller performance indicators" (Palmatier *et al.*, 2006, p. 139; see Table 3.2). Most often loyalty is conceptualized as expectation of continuity (40% of studies) and only 10% of studies comprise word-of-mouth. Hence future studies of relationship quality should involve a multidimensional loyalty construct which encompasses both attitudinal and behavioural elements of loyalty.

Adaptation

Interestingly, 36% of studies employ the construct of adaptation or relationship investment. Indeed, Håkansson (1982, p. 18) argues that "another important aspect of the relationship is *the adaptations* which one or other party may make in either the elements exchanged or the process of exchange". Later empirical studies have demonstrated that adaptation is a dimension of relationship quality (Kumar *et al.*, 1995b; Woo and Ennew, 2004; Fynes *et al.*, 2005; Su *et al.*, 2008). Adaptations comprise many different facets which are inseparable with relationship investments. According to Hallén *et al.* (1991), mutual adaptations encompass customization of product, stockholding, production process and planning. "Partly the adaptations are made unilaterally as a consequence of imbalance in the interfirm power relation, and partly the adaptations are reciprocal demonstrations of commitment and trust in the relationship" (*ibid.*, p. 34). The other manifestations of adaptation comprise willingness to invest (Kumar *et al.*, 1995b) as well as other customizations of products, production process, inventory procedures, delivery procedures, tools and equipment (Doney and Cannon, 1997). Leuthesser (1997, p. 246) uses the term of initiating behaviour which "refers to the extent to which a supplier proactively initiates efforts to better understand a buyer's needs and requirements, and helps the buyer become more competitive". Smith (1998a) generalizes about various relationship investments whereas De Wulf *et al.* (2001) prefer the definition of various efforts to improve ties with regular customers. Goodman and Dion (2001, p. 292) argue that "idiosyncratic investments as a rule are expenditures of time, effort, or funds directed mainly at marketing initiatives for a specific manufacturer's product offering".

According to Woo and Ennew (2004, p. 1270), adaptations comprise improvements of "technical capabilities to keep abreast with new developments", proactive improvement, making operational changes and co-ordination efforts. The other authors (Fynes *et al.*, 2004; Fynes *et al.*, 2005; Su *et al.*, 2008) posit that adaptation refers to significant investments and specialisation of tools and equipment as well as tailoring of production system. Leonidou *et al.* (2006, p. 580-581) add that the construct encompasses "changes in corporate objectives/strategies/policies, adjustment of procedures, changes in organizational structure, flexibility in responding to demands, adjustment of type/quality of work". Another alias of adaptation is proactive improvement which encompasses processes, activities and innovation (Cahill, 2007; Deepen, 2007; Deepen *et al.*, 2008). However, Vieira (2008) prefers the definition of problem solving behaviour which encompasses help to achieve goals, recommendations of suitable solutions and best services, correct information, management of expectations and other facets. Čater and Čater (2010) simplify the term indicating three sources of adaptations: products, personnel and equipment.

Finally, the meta-analysis by Palmatier *et al.* (2006, p. 150) demonstrates that "relationship investment both builds customer relationships and directly improves performance, which suggests that the extant relational-mediated framework is not comprehensive". Hence, "the classic mediating model of RM [Relationship Marketing] (Morgan and Hunt 1994) should be adapted to include alternative mediated pathways" such as reciprocity (*ibid.*, p. 150).

Communication

Communication has been an important dimension of business to business relationships (Anderson and Narus, 1984; 1990; Crosby et al., 1990; Athanasopoulou, 2009). Indeed, 36% of the relationship marketing studies involve communication (see Table 3.2). As "channel members achieve coordination by sharing information through frequent two-way interchanges", "communications play an important role in realizing the mutual benefits"

(Anderson and Weitz, 1992, p. 21). Morgan and Hunt (1994, p. 25) posit that "a partner's perception that past communications from another party have been frequent and of high quality that is, relevant, timely, and reliable, ... will result in greater trust". This proposition has been corroborated by the empirical research, which has demonstrated that communication has substantial positive effect on trust.

Dependence

The literature review indicates that 32% of the relationship marketing studies include dependence (see Table 3.2). Emerson (1962, p. 32) contends that "the dependence of actor A upon actor B is (1) directly proportional to A's motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals to A outside of the A-B relation". According to Hallén *et al.* (1991, p. 31) "the relative dependence between two actors in an exchange relationship determines their relative power. Power derives from having resources that the other needs and from controlling the alternative sources of the resources. This conception refers to the structural potential power of one actor in a relationship whereby that actor can influence the other to comply with the former actor's needs". Palmatier *et al.* (2006, p. 138) agree that dependence refers to "customer's evaluation of the value of seller-provided resources for which few alternatives are available from other sellers". Hallén *et al.* (1991) posit that supplier dependence comprises customer importance and buyer concentration whereas customer dependence consists of supplier importance, market share and product complexity. Hence, the aliases of dependence encompass "relative and asymmetric dependence, switching cost, and imbalance of power" (Palmatier *et al.*, 2006, p. 138).

Co-operation

The literature review indicates that 30% of the relationship marketing studies comprise co-operation. Morgan and Hunt (1994, p. 26) forward the commitment-trust theory stating that "cooperation is the only outcome posited to be influenced directly by both relationship

commitment and trust. A partner committed to the relationship will cooperate with another member because of a desire to make the relationship work". Woo and Ennew (2004, p. 1257) argue that coordination and co-operation terms are used for similar activities and explain that "cooperative behaviour includes the coordination tasks which are undertaken jointly and singly to pursue common and/or compatible goals and activities undertaken to develop and maintain the relationship". Co-operation is closely related to institutionalisation (Håkansson, 1982) or "the process through which various norms - patterns of behaviour and expectations of behaviour on the part of others – become established. It refers to the emergence of various rules, customs and standard operating procedures in a business relationship" (Halinen, 1997, p. 49). Moreover, "cooperation promotes value creation beyond that which each party could achieve separately" (Palmatier *et al.*, 2006, p. 140).

Opportunism

Although only 14% of relationship marketing studies include opportunism, it is regarded as an important antecedent of trust (Morgan and Hunt, 1994; Deepen, 2007; Vieira *et al.*, 2011). It is the study of Morgan and Hunt (1994) which has incorporated opportunism into the commitment-trust theory. Instead of treating managers as opportunistic agents as prescribed by transaction-cots theory, Morgan and Hunt (1994) posit that opportunism is rather an exception, which is the hindrance to the development of trusting and committed relationships. Opportunism appears to have great explanatory power. On one hand, opportunism is a strong negative antecedent of trust. On the other hand, trust appears to mediate the negative effects of opportunism on many relationship outcomes: commitment, acquiescence, propensity to leave, co-operation, functional conflict and uncertainty (Morgan and Hunt, 1994). Moreover, opportunism along with trust and co-operation is related to the concept of atmosphere. According to Håkansson (1982, p. 21) "atmosphere can be described in terms of the power–dependence relationship which exists between the companies, the state of conflict or co-operation and overall closeness or distance of the relationship as well as by the companies'

mutual expectations". Indeed, Young and Wilkinson (1998, p. 57-58) posit that "a central aspect [of atmosphere] is the cooperative and competitive norms of the firms involved, including trust and opportunism".

3.4 The Theoretical Bases and Dimensions of Relationship Quality

Although the previous section (3.3) identifies the dimensions most often employed in the studies of relationship marketing, such reviews should not be regarded as "exhaustive list or even a list of the most important constructs" (Palmatier *et al.*, 2006, p. 151). Hence, the constructs are expanded by a thourough examination of five theories: services marketing literature, social exchange theory, commitment-trust theory, equity theory and trascation-cost theory.

3.4.1 Services Marketing Literature: Loyalty

Following the suggestion of Day (1969), later studies (Jacoby, 1971; Olson and Jacoby, 1971) have empirically identified attitudinal and behavioural elements of loyalty. Focusing on both attitudinal and behavioural facets of the construct, Jacoby and Kyner (1973, p. 2) forwards a multidimensional definition of brand loyalty explaining that it is: "(1) the biased (i.e., non-random), (2) behavioural response (i.e., purchase), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternative brands out of a set of such brands, and (6) is a function of psychological (decision-making, evaluative) processes".

Dick and Basu (1994, p. 100) are the first to define loyalty "as the relationship between the relative attitude toward an entity (brand, store, service, vendor) and patronage behaviour" explaining that the two dimensions are affected by *cognitive, affective* and *conative* antecedents. Nevertheless, Oliver (1997, 1999) has re-conceptualized loyalty as the sequential chain comprising the four phases: cognitive loyalty, affective loyalty, conative loyalty and action loyalty.

Cognitive loyalty rests on brand attribute information, which helps to differentiate a brand among alternatives as preferable (Oliver, 1999). In this phase, loyalty is "directed

toward the brand because of this information" which can be based on both vicarious knowledge or recent experience (Oliver, 2010, p. 433). In order to proceed to the affective phase of loyalty, the transaction should not be routine. Otherwise the depth of loyalty remains limited to mere performance (*ibid*., p. 433).

Affective loyalty is based on liking or attitude towards the brand, which "has developed on the basis of cumulatively satisfying usage occasions" (Oliver, 1999, p. 35). This is related to the pleasure dimension of satisfaction and brand likeableness. Commitment in this stage is affective, because a consumer perceives a brand as cognition and affect (liking). As in the case of cognitive loyalty, switching in this stage is very likely thus deeper loyalty should be the aim.

The *conative phase of loyalty* is behavioural intention, which emerges as a result of "repeated episodes of positive affect toward the brand" (Oliver, 2010, p. 434). Although loyalty at this stage is defined as the brand-specific and "deeply-held commitment to buy" (Oliver, 1999, p. 35), it is more akin to motivation and may remain unrealized action. The concept of conative loyalty is consistent with operationalizations of commitment by a number of previous studies (Moorman *et al.*, 1992; Geyskens *et al.*, 1996; Wetzels *et al.*, 1998; Gruen *et al.*, 2000). Oliver (2010) posits that despite the similarities with the affective phase, the distinguishable characteristics of the conative phase are social bonds.

Finally, *action loyalty* is the highest stage of loyalty which refers to readiness to act overcoming obstacles. Readiness to act reflects "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" while overcoming of obstacles constitutes "re-buying despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 36). The fourth phase brings "the attitude-based loyalty model to the behaviour of interest – the action state of inertial re-buying" (Oliver, 2010, p. 434).

The conceptual framework of the cognitive-to-action loyalty has been empirically tested by a number of studies (e.g., Eugene and Jamie, 2000; McMullan and Gilmore, 2003; McMullan, 2005; Harris and Goode, 2004; Evanschitzky and Wunderlich, 2006) in order to assess the sequence and distinctness of the phases. Eugene and Jamie (2000) operationalizes the sequential chain using the constructs of service quality (*cognitive loyalty*), relative attitude and satisfaction (*affective loyalty*), intention to recommend and repurchase (*conative loyalty*) and the share of visits to department stores (*action loyalty*). Although the sequential relationships have been corroborated and the model has demonstrated adequate goodness-of-fit, the study suffers from several limitations. Firstly, it ignores convergent validity thus it is not clear how well the indicators of the four constructs converge. Secondly, there is no evidence of discriminant validity therefore it is problematic to assess the empirical distinctiveness of the four phases. The very similar weaknesses are inherent in the later studies by McMullan and Gilmore (2003) and McMullan (2005). Furthermore, the two works have not assessed the sequential relationships between the four dimensions.

The study by Harris and Goode (2004) can be regarded as the most rigorous attempt to test the propositions of Oliver (1999). Indeed, the survey employs the good measurement practice of congeneric models. Firstly, all constructs are measured by at least four items and demonstrate evidence of content validity. Secondly, all scales possess adequate reliabilities. Thirdly, the authors provide the evidence of discriminant validity. Finally, the sequential relationships between the dimensions of loyalty are supported by path analysis. Interestingly, all possible sequential combinations have been tested in order to identify the best fitting pattern. Consistently with the theory, the proposition of Oliver (1999) has emerged as the best fitting thus the sequential relationships between the four phases have been corroborated.

Another attempt to evaluate empirically the model by Oliver (1999) is the study by Evanschitzky and Wunderlich (2006) conducted in the retail trade industry. The operationalization of loyalty comprises attribute performance of the retail industry (*cognitive*

loyalty), overall satisfaction and liking (*affective loyalty*), willingness to recommend, cross-buying intention and repurchase intention (*conative loyalty*) and self-reported measures of retrospective word-of-mouth behaviour, purchase frequency and actual expenses per year (*action loyalty*). The work by Evanschitzky and Wunderlich (2006) echoes the findings of Harris and Goode (2004) and indicates the presence of the sequential relationships between the four dimensions.

Having summarized the operationalizations of the sequential loyalty chain, Oliver (2010) calls for more intensive efforts to corroborate or refute his views and points out several potential weaknesses. Oliver (2010, p. 440) clarifies that "loyalty effects have been discussed largely in the context of product marketing" while "strong interpersonal character of services" requires "additional dimensions of a much more binding and even overriding nature". Indeed, the distinctiveness of services encompass stronger person-to-person interaction, greater perceived risk and possibilities of developing stronger bonds and loyalty (Gremler and Brown, 1996). Hence, the dimensions of relationship marketing may be more relevant to service industries. Finally, Oliver (ibid., p. 442) concludes that "any number of variables can be combined to display consumer segments with differentiated orientations to the firm's offering".

The present operationalizations of the sequential chain are based on relatively transactional business-to-consumer samples: retail customers (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online shoppers (Harris and Goode, 2004) and restaurant visitors (McMullan and Gilmore, 2003; McMullan, 2005). Hence, it is essential to assess validity of the sequential phases based on more complex business-to-business services samples. Moreover, Bagozzi (1995), Palmatier *et al.* (2006) and Oliver (2010) amongst others call for integration of additional dimensions (e.g. exchange efficiency, equity, relational norms and reciprocity) into relationship assessment frameworks. As there are numerous calls

to assess discriminant validity of loyalty in the light of the other variables, this study will integrate the sequential chain of loyalty with the other dimensions of relationship marketing.

3.4.2 Social Exchange Theory

Although social exchange theory (Homans, 1958; Thibaut and Kelley, 1959; Emerson, 1962; Blau, 1964) is one of the most popular in relationship marketing (Wulf and Odekerken-Schröder, 2001; Bruhn, 2003) and has been frequently employed to explain business-to-business relationships (Håkansson, 1982; Crosby *et al.*, 1990; Woo and Ennew, 2004; Palaima and Auruskeviciene, 2007), a fully developed conceptual framework is still lacking (Lambe *et al.*, 2001; Palmatier *et al.*, 2006). In order to close the gaps and identify the missing links, this section reviews four dimensions of social exchange theory: reciprocity, co-operation, communication and dependence.

3.4.2.1 Reciprocity

Simmel and Wolff (1950, p. 387) posit that it is difficult to achieve social balance and unity without "the reciprocity of service and return service" because "all contacts among men rest on the schema of giving and returning the equivalence". Blau (1964) echoes that social associations are based on seeking of social and economic rewards thus relationship continuousness is only possible if exchange is based on *reciprocity*, which builds trust and commitment. Indeed, perceived equity is a critical dimension of exchange which is "dependent on an individual's assessment of the value and relevance of participants' inputs and outcomes" (Gundlach and Murphy, 1993b, p. 42). According to Bagozzi (1995, p. 275), reciprocity is "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship" which provides control over volitions and actions and thus it is likely to be an important variable in marketing relationships. Indeed, in order for trust, mutual commitment and loyalty to develop, parties must abide by exchange rules (Cropanzano and Mitchell, 2005, p. 875), which refer to "normative definition of the situation that forms among or is adopted by the participants in an exchange relation".

Palmatier et al. (2006) echo that although commitment and trust have been important dimensions in relationship marketing, such constructs as reciprocity along with relational norms, relationship satisfaction, exchange efficiency and equity may play critical role. Hence, Palmatier et al. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). This argument is supported by meta-analysis (Palmatier *et al.*, 2006), which indicates that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has substantial effect on seller's objective performance.

Gouldner (1960) contends that *reciprocity as a rule* can be classified into the three types: (1) *reciprocity as a pattern of mutually contingent exchange of gratifications*, (2) *the existential or folk belief in reciprocity*, and (3) *the generalized moral norm of reciprocity. The first type of reciprocity* refers to reciprocal interdependence based on contingent interpersonal transactions, "whereby an action by one party leads to a response by another" (Cropanzano and Mitchell, 2005, p. 876). *The second type of reciprocity* denotes "cultural expectation that people get what they deserve" (*ibid.*, p. 876). *The third type of reciprocity* reflects the generalized moral norm (Gouldner, 1960).

Bagozzi (1995) posits that reciprocity is at the core of marketing relationship and argues that it is more than a norm of reciprocity formulated by Gouldner (1960). Indeed, Becker (1990) explains that reciprocity encompass the three maxims: (1) proportional returning good-for-good, (2) resistance to evil and not doing evil in return and (3) compensation for harm. Bagozzi (1995, p. 275-276) argues that Becker (1990) defines reciprocity as "a matter of moral obligation with deontic virtue" which is "a sense of obligation...felt only in retrospect".

Until very recently empirical evaluation of reciprocity was not possible because of the absence of reciprocity measures (Palmatier *et al.*, 2006). Although there have been several attempts to conceptualize reciprocity (Yau *et al.*, 2000; Sin *et al.*, 2005; Stanko *et al.*, 2007),

it is the work of Pervan *et al.* (2009) that constitutes the most comprehensive empirical assessment of the construct. Following the suggestion of Becker (1990), Pervan *et al.* (2009) initially conceptualized reciprocity as the three dimensional construct. Nevertheless, the empirical findings demonstrate that reciprocity comprises the two dimensions: *response-to-harm* and *exchange-of-good.* Although the dimensionality doesn't match the structure proposed by Gouldner (1960) and Becker (1990), the factors have maintained the meaning of construct (Pervan *et al.*, 2009).

The study by Pervan *et al.* (2009) has substantially contributed to conceptualization and empirical evaluation of reciprocity. Although the construct demonstrates content and construct validity, "full validation is an ongoing process and should be the subject of future studies, including replication and extension across different contexts and cultures" (Pervan *et al.*, 2009, p. 68). Indeed, the conceptual distinctiveness of the reciprocity construct should be evaluated along with the other dimensions of relationships marketing: loyalty, commitment, co-operation, communication, trust and opportunism amongst others (Palmatier *et al.*, 2006).

Reciprocity may be a culture-dependent dimension (Gouldner, 1960; Wilkins and Ouchi, 1983; Cropanzano and Mitchell, 2005; Pervan *et al.*, 2009), because it is "a cultural mandate, in which those who do not comply are punished" (Cropanzano and Mitchell, 2005, p. 877). Moreover, definitions of promise keeping and harm vary across societies (Rousseau and Schalk, 2000). Social preferences is a culture-dependent variable and therefore model of reciprocity must include cultural influence (Gächter and Herrmann, 2009). Indeed, the study by Gächter and Herrmann (2009) has demonstrated that national culture is the antecedent of reciprocity.

3.4.2.2 Co-operation

Resource dependence theory (Pfeffer and Salancik, 1978; 2003) has been frequently employed to explain governance of business-to-business relationships (Lambe *et al.*, 2001; Varey, 2002). According to the theory (Hillman *et al.*, 2009, p. 1404-1405), "organizations

are not autonomous, but rather...constrained by a network of interdependencies", which, coupled with uncertainty about the actions of interdependent partners, lead "to a situation in which survival and continued success are uncertain" thus "organizations take actions to manage external interdependencies, although such actions are inevitably never completely successful and produce new patterns of dependence and interdependence" resulting in "interorganizational as well as intraorganizational power, where such power has some effect on organizational behaviour".

Although Stern and Ansary (1992) were among the first to utilize the theory within the marketing literature two decades ago, the authors (Coughlan *et al.*, 2001) still argue that high mutual dependence or power fosters value creation by driving coordination and enhancing co-operation.

Contrary to the resource dependence theory, Frazier (1983) contends that co-operation comprises compatibility of mutual goals, inter-firm communication, participative decision making, ideological agreement and *the use of power in a non-pressurized fashion.* Indeed, based on the ideas of Pruitt (1981) and Anderson and Narus (1990), Morgan and Hunt (1994, p. 26) forward the commitment-trust theory of relationship marketing stating that "cooperation is the only outcome posited to be influenced directly by both relationship commitment and trust. A partner committed to the relationship will cooperate with another member because of a desire to make the relationship work". The study by Larson and Kulchitsky (1999) echoes that the construct of co-operation encompass collaborative goal setting, cross-functional coordination, detailed communication, mutual respect, trust, teamwork, and unity of purpose. The findings of the previous studies have been summarized by the meta-analysis of Palmatier *et al.* (2006, p. 150), which provides the empirical evidence, that "dependence is not an effective relationship-building strategy but can improve performance in other ways, possibly by increasing switching costs and barriers to exit".

Focusing on the previous studies (Frazier, 1983; Larson and Kulchitsky, 1999), Deepen (2007) forwards a scale of co-operation for the logistics outsourcing industry comprising the eight indicators, which encompass the following facets: jointly agreed goals, similar approach to doing business, pulling together in the same direction, mutual decisions in presence of problems and mutual respect.

Drawing on social exchange theory, Lambe *et al.* (2001, p. 23) concludes that the concept of co-operation refers to "similar or complementary actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocity over time". As relationship develops, exchange partners begin to expect that the other part will co-operate and that both firms will benefit from co-operation (*ibid.*, p. 23). Indeed, the meta-analysis by Palmatier *et al.* (2006, p. 140) summarizes various studies and contends that "co-operation captures the level of coordinated and complementary actions between exchange partners in their efforts to achieve mutual goals".

Owing to the ambiguities of the resource dependence theory, Casciaro and Piskorski (2005, p. 193) forward the revised model and hypothesize that "actors in high mutual dependence dyads are...more likely to face uncertainty" which leads to merging and the development of trust. Consequently, trust results in reduction of uncertainty and opportunistic bargaining. Finally, Casciaro and Piskorski (2005, p. 193) conclude that "those successful actors will reduce uncertainty in the flow of needed resources by relying on social norms of cooperation and reciprocity and hence should rely less on formal long-term contractual arrangements".

Indeed, the ideas of Casciaro and Piskorski (2005) are consistent with the view of Narayandas and Rangan (2004, p. 74) who echo "that interpersonal trust enhances interorganizational commitment over time and that high levels of trust and commitment can, in turn, neutralize the impact of initial power-dependence asymmetries... thus enabling weaker firms to thrive in equitable relationships with powerful partners".

Although Palmatier *et al.* (2006) call for adaptation of the classic mediated model of relationship marketing (Morgan and Hunt, 1994) by adding reciprocity, there are a number of problems. Firstly, it is important to identify the extent to which constructs of trust, co-operation and reciprocity are "empirically distinguishable from one another" (Bacharach, 1989, p. 503). Secondly, as the relationship between trust, co-operation and reciprocity can be either recursive or non-recursive (Ostrom, 2003), the research design should comprise several competitive models.

3.4.2.3 Communication

Communication has been an important dimension of business to business relationships (Anderson and Narus, 1984; 1990; Crosby *et al.*, 1990; Athanasopoulou, 2009). As "channel members achieve coordination by sharing information through frequent two-way interchanges", "communications play an important role in realizing the mutual benefits" (Anderson and Weitz, 1992, p. 21). Varey (2002) contends that communication is the necessary social process to achieve trust, commitment and loyalty. Indeed, communication is an essential prerequisite for achievement of relationship benefits (Cahill, 2007) and a precursor of trust (Anderson and Weitz, 1992; Morgan and Hunt, 1994). Morgan and Hunt (1994, p. 25) posit that "a partner's perception that past communications from another party have been frequent and of high quality that is, relevant, timely, and reliable, ... will result in greater trust". This proposition has been corroborated by the empirical research, which has demonstrated that communication has substantial positive effect on trust. Moreover, communication has indirect effect on relationship commitment, acquiescence, propensity to leave, co-operation, functional conflict and uncertainty through the mediating variable of trust.

Mohr *et al.* (1996, p. 103) concur that collaborative communication refers to a specific combination of intensive, relationship-building communication facets comprising frequency, bi-directionality, formality and content which "can be used to create an atmosphere of mutual

support, thereby creating volitional compliance between partners" . Anderson (2002, p. 189) contends that communication is "a major causal variable determining many organizational outcomes". Indeed, communication requires exchanging information and builds stronger relationships by goal alignment, helping to resolve disputes and uncovering opportunities, which create value (Palmatier *et al.*, 2006). Focusing on the previous studies, the meta-analysis by Palmatier *et al.* (2006, p. 138) defines communication as "amount, frequency, and quality of information shared between exchange partners" and corroborates the substantial effects of communication on trust, commitment, relationship satisfaction and relationship quality.

3.4.2.4 Dependence

Emerson (1962, p. 32) contends that "the dependence of actor A upon actor B is (1) directly proportional to A's motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals to A outside of the A-B relation". Indeed, the company is dependent on the relationship to the extent to which there are no alternatives to value gained from the relationship (Thibaut and Kelley, 1959; Palmatier *et al.*, 2006). Thibaut and Kelley (1959) argue that anticipated outcomes of a relationship are evaluated against some standards or criteria of acceptability which are classified into the two types: *comparison level* (CL) and *comparison level of alternatives* (CL_{alt}). On one hand, comparison level (CL) refers to "the standard against which the member evaluates the "attractiveness" of the relationship of how satisfactory it is" (*ibid.*, p. 21). On the other hand, comparison level of alternatives (CL_{alt}) denotes "the standard the member uses in deciding whether to remain or leave relationship" (*ibid.*, p. 21).

According to Thibaut and Kelley (1959), CL is an evaluation of relationship value in terms of what a person feels he or she deserves. Relationship satisfaction and dissatisfaction are related to the level of CL. The level of relationship outcome higher than CL leads to satisfaction, while the lower level has the opposite effect. Nevertheless, circumstances may

force a party to remain in the relationship despite the fact that relationship is unsatisfactory. Such situation emerges when relationship is perceived as unsatisfactory, but CL_{alt} is lower than CL.

Lambe *et al.* (2001) explains that interdependence and mutual commitment are contingent upon bilateral perception of outcomes that exceeds both *comparison level* and *comparison level of alternatives*. Moreover, the development of trust and other key variables such as reciprocity is also dependent on the concept of interdependence (Lambe *et al.*, 2001; Cropanzano and Mitchell, 2005). As complete dependence or independence doesn't result in social exchange, interdependence is considered an important concept of social exchange theory (Molm, 1994).

The propositions of Thibaut and Kelley (1959) have been corroborated by a number of studies (Frazier and Summers, 1986; Frazier *et al.*, 1989; Anderson *et al.*, 1994; Lusch and Brown, 1996). Finally, the meta-analysis by Palmatier *et al.* (2006) has summarized the findings of the previous studies and demonstrated that dependence has positive effects on commitment, trust, relationship satisfaction and relationship quality.

3.4.3 Commitment-Trust Theory

Gundlach and Murphy (1993b, p. 41) explain that "the variable most universally accepted as a basis for any human interaction or exchange is trust - a faith or confidence that the other party will fulfil obligations set forth in an exchange". Although trust is the central dimension of social exchange theory (Blau, 1964; Cropanzano and Mitchell, 2005) and has been operationalized as a variable of transaction cost theory (Williamson, 1975), relational contracting theory (Macneil, 1980), equity theory (Leventhal, 1980), IMP theory (Håkansson, 1982) and resource-advantage theory (Shelby and Morgan, 1996; Hunt, 1997), it is the work of Morgan and Hunt (1994) that constitutes the most comprehensive empirical evaluation of the construct. Morgan and Hunt (1994) forward commitment-trust theory and argue that successful relationships require commitment and trust, which are the key mediating variables.

Commitment is the dimension, which differentiates between social and economic forms of exchange (Morgan and Hunt, 1994) or true and spurious relationships (Liljander and Roos, 2002). Indeed, one of the basic propositions of social exchange theory is that if parties abide by certain rules, "relationships evolve over time into trusting, loyal, and mutual commitments" (Cropanzano and Mitchell, 2005, p. 875). With a focus on social exchange theory, Morgan and Hunt (1994, p. 23) conceptualizes trust "as existing when one party has confidence in an exchange partner's reliability and integrity" and defines commitment as "as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely".

Trust and commitment have been linked to a number of other dimensions. The study by Morgan and Hunt (1994, p. 34) has identified the three antecedents of trust: (1) "maintaining high standards of corporate values and allying oneself with exchange partners having similar values" (shared values); (2) "communicating valuable information, including expectations, market intelligence, and evaluations of the partner's performance" (communication); and (3) "avoiding malevolently taking advantage of their exchange partners" (opportunism).

According to Morgan and Hunt (1994), trust is the antecedent of co-operation, functional conflict, uncertainty and, most importantly, commitment. Although trust appears to be the strongest antecedent of commitment, the other antecedents comprise relationship termination costs, shared values and relationship benefits. Finally, commitment has effects on acquiescence, co-operation and propensity to leave. Besides testing the direct relationships, the study by Morgan and Hunt (1994) has corroborated the hypothesis that trust and commitment are the key mediating variables.

Drawing on the commitment-trust theory (Morgan and Hunt, 1994), a number of studies has further investigated the key mediating role of the two dimensions. The study by Hennig-Thurau *et al.* (2002, p. 242) conceptualizes "satisfaction and commitment as mediators

between relational benefits and relationship marketing outcomes" and demonstrates that "the constructs of customer satisfaction, commitment, and trust as dimensions of relationship quality (with trust being also a type of relational benefit) influence customer loyalty, either directly or indirectly".

The work by Harris and Goode (2004) has corroborated the pivotal role of trust and demonstrated that it affects loyalty directly as well as indirectly through the mediating variable of satisfaction. As Harris and Goode (2004) conceptualizes loyalty (Oliver, 1999, p. 34) as "a deeply held *commitment to re-buy to re-patronize*...consistently in the future, despite situational influences and marketing efforts", the positive link between trust and loyalty encompass the effect on commitment.

Finally, the findings of the previous studies have been summarized by the meta-analysis of Palmatier *et al.* (2006, p. 138), which defines trust as "confidence in an exchange partner's reliability and integrity" and concludes that "generating relationship benefits, promoting customer dependency, and increasing similarity to customers are more effective strategies for increasing customer commitment than for building trust, whereas relationship investment and interaction frequency have the opposite effect" (ibid., p. 149). On the other hand, both trust and commitment appear to have effects on the five relationship outcomes: co-operation, word-of-mouth, expectation of continuity, customer loyalty and seller objective performance.

Moreover, as the study has demonstrated that that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has substantial effect on seller's objective performance, Palmatier *et al.* (2006) argue that that the construct should be conceptualized as a mediator of the classic model of relationship marketing suggested by Morgan and Hunt (1994).

Although some authors conclude that relationship quality is a higher-order construct comprising trust, commitment and satisfaction (Athanasopoulou, 2009; Holmlund, 2008), there is no consensus (Palmatier *et al.*, 2006). Indeed, Morgan and Hunt (1994) concur that

both trust and commitment reflects successful relationships while others argue that either commitment (Ganesan, 1994) or trust (Sirdeshmukh *et al.*, 2002) is the essential dimension. The controversy has been addressed by the study of Palmatier *et al.* (2006, p. 149), which has demonstrated "that objective performance is influenced most by relationship quality (a composite measure of relationship strength) and least by commitment, which supports a multidimensional perspective of relationships in which no single or "best" relational mediator can capture the full essence or depth of a customer–seller relationship".

3.4.4 Equity Theory

Exchange has been the central element of marketing for several decades (Bagozzi, 1974; Bagozzi, 1975). Indeed, marketing is "a social and managerial process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others" (Kotler *et al.*, 2008, p. 7). The essential element of marketing is equity (Oliver and Swan, 1989; Gundlach and Murphy, 1993b). Through building on and extending prior research in social psychology (Thibaut and Kelley, 1959; Homans, 1961; Blau, 1964), Adams (1963) forwards equity theory of social exchange and posits that inequity exists when the parties in the relationship have unequal ratios of inputs and outcomes. Adams (1966) further explains that in the presence of inequity, the participants will perceive distributive injustice and the party with the lower ratio will experience deprivation. Inequitable outcomes destroy confidence that exchange parties will not take advantage of each other (Gundlach and Murphy, 1993b; Wulf and Odekerken-Schröder, 2001). "Inputs" are synonymous with Homans' (1961) "investments" and refer to perceived contributions to the exchange with expected reciprocity (Adams, 1966). The two distinct characteristics of inputs and outputs are bilateral recognition and relevance (Adams, 1966), which depend on norms, values (Adams, 1963) and expectations (Varey, 2002). Hence, prediction of inequity is contingent upon understanding of culture (Adams, 1963).

Inequity results in tension (Miner, 2007), which is proportional to the magnitude of inequity (Goodman and Friedman, 1971). The greater the tension, the stronger is the motivation to achieve equity or eliminate inequity (Adams, 1966; Nelson and Quick, 2008). The consequences of inequity rests on cognitive dissonance theory (Festinger, 1957; Brehm and Cohen, 1962) and encompass several methods of inequity reduction relevant to marketing exchange (Huppertz *et al.*, 1978): altering of inputs, altering of outcomes, leaving the exchange and acting on other.

In summary, equity theory comprises both advantages and disadvantages. Wulf and Odekerken-Schröder (2001, p. 88) conclude that, contrary to social exchange theory, equity theory "explicitly recognizes the inherent inequality between exchange partners" thus it is "applicable to a broader range of commercial exchange situations". Nevertheless, equity theory doesn't assume that abilities and motivation pertinent to judgment of equity may differ across exchange partners (Wulf and Odekerken-Schröder, 2001). Indeed, individuals may have different preferences for equity (Nelson and Quick, 2008). Moreover, as equity has been conceptualized as a culture dependent concept (Adams, 1963), future research should address the relationship between perception of equity and culture.

3.4.5 Transaction-Cost Theory: Opportunism

Transaction cost theory rests on the three foundational premises: bounded rationality, opportunism, uncertainty and risk neutrality (Williamson, 1973; Williamson, 1996; Chiles and McMackin, 1996). According to Williamson (1973, p. 317) "bounded rationality refers to rate and storage limits on the capacities of individuals to receive, store, retrieve, and process information without error". As humans are limited in their cognitive abilities, "economic actors do not possess the wits necessary to write comprehensive contracts that account for all possible contingencies" (Chiles and McMackin, 1996, p. 89). Williamson (1996) contends that incomplete contracting is paired with opportunism, which refers to efforts to mislead, disguise, obfuscate and confuse. Morgan and Hunt (1994, p. 25) posit that "the essence of

opportunistic behaviour is deceit-oriented violation of implicit or explicit promises about one's appropriate or required role behaviour". According to the theory, disclosure of information can be selective and distortive (Williamson, 1996). Indeed, unequal spread of information is often coupled with opportunistic behaviour and commercially hazardous exchange (Wulf and Odekerken-Schröder, 2001). From a transaction-cost theory perspective, the aim of exchange governance is to minimize the direct and opportunity costs (Lambe *et al.*, 2001).

Williamson (1983) further clarifies that the two prerequisites of bounded rationality are uncertainty and complexity. The absence of the two conditions eliminates bounded rationality, contract incompleteness and the need to select the appropriate governance structure (Chiles and McMackin, 1996).

Williamson (1996) posits that transaction cost analysis involves an evaluation of the comparative costs encompassing planning, adapting, and monitoring task completion under different governance structures which can vary from arm's length spot-market governance to vertical integration (Varey, 2002). On one hand, the defining characteristic of spot-market governance is the absence of interaction continuity expectations (Heide and John, 1992). In this type of transactions "buyers set sellers against each other in order to achieve lower costs" (Varey, 2002, p. 24) thus "governance reduces to arm's-length bargaining over output, in the form of price and quantity" with no decision control over other party (Heide and John, 1992, p. 34). On the other hand, vertical integration allows to align objectives and internal systems of buyers and sellers (Varey, 2002). Vertical control and integration encompass control over decision making related to manufacturing, selection of suppliers and quality control procedures amongst others (Heide and John, 1992). In other words "the transaction is removed from the market and organized within the firm subject to an authority relation (vertical integration)" (Williamson, 1975, p. 250).

The selection of governance structure depends on (1) the frequency of transactions, (2) uncertainty and (3) asset specificity (Williamson, 1996). The latter dimension deserves special attention. Asset specificity relates to "the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive values" (Williamson, 1996, p. 59). In other words "asset specificity refers to the extent to which assets...are specialized to a specific transaction and can be used only at lower value in alternative applications" (Chiles and McMackin, 1996, p. 74).

The probability of opportunistic behaviour depends on the extent of asset specificity employed to maintain the exchange relationship, bounded rationality and uncertainty (Hill, 1990; Williamson, 1985). Although there are economic actors who don't behave opportunistically even in the presence of high asset specificity, identification of co-operative and trusting subjects is problematic due to bounded rationality and uncertainty, thus optimal level of safeguards depends on opportunistic behaviour probability and specific investments (Hill, 1990).

Selection of governance structure is based on transaction costs (Williamson, 1981) which are synonymous to "safeguards" costs (Hill, 1990) comprising information search, negotiating, contingency plans, bonding, monitoring and enforcement (Hill, 1990; Varey, 2002). If safeguard costs of hierarchy are substantially lower than those of hybrid and market, the exchange will take form of vertical integration (Chiles and McMackin, 1996).

Hill (1990, p. 511) hypothesizes that "over time the invisible hand of the market favours actors whose behavioural repertoires are biased toward cooperation, rather than opportunism". Hill (*ibid*., p. 500) further explains that opportunism, safeguards and hierarchical modes of governance dissipate quasi rent or "the excess above the returns necessary to maintain a resource in current operation". Hence, quasi rent can be only maximised if the relationship involves similar trusting and co-operating actors. Finally, Hill (1990, p. 507) warns that the market will remove "opportunistic actors even when the focal exchange is characterized by

substantial asset-specific investments and high switching costs". As every company is surrounded by a number of markets, opportunistic behaviour in one market may have consequences in other markets. Indeed, opportunism toward suppliers and lack of co-operation may increase safeguard costs and affect company's ability to compete successfully in the end market. While conventional transaction cost theory sees hierarchy as the equilibrium response to transactions comprising substantial specific asset investments, Hill (1990, p. 511) argues that "the equilibrium response is the emergence of a co-operative and trusting relationship".

Although the assumption of opportunism is central to transaction-cost theory (Stump and Heide, 1996; Dyer, 1997; Moschandreas, 1997; Williamson, 1979), it has been criticized by many scholars (Granovetter, 1985; Dwyer *et al.*, 1987; Larson, 1992; Ghoshal and Moran, 1996). For example, Chiles and McMackin (1996, p. 88) contend that "trust's role in constraining opportunistic behaviour allows parties to adopt less elaborate safeguards, thereby economizing on transaction costs and, in turn, altering the choice of governance structure" thus trust should be incorporated into transaction-costs theory.

Transaction cost theory is antithetical to the views of Macneil (1980) and Donaldson (1990, p. 377) who contends that managers are not opportunistic agents, but good stewards acting in the best interests thus "the desideratum of governance structure is to find an organizational structure that allows coordination to be achieved most effectively". Indeed, "even though guileful, self-interest maximization is axiomatic in transaction cost analysis, empirical research indicates that human behaviour may not be so Machiavellian after all, especially not behaviour in long-run relationships" (Morgan and Hunt, 1994, p. 25).

The propositions of transaction-cost theory have been empirically tested by several studies (Heide and John, 1992; Rokkan *et al.*, 2003). The study by Heide and John (1992, p. 32) demonstrates that "in the absence of supportive norms, it is not possible for parties whose specific assets are at risk to acquire vertical control as per the transaction cost prescription.

Instead, those parties lose control because of their dependence". Contrary to transaction-costs theory, investments in buyer specific assets have negative effect on buyer control.

According to Heide and John (1992), the extent of buyer control depends on the interaction of norms with specific assets. While transaction cost framework is preoccupied with "*the conditions* that motivate a firm to structure relationships", relationship norms "provide the ability to implement the desired structures" (Heide and John, 1992, p. 40). Hence, norms of solidarity, information exchange and flexibility play the key role in management of business relationships.

Although transaction-cost theory doesn't acknowledge the contribution of power-dependence theory (Pfeffer and Salancik, 1978; Williamson, 1981; Barney and Ouchi, 1986) stating that investments in specific assets create inter-firm dependence and thus prevents control, this proposition has been corroborated by the study of Heide and John (1992).

Rokkan *et al.* (2003, p. 221) forward several contradictions of transaction-costs theory. On one hand, specific investments may act as safeguards or bonds. On the other hand, specific investments are associated with substantial risk. As "these investments are partially sunk, they lock in the investor to a particular relationship. In turn, this permits the receiver to opportunistically expropriate part of their value" (Rokkan *et al.*, 2003, p. 221). Indeed, the study by Rokkan *et al.* (2003) indicates that specific investments result in opportunism on the receiver's part. Interestingly, norm of solidarity is a strong moderator of the relationship. Surprisingly, the interaction of specific investments and solidarity shifts the effect of specific investments from expropriation to bonding. Moreover, the study (Rokkan *et al.*, 2003) shows that future time horizon also mitigates the negative relationship of specific investments on opportunism. While relationship extendedness increases, the positive effect of specific investment on opportunism becomes negative.

In summary, there is evidence suggesting that relationship quality models should comprise opportunism along with trust (Chiles and McMackin, 1996; Morgan and Hunt,

1994) and other relationship norms (Heide and John, 1992; Rokkan *et al.*, 2003). It is the study of Morgan and Hunt (1994) which has incorporated opportunism in commitment-trust theory. Instead of treating managers as opportunistic agents as prescribed by transaction-cots theory, Morgan and Hunt (1994) posit that opportunism is rather an exception, which is the hindrance to the development of trusting and committed relationships. Opportunism appears to have great explanatory power. On one hand, opportunism is a strong negative antecedent of trust. On the other hand, trust appears to mediate the negative effects of opportunism on many relationship outcomes: commitment, acquiescence, propensity to leave, co-operation, functional conflict and uncertainty (Morgan and Hunt, 1994).

Nevertheless, further research should address the effects of other norms as well as the interrelationships among them (Rokkan *et al.*, 2003). Although the norm of solidarity comprises (1) treatment of problems as joint responsibilities, (2) commitment to improve mutual benefits and (3) not minding owing each other favours (Heide and John, 1992), the norm of reciprocity is much more comprehensive (Gouldner, 1960; Pervan *et al.*, 2009) thus it should be incorporated into relationship quality models (Palmatier *et al.*, 2006).

3.5 Concluding Remarks

Having reviewed the constructs most often employed in relationship marketing studies as well as the five theoretical bases of relationship marketing, it is evident that future research should address the following issues:

1. Despite a consensus that loyalty comprises both attitudinal and behavioural elements (Jacoby, 1971; Olson and Jacoby, 1971; Harris and Goode, 2004; Oliver, 2010), the majority of studies are limited to relationship continuity (see Table 3.2, p. 60). Consequently, future studies should conceptualize loyalty as a multi-dimensional construct and investigate its relationships with the other dimensions of relationship quality.

2. Although relationship quality is most often conceptualized as a second-order construct comprising trust, commitment and satisfaction, there is strong evidence that the

construct "should be adapted to include alternative mediated pathways" such as reciprocity (Palmatier *et al.*, 2006, p. 150). Indeed, reciprocity is very closely related to the concept of adaptation which is central to business-to-business industries (Håkansson, 1982; Ford *et al.*, 2003; Gummesson, 2008b) and is often present in the relationship marketing studies (see Table 3.2, p. 60). Drawing on the work of Hallén *et al.* (1991), Brennan *et al.* (2003, p. 1658) relate adaptations to reciprocity and contends that reciprocal adaptations is a part of trust-building process whereas unilateral adaptations is "a response to power imbalances within the relationship".

3. Despite the evidence that multi-faceted loyalty, commitment, adaptation, co-operation, communication, trust and opportunism are critical dimensions in the business-to-business context, at present there is no study which integrates all the dimensions and explains the relationships between them. Thus future studies should address this gap.

4. Håkansson (1982) contends that the social system affects the interaction process (see Figure 3.1, p. 45). Indeed, Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships". Relationship marketing encompasses three important dimensions of consumer experience: service expectations, service evaluations and reactions to service (Zhang *et al.*, 2008; Schumann, 2009a) which are affected by culture (Liu *et al.*, 2001; Patterson *et al.*, 2006; Patterson and Mattila, 2008; Zhang *et al.*, 2008; Schumann, 2009a). Indeed, there is evidence that both national and organizational cultures moderate the effect of relationship quality on repurchase intentions in the business-to-business setting (Hewett *et al.*, 2002; 2006). However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on ... relationship quality" (Athanasopoulou, 2009, p. 605).

CHAPTER 4

ORGANIZATIONAL CULTURE

4.1 Introduction

Having reviewed the concept of relationship quality in Chapter 3, the current chapter proceeds with organizational culture. Consequently, it is organized into three parts: *paradigms of organizational culture* (4.2), *conceptualizations of organizational culture* (4.3) and *dimensions of organizational culture* (4.4).

Firstly, five paradigms of organizational culture forwarded by Deshpande and Webster (1989) are discussed in order to identify their strengths, weaknesses and relevance to relationship marketing: (1) comparative management, (2) contingency management, (3) organizational cognition, (4) organizational symbolism and (5) structural / psychodynamic perspective.

Secondly, the discussion continues with *conceptualizations of organizational culture* (4.3). As the current study employs the Popperian philosophical stance (Popper, 1963), the conceptualizations of organizational culture are evaluated using two positivistic criteria: *falsifiability* and *utility*. Moreover, this section reviews three theoretical approaches to construction of cultural scales: *the emergent view*, *the cross-level view* and *the individual view* (Dansereau and Yammarino, 2006). The section ends with the justification for the employment of the *cross-level view* and *the GLOBE theory of culture* (Javidan *et al.*, 2004) in the current study.

Finally, having identified the most relevant paradigm and conceptualization of organizational culture, Chapter 4 reviews five dimensions of organizational culture: *individualism and collectivism*, *human orientation*, *power distance*, *assertiveness* and *uncertainty avoidance*.

4.2 Paradigms of Organizational Culture

Drawing on the seminal work of Smircich (1983), Deshpande and Webster (1989) define the research agenda for marketing and classify research on organizational culture into five paradigms: comparative management, contingency management, organization cognition,

organizational symbolism and structural / psychodynamic perspective (see Table 4.1). The first two perspectives regard organizational culture as a *variable* whereas the others treat it as a *metaphor*. In the *comparative managemen*t perspective, culture is viewed as an *exogenous variable*, "one that cannot be managed but rather must be accommodated" (*ibid.*, p. 4). In other words, culture is regarded as an independent variable which "is imported into the organization through the membership" and is reflected in "the patterns of attitudes and actions of individual organization members" (Smircich, 1983, p. 343). Consistent with the comparative management perspective, Hofstede (2001, p. 393) concurs that "organizational cultures are (1) holistic, (2) historically influenced, (3) *related to anthropological concepts*, (4) socially constructed, (5) soft and (6) *relatively stable – that is, difficult to change*". Indeed, the anthropological research tradition of organizational culture states that organizations **are cultures** whereas the sociological perspective claims that organizations **have cultures** (Smircich, 1983; Cameron and Quinn, 2006). Finally, Hofstede (2001) concludes that it is easier to achieve congruence between the strategy and culture by changing the former construct.

The *contingency management* paradigm of organizational culture originates from the contingency theory (Smircich, 1983; Deshpande and Webster, 1989) which stems from the works of Thompson (1967; 2003) and Donaldson (2001) amongst others. According to this paradigm, "strategic organizational contingencies affect organizational form, culture and practices and leader behaviors. Organizational contingencies (size, technology, environment) impose requirements that organizations must meet in order to perform effectively, compete, and survive. Organizational practices [culture] are largely directed toward meeting the requirements imposed on organizations by organizational contingencies" (House *et al.*, 2002, p. 9). In other words, "the central proposition of this theory is that there is a set of demands that are imposed on organizations that must be met for them to ensure survival and guarantee effectiveness" (House and Javidan, 2004, p. 26). Smircich (1983, p. 345) concurs that

organizational cultures can be adapted "to build organizational commitment, convey a philosophy of management, rationalize and legitimate activity, motivate personnel, and facilitate socialization".

As contemporary marketing rests on structural functionalism and the contingency theory of organizations, the contingency management perspective of organizational culture "is likely to be the most natural one for marketing scholars" (Deshpande and Webster, 1989, p. 10).

Table 4.1: Paradigms of Organizational Culture

Organizational Paradigm	Key Theoretical Features	Locus of Culture	Methodological Implications
1. Comparative management	Grounded in functionalism (Malinowski, 1961) and classical management theory (Barnard, 1938).	Exogenous variable.	Cross-sectional survey research.
2. Contingency management	Grounded in structural functionalism (Radcliffe-Brown, 1952) and contingency theory (Thompson, 1967).	Endogenous variable.	Cross-sectional survey research or ethnographic methods.
3. Organizational cognition	Grounded in ethnoscience (Goodenough, 1971) and cognitive organization theory (Weick, 1979).	Culture as metaphor for organizational knowledge systems.	Ethnographic or phenomenological research.
4. Organizational symbolism	Grounded in symbolic anthropology (Geertz, 1973) and symbolic organization theory (Dandridge *et al*., 1980).	Culture as metaphor for shared symbols and meanings.	Ethnographic or phenomenological research.
5. Structural/ psychodynamic perspective	Grounded in structuralism (Levi-Strauss, 1963) and transformational organizational theory (Turner, 1983).	Culture as metaphor for unconscious mind.	Ethnographic or historical research.

Source: adapted from Deshpande and Webster (1989, p. 7, 9).

Indeed, Gummesson (2008b, p. 14) posits that "marketing is a culture, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the

organization, its customers and other stakeholders". The definition harmonizes with the *contingency management* perspective stating that organizational culture must be adapted in order to meet contingencies and perform effectively. Indeed, "the development and management of a service culture is a critical task" because "a strong culture ... enables people to act in a certain manner and to respond to various actions in a consistent way" (Grönroos, 2000, p. 357). Consistent with Radcliffe-Brown's structural-functionalism, "culture functions as an adaptive-regulatory mechanism ... [which] unites individuals into social structures" (Smircich, 1983, p. 342).

The *organization cognition* paradigm regards organizational culture "as a metaphor for organizational knowledge systems with shared cognitions" (Deshpande and Webster, 1989, p. 11). It concentrates on managerial information processing and treats organizations as knowledge systems (Deshpandé *et al.*, 1993). According to Smircich (1983, p. 348), the essence of this perspective "is to determine what the rules are, to find out how the members of a culture see and describe their world" because "the human mind generates culture by means of a finite number of rules" (*ibid.*, p. 342). Indeed, it is vital to understand the rules "that guide behaviour - the shared cognitions, systems of values and beliefs, the unique ways in which organization members perceive and organize their world" (Deshpande and Webster, 1989, p. 7). Smircich (1983) posits that organizational culture can be treated as a "master contract" which emerges as a result of ongoing interpersonal interactions and becomes context for future interactions.

The organizational symbolism paradigm treats an organization as "a system of shared meanings and symbols, a pattern of symbolic discourse that provides a background against which organization members organize and interpret their experience, looking for clues as to what constitutes appropriate behaviour" (Deshpande and Webster, 1989, p. 7).

Finally, in *the structural / psychodynamic* perspective, "organizational forms and practices [culture] are understood as projections of unconscious processes and are analyzed

with reference to the dynamic interplay between out-of-awareness processes and their conscious manifestation" (Smircich, 1983). In other words, "the research goal is to discover structural patterns that link the unconscious human mind with overt manifestations in social arrangements" (Deshpande and Webster, 1989, p. 8).

Although "unholy war has been fought between proponents of a qualitative approach versus a quantitative approach to the study of organizational cultures", "much of the literature has consisted of qualitative case studies that neglect appropriate validation procedures, lacking objectivity and generalizability" (Hofstede, 2001, p. 393). Deshpande and Webster (1989) posit that both qualitative and quantitative methods should be employed to study organizational culture. Indeed, Hofstede (2001, p. 393) calls for "a combination of qualitative approach for depth and empathy with a quantitative approach for confirmation". Ashkanasy *et al.* (2000, p. 132) concurs "that there is a need for multilevel and multimethod conceptualization" of organizational culture. Finally, Deshpande and Webster (1989) conclude that the choice of research method should be based on the paradigm of organizational culture employed and the research topic under investigation (see Table 4.1). Consistent with the GLOBE model of culture and leadership (House *et al.*, 2002) and the ideas of contemporary relationship marketing (e.g., Gummesson, 2008b), *the current study draws on the contingency management perspective of organizational culture. Thus cross-sectional survey research will be employed in order to generalize and identify common patterns and themes.* Moreover, both the contingency management perspective and cross-sectional survey method are the most relevant to the research objective and aims discussed in Chapter 1.

4.3 Conceptualizations of Organizational Culture

Having reviewed the five paradigms of organizational culture, the discussion will proceed with conceptualizations of organizational culture. The current study employs the Popperian philosophical stance (Popper, 1963) thus conceptualizations of organizational culture are

evaluated using two positivistic criteria: *falsifiability* and *utility*. The former concept comprises *content* and *construct validity* whereas the latter is similar to *predictive validity* (Bacharach, 1989) defined as "the ability of a measure to effectively predict some subsequent and temporally ordered criteria" (Netemeyer *et al.*, 2003b, p. 86).

Having reviewed the relevant literature, the initial list comprised 18 conceptualizations of organizational culture spanning 31 years (1975 – 2006). Consistent with Ashkanasy *et al.* (2000), the majority of conceptualizations lack falsifiability and utility. Indeed, "the lack of theoretical basis for many of these instruments is further cause of concern on the part of cultural researchers and practitioners" (*ibid.*, p. 133). Hence, 13 conceptualizations of organizational culture were excluded from further analysis on the basis of insufficient falsifiability or utility. The excluded conceptualizations comprise 2 instruments measuring behaviour (Allen and Dyer, 1980; Kilmann and Saxton, 1983), 5 typing questionnaires (Harrison, 1975; Handy, 1979; Margerison, 1979; Glaser, 1983; Lessem, 1990), 3 studies measuring effectiveness (Harris and Moran, 1989; Sashkin and Fulmer, 1985; Woodcock and Francis, 1989), a descriptive questionnaire (Migliore *et al.*, 1992) and an instrument measuring cultural fit (Enz, 1986). Having excluded the studies lacking falsifiability and utility, the five remaining conceptualizations (see Table 4.2) will be discussed in more detail.

The organizational culture inventory (Cooke and Lafferty, 1983; 1986) comprises 12 dimensions "that describe the thinking and behavioral styles that might be implicitly or explicitly required for people to "fit in" and "meet expectations" in organization or organizational subunit" (Cooke and Szumal, 2000, p. 148).

The 12 behavioural norms form a three-factor structure: **(1)** *constructive culture* (achievement, self-actualizing, humanistic-encouraging, affiliative), **(2)** *passive / defensive culture* (approval, conventional, dependent, avoidance) and **(3)** *aggressive / defensive* culture (oppositional, power, competitive, perfectionistic).

Table 4.2: Conceptualizations of Organizational Culture

Source	Definition of Organizational Culture	Theoretical Approach to Scale Construction	Content Validity	Concurrent Validity	Predictive Validity	Reliability
Cooke and Lafferty (1983; 1986)	Organizational culture is "the ways of thinking, behaving, and believing that members of a social unit have in common" (Cooke and Rousseau, 1988, p. 248).	The emergent approach	No	Yes	No	Yes
O'Reilly *et al.* (1991)	No explicit definition. However, O'Reilly *et al.* (1991, p. 491) posit that "researchers have agreed that culture can be thought of as a set of cognitions shared by members of a social unit".	The individual approach	Yes	Yes	Yes	Yes
Hofstede (2001, p. 391)	"Organizational cultures are the collective programming of the mind that distinguishes the members of one organization from another".	The emergent approach	Yes	Yes	No	Yes
House and Javidan (2004, p. 16)	"[Organizational] culture is operationally defined by the use of indicators reflecting two distinct kinds of cultural manifestations: (a) the commonality (agreement) among members of collectives with respect to the psychological attributes [**values**]; and (b) the commonality of observed and reported **practices** of entities such as … work organizations".	The cross-level approach	Yes	Yes	Yes	Yes
Cameron and Quinn (2006, p. 17)	"An organization's culture is reflected by what is valued, the dominant leadership styles, the language and symbols, the procedures and routines, and the definitions of success that make an organization unique".	The emergent approach	No	Yes	Yes	Yes

According to Cooke and Szumal (2000, p. 148) "constructive cultures ... encourage members to interact with *people* and approach *tasks* in ways that will help them to meet their higher-order *satisfaction* needs. Passive/Defensive cultures ... encourage or implicitly require members to interact with people in ways that will not threaten their own personal *security*. Aggressive/Defensive cultures ... encourage or drive members to approach *tasks* in forceful ways to protect their status and security".

Although Cooke and Rousseau (1988) claim that the instrument is based on "the interpersonal personality system proposed by Leary (1957)" as well as research on personality, human needs (e.g. Maslow, 1954) and leadership styles, the authors do not provide convincing evidence for content validity. Moreover, analysis of convergent and discriminant validity is absent as well. Finally, concurrent validity is supported by substantial correlations between the 12 dimensions and 7 types of variables: structure, systems (e.g. human resource, accounting, quality control systems etc.), technology, skills / qualities, individual outcomes, group outcomes and organizational outcomes.

O'Reilly *et al.* (1991, p. 491) forward the organizational culture profile (OCP) instrument which rests "on the idea that organizations have cultures that are more or less attractive to certain types of individuals". The instrument comprises "a set of value statements that can be used to idiographically assess both the extent to which certain values characterize a target organization and an individual's preference for that particular configuration of values" (*ibid.*, p. 494). In other words, the instrument measures person-organization fit across 8 dimensions: (1) innovation and risk taking, (2) attention to detail, (3) orientation toward outcomes or results, (4) aggressiveness and competitiveness, (5) supportiveness, (6) emphasis on growth and rewards, (7) a collaborative and team orientation and (8) decisiveness.

According to Ashkanasy *et al.* (2000), the organizational culture profile demonstrates reliability as well as content and concurrent validity. Indeed, the initial pool comprised 110 items "developed on the basis of an extensive review of academic and practitioner-oriented

writings on organizational values and culture" (O'Reilly *et al.*, 1991, p. 495). Moreover, the instrument demonstrates concurrent validity which is evidenced by "the emergence of distinctive preferences for different organizational cultures among respondents with characteristically different personality attributes" (*ibid*., p. 502). Indeed, substantial correlations between the 8 dimensions of the organizational culture profile (OCP) and the adjective check list (Gough and Heilbrun, 1980) testify to concurrent validity. For example, "individuals with high needs for achievement show a significant preference for aggressive, outcome-oriented cultures" whereas "respondents with high needs for autonomy show a preference for innovative cultures and negativity toward those characterized by an emphasis on supportiveness and teamwork" (O'Reilly *et al.*, 1991, p. 502). Finally, the study demonstrates that person-organization fit predicts important organizational outcomes: job satisfaction, normative commitment and employee turnover.

Contrary to the GLOBE theory, Hofstede (2001, p. 391) contends that "*organizational* cultures are entirely distinct from *national* cultures". The former distinguishes "organizations while holding their national environments constant" whereas the latter distinguishes "nations while holding organizational contexts constant" (*ibid.*, p. 391). Hence, organizational culture comprises a different set of dimensions. On one hand, practices encompass six factors: (1) *process oriented versus results oriented*, (2) *employee oriented versus job oriented*, (3) *parochial versus professional*, (4) *open system versus closed system*, (5) *loose control versus tight control* and (6) *normative versus pragmatic*. On the other hand, values consist of three dimensions: (1) *need for security*, (2) *work centrality* and (3) *need for authority*.

The study of Hofstede (2001) demonstrates content validity. Indeed, the instrument rests on extensive qualitative research as well as "survey of the literature on the ways in which organizational cultures are supposed to manifest themselves" (Hofstede, 2001, p. 395). Moreover, the study provides evidence for concurrent validity which is supported by strong correlations of the practice dimensions and structural data: measures of size, measures of

structure, control system, time budget of top manager, profile of top five managers, profile of employees etc. Despite the sound evidence for content and concurrent validity, predictive validity of the instrument remains unclear.

The seminal GLOBE study (Javidan *et al.*, 2004, p. 29) conceptualizes culture "in terms of nine cultural attributes that, when quantified, are referred to as dimensions": *power distance, uncertainty avoidance, human orientation, institutional collectivism, in-group collectivism, assertiveness, gender egalitarianism, future orientation* and *performance orientation* (see Table 4.3)

The items have "isomorphic structures across the levels of analysis (societal and organizational) and across the two culture manifestations [practices and values]" (House and Javidan, 2004, p. 21). Namely, each item has four forms: "organization and society practices (questions with *AS IS* response format) and organizational and societal values (questions with *SHOULD BE* response format)" (*ibid.*, p. 21). Indeed, Hofstede (2001) concurs that organizational culture comprises both values and practices. However, he argues that practices generate "much wider ranges of answers" across organizations whereas values create more variance across countries (*ibid.*, p. 396).

Contrary to the study of Hofstede (2001), the GLOBE theory of culture is based on the *theory-driven* approach. In other words, the constructs measured by the scales were specified before the scales were developed (Hanges and Dickson, 2004). Having identified the seven cultural dimensions (see Table 4.3), "a total of 371 culture items ... were derived through interviews and focus groups held in several countries" (*ibid.*, p. 124). Most importantly, the GLOBE study provides evidence for multisource construct validity.

Concurrent validity was tested examining correlations between the GLOBE societal-level practice scales and unobtrusive measures which refer "to data collected in a way that avoids obtrusive interaction between the investigator and the subjects being studied" (Gupta *et al.*, 2004, p. 153). Interestingly, the societal-level practice scales of culture demonstrate the

agreement or convergent validity with the unobtrusive measures developed on the basis of the Culturgrams characterizing various countries of the world. Thus, "the ... scales do indeed capture information that goes beyond the literal interpretation of the ... practices measures" (*ibid.*, p. 160).

The societal-level scales demonstrate convergence with the scales identified by Hofstede (2001). Indeed, many, but not all correlations are significant (see Table 4.4). However, Hanges and Dickson (2004, p. 141) clarify that "the ... scales measure these two aspects of culture separately and, as shown in the correlations with Hofstede's measures , the patterns of relationships differ depending upon which aspect of culture was being measured".

Although multi-source construct validity was examined at the society-level, Hanges and Dickson (2004) indicate that the scales posses the identical structure as well as adequate reliabilities at the organizational level of analysis. Moreover, "societal-level differences have a substantial impact on the cultural practices of organizations" and explain from 21% (*in-group collectivism*) to 47% (*future orientation*) of the amount of variance in the latter construct (Brodbeck *et al.*, 2004). Finally, the GLOBE study demonstrates that organizational culture has effect on the dimensions of the culturally endorsed implicit leadership theory thus testifying for predictive validity (Dorfman *et al.*, 2004). Namely, it affects six dimensions of leadership: charismatic / value based leadership, team-oriented leadership, participative leadership, human-oriented leadership, autonomous leadership and self-protective leadership.

The landmark study of Cameron and Quinn (2006) classifies organizational culture into four types: *hierarchy, clan, adhocracy* and *market*. According to Cameron and Quinn (2006, p. 37), *the hierarchy culture* rests on the seven classical attributes of bureaucracy forwarded by Max Weber: "rules, specialisation, meritocracy, hierarchy, separate ownership, impersonality and accountability". In this type or organization, place of work is very structured and formalized while governance is based on procedures: "formal rules and policies hold the organization together" *(ibid.*, p. 38).

Table 4.3: Culture Construct Definitions

Power Distance: The degree to which members of a collective expect power to be distributed equally.
Uncertainty Avoidance: The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.
Human Orientation: The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.
Collectivism I (Institutional Collectivism): The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.
Collectivism II (In-Group Collectivism): The degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.
Assertiveness: The degree to which individuals are assertive, confrontational, and aggressive in their relationships with others.
Gender Egalitarianism: The degree to which a collective minimizes gender inequality.
Future Orientation: The extent to which individuals engage in future-oriented behaviors such as delaying gratification, planning, and investing in the future.
Performance Orientation: The degree to which a collective encourages and rewards group members for performance improvement and excellence.

Source: adapted from Javidan *et al.* (2004, p. 30)

Table 4.4: Convergent Validity Coefficients between GLOBE Scales and Hofstede Scales

GLOBE Scales		Hofstede Scales
		Power Distance
Power Distance	Practices (As is)	.61[**]
	Values (Should be)	-.03
		Uncertainty Avoidance
Uncertainty Avoidance	Practices (As is)	-.61[**]
	Values (Should be)	.32[**]
		Individualism
Institutional Collectivism	Practices (As is)	.15
	Values (Should be)	-.55[**]
In-Group Collectivism	Practices (As is)	-.82[**]
	Values (Should be)	-.20
		Masculinity
Gender Egalitarianism	Practices (As is)	-.16
	Values (Should be)	.11
Assertiveness	Practices (As is)	.42[**]
	Values (Should be)	-.12

Source: adapted from Hanges and Dickson (2004, p. 140)

Stability, predictability, and efficiency are important long-term qualities of this type organization. Moreover, abilities to organize and coordinate are important qualities of leaders (*ibid.*, p. 38).

The clan culture is similar to family-type organizations, which look "more like extended families than economic entities" (Cameron and Quinn, 2006, p. 41). Important characteristics of clan culture comprise "common values and goals, cohesion, participativeness, individuality and a sense of we-ness" (*ibid*., p 41). The value drivers of the clan culture encompass commitment, communication and development. The governance is based on "teamwork, employee involvement programmes, and corporate commitment to employees" (*ibid*., p. 41). The hallmark characteristics of successful clans are: (1) minimal management levels, (2) informality and self-management, (3) employee ownership, (4) work teams, (5) participation and (6) job rotation.

The adhocracy culture "emphasizes values of entrepreneurship, creativity, and adaptability. Flexibility and tolerance are important beliefs and effectiveness is defined in terms of finding new markets and new directions for growth" (Deshpandé *et al.*, 1993, p. 26). According to Cameron and Quinn (2006, p. 43), "a major goal of an adhocracy is to foster adaptability, flexibility, and creativity where uncertainty, ambiguity, and information overload is typical". The value drivers of the adhocracy culture encompass innovative outputs, transformation and agility (*ibid.*, p. 46). Organizations of this type try to encourage entrepreneurship creativity and flexibility, because they develop innovative and pioneering cutting-edge products and services. Finally, profitability and acquiring of new resources are adaptation and innovation-driven.

According to Cameron and Quinn (2006, p. 39), primary objectives of *the market culture* comprise: "profitability, bottom-line results, strength in market niches, stretch targets, and secure customer bases". The markets treat the external environment as hostile while consumers are regarded as demanding. Hence, competitiveness and productivity are the core

values of the markets. Indeed, "the key measure of organizational effectiveness is productivity achieved through [the] market mechanisms" (Deshpandé *et al.*, 1993, p. 26).

Cameron and Quinn (2006, p. 151) posit that "six content dimensions serve as the basis for" the organizational culture assessment instrument:

1. "The dominant characteristics of the organization or what the overall organization is like";

2. "The leadership style and approach that permeate the organization";

3. "The management of employees or the style that characterizes how employees are treated and what the working environment is like".

4. "The organizational glue or bonding mechanisms that hold the organization together";

5. "The strategic emphases that define what areas of emphasis drive the organization's strategy";

6. "The criteria of success that determine how victory is defined and what gets rewarded and celebrated".

Instead of providing strong evidence of content validity, Cameron and Quinn (2006, p. 150) argue "that most individuals have a similar kind of framework for making sense of the world around them. This framework is called a psychological archetype, and it refers to the categories people form in their minds to organize the information they encounter". In other words, individuals interpret cultural information "in the context of their underlying archetypes" (Deshpandé *et al.*, 1993, p. 25).

Cameron and Quinn (2006, p. 156) claim that "evidence for the [predictive] validity of the culture instrument was uncovered when the culture type was matched with the domain of effectiveness in which the organization excelled and by the type of decision making, structure, and strategy employed". However, the authors neither provide support for this contention nor specify the statistical technique. Similarly, they try to defend concurrent validity explaining

that the other instrument was employed to assess "the same cultural dimensions using a different response scale" (*ibid.*, p. 157). Nevertheless, the problem of predictive validity was address by Deshpandé *et al.* (1993; 2004). The study demonstrates that "business performance is ranked from highest to lowest according to type of organizational culture as follows": *market* culture, adhocracy culture, clan culture and hierarchy culture (Deshpandé *et al.*, 1993). Moreover, the competing values framework, along with climate, market orientation and innovativeness, explains from 14% (Deshpandé and Farley, 2003) to 20% (Deshpandé *et al.*, 2000) of the variance in business performance.

Dansereau and Yammarino (2006) explain that the theoretical approaches to constructing cultural scales can be classified into three categories: *the emergent view*, *the cross-level view* and *the individual view*. *The emergent view* originates from the work of Glick (1985) who explains that some constructs emerge only at aggregated levels (e.g. organizational or societal culture) and are not present at a lower level of analysis (e.g. individuals).

The second approach to designing cultural scales is *the cross-level* (Dansereau and Yammarino, 2006) or *pan-cultural* (Leung and Bond, 1989) *view*, which originates from the work of Schneider (1987). Peterson and Castro (2006) posit that using this approach, measures are constructed at the individual level of analysis using respondents from a variety of organizations and departments.

Finally, the *individual view* originates from the work of James *et al.* (1984). According to this view "individual's perceptions may simply reflect the individual-level personality differences among people rather than culture" (Dansereau and Yammarino, 2006, p. 539) therefore constructs and relationships must be analysed at the individual, but not an aggregate level of analysis.

Although House and Hanges (2004) claim that the GLOBE theory of culture adopts the convergent-emergent approach, Peterson and Castro (2006) argue that the study, in fact,

demonstrates the cross-level logic and does not provide sufficient evidence for the convergent-emergent method. As level of analysis has been a critical issue in the organizational and cross-cultural literature (Hofstede, 1980; Hofstede, 2006; Javidan *et al.*, 2006; Smith, 2006), it is discussed in more detail in section 6.6 (Level of Analysis).

As was stated previously, the current study adopts the definition of marketing suggested by Gummesson (2008b, p. 14) who posits that "*marketing is a culture*, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders". Moreover, the notions of full-time and part-time marketing make "legitimate and imperative for everyone to influence customer relationships" (*ibid.*, p. 77). Indeed, "attracting employees with the potential to be part-time marketers, developing their marketing skills and knowledge, and building an organizational climate for marketing" are at the core of relationship marketing (Berry, 1995, p. 241). Owing to the importance of part-time marketing, the cross-level approach to study of organizational culture is deemed the most appropriate therefore the GLOBE theory of culture is relevant to relationship marketing and will be employed to conceptualize and test the effects of organizational culture on relationship quality in the current study.

4.4 Dimensions of Organizational Culture

Having selected the paradigm and conceptualization of organizational culture to be employed in the current study, section 4.4 reviews the five dimensions of organizational culture which are the most relevant to the concept of relationship quality. Namely, the review comprises *individualism and collectivism, human orientation, power distance, assertiveness* and *uncertainty avoidance*.

4.4.1 Individualism and Collectivism

Although conceptualisations of individualism and collectivism differ across studies (Schwartz, 1994b; Triandis, 1995a; Hofstede, 2001), "they all relate to a theme that contrasts

the extent to which people are autonomous individuals or embedded in their groups" (Gelfand *et al.*, 2004, p. 440). Hofstede (1980, p. 51) explains that "individualism pertains to societies in which the ties between individuals are loose" while collectivism refers "to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty".

Schwartz (1994b) posits that individualism and collectivism encompasses the following aspects:

1. *Relationships between individuals and groups.* Members of collectivistic societies are embedded in their groups which are based on close-knit harmonious relations whereas individualistic cultures are characterized by autonomy of individuals entitled to achieve personal interests and desires.

2. *Assurance of responsible social behaviour.* Collectivism is based on fostering motivation to consider welfare of other individuals and emphasizes egalitarianism instead of hierarchy. Individualistic cultures possess the opposite properties.

3. *The relationships between humankind and the natural and social world.* Collectivism focuses on harmony with the natural and social world while individualism is based on exploitation and mastery.

Individualism and collectivism can take many different forms thus the dimension should not be viewed as a pure dichotomy (Triandis, 1995a; Chen *et al.*, 1998), but rather as continuity (Morris *et al.*, 1994). Nevertheless, the construct comprises "four universal dimensions" (Triandis, 1995a, p. 43):

1. *The definition of the self.* Triandis (1995a, p. 43) explains that "the definition of the self is interdependent in collectivism and independent in individualism". This is manifested in sharing of resources and conformity to the norms of the group.

2. *The structure of goals.* The defining characteristic of collectivism is the compatibility of personal goals with communal goals.

3. *The antecedents of social behaviour.* On one hand, norms, obligations and duties guide social behaviour in collectivistic cultures. On the other hand, the antecedents of social behaviour in individualistic cultures are attitudes, personal needs, rights and contracts.

4. *Importance of relationships.* Relationships are important in collectivistic cultures even if they are disadvantageous. In contrast, the maintenance of relationships in individualistic cultures is based on rational analyses of the advantages and disadvantages.

Although individualism and collectivism is under-researched empirically at the organizational level (Gelfand *et al.*, 2004), a number of studies (Earley, 1989; Kanungo and Jaeger, 1990; Chatman and Barsade, 1995; Gelfand *et al.*, 2004) demonstrate that the dimension is relevant to this level of analysis. Indeed, "the level of individualism and collectivism in society will also affect the types of persons who will be admitted into positions of special influence in organizations" (Hofstede, 2001, p. 213). Drawing on the four universal features identified by Triandis (1995a), Gelfand *et al.* (2004) forward the key differences between individualistic and collectivistic organizational cultures. The members of individualistic cultures possess the following characteristics: (1) independence, (2) stress on unique skills and abilities instead of relationships and social background, (3) calculative needs and goals and (4) attitude driven organizational behaviour. In contrast, the employees of collectivistic cultures are characterized by: (1) interdependence, (2) the consistency between organization and individual's self-identity, (3) stress on relationships, duties and obligations and (4) priority of communal goals and desires. Finally, Gelfand *et al.* (2004, p. 447) conclude that the employees of collectivistic organizational cultures "would view the nature of their relationship with the organization as one that is less a matter of rational exchanges and more a matter of long-term relational exchanges".

Indeed, Chatman *et al.* (1998, p. 751) posit that individualistic organizational cultures focus on unique abilities which differentiate one person from another and "reward achievements that can be attributed to a particular person". In contract, collectivistic

organizational cultures are characterized by shared objectives, interchangeable interests and commonalties among members. Chatman *et al.* (1998, p. 751) argue that "members of collectivistic cultures are more likely … to agree about what constitutes correct action, behave according to the norms of the culture, and suffer or offer severe criticism for even slight deviations from norms".

Hofstede (2001) forwards two dimensions of organizational culture relevant to individualism and collectivism: (1) *employee orientation versus job orientation* and (2) *parochialism versus professionalism*. Employee oriented organizational cultures are characterized by taking into account personal problems, responsibility for employee welfare and making important decisions by groups or committees instead of individuals. In contrast, job oriented organizational cultures focus on "a strong pressure for getting the job done", interests in the work employees do and ignorance of personal and family welfare (Hofstede, 2001, p. 399).

Employee orientation versus job orientation identified by Hofstede (2001) is consistent with the management grid suggested by Blake and Mouton (1964), which comprises two axes: *concern for people* and *concert for production*. Although combinations of the two axes can result in several management styles, Blake and Mouton (1964, p. 10) warn that "adequate organization performance is possible through balancing the necessity to get out work with maintaining morale of people at a satisfactory level".

Cameron and Quinn (2006, 2011) classify organizational cultures into four types: *market, hierarchy, adhocracy* and *clan*. Although the *clan* culture has not been labelled as individualistic versus collectivistic, the two dimensions clearly overlap. Cameron and Quinn (2006) explain that important characteristics of the clan culture encompass common values and goals, cohesion, participativeness, individuality and we-ness sense. The governance of the clans is based on teamwork, employee involvement programmes, and corporate commitment to employees. Teams have semi-autonomy and the right to hire and fire team members.

Reward systems are not individual, but team-based. The clan type organizations manage environment by teamwork and employee development. Moreover, customers are treated as partners. The development of human work environment is very important and rests on empowerment, participation, commitment and loyalty. The hallmark characteristics of successful clans comprise minimal management levels, informality and self-management, employee ownership, work teams, participation and job rotation. The clan leaders are like mentors or parent figures. Commitment and Loyalty are the qualities that help the clan to stay as a unity. The other important characteristics encompass long-term benefit of individual development, high unity and morale. Finally, good internal climate is defined as success.

The GLOBE theory (Javidan *et al.*, 2004) distinguishes between two types of collectivism: *institutional collectivism* and *in-group collectivism.* The former dimension is defined as "the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action" while the latter refers to "the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families" (Javidan *et al.*, 2004, p. 30). As the culture construct comprises both practices and values (Hofstede, 2001), the GLOBE theory ensures coverage of the content domain and measures organizational culture at the two levels. The indicators assessing the *cultural practices* focus informants' attention on *how things are* while the items measuring the *cultural values* concentrate respondents' mind on *how things should be* (Hanges and Dickson, 2004). Although Gelfand *et al.* (2004) explain that individualism and collectivism have effects on numerous facets of organizational life (see Table 4.5), the most important implications encompass human resource management practices, employee motivation, co-operation, reciprocity, form of contracts and trust. Individualistic organizational cultures are characterized by transactional or calculative relationships. Indeed, "the relationship between employer and employee is primarily conceived as a business

transaction, a calculative relationship between actors on a labour market" (Hofstede, 2001, p.

237).

Table 4.5: Collectivistic versus Individualistic Organizational Cultures

Organizations That Score High on Collectivism	Organizations That Score High on Individualism
Members assume that they are highly interdependent with the organization and believe it is important to make personal sacrifices to fulfil their organizational obligations.	Members assume that they are independent of organization and believe it is important to bring their unique skills and abilities to the organisation.
Employees tend to develop long-term relationship with employers from recruitment to retirement.	Employees develop short-term relationship and change companies at their own discretion.
Organizations take responsibility for employee welfare.	Organizations are primarily interested in the work that employees perform and not their personal and family welfare.
Important decisions tend to be made by groups.	Important decisions tend to be made by individuals.
Selection can focus on relational attributes of employees.	Selection focuses primarily on employees' knowledge, skills and abilities.
Jobs are designed in groups to maximise the social and technical aspects of the job.	Jobs are designed individually to maximise autonomy.
Training is emphasized more than selection.	Selection is emphasized more than training.
Compensation and promotion are based on what is equitable for the group and on considerations of seniority and personal needs.	Compensation and promotion is based on the equity model, in which an individual is rewarded in direct relationship to his or her contribution to task success.
Motivation is socially oriented and is based on the need to fulfil duties and obligations and to contribute to the group.	Motivation is individually oriented and is based on individual interests, needs, and capacities.
Organizational commitment is based on expectations of loyalty and in-group attitudes.	Organizational commitment is based on individuals' rational calculations of costs and benefits.
Prosocial behaviours, or organizational citizenship behaviours, are more common.	Prosocial behaviours and organizational citizenship behaviours are less common.
Avoidant, obliging, compromising, and accommodating conflict resolution tactics are preferred.	Direct and solution-oriented conflict resolution tactics are preferred.
Accountability for organizational success and failures rests with groups.	Accountability for organizational success and failures rests with individuals.

Source: adapted from Gelfand *et al.* (2004, p. 459)

Human resource management in collectivistic organizational cultures focuses not on rational exchanges, but on long-term relationship commitments which guide future behaviour (Gelfand *et al.*, 2004). Moreover, an employer hires not an individual, but a person who belongs to a group (Hofstede, 2001).

Motivation of social behaviour in collectivistic cultures is based on duties, obligations and the need to contribute to the group (Kashima and Callan, 1994; Miller, 1994; Singelis *et al.*, 1995). Indeed, collectivism is characterized by higher morality while individualism is related to calculative values (Etzioni, 1975).

According to Gelfand *et al.* (2004, p. 457) "it is likely that transactional contracts, which are characterized by short time frames and specific obligations, are more prevalent in individualistic cultures, whereas relational contracts, which are characterized by long-term relationships with diffuse obligations, are more prevalent in collectivistic cultures". Indeed, Thomas *et al.* (2003) hypothesize that the formation of relational contract depends on collectivistic values.

Hofstede (2001) contends that trust is the key prerequisite of business relationships in collectivistic cultures. Through a trust-based "relationship, both parties adopt the other into their in-groups and from that moment onward both are entitled to preferential treatment" (*ibid.* p. 239). Moreover, the relationship is established between persons rather than companies. Hence, "to the collectivistic mind, only natural persons are worthy of trust, and via these persons their friends and colleagues, but not impersonal legal entities like companies" (*ibid.* p. 239). The personal relationships take priority over the company and task thus they should be established first. Indeed, Hennig-Thurau *et al.* (2004) hypothesize that the relationship between confidence benefits and loyalty should be stronger in collectivistic cultures.

There is a consensus that collectivistic cultures are more co-operative than individualistic (Mead, 1976; Triandis, 1990; Cox *et al.*, 1991; Eby and Dobbins, 1997). Chen

et al. (1998, p. 290) argue that collectivism "regards the pursuit of group goals and values. Here, competence is the ability to pursue strategies that contribute to the realization of the collective goals; individual goals are aligned with, channelled into, or restrained for the achievement of collective objectives". Moreover, the expressive motives of collectivists are characterized by "self-discipline, self-restraint, self-sacrifice, loyalty, solidarity, and sociality" (*ibid.*, p. 291).

In contrast, "individual rationality dictates doing what is in one's own best interests. Competence refers to the extent to which actors are capable of engaging in activities that cause them to realize their self-interest goals" (*ibid.*, p. 290). Moreover, "the expressive motives of individualists center around actualizing the true or potential self" which is characterized by "individuality, autonomy, agency, independence, self-direction, self-reliance, self-fulfilment, self-actualization and so on" (*ibid.*, p. 290).

Indeed, the study by Wagner (1995, p. 167) demonstrates that "individualists who feel independent and self-reliant are less apt to engage in cooperative behaviour, and collectivists who feel interdependent and reliant on groups are more likely to behave cooperatively". Mintu-Wimsatt and Madjourova-Davri (2011) concur that collectivism has positive effect on co-operative problem solving.

Finally, Triandis (1995a) argues that individualistic organizational cultures demonstrate "less time perspective and less reciprocity of action". Moreover, members of individualistic cultures do not identify with the group to a great extent and treat relationships as transitory. In contrast, members of collectivistic cultures "show much reciprocity and are less likely to maximize individual gains by taking advantage of other group members" (*ibid*., p. 58). Indeed, the study by Moorman and Blakely (1995) has corroborated the positive effects of collectivistic values and norms on interpersonal helping. Ting-Toomey (1986) concurs that reciprocity appears to be obligatory in collectivistic cultures.

Although collectivism is praised for the focus on high morality, trusting relationships and other virtues, the qualities of this culture may be limited to in-groups (Doney *et al.*, 1998; Yamagishi *et al.*, 1998; Gómez *et al.*, 2000; Huff and Kelley, 2003). Indeed, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders", whereas individualistic cultures "tend to distinguish less sharply between in-groups and out-groups when responding to their needs" (Schwartz, 1992).

In summary, there is theoretical evidence that the dimensions of relationship quality as well as the causal relationships between them may depend on individualism and collectivism. However, the link is clearly under-researched. Hence, the current study will address this gap.

4.4.2 Human Orientation

Drawing on the work of Triandis (1995a), Kabasakal and Bodur (2004, p. 565) posit that "values of altruism, benevolence, kindness, love and generosity are salient as motivating factors guiding people's behaviour in societies characterized by high human orientation. In these societies, the need for belongingness and affiliation, rather than self-fulfilment, pleasure, material possessions, and power, are likely to be the dominant motivating bases".

The landmark study by Schwartz (1992) forwards ten distinct value types and classifies them into two dimensions: *openness to change* versus *conservation* and *self-enhancement* versus *self-transcendence*. Although Kabasakal and Bodur (2004) relate *self-transcendence* to human orientation, there are some controversies, which require further discussion.

Schwartz (1992) explains that *self-enhancement* is characterized by *power*, *achievement* and *hedonism* while *self-transcendence* comprises *benevolence* and *universalism*. The concept of *benevolence* rests on "the need for positive interaction in order to promote the flourishing of groups" and fosters "preservation and enhancement of the welfare of people with whom one is in frequent personal contact" (Schwartz, 1992, p. 11). In other words, benevolence "focuses on concern for the welfare of close others in everyday interaction" (*ibid.*, p. 11).

Hence, the focus of benevolence values is narrower. The values of benevolence comprise helpfulness, honesty, forgiving, loyalty, responsibility, a spiritual life, true friendship, mature love and meaning in life.

In contrast, the motivational goal of *universalism* is based on "those survival needs of groups and individuals that become apparent when people come into contact with those outside the extended primary group and become aware of the scarcity of natural resources. People may then realize that failure to accept others who are different and treat them justly will lead to life-threatening strife, and failure to protect the natural environment will lead to the destruction of the resources on which life depends" (Schwartz, 1992, p. 12). Individuals from cultures high on human orientation attach great importance on equal treatment of every person and strive to achieve justice for everybody including strangers (Schwartz *et al.*, 2001). The values of universalism encompass social justice, equality, inner harmony, broad-mindedness, wisdom, protecting environment, a world at peace, unity with nature and a world of beauty (Schwartz, 1992).

The study by Bigoness and Blakely (1996) concur with the findings of Schwartz (1992) and forwards the two dimensions identical to *benevolence* and *universalism*. The first dimension comprises the five instrumental values (cheerful, forgiving, helpful, and loving) and corresponds to b*enevolence* while the second factor encompasses the three items (broadminded, capable, and courageous) and is similar to *universalism*.

Although Kabasakal and Bodur (2004, p. 565) argue that both *benevolence* and *universalism* "strongly connote human orientation", a number of studies indicate that the former dimension belongs rather to collectivism (Triandis *et al.*, 1990; Schwartz, 1992; Hofstede, 2001). Indeed, Schwartz (1992, p. 39) hypothesizes that individualism is correlated with "universalism but not necessarily to benevolence" while collectivism is related to "benevolence, but not necessarily to universalism". Moreover, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference

to the needs of outsiders", whereas individualistic cultures "tend to distinguish less sharply between in-groups and out-groups when responding to their needs" (*ibid.*, p. 12). Hence, "this suggests a pattern of much greater emphasis on benevolence … in collectivistic cultures and more equal emphasis on both value types in individualistic cultures" (*ibid.*, p. 12). Indeed, the later study by Schwartz (2007) has corroborated the negative effect of collectivism on moral inclusiveness which refers to broadness of the community to which the values of benevolence and universalism are applied. When individuals, whose moral universe is restricted to their in-groups, perceive justice or equality as important, "the meaning of these values is no longer distinct from the meaning of benevolence values" Schwartz (2007, p. 713).

Schwartz (1992) classifies societies into communal and contractual. The former type is "characterized by extended primary groups in which people have diffuse mutual obligations and expectations based largely on their enduring ascribed statuses" while the latter type refers to narrow primary groups and secondary social relations "in which people develop specific obligations and expectations largely through negotiation in the process of achieving and modifying statuses" (*ibid.*, p. 57). Hence, tradition, conformity and benevolence are more inherent in communal societies whereas self-direction, stimulation and universalism are more emphasized in contractual societies.

Drawing on the previous works (James *et al.*, 1996; Kanungo and Aycan, 1997), Kabasakal and Bodur (2004) posit that cultures differs from each other by the extent of paternalism, which is defined as a form of *benevolence*. Hence, "in paternalistic societies, people in authority are expected to act like a parent and take care of subordinates' and employees' families", whereas cultures low on paternalism are characterized by "limited interest in workers' problems, which is restricted to job-related issues" (Kabasakal and Bodur, 2004, p. 566).

The GLOBE theory defines human orientation as "the degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring and kind to

others" (Javidan *et al.*, 2004, p. 30). Kabasakal and Bodur (2004, p. 569) explain that "this dimension is manifested in the way people treat one another and in the social programs institutionalized within each society". The scale of human orientation comprises the four items: concern about others, sensitivity towards others, friendliness and generosity.

Human orientation affects numerous aspects of organizational life (see Table 4.6) which clearly encompass the values of *benevolence* and *universalism*. Kabasakal and Bodur (2004) conclude that individuals from human-oriented cultures are expected to offer material and financial help, spend time together, demonstrate empathy and ensure communication necessary to solve problems.

Table 4.6: Summary of Major Connotations and Variations of the Human Orientation Differences in Terms of Organizational Practices and Values

High Human-Orientation Organizations	Low Human orientation Organizations
Informal relationships.	Formal relationships.
Social control based on shared values and norms.	Social control based on bureaucratic practices.
Practices reflect individualized considerations	Practices reflect standardized considerations.
Mentoring and patronage support	Supervisory support.
Organizations are trusted more and are autonomous in human resource practices.	Organizations are controlled by legislation and unionization.
Organizations are relatively autonomous in their employee relations.	Organizations are restricted in their employee relations by the concept of social partners.
Less influence on trade unions and the state on the business system.	Greater influence of trade unions and the state of the business system.
Higher emphasis on contractual sale of labour.	Lower emphasis on contractual sale of labour.
Shareholder's approach.	Stakeholder's approach.
Primary focus is on profits.	Primary focus is on social responsibility.
Organizational members prefer to work with others to get job done.	Organizational members prefer to be left alone to get jobs done.

Source: adapted from Kabasakal and Bodur (2004, p. 586)

Human-oriented individuals are expected to look for help and others are supposed to reciprocate. High human orientation refers to social control based on shared norms and values instead of bureaucratic practices. Hence, organizational practices are based on individualized considerations and informal relationships provide opportunities for development. Finally, human oriented organizations focus on profit making with social responsibility and consideration of all stakeholders. In contrast, individuals from cultures low on human orientation are self-centred and characterized by self-enjoyment and self-interest. Low human orientation results in social control manifested as formal procedures, bureaucratic practices and formal relationships. Moreover, organizations low on human orientation justify profit making with no social responsibility and demonstrate preferential treatment of shareholders. Finally, "in less human oriented societies, organizations are trusted less by their members, and mechanism of control are established by legislation, unionization, and state interventions" (Kabasakal and Bodur, 2004, p. 596).

In summary, a number of studies suggest that the dimensions of relationship quality as well as the causal relationships between them may depend on human orientation. However, it is evident that the link is under-researched. Consequently, the current study will address this gap.

4.4.3 Power Distance

Power distance has been regarded as a very important dimensions of culture (Hofstede, 1983; Schwartz and Sagiv, 1995; Schwartz, 1999; Carl *et al.*, 2004) which has been linked to a number of behaviours in societies (Hofstede and Bond, 1988; Carl *et al.*, 2004; Ndubisi, 2004) and organizations (Bochner and Hesketh, 1994; Béteille, 1977; Raghuram, 2001; Beugré, 2007). The concept of power distance originates from the research of Mulder (Mulder *et al.*, 1971; Mulder, 1976; Mulder, 1977) who defines power distance as "the degree of inequality in power between a less powerful individual (I) and a more powerful other (O), in

which I and O belong to the same (loosely or tightly knit) social system" (Mulder, 1977, p. 90).

Schwartz (1992) forwards eleven values identified at the individual level of analysis and classify them into the two dimensions: *openness to change* versus *conservatism* and *self-transcendence* versus *self-enhancement*. *Self-transcendence* refers to the concepts of *benevolence* and *universalism*, which are related to *human orientation* (see Section 5.4.2). In contrast, *self-transcendence* is at the opposite pole and denotes the values of *achievement, hedonism* and *power*. Schwartz (1992, p. 9) posits that the essence of *power* values encompass "attainment of social status and prestige, and control or dominance over people and resources (authority, wealth, social power, preserving my public image, social recognition)".

The later study by Schwartz (1999) examines the same values at the cultural level of analysis and re-classifies them into the seven types structured along the three polar dimensions: *conservatism* versus *intellectual and affective autonomy*, *mastery* versus *harmony* and *hierarchy* versus *egalitarianism*. The latter dimension deserves special attention. *Hierarchy* refers to "cultural emphasis on the legitimacy of an unequal distribution of power, roles and resources (social power, authority, humility, wealth)" whereas *egalitarianism* denotes "a cultural emphasis on transcendence of selfish interests in favour of voluntary commitment to promoting the welfare of others (equality, social justice, freedom, responsibility, honesty)" (*ibid.*, p. 27-28).

Hofstede (2001, p. 98) contends that power distance refers to "the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally". Power distance is related to the necessity for dependence versus interdependence. Hence, inequality in low power distance cultures is perceived as an evil which should be tackled whereas individuals from high power distances cultures treat hierarchies as existential arrangements of convenience. Finally, Hofstede (2001) argues that

high power distance is related to latent conflict or mistrust between powerful and powerless whereas low power distance is characterized by harmony between the two sides.

Drawing on the work of Hofstede (2001), the GLOBE theory defines power distance as "the degree to which members of a collective expect power to be distributed equally" (Javidan *et al.*, 2004, p. 30). Carl *et al.* (2004, p. 518) explains that in high power distance cultures "some individuals are perceived to have a higher overall rank whose power unquestionable and virtually unattainable by those with lower power" while in low power distance societies "the distance for large power differentials is often based on the beliefs that power corrupts, and excessive power results in the abuse of power, from which people in less powerful positions have no resource". The GLOBE study has demonstrated that power distance is relevant to both societal and organizational levels of analysis (Brodbeck *et al.*, 2004). Carl *et al.* (2004, p. 534) explain further that "substantial gains can be obtained by reducing the level of power distance within an organization. Reduced power distance can contribute to the flexibility of the organization and enhance competence building and learning". Moreover, reduction of power distance is essential to achieve empowerment, better contribution to organizational mission and independent decision making. Focusing on the work of Schwartz (1999), Carl *et al.* (2004) relate hierarchy and egalitarianism to co-operation and posit that hierarchy is antithetical to co-operation while egalitarianism fosters concern for everyone's welfare and internalizes commitment to the voluntary co-operation. Indeed, power distance prevents co-operation by decreasing trust and increasing perceptions of others as a threat (Doney *et al.*, 1998; Stephan *et al.*, 2008).

Drawing on the work of John (1984), Doney *et al.* (1998) hypothesize that "by establishing acceptable levels of power and coercion", power distance triggers opportunistic behaviour of both relationship partners. Indeed, John (1984) has demonstrated that opportunistic behaviour of the relationship partner is induced by the perception that the other relationship party abuses power in the form of rules, authority structures and monitoring.

Owing to transaction cost theory, Rokkan *et al.* (2003) concur that building of hierarchy by specific investments results in opportunism on the receiver's part. Surprisingly, the interaction of specific investments and solidarity shifts the effect of specific investments from expropriation to bonding. Hence, the norm of solidarity is essential to prevent opportunism. Nevertheless, co-operation based solidarity along with mutual and comparable dependence and group affiliation are attributed to cultures which are low on power distance (Doney *et al.*, 1998). Moreover, cultures low on power distance are characterized by willingness to consult others, natural sharing of power, participative decision making and refraining from using coercion thus opportunism may be less prevalent in this type of culture (Doney *et al.*, 1998).

Davis *et al.* (1997, p. 22) hyptothesize that people in hihg power distance cultures are more likely to develop principal-agent relationships, which are based on the assumption that both agents and principals strive to achieve as much as "possible utility with the least possible expenditure". In constrast, low power distance cultures are characterized by principal-stewardship relationships, which rest on giving preference to co-operative behaviors instead of self-serving interests. Indeed, Doney *et al.* (1998) hypothesize that the higher power distance, the more trust is built via the calculative process of trust building. The calculative process of trust building is consistent with transaction cost theory (Williamson, 1981) and "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (Doney *et al.*, 1998, p. 605).

Drawing on the works of Sorokin and Lunden (1959) and Sampson (1965), Kipnis (1972) argues that power destroys harmony of social relationships. Persons who are high on power distance undervalue performance of other individuals and treat them as objects of manipulation. Hence, the behaviour of others is perceived not as self-controlled, but as consequence of power. In other words, the more powerful "restore cognitive balance by viewing the less powerful as less worthy, less interesting, and deserving of their fate" (*ibid.*, p. 40).

In summary, a number of studies indicate that the dimensions of relationship quality as well as the causal relationships between them may depend on power distance. However, it is evident that the link is under-researched. Hence, the current study will address this gap.

4.4.4 Assertiveness

Although the GLOBE study is the only work, which focuses on assertiveness as a dimension of both national and organizational cultures (Hartog, 2004), the concept has intrigued social psychologists for several decades (Borgatta, 1964; Peabody, 1985; 2011). Drawing on the work of Cattell (1947), the later studies (Digman and Takemoto-Chock, 1981; Goldberg, 1990) have replicated the five factors of personality traits: surgency (or extraversion), agreeableness, conscientiousness, emotional stability (vs. neuroticism) and intellect. The domain of surgency or extraversion encompass several traits: *assertiveness,* talkativeness and activity level characterized by silence, passivity and reserve (Goldberg, 1993, p. 396). Borgatta (1964) forwards the five robust dimensions of personality traits: assertiveness, likeability, responsibility, emotionality and intelligence. Peabody *et al.* (Peabody, 1987; Peabody and Goldberg, 1989; Peabody and De Raad, 2002; De Raad and Peabody, 2005) argue that personality traits are classified into the three factors: *self-assertiveness* versus *unassertiveness*, *a dimension of general evaluation* and *tight* versus *loose control over impulse expression*. Hartog (2004, p. 401) posits that the assertiveness scale developed by Peabody comprises the six items: "*aggressive* versus *peaceful*, *passive* versus *forceful*, *conceited* versus *modest*, *self-confident* versus *unassured*, *bold* versus *timid* and *active* versus *inactive*.

Although "some of the societies are described as strongly opposed to competition, others as never experiencing it, and others as highly cooperative", "cooperation is overwhelmingly the dominant orientation of the peaceful societies" (Bonta, 1997, p. 312). Moreover, peaceful worldview "is not only shared by virtually everyone but is also integrated into all levels of individual and group self concepts and relationships with others" (*ibid*., p.

313). Bonta (1997) contends that the peaceful societies relate competition with aggression and violence. Hence, "anger and aggressiveness are negatively valued, whereas ... nurturance and cooperation with the group are positively valued. These societies also strongly de-emphasize individual achievement, which for some of them shows the close identification with competitiveness and hence aggressiveness" (*ibid.*, p. 313). Finally, the peaceful societies treat "competitiveness as a dangerous behaviour that should be avoided and strongly opposed" (*ibid.*, p. 313).

Although the cultural dimension of assertiveness conceptualized by the GLOBE study originates from the *masculinity* versus *femininity* factor identified by Hofstede, the two concepts are related, but distinct (Hartog, 2004). Indeed, the relationship between the two scales are positive and significant ($r = .37$, $p < .05$). Nevertheless, Hartog (2004) explains that the measure of masculinity "does not include any indicators of assertiveness, toughness, aggressiveness, or dominance" thus "the scale can be seen as lacking face validity with respect to directly measuring assertiveness or aggressiveness as a dimension of culture".

Hofstede (2001, p. 297) contends that "masculinity stands for a society in which social gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life. Femininity stands for a society in which social gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life." Hofstede (2001) relates *masculinity* versus *femininity* to the meaning of work and contends that masculine cultures value pay, security and job content while feminine societies place more importance on relationships and physical conditions. Hence, "the masculine manager is ... assertive, decisive, and aggressive (only in masculine societies does this word carry a positive connotation). Masculine business is survival of the fittest" (*ibid.*, p. 313)". Instead of efforts to resolve conflicts, they are denied or solved by fighting until the strongest man wins. Masculine cultures are characterized by price competition and competitive advantage in

manufacturing (*ibid*., p. 318). In contrast, "the manager in a feminine culture is less visible, intuitive rather than decisive, and accustomed to seeking consensus; feminine business can be a cooperative venture" (*ibid.*, p. 313). Conflicts are solved by compromise and negotiation. Feminine cultures are characterized by competitive advantage in service industries (consulting, transportation), customized manufacturing and handling of live matter such as high-yield agriculture or biochemistry (*ibid.*, p. 317).

According to Javidan *et al.* (2004, p. 30) assertiveness reflects "the degree to which individuals are assertive, confrontational, and aggressive in their relationships with others". The dimension of assertiveness operationalized by the GLOBE study is a direct descendant of the masculinity and femininity factor identified by Hofstede (Hartog, 2004). The scale of assertiveness encompasses the four items measuring diverse practices: *aggressiveness, domination, toughness* and *assertiveness* itself. Hartog (2004, p. 406) explains that the GLOBE study separates "the three underlying dimensions that comprise ... masculinity-femininity dimension, namely: performance orientation, assertiveness, and gender egalitarianism". Although a society can demonstrate minimal gender role differences, members of such a society can be assertive, dominant and aggressive. In contrast, Japanese culture stresses the importance of gender roles and at the same time places high importance of submissiveness and non-assertiveness in business relationships (*ibid.*, p. 406).

Doney *et al.* (1998, p. 604) define "trust as a willingness to rely on another party and to take action in circumstances where such action makes one vulnerable to the other party" and hypothesize that "relative to counterparts in collectivistic **(feminine)** cultures, trustors in individualist **(masculine)** cultures are more likely to form trust via a calculative process" (*ibid.*, p. 610). Indeed, individuals from assertive cultures, "build trust on the basis of capabilities or calculation" and "act and think of others as opportunistic" (Hartog, 2004, p. 405).

Table 4.7: Higher Assertiveness Societies versus Lower Assertiveness Societies

Societies That Score Higher on Assertiveness, Tend to:	Societies That Score Lower on Assertiveness, Tend to:
Value assertive, dominant, and tough behavior for everyone in society.	View assertiveness as socially unacceptable and value modesty and tenderness.
Have sympathy for the strong.	Have sympathy for the weak.
Value competition.	Value cooperation.
Believes that anyone can succeed if he or she tries hard enough.	Associate competition with defeat and punishment.
Values success and progress.	Value people and warm relationships.
Value direct and unambiguous communication.	Speak indirectly and emphasizes "face-saving".
Value being explicit and to the point in communications.	Value ambiguity and subtlety in language and communications.
Value expressiveness and revealing thoughts and feelings.	Value detached and self-possessed conduct.
Have relatively positive connotations for the term aggression (e.g. aggression helps to win).	Have far more negative connotations with the term aggression (e.g. aggression leads to negative outcomes).
Have a just-world belief.	Have an unjust-world belief.
Try to have control over the environment.	Value harmony with their environment rather than control.
Stress equity, competition and performance.	Stress equality, solidarity, and quality of life.
Emphasize results over relationships.	Emphasize integrity, loyalty and cooperative spirit, tradition, seniority and experience.
Reward performance.	View "merit-pay" as potentially destructive to harmony.
Value what you do more than who you are.	Value who you are more than what you do.
Build trust based of capabilities or calculation.	Build trust on the basis of predictability.
Act and think of others as opportunistic.	Think of other inherently worthy of trust.
Have a "can-do" attitude.	
Value taking initiative.	
Expect demanding and challenging targets.	
Believe that individuals are in control.	

Source: adapted from Hartog (2004, p. 405).

The calculative process of trust building is based on the transaction-cost theory thus trustors must determine if the benefits of opportunistic behaviour exceed the targets' costs (Doney *et al.*, 1998). The assessment of trustworthiness is based on "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (*ibid.*, p. 605).

Hence, "trustors assume that targets exhibit "trust-like" behaviour because they are self-interest-seeking individuals, making net present value calculations - the results of which indicate net benefits to refraining from opportunistic behaviour" (*ibid.*, p. 605).

Drawing on the work of Deal and Kennedy (1982), Hartog (2004) relates assertiveness to tough-guy-macho culture and argues that the concept of assertiveness is relevant to organizational level of analysis. Indeed, the tough-guy-macho culture denotes "a world of individualists who regularly take high risks and get quick feedback on whether their actions were right or wrong" (Deal and Kennedy, 2000, p. 107).

As trust "incorporates the notion of risk as a precondition of trust" (Doney *et al.*, 1998, p. 604), the individuals from assertive cultures may be both risk taking and more tolerant towards opportunism of others. Dickson *et al.* (2006) argue that members of assertive cultures are "more aggressive and proactive in dealing with situations in their ... relationships that might lead to opportunistic behaviour" and thus they are more tolerant towards opportunism. Indeed, the study of Dickson *et al.* (2006) demonstrates that the greater assertiveness, the lower concerns about opportunistic behaviour.

In summary, individuals from cultures higher on assertiveness value assertive and dominant behaviour, seek control of environment, value competition and place emphasis on results instead of relationships (see Table 4.7). Members of assertive cultures build trust based on calculation and behave opportunistically. On the other hand, cultures lower on assertiveness are characterized by co-operation, harmony with environment and higher importance on warm relationships and people. The members of this culture value integrity,

loyalty and predictability-based trust. Moreover, "they think of other inherently worthy of trust" (Hartog, 2004, p. 405).

In summary, assertiveness is clearly underexplored as a dimension of culture (Hartog, 2004). Moreover, there is convincing evidence that assertiveness may have strong effects on both the dimensions of relationship quality and structural relationships between them. Consequently, the current study will examine the link between the two constructs.

4.4.5 Uncertainty Avoidance

Hofstede (2001, p. 161) explains that uncertainty avoidance refers to "the extent to which members of a culture feel threatened by uncertain or unknown situations". The dimension of uncertainty avoidance operationalized by the GLOBE study is a direct descendant of the same dimension identified by Hofstede (Hanges and Dickson, 2004). Indeed, substantial relationship between the two dimensions is evidenced by strong correlation. According to the GLOBE study, "uncertainty avoidance refers to the extent to which members of collectives seek orderliness, consistency, structure, formalized procedures, and laws to cover situations in their daily lives" (De Luque and Javidan, 2004, p. 603).

Uncertainty avoidance is related to intolerance of ambiguity (Furnham and Ribchester, 1995; Hofstede, 2001), which operates at individual level of analysis and is conceived as a variable of organizational and national cultures (Furnham and Ribchester, 1995). Ambiguity tolerance derives from the work of Frenkel-Brunsvik (De Luque and Javidan, 2004; Furnham and Ribchester, 1995) who explains (Frenkel-Brunswik, 1951) that the dimension "generalizes to the entire emotional and cognitive functioning of the individual, characterizing cognitive style, belief and attitude systems, interpersonal and social functioning, and problem solving behaviour" (Furnham and Ribchester, 1995, p. 180). Hofstede (2001, p. 148) argues that "uncertainty avoidance cultures shun ambiguous situations. People in such cultures look for structure in their organizations, institutions and relationships, which makes events clearly interpretable and predictable".

The concept of uncertainty avoidance originates from the work of Cyert and March (1963). They contend that organizations avoid uncertainty in the two ways. Firstly, instead of correctly anticipating uncertain events in the distant future, organizations employ decision rules to manage short-run reaction and feedback. Secondly, organizations "avoid the requirement that they anticipate future reactions of other parts of their environment by arranging negotiated environment" (Cyert and March, 1992, p. 167). Prediction-dependent planning is avoided whereas preference is given to "planning where the plans can be made self-confirming through some control device" (*ibid.*, p. 167).

Drawing on the work of Galbraith (1974), Earley (1997) relates feedback seeking to uncertainty avoidance. Indeed, Ashford and Cummings (1983, p. 374) contend "that information seeking is a primary means of reducing uncertainty" thus "when the appropriate response to a stimulus is ambiguous, the individual experiences a noxious state of uncertainty", which "creates a tension the individual is motivated to resolve by seeking additional information". Hence, "feedback seems to be a resource valuable in resolving feelings of ambiguity and uncertainty" (Ashford and Cummings, 1985, p. 76-77). Morrison (2002) agrees that "feedback seeking is more frequent to the extent that uncertainty is high and tolerance for uncertainty low". Gudykunst and Nishida (2001) demonstrate that anxiety and uncertainty have negative effects on perceived effectiveness of communication across close-friend and stranger relationships. The study indicates that anxiety has greater effect on perceived effectiveness of communication for stranger relationships in the United States. In contrast, uncertainty is the stronger antecedent for close-friend relationships. The Japanese sample demonstrates a different pattern of relationships: anxiety has the stronger effects on perceived communication effectiveness for both stranger and close-friend relationships.

Galbraith (1974) argue that organization can manage task uncertainty using several mechanisms of organization design: (1) reduction of the need to process information or (2) increasing the capacity to process information. Indeed, Luque and Sommer (2000, p. 838)

134

contend that in low tolerance for ambiguity (tight) cultures "significant formal information systems are incorporated into organizational structures" to reduce ambiguity, deviant behaviour and the need for feedback seeking. Hence, in cultures tolerant towards ambiguity, "the feedback process is less focused on formal structure" while cultures intolerant to ambiguity are characterized by the feedback process, which "is focused on the formal structure to create a method of ego defence" (*ibid.*, p. 839). Finally, Luque and Sommer (2000, p. 838) hypothesize that "organizations operating in a low tolerance for ambiguity culture will use more formal rules, procedures, and structure for providing feedback" and "will engage in greater feedback seeking". Indeed, Hofstede (2001, p. 146) concurs that "technology includes all human artifacts" and is a way of coping with uncertainty.

Doney *et al.* (1998, p. 614) contend that "the prevailing view in high uncertainty avoidance cultures is that human behaviour is predictable. Variability in a partners' performance is unacceptable, and a relatively high value is placed on predictability in relationships" thus individuals in high uncertainty avoidance cultures "form trust via a prediction process". Further, "trust building via a prediction process requires information about a target's past actions – the greater the variety of shared experiences, the greater the generated knowledge base and the more a target's behaviour becomes predictable" (*ibid.*, p. 605). Hence, the consistency of past actions and congruence between the actions and promises play the key role in judging predictability of behaviour. Moreover, the other evidences of trust encompass expertise, ability and competence.

Reciprocity may be a stronger antecedent of trust in high uncertainty avoidance cultures because it involves feedback and communication mechanisms – the concepts, which are important for high uncertainty avoidance societies and organizations. Reciprocity encompasses "a constructive response to conflict", and "the expectation that problem situations would be communicated" (Pervan *et al.*, 2009, p. 64). The concept of reciprocity is very closely related to predictability. According to Molm *et al.* (2007) the value of reciprocity

has two dimensions: (1) instrumental or utilitarian and (2) symbolic or communicative. The instrumental value of reciprocity is defined as "the value for the recipient of the good, service, or social exchange" while symbolic value comprises uncertainty reduction by communication of predictability, trustworthiness and partner's respect for the actor in the relationship (Molm *et al.*, 2007, p. 220). Indeed, Schumann (2009b) demonstrates that predictability of service provider is a positive antecedent of trust. The study indicates that the relationship is moderated by uncertainty avoidance. The operationalization of predictability in the study of Schumann (2009b) encompass several elements of reciprocity. The literature analysed supports the proposition that uncertainty avoidance may moderate the relationship between reciprocity and trust.

The relationship between trust and uncertainty avoidance remains somewhat controversial. On one hand, Doney *et al.* (1998, p. 615) relates uncertainty avoidance to the "tightness" and "looseness" concepts and argue that "loose" or "low uncertainty avoidance cultures are associated with less regard for stability and permanence in relationships and with greater risk taking". Hence, "it may be difficult for trustors to trust other people and institutions" (*ibid.*, p. 615). In contrast, individuals in high uncertainty avoidance cultures demonstrate more trust and "judge others to be similar to themselves" (*ibid.*, p. 615).

 On the other hand, the study of Hofstede (2001) demonstrates the opposite relationship between uncertainty avoidance and trust. As indicated by the correlation of the uncertainty avoidance index and the 1990-93 World Values Survey, there is a substantial negative relationship (rho = -.72) between uncertainty avoidance and trusting people across 26 countries (*ibid.*, p. 159). Paradoxically, people in high uncertainty avoidance cultures "are often prepared to engage in risky behaviour in order to reduce ambiguities" (*ibid.*, p. 148). Nevertheless, risk taking in such cultures is limited to familiar risks. In contrast, individuals from low uncertainty avoidance cultures take both familiar and unfamiliar risks.

Uncertainty avoidance appears to be under-explored as a dimension of organizational culture. However, there is theoretical evidence that it may have strong effects on both the dimensions of relationship quality and structural relationships between them. Consequently, the current study will address this gap.

4.5 Concluding Remarks

This chapter has drawn on various cultural paradigms, theories, conceptualizations and dimensions in order to gain insights into organizational culture.

As was stated previously, the current study adopts *the contingency management perspective of organizational culture* which states that "organizational practices [culture] are largely directed toward meeting the requirements imposed on organizations by organizational contingencies" (House *et al.*, 2002, p. 9). In other words, "the central proposition of this theory is that there is a set of demands that are imposed on organizations that must be met for them to ensure survival and guarantee effectiveness" (House and Javidan, 2004, p. 26).

The contingency management perspective harmonizes with the definition of marketing and the concept of relationship marketing employed in the current study. Consistent with Gummesson (2008b, p. 14) "*marketing is a culture*, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders". Hence, *organizational culture is understood as a manageable process* oriented towards "meeting the requirements imposed on organizations by organizational contingencies" (House *et al.*, 2002, p. 9).

Looking from the positivistic perspective, the GLOBE theory of culture demonstrates the strongest evidence for *falsifiability* and *utility*. Moreover, the study is based on the cross-level approach therefore the constructs and relationships should be valid at all the levels of analysis. In other words, the measures can be applied to explore the effects of organizational culture at the individual level of analysis, which is extremely important to relationship

marketing. Indeed, the notions of full-time and part-time marketing make "legitimate and imperative for everyone to influence customer relationships" (Gummesson, 2008b, p. 77). Consequently, the current study will draw on the GLOBE theory of culture.

Finally, the literature review has identified the five dimensions of organizational culture relevant to the construct of relationship quality: *individualism and collectivism, human orientation, power distance, assertiveness* and *uncertainty avoidance*.

CHAPTER 5

CONCEPTUALIZATION

5.1 Introduction

The aim of Chapter 5 is to amalgamate extant literature in order to conceptualize relationship quality and its links with organizational culture. Consequently, Chapter 5 comprises two major parts: hypotheses pertaining to relationship quality (5.2) and hypotheses pertaining to organizational culture (5.3).

Firstly, section 5.2.1 introduces conceptual models of relationship quality. Having introduced the competing models, sections 5.2.2 through 5.2.10 proceed with the theoretical support for the relationship quality hypotheses. A critical synthesis of existing theories encompasses services marketing literature, social exchange theory, commitment-trust theory, equity theory and transaction-cost theory.

Secondly, conceptualization continues with hypotheses pertaining to organizational culture (5.3). As the current study comprises two rival models of relationship quality, the effects of organizational culture are conceptualized using both of them (5.3.1). Having introduced the effects of organizational culture, sections 5.3.2 through 5.3.6 proceed with the theoretical support for the hypotheses pertaining to organizational culture. That is, five dimensions of organizational culture are explored in order to reveal their ties with relationship quality: individualism and collectivism, human orientation, power distance, assertiveness and uncertainty avoidance. *Finally*, Chapter 5 draws conclusions related to conceptualization (5.4).

5.2 Hypotheses Pertaining to Relationship Quality

As was stated, this section forwards competing models of relationship quality. Having introduced the models, sections 5.2.2 through 5.2.10 proceed with the theoretical support for the relationship quality hypotheses. The development of relationship quality hypotheses starts with the sequential chain of loyalty (5.2.2). As the sequential chain of loyalty is complex and refers to "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" (Oliver, 1997, p. 36), it must be conceptualized prior to the

linkages between loyalty and the other dimensions of relationship quality. Having conceptualized the loyalty construct, the other hypotheses pertaining to relationship quality are developed step-by-step: (1) opportunism → trust, (2) trust → co-operation, (3) trust → reciprocity, (4) trust → loyalty, (5) communication → trust, (6) communication → co-operation, (7) co-operation → reciprocity, (8) reciprocity → loyalty (see Figure 5.1, p. 142).

5.2.1 The Research Models

This section will introduce two competing models of relationship quality (see Figure 5.1 and 5.2). Having introduced the models, sections 5.2.2. through 5.2.10 will provide the theoretical support for the hypotheses.

The Sequential Chain of Loyalty

Although the sequential chain of loyalty forwarded by Oliver (1997) "constitutes the most comprehensive evaluation of the construct" (Harris and Goode, 2004, p. 141), "loyalty effects have been discussed largely in the context of product marketing" (Oliver, 2010, p. 440). Indeed, the present operationalizations of the sequential chain are based on relatively transactional business-to-consumer samples: retail customers (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online shoppers (Harris and Goode, 2004) and restaurant visitors (McMullan and Gilmore, 2003; McMullan, 2005). Hence, it is important to assess validity of the sequential stages based on more complex business-to-business services samples. *Hence,* H_1 *states that there are four sequential stages of loyalty (respectively, cognitive, affective, conative, and action loyalty).*

Opportunism and Trust

The literature reviewed suggests that relationship quality models should comprise opportunism along with trust (Chiles and McMackin, 1996; Morgan and Hunt, 1994) and other relationship norms (Heide and John, 1992; Rokkan *et al.*, 2003).

Figure 5.1: Conceptualization of Recursive Relationship Quality Model
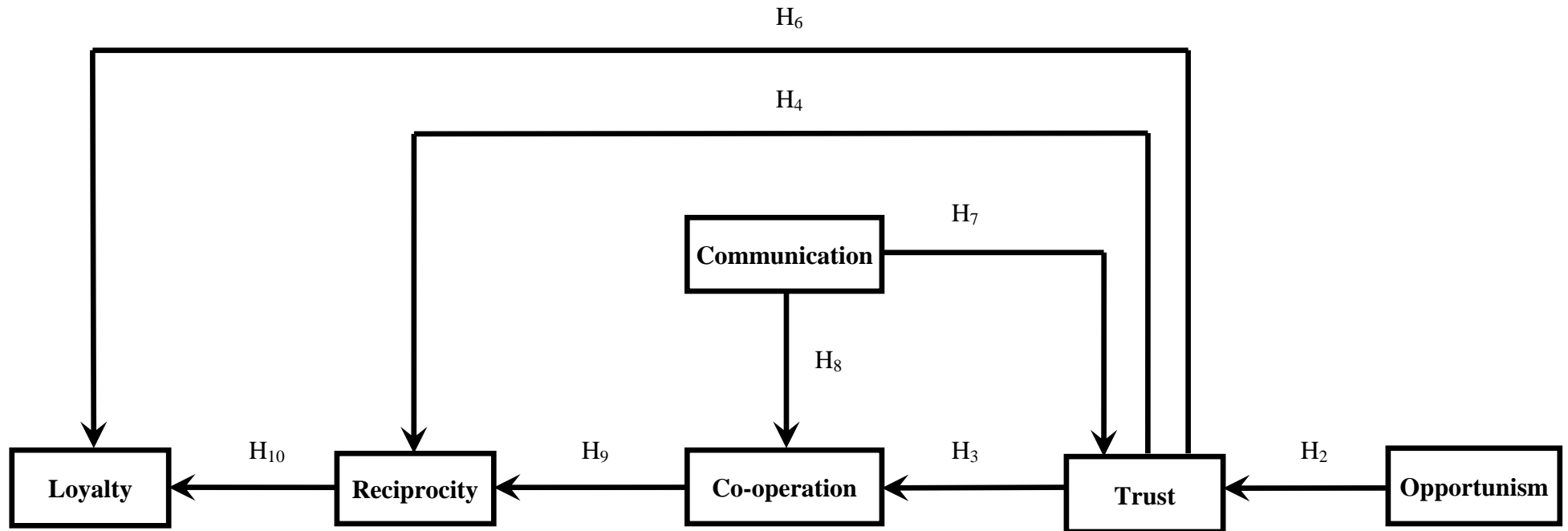
Figure 5.2: Conceptualization of Non-Recursive Relationship Quality Model
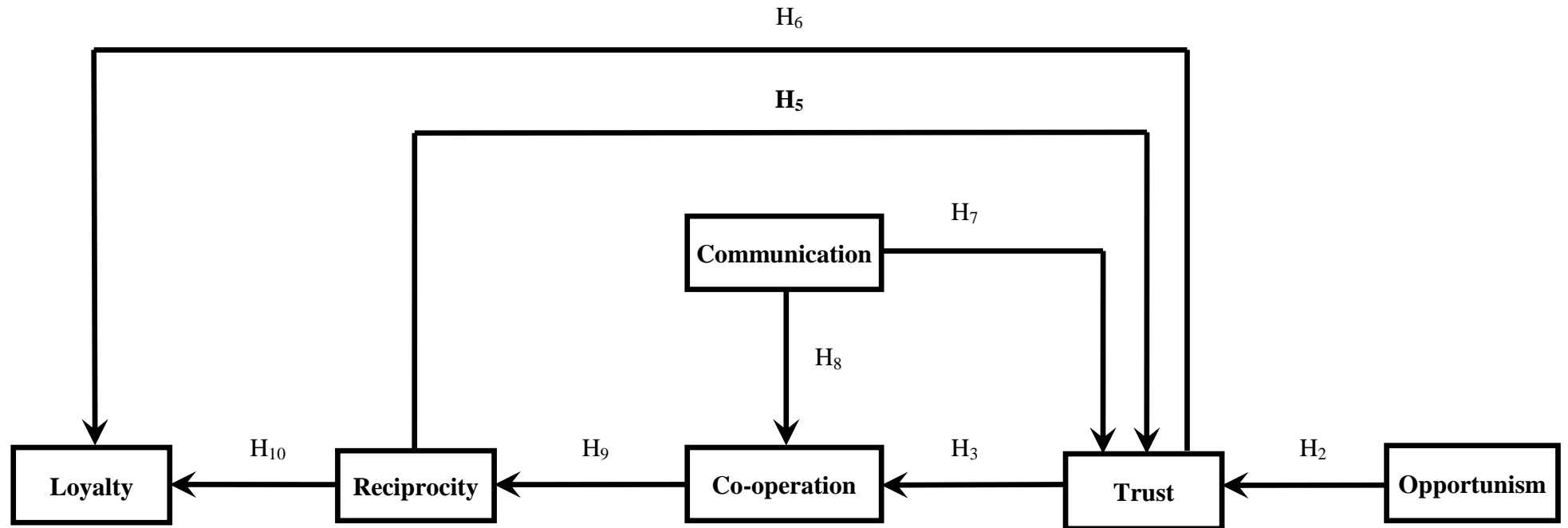
H_6

H_5

H_7

| Communication |

H_8

| Loyalty | H_{10} | Reciprocity | H_9 | Co-operation | H_3 | Trust | H_2 | Opportunism |

It is the study of Morgan and Hunt (1994) which has incorporated opportunism into the commitment-trust theory. Opportunism appears to have great explanatory power. On one hand, opportunism is a negative antecedent of trust. On the other hand, trust appears to mediate the negative effects of opportunism on many relationship outcomes: commitment, acquiescence, propensity to leave, co-operation, functional conflict and uncertainty (Morgan and Hunt, 1994). *Hence,* H_2 *states that opportunism has a direct negative effect on trust* (see Figure 5.1).

Trust and Co-operation

Deutsch (1962, p. 302) posits that "the initiation of cooperation requires trust whenever the individual, by his choice to cooperate, places his fate partly in the hands of others". Hence, "where there is no pre-existing socialized basis for mutual trust, one would not expect that a person who has to offer his contribution first would offer to participate in the exchange" (*ibid.*, p. 308). The meta-analysis by Palmatier et al. (2006) demonstrates nomological validity of the relationship: the vast majority of relationship marketing studies concur that trust, commitment and satisfaction are the antecedents of co-operation. *Thus* H_3 *states that trust has a direct positive effect on co-operation.*

Trust and Reciprocity

Palmatier et al. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). The individual who provides another person high value must trust him to expect adequate reciprocity (Blau, 1964). Hence, relationships start to develop with low levels of trust and minor transactions in order to avoid risk. Indeed, Molm *et al.* (2000) argue that social exchange may involve giving value with delayed reciprocity thus trust is a prerequisite for exchange to begin. Palmatier et al. (2006) concur that one party may receive value earlier and therefore must have enough confidence in the relationship partners to expect reciprocity over time. *Hence,* H_4 *states that trust has a direct positive effect on reciprocity.*

In contrast, the causal relationship between reciprocity and trust may be in the opposite direction. Blau (1964) posits that social associations are based on seeking of social and economic rewards thus relationship continuity is only possible if exchange is based on *reciprocity*, which builds trust and commitment. Blau (1964) argues that purely economic exchange does not result in the development of trust. Hence, reciprocity-based social exchange is an essential antecedent of the latter construct. As reciprocity increases trust, the amounts of exchange increase. The relationship between trust and reciprocity is cyclic: "the gradual expansion of mutual service is accompanied by a parallel growth of mutual trust" (Blau, 1964, p. 94). Consequently, H_4 *states that reciprocity has a direct positive effect on trust.*

As simultaneous assessment of the two hypotheses is impossible due to the limitations of structural equation modelling, testing of hypotheses H_4 and H_5 will be implemented by specification of two competing models (see Figure 5.1 and Figure 5.2).

Trust and Loyalty

The sequential chain of loyalty encompasses "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" (Oliver, 1997, p. 36). The seminal study of Morgan and Hunt (1994) has corroborated the direct causal relationship between trust and commitment. *Hence,* H_6 *states that trust has a direct positive effect on loyalty.*

Communication and Trust

Anderson and Narus (1990) contend that communication has strong effects on both trust and co-operation. Morgan and Hunt (1994, p. 25) posit that "a partner's perception that past communications from another party have been frequent and of high quality that is, relevant, timely, and reliable, ... will result in greater *trust*". The meta-analysis by Palmatier *et al.* (2006) has corroborated the effects of communication on trust, commitment, relationship

satisfaction and relationship quality. Consequently, H$_7$ *states that communication has a direct positive effect on trust*.

Communication and Co-operation

Communication builds strong relationships by exchange of information and goal alignment (Palmatier *et al.*, 2006), which is the central element of co-operation. A number of studies agree that communication has substantial effect on co-operation (Anderson and Weitz, 1992; Morgan and Hunt, 1994; Deepen, 2007; Anderson and Narus, 1990). Hence, H$_8$ *states that communication has a direct positive effect on co-operation.*

Co-operation and Reciprocity

Lambe (2001) posits that as cooperative behaviours develop, exchange partners begin to expect reciprocity. According to Ostrom (2003, p. 43), humans "cooperate with individuals who are expected (from prior interactions, from information about social history, and from visual and verbal cues) to be trustworthy reciprocators in those risky transaction expected to generate net benefits". Moreover, "if initial levels of cooperation are moderately high", individuals "are more willing to adopt reciprocity norms" (*ibid*, p. 50). Komorita *et al.* (1991, p. 496) posit that co-operation has effect on reciprocity thus "subjects definitely reciprocate the competitive choices of others and react to defection with defection". *Hence,* H$_9$ *states that co-operation has a direct positive effect on reciprocity.*

Reciprocity and Loyalty

Meyer and Allen (1991) explain "that the concept of reciprocity has been postulated as a mechanism by which both normative and affective commitment are translated into behavior". Hence, "to the extent that the individual has internalized a reciprocity norm or "exchange ideology", the receipt of special favors, or investments, from the organization may oblige" to remain in the relationship even in the presence of more attractive alternatives (*ibid.*, p. 78). Indeed, the study of Pervan *et al.* (2009) demonstrates that reciprocity as well as trust are the

antecedents of commitment. Hence, H_{10} *states that reciprocity has a direct positive effect on loyalty.*

5.2.2 The Sequential Chain of Loyalty

Having introduced the competing models, sections 5.2.2 through 5.2.10 will proceed with the theoretical support for the hypotheses pertaining to relationship quality. A critical synthesis of existing theories encompasses services marketing literature, social exchange theory, commitment-trust theory, equity theory and transaction-cost theory.

As the sequential chain of loyalty forwarded by Oliver (1997) "constitutes the most comprehensive evaluation of the construct" (Harris and Goode, 2004, p. 141), it will be employed to conceptualize loyalty in the current study. The conceptual framework of the cognitive-to-action loyalty has been empirically tested by a number of studies in order to assess the sequence and distinctness of the stages (e.g., Eugene and Jamie, 2000; McMullan and Gilmore, 2003; McMullan, 2005; Harris and Goode, 2004; Evanschitzky and Wunderlich, 2006).

Having summarized the operationalizations of the sequential loyalty chain, Oliver (2010) calls for more intensive efforts to corroborate or refute his views and points out several potential weaknesses. Oliver (2010, p. 440) explains that "loyalty effects have been discussed largely in the context of product marketing" while "strong interpersonal character of services" requires "additional dimensions of a much more binding and even overriding nature". Indeed, the distinctiveness of services encompass stronger person-to-person interaction, greater perceived risk and possibilities of developing stronger bonds as well as loyalty (Gremler and Brown, 1996).

Hougaard and Bjerre (2003) classify relationships using four attributes: continuity, complexity, symmetry and informality. Firstly, relationships can be transactional or "possess a high degree of embedded continuity" (*ibid*., p. 35). Secondly, "relationships differ in their degree of complexity", which is caused by the exchange, interaction and integration (*ibid*., p.

35). The exchange in the markets of "high involvement durable goods and services" is associated with very complex relationship management (*ibid*., p. 35). The interaction or "social contact in the context of extensive networks of personal communication between people in organizations makes industrial relationship rather complex". The integration or "contracts and regulating mechanisms in business-to-business relationships can be complicated, incomplete and inconsistent" (*ibid*., p. 36). Finally, symmetry denotes "relative distribution of influence and information within the relationship" (*ibid*., p. 36). As business-to-business services may possess high levels of continuity and complexity, the psychological processes of cognition, affection and connation may be perceived differently. Consequently, the sequential chain of loyalty suggested by Oliver (1997) may demonstrate different dimensionality as well as causal relationships in a business-to-business setting.

The present operationalizations of the sequential chain are based on relatively transactional business-to-consumer samples: retail customers (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online shoppers (Harris and Goode, 2004) and restaurant visitors (McMullan and Gilmore, 2003; McMullan, 2005). Hence, it is important to assess validity of the sequential stages based on more complex business-to-business services samples. Moreover, Bagozzi (1995), Palmatier *et al.* (2006) and Oliver (2010) amongst others call for integration of additional dimensions (e.g. exchange efficiency, equity, relational norms and reciprocity) into relationship assessment frameworks. As there are numerous calls to assess discriminant validity of loyalty in the light of the other variables, this study will integrate the sequential chain of loyalty with the other dimensions of relationship marketing. Indeed, Oliver (2010, p. 442) concludes that "any number of variables can be combined to display consumer segments with differentiated orientations to the firm's offering".

H_1. There are four sequential stages of loyalty (respectively, cognitive, affective, conative, and action loyalty).

5.2.3 Opportunism and Trust

Williamson (1996) contends that incomplete contracting is paired with opportunism, which refers to efforts to mislead, disguise, obfuscate and confuse. Morgan and Hunt (1994, p. 25) posit that "the essence of opportunistic behaviour is deceit-oriented violation of implicit or explicit promises about one's appropriate or required role behaviour". According to transaction-cost theory, disclosure of information can be selective and distortive (Williamson, 1996). Indeed, unequal spread of information is often coupled with opportunistic behaviour and commercially hazardous exchange (Wulf and Odekerken-Schröder, 2001).

Hill (1990, p. 511) hypothesizes that "over time the invisible hand of the market favours actors whose behavioural repertoires are biased toward cooperation, rather than opportunism" and warns that the market will remove "opportunistic actors even when the focal exchange is characterized by substantial asset-specific investments and high switching costs" (*ibid.*, p. 507). As every company is surrounded by a number of markets, opportunistic behaviour in one market may have consequences in other markets. Indeed, opportunism toward suppliers and lack of co-operation may increase safeguard costs and affect company's ability to compete successfully in the end market. While conventional transaction cost theory treats hierarchy as the equilibrium response to transactions comprising substantial specific asset investments, Hill (1990, p. 511) argues that "the equilibrium response is the emergence of a co-operative and trusting relationship".

Although the assumption of opportunism is central to transaction-cost theory (Stump and Heide, 1996; Dyer, 1997; Moschandreas, 1997; Williamson, 1979), it has been criticized by many scholars (Granovetter, 1985; Dwyer *et al.*, 1987; Larson, 1992; Ghoshal and Moran, 1996). For example, Chiles and McMackin (1996, p. 88) contend that "trust's role in constraining opportunistic behaviour allows parties to adopt less elaborate safeguards, thereby economizing on transaction costs and, in turn, altering the choice of governance structure" thus trust should be incorporated into transaction-costs theory.

The literature reviewed suggests that relationship quality models should comprise opportunism along with trust (Chiles and McMackin, 1996; Morgan and Hunt, 1994) and other relationship norms (Heide and John, 1992; Rokkan *et al.*, 2003). It is the study of Morgan and Hunt (1994) which has incorporated opportunism into the commitment-trust theory. Instead of treating managers as opportunistic agents as prescribed by transaction-cots theory, Morgan and Hunt (1994) posit that opportunism is an exception, which is the hindrance to the development of trusting and committed relationships. Opportunism appears to have great explanatory power. On one hand, opportunism is a strong negative antecedent of trust. On the other hand, trust appears to mediate the negative effects of opportunism on many relationship outcomes: commitment, acquiescence, propensity to leave, co-operation, functional conflict and uncertainty (Morgan and Hunt, 1994). Hence, it is hypothesized that:

H$_2$. Opportunism has a direct negative effect on trust.

5.2.4 Trust and Co-operation

Contrary to the resource dependence theory, Frazier (1983) contends that co-operation comprises compatibility of mutual goals, inter-firm communication, participative decision making, ideological agreement and the use of power in a non-pressurized fashion.

Deutsch (1962, p. 302) posits that "the initiation of cooperation requires trust whenever the individual, by his choice to cooperate, places his fate partly in the hands of others". Hence, "where there is no pre-existing socialized basis for mutual trust, one would not expect that a person who has to offer his contribution first would offer to participate in the exchange" (*ibid.*, p. 308). Indeed, the prisoner's dilemma indicates that "individuals must develop "mutual trust" if they are to cooperate with one another" (Cook and Cooper, 2003, p. 211). Anderson and Narus (1984, p. 45) concur that "once trust is established, firms learn that coordinated, joint efforts will lead to outcomes that exceed what the firm would achieve if it acted solely in its own best interests". Drawing on the ideas of Pruitt (1981) and Anderson and Narus (1990), Morgan and Hunt (1994, p. 26) forward the commitment-trust theory of

relationship marketing stating that "cooperation is the only outcome posited to be influenced directly by both relationship commitment and trust". The seminal work by Morgan and Hunt (1994) indicates that co-operation indeed arises from trust and commitment. Dirks (1999, p. 447) concur that "cooperation is frequently associated with trust - particularly when cooperation puts one at risk of being taken advantage of by a partner". He proposes "that trust will positively affect two components of cooperation: coordination and helping" *(ibid.*, p. 447). Consequently, "the ability to harmoniously combine actions (i.e., be coordinated) is likely to be contingent on the extent to which individuals can depend on their partners and can predict their partners' behaviors" *(ibid.*, p. 447). Moreover, the higher trust, the more "individuals anticipate that their partners will not take advantage of their assistance" *(ibid.*, p. 447).

Drawing on previous studies (Frazier, 1983; Larson and Kulchitsky, 1999), Deepen (2007) forwards a scale of co-operation for the logistics outsourcing industry comprising eight indicators, which encompass the following facets: jointly agreed goals, similar approach to doing business, pulling together in the same direction, mutual decisions in the presence of problems and mutual respect. The study by Deepen (2007) has corroborated the positive effect of trust on co-operation. Moreover, the meta-analysis by Palmatier et al. (2006) demonstrates nomological validity of the relationship. Indeed, the vast majority of relationship marketing studies concur that trust, commitment and satisfaction are the antecedents of co-operation. Consequently, it is hypothesized that:

H$_3$. Trust has a direct positive effect on co-operation.

5.2.5 Trust and Reciprocity

Although social exchange theory (Homans, 1958; Thibaut and Kelley, 1959; Emerson, 1962; Blau, 1964) is one of the most popular in relationship marketing (Wulf and Odekerken-Schröder, 2001) and has been frequently employed to explain business-to-business relationships (Håkansson, 1982; Crosby *et al.*, 1990; Woo and Ennew, 2004; Palaima and

Auruskeviciene, 2007), a fully developed conceptual framework is still lacking (Lambe *et al.*, 2001; Palmatier *et al.*, 2006). According to Bagozzi (1995, p. 275), reciprocity "is at the core of marketing relationships" and refers to "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship". As reciprocity provides "control over one's volitions and actions", it is likely to be an important variable of relationship marketing (*ibid.*, p. 276). Palmatier *et al.* (2006, p. 152) contend that although commitment and trust have been critical dimensions of relationship marketing, "other candidates might include relationship satisfaction, exchange efficiency, equity, relational norms, and reciprocity". Consequently, Palmatier et al. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). This argument is supported by the meta-analysis (Palmatier *et al.*, 2006), which indicates that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has a substantial effect on seller objective performance.

An individual who provides another person high value must trust him to expect adequate reciprocity (Blau, 1964). Hence, a relationship starts to develop with low levels of trust and minor transactions in order to avoid risk. Molm *et al.* (2000) posits that social exchange may involve giving of value with delayed reciprocity thus trust is a prerequisite for exchange to begin. Palmatier et al. (2006) concur that one party may receive value earlier and therefore must have enough confidence in the relationship partners to expect reciprocity over time.

In contrast, the causal relationship between reciprocity and trust may be in the opposite direction. Blau (1964) posits that social associations are based on seeking of social and economic rewards thus relationship continuity is only possible if exchange is based on reciprocity, which builds trust and commitment. Indeed, in order for trust, mutual commitment and loyalty to develop, parties must abide by exchange rules (Cropanzano and

Mitchell, 2005, p. 875), which pertain to "a normative definition of the situation that forms among or is adopted by the participants in an exchange relation". Blau (1964) argues that purely economic exchange does not result in the development of trust. Hence, reciprocity-based social exchange is an essential antecedent of the latter construct. As reciprocity of another party increases trust, the amounts of exchange increase. The relationship between trust and reciprocity is cyclic: "the gradual expansion of mutual service is accompanied by a parallel growth of mutual trust" (Blau, 1964, p. 94). Hence, "processes of social exchange … generate trust in social relations through their recurrent and gradually expanding character" (*ibid.*, p. 94). Lambe et al. (2001) concur that reciprocity and keeping of promises result in the development of trust, which is the key variable enabling firms to move from transactional to relational exchange.

The literature review indicates that there is no consensus about the directionality of the relationship between trust and reciprocity. Although reciprocity is regarded as a central construct of social exchange theory, it is under-researched as a dimension of relationship quality. Until very recently empirical evaluation of reciprocity was not possible because of the absence of reciprocity measures (Palmatier *et al.*, 2006). Although there have been several attempts to conceptualize reciprocity (Yau *et al.*, 2000; Sin *et al.*, 2005; Stanko *et al.*, 2007), it is the work of Pervan *et al.* (2009) that constitutes the most comprehensive empirical assessment of the construct. Pervan *et al.* (2009) demonstrates that reciprocity and trust are the antecedents of commitment and explain a substantial part of this dimension ($R^2 = .39$). Although the study of Pervan *et al.* (2009) indicates strong correlations between trust and separate dimensions of the reciprocity construct (r = .71; r = .72), it does not address the problem of causal direction. Based on the literature reviewed it is hypothesized that:

H_4. Trust has a direct positive effect on reciprocity.

H_5. Reciprocity has a direct positive effect on trust.

As simultaneous assessment of the two hypotheses is impossible due to the limitations of structural equation modelling, testing of hypotheses H_4 and H_5 will be implemented by specification of two competing models (see Figure 5.1 and Figure 5.2).

5.2.6 Trust and Loyalty

Following the advice of Palmatier et al. (2006), reciprocity is conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). As *loyalty* is operationalized as a sequential chain, which encompasses deeply-held *commitment*, trust is expected to have both direct and indirect effects on the loyalty construct. On one hand, the indirect effect of trust is expected to be mediated by co-operation, reciprocity and trust itself (only in the non-recursive model, see Figure 5.2, p. 143).

On the other hand, the theory also supports conceptualization of a direct effect of trust on loyalty. Indeed, conative loyalty refers to the brand-specific and "deeply-held commitment to buy" (Oliver, 1999, p. 35). The concept of conative loyalty is consistent with the operationalizations of commitment stemming from a number of previous studies (Moorman *et al.*, 1992; Geyskens *et al.*, 1996; Wetzels *et al.*, 1998; Gruen *et al.*, 2000). Action loyalty is the highest stage of loyalty which refers to readiness to act overcoming obstacles. Readiness to act reflects "*deeply held commitment* to re-buy or re-patronize a preferred product/service consistently in the future" while overcoming of obstacles constitutes "re-buying despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 36). The seminal study of Morgan and Hunt (1994) has corroborated the direct causal relationship between trust and commitment. Indeed, a number of studies concur that trust is the direct antecedent of commitment (Garbarino and Johnson, 1999; Hennig-Thurau *et al.*, 2004; Palaima and Auruskeviciene, 2007; Ruben Chumpitaz and Nicholas, 2007). Drawing on the work of Oliver (1997), Harris and Goode (2004) conceptualize loyalty as a sequential chain and demonstrate that trust is the direct antecedent of the construct. Based on the literature reviewed it is hypothesized that:

H$_6$. Trust has a direct positive effect on loyalty.

5.2.7 Communication and Trust

Communication has been an important dimension of business-to-business relationships (Anderson and Narus, 1984; 1990; Crosby *et al.*, 1990; Athanasopoulou, 2009). As "channel members achieve coordination by sharing information through frequent two-way interchanges", "communications play an important role in realizing the mutual benefits" (Anderson and Weitz, 1992, p. 21). Loomis (1959) argues that the greater communication, the higher level of perceived trust. Anderson and Narus (1990, p. 42) posit that communication is "the formal as well as informal sharing of meaningful and timely information between firms" which has strong effects on both trust and co-operation. The study by Deepen (2007) concurs that communication is the antecedent of trust and co-operation. Indeed, communication is an essential prerequisite for achievement of relationship benefits (Cahill, 2007) and trust (Anderson and Weitz, 1992; Morgan and Hunt, 1994). Morgan and Hunt (1994, p. 25) posit that "a partner's perception that past communications from another party have been frequent and of high quality that is, relevant, timely, and reliable, ... will result in greater trust". This proposition has been corroborated by the empirical research, which demonstrates that communication has a substantial positive effect on trust. According to Whitener *et al.* (1998, p. 517), "communication researchers identify three factors that affect perceptions of trustworthiness: (1) accurate information, (2) explanations for decisions, and (3) openness". Selnes (1998, p. 313) defines communication "as the ability of the supplier to provide timely and trustworthy information" and indicates that the dimension has a direct positive effect on trust. Anderson (2002, p. 189) contends that communication is "a major causal variable determining many organizational outcomes". Varey (2002) concurs that communication is the necessary social process to achieve trust, commitment and loyalty.

Indeed, communication requires exchanging information and builds stronger relationships by aligning goals, helping to resolve disputes and uncovering opportunities,

which create value (Palmatier *et al.*, 2006). The meta-analysis by Palmatier *et al.* (2006, p. 138) defines communication as "amount, frequency, and quality of information shared between exchange partners" and corroborates the effects of communication on trust, commitment, relationship satisfaction and relationship quality. Based on the literature reviewed it is expected that:

H_7. Communication has a direct positive effect on trust.

5.2.8 Communication and Co-operation

Drawing on social exchange theory, Lambe *et al.* (2001, p. 23) concludes that the concept of co-operation refers to "similar or complementary actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocity over time". Focusing on previous studies (Frazier, 1983; Larson and Kulchitsky, 1999), Deepen (2007) posits that co-operation encompasses the following facets: jointly agreed goals, similar approach to doing business, pulling together in the same direction, mutual decisions in presence of problems and mutual respect. According to Palmatier *et al.* (2006, p. 214) "co-operation captures the level of coordinated and complimentary actions between exchange partners in their efforts to achieve mutual goals". Anderson and Narus (1990, p. 45) explain that "once trust is established, firms learn that coordinated, joint efforts will lead to outcomes that exceed what the firm would achieve if it acted solely in its own best interests". Coordination is achieved "by sharing information through frequent two-way communication" (Anderson and Weitz, 1992, p. 21). Hence, communication may be the antecedent of co-operation. Indeed, communication builds strong relationships by exchange of information and goal alignment (Palmatier *et al.*, 2006), which is the central element of co-operation. A number of studies concur that communication has effect on co-operation (Anderson and Weitz, 1992; Morgan and Hunt, 1994; Deepen, 2007; Anderson and Narus, 1990). Although the study by Morgan and Hunt (1994) indicates that communication is the direct antecedent of trust, which mediates the effect of communication on co-operation, the other studies

156

demonstrate that the dimension affects trust directly (Anderson and Narus, 1990; Deepen, 2007). Consequently, it is hypothesized that:

H_8. Communication has a direct positive effect on co-operation.

5.2.9 Co-operation and Reciprocity

Co-operation implies that immediate benefits may be given with hope to receive later payoff (Palmer, 2000). Lambe (2001) posits that as co-operative behaviours develop, exchange partners begin to expect reciprocity. According to Ostrom (2003, p. 43), humans "cooperate with individuals who are expected (from prior interactions, from information about social history, and from visual and verbal cues) to be trustworthy reciprocators in those risky transactions expected to generate net benefits". Moreover, "if initial levels of cooperation are moderately high", individuals "are more willing to adopt reciprocity norms" (*ibid*, p. 50). An increase in reciprocity affects reputation and trust, which in turn has effect on co-operation thus the latter dimension is contingent upon expected response (Ostrom, 2003).

The evidence from experimental research suggests that individuals use different reciprocity norms, which can be classified into six patterns (Ostrom, 2003):

1. Co-operation always starts unilaterally, but is stopped when another side does not reciprocate;

2. Co-operation starts immediately only in the presence of trust and stops if there is no reciprocity;

3. Co-operation starts only when established by others and stops when there is no reciprocity;

4. Co-operation always is present only to some extent;

5. No co-operation at all;

6. Norms 1 and 2 are imitated until possibility to get benefits without the usual efforts or costs.

On one hand, the literature review indicates that the relationship between co-operation and reciprocity may be a part of the non-recursive loop formed of trust, co-operation and reciprocity. On the other hand, there is no consensus about the directionality of the relationship between trust and reciprocity (see Section 5.2.5, p. 151). As was stated, both the competitive views will be tested empirically.

Komorita *et al.* (1991, p. 496) posit that co-operation has effect on reciprocity thus "subjects definitely reciprocate the competitive choices of others and react to defection with defection". Nevertheless, individuals "not always reciprocate … and frequently exploit such behavior" in order to maximise "the payoff difference between self and other" (*ibid.*, p. 496). Co-operation denotes "similar or complementary actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocity over time" (Lambe *et al.*, 2001, p. 23). As a relationship develops, exchange partners begin to expect that the other part will co-operate and that both firms will benefit from co-operation (*ibid.*, p. 23). Hence, co-operation is expected to be an antecedent of reciprocity.

Although the literature supports the relationship between co-operation and reciprocity, the link is under-researched in the marketing context. Consequently, it is essential to define the two concepts in order to understand better the causal relationship between them. Palmatier *et al.* (2006, p. 139) explain that co-operation refers to "coordinated and complementary actions between exchange partners to achieve mutual goals". Indeed, co-operation encompasses the following facets: jointly agreed goals, similar approach to doing business, pulling together in the same direction, mutual decisions in the presence of problems and mutual respect (Deepen, 2007). Drawing on the study of Pervan *et al.* (2009), it is hypothesized that reciprocity is a higher-order construct which comprises three dimensions: exchange-of-good, provider's-response-to-harm and client's-response-to-harm. On one hand, exchange-of-good encompasses several aspects: providing each other equal benefits, equity in dealings and exchange of the exchange of benefits, which even out over time. On the other

hand, response-to-harm encompasses several mutual facets: seeking to remedy the situation in the presence of a mistake, redressing problems, honesty about the problems which arise and providing information about them. As both perception of exchange-of-good and response-to-harm are contingent upon jointly agreed goals and similar approach to doing business, co-operation is expected to be an antecedent of the second-order reciprocity construct. Hence, it is hypothesized that:

H_9. Co-operation has a direct positive effect on reciprocity.

5.2.10 Reciprocity and Loyalty

In order for trust, mutual commitment and loyalty to develop, parties must abide by exchange rules, which refer to "a normative definition of the situation that forms among or is adopted by the participants in an exchange relation" (Cropanzano and Mitchell, 2005, p. 875). Meyer and Allen (1991) explain "that the concept of reciprocity has been postulated as a mechanism by which both normative and affective commitment are translated into behavior". Hence, "to the extent that the individual has internalized a reciprocity norm or "exchange ideology", the receipt of special favors, or investments, from the organization may oblige" to remain in the relationship even in the presence of more attractive alternatives (*ibid.*, p. 78). Pervan *et al.* (2009, p. 61) posit that reciprocity "may generate equilibrium" as well as "expectation and self-esteem leading to feelings of personal well-being". Further, "equilibrium is achieved because reciprocal exchange should be fitting and proportional. Expectation is provided by consistently upholding the norm, and self-esteem develops because the act of reciprocity is, by definition, one of respect. The desire to consistently achieve well-being may then lead to greater trust and commitment to the relationship" (*ibid.*, p. 61). Moreover, "reciprocity should explain a significant amount of the variance in commitment because exchanging good and productively responding to problems is a feature of strong relationships" (*ibid.*, p. 61). Indeed, the study of Pervan *et al.* (2009) demonstrates that both reciprocity and trust are the antecedents of commitment.

Palmatier et al. (2006) posit that although commitment and trust have been important dimensions of relationship marketing, such constructs as reciprocity along with relational norms, relationship satisfaction, exchange efficiency and equity may play critical role. Consequently, Palmatier et al. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). This argument is supported by meta-analysis (Palmatier *et al.*, 2006, p. 138), which indicates that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has a substantial effect on seller's objective performance through the mediating variable of commitment defined as "an enduring desire to maintain a valued relationship".

Drawing on the work of Oliver (1997), it is hypothesized that loyalty is a sequential chain, which comprises four stages: cognitive loyalty, affective loyalty, conative loyalty and action loyalty (see Section 5.2.2). Conative loyalty refers to the brand-specific and "deeply-held commitment to buy" (Oliver, 1999, p. 35) whereas action loyalty denotes readiness to act overcoming obstacles. Readiness to act reflects "*deeply held commitment* to re-buy or re-patronize a preferred product/service consistently in the future" (*ibid.*, p. 36). As both the dimensions encompass commitment, it is deemed appropriate to specify a direct effect of reciprocity on loyalty. Consequently, it is hypothesized that:

H_{10}. Reciprocity has a direct positive effect on loyalty.

5.3 Hypotheses Pertaining to Organizational Culture

This section introduces competing conceptual models. Having introduced the models, sections 5.3.2 through 5.3.6 proceed with the theoretical support for the hypotheses pertaining to organizational culture. Hypotheses are developed step-by-step using five dimensions of organizational culture: (1) individualism and collectivism, (2) human orientation, (3) power distance, (4) assertiveness and (5) uncertainty avoidance.

Level of Analysis

The issue pertaining to level of analysis in the organizational and cross-cultural literature has been central and fiercely debated for many years (Hofstede, 1980; Hofstede, 2006; Javidan *et al.*, 2006; Smith, 2006). Hofstede (2001, p. 16) argues that ecological fallacy is committed when relationships found at a collective level (e.g. national or organizational culture) "are interpreted as if they apply to individuals" and clarifies further that reverse ecological fallacy refers to construction of "ecological indexes from variables correlated at the individual level". Indeed, Denison (1996) and Castro (2002) echo that relationships present at the individual level may or may not exist at an aggregate level. Moreover, Leung and Bond (1989) argue that level of analysis affects both structural relationships and measurement models thus dimensionality can vary at different levels of analysis.

The current study draws heavily on the GLOBE theory of culture, which operationalizes organizational and national cultures using the same dimensions. The authors of the GLOBE questionnaire (House and Hanges, 2004, p. 99) warn that "the units of analysis for project GLOBE consisted of cultural-level aggregated responses of middle managers" thus the scales may show different psychometric properties at the individual level of analysis. However, Peterson and Castro (2006) provide contra-arguments and posit that the scales were designed at the individual level using the cross-level approach therefore the constructs and relationships should be valid at the all levels of analysis. The issues related to level of analysis is discussed more broadly in section 6.6, which reviews the relevant literature and justifies the use of the GLOBE theory and measures of organizational culture at the individual level of analysis.

Besides using the GLOBE theory to conceptualize the effects of organizational culture, the current study also employs the theoretical evidence stemming from the individual (e.g. Schwartz, 1992), organizational (e.g. Carl *et al.*, 2004) and national (e.g. Hofstede, 2001) levels of analysis. Hence, the current study contends that culture is either a cross-level or an individual-level phenomenon. Dansereau and Yammarino (2006, p. 538) explain the cross-

level approach and argue that "the idea in this approach is that organizations tend to attract, select, and retain individuals who are similar to one another. This practice produces an organization that contains individuals who are similar. As a result, the individuals in the organization come to perceive variables in the same way" thus relationships and constructs are the same at both the individual and organizational levels. The *individual view* originates from the work of James *et al.* (1984). According to this view "individual's perceptions may simply reflect the individual-level personality differences among people rather than cultures" (Dansereau and Yammarino, 2006, p. 539) therefore constructs and relationships must be analysed at the individual, but not an aggregate level of analysis.

Indeed, the empirical research supports the cross-level and individual-level views. The measures of Hofstede (2001) were developed using the convergent-emergent approach whereas the GLOBE study followed the cross-level approach (Peterson and Castro, 2006). Nevertheless, the correlations between the similar dimensions of the two studies are substantial. For example, correlation between in-group collectivism practices and Hofstede's individualism scale is equal to -.82 (Gelfand *et al.*, 2004). Moreover, the current study also supports the cross-level and individual-level views. As it will emerge later (see Section 7.3), the dimensionality of organizational culture measured at the individual level of analysis is very similar to that of the GLOBE study. Moreover, the linkages valid at the national and organizational levels of analysis appear to be significant at the individual level of analysis (see Section 9.2).

5.3.1 The Research Models

This section will introduce recursive and non-recursive models (see Figure 5.3 and 5.4) and will explain the research hypotheses pertaining to organizational culture. Having introduced the models, sections 5.3.2. through 6.3.6 will proceed with the theoretical support for the hypotheses.

Figure 5.3: Conceptual Effects of Organizational Culture on Relationship Quality (Recursive Model)
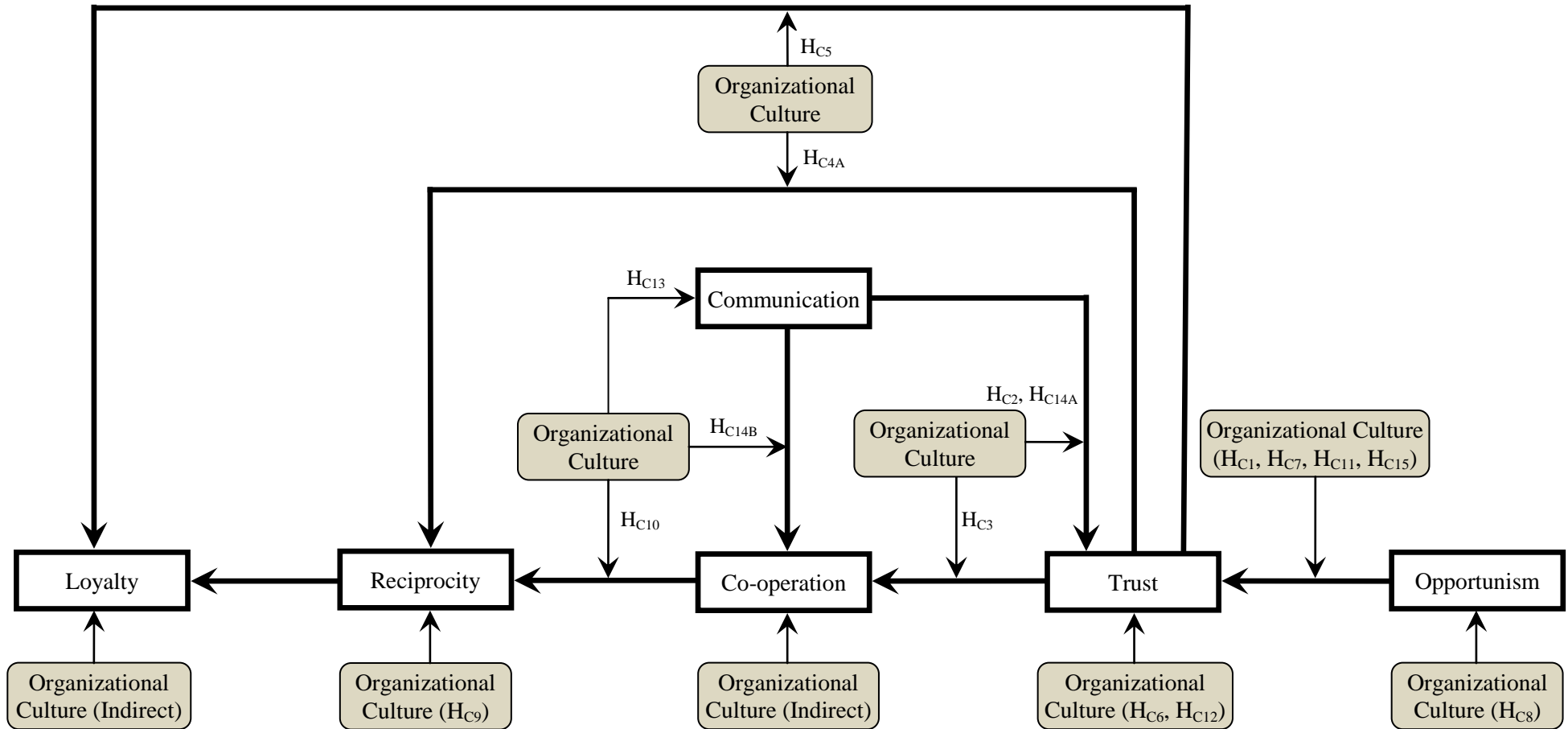
The effects of collectivism: H_{C1}, H_{C2}, H_{C3}, H_{C4A}, H_{C5}.
The effects of human orientation: H_{C6}, H_{C7}.
The effects of power distance: H_{C8}, H_{C9}, H_{C10}.
The effect of assertiveness: H_{C11}.
The effects of uncertainty avoidance: H_{C12}, H_{C13}, H_{C14}, H_{C15}.

Figure 5.4: Conceptual Effects of Organizational Culture on Relationship Quality (Non-Recursive Model)
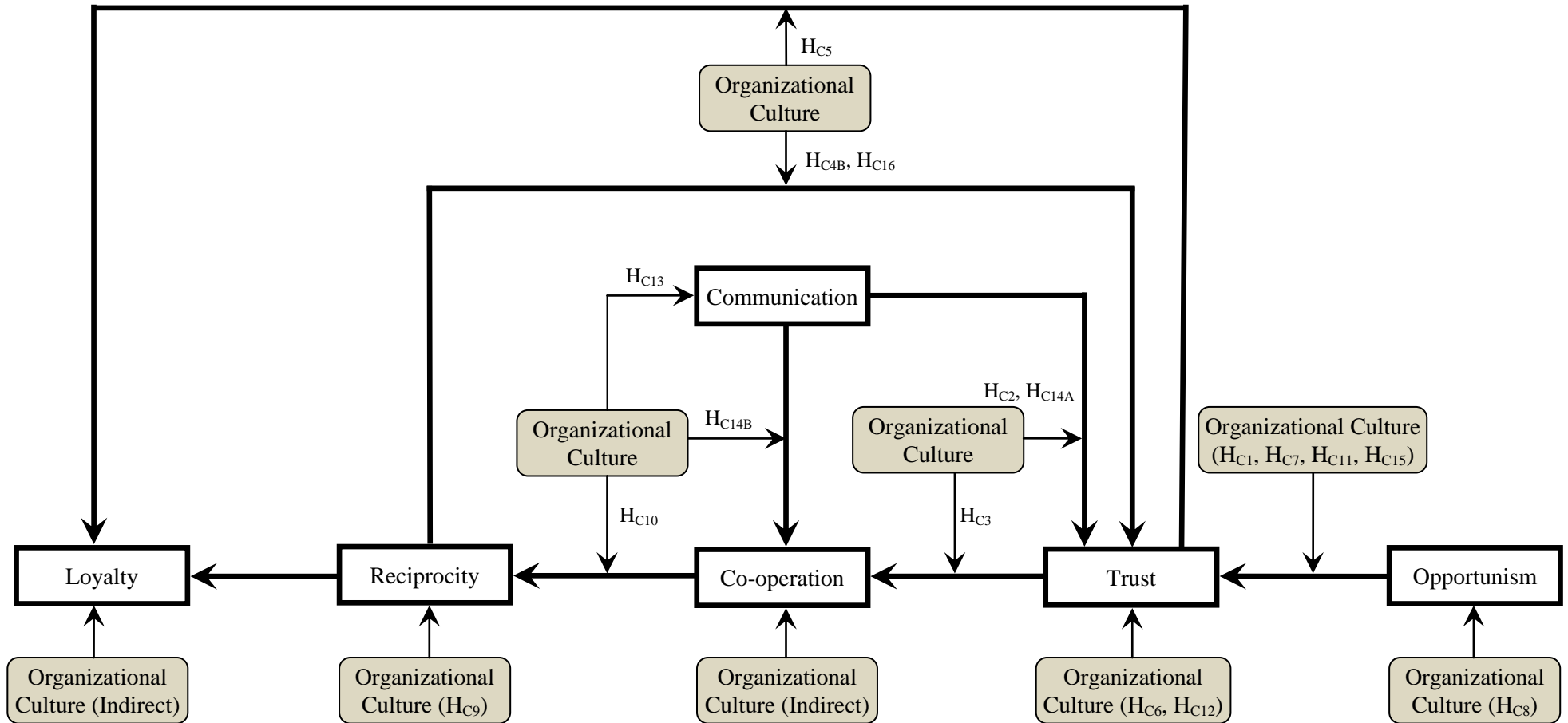
The effects of collectivism: H_{C1}, H_{C2}, H_{C3}, H_{C4B}, H_{C5}.
The effects of human orientation: H_{C6}, H_{C7}.
The effects of power distance: H_{C8}, H_{C9}, H_{C10}.
The effect of assertiveness: H_{C11}.
The effects of uncertainty avoidance: H_{C12}, H_{C13}, H_{C14}, H_{C15}, H_{C16}.

Individualism and Collectivism

Although collectivism is praised for the focus on high morality, trusting relationships and other virtues, the qualities of this culture may apply only to in-groups (Doney *et al.*, 1998; Yamagishi *et al.*, 1998; Gómez *et al.*, 2000; Huff and Kelley, 2003). Hence, the effects of collectivism on loyalty, reciprocity and co-operation may be not relevant to out-group relationships. Indeed, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders" (Schwartz, 1992).

Hofstede (2001) contends that trust is the key prerequisite of business relationships in collectivistic cultures. Through trust based "relationship, both parties adopt the other into their in-groups and from that moment onward both are entitled to preferential treatment" (*ibid.* p. 239). Hennig-Thurau *et al.* (2004) contend that the relationship between confidence benefits and loyalty should be stronger in collectivistic cultures. Doney *et al.* (1998) relates trust to collectivism and explains that in collectivistic cultures trust is formed via prediction and intentionality processes. Trust develops "via a prediction process whereby a trustor determines that a target's past actions provide a reasonable basis upon which to predict future behavior" (*ibid.*, p. 605). Moreover, "using an intentionality process to establish trust, trustors interpret targets' words and behavior and attempt to determine their intentions in exchange" (*ibid.*, p. 606). Owing to the importance of trust in collectivistic cultures, it is expected the both the antecedents of trust (H_{C1} and H_{C2}, see Figure 5.3; H_{C4B}, see Figure 5.4) as well as trust itself (H_{C3}, H_{C4A} and H_{C5}; see Figure 5.3) will have stronger effects in collectivistic organizational cultures.

Human Orientation

Human orientation is related to values of benevolence and universalism (Kabasakal and Bodur, 2004). Larzelere and Huston (1980, p. 596) argue that "the more … the target person is seen as benevolent and honest toward the perceiver, the more likely the perceiver will be to

predict a favorable future for the relationship". Hence, "trust exists to the extent that a person believes another person (or persons) to be benevolent and honest" (*ibid.*, p. 596). Mayer *et al.* (1995, p. 719) contend that "benevolence is the perception of a positive orientation of the trustee toward the trustor" which "plays an important role in the assessment of trustworthiness, in that high benevolence in a relationship would be inversely related to motivation to lie". Hence, Mayer *et al.* (1995) hypothesize that benevolence is an antecedent of trust. Doney and Cannon (1997) concur that perception of trust is dependent on credibility and benevolence. *Hence*, H_{C6} *states that human orientation has a direct positive effect on trust* (see Figure 5.3)*.* As the relationship quality model encompasses a chain, which comprises the five dimensions, it is expected that human orientation will have indirect effects on co-operation, reciprocity and loyalty (see Figure 6.3).

Benevolence encompasses helpfulness and forgivingness (Schwartz, 1992; Bigoness and Blakely, 1996) thus individuals from cultures high on human orientation may also be more tolerant towards opportunism of service providers. Moreover, tolerance is embedded in universalism (Schwartz, 1992) which is even more related to human orientation. Thus members of human-oriented cultures may have wider zones of tolerance and perceive opportunistic behaviour less as opportunism itself and more as temporary service failure, which requires service recovery. *Consequently,* H_{C7} *states that the higher human orientation, the weaker the effect of opportunism on trust.*

Power Distance

Power distance prevents co-operation by decreasing trust and increasing perceptions of others as a threat (Doney *et al.*, 1998; Stephan *et al.*, 2008). Hence, power distance may have a direct positive effect on perception of opportunism. As opportunism is hypothesized to be the first stage of the relationship quality model, the dimension may also mediate the negative effects of power distance on trust, co-operation, reciprocity and loyalty (see Figure 5.3). Drawing on the work of John (1984), Doney *et al.* (1998) hypothesize that "by establishing acceptable

levels of power and coercion", power distance triggers opportunistic behaviour of both relationship partners. John (1984) has demonstrated that opportunistic behaviour of the relationship partner is induced by the perception that the other relationship party abuses power in the form of rules, authority structures and monitoring. *Hence,* H_{C8} *states that power distance has a direct positive effect on opportunism.*

Davis *et al.* (1997, p. 22) contend that people in hihg power distance cultures are more likely to develop principal-agent relationships, which are based on the assumption that both agents and principals strive to achieve as much as "possible utility with the least possible expenditure". Moreover, power distance reflects unequal distribution of roles and resources (Schwartz, 1999) and abuse in power (Carl *et al.*, 2004). *Hence,* H_{C9} *states that power distance has a direct negative effect on reciprocity.*

The literature reviewed supports both direct and indirect effects of power distance on the three dimensional construct of reciprocity comprising *provider's-response-to-harm*, *client's-response-to-harm* and *exchange-of-good*. However, power distance may also have direct negative effects on separate first-order dimensions of the latter outcome. This proposition is rooted in the equity theory (Adams, 1963). It is expected that organizations (clients) high on power distance demonstrate lower levels of reciprocity by comparison with service providers across the two dimensions: *client's-response-to-harm* (H_{C9A}) and *exchange-of-good* (H_{C9B}). Indeed, high power distance or hierarchy is antithetical to co-operation (Carl *et al.*, 2004). Moreover, members of cultures high on power distance strive to achieve as much as "possible utility with the least possible expenditure" (Davis *et al.*, 1997, p. 22). Thus, organizations (clients) high on power distance may be more sensitive to issues pertaining to provider's co-operation when evaluating *provider's-response-to-harm* (H_{C10}). The higher power distance, the greater imbalance of reciprocity which is followed by greater sensitivity to problems in co-operation. Hence, the three-fold set of hypotheses states that: **H_{C9}.** *Power distance has direct negative effects on the two dimensions of reciprocity: a) client's-response-*

to-harm, b) exchange-of-good. **H$_{C10}$.** *The greater power distance, the stronger the effect of co-operation on provider's-response-to-harm.*

Assertiveness

Individuals from assertive cultures, "build trust on the basis of capabilities or calculation" and "act and think of others as opportunistic" (Hartog, 2004, p. 405). The calculative process of trust building is based on the transaction-cost theory thus trustors must determine if the benefits of opportunistic behaviour exceed the targets' costs (Doney *et al.*, 1998). The assessment of trustworthiness is based on "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (*ibid.*, p. 605). Hence, "trustors assume that targets exhibit "trust-like" behaviour because they are self-interest-seeking individuals, making net present value calculations - the results of which indicate net benefits to refraining from opportunistic behaviour" (*ibid.*, p. 605).

As trust "incorporates the notion of risk as a precondition of trust" (Doney et al., 1998, p. 604), the individuals from assertive cultures may be both risk taking and more tolerant towards opportunism of others. Dickson et al. (2006) argue that members of assertive cultures are "more aggressive and proactive in dealing with situations in their ... relationships that might lead to opportunistic behaviour" and thus they are more tolerant towards opportunism. Indeed, the study of Dickson et al. (2006) demonstrates that the greater assertiveness, the lower concerns about opportunistic behaviour. Consequently, H$_{C11}$ *states that the greater assertiveness, the weaker the effect of opportunism on trust.*

Uncertainty Avoidance

Earley (1997) relates feedback seeking to uncertainty avoidance. Indeed, Ashford and Cummings (1983, p. 374) contend "that information seeking is a primary means of reducing uncertainty" thus "when the appropriate response to a stimulus is ambiguous, the individual experiences a noxious state of uncertainty", which "creates a tension the individual is motivated to resolve by seeking additional information". Hence, "feedback seems to be a

resource valuable in resolving feelings of ambiguity and uncertainty" (Ashford and Cummings, 1985, p. 76-77). Luque and Sommer (2000, p. 838) contends that members of organizations high on uncertainty avoidance "will engage in greater feedback seeking". Morrison (2002) agrees that "feedback seeking is more frequent to the extent that uncertainty is high and tolerance for uncertainty low". Gudykunst and Nishida (2001) demonstrate that anxiety and uncertainty have negative effects on perceived effectiveness of communication. Hofstede (2001) has corroborated the negative relationship between uncertainty avoidance and trust. *Hence, the four-fold set of hypotheses states that:* H_{C12}. *Uncertainty avoidance has a direct negative effect on trust.* H_{C13}. *Uncertainty avoidance has a direct negative effect on communication.* H_{C14}. *The greater uncertainty avoidance, the stronger the effects of communication on (a) trust and (b) co-operation.*

Doney *et al.* (1998, p. 614) contend that "the prevailing view in high uncertainty avoidance cultures is that human behaviour is predictable. Variability in a partners' performance is unacceptable, and a relatively high value is placed on predictability in relationships" thus individuals in high uncertainty avoidance cultures "form trust via a prediction process". Further, "trust building via a prediction process requires information about a target's past actions – the greater the variety of shared experiences, the greater the generated knowledge base and the more a target's behavior becomes predictable" (*ibid.*, p. 605). Hence, the consistency of past actions and the congruence between the actions and promises play the key role in judging predictability of behaviour. *Hence, the two-fold set of hypotheses states that:* H_{C15}. *The greater uncertainty avoidance, the stronger the effect of opportunism on trust.* H_{C16}. *The greater uncertainty avoidance, the stronger the effect of reciprocity on trust.*

5.3.2 Individualism and Collectivism

Having introduced the effects of organizational culture, sections 5.3.2 through 5.3.6 will proceed with the theoretical support for the hypotheses pertaining to organizational culture.

That is, five dimensions of organizational culture are explored in order to reveal their ties with relationship quality: individualism and collectivism, human orientation, power distance, assertiveness and uncertainty avoidance.

Although conceptualizations of individualism and collectivism differ across studies (Schwartz, 1994b; Triandis, 1995a; Hofstede, 2001), "they all relate to a theme that contrasts the extent to which people are autonomous individuals or embedded in their groups" (Gelfand *et al.*, 2004, p. 440). According to Schwartz (1994b) members of collectivistic societies are embedded in their groups which are based on close-knit harmonious relations whereas individualistic cultures are characterized by autonomy of individuals entitled to achieve personal interests and desires. Collectivism is based on fostering motivation to consider welfare of other individuals and emphasizes egalitarianism instead of hierarchy.

Triandis (1995a, p. 43) concur that "the definition of the self is interdependent in collectivism and independent in individualism". This is manifested in sharing of resources and conformity to the norms of the group. The defining characteristic of collectivism is the compatibility of personal goals with communal goals. On one hand, norms, obligations and duties guide social behaviour in collectivistic cultures. On the other hand, the antecedents of social behaviour in individualistic cultures are attitudes, personal needs, rights and contracts. Finally, relationships are important in collectivistic cultures even if they are disadvantageous. In contrast, the maintenance of relationships in individualistic cultures is based on rational analyses of the advantages and disadvantages.

Drawing on the work of Triandis (1995a), Gelfand *et al.* (2004) forward the key differences between individualistic and collectivistic organizational cultures. The members of individualistic cultures possess the following characteristics: (1) independence, (2) stress on unique skills and abilities instead of relationships and social background, (3) calculative needs and goals and (4) attitude driven organizational behaviour. In contrast, the employees of collectivistic organizational cultures are characterized by: (1) interdependence, (2) the

consistency between organization and individual's self-identity, (3) stress on relationships, duties and obligations and (4) priority of communal goals and desires. Finally, Gelfand *et al.* (2004, p. 447) conclude that the employees of collectivistic organizational cultures "would view the nature of their relationship with the organization as one that is less a matter of rational exchanges and more a matter of long-term relational exchanges".

Chatman *et al.* (1998) posit that collectivistic organizational cultures are characterized by shared objectives, interchangeable interests and commonalities among members. Further, "members of collectivistic cultures are more likely … to agree about what constitutes correct action, behave according to the norms of the culture, and suffer or offer severe criticism for even slight deviations from norms" (Chatman *et al.*, 1998, p. 751). Indeed, collectivism is characterized by higher morality while individualism is related to calculative values (Etzioni, 1975).

Finally, Triandis (1995a, p. 58) argues that individualistic organizational cultures demonstrate "less time perspective and less reciprocity of action". In contrast, members of collectivistic cultures "show much reciprocity and are less likely to maximize individual gains by taking advantage of other group members" (*ibid*., p. 58). Indeed, the study by Moorman and Blakely (1995) has corroborated the positive effect of collectivistic values and norms on interpersonal helping. Ting-Toomey (1986) concurs that reciprocity appears to be obligatory in collectivistic cultures.

Although collectivism is praised for the focus on high morality, trusting relationships and other virtues, the qualities of this culture may apply only to in-groups (Doney *et al.*, 1998; Yamagishi *et al.*, 1998; Gómez *et al.*, 2000; Huff and Kelley, 2003). Hence, the reviewed effects of collectivism on loyalty, reciprocity and co-operation may be not relevant to out-groups relationships. Indeed, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders", whereas individualistic cultures "tend to distinguish less sharply between in-groups and out-

groups when responding to their needs" (Schwartz, 1992, p. 12). Indeed, Schwartz (2007) has corroborated the negative effect of collectivism on moral inclusiveness which refers to broadness of the community to which the values of benevolence and universalism are applied.

Hofstede (2001) contends that trust is the key prerequisite of business relationships in collectivistic cultures. Through a trust-based "relationship, both parties adopt the other into their in-groups and from that moment onward both are entitled to preferential treatment" (*ibid.* p. 239). Moreover, the relationship is established between persons rather than companies. Hence, "to the collectivistic mind, only natural persons are worthy of trust, and via these persons their friends and colleagues, but not impersonal legal entities like companies" (*ibid.* p. 239). The personal relationships take priority over the company and task thus they should be established first. Indeed, Hennig-Thurau *et al.* (2004) hypothesize that the relationship between confidence benefits and loyalty should be stronger in collectivistic cultures.

Doney *et al.* (1998) relates trust to collectivism and explains that in collectivistic cultures trust is formed via prediction and intentionality processes. Trust develops "via a prediction process whereby a trustor determines that a target's past actions provide a reasonable basis upon which to predict future behavior" (*ibid.*, p. 605). Moreover, using this process "the trustor confers trust based on prior experiences demonstrating that the target's behavior is predictable. The consistency of the target's past actions and the extent to which the target's actions are congruent with his or her words affect the degree to which a trustor judges the target's behavior to be predictable" (*ibid.*, p. 605). Moreover, "using an intentionality process to establish trust, trustors interpret targets' words and behavior and attempt to determine their intentions in exchange" (*ibid.*, p. 606). As "the costs of deviant behavior are high in collectivist societies" (*ibid.*, p. 611), the effects of opportunism and communication on trust may be stronger for collectivistic organizational cultures. Owing to the importance of

trust in collectivistic cultures, it is likely that trust is a stronger antecedent of co-operation, reciprocity and loyalty. Consequently, based on the literature reviewed it is hypothesized that:

H$_{C1}$. The higher collectivism, the stronger the effect of *opportunism* on *trust* in outsourcing (out-group) relationships.

H$_{C2}$. The higher collectivism, the stronger the effect of *communication* on *trust* in outsourcing (out-group) relationships.

H$_{C3}$. The higher collectivism, the stronger the effect of *trust* on *co-operation* in outsourcing (out-group) relationships.

H$_{C4}$. The higher collectivism, the stronger the direct effects of (a) trust on reciprocity and (b) reciprocity on trust in outsourcing (out-group) relationships.

H$_{C5}$. The higher collectivism, the stronger the effect of trust on loyalty in outsourcing (out-group) relationships.

5.3.3 Human Orientation

Drawing on the work of Triandis (1995a), Kabasakal and Bodur (2004, p. 565) posit that "values of altruism, benevolence, kindness, love and generosity are salient as motivating factors guiding people's behaviour in societies characterized by high human orientation". The landmark study by Schwartz (1992) forwards ten distinct value types and classifies them into two dimensions: *openness to change* versus *conservation* and *self-enhancement* versus *self-transcendence*. Although Kabasakal and Bodur (2004) relate *self-transcendence* to human orientation, there are some controversies.

Schwartz (1992) explains that *self-enhancement* is characterized by *power*, *achievement* and *hedonism* while *self-transcendence* comprises *benevolence* and *universalism*. Benevolence "focuses on concern for the welfare of close others in everyday interaction" (Schwartz, 1992, p. 11). Hence, the focus of benevolence values is narrower. The values of

benevolence comprise helpfulness, honesty, forgiving, loyalty, responsibility, a spiritual life, true friendship, mature love and meaning in life. Nevertheless, the values are more relevant to in-group relationships.

In contrast, the values of universalism encompass social justice, equality, inner harmony, broad-mindedness, wisdom, protecting environment, a world at peace, unity with nature and a world of beauty (Schwartz, 1992). Individuals from cultures high on universalism attach great importance on equal treatment of every person and strive to achieve justice for everybody including strangers from out-groups (Schwartz *et al.*, 2001).

The study by Bigoness and Blakely (1996) concurs with the findings of Schwartz (1992) and forwards two dimensions identical to *benevolence* and *universalism*. The first dimension comprises five instrumental values (cheerful, forgiving, helpful, and loving) and corresponds to b*enevolence* while the second factor encompasses three items (broadminded, capable, and courageous) and is similar to *universalism*.

Although Kabasakal and Bodur (2004, p. 565) argue that both *benevolence* and *universalism* "strongly connote human orientation", a number of studies indicate that the former dimension belongs rather to collectivism (Triandis *et al.*, 1990; Schwartz, 1992; Hofstede, 2001). Indeed, Schwartz (1992, p. 39) hypothesizes that individualism is correlated with "universalism but not necessarily to benevolence" while collectivism is related to "benevolence, but not necessarily to universalism". Moreover, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders", whereas individualistic cultures "tend to distinguish less sharply between in-groups and out-groups when responding to their needs" (*ibid.*, p. 12). Hence, "this suggests a pattern of much greater emphasis on benevolence … in collectivistic cultures and more equal emphasis on both value types in individualistic cultures" (*ibid.*, p. 12). Indeed, Schwartz (2007) has corroborated the negative effect of collectivism on moral inclusiveness which refers to broadness of the community to which the values of benevolence and

universalism are applied. When individuals, whose moral universe is restricted to their in-groups, perceive justice or equality as important, "the meaning of these values is no longer distinct from the meaning of benevolence values" (Schwartz, 2007, p. 713).

Larzelere and Huston (1980, p. 596) argue that "the more … the target person is seen as benevolent and honest toward the perceiver, the more likely the perceiver will be to predict a favorable future for the relationship". Hence, "trust exists to the extent that a person believes another person (or persons) to be benevolent and honest" (*ibid.*, p. 596). Mayer *et al.* (1995, p. 719) contends that "benevolence is the perception of a positive orientation of the trustee toward the trustor" which "plays an important role in the assessment of trustworthiness, in that high benevolence in a relationship would be inversely related to motivation to lie". Consequently, Mayer *et al.* (1995) hypothesize that benevolence is the antecedent of trust. Doney and Cannon (1997) concur that perception of trust is dependent on credibility and benevolence. Thus, "through the process of intentionality, buyers attribute benevolent motives to those they like or perceive as similar to themselves" (*ibid.*, p. 47). According to Sirdeshmukh *et al.* (2002), "a benevolent partner can be trusted to take initiatives (favoring the customer) while refraining from unfair advantage taking". The study indicates that benevolence has effect on the perception of trust in front line service employees. Although a number of studies demonstrate that benevolence is a part of trust (Geyskens *et al.*, 1998), the constructs have also appeared to be discriminant (Schumann, 2009b). Moreover, the positive effect of benevolence on trust has been corroborated by Schumann (2009b).

As benevolence comprises helpfulness and forgivingness (Schwartz, 1992; Bigoness and Blakely, 1996), individuals from cultures high on human orientation may also be more tolerant towards opportunism of service providers. Moreover, tolerance is embedded in universalism (Schwartz, 1992) which is even more related to human orientation. Indeed, universalism encompasses "understanding, appreciation, tolerance, and protection for the welfare of all people and for nature" (Schwartz, 1994a, p. 22). According to Geyskens *et al.*

(1998, p. 225), "trust in the partner's benevolence is a … belief that [the] partner is genuinely interested in one's interests or welfare and is motivated to seek joint gains". Hence, members of human-oriented cultures may have wider zones of tolerance and perceive opportunistic behaviour less as opportunism itself and more as temporary service failure, which requires service recovery. Indeed, "benevolent acts of service facilitation are kind, charitable acts on the part of customers, within the immediate service exchange and may include tolerance, patience and politeness" (Bove *et al.*, 2009, p. 699). Hence, based on the literature reviewed it is hypothesized that:

H_{C6}. Human orientation has a direct positive effect on trust.

H_{C7}. The higher human orientation, the weaker the effect of opportunism on trust.

5.3.4 Power Distance

Drawing on the work of Hofstede (2001), the GLOBE theory defines power distance as "the degree to which members of a collective expect power to be distributed equally" (Javidan *et al.*, 2004, p. 30). Schwartz (1999) forwards eleven values and classifies them into seven types structured along three polar dimensions: *conservatism* versus *intellectual and affective autonomy*, *mastery* versus *harmony* and *hierarchy* versus *egalitarianism*. *Hierarchy* refers to "cultural emphasis on the legitimacy of an unequal distribution of power, roles and resources (social power, authority, humility, wealth)" whereas *egalitarianism* denotes "a cultural emphasis on transcendence of selfish interests in favour of voluntary commitment to promoting the welfare of others (equality, social justice, freedom, responsibility, honesty)" (*ibid.*, p. 27-28).

Focusing on the work of Schwartz (1999), Carl *et al.* (2004) relate *hierarchy* and *egalitarianism* to co-operation and posit that *hierarchy* is antithetical to co-operation while *egalitarianism* fosters concern for everyone's welfare and internalizes commitment to the voluntary co-operation. Indeed, power distance prevents co-operation by decreasing trust and

increasing perceptions of others as a threat (Doney *et al.*, 1998; Stephan *et al.*, 2008). Hence, power distance may have a direct positive effect on perception of opportunism. As opportunism is hypothesized to be the first stage of the relationship quality model (see Figure 5.3), the dimension may also mediate the negative effects of power distance on trust, co-operation, reciprocity and loyalty. Indeed, the literature supports this proposition. Drawing on the work of John (1984), Doney *et al.* (1998, p. 612) hypothesize that "by establishing acceptable levels of power and coercion", power distance triggers opportunistic behaviour of both relationship partners. John (1984) has demonstrated that opportunistic behaviour of the relationship partner is induced by the perception that the other relationship party abuses power in the form of rules, authority structures and monitoring. Owing to transaction cost theory, Rokkan *et al.* (2003) concur that building of hierarchy by specific investments results in opportunism on the receiver's part. Surprisingly, the interaction of specific investments and solidarity shifts the effect of specific investments from expropriation to bonding. Hence, not power or hierarchy, but the norm of solidarity is essential for prevention of opportunism. However, co-operation based solidarity as well as mutual and comparable dependence and group affiliation are attributed to cultures which are low on power distance (Doney *et al.*, 1998).

Davis *et al.* (1997, p. 22) hyptothesize that people from cultures high in power distance are more likely to develop principal-agent relationships, which are based on the assumption that both agents and principals strive to achieve as much as "possible utility with the least possible expenditure". Hence, the both sides may perceive higher levels of opportunism. Indeed, Doney *et al.* (1998) hypothesize that the higher power distance, the more trust is built via the calculative process of trust building. The calculative process of trust building is consistent with transaction cost theory (Williamson, 1981) and "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (Doney *et al.*, 1998, p. 605).

Drawing on the works of Sorokin and Lunden (1959) and Sampson (1965), Kipnis (1972) argues that power destroys harmony of social relationships. Persons from culture high in power distance undervalue performance of other individuals and treat them as objects of manipulation. Hence, the behaviour of others is perceived not as self-controlled, but as a consequence of power. In other words, the more powerful "restore cognitive balance by viewing the less powerful as less worthy, less interesting, and deserving of their fate" (*ibid.*, p. 40).

Although the literature reviewed suggests that power distance may have a negative effect on reciprocity through the mediating variables of opportunism, trust and co-operation, power distance may be both a direct and an indirect antecedent of reciprocity. As reciprocity is hypothesized to be a three-dimensional second-order construct comprising *provider's-response-to-harm*, *client's-response-to-harm* and *exchange-of-good*, power distance may result in imbalance across the three dimensions. Adams (1963) forwards equity theory of social exchange and posits that inequity exists when the parties in the relationship have unequal ratios of inputs and outcomes. Adams (1966) explains that in the presence of inequity, the participants will perceive distributive injustice and the party with the lower ratio will experience deprivation. "Inputs" are synonymous with Homans' (1961) "investments" and refer to perceived contributions to the exchange with expected reciprocity. The two distinct characteristics of inputs and outputs are bilateral recognition and relevance (Adams, 1966), which depend on norms, values (Adams, 1963) and expectations (Varey, 2002). Hence, prediction of inequity is contingent upon understanding of culture (Adams, 1963).

Power distance refers to "the degree of inequality in power between a less powerful individual (I) and a more powerful other (O), in which I and O belong to the same (loosely or tightly knit) social system" (Mulder, 1977, p. 90). Moreover, power distance reflects unequal distribution of roles and resources (Schwartz, 1999) and abuse in power (Carl *et al.*, 2004) .

The literature reviewed supports both the direct and indirect effects of power distance on the three dimensional construct of reciprocity comprising *provider's-response-to-harm*, *client's-response-to-harm* and *exchange-of-good*. However, power distance may also have direct negative effects on separate first-order dimensions of reciprocity. Hence, organizations (clients) from cultures high in power distance may demonstrate lower levels of reciprocity by comparison with service providers across the two dimensions: *client's-response-to-harm* and *exchange-of-good*. Indeed, high power distance or hierarchy is antithetical to co-operation (Carl *et al.*, 2004). Moreover, members of cultures high in power distance strive to achieve as much as "possible utility with the least possible expenditure" (Davis *et al.*, 1997, p. 22). Thus, organizations (clients) from cultures high in power distance may be more sensitive to issues pertaining to provider's co-operation when evaluating *provider's-response-to-harm*. The higher power distance, the greater imbalance of reciprocity which is followed by greater sensitivity to problems in co-operation. Consequently, it is hypothesized that:

H_{C8}. Power distance has a direct positive effect on opportunism.

H_{C9}. Power distance has a direct negative effect on reciprocity.

H_{C9}. Power distance has direct negative effects on the two dimensions of reciprocity: a) *client's-response-to-harm*, b) *exchange-of-good*.

H_{C10}. The greater power distance, the stronger the effect of co-operation on provider's-response-to-harm.

5.3.5 Assertiveness

According to Javidan *et al.* (2004, p. 30) assertiveness reflects "the degree to which individuals are assertive, confrontational, and aggressive in their relationships with others". The dimension of assertiveness operationalized by the GLOBE study is a direct descendant of the masculinity and femininity factor identified by Hofstede (Hartog, 2004). Indeed, the

relationship between the two scales are positive ($r = .37$, $p < .05$) and significant (Hartog, 2004). Hofstede (2001, p. 313) contends that "the masculine manager is ... assertive, decisive, and aggressive (only in masculine societies does this word carry a positive connotation). Masculine business is survival of the fittest". Instead of efforts to resolve conflicts, they are denied or solved by fighting until the strongest man wins. Masculine cultures are characterized by price competition and competitive advantage in manufacturing (*ibid*., p. 318).

Doney *et al.* (1998, p. 604) define "trust as a willingness to rely on another party and to take action in circumstances where such action makes one vulnerable to the other party" and hypothesize that "relative to counterparts in collectivist **(feminine)** cultures, trustors in individualist **(masculine)** cultures are more likely to form trust via a calculative process" (*ibid.*, p. 610). Indeed, individuals from assertive cultures, "build trust on the basis of capabilities or calculation" and "act and think of others as opportunistic" (Hartog, 2004, p. 405). The calculative process of trust building is based on the transaction-cost theory thus trustors must determine if the benefits of opportunistic behaviour exceed the targets' costs (Doney *et al.*, 1998). The assessment of trustworthiness is based on "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (*ibid.*, p. 605). Hence, "trustors assume that targets exhibit "trust-like" behaviour because they are self-interest-seeking individuals, making net present value calculations - the results of which indicate net benefits to refraining from opportunistic behaviour" (*ibid.*, p. 605).

Drawing on the work of Deal and Kennedy (1982), Hartog (2004) relates assertiveness to tough-guy-macho culture and argues that the concept of assertiveness is relevant to organizational level of analysis. Indeed, the tough-guy-macho culture denotes "a world of individualists who regularly take high risks and get quick feedback on whether their actions were right or wrong" (Deal and Kennedy, 2000, p. 107).

As trust "incorporates the notion of risk as a precondition of trust" (Doney *et al.*, 1998, p. 604), individuals from assertive cultures may be both risk taking and more tolerant towards opportunism of others. Dickson *et al.* (2006, p. 494) argue that members of assertive cultures are "more aggressive and proactive in dealing with situations in their ... relationships that might lead to opportunistic behaviour" and thus they are more tolerant towards opportunism. Indeed, the study of Dickson *et al.* (2006) demonstrates that the greater assertiveness, the lower concerns about opportunistic behaviour. Consequently, it is hypothesized that:

H_{C11}. The greater assertiveness, the weaker the effect of opportunism on trust.

5.3.6 Uncertainty Avoidance

According to the GLOBE study, "uncertainty avoidance refers to the extent to which members of collectives seek orderliness, consistency, structure, formalized procedures, and laws to cover situations in their daily lives" (De Luque and Javidan, 2004, p. 603). Drawing on the work of Galbraith (1974), Earley (1997) relates feedback seeking to uncertainty avoidance. Indeed, Ashford and Cummings (1983, p. 374) contend "that information seeking is a primary means of reducing uncertainty", thus "when the appropriate response to a stimulus is ambiguous, the individual experiences a noxious state of uncertainty", which "creates a tension the individual is motivated to resolve by seeking additional information". Hence, "feedback seems to be a resource valuable in resolving feelings of ambiguity and uncertainty" (Ashford and Cummings, 1985, p. 76-77). Luque and Sommer (2000, p. 838) hypothesize that "organizations operating in a low tolerance for ambiguity culture will use more formal rules, procedures, and structure for providing feedback" and "will engage in greater feedback seeking". Morrison (2002, p. 230) agrees that "feedback seeking is more frequent to the extent that uncertainty is high and tolerance for uncertainty low".

Gudykunst and Nishida (2001) compare the effects of anxiety and uncertainty on perceived effectiveness of communication across two types of relationships and two cultures. The study indicates that anxiety has a greater effect on perceived effectiveness of

communication for stranger relationships in the United States. In contrast, uncertainty appears to be a stronger antecedent for close-friend relationships. Interestingly, the Japanese sample demonstrates a different pattern: anxiety has a stronger effect on perceived effectiveness of communication for both stranger and close-friend relationships.

The relationship between uncertainty avoidance and trust remains somewhat controversial. On one hand, Doney *et al.* (1998, p. 615) argue that "it may be difficult for trustors to trust other people and institutions" in low uncertainty avoidance cultures. Moreover, Doney *et al.* (1998, p. 615) claim that "low uncertainty avoidance cultures are associated with less regard for stability and permanence in relationships". In other words, low uncertainty avoidance cultures are related to greater risk taking.

On the other hand, the landmark study of Hofstede (2001) demonstrates the opposite relationship between uncertainty avoidance and trust. Indeed, as indicated by the correlation of the uncertainty avoidance index and the 1990-93 World Values Survey, there is a substantial negative relationship (rho = -.72) between uncertainty avoidance and trusting people across 26 countries (*ibid.*, p. 159). Paradoxically, people in high uncertainty avoidance cultures "are often prepared to engage in risky behaviour in order to reduce ambiguities" (*ibid.*, p. 148). However, risk taking in such cultures is limited to known risks. In contrast, individuals from cultures low in uncertainty avoidance take both familiar and unfamiliar risks.

The literature reviewed supports both the direct and moderating effects of uncertainty avoidance. On one hand, the empirical evidence indicates that uncertainty avoidance is a direct negative antecedent of both trust and communication (Hofstede, 2001; Gudykunst and Nishida, 2001). On the other hand, uncertainty avoidance may positively moderate the relationships between communication and its outcomes: trust and co-operation. Consequently, it is hypothesized that:

H_{C12}. Uncertainty avoidance has a direct negative effect on trust.

H_{C13}. Uncertainty avoidance has a direct negative effect on communication.

H$_{C14}$. The greater uncertainty avoidance, the stronger the effects of communication on (a) trust and (b) co-operation.

Doney *et al.* (1998, p. 614) contend that "the prevailing view in high uncertainty avoidance cultures is that human behaviour is predictable. Variability in a partners' performance is unacceptable, and a relatively high value is placed on predictability in relationships". Consequently, individuals in high uncertainty avoidance cultures "form trust via a prediction process" (*ibid.*, p. 614). Further, "trust building via a prediction process requires information about a target's past actions – the greater the variety of shared experiences, the greater the generated knowledge base and the more a target's behaviour becomes predictable" (*ibid.*, p. 605). Hence, the consistency of past actions and the congruence between the actions and promises play the key role in judging predictability of behaviour.

Reciprocity may be a stronger antecedent of trust in high uncertainty avoidance cultures because it involves feedback and communication mechanisms – the concepts, which are important for high uncertainty avoidance societies and organizations. Reciprocity encompasses "a constructive response to conflict", and "the expectation that problem situations would be communicated" (Pervan *et al.*, 2009, p. 64). The concept of reciprocity is very closely related to predictability. According to Molm *et al.* (2007) the value of reciprocity encompass two facets: (1) instrumental or utilitarian and (2) symbolic or communicative. The instrumental value of reciprocity is defined as "the value for the recipient of the good, service, or social exchange" while symbolic value comprises uncertainty reduction by communication of predictability, trustworthiness and partner's respect for the actor in the relationship (Molm *et al.*, 2007, p. 200). Indeed, Schumann (2009b) demonstrates that predictability of service provider is a positive antecedent of trust. The study indicates that the relationship is moderated by uncertainty avoidance. The operationalization of predictability in the study of Schumann (2009b) encompasses several elements of reciprocity. As the literature reviewed

supports the proposition that uncertainty avoidance may moderate the relationship between reciprocity and trust, it is hypothesized that:

H_{C15}. The greater uncertainty avoidance, the stronger the effect of opportunism on trust.

H_{C16}. The greater uncertainty avoidance, the stronger the effect of reciprocity on trust.

5.4 Concluding Remarks

The aim of Chapter 5 is to amalgamate extant literature in order to conceptualize relationship quality and its links with organizational culture. Consequently, Chapter 5 comprises two major parts: hypotheses pertaining to relationship quality and hypotheses pertaining to organizational culture.

Drawing on a synthesis of extant literature, relationship quality is conceptualized as a six-dimensional construct comprising: opportunism, trust, co-operation, communication, reciprocity and loyalty. As there is no consensus about the directionality of the relationship between trust and reciprocity, two competing models are specified.

Having conceptualized relationship quality, conceptualization continues with hypotheses pertaining to organizational culture. As the study comprises the two models of relationship quality, the effects of organizational culture are modelled using both of them. Drawing on a synthesis of extant literature, five dimensions of organizational culture are hypothesized to have direct and moderating effects on relationship quality: individualism and collectivism, human orientation, power distance, assertiveness and uncertainty avoidance.

CHAPTER 6

RESEARCH METHODOLOGY

6.1 Introduction

Chapter 6 is organized into two major parts. The first part encompasses sections 6.2 through 6.6 and centres on the following aspects: research design, questionnaire development, sample, common method bias and level of analysis in cultural research. The second part involves sections 6.7 through 6.8 and focuses on structural equation modelling. That is, this part forwards the methodological approach employed in order to test empirically the direct and moderating effects of interest conceptualized in Chapter 5.

Initially, Chapter 6 reviews three divergent research design frameworks (6.2): exploratory, descriptive and causal (see Figure 6.1). Having justified the selection of the descriptive cross-sectional research design, the discussion proceeds with questionnaire development (6.3). Following the advice of Iacobucci and Churchill (2010), the procedural template comprises the eight steps as illustrated in Figure 6.1: information sought (6.3.1), types of questionnaire and method of administration (6.3.2), individual question generation and content (6.3.3), form of response (6.3.4), question wording (6.3.5), question sequence (6.3.6), internet survey characteristics (6.3.7) and questionnaire pre-testing (6.3.8).

Having described the questionnaire development procedure, section 6.4 proceeds with sampling solutions. *Firstly*, the selection of the sampling frame is discussed (6.4.1). *Secondly*, the procedures pertinent to administration of questionnaires are explained (6.4.2). *Thirdly*, the sample characteristics are presented (6.4.3). *Finally*, the section ends with the evaluation of sample size adequacy for structural equation modelling (6.4.4).

Owing to the consensus that common method bias may be a potential problem in management research, section 6.5 forwards possible methodological solutions to control common method bias. This section is organized into three parts. *Firstly*, divergent definitions and sources of common method bias are reviewed. *Secondly*, procedural and statistical remedies for common method variance are discussed. *Finally*, the section ends with the justification to assess common method bias using the latent factor approach.

Figure 6.1: The Structure of Chapter 6 - Research Methodology

SECTIONS: CONTENT:

| Section 6.2: Research Design | → | **The Justification for the Descriptive Cross-Sectional Research Design** |

| Section 6.3: Questionnaire Development | → | **The Eight Stages of Questionnaire Development:**

1. Information Sought
2. Types of Questionnaire and Method of Administration
3. Individual Question Generation and Content
4. Form of Response
5. Question Wording
6. Question Sequence
7. Internet Survey Characteristics
8. Questionnaire Pre-Testing |

| Section 6.4: Sample | → | 1. Sampling Frame and Sample Selection
2. Administration of Questionnaires
3. Sample Characteristics
4. Sample Size Adequacy for Structural Equation Modelling |

| Section 6.5: Common Method Bias | → | 1. The Definition and Possible Sources
2. Procedural and Statistical Remedies
3. Assessment Using Common Method Latent Factor |

| Section 6.6: Level of Analysis | → | **1. The Issue of Level of Analysis Pertinent to Culture**

2. The Theoretical Approaches to Constructing Cultural Scales

2.1 Emergent View
2.2 Cross-Level View
2.3 Individual View

3. The Justification for Using the GLOBE Scales of Organizational Culture in the Current Study |

Figure 6.1: Continued

SECTIONS: CONTENT:

| Section 6.7:

The Process of Structural Equation Modelling | → | The Basic Principles of the Eight Stages of Structural Equation Modelling |

The Rules of the Most Important Stages

6.7.1 Model Conceptualization

| **Section 6.7.1.1:**

Conceptualization of the Measurement Model | → | **The Positivistic Logic of the Measurement Model Conceptualization:**

1. The Sequential Steps of the Measurement Model Conceptualization

2. The positivistic Criteria for the Measures:

Falsifiability: Content and Construct Validity
Utility: Nomological Validity |

| **Section 6.7.1.2:**

Conceptualization of the Structural Model | → | **The Positivistic Logic of the Structural Model Conceptualization:**

The Sequential Steps of the Structural Model Conceptualization |

Section 6.7.2: Model Identification	→	**The Identification of First-Order and Second-Order Congeneric Measurement Models:** 1. The Minimum Number of Indicators per Construct 2. The Counting Rule of Identification (t-rule) 3. Scaling of Factors
	→	**The Identification Rules of Recursive Structural Models**
	→	**The Identification Rules of Non-Recursive Structural Models:** 1. The Order Condition 2. The Rank Condition

188

SECTIONS: **CONTENT:**

| Section 6.7.3: Parameter Estimation | → | The Assumptions of Maximum Likelihood and the Other Estimation Methods |

↓

6.7.4 Assessing Goodness-of-Fit

Section 6.7.4.1:

Assessing Goodness-of-Fit of the Measurement Model

→

Assessment of Construct Validity:

1. Assessment of Convergent Validity:

1.1 Factor Loadings
1.2 Average Variance Extracted
1.3 Reliability

2. Assessment of Discriminant Validity:

2.1 Fornell-Larcker Test
2.2 χ^2 Difference Test

→

1. Assessment of Goodness-of-Fit Statistics:

1.1 Absolute Goodness-of-Fit Indices:

χ^2 statistic
Normed Chi-Square Index
Goodness-of-Fit Index (GFI)
Root Mean Square Error of Approximation (RMSEA)
Root Mean Square Residual (RMR)
Standardized Mean Square Residual (SRMR)

1.2 Comparative Goodness-of-Fit Indices:

Normed Fit Index
Tucker-Lewis Index
Comparative Fit Index (CFI)

1.3 Parsimonious Goodness-of-Fit Indices:

Parsimonious Normed Fit Index (PNFI)
Akaike Information Criterion (AIC)
Expected Cross-Validation Index (ECVI)

2. Characteristics of Different Fit Indices Demonstrating Goodness-of-Fit across Different Model Complexities and Sample Sizes

Figure 6.1: Continued

As level of analysis has been an important issue in both organizational and cross-cultural research, the problem will be reviewed in section 6.6. This section is organized into three parts. *Firstly*, the potential problems related to level of analysis are discussed. *Secondly*, the theoretical approaches to constructing cultural scales are summarized. *Finally*, the discussion ends with the justification to employ the GLOBE scales of organizational culture in the current study.

Sections 6.7 through 6.8 focus on structural equation modelling and explore the methodological approach employed in order to test empirically the direct and moderating effects of interest conceptualized in Chapter 5.

Section 6.7 concentrates on the structural equation modelling process and is organized into four parts. Initially, the process of structural equation modelling (6.7) is discussed in order to identify the basic principles of the eight sequential stages recommended by Diamantopoulos and Siguaw (2000). This is followed by sub-sections 6.7.1 through 6.7.5 which progressively present a detailed discussion of the intricacies of the structural equation modelling procedures at the most important stages.

Firstly, model conceptualization is discussed (6.7.1). This part begins with conceptualization of the measurement model (6.7.1.1). It clarifies the sequential steps of the measurement model conceptualization and explains the positivistic criteria for selection of measures. This is followed by the sequential steps of the structural model conceptualization (6.7.1.2).

Secondly, model identification (6.7.2) is explored. Initially, this part focuses on the identification of first-order and second-order congeneric measurement models. It clarifies the minimum number of indicators per construct, the counting rule of identification (t-rule) and divergent factor scaling options. Later, the identification rules pertinent to both recursive and non-recursive structural models are discussed. This part ends with the detailed algorithms of identification for complex non-recursive structural models as conceptualized in Chapter 5.

Thirdly, parameter estimation (6.7.3) forwards the assumptions of maximum likelihood and the other estimation methods. This part also compares advantages of divergent estimation methods and ends with the justification to use maximum likelihood estimation.

Fourthly, assessing goodness-of-fit (6.7.4) comprises two parts: assessing goodness-of-fit of the measurement (6.7.4.1) and structural models (6.7.4.2). The former part is aimed at determining construct validity of the measures representing the constructs while the latter part evaluates the degree of consistency between the theoretical relationships and empirical data at hand. The discussion of construct validity encompasses convergent and discriminant validity as recommended by Hair *et al.* (2010, see Figure 6.1). As advocated by Byrne (2010) and Hair et al. (2010), three categories of goodness-of-fit indices are reviewed: absolute, comparative and parsimonious.

Assessing goodness-of-fit of the structural model (6.7.4.2) involves the discussion of parameter estimates, explanatory power (utility) and overall goodness-of-fit which differs from the measurement model stage in several aspects (see Figure 6.1). As advocated by Hair et al. (2010), the need to compare goodness-of-fit of the measurement and structural models by χ^2 difference test is explained. Finally, this part describes the equilibrium assumption which is critical to non-recursive structural models (Paxton *et al.*, 2011) such as conceptualized in Chapter 5.

Fifthly, assessing assumptions of structural equation modelling (6.7.5) encompasses several parts: assessment of normality and data continuousness and the process and options of dealing with non-normal continuous data (see Figure 6.1). As suggested by Finney and DiStefano (2006), both the methods are considered: robust maximum likelihood and maximum likelihood with bootstrapping are discussed as possible remedies for non-normality.

Finally, Chapter 6 ends with the methods for testing moderating effects in structural equation models (6.8). Initially, the pros and cons of multiple-group analysis and testing interactions using product terms are explored. Later, the choice of the orthogonalizing method

is justified. Finally, this part ends with a detailed explanation of the orthogonalizing moderation.

6.2 Research Design

A research design is defined as "the framework of plan for a study, used as a guide to collect and analyse data" which "ensures that the study will be relevant to the problem" (Iacobucci and Churchill, 2010, p. 58). McDaniel and Gates (2007) explain that the research design should also address the research objective and hypotheses. Although there are many research frameworks (Iacobucci and Churchill, 2010), they all can be categorized into the three main types: exploratory, descriptive and causal (Buchanan and Bryman, 2009; Creswell, 2009; Burns and Bush, 2010). Exploratory research design focuses on discovering ideas and insights pawing way for more precise formulation of problems and development of hypothesis (Iacobucci and Churchill, 2010). Commonly employed exploratory research methods encompass qualitative methods such as literature review, focus groups, qualitative interviews, ethnographies and other (Creswell, 2009).

Contrary to exploratory research, wherein the concept under investigation may not be completely understood, descriptive research design "encompasses an array of research objectives" (Iacobucci and Churchill, 2010, p. 84) as well as hypotheses and research questions (Malhotra and Birks, 2007) demonstrating the degree of association between variables (Parasuraman *et al.*, 2007). Indeed, the descriptive research design "is typically concerned with determining the frequency something occurs or the relationship between two variables" (Iacobucci and Churchill, 2010, p. 59). Descriptive research is further classified into cross-sectional and longitudinal. The former type of study provides a snapshot of dynamic process (Kaplan, 2001) based on the representative samples (Iacobucci and Churchill, 2010) while the latter typically uses "permanent samples, called panels, from which data are collected on periodic basis" (Parasuraman *et al.*, 2007, p. 76). Iacobucci and

Churchill (2010) conclude that cross-sectional analysis is the most important type of descriptive research design.

As causal (or experimental) research design "allows one to make causal inferences about relationships among variables" (Parasuraman *et al.*, 2007, p. 64), it differs from both explanatory and descriptive studies. Causal research provides evidence regarding causal associations by means of concomitant variation, time order of variable occurrence and elimination of other explanations (Iacobucci and Churchill, 2010). As the nature of this research design involves many complexities, it takes form of laboratory and field experiments (*ibid.*, p. 60).

Since research design "provides the underlying structure to integrate all elements of a quantitative study so that the results are credible, free from bias, and maximally generalizable" (Dannels, 2010, p. 343), the selection of an appropriate research design is a matter of the utmost importance. Given the structural essence of the research problem, objectives, research questions and hypotheses, a descriptive cross-sectional design was deemed the most suitable for the current study. Despite a number of qualitative studies which have contributed to the understanding of relationship quality phenomenon (Järvelin, 2001; Holmlund, 2008; Athanasopoulou, 2009), numerous calls for survey-based quantitative research have been articulated (Bagozzi, 1995; Hennig-Thurau *et al.*, 2004; Palmatier *et al.*, 2006; Pervan *et al.*, 2009). Moreover, a clear precedent exists within the literature of relationship quality (Crosby *et al.*, 1990; Hennig-Thurau *et al.*, 2002; Woo and Ennew, 2004; Palaima and Auruskeviciene, 2007).

6.3 Questionnaire Development

The process of the development and validation of the research instrument follows the logic suggested by Iacobucci and Churchill (2010). The procedural template comprises the eight steps as illustrated in Figure 6.2. Although the process is presented as a sequential chain, "this step-by-step procedure is often modified via some iteration and looping" (Iacobucci and

Churchill, 2010, p. 204). While several of the stages are typical of paper-and-pencil surveys, the nine-step process is applicable to web-based surveys as well.

Figure 6.2: Procedure for Developing a Questionnaire

```
┌─────────────────────────────────────────────────┐
│            1. Information Sought                  │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│  2. Types of Questionnaire and Method of Administration │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│    3. Individual Question Generation and Content  │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│             4. Form of Response                   │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│             5. Question Wording                   │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│             6. Question Sequence                  │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│        7. Internet Survey Characteristics         │
└─────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────┐
│         8. Questionnaire Pre-Testing              │
└─────────────────────────────────────────────────┘
```
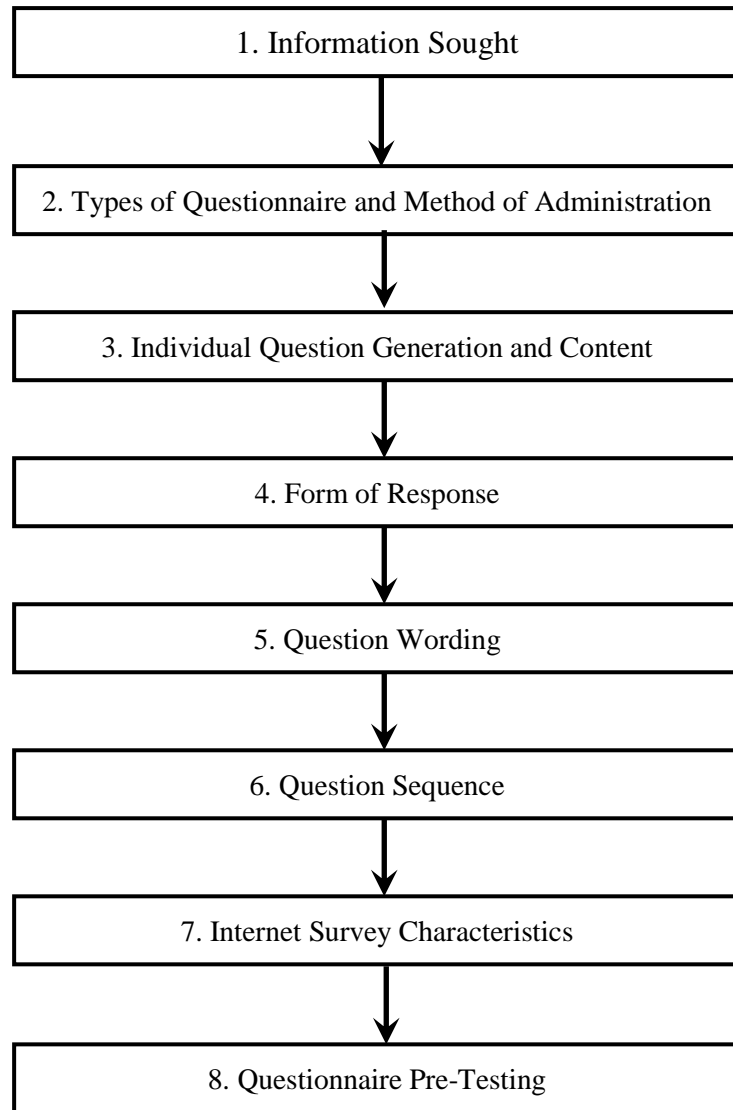
Source: adapted from Iacobucci and Churchill (2010, p. 205)

However, owing to the differences of web-based survey, it is essential to discuss several characteristics pertinent only to this method. As advocated by Best and Krueger (2008), the internet survey design should address the five considerations: uniformity, usability, security, anonymity and layout and design. Uniformity denotes the consistency of instrument appearance across different types of hardware, software and platforms. Usability refers to the level of difficulty of using an online questionnaire. Security solutions should prevent access to

out-of-sample individuals and limit multiple submissions. As "maintaining the security of the online instrument requires some way to identify or track potential respondents" (Best and Krueger, 2008, p. 215), this may result in problem of anonymity which, in turn, threatens the measurement validity and can result in bias. Finally, layout design has effect on response rate thus must be carefully considered. Owing to the importance of the five characteristics, they will be discussed separately in section 6.3.7 after the general nine-step process of questionnaire development.

6.3.1 Information Sought

Iacobucci and Churchill (2010, p. 204) explain that "both descriptive and causal research demand sufficient prior knowledge to allow the framing of specific hypotheses for investigation, which then guide the research". The development of individual questions was guided by the two constructs conceptualised in Chapter 5. Specifically, the conceptualisation of relationship quality and organizational culture formed the basis for operationalization. As it is essential to prevent access to out-of-sample individuals, the study comprised the three filtering questions. Firstly, the respondents were asked to indicate the job category describing the job function. The question was employed in order to filter out the respondents not belonging to one of the three job categories: logistics, supply chain and transport. Secondly, the respondents were instructed to specify the industry. Access was limited to the respondents from manufacturing, retail trade or wholesale trade industries. Thirdly, the informants had to indicate the logistics services which are outsourced. As the study focuses on the customers of logistics outsourcing services, the survey stopped in case if there were no services outsourced. Besides the filtering questions discussed, the research design comprised more measures to ensure sample representativeness, security and prevent access to out-of-sample individuals as well as multiple submissions. The measures will be discussed in more detail in section 6.3.7 (Internet Survey Characteristics) and 6.4 (Sample). Finally, several control variables were included into the questionnaire in order to "examine parameter estimates in a model of

theoretical interest after controlling for the effects of specific variables" (Hancock and Mueller, 2010b, p. 376). Namely, the set of control variables comprised company size, relationship age, use-of-transport-services and number of services outsourced.

6.3.2 Types of Questionnaire and Method of Administration

Having deemed descriptive research design as the most suitable for the current study, this sub-section will proceed with the justification to employ survey and will determine its type.

Data collection sources are classified into primary and secondary (Burns and Bush, 2010). Primary data "are originated by the researcher for the purpose of the immediate investigation at hand" while secondary data are statistics which "had been gathered for a previous purpose" (Iacobucci and Churchill, 2010, p. 142). Owing to the previously formulated objective, research questions and hypotheses, data generation from a primary source was deemed the most appropriate and a survey instrument was employed to collect data from respondents. Hair *et al.* (2009) classify survey methods into the four types: person-administered, telephone-administered, self-administered and computer-assisted (online). Internet survey belongs to the computer-assisted type and is defined as a survey mode "in which questionnaires are delivered and answered using Internet technology" (Vehovar and Manfreda, 2008, p. 178). This type of survey is further classified into the two types: e-mail survey and web-based survey (Hair *et al.*, 2009). The latter type of survey is defined as "a self-administered questionnaire that is placed on a Web site for prospective subjects to read and complete" (Hair *et al.*, 2009, p. 257). According to Vehovar and Manfreda (2008), web-based surveys are often superior to traditional paper-and-pencil modes. Indeed, Hair *et al.* (2009) indicate many advantages: (1) ability to reach hard-to-reach respondents (2) flexible timing of completion, (3) possibility to incorporate complex branching questions, (4) automatic encoding, (5) reduction of errors and (6) speedier data collection. Furthermore, the benefits also encompass reduction of costs and advanced designing features such as question skips, filtering questions and randomization of questions (Vehovar and Manfreda, 2008). The

latter benefit can prevent respondents to identify conceptual relationships and thus is a procedural remedy to reduce common method bias (Chang *et al.*, 2010). Finally, owing to the method of structural equation modelling, web-based survey has an important advantage of controlling missing values.

Nevertheless, the method comprises several potential challenges which must be properly addressed prior to data collection. The most important issue is error of coverage which "occurs when some part of the population cannot be included in the sample" (Fricker, 2008, p. 198). Fricker (2008) further clarifies that sampling frame should be as complete as possible in order to minimize error of coverage. Owing to the importance of this issue, several steps were taken to increase completeness of sampling frame. As the majority of the UK-based logistics managers and executives are organized into the professional body called The Chartered Institute of Logistics and Transport (CILT), the organization was contacted and asked for permission to use the membership database as the sampling frame. Since the database contains 12 000 e-mail addresses, the list can be considered as an adequate sampling frame. The sampling procedure will be explained in more detail in section 6.4.

The other disadvantage of web-based surveys is related to security. Best and Krueger (2008, p. 218) posit that "while researchers should strive to maximize the participation of those in the sample, they must also take care to prevent out-of-sample individuals from completing the instrument, as well as preventing multiple submissions from the same respondent". Owing to the importance of this problem, several technological solutions were considered prior to data collection. Firstly, it was decided to employ Qualtrics web-based survey system to design the questionnaire and to collect data. As the system is sophisticated, it allows limiting access to only those who have received a unique link as well as preventing multiple submissions. The other characteristics of web-based survey will be discussed later in section 6.3.7 (Internet Survey Characteristics).

Owing to the advantages of web-based survey, the method was deemed the most appropriate for the current study. Furthermore, a good body of literature demonstrates a clear precedent for web-based data collection within the study of relationship management in the logistics industry (Knemeyer and Murphy, 2004; Cahill, 2007; Deepen, 2007).

6.3.3 Individual Question Generation and Content

Hair *et al.* (2010, p. 655) explain that "hypotheses tests involving the structural relationships among constructs will be no more reliable or valid than is the measurement model in explaining how these constructs are constructed". According to Netemeyer *et al.* (2003b) scale development should begin with construct definition paying particular attention to the structure of the domain. As domain of observables is "the set of identifiable and measurable components associated with an abstract construct" (Hair *et al.*, 2009, p. 336), it may be either under-representative or possess construct-irrelevant variance (Netemeyer *et al.*, 2003b). The former condition is the result of failure to include the important facets of the construct, while the latter occurs as the result of too broad definition and leads to confounded relationships. As well-specified theory is the prerequisite for construct validity (Netemeyer *et al.*, 2003b), the conceptualization of the measurement models will rest on the literature review in Chapter 3 (Relationship Quality) and Chapter 4 (Organizational Culture).

The current study employs the Popperian philosophical stance (Popper, 1963; Popper, 2002a) thus the variables and constructs were evaluated using two broad criteria: falsifiability and utility. As suggested by Bacharach (1989), falsifiability of the potential scales was assessed using the concepts of content and construct validity. Netemeyer *et al.* (2003b, p. 86) echo that content validity is "the degree to which elements of a measurement instrument are relevant to and representative of the targeted construct for the particular assessment purpose". Hair *et al.* (2010) posit that construct validity comprises the five elements: convergent validity, reliability, discriminant validity, nomological validity and face validity. The discussion of the measurement models employed in the current study is organized into the two

stages. Firstly, content validity will be evaluated. Secondly, the discussion will proceed with the review of construct validity evidence of individual scales.

Content validity of the potential scales was assured by a priori theoretical (see Chapter 3 and 4) as well as item generation and judging efforts. Having defined the constructs and content domain within the framework of the five theories, the initial pool of 80 items were generated. As recommended by Netemeyer *et al.*, (2003), the initial pool of items was over-inclusive. In the next stage the all elements of the items (the items themselves, the response formats, the number of scale points, and the instructions to respondent) were judged for content and face validity using the procedures recommended by Netemeyer *et al.*, (2003). Six top academics assessed content validity of the scales while face validity was evaluated by six judges from logistics industry. As recommended (Netemeyer *et al.*, 2003), 3-point scales were used (not representative, somewhat representative, clearly representative). Additionally, qualitative procedures were employed to identify the items, which needed refinement or deletion. The judges were asked to write and verbalize comments about problematic items. Based on the results of judging, the majority of the scales underwent minor modifications to eliminate problems related to wording clarity, redundancy and presence of double-barrelled items. Finally, the scale of reciprocity underwent major modifications, which will be discussed later. The items presented below represent those which have been modified and refined after the judging procedures.

Loyalty

As the conceptualisation of loyalty by Oliver (1997) encompass both attitudinal and behavioural elements of loyalty, it "constitutes the most comprehensive evaluation of the construct" (Harris and Goode, 2004, p. 141). Oliver (1997; 1999) conceptualized loyalty as a sequential chain consisting of the four dimensions: cognitive loyalty, affective loyalty, conative loyalty and action loyalty. The propositions of Oliver (1997) have been empirically tested by Harris and Goode (2004). Besides corroborating the existence of the sequential

chain, the study has demonstrated high reliability of the measures. Furthermore, the four-stage construct of loyalty has been found to be discriminant in respect to trust, satisfaction, service quality and perceived value. Finally, nomological validity has been evidenced by the significant substantial relationships between the five dimensions thus the construct of loyalty satisfies the requirements of falsifiability and utility and will be employed in this study.

Cognitive loyalty is built on brand belief and rests on brand attribute information, which helps to differentiate it as a preference. In this stage "cognition can be based on prior or vicarious knowledge and recent experience-based information" (Oliver, 2010, p. 433)

LCOG1 – I believe that using this LSP is preferable to other companies.

LCOG2 – I believe that this LSP has the best offers at the moment.

LCOG3 – I believe that the services of this LSP are badly suited to what I like.

LCOG4 – I prefer the services of this LSP to the services of competitors.

Affective loyalty reflects liking or attitude towards the brand, which "has developed on the basis of cumulatively satisfying usage occasions" (Oliver, 1999, p. 35). Commitment in this stage is affective, because a consumer perceives a brand as cognition or liking. As in the case of cognitive loyalty, switching in this stage is very likely thus deeper loyalty should be the aim.

LAF1 – I have a negative attitude to this LSP.

LAF2 – I dislike the offerings of this LSP.

LAF3 – I like the services of this LSP.

LAF4 – I like the offers of this LSP.

LAF5 - I like the overall performance of this LSP.

Conative loyalty refers to brand-specific deeply-held commitment to buy. Nevertheless, commitment in this stage is related to motivation or behavioural intention and may remain unrealised action.

LCON1 – I have repeatedly found that this LSP is better than others.

LCON2 – I nearly always find the offers of this LSP inferior.

LCON3 – I have repeatedly found the services of this LSP inferior.

LCON4 – Repeatedly, the overall performance of this LSP is superior to that of competitor firms.

Action loyalty in the highest stage of loyalty and constitutes readiness to act overcoming the obstacles. Readiness to act is defined as "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" while overcoming of obstacles refers to "re-buying despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 36).

LAC1 – I would always continue to choose this LSP before others.

LAC2 – I will always continue to choose the services of this LSP before others.

LAC3 – I would always continue to favour the offerings of this LSP before others.

LAC4 – I will always choose to use this LSP in preference to competitors.

Reciprocity

Although reciprocity is "at the core of marketing relationships" and is "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship" (Bagozzi, 1995, p. 275), until very recently, the absence of any measure of the construct was especially notable (Palmatier *et al.*, 2006). The problem was addressed by Pervan et al. (2009), who explored psychological manifestations of reciprocity and suggested multidimensional measurement scale. Although the scale development procedure of reciprocity was rigorous and methodologically sound, the results of judging revealed several issues thus the scale underwent major modifications. Initially the scale was conceptualised as a second-order construct consisting of response-to-harm and exchange-of-good. However, the all experts agreed that measurement of provider's-response-to-harm and client's-response-to-

harm by a single scale results in double-barrelled items. Based on the recommendations of the judges, the construct of reciprocity was re-conceptualised as a second-order construct consisting of the three dimensions: provider's-response-to-harm, client's-response-to-harm and exchange-of-good.

Provider's-Response-to-Harm (Reciprocity)

RHP1 − If this LSP realize that they have made a mistake, they seek to remedy the situation.

RHP2 − This LSP redresses any problems.

RHP3 − This LSP makes us aware of any problems.

RHP4 − If this LSP make a mistake, they always let us know.

RHP5 − This LSP is honest about the problems that arise.

RHP6 − Rather than reacting to problems at face value, this LSP seeks further explanation.

Client's-Response-to-Harm (Reciprocity)

RHC1 − If your company realize that they have made a mistake, they seek to remedy the situation.

RHC2 − Your company redresses any problems that may have been caused to this LSP.

RHC3 − Your company make this LSP aware of any problems they have caused to this LSP.

RHC4 − If your company make a mistake, they always let this LSP know.

RHC5 − Your company is honest about the problems that arise.

RHC6 − Rather than reacting to problems at face value, your company seeks further explanation.

Exchange-of-Good (Reciprocity)

      EG1 – Overall, your company and this LSP provide each other with equal benefits.

      EG2 – There is a balance in the dealings of your company and this LSP.

      EG3 – There is equity in dealings of your company and this LSP.

      EG4 − The exchange of benefits between your company and this LSP even out over time.

Co-operation

The concept of co-operation refers to "similar or complementary actions taken by firms in interdependent relationships to achieve mutual outcomes or singular outcomes with expected reciprocity over time" (Lambe *et al.*, 2001, p. 23). As relationship develops, exchange partners begin to expect that other part will co-operate and that both firms will benefit from co-operation (*ibid.*, p. 23). Indeed, the meta-analysis by Palmatier *et al.* (2006, p. 140) summarizes various studies and contends that "co-operation captures the level of coordinated and complementary actions between exchange partners in their efforts to achieve mutual goals". Frazier (1983) posits that co-operation comprises compatibility of mutual goals, inter-firm communication, participative decision making and ideological agreement. The study by Larson and Kulchitsky (1999) echoes that the construct of co-operation encompass collaborative goal setting, cross-functional coordination, detailed communication, mutual respect, trust, teamwork, and unity of purpose. With a focus on the previous works (Frazier, 1983; Larson and Kulchitsky, 1999), Deepen (2007) forwards a scale of co-operation for logistics outsourcing industry comprising the eight indicators. As the scale has demonstrated convergent validity and has been found to be discriminant in respect to the other dimensions of relationship marketing, it satisfies the requirement of falsifiability. Furthermore, nomological validity has been evidenced by the significant substantial relationships of co-operation and the other variables of relationship marketing. As the scale satisfies the requirements of both falsifiability and utility, it was employed in the current study. However,

the results of judging demonstrated that two indicators lack face validity thus they were removed.

C1 – The goals of our relationship with this LSP were jointly agreed.

C2 – Our approach to doing business is very similar to this LSP.

C3 – In the relationship with this LSP, we always pull together in the same direction.

C4 – When problems arise, we make decisions together with this LSP to get to adequate solutions.

C5 – I think that relationship with this LSP is based on mutual respect.

C6 – This LSP co-operates with us very well.

Communication

According to Palmatier *et al.* (2006, p. 138), communication refers to "amount, frequency, and quality of information shared between exchange partners". Morgan and Hunt (1994, p. 25) argue that "a partner's perception that past communications from another party have been frequent and of high quality…results in greater trust". Indeed, the meta-analysis by Palmatier *et al.* (2006) demonstrated that common aliases of communication encompass bilateral or collaborative communication, information exchange and sharing. As the scale of communication suggested by Deepen (2007) encompasses communication quality, frequency and intensity and is specific to logistics outsourcing industry, it was employ in the current study. Although the scale initially comprised seven indicators, the results of judging indicated that one item was perceived as double-barrelled thus it was removed. Moreover, based on the recommendation of judges the scale underwent major changes in wording in order to increase face validity. Question wording will be discussed later in section 6.3.5.

COM1 – We frequently discuss problems with this LSP.

COM2 – The exchange of information between us and this LSP works very well.

COM3 – To reach our goals, a lot of communication with this LSP is necessary.

COM4 – We always exchange information with this LSP that is relevant.

COM5 – This LSP appears to provide information as soon as it becomes available.

COM6 – Information provided by this LSP is reliable.

Trust

Gundlach and Murphy (1993a, p. 41) posit that "the variable most universally accepted as a basis of any human interaction or exchange is trust". The seminal study of Zaheer *et al.* (1998) classifies trust into interpersonal and interorganizational. According to the study, interpersonal trust denotes "the extent of a boundary-spanning agent's trust in her counterpart in the partner organization. In other words, interpersonal trust is the trust placed by the individual boundary spanner in her individual opposite member. The term interorganizational trust is defined as the extent of trust placed in the partner organization by the members of a focal organization" (*ibid.*, p. 142). Zaheer *et al.* (1998) demonstrate that the two types of trust are theoretically and empirically distint but related. However, "interorganizational trust emerges as the overriding driver of exchange performance, negotiation, and conflict, whereas interpersonal trust exerts little direct influence on those outcomes. Nevertheless, interpersonal trust may also matter through its institutionalizing effects on interorganizational trust" (*ibid.*, p. 153). Consistent with the seminal study of Morgan and Hunt (1994), the current study operationalizes trust as interorganizational. Morgan and Hunt (1994, p. 23) "conceptualize trust as existing when one party has confidence in an exchange partner's reliability and integrity". Indeed, the meta-analysis by Palmatier *et al.* (2006) demonstrates that common aliases of trust are trustworthiness, credibility, benevolence, and honesty.

The initial pool of trust items was over-inclusive and comprised eleven items which were derived from several sources. The three items were borrowed from the study of Morgan and Hunt (1994) to measure reliability and integrity. The remaining eight indicators were derived from the scale of Harris and Goode (2004, p. 145) which "is designed to gauge the extent to which customers have confidence and faith in the integrity, service, and brands".

T1 – This LSP cannot be trusted at times.

T2 – This LSP can be counted on to do what is right.

T3 – This LSP has high integrity.

T4 – This LSP is interested in more than just selling services.

T5 – There are no limits to how far this LSP will go to solve a service problem.

T6 – This LSP appears to be genuinely committed to my satisfaction.

T7 – Most of what this LSP says about its services is true.

T8 – I think some of this LSP claims about its services are exaggerated.

T9 – If this LSP makes a promise about its service, it's probably true.

T10 – In my experience this LSP is very reliable.

T11 – I feel I know what to expect from this LSP.

Opportunism

The operationalization of opportunism rests on the definition of Morgan and Hunt (1994, p. 25), which explains that "the essence of opportunistic behaviour is deceit-oriented violation of implicit or explicit promises about one's appropriate or required role behaviour". Opportunism was assessed based on the items borrowed from the two studies. Two indicators were derived from the seminal work of Morgan and Hunt (1994). The study by Cahill (2007) provided the other three items of opportunism. Owing to the insights generated by the judging process, one item was removed as lacking content validity. The wording of the all items were slightly changed to make scales more industry-specific and to increase face validity. The final pool of opportunism items comprises the four indicators.

OP1 – Sometimes this LSP fails to keep promises.

OP2 – Sometimes this LSP alters the facts significantly.

OP3 – Sometimes this LSP exaggerates its requirements.

OP4 – On occasion this LSP lies to your company to protect own interests.

Operationalization of Organizational Culture

Having discussed the scales of relationship quality, this section will proceed with operationalization of organizational culture. As discussed earlier, the dimensions of organizational culture were measured using the scales forwarded by the Global Leadership and Organizational Behaviour Effectiveness Research Program (GLOBE). The rationale behind this decision rests on several arguments.

Firstly, instead of employing empirical approach like in the study by Hofstede (2001), the GLOBE scales were derived using theory-driven approach which starts with definition of a target construct prior to generating any items (Nunnally and Bernstein, 2006). Hanges and Dickson (2006, p. 123) argue that "the consequence of constructing scales in this manner is the relatively unambiguous interpretation of any empirical relations obtained with this scale as well as the possibility of new insights by allowing more complex statistical analysis".
Secondly, the initial pool of the items contained 371 indicators which underwent procedures of Q-sorting and pretesting. Furthermore, the measures of culture have demonstrated multisource construct validity. Specifically, convergent validity has been evidenced by substantial correlations between the scales of culture and the other constructs: archival data, unobtrusive measures, the Schwartz value survey (Schwartz, 1994b), the world values survey (Inglehart *et al.*, 1998) and the scales developed by Hofstede (2001). Although the assessment of multisource construct validity was limited to societal culture, the study has demonstrated that organizational culture is integral to the former construct. Owing to the theory driven approach and multi-source construct validity, the GLOBE measures of organizational culture will be employed in the current study.

As the culture construct comprises both practices and values (Hofstede, 2001), the GLOBE theory ensures coverage of the culture content domain and measures organizational culture at the two levels. The indicators assessing the *cultural practices* focus informants' attention on *how things are* while the items measuring the *cultural values* concentrate

respondents' mind on *how things should be* (Hanges and Dickson, 2004). Owing to the more tangible and realistic nature of practices, organizational culture will be operationalized using the scales of practices.

Uncertainty Avoidance

As defined by the GLOBE theory (De Luque and Javidan, 2004, p. 603), "uncertainty avoidance refers to the extent to which members of collectives seek orderliness, consistency, structure, formalized procedures, and laws to cover situations in their daily lives". The dimension of uncertainty avoidance operationalized by the GLOBE study is a direct descendant of the same dimension identified by Hofstede (Hanges and Dickson, 2004). Indeed, substantial relationship between the two dimensions has been evidenced by strong correlation (*ibid.*, p. 143). The three questionnaire items were employed to measure organizational practices with regard to uncertainty avoidance.

> *UA1* – In your company, orderliness is stressed, even at the expense of experimentation and innovation.
>
> *UA2* – In your company, most work is highly structured, leading to few unexpected events.
>
> *UA3* – In your company, job requirements are spelled out in detail so employees know what they are expected to do.

Individualism and Collectivism

The GLOBE theory distinguishes between the two types of collectivism: institutional collectivism and in-group collectivism. The former dimension is defined as "the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action" while the latter refers to "the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families" (Javidan et al., 2004, p. 30). Institutional collectivism was operationalized using the three

items which encompass "the importance of group loyalty versus individual goals, the pay and bonus system maximizing group or individual interests, and the emphasis on group cohesion versus individualism" (Gelfand et al., 2004, p. 466). The scale of in-group collectivism comprises the five items measuring different aspects of organizational practices related to pride, loyalty and cohesiveness.

Institutional Collectivism

COLI1 − In your company, managers encourage group work even if individual goals suffer.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
1	2	3	4	5	6	7

COLI2 − In your company, the pay / bonus system is designed to maximize:

Individual interests						Collective interests
1	2	3	4	5	6	7

COLI3 − In your company:

Group cohesion is more valued than individualism			Group cohesion and individualism are equally valued			Individualism is more valued than group cohesion
1	2	3	4	5	6	7

In-Group Collectivism

COLG1 − In your company, members take pride in the accomplishments of their manager.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
1	2	3	4	5	6	7

COLG2 − In your company, managers take pride in the accomplishments of their members.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
1	2	3	4	5	6	7

COLG3 – In your company, employees feel loyalty to the organization.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
1	2	3	4	5	6	7

COLG4 – Members of your company:

Take no pride in working for the organization			Take a moderate amount of pride in working for the organization			Take a great deal of pride in working for the organization
1	2	3	4	5	6	7

COLG5 – Your company shows loyalty towards employees.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
1	2	3	4	5	6	7

Human Orientation

As defined by the GLOBE theory, human orientation refers "to the degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring and kind to others" (Javidan *et al.*, 2004, p. 30). Kabasakal and Bodur (2004, p. 569) explain that "this dimension is manifested in the way people treat one another and in the social programs institutionalized within each society". The scale of human orientation comprises the four items: concern about others, sensitivity towards others, friendliness and generosity.

HO1 through HO4 – In your company, people are generally:

	1	2	3	4	5	6	7	
Very concerned about others	1	2	3	4	5	6	7	Totally unconcerned about others
Very sensitive toward others	1	2	3	4	5	6	7	Not at all sensitive toward others
Very friendly	1	2	3	4	5	6	7	Very unfriendly
Very generous	1	2	3	4	5	6	7	Not at all generous

Assertiveness

According to Javidan *et al.* (2004, p. 30) assertiveness reflects "the degree to which individuals are assertive, confrontational, and aggressive with their relationships with others". The dimension of assertiveness operationalized by the GLOBE study is direct descendant of the masculinity and femininity dimension identified by Hofstede (Hartog, 2004). Masculinity versus femininity reflects "the distribution of emotional roles between genders" (Hofstede, 2001, p. xx) thus "in masculine societies men are supposed to be assertive and tough and women are expected to be modest and tender. In contrast, femininity pertains to societies in which social gender roles overlap" (Hartog, 2004, p. 401). The scale of assertiveness encompasses the four indicators measuring diverse practices: aggressiveness, domination, toughness and assertiveness itself.

A1 through A4 – In your company, people are generally:

Aggressive	1	2	3	4	5	6	7	Non-aggressive
Dominant	1	2	3	4	5	6	7	Non-dominant
Tough	1	2	3	4	5	6	7	Tender
Assertive	1	2	3	4	5	6	7	Non-assertive

Power Distance

Finally, power distance constitutes "the degree to which members of a collective expect power to be distributed equally" (Javidan *et al.*, 2004, p. 30). The GLOBE study has demonstrated that power distance is relevant both at societal and organizational levels (Brodbeck *et al.*, 2004). Indeed, "substantial gains can be obtained by reducing the level of power distance within an organization. Reduced power distance can contribute to the flexibility of the organization and enhance competence building and learning" (Carl *et al.*, 2004, p. 534). The scale of power distance comprises the three items encompassing different organizational practices.

PD1 – In your company, a person's influence is based primarily on:

One's ability and contribution to the organization						The authority of one's position
1	2	3	4	5	6	7

PD2 – In your company, subordinates are expected to:

Obey their boss without question						Question their boss when in disagreement
1	2	3	4	5	6	7

PD3 – In your company, people in positions of power try to:

Increase their social distance from less powerful individuals						Decrease their social distance from less powerful people
1	2	3	4	5	6	7

6.3.4 Form of Response

As recommended by Netemeyer *et al.* (2003b), a multichotomous response format was employed within the current study thus the respondents were asked to select predetermined option that most closely expressed their opinion on the subject under investigation. Multichotomous scales have been used widely to measure attitudes and behaviours across marketing, organizational behaviour and psychology literatures (Netemeyer *et al.*, 2011; Buchanan and Bryman, 2009; Millsap and Maydeu-Olivares, 2009). Owing to the co-variance based method of structural equation modelling, multichotomous response formats are preferable because they create more variance (Netemeyer *et al.*, 2003b). Indeed, scales with more points have greater discriminatory power (Hair *et al.*, 2009). Furthermore, data continuousness is the assumption of structural equation modelling which is violated if number of categories is fewer than five (Byrne, 2001). The all Likert-type scales of relationship quality comprised seven categories, whereby responses ranged from "very strongly disagree"

to "very strongly agree". As for the all relationship quality items a neutral response is a valid answer, midpoints were labelled as "neither agree nor disagree".

Although the all scales of organizational culture comprised seven categories, the four types of labelling were employed as originally specified in the GLOBE questionnaire. The first type doesn't differ from that of the relationship quality scales. The second type was a semantic differential with bipolar or unipolar adjective-based scale endpoints with no midpoint (e.g. tough – tender, aggressive - non-aggressive). This response format was used for assertiveness and human orientation scales. The third response format was the same as the second except the endpoints which were described with a short sentence instead of using adjectives. The fourth response format was the same as the third except that the scales had a midpoint (e.g. group cohesion and individualism are equally valued).

6.3.5 Question Wording

Hair *et al.* (2009, p. 351) posit that appropriateness of scale descriptors refers to "the extent to which the scale point elements match the data being sought". As poor question wording can result in item nonresponse and measurement error, this task is critical (Iacobucci and Churchill, 2010). Appropriateness of question wording was assessed using several steps.

Firstly, the recommendations of Netemeyer *et al.* (2003b) were followed in order to ensure wording clarity. As was mentioned previously, wording clarity as well as the other elements of content and face validity, was assessed by six top academics and six judges from logistics industry. Besides using, 3-point scales (not representative, somewhat representative, clearly representative) as recommended by Netemeyer *et al.* (2003b), additional qualitative procedures were employed to identify the items, which needed refinement or deletion. The judges were asked to write and verbalize comments about problematic items. Based on the results of judging, the majority of the scales underwent minor modifications. The changes involved: (1) decrease of ambiguity, (2) wording amendments to make language more relevant to the reading level of the respondents and (3) reduction of redundancy to make items

214

short and simple. Nevertheless, the construct of reciprocity underwent major changes. As the all experts agreed that measurement of provider's-response-to-harm and client's-response-to-harm by a single scale results in double-barrelled items, the construct of reciprocity was re-conceptualised as a second-order construct consisting of the three dimensions: provider's-response-to-harm, client's-response-to-harm and exchange-of-good.

Secondly, following the recommendations of Podsakoff *et al.* (2003) and Netemeyer *et al.* (2003b, p. 99), both the relationship quality and organizational culture scales included negatively worded items in order to reduce response bias "in the form of acquiescence, affirmation and yea-saying".

6.3.6 Question Sequence

Having decided on the form of response and question wording, the next step involved decisions on question sequence. As "the order of questions can be crucial" (Iacobucci and Churchill, 2010, p. 220), this step is too important to omit. Indeed, question sequence can be employed as a procedural remedy for controlling common method bias (Podsakoff *et al.*, 2003; Chang *et al.*, 2010; Podsakoff *et al.*, 2011). Podsakoff *et al.* (2003) classify the techniques for controlling common method bias into procedural and statistical. The procedural category encompasses the two methods: (1) measurement of the predictor and criterion variables using different sources, (2) temporal, proximal, psychological, or methodological separation of measures and (3) ensuring anonymity as well as reducing evaluation apprehension. The statistical category comprises a set of statistical techniques and will be discussed later in Section 6.5 (Common Method Bias).

Chang *et al.* (2010) argue that common method bias should be controlled by both procedural and statistical remedies. As measurement of the predictor and criterion variables using different sources was impossible, procedural remedies will be limited to temporal and methodological separation of the measures. Podsakoff *et al.* (2003, p. 887) posit that temporal separation refers to "a time lag between the measurement of predictor and criterion variables".

The first set of questions was filtering questions, which was employed to prevent access to out-of-sample individuals and will be discussed later in Section 6.4 (Sample). The second set of question was loyalty questions. As loyalty was hypothesized to be a sequential chain, its indicators were mixed ensuring isolation of predictor and criterion variables. Finally, the remaining dimensions of relationship quality were separated from each other mixing them with the dimensions of organizational culture which resulted in the following question sequence: loyalty, co-operation, uncertainty avoidance, provider's-response-to-harm, collectivism, client's-response-to-harm, human orientation, exchange-of-good, assertiveness, trust, power distance, communication and opportunism. Moreover, the indicators within each dimension were randomized automatically. Chang *et al.* (2010, p. 179) contend that "complicated specifications of regression models reduce the likelihood of CMV. Specifically, respondents are unlikely to be guided by a cognitive map that includes difficult-to-visualize interaction and non-linear effects". Furthermore, as recommended by Podsakoff *et al.* (2003), the dimensions of organizational culture were measured by the four types of scales (see Section 6.3.4, Form of Response) leading to methodological separation. Finally, anonymity was guaranteed and the respondents were assured that "there are no right or wrong answers and that they should answer questions as honestly as possible" (Podsakoff *et al.*, 2003, p. 888).

6.3.7 Internet Survey Characteristics

Owing to the specificity of web-based surveys, the discussion of internet survey characteristics will comprise uniformity, usability, security and anonymity.

Uniformity

Uniformity refers to the consistency of instrument appearance across different types of hardware, software and platforms (Best and Krueger, 2008). Best and Krueger (2008) explain that lack of uniformity leads to measurement error and poor generalizability. The most advanced web-based Qualtrics survey software was employed in order to ensure uniformity of

the questionnaire across the main web-browsers: Mozilla Firefox, Google Chrome, Apple Safari, and Internet Explorer.

Usability

Usability denotes "the level of difficulty of using an online application" (Best and Krueger, 2008, p. 218). Owing to the number and complexity of the constructs measured, usability of the questionnaire was carefully considered. Firstly, usability was increased using advanced solutions of layout design. As recommended by Best and Krueger (2008), the width of web-page didn't exceed 600 pixels and the questionnaire was presented in Arial font. Owing to the necessity to control for common method bias and reduce complexity, strolling was not allowed. Hence, the instrument was introduced step-by-step as discussed in section 6.3.6 (Question Sequence). As the structural equation modelling method does not allow missing values, the all questions were specified as required. In case of no answer, the respondent was kindly reminded to answer the indicated question(s) before moving to the next section. Following the advice of Best and Krueger (2008), a graphical progress indicator was employed in order to inform the respondents about the remaining percentage of unanswered questions. Finally, usability of the questionnaire was assessed during pre-testing which will be discussed in more detail in section 6.3.8 (Questionnaire Pre-Testing). As the respondents have demonstrated agreement that the questionnaire has appropriate structure and the questions are clear, the instrument satisfies the criteria of usability.

Security

Security refers to prevention of "out-of-sample individuals from completing the instrument, as well as preventing multiple submissions from the same respondent" (Best and Krueger, 2008, p. 218). Indeed, web-based questionnaires can be easily forwarded to out-of-sample individuals thus security solutions should be carefully considered prior to data collection. Owing to the importance of generalizability and representativeness, several measures were introduced in order to increase security. Firstly, access to the questionnaire was granted to

only those individuals who received invitation emails to take the survey. Invitation emails contained a unique hyperlink related to the specific respondent thus multiple submissions as well as out-of-sample access was prevented. Furthermore, the questionnaire contained filtering questions in order to prevent instrument forwarding thus the survey stopped if the respondent didn't satisfy sample requirements. The selection of respondents will be discussed in more detail in section 6.4 (Sample).

Anonymity

Best and Krueger (2008, p. 215) posit that "maintaining the security of the online instrument requires some way to identify or track potential respondents" therefore this may result in problem of anonymity which, in turn, threatens the measurement validity and can result in bias. As respondent tracking was limited to the unique survey hyperlinks and the questionnaire didn't include any personal information, the pre-testing procedures have demonstrated that the questionnaire is perceived as anonymous.

6.3.8 Questionnaire Pre-Testing

Pre-testing is an essential step of questionnaire development because it demonstrates how the instrument performs under actual conditions (Iacobucci and Churchill, 2010). Indeed, Hair *et al.* (2009, p. 424) posit that "an appropriate pretest involves giving the survey to a small, representative group of respondents". Iacobucci and Churchill (2010) argue that regardless the method of administration that will be employed, the interviewer should observe respondents to see how they answer the questions, where they get confused, etc. Although the respondents were allowed to read the questions and answer them themselves, the interviewer was always present in order to observe and collect feedback immediately. The pilot test was carried out using a sample of twenty respondents. Hair *et al.* (2009) explain that pre-test should comprise at least fifty individuals in case if there is no evidence of reliability and validity. As the selection of the measures employed in the current study was based on the evidence of construct validity, the pre-test sample of twenty respondents can be regarded as sufficient.

Following the recommendation of Hair *et al.* (2009), the respondents were asked to comment on wording, question flow, instructions and anything they perceived as confusing. As a result minor amendments were made to the cover letter, instructions, reminders and navigation of the questionnaire.

6.4 Sample

This section comprises four parts. Firstly, the selection of the sampling frame is justified. Secondly, administration of questionnaires is explained. Thirdly, sample characteristics are discussed. Finally, the section ends with the discussion of sample size adequacy for structural equation modelling.

6.4.1 Sampling Frame and Sample Selection

Although web-based survey has many advantages which were discussed in Section 6.3.2, the method comprises several potential challenges which must be properly addressed prior to data collection. The most important issue is error of coverage which "occurs when some part of the population cannot be included in the sample" (Fricker, 2008, p. 198). Fricker (2008) explains that sampling frame should be as complete as possible in order to minimize error of coverage. Indeed, Stapleton (2010, p. 400) argues that it is best to have "a probability sample where each member of the sampling frame has a known probability of being selected into the sample". Nevertheless, probability sampling has several drawbacks. Hair *et al.* (2009, p. 314) explain that the main disadvantage of probability sampling "is the difficulty of obtaining complete and accurate listing of the target population elements". As recommended by Stapleton (2010), the population for generalization will be defined prior to proceeding with discussion of sampling frame. In the current study the population of generalization is defined as the individuals who satisfy the four criteria:

1. The employees of the UK-based medium-size or large companies (more than 50 employees).

2. The employees having the following job functions: logistics (e.g. logistics executive, logistics manager etc.), supply chain (e.g. supply chain director, supply chain manager etc.) and transport (e.g. head of transport, transport manager etc.).

3. The employees of the companies operating in one of the following industries: manufacturing, wholesale trade and retail trade.

4. The employees of the companies which engage in logistics outsourcing.

The selection of population for generalization is based on several arguments. Firstly, logistics and supply chain management are critical functions to the companies operating in the manufacturing and wholesale / retail trade industries. Secondly, the complexity of logistics operations differs greatly across companies of different size. As service complexity has effect on perception of relationship quality, this study focuses on medium-size and large companies. Thirdly, the employees having one of the three job functions are the most involved in relationships with providers of logistics outsourcing services thus they are the most suitable informants.

Having defined the population for generalization, the discussion will continue with the selection of the sampling frame. Owing to the importance of sampling frame completeness, several steps were taken in order to minimize the error of coverage. As the majority of the UK-based logistics managers and executives are organized into the professional body called The Chartered Institute of Logistics and Transport (CILT), the organization was contacted and asked permission to use the membership database as the sampling frame. The initial database contained 12 000 UK-based individuals who are employed in companies operating in diverse industries. Owing to the defined population for generalization, the four filtering criteria were applied. Consequently, the number of database records reduced to 3182.

As the list of 3182 individuals cannot be technically regarded as the complete list of the target population, probability sampling was impossible. Moreover, the absence of the population size estimate was another obstacle for probability sampling. Nevertheless, the

individuals in the list are similar to the defined target population with respect to the characteristics under investigation. Although the sampling method employed could be formally defined as judgement sampling, the findings of the study can be generalized to the population of interest. Indeed, the analysis of sample characteristics demonstrates that the collected sample is similar to the target population. The sample characteristics will be discussed in more detail in section 6.4.3.

Finally, it is important to mention that the respondents were asked to evaluate the most important logistics service provider. Consequently, the sample comprises only ongoing relationships. Liljander and Roos (2006) classify relationships into true and spurious.

A true customer-service relationship refers to "(1) the biased (i.e. non-random) (2) behavioural response (i.e. purchase, word-of-mouth, information sharing and other positive behaviours), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one service provider out of a set of such providers, which (6) is a function of psychological (cognitive and affective) processes, including the presence of trust, relationship benefits and the absence of negative bonds, resulting in service-provider commitment" (*ibid*., p. 595-596). *A spurious customer-service relationship* is defined as "(1) the biased (i.e. non-random) (2) behavioural response (i.e. purchase), (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternative service providers out of a set of such providers, which (6) is a function of inertia, trust deficit, weak or absent relationship benefits and/or the existence of negative bonds (*ibid.*, p. 596). As not ongoing relationships do not satisfy the definition of true or spurious relationship forwarded by Liljander and Roos (2006), they are ignored in the current study.

The seminal study by Hallén *et al*. (1991) demonstrates that dependence has effect on adaptations. That is, "in working business relationships, a firm adapts to a counterpart to the degree that it is dependent on that counterpart" (*ibid*., p. 31). Moreover, the study indicates that supplier (or customer) importance is a part of supplier (or customer) dependence.

Interestingly, drawing on the work of Hallén et al. (1991), Brennan et al. (2003) relate adaptations to reciprocity. As reciprocity is hypothesized to be the key mediating variable which is related to all the constructs of the model, it was deemed necessary to ask the respondents to evaluate the most important logistics service provider. This logic is consistent with the similar studies (e.g. Hallén et al., 1991; Hewett *et al*., 2002; Deshpandé *et al.*, 1993).

Although the current study includes the construct of reciprocity which is dyadic in its very nature, the sample is limited to customers and does not include service providers. Indeed, Deshpandé *et al.* (1993, p. 28) argue that "the organizational buying behavior literature ... stresses the crucial importance of the dyad - that is, measurements of both buyer and seller - so as to explore the extent of agreement about theoretical constructs". Consequently, an alternative to the approach adopted in the current study could be a different unit of analysis – the quadrad. According to Deshpandé *et al.* (1993, p. 28) "the method ... involves an analysis of a matched set of buyer-seller pairs". Moreover, "more than one key informant within an organizational unit is needed to develop reliable measures of organizational constructs" thus the quadrad should comprise at least four responses (*ibid.*, p. 28). Deshpandé *et al.* (1993, p. 29) explain that scales should be build using the average of the relevant responses within the quadrad. Although, at first sight, the method looks attractive, "this sampling technique is cumbersome and by economic necessity constrains the total number of collectable observations" (*ibid.*, p. 29). Owing the complexity of the research models and the required sample size, the quadrad analysis was deemed insurmountable. Finally, the research objective and aims formulated in Section 1.3 can be successfully achieved with a sample comprising only customers. Consequently, this approach is employed in the current study.

6.4.2 Administration of Questionnaires

Stapleton (2010) posits that survey administration has been found to have effect on both survey response rate and measurement error thus discussion of survey administration should encompass the mode of administration, the number and type of contacts and anonymity.

As was mentioned, data collection was carried out using the web-based questionnaire. The most advanced Qualtrics survey software was employed in order to manage every aspect of data collection: questionnaire design, pre-testing, distribution of invitations, filtering the respondents, sending reminders, data collection, coding, storage and export to SPSS statistical package. As the measures and questionnaire underwent rigorous procedures of judging and pre-testing, the survey was administered at once to the full list of 3182 selected individuals who received e-mail invitations with a unique hyperlink connected with the particular person in order to prevent out-of-sample access as well as multiple submissions. Following the advice of Best and Krueger (2008), the four filtering questions were enforced in order to prevent access to out-of-sample individuals as well as double-check suitability of the individuals being interviewed. The questions encompassed verification of the three sampling criteria discussed in section 6.4.1: company size, job category and industry. As the study focuses on the clients of logistics outsourcing services, the fourth filtering question verified satisfaction of this criterion. The survey continued only if the respondent met the four screening criteria. As the structural equation modelling method does not allow missing values, all the questions were specified as required. In case of no answer, the respondent was kindly reminded to answer the indicated question(s) before moving to the next section. Following the advice of Kaczmirek (2008), initially, the responding process was monitored in real time in order to detect non-response items, drop-outs and other problems. Of the 3182 respondents contacted, 271 responses were collected over the two weeks period. Approximately after three weeks, all the non-responders received a kind reminder which resulted in other 53 responses over the period of one week. Eventually, 324 questionnaires were received. Of the 324, the five respondents did not meet one of the three criteria (industry, company size or job function), 28 respondents indicated that their companies do not outsource any logistics services and 15 responses were incomplete. Eventually, 266 complete questionnaires were obtained yielding a response rate of 10% (using the calculation method recommended by

C.A.S.R.O., 1982), which is quite similar to the response rates of the other studies in the same industry (Knemeyer and Murphy, 2004; Jaafar and Rafiq, 2005).

Owing to a sensitivity of structural equation modelling to outliers (Byrne, 2010), the dataset was tested for outliers calculating Mahalanobis distance (D^2) for each case. As the D^2 values of the fifteen cases were found to be distinct, they were removed from the dataset resulting in the total sample of 251.

6.4.3 Sample Characteristics

Having discussed the sampling frame and sample selection, this section will proceed with the characteristics of the sample. The sample characteristics and demographic profile of the survey respondents are presented in Table 6.1.

Table 6.1: Sample Characteristics

Variable	Category	Frequency	Percent
Company Size[1]	Medium Companies	66	26.29
	Large Companies	185	73.71
	Total:	**251**	**100**
Industry (UK)	Manufacturing	139	55.38
	Wholesale and Retail Trade	112	44.62
	Total:	**251**	**100**
Job Function[2]	Logistics	123	49.00
	Supply Chain	119	47.41
	Transport	9	3.59
	Total:	**251**	**100**
Services Used[3]	Transportation Operations	176	70.12
	Customs Clearance	140	55.78
	International Freight Forwarding	137	54.58
	Warehousing	134	53.39
	Consulting services	86	34.26
	Cross-Docking	64	25.50
	Product Returns	54	21.51
	Transportation Planning	53	21.12
	Pick / Pack Operations	52	20.72
	Logistics Information Systems	50	19.92
	Assembly	43	17.13
	Inventory Control / Management	33	13.15
	Lead Logistics Management	22	8.76

In line with the sampling procedure adopted, the sample comprises 26.29% of medium companies and 73.71% of large companies. The sample is almost equally distributed across manufacturing and retail / wholesale industries. The former industry accounts for 55.38% while the latter equals to 44.62% of the sample. The distribution of job function demonstrates a quite similar pattern: logistics and supply chain functions equal to 49% and 47.41% respectively. The third job function (Transport) accounts only to 3.59% of the total sample. The number of logistics services outsourced varies from 1 to 12 with median value of 4. Transportation operations is the most frequently outsourced service (70.12%) while outsourcing of lead logistics management is used only by 8.76% of the companies. The four services are outsourced by more than 50% of the companies: transportation operations (70.12%), customs clearance (55.78%), international freight forwarding (54.58%) and warehousing (53.39%). Finally, the age of relationship between client and logistics service provider ranges from several months to more than 20 years with the median value of 8 years.

6.4.4 Sample Size Adequacy for Structural Equation Modelling

Having discussed the sampling frame, administration of questionnaires and sample characteristics, this section will proceed with evaluation of sample size adequacy for structural equation modelling.

Although a good body of research has addressed the issues pertinent to sample size adequacy in structural equation modelling during the past decade (Enders and Bandalos, 2001; Jackson, 2003; Reinartz *et al.*, 2009), there is still no consensus what constitutes the sufficient sample size (Tanaka, 1987; Ullman, 1996; Mueller, 1997; Hair *et al.*, 2010). Kline (2005) explains that sample size can be considered as small, medium and large when N values are fewer than 100, between 100 and 200, and more than 200 respectively. However, Jackson

(2003) argues that model complexity must be taken into consideration and explains that the ratio of cases to the number of parameters should be not less than 10:1 while the other sources (Bentler and Chou, 1987a; Hancock and Mueller, 2010b) contend that 5:1 is enough. Nevertheless, the simulation study by Reinartz *et al.* (2009) demonstrates that structural equation modelling provides accurate results as long as the sample size exceeds 250. Further, the measurement model is more reliable when there are no factors consisting of less than 3 indicators. If the sample size exceeds 400, the method becomes too sensitive and goodness-of-fit indices demonstrate poor fit (Tanaka, 1993).

Table 6.2: Minimum Sample Sizes Based on the Model Complexity and Basic Measurement Model Characteristics

Category	Sample Size	Number of Constructs	Number of Indicators per Construct	Communalities
1	100	≤ 5	> 3	.6 or higher
2	150	≤ 7	≥ 3	.5
3	300	≤ 7	< 3	below .45
4	500	Large Number	< 3	below .45

Source: adapted from Hair *et al.* (2010, p. 662)

Indeed, Hair *et al.* (2010, p. 662) concur that "previous guidelines such as "always maximise your sample" and "sample sized of 300 are required" are no longer appropriate" and suggest minimum sample sizes based on the model complexity and measurement model characteristics (see Table 6.2). As the sample size table forwarded by Hair *et al.* (2010) is consistent with the empirical findings of the Monte Carlo simulation study of Reinartz *et al.* (2009), both the sources will be employed in the current study in order to determine sample size adequacy for structural equation modelling, which will be discussed in more detail in Chapter 7.

6.5 Common Method Bias

Bagozzi and Yi (1991) explain that common method bias refers to the systematic component of measurement error arising not from the construct itself, but from the measurement method

which encompasses the content of specific items, scale type and response format. Specifically, the sources of common method bias can be classified into the four broader categories: common rater (Crowne *et al.*, 1964; Schmitt, 1994; Johns, 1994), item characteristics (Cronbach, 1950; Peterson, 2000), item context (Harrison and McLaughlin, 1993; Harrison *et al.*, 1996) and measurement context (Bouchard, 1976; Richman *et al.*, 1999). Most scholars agree that common method bias is a potential problem (Hult *et al.*, 2006; Malhotra *et al.*, 2006; Williams *et al.*, 2010; Wilson, 2010), which should be tackled by both procedural and statistical remedies (Kline *et al.*, 2000; Chang *et al.*, 2010; Podsakoff *et al.*, 2011).

Having discussed the procedural remedies in section 6.3.6 (Question Sequence), this sub-section will focus on statistical methods to control common method bias. Podsakoff *et al.* (2003) classify statistical techniques into the four types: Harman's single-factor test (Harman, 1976), marker variable technique (Lindell and Brandt, 2000; Lindell and Whitney, 2001), directly measured latent method factor (Williams and Anderson, 1994; Williams *et al.*, 1996; Reynolds and Harris, 2009) and single unmeasured latent method factor (Carlson and Kacmar, 2000; Conger *et al.*, 2000; Podsakoff *et al.*, 2011). Although Harman's single-factor test is used very widely (Taggar, 2002; Carr and Kaynak, 2007; Golden and Veiga, 2008), Podsakoff *et al.* (2003, p. 889) warns that the test is insensitive and "actually does nothing to statistically control for (or partial out) method effects". Indeed, Chang *et al.* (2010) echo that reporting outcomes from Harman's test is insufficient and suggest using other statistical tests: marker variable technique and modelling method factor. Chang *et al.* (2010, p. 181) further clarify that "the latter method allows questionnaire items to load on their theoretical constructs, as well as on a latent CMV factor, and examines the significance of theoretical constructs with or without the common factor method." Podsakoff *et al.* (2003, p. 893) posit that the latent method factor approach comprises several advantages: "it (a) allows measurement error in the method factor to be estimated, (b) models the effects of the biasing factor on the measures themselves rather than directly on the theoretical constructs of

interest". Owing to the sensitivity and advantages of the latent method factor technique, the method will be employed in the current study. As the sources of common method bias cannot be identified or are not relevant (e.g. social desirability), assessment of common method bias will be carried out using single common-method factor approach as recommended by Podsakoff *et al.* (2003).

The procedure will comprise several steps. Firstly, the items will be allowed to load on their constructs as well as latent common method factor. Secondly, the effects of common method factor will be constrained to be equal for identification purposes. Thirdly, the nested models with and without common method factor will be compared using χ^2 difference test. Finally, common method bias will be ruled-out if the model with common method factor will not fit better.

Although Podsakoff *et al.* (2003, p. 894) argues that constraining common method factors to be equal "undermines one of the advantages of this technique", this is a common practice. Indeed, it is unlikely that common method has the same effect on the all indicators (Lindell and Whitney, 2001). Nevertheless, Lindell and Whitney (2001, p. 116) further clarify that "an assumption of equal weights…will not distort the results significantly enough to alter conclusions" and support this statement by the evidence provided by the literature on equal weights in regression analysis (Dawes and Corrigan, 1974; Ree *et al.*, 1998).

6.6 Level of Analysis

The issue of level of analysis in the organizational and cross-cultural literature has been central and fiercely debated for many years (Hofstede, 1980; Hofstede, 2006; Javidan *et al.*, 2006; Smith, 2006). Hofstede (2001, p. 16) argues that ecological fallacy is committed when relationships found at a collective level (e.g. national or organizational culture) "are interpreted as if they apply to individuals" and clarifies further that reverse ecological fallacy refers to construction of "ecological indexes from variables correlated at the individual level". Indeed, Denison (1996) and Castro (2002) echo that relationships present at the individual

level may or may not exist at an aggregate level. Moreover, Leung and Bond (1989) argue that level of analysis affects both structural relationships and measurement models thus dimensionality can vary at different levels of analysis. Finally, Hofstede (2001, p. 17) concludes that "cultures are not king-size individuals: they are wholes, and their internal logics cannot be understood in the terms used for the personality dynamics of individuals".

As was mentioned previously, the GLOBE measures of organizational culture were employed in the current study. The authors of the GLOBE questionnaire (House and Hanges, 2004, p. 99) warn that "the units of analysis for project GLOBE consisted of cultural-level aggregated responses of middle managers" thus the scales may show different psychometric properties at the individual level of analysis. Nevertheless, Peterson and Castro (2006) give contra-arguments and posit that the scales were designed rather at the individual level therefore the constructs and relationships should be valid at the both levels of analysis.

Owing to the lack of consensus about the GLOBE research design, this section will review the relevant literature and justify the use of the GLOBE measures of organizational culture at the individual level of analysis. Dansereau and Yammarino (2006) explain that the theoretical approaches to constructing cultural scales can be classified into the three categories: *emergent view*, *cross-level view* and *individual view*.

The emergent view originates from the work of Glick (1985) who explained that some constructs emerge only at aggregated levels and are not present at a lower levels of analysis. Hanges and Dickson (2006, p. 524) claim that the GLOBE culture scales are convergent-emergent thus "convergence occurs when the survey responses from people within organizations or societies tend to centre on a common value" while "emergence refers to phenomena that exist at a higher (e.g., organizational, societal) level of analysis but do not necessarily exist at a lower (e.g., individual) level of analysis". The examples of emergent view encompass the studies by Hofstede *et al.* (1990), Triandis (1995b), Hofstede (2001) and Smith *et al.* (2002) amongst others.

The second approach to designing cultural scales is *cross-level* (Dansereau and Yammarino, 2006) or *pan-cultural* (Leung and Bond, 1989) *view*, which originates from the work of Schneider (1987). Peterson and Castro (2006) posit that using this approach, measures are constructed at the individual level of analysis using respondents from variety of organizations and departments. Dansereau and Yammarino (2006, p. 538) further clarify that "the idea in this approach is that organizations tend to attract, select, and retain individuals who are similar to one another. This practice produces an organization that contains individuals who are similar. As a result, the individuals in the organization come to perceive variables in the same way" thus relationships and constructs are the same at both the individual and organizational levels. The examples of cross-level studies comprise the works of Peterson *et al.* (1995), Fey and Denison (2003), Deshpandé and Farley (2004), Cameron and Quinn (2006) amongst others.

The *individual view* originates from the work of James *et al.* (1984). According to this view "individual's perceptions may simply reflect the individual-level personality differences among people rather than culture" (Dansereau and Yammarino, 2006, p. 539) therefore constructs and relationships must be analysed at the individual, but not an aggregate level of analysis.

Having reviewed the problem and the three theoretical approaches to construction of cultural scales, the discussion will proceed with the justification to employ the GLOBE scales of organizational culture at the individual level of analysis. Although House and Hanges (2004) claim that the design of the GLOBE scales took the convergent-emergent approach, Peterson and Castro (2006, p. 512) give contra-arguments and explain that "the gist of the approach was to design measures at the individual level, justify aggregating the individual-level measures to a target level (either organizational or societal), then check to see whether items composing each individual-level measure were interrelated…when aggregated to organizational of societal levels". Indeed, when responding to the criticism of Peterson and

Castro (2006), Hanges and Dickson (2006) provide several indirect arguments in favour of the individual level approach:

1. Hanges and Dickson (2006, p. 527) have admitted that confirmatory factor analysis in the pilot study 2 was conducted at the individual (pan-cultural) level of analysis.

2. Hanges and Dickson (2006, p. 528) explain that they justified aggregating the individual-level measures to a target level after the final pilot study.

3. The authors (Hanges and Dickson, 2006, p. 531) posit that multilevel confirmatory factor analysis was employed in order to evaluate the structure of culture factors at distinct levels of analysis (individual versus aggregate). They claim (Hanges and Dickson, 2006, p. 530) that "the items strongly load on the single societal-level factor" while "the factor loadings at the within-society level were extremely weak. The fit of this multilevel CFA was extremely good (CFI=.97, RMSEA=.03). Thus, this analysis supports that this scale operates at the societal level of analysis". Nevertheless, the arguments do not sound convincing because of the several reasons. Firstly, the results of multilevel factor analysis are limited to only one factor (uncertainty avoidance) thus the dimensionality of the other factors remains unclear. Secondly, although confirmatory factor analysis was performed at the individual level of analysis in the pilot study 2, the results haven't been published therefore it is unclear how the scales operate at the individual level alone.

In summary, having reviewed the relevant literature and empirical evidence, it can be concluded that the GLOBE project followed the cross-level approach instead of taking the convergent-emergent perspective. Indeed, as noted by Peterson and Castro (2006) the authors demonstrate the individual level logic and did not provide sufficient evidence for the convergent-emergent method. Finally, the debate between Peterson and Castro (2006) and Hanges and Dickson (2006) was summarized by Dansereau and Yammarino (2006, p. 550) who, based on the empirical evidence, conclude that "all of these authors are correct in their

own way, given their own starting points" thus the alternatives raised in the two papers should be tested empirically.

6.7. The Process of Structural Equation Modelling

The position of Karl Popper (Johnson and Duberley, 2000; Popper, 2002b) is that there should be methodological unity between social and natural sciences. Looking from the positivistic perspective, the aim of research is to generate causal laws. Johnson and Duberley (2000, p. 40) explain that "the aim of research should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour". Social interactions should be studied as physical elements – as a chain of causal relations between behaviour and context in the external environment (*ibid.*, p. 40).

The most suitable method for the previously formulated aim and research questions is structural equation modelling. Hair *et al.* (2010, p. 634) explain that the method "enables the researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs" and is the most useful analysis technique dealing simultaneously with series of regression equations.

The process of structural equation modelling consisting of eight elements will be employed to answer the research questions (see Figure 6.3). Although this process may slightly differ accordingly to aims (Schumacker and Lomax, 2004; Kline, 2005; Byrne, 2010; Schumacker and Lomax, 2010), the elements presented in Figure 6.3 are essential (Diamantopoulos and Siguaw, 2000), therefore the process will be used as the structure of section 6.7. Firstly, the essence of every step will be described shortly. Secondly, a deeper analysis of the process will relate it to the study.

1. Model conceptualisation. This stage consists of the two parts: (1) *conceptualisation of measurement model* and (2) *conceptualisation of structural model* (Diamantopoulos and Siguaw, 2000). *Conceptualisation of measurement model* describes how latent variables are operationalized by manifest variables (directly measurable indicators) while *conceptualisation*

of structural model involves the three main aspects: (1) identification of constructs for inclusion in the model, (2) designation of them as exogenous (causes) or endogenous (outcomes) and (3) specification of expected relationships between them.

Figure 6.3: The Process of Structural Equation Modelling
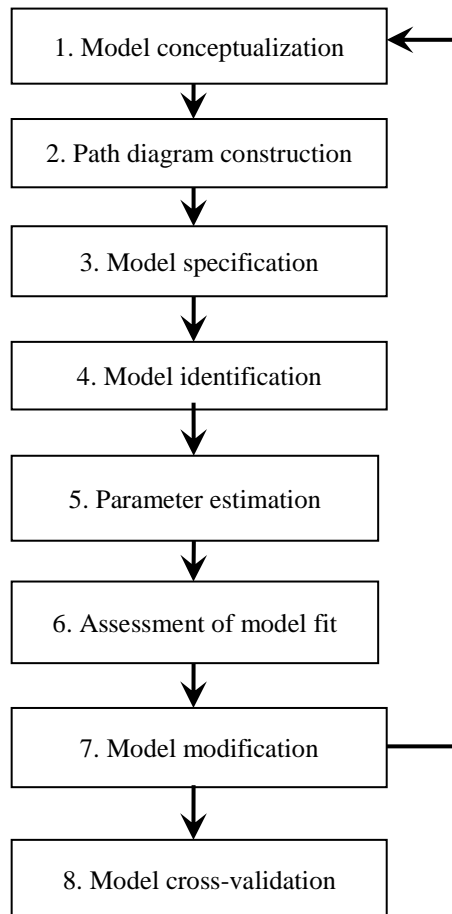
Source: adapted from (Diamantopoulos and Siguaw, 2000, p. 7).

2. Path diagram construction. In this stage various elements of the model are represented graphically. This part is closely related to stage one: in case of detected logical inadequacy, the process goes back to stage one.

3. Model specification. In model specification stage the relationships are described by systems of linear equations.

4. Model identification answers the question "whether one has sufficient information to obtain a unique solution for the parameters to be estimated in the model" (Diamantopoulos

and Siguaw, 2000, p. 48). On the other hand, the identification concept is closely related to falsifiability of the model (Hoyle, 1995) and degrees of freedom. If the model is just-identified, there is a single solution thus it is not possible to reject of falsify it.

5. Parameter estimation. The essence of estimation is to get numerical values for the parameters in the model. There are several estimation techniques, which have different assumptions. In this section possible remedies will be discussed in case if the data does not meet the assumptions.

6. Assessment of model fit. The purpose of this stage is to assess the degree of consistency between the theoretical model and empirical data. It consists of the two sub-stages: *assessment of measurement* model and *assessment of structural model*. The former is aimed at determining construct validity of the measures representing the constructs (Byrne, 1989; Netemeyer *et al.*, 2003a) while the latter evaluates the degree of consistency between the theoretical relationships and empirical data at hand.

7. Model modification. Model modification is defined as alterations to the specification by the addition or deletion of certain parameters and improvement of interpretability by better fit and parsimony.

8. Model cross-validation. Finally**,** this stage refers to the assessment of generalizability and extent of replication in other samples.

6.7.1 Model Conceptualization

Having discussed the essence of sequential steps, a deeper analysis of the process will relate it to the study in more detail.

6.7.1.1 Conceptualization of Measurement Model

The conceptualisation of measurement model was carried out accordingly to the logic suggested by Diamantopoulos and Siguaw (2000). They explain that conceptualisation of the measurement model must begin with analysis of previous theories ant past methodologies and may be followed by exploratory research (see Figure 6.4). If measures for latent variables are

not available, development of new scales can be considered. The next stage is identification of relevant manifest variables, which could act as indicators for latent variables. Multiple measures should be available for all constructs. If they are not available, possibility to use single measure must be evaluated. If it is not possible, it is recommended to consider development of new measures. The final stage is selection of manifest variables for inclusion in the measurement model.

Figure 6.4: Conceptualization of Measurement Model
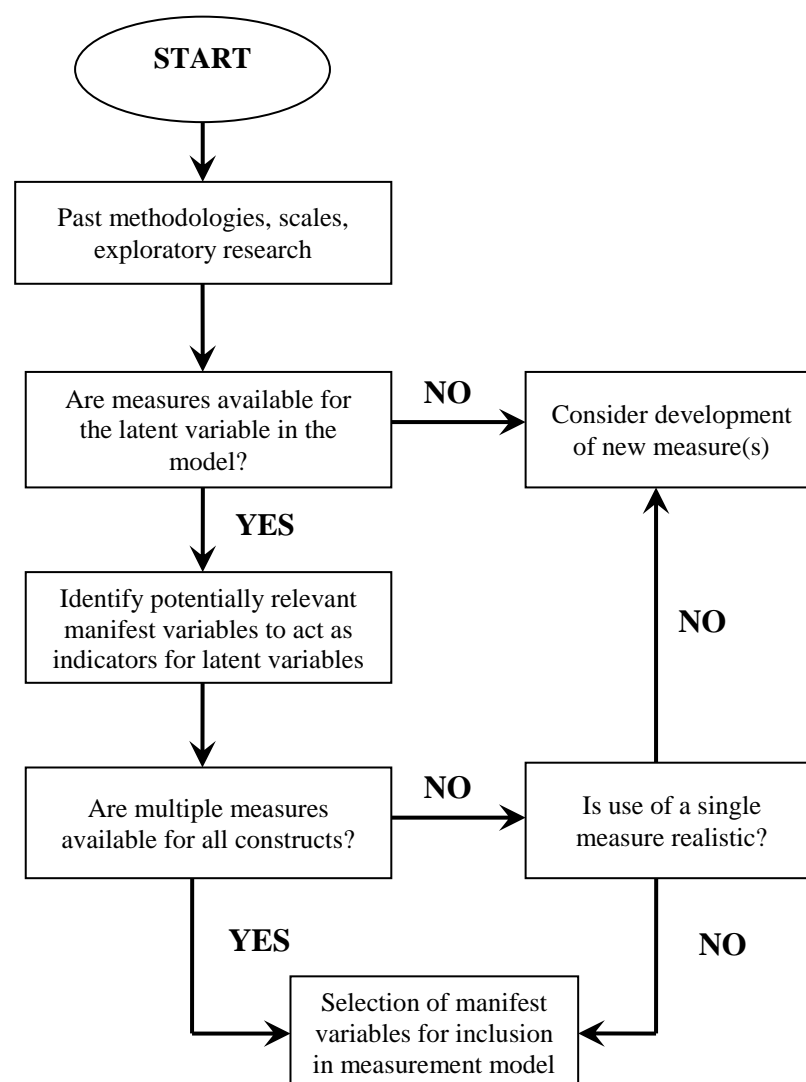
Source: adapted from Diamantopoulos and Siguaw (2000, p. 17)

According to Popper (2002b), scientific statements must be objective thus statements of empirical basis must be objective or inter-subjectively testable. It means that it should be

possible to deduce other testable statement from the statement, which is tested. Objectivity or validity or inter-subjective testability of the measurement model is very important, because it is directly related to falsifiability. Moreover, if measures are not reliable and valid, assessment of the structural model is impossible (Diamantopoulos and Siguaw, 2000).

Bacharach (1989) posits that the two broad criteria for evaluation of variables and constructs are falsifiability and utility. The former refers to the possibility of an empirical refutation (Popper, 1963), while the latter is defined as the ability to explain and predict (Bacharach, 1989). On one hand, explanation refers to the substantial meaning of the three elements: variables, constructs and linkages. On the other hand, prediction tests that substantive meaning "by comparing it to empirical evidence" (*ibid.*, p. 501).

Falsifiability of the measurement model was assessed using the concepts of content and construct validity. Bacharach (1989) warns that content validity of variables is an essential prerequisite of falsifiability. Indeed, Netemeyer *et al.* (2003b, p. 86) echo that "elements of a measurement instrument must be "relevant to and representative of the targeted construct for the particular assessment purpose". Content validity of the measurement model was assured by a priori theoretical (see Chapter 5, Conceptualization) and item generation and judging efforts (see Section 6.3, Questionnaire Development). Hair *et al.* (2010, p. 634) posit that construct validity is "extent to which a set of measured variables actually represent the theoretical latent construct they are designed to measure" and explain that construct validity encompass reliability, convergent validity, discriminant validity and nomological validity. They add that reliability is "measure of the degree to which a set of indicators of a latent construct is internally consistent in their measurements. The indicators of highly reliable constructs are highly interrelated, indicating that they all seem to measure the same thing" (*ibid.*, p. 631).

Convergent validity is present when indicators of the same construct converge, while discriminant validity is defined as "the extent to which measures diverge from other

operationalizations from which the construct is conceptually distinct" (Netemeyer *et al.*, 2003a, p. 86). Construct validity of the conceptual measurement model was discussed in detail in Section 6.3 (Questionnaire Development). Finally, *utility* was evaluated inspecting evidence of nomological validity of the previous studies, which have testified to nomological validity of the scales and demonstrated possession of distinct antecedent causes and consequential effects.

Finally, "the issue of causality affects measurement theory" (Hair et al., p. 701) thus measurement models can be specified as reflective or formative (Diamantopoulos and Siguaw, 2006). According to Hair et al. (2010, p. 701), "a reflective measurement theory is based on the idea that latent constructs cause the measured variables and that the error results in an inability to fully explain these measured variables". In contrast, "a formative measurement theory is modeled based on the assumption that the measured variables cause the construct. The error in formative measurement models, therefore, is an inability of the measured variables to fully explain the construct" (ibid., p. 702). Most importantly, "formative constructs are not considered latent. Instead, they are viewed as indices where each indicator is a cause of the construct" (ibid., p. 702). Diamantopoulos and Winklhofer (2001, p. 274) warn that "the choice between a formative and a reflective specification should primarily be based on theoretical considerations regarding the causal priority between the indicators and the latent variable involved". In other words, "the content domain of the construct is most crucial, no matter which approach is used" (Hair et al., 2010). Review of the items constituting the scales of relationship quality and organisational culture (see Section 6.3.3, p. 199) reveals that the causal priority runs from the latent variable to the indicators. Indeed, the constructs of the current study by their very nature are latent variables and cannot be modeled as indices.

Diamantopoulos and Winklhofer (2001, p. 271) posit that "whereas for reflective indicators, according to the domain sampling model, a set of items is chosen randomly from

the universe of items relating to the construct of interest, a census of indicators is required for a formative specification. More specifically, the items used as indicators must cover the entire scope of the latent variable". It is evident that the constructs of the current study are latent and items can be chosen randomly.

In summary, review of the items constituting the scales of relationship quality and organisational culture (see Section 6.3.3, p. 199) demonstrates that the constructs satisfy the criteria for reflective constructs forwarded by Hair et al. (2010). That is, (1) "items are caused by construct", (2) "all items are related conceptually because they have a common cause", (3) domain of items is "representative sample of potential items", (4) internal consistency is important and thus required, and (5) both internal and external forms of construct validity are important and hence required (ibid., p. 753). Owing to the reviewed arguments, it is deemed the most appropriate to model the constructs of relationship quality and organisational culture as reflective.

6.7.1.2 Conceptualization of Structural Model

The conceptualisation of structural model was implemented using the logic suggested by Diamantopoulos and Siguaw (2000), which clearly rests on Popperian deductive method (see Figure 6.5). The process of conceptualisation begins with analysis of previous theories and identification of latent variables for inclusion in the model. If identification is problematic, deeper analysis of previous theories is required. The next step is designation of constructs as exogenous (cause) or endogenous (outcome).

Often theories may contradict and it may be difficult to come up with a single solution, therefore sometimes it is useful to consider development of alternative (or rival) models (Diamantopoulos and Siguaw, 2000). The next stage is specification of expected relationships for each endogenous variable. Popper (2002b) note that every hypothesis must be theoretically advanced.

Figure 6.5: Conceptualization of Structural Model
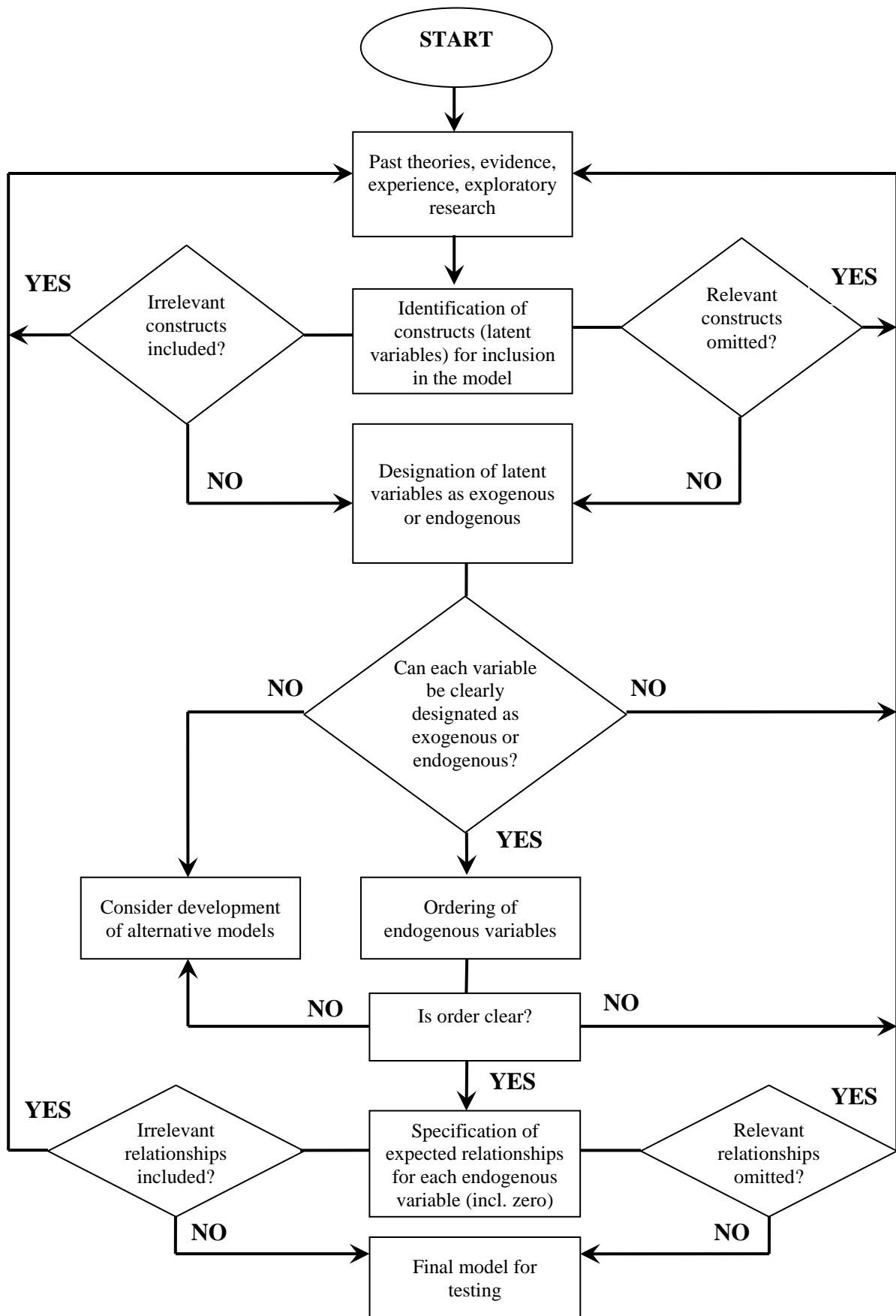
Source: adapted from Diamantopoulos and Siguaw (2000, p. 15)

A hypothesis of zero relationship is no less important than positive or negative relationship, therefore absence of linkages must rest on theory as well (Diamantopoulos and Siguaw, 2000). According to Popper (2002b), a theory should be carried out using the four steps:

1. Testing of internal consistency of a system. In this stage the conclusions are tested among themselves using the logical comparison. The internal consistency of the proposed system was tested using the logic presented in Figure 6.5.

2. Investigation of the logical form of the theory. In this stage it is essential to determine if the theory is scientific. It means that such criteria as falsifiability, or refutability, or testability are evaluated. As was mentioned previously, falsifiability and testability of the measurement model was assessed by inspection of content and construct validity of the selected measures.

3. Comparison with other theories. In this stage the aim is to determine if the theory will result in a scientific advance and will survive various tests.

6.7.2 Model Identification

In broad terms "the problem of identification revolves around the question of whether one has sufficient information to obtain a unique solution for the parameters to be estimated in the model" (Diamantopoulos and Siguaw, 2000, p. 48). This question is directly related to "the transposition of variance-covariance matrix of the observed variables (the data) into the structural parameters of the model under study" (Byrne, 2010, p. 33). For example, the model will not be identified if the number of elements (of information pieces) in the covariance matrix is less than the number of parameters to be estimated. The concept of identification is complex and depends on many conditions (e.g. number of indicators per construct, model type etc.). This section will summarize identification rules, related to the two conceptualized models (recursive and non-recursive).

Structural equation models are further classified into congeneric and non-congeneric. The congeneric structural model is defined as a model that (1) has no cross-loadings and (2)

error covariances between and within constructs (Hair *et al.*, 2010). The identification rules of congeneric and non-congeneric models differ (O'Brien, 1994). Congeneric models represent good measurement properties (Carmines and McIver, 1981; Gerbing and Anderson, 1984) therefore discussion of identification rules will be limited to congeneric models. The identification rules of measurement and structural models will be discussed separately.

Identification of measurement model must start with evaluation of individual factors and later follow with assessment of overall model (Hair *et al.*, 2010). Identification of factors (model) depends on the counting rule (t-rule), stating that degrees of freedom must be equal or greater to zero to achieve identification (Kaplan, 2009). There are three outcomes of identification: a factor (model) can be (1) under-identified, (2) just-identified and (2) over-identified (Maccallum, 1995; Mueller, 1996; Kelloway, 1998; Kline, 2005; Byrne, 2006).

1. Under-identified factor (model) has more parameters to be freely estimated than there are unique information pieces (variances and covariances) in the covariance matrix (Hair *et al.*, 2010) therefore estimation of unique estimates is not possible (Hayduk, 1987; Kenny, 2009).

2. A just-identified factor (model) has an equal number of parameters to be estimated and unique information pieces in the covariance matrix, thus it has zero degrees of freedom, which result in perfect fit, inability to test theory (Kline, 2011) and tautology (James *et al.*, 1982).

3. Over-identified factor (model) has fewer parameters to be freely estimated than there are unique information pieces in the covariance matrix therefore it has degrees of freedom greater than zero and satisfies the counting rule (Kaplan, 2009; Kline, 2011).

The Minimum Number of Indicators per Construct

Identification of a factor depends on the number of its indicators. A factor is under-identified, just-identified and over-identified when number of indicators is two, three and four or more respectively (Herting and Costner, 1985; Nunnally and Bernstein, 1994; Hair *et al.*, 2010).

Hair *et al.* (2010) warns that factors with 2 or fewer indicators should be avoided even if the overall model is identified, because unidimensionality of such factors cannot be evaluated separately (Anderson and Gerbing, 1988). Moreover, factors with 2 indicators may result in other problems such as confounding (Burt, 1976) or problems with estimation (Hair *et al.*, 2010). Reduction of factor indicators to 2 or 3 may improve goodness-of-fit, but results in poor practice of model specification (Marsh *et al.*, 1998; Little *et al.*, 2002; Kenny and McCoach, 2003) and finally may result in diminishing validity of theoretical domain (Hair *et al.*, 2010) which is at utmost importance (Hayduk *et al.*, 2007). Hair *et al.* (2010) posit that ideally a factor should comprise four indicators. However, three indicators per factor is acceptable when other factors in the model have more indicators (*ibid.*, p. 701). Finally, Bacon *et al.* (1995) conclude that more indicators may result in higher reliability and generalizability.

Byrne (2010) notes that the same identification requirements apply to second-order models: they must comply with counting or t-rule and number of indicators both at first and second-order levels must be at least 3.

The Counting Rule (t-rule) of Identification

Identification of overall model as well as of separate factors can be evaluated using the counting rule (t-rule), where p + q totals the number of endogenous and exogenous indicators and (1/2) (p+q) (p+q+1) constitutes the number of unique information pieces in the covariance matrix (Paxton *et al.*, 2011).

$$t \leq \left(\frac{1}{2}\right)(p+q)(p+q+1)$$

Scaling of Factors

All factors and error terms should be assigned a scale in order to be identified (Byrne, 2010). Scaling of factor can be implemented either by fixing loading of any indicator to 1 or setting factor variance equal to 1 (Raykov and Marcoulides, 2006; Byrne, 2010; Kline, 2011).

Disturbances and measurement errors must be scaled in the same way: (Kline, 2011, p. 127) "the path coefficient for the direct effect of a disturbance or measurement error — the unstandardized residual path coefficient — is fixed to equal the constant 1.0".

The Identification of Recursive Structural Models

The counting rule is necessary, but not sufficient condition of identification (Kline, 2011). The necessary and sufficient rule of identification is *the recursive rule,* which states that model is identified if it is recursive (Paxton *et al.*, 2011). Recursive models have no reciprocal relationships, feedback loops and covariances of errors terms (Paxton *et al.*, 2011).

The Identification of Non-Recursive Structural Models

The identification of non-recursive models should be assessed using a different set of rules: besides the counting rule, the rank and order conditions should be evaluated (Blalock, 1964; Kline, 2011; Paxton *et al.*, 2011). The order condition states that "in a model of p simultaneous equations, an equation is identified it excludes at least p-1 variables (endogenous or exogenous) that appear elsewhere in the model (Paxton *et al.*, 2011, p. 31). The order condition as well as the counting rule are necessary, but not sufficient conditions of identification when dealing with non-recursive models (Kline, 2011).

On the other hand, the rank condition of identification is both necessary and sufficient (Paxton *et al.*, 2011). It states that "with p equations and p endogenous variables, an equation is identified if at least one nonzero determinant of order (p-1) (p-1) can be constructed from the coefficients of the variables excluded from that equation (but included in other equations)" (Paxton *et al.*, 2011, p. 34). In other words, the essence of the rank condition is to determine if a structural equation is not a linear combination of other equations (Duncan, 1975). Although assessment of rank condition is complex and involves matrix operations (Bollen, 1989), several algorithms have been devised to reduce the complexities of the procedure. Berry (1984) introduced algorithm, which does not involve matrix operations. Later Rigdon (1995) suggested a graphical technique.

Figure 6.6: An Example of Non-Recursive Loop Model
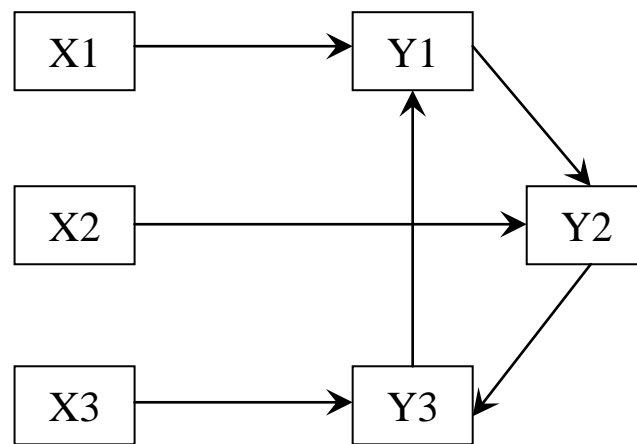
The graphical method of Eusebi (2008) is complex and requires knowledge of graphical models theory. The procedure introduced by Kline (2011) is simplified version of the algorithm suggested by Berry (1984) and is the most advanced, easiest to use and less error-prone at the moment. As identification of complex non-recursive models may be problematic (Bollen and Jöreskog, 1985), it is better to use simpler and less error-prone methods. The procedure of Kline (2011) comprises several steps, which will be discussed in detail based on an example illustrated in Figure 6.6.

1. The first step is construction of a system matrix, "in which the endogenous variables of the structural model are listed on the left side of the matrix (rows) and all variables in the structural model (excluding disturbances) along the top (columns)" (Kline, 2011, p. 151). The system matrix of the model in Figure 6.6 is represented in Matrix 1. Direct effects of exogenous variables (X) on endogenous variables (Y) are represented by 1. Kline (2011, p. 151) adds that "a 1 also appears in the column that corresponds to the endogenous variable represented by that row". Finally, variables not included in the equation must be indicated by zeros.

Matrix 1

	X_1	X_2	X_3	Y_1	Y_2	Y_3
Y_1	1	0	0	1	0	1
Y_2	0	1	0	1	1	0
Y_3	0	0	1	0	1	1

2. In the second step, the first row of system matrix (first equation) should be crossed out. Later any columns containing 1 in this row should be cross out as well. The result of step 2 is represented in Matrix 2 bellow.

Matrix 2

$$
\begin{array}{c c c c c c c}
 & X_1 & X_2 & X3 & Y_1 & Y_2 & Y_3 \\
Y_1 & \cancel{1} & \cancel{0} & \cancel{0} & \cancel{1} & \cancel{0} & \cancel{1} \\
Y_2 & \cancel{0} & 1 & 0 & \cancel{1} & 1 & \cancel{0} \\
Y_3 & \cancel{0} & 0 & 1 & \cancel{0} & 1 & \cancel{1}
\end{array}
$$

3. A new matrix is formed of the entries, which remain after crossing out in step 2.

Matrix 3

$$
\begin{bmatrix}
1 & 0 & 1 \\
0 & 1 & 1
\end{bmatrix}
$$

4. The reduced matrix should be further simplified "by deleting any row with entries that are all zeros" (Kline, 2011, p. 151). "Any row that is an exact duplicate of another or that can be reproduced by adding other rows together" should be deleted also (*ibid.*, p. 151). The new matrix formed in step 3 does not require further simplification, because it satisfies neither of the two conditions.

Let's define the following matrix for illustration purposes:

Matrix 4

$$
\begin{bmatrix}
1 & 0 \\
0 & 1 \\
1 & 1
\end{bmatrix}
$$

The third row of the matrix above can be created adding the first and the second rows therefore it should be deleted.

After the final step, it is possible to determine the rank, which equals to the number of remaining rows (*ibid.*, p. 151). It is important to note that steps 1 through 4 should be repeated for the every equation in the model. The model is identified if the all equations satisfy the rank condition.

Equation of Y_1 meets the rank condition. The reduced matrix has 2 rows therefore its rank is 2. Kline (2011, p. 151) notes that "the rank condition is met for the equation of endogenous variable if the rank of the reduced matrix is greater than or equal to the total number of endogenous variables minus 1".

In summary, the algorithm suggested by Kline (2011) does not involve matrix operations and is easy to implement therefore it will be used to assess the rank condition of the non-recursive structural model, conceptualized in Chapter 5.

6.7.3 Parameter Estimation

The essence of parameter estimation is to get values of parameters with minimal discrepancy between the sample covariance matrix and the population covariance matrix, which is generated by the structural equation model (Byrne, 2009). It is possible to use seven parameter estimation methods, but default is maximum likelihood (ML), which must meet the assumption of multivariate normality (Robles, 1996; Diamantopoulos and Siguaw, 2000; Byrne, 2010). The method is accompanied by a wide range of statistics which can be used to evaluate the consistency of the theoretical model with the data therefore it is very useful (Diamantopoulos and Siguaw, 2000).

On the other hand, WLS and DWLS estimation methods have the advantage of being asymptotic distribution-free estimators. However, the both methods require sample size of 1000 or more (*ibid.*, p. 57).

In this study maximum likelihood method (ML) will be employed to generate the values of parameters. In case of violations of multivariate normality, the remedies discussed in section 6.7.5 (Assessing Assumptions of Structural Equation Modelling) will be applied as recommended by the literature (Satorra and Bentler, 1994; Finney and DiStefano, 2006; Byrne, 2010).

6.7.4 Assessment of Goodness-of-Fit

Goodness-of-fit is defined as "the extent to which the hypothesized model is consistent with the data" (Diamantopoulos and Siguaw, 2000, p. 82). Although structural equation modelling enables estimation of the measurement and the structural models simultaneously (Hair *et al.*, 2010), the number of suggested steps varies from one to four. Some authors argue that superior approach is assessment of both the measurement and the structural models at once. Others posit that the two-step approach is necessary, because validity of measurement model is a prerequisite of structural theory validity (Anderson and Gerbing, 1992; Anderson and Gerbing, 1988). Some authors even suggest four-step modelling as an extension of the two-steps procedure (Mulaik and Millsap, 2000). Finally, the majority agree that testing of a theory should be implemented by at least the two steps, because testing of structural relationships should be implemented only with good measures (Netemeyer *et al.*, 2003b; Hair *et al.*, 2006; Byrne, 2010). This study will follow the two-step approach. Assessment of goodness-of-fit will begin with evaluation of the measurement model and, given an acceptable fit, the analysis will proceed with assessment of the structural model and overall goodness-of-fit.

6.7.4.1 Assessing Goodness-of-Fit of Measurement Model

Assessment of the measurement model will be conducted by the two recommended steps: (1) evaluation of construct validity, which involves convergent validity and discriminant validity and (2) assessment of goodness-of-fit statistics.

Assessment of Construct Validity

Convergent validity is defined "as extent to which indicators of a specific construct converge or share a high proportion of variance in common" (Hair *et al.*, 2010, p. 689), which should be evaluated by (1) *inspection of factor loadings*, (2) *average variance extracted* and (3) *reliability*.

1. Factor loadings are indicators of convergent validity, because high loadings indicate that observed variables converge on the latent construct (Diamantopoulos and Siguaw, 2000; Hair *et al.*, 2010). Standardized factor loadings should be statistically significant (Bollen, 1989; Byrne, 2001) and equal or greater than .7 with minimum value of .5 (Hair *et al.*, 2010). This requirement is very closely related to communality or R^2 of an indicator, which "represents how much variation in an item is explained by the latent variable" (Hair *et al.*, 2010, p. 709). A standardised factor loading of .71 results in R^2 of .5 indicating that half of the item's variance is explained by the latent factor and the other half is attributed to measurement error.

2. Average variance extracted (AVE) is "a summary measure of convergence among a set of items representing a latent construct" (Hair *et al.*, 2010, p. 688). It was suggested by Fornell and Larcker (1981) who advocated a minimum value of .5. Netemeyer *et al.* (2003b) suggested a short-form calculation formula for AVE, where:

λ_i = completely standardized factor loading of *i*th item

p = the number of indicators

$$\frac{\sum_{i=1}^{p} \lambda_i^2}{p}$$

3. Reliability is another indicator of convergent validity (Hair *et al.*, 2010), which can be assessed in several debatable ways (Bacon *et al.*, 1995; Raykov, 1997; Netemeyer *et al.*, 2003b; Raykov, 2004). Cronbach alpha (Cronbach, 1951) is frequently used to assess reliability and it "represents the proportion of a scale's total variance that is attributed to common source - ... the true score of the latent construct being measured" (Netemeyer *et al.*, 2003b, p. 49). It can be defined as "an index of common-factor concentration" (Cronbach, 1951, p. 331), which "serves purposes for indices of homogeneity" (*ibid.*, p. 331). Under the certain assumptions, this statistic can be standardized and simplified to the average inter-item correlation known as Spearman-Brown stepped-up reliability coefficient (Cortina, 1993b).

Cronbach alpha has been criticized, because it depends heavily on the number of items in the scale thus scales with more indicators result in higher reliabilities (Cortina, 1993b). For example, Peterson (1994) found out that with the same interim correlation of .47 scales with 3 and 9 items had alpha levels of .73 and .89 respectively. Finally, this statistic is not a measure of unidimensionality (Netemeyer *et al.*, 2003b) or "the extent to which the scale measures one underlying factor" (Field, 2009, p. 675) therefore it should be employed to evaluate internal consistency only with the evidence of unidimensionality present (Hattie, 1985; Anderson and Gerbing, 1988; Clark and Watson, 1995; Schmitt, 1996). Cronbach alpha indicates excellent, very good and adequate reliability when values are around .9, .9 and .7 respectively (Kline, 2011). Field (2009) echoes that values around .8 are good and Netemeyer *et al.* (2003b) agree that the widely advocated minimum value of Cronbach alpha is .7.

Composite reliability is a more precise measure of internal consistency. It was suggested by Fornell and Larcker (1981) and is often used with structural equation modelling (Hair *et al.*, 2010). The statistic can be computed by the formula suggested by Netemeyer *et al.* (2003b), where:

$$CR = \frac{\left(\sum_{i=1}^{n} \lambda_i\right)^2}{\left(\sum_{i=1}^{n} \lambda_i\right)^2 + \left(\sum_{i=1}^{n} e_i\right)}$$

λ_i = completely standardized factor loading of *i*th item

e_i = error variance term of *i*th item

Unlike Cronbach alpha, it does not assume that reliabilities of individual indicators are equal because it is based both on standardized loadings and measurement error (Bollen, 1989). Composite reliability value of .7 or greater indicates good reliability and demonstrates that the indicators consistently measure the same latent construct (Nunnally, 1978; Nunnally and Bernstein, 1994; Hair *et al.*, 2010). However, some authors explain that composite

reliability values of .6 or greater are acceptable (Bagozzi and Youjae, 1988; Diamantopoulos and Siguaw, 2000).

Discriminant validity is defined as "the extent to which a construct is truly distinct from other constructs" and is regarded as another sub-part of construct validity (Hair *et al.*, 2010, p. 710). Discriminant validity can be assessed by a number of methods (Campbell and Fiske, 1959; Fornell and Larcker, 1981; Bagozzi *et al.*, 1991) including the following:

1. Discriminant validity holds true when the average variance extracted of the two constructs is greater than the square of correlation between them (Fornell and Larcker, 1981; Bagozzi and Phillips, 1982; Netemeyer *et al.*, 2003b; Hair *et al.*, 2010). Hair *et al.* (2010) posit that this approach is rigorous and conservative.

2. Discriminant validity can be assessed constraining correlation between the two constructs to 1 and later comparing chi-square values of the constrained and the unconstrained models. Discriminant validity holds true when chi square of the unconstrained model is significantly lower (Netemeyer *et al.*, 2003b; Hair *et al.*, 2010).

Finally, another necessary, but not sufficient condition of discriminant validity is congeneric model, which does not allow cross-loadings and error covariances between and within constructs (Hair *et al.*, 2010).

Assessment of Goodness-of-Fit

The second step in the assessment of the measurement model is evaluation of goodness-of-fit indices which are classified into the three types: absolute, incremental and parsimonious (Hair *et al.*, 2010). Absolute fit indices measure the extent of consistency between the theoretical model and the data (Kenny and McCoach, 2003) evaluating differences in the implied and observed covariance matrixes (Gerbing and Anderson, 1993).

χ^2 **statistic** is the most essential (Hair *et al.*, 2010) and statistically based absolute fit index (Byrne, 1998), which always should be reported along with degrees of freedom (Hayduk *et al.*, 2007; Savalei, 2008). However, it should not be used as a single measure of

goodness-of-fit, because of possible bias against sample size and model complexity (Fan *et al.*, 1999b; Cheung and Rensvold, 2002; Meade *et al.*, 2008; Byrne, 2011). χ^2 "is a mathematical function of the sample size (N) and the difference between the observed and estimated covariance matrixes" (Hair *et al.*, 2010, p. 666) therefore an increase in sample size inflates its value. Moreover, χ^2 tends to increase together with the number of indicators (*ibid.*, p. 666) and it assumes perfect fit (Jaccard and Wan, 1996), which may be implausible (Miles and Shevlin, 2007; Steiger, 2007).

The problems of χ^2 was addressed by Wheaton *et al.* (1977) who introduced **normed chi-square index**, which is simple ratio of χ^2 and degrees-of-freedom. Wheaton *et al.* (1977) posit that models with χ^2 to degrees-of-freedom ratios less than five indicates good fit while the others suggest cut-off value of 3 (Hair *et al.*, 2010) or even 2 (Marsh and Hocevar, 1985). Despite popularity of this index (Hair *et al.*, 2010), Kline (2011) discourages its use and claims that: (1) it is not sensitive to sample size only when the model is not correct, (2) degrees of freedom are not related to sample size and (3) there is no agreement on cut-off values.

Goodness-of-Fit Index (GFI) suggested by Jöreskog and Sörbom (1982) demonstrates the relative amount of variance and covariance in the sample-based covariance matrix, which is explained by the model-based covariance matrix (Byrne, 2010). As well as χ^2, the index is still sensitive to sample size (Maiti and Mukherjee, 1991; Shook *et al.*, 2004). On the other hand, larger sample size results in more precise parameter estimates (MacCallum *et al.*, 1996). Indeed, it is evident that GFI may cause problems when balancing precision of parameters with adequate goodness-of-fit.

Acceptable values of GFI vary from greater than .9 (Hair *et al.*, 2010) to .95 and more (Hoelter, 1983). However, Hair *et al.* (2010) warns that the usage of index has declined. Indeed, Sharma *et al.* (2005) recommend not using this index because of the problems

associated with: (1) dependence on sample size and number of indicators and (2) not enough sensitivity to detect missspecified models.

Root mean square error of approximation (RMSEA) was introduced by Steiger and Lind (1980) to correct for both model complexity and sample size. One important aspect of RMSEA is that it indicates consistency between the theoretical model and population covariance matrix instead of focusing on just a sample used for estimation (Browne and Cudeck, 1993; Hair *et al.*, 2010).

$$RMSEA = \sqrt{\frac{(\chi^2 - df_m)}{df_m(N-1)}}$$

Hancock and Mueller (2010a) argue that RMSEA as well as the upper bound of its confidence interval should be bellow .05. Browne and Cudeck (1993) echo that RMSEA value less than .05 indicates good fit while value greater than .08 demonstrates reasonable errors. Hu and Bentler (1999) posit that good fit is represented by RMSEA value not greater than .06. However, Feinian *et al.* (2008) do not recommend usage of absolute cut-off value. Indeed, Hair et al. (2010) explain that RMSEA cut-off values should depend on sample size and number of indicators used (see Table 6.3, p. 256). The index tends to increase when sample size is small therefore it performs better with larger samples (Rigdon, 1996; Sharma et al., 2005) equal to at least 200 (Curran *et al.*, 2003; Sharma *et al.*, 2005). An another advantage of RMSEA is that it provides confidence interval with p-value, which tests the hypothesis that RMSEA value in the population is not greater than .05. Ideally the hypothesis should not be rejected (Jöreskog and Sörbom, 1996).

RMSEA is a strongly recommended index (MacCallum and Austin, 2000; Sharma *et al.*, 2005), because it possesses many desirable properties such as sensitivity to misspecification, guideline of interpretation and presence of confidence interval (MacCallum and Austin, 2000).

Root mean square residual (RMR) indicates the average value of differences between the elements of implied and observed covariance matrixes (Diamantopoulos and Siguaw, 2000). The problem of RMR is that its range depends on the scales of the indicators therefore it can be difficult to interpret it when scales differ (Kline, 2011). Nevertheless, the problem is easily overcome calculating **standardized mean square residual (SRMR)** by dividing RMR values by their standard errors (Jöreskog and Sörbom, 1989). **SRMR** value less than .05 indicates good fit (Diamantopoulos and Siguaw, 2000). However, Hair *et al.* (2010) suggest less conservative cut-off value of .10, but warns that it depends on sample size and number of indicators used (see Table 6.3, p. 256).

The next group of goodness-of-fit indices are classified as comparative (Byrne, 2010) or incremental (Hu and Bentler, 1995; Hair *et al.*, 2010), which "assess how well the estimated model fits relative to some alternative baseline model" (Hair *et al.*, 2010, p. 668). Alternative baseline models used for comparison purposes are usually the independence model and the saturated model (Byrne, 2010). The former assumes complete independence between variables while the latter has zero degrees of freedom thus it fits perfectly (Diamantopoulos and Siguaw, 2000). Paxton *et al.* (2011) clarify that it is possible to specify various baseline models besides the null and saturated.

Normed fit index suggested by Bentler and Bonett (1980) is a ratio of difference in χ^2 statistic for a baseline model (typically null) and the proposed model divided by χ^2 of baseline model (Paxton *et al.*, 2011).

$$NFI = \frac{\chi_n^2 - \chi_m^2}{\chi_n^2}$$

Normed fit index ranges from 0 to 1 demonstrating perfect fit with NFI values of 1 (Hair *et al.*, 2010) and good fit when close to .95 (Schumacker and Lomax, 2004; Byrne, 2010). Hair *et al.* (2010) posit that the main disadvantage of NFI is that it does not penalize for complexity therefore more complex models result in higher NFI values.

Tucker-Lewis index (Tucker and Lewis, 1973) "is actually a comparison of the normed chi-square values for the null and specified model, which to some degree takes into account model complexity" (Hair *et al.*, 2010, p. 668). TLI is not standardized thus it may have values bellow 0 and above 1 (ibid., p. 668). However, if the index is greater to 1, it is set to 1. Values of Tucker Lewis index close to .95 indicate good fit (Schumacker and Lomax, 2004; Byrne, 2010).

$$TLI = \frac{\left[\left(\frac{\chi_n^2}{df_n}\right) - \left(\frac{\chi_m^2}{df_m}\right)\right]}{\left[\left(\frac{\chi_n^2}{df_n}\right) - 1\right]}$$

Comparative Fit Index (CFI) was designed Bentler (1990) to overcome the problems of normed fit index (Bentler and Bonett, 1980; Hu and Bentler, 1999; Byrne, 2010). Comparative fit index includes a penalty for complexity per degrees of freedom. Kline (2011) explains that CFI value of .95 or greater indicates good fit. However, Hair *et al.* (2010) argue that cut-off value should be adjusted based on sample size and number of indicators in the model (see Table 6.3, p. 256).

$$CFI = 1 - \frac{(\chi_m^2 - df_m)}{(\chi_n^2 - df_n)}$$

The following group of goodness-of-fit indices are classified as parsimonious and "provide information about which model among a set of competing models is best, considering its fit relative to its complexity" (Hair *et al.*, 2010, p. 669). Parsimonious normed fit index (PNFI) is based on normed fit index (NFI) which is adjusted by parsimony ratio. The statistic is computed by dividing degrees of freedom used by the model by total degrees of freedom available.

$$PNFI = NFI \frac{df_m}{df_t}$$

Akaike information criterion (AIC) is used to compare two or more alternative models, which are not nested (Kline, 2011). Smaller value of AIC indicates a better fitting model (Byrne, 2010). AIC incorporates model parsimony and favours simpler models (Akaike, 1974; Kline, 2011). However, the correction for parsimony diminishes when sample size increases (Mulaik, 2009). The statistic requires sample size of at least 200 and assumes multivariate normality (Diamantopoulos and Siguaw, 2000). The formula of AIC involves χ^2 value of the model plus the number of free parameters (q) multiplied by 2 (Byrne, 2006; Kline, 2011) therefore it penalizes for complexity.

$$AIC = \chi^2_m + 2q$$

Expected cross validation index (ECVI) "measures the discrepancy between the fitted covariance matrix in the analyzed sample, and the expected covariance matrix that would be obtained in another sample of equivalent size" (Byrne, 2010, p. 82). The model with the smallest ECVI value has the greatest potential for replication (Diamantopoulos and Siguaw, 2000). ECVI suggested by Browne and Cudeck (1989) is almost the same as AIC except for a constant scale factor where n is sample size.

$$ECVI = \frac{1}{n}(AIC)$$

In summary, there is consensus that model fit should be assessed from different perspectives using a set of fit indices (Hayduk, 1996; Hair *et al.*, 2010; Schumacker and Lomax, 2010; Kline, 2011). Hair *et al.* (2010) posit that beside χ^2 value and associated degrees of freedom, at least one index per category should be reported: absolute fit index, incremental fit index, goodness-of-fit index and badness-of-fit index. Kline (2011) argues that a set of reported fit indices should include the following: model χ^2 and its degrees of freedom, RMSEA, GFI, CFI and SRMR. However, there is consensus not to use GFI, because of the problems discussed previously (Sharma *et al.*, 2005). Besides the discussed indices, Sharma

et al. (2005) recommends reporting Tucker-Lewis index (TLI), which demonstrated even better properties than RMSEA. Finally, ECVI should be employed in case of the need to compare several competitive models (Diamantopoulos and Siguaw, 2000).

Drawing conclusions based on the literature reviewed, it was decided to use the following set of indices: χ^2 and its degrees of freedom, normed χ^2 index, RMSEA, CFI, TLI and SRMR. As the study comprises the two competitive models, their relative superiority will be additionally assessed by χ^2 difference test, AIC and ECVI.

Although cut-off value of .95 usually is considered as a standard for CFI and TLI, decision on cut-off values should consider sample size and model complexity (Hair *et al.*, 2010). Hair *et al.* (2010) adds that cut-off value .95 becomes unrealistic when many parameters are estimated and sample size is large. Drawing on the results of studies by Hu and Bentler (1999) and Marsh *et al.* (2004a), Hair *et al.* (2010) suggested the guideline of cut-off values based on different simple sizes and complexity conditions (see Table 6.3).

Table 6.3: Characteristics of Different Fit Indices Demonstrating Goodness-of-Fit across Different Model Situations

	N < 250			N > 250		
	M ≤ 12	**12 < m < 30**	**M ≥ 30**	**m < 12**	**12 < m < 30**	**M ≥ 30**
χ^2	Insignificant p-values expected	Significant p-values expected	Significant p-values expected	Insignificant p-values even with good fit	Significant p-values expected	Significant p-values expected
CFI or TLI	≥ .97	≥ .95	> .92	≥ .95	> .92	> .90
RNI	May not diagnose misspecification well	≥ .95	> .92	≥ .95, not used with N > 1000	> .92, not used with N > 1000	> .90, not used with N>1000
SRMR	Biased upward, use other indices	≤ 0.08 with CFI ≥ .95	< .09 (with CFI > .92	Biased upward, use other indices	≤ .08 with CFI > .92	≤ .08 with CFI > .92
RMSEA	< .08 with CFI ≥ .97	≤ .08 with CFI ≥ .95	≤ .08 with CFI ≥ .92	< .07 with CFI ≥ .97	< .07 with CFI ≥ .92	< .07 with CFI ≥ .90

Note: m = number of observed variables; N = sample size
Source: adapted from Hair *et al.* (2010, p. 672)

6.7.4.2 Assessing Goodness-of-Fit of Structural Model

Assessment of the structural model involves evaluation of parameter estimates, explanatory power and overall goodness-of-fit (Byrne, 2010; Hair *et al.*, 2010). Structural relationships must be statistically significant, in the predicted direction and nontrivial (Hair *et al.*, 2010). Explanatory power of the structural model should be assessed by examination of R^2 values of individual equations, which demonstrate the proportion of variance explained (Paxton *et al.*, 2011). Finally, goodness-of-fit of the overall model should be evaluated and compared with the measurement model, because better fit of the recursive structural model indicates that the structural theory lacks validity thus the comparison should produce statistically insignificant χ^2 difference (Hair *et al.*, 2010).

Calculation of indirect and total effects in the non-recursive models deserves special attention. Variables in feedback loops have effects on each other thus "the model can imply an infinite chain of influence" (Paxton *et al.*, 2011, p. 94) therefore the estimation of non-recursive models based on cross-sectional data must satisfy the assumption of equilibrium (Heise, 1975; Bollen, 1987; Kaplan, 2001; Kline, 2011), which means that "the effect of the positive feedback loop is ever increasing with a decreasing effect so that a single change to one of variables "settles down" to a single measurable indirect or total effect" (Paxton *et al.*, 2011, p. 95). The equilibrium of linear equations can be evaluated using stability index suggested by Fox (1980) and Bentler and Freeman (1983), which demonstrates stability when its value is less than 1. However, Kaplan (2001) argues that the degree of bias is not accurately measured by the stability index and warns that instability can result in severe bias of parameter estimates. Finally, Kline (2011) warns that in fact there is no way to assess equilibrium when data is cross-sectional.

6.7.5 Assessing Assumptions of Structural Equation Modelling

Structural equation modelling is very often used in management research and has almost become a common research language. Although multivariate normality is a critically

important assumption of structural equation modelling (Curran *et al.*, 1996; Olsson *et al.*, 2000; Boomsma and Hoogland, 2001; Bentler and Savalei, 2006), it has been blatantly ignored for years (Micceri, 1989; Breckler, 1990; Zhu, 1997; Byrne, 2010). In many cases data is not normal (Lei and Lomax, 2005), but the vast majority of authors tend to protect their models from falsification by either not acknowledging the assumption of normality or testing it explicitly (Byrne, 2010).

The Effects of Non-Normality on Structural Equation Modelling

The effects of non-normality depend on its extent (Diamantopoulos and Siguaw, 2000; Byrne, 2010). There is consensus that violations of normality affect the following aspects of structural equation modelling (West *et al.*, 1996; Fan *et al.*, 1999a; Kline, 2011):

1. **χ^2 value.** The greater non-normality, the more χ^2 value inflates if either Maximum Likelihood (ML) or generalized least squares (GLS) estimation methods are used. χ^2 inflation results in inappropriate modifications, over-fitting and poor replicability of theoretically sound models (Maccallum *et al.*, 1992; Nevitt and Hancock, 1997; Lei and Lomax, 2005; Kline, 2011).

2. **Goodness-of-fit statistics.** Non-normality leads to biased goodness-of-fit indices such as Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and Root Mean Square Error of Approximation (RMSEA), because they are dependent on χ^2 value (Marsh *et al.*, 1988; West *et al.*, 1996; Nevitt and Hancock, 2000; Nevitt and Hancock, 2001).

3. **T-values**. Non-normality affects both parameter estimates (Fan and Wang, 1998; Lei and Lomax, 2005) and standard errors (Nevitt and Hancock, 2001; Byrne, 2010), which may result in spuriously high t-values and significant paths, although no effects may be present in the population.

Assessment of Normality

Assessment of normality must start at univariate level, because univariate normality is the necessary, but not sufficient condition for multivariate normality (Byrne, 2010). Research has

demonstrated that skewness has effects on tests of means, while kurtosis (especially multivariate) severely affects variances and covariances, which are the cornerstones of structural equation modelling (DeCarlo, 1997; Byrne, 2010). However, there is no consensus about kurtosis (Byrne, 2010). West *et al.* (1996) explain that value of 7 constitutes early departure from normality while Kline (2011) posits that value of 8 and greater indicates extreme kurtosis, which becomes a problem if it is greater than 10. Multivariate normality must be evaluated using Mardia's normalized estimate of multivariate kurtosis, which indicates violation of normality if it is greater than 5 (Byrne, 2010).

Assessment of Data Continuousness

Continuousness of data is another important assumption of Maximum Likelihood estimation (Byrne, 2010). Likert scale is used very often in marketing research. There may be two problems related to Likert-scaled data (O'Brien, 1985; Jöreskog, 1993; DiStefano, 2002):

1. Splitting of continuous data into categories may result in categorization error with categories representing only crude measurement.

2. Length of categories may be unequal and this may result in transformation error. However, this is not a problem when number of categories is large and data is approximately normal (Babakus *et al.*, 1987; Bentler and Chou, 1987b; Atkinson, 1988). Byrne (2010) echoes that problems arise if Likert scale has less than five points with high degrees of skewness. Since the all Likert scales in the questionnaire have seven points, it can be concluded that the data can be analyzed using maximum likelihood method, which requires continuous scale.

The Process and Options of Dealing with Non-Normal and Continuous Data

There are two options of analysing continuous non-normal variables: (1) Robust Maximum Likelihood method and (2) Maximum Likelihood method with bootstrapping (Lockwood and MacKinnon, 1998; MacKinnon *et al.*, 2004; Preacher and Hayes, 2008; Kline, 2011).

Robust Maximum Likelihood method adjusts t-values, standard errors, χ^2 and goodness-of-fit statistics to reflect the degree of kurtosis (Kline, 2011). Using this method, χ^2 value is replaced by Satorra-Bentler statistic (Satorra and Bentler, 1994), which is used to rescale goodness-of-fit indices and adjust them for kurtosis. Research has demonstrated that Satorra-Bentler method performs well (Finney and DiStefano, 2006).

Another approach to analysis of continuous and non-normal data is Maximum Likelihood (or other normal method) with bootstrapping procedure (Yung and Bentler, 1996; Zhu, 1997), which was introduced by Efron (Efron, 1979; Efron, 1986) and later developed by Kotz and Johnson (1997). During the bootstrapping procedure, standard errors and the other parameters are generated using very large number of subsamples drawn with replacement from the same database, which serves as a hypothetical population (Byrne, 2010; Kline, 2011). However, bootstrapping is only precise with moderately large samples (Yung and Bentler, 1994; Ichikawa and Konishi, 1995). Indeed, bootstrapping rests on the parent distribution therefore sample size must be at least 200 to avoid biased results (Kline, 2011). Kline (2011) warns that analysis with sample size of 100 or smaller results in large standard errors and unusable samples with not positive definite covariance matrixes. The smaller sample size and extent of normality, the greater rate of non-convergence (Anderson and Gerbing, 1984). Rodgers (1999) adds that bootstrapping can even magnify problems instead of solving them if sample size is small. Moreover, it can't compensate for not representative samples. Another disadvantage of bootstrapping is that it does not allow bootstrapping of goodness-of-fit indices. They can be calculated by a separate procedure of Bollen-Stine bootstrapping (Bollen and Stine, 1992), which is an alternative to Satorra-Bentler rescaled χ^2. Bollen-Stine bootstrapping produces probability value for χ^2, which is used to calculate normal theory χ^2 with the proper number of degrees of freedom (Nevitt and Hancock, 1997).

The process and possible options of dealing with non-normal and continuous data are summarized in Figure 6.7.

Step 1. As there is no agreement what constitutes non-normality, it is better to adopt the conservative approach and to diagnose univariate non-normality in the presence of statistically significant kurtosis at univariate level.

Step 2. Multivariate normality holds true when Mardia's normalized estimate of multivariate Kurtosis is not greater than 5. Maximum likelihood estimation can be used in the presence of both univariate and multivariate normality.

Assessment of parameters (Step 3) can be implemented either by robust maximum likelihood or bootstrapping with maximum likelihood. The former method is integrated into Lisrel software while the latter is a part of Amos package.

Assessment of parameters by Robust Maximum Likelihood (See Figure 6.7, Step 3.1) involves correction for kurtosis of standard errors and t-values. The disadvantage of this method is that Lisrel software does not compute confidence intervals thus they must be calculated by hand. Another option is to use *bootstrapping with maximum likelihood* which provides standard errors and bias-corrected confidence intervals (See Figure 6.7, Step 3.2). Assessment of goodness-of-fit (Step 4) is comprised of the two options (Steps 4.1 and 4.2). According Fouladi (1998), as the both methods have advantages and shortcomings, one method is not advocated over another.

Assessment of goodness-of-fit by Robust Maximum Likelihood (Step 4.1) involves replacement of χ^2 by Satorra-Bentler rescaled χ^2, which is used to recalculate Comparative Fit Index, Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA) and the other goodness-of-fit indices which are dependent on χ^2. Although the method allows complete evaluation of goodness-of-fit, it involves number of complexities such as generation of asymptotic covariance matrix and programming using Lisrel syntax. The method is especially difficult to implement dealing with second-order measurement models or non-recursive structural models. As the latter models involve the effects of instrumental variables, the procedure becomes even more complicated and error-prone.

Figure 6.7: The Process and Options of Dealing with Non-Normal and Continuous Data
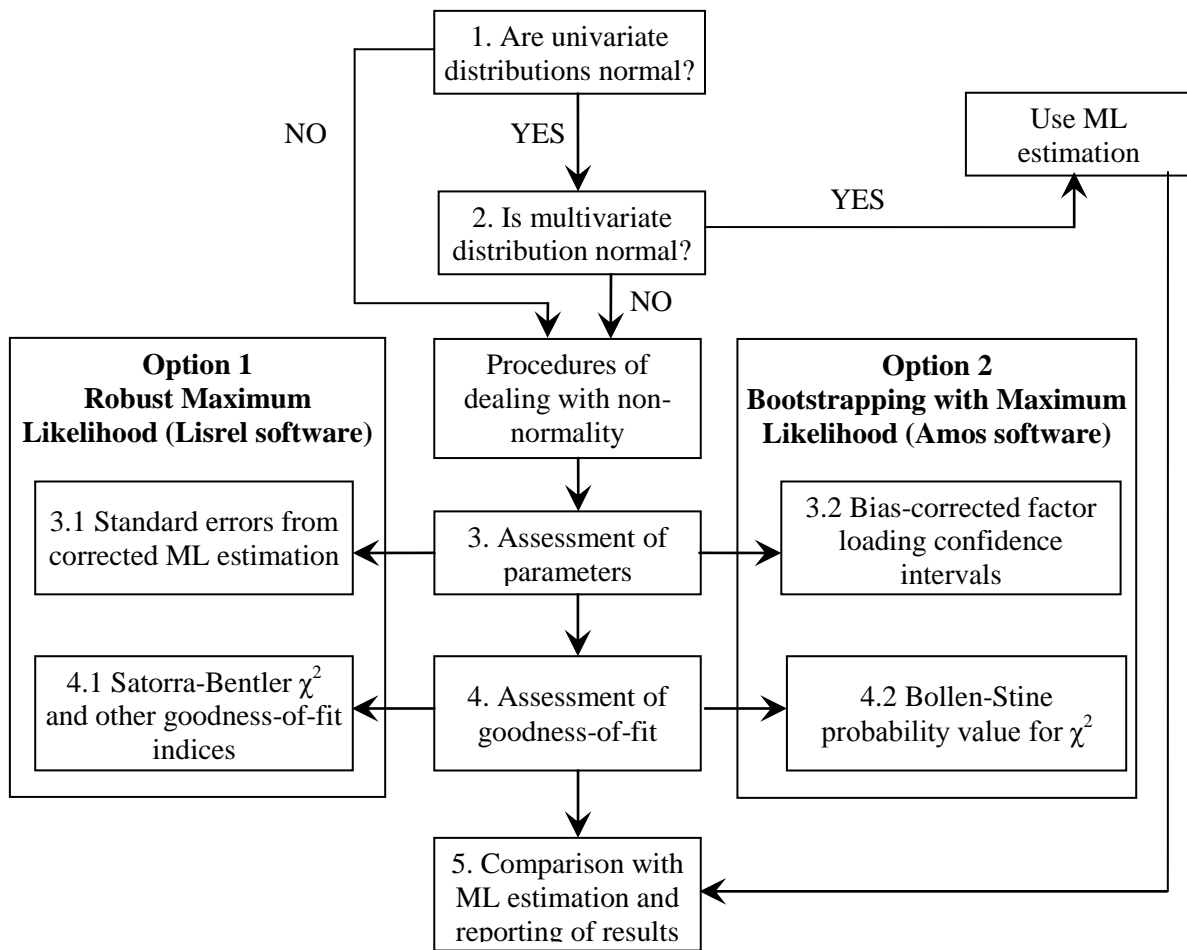
Assessment of goodness-of-fit by bootstrapping with Maximum Likelihood (Step 4.2) allows bootstrapping of goodness-of-fit indices as well. However, the indices must be calculated by hand using Bollen-Stine probability value for χ^2, which is obtained by a separate procedure of Bollen-Stine bootstrapping available in Amos software. As the procedure involves a number of complexities, it is difficult to implement. Firstly, Bollen-Stine bootstrapping does not provide χ^2 value for independence model thus it is impossible to calculate neither CFI nor TLI. Secondly, standardized mean square residual (SRMR) is not calculated as well. Thirdly, as confidence interval of non-centrality parameter is not provided, it is impossible to calculate neither confidence interval nor probability value of RMSEA. Fourthly, Bollen-Stine bootstrapping is limited to assessment of χ^2 and RMSEA thus complete evaluation of goodness-of-fit is not possible.

In the final step findings from Robust Maximum Likelihood and (or) Bootstrapping should be compared with the results of Maximum Likelihood (Step 5).

The process of dealing with non-normality presented in Figure 6.7 is extensive because there is no consensus whether the both methods should be employed to correct for non-normality. Byrne (2010) posits that bootstrapping should be used in any case if data is not normal. Finney and DiStefano (2006) explain that Robust Maximum Likelihood is enough if data is moderately not normal (skewness < 2 and Kurtosis < 7). They advocate using both Robust Maximum Likelihood and bootstrapping only in the presence of severe non-normality (skewness > 2 and Kurtosis > 7). Finally, they conclude that it is useful to report findings from the both methods if possible.

Drawing conclusions based on the literature reviewed, the following approach will be taken in the presence of non-normality because of the following reasons:

1. As recommended by Finney and DiStefano (2006), both robust maximum likelihood and bootstrapping with maximum likelihood will be employed to assess the parameters and goodness-of-fit of the first-order measurement models and recursive structural models (steps 3.1, 3.2, 4.1). As the Bollen-Stine bootstrapping is limited to assessment of χ^2 and RMSEA (step 4.2) and does not allow complete evaluation of goodness-of-fit, it will be not considered in case of non-normality.

2. Assessment of the second-order measurement model and the non-recursive structural models will be limited to evaluation of confidence intervals obtained using bootstrapping with maximum likelihood. Indeed, Byrne (2010) argues that this approach can be used as a single remedy in any case of non-normality. The rationale of this approach also rests on the practical reasons. On one hand, the both types of models involve substantial complexity thus robust maximum likelihood is difficult to implement and error-prone. On the other hand, bootstrapping with maximum likelihood is limited to assessment of χ^2 and RMSEA therefore does not allow complete comparison of goodness-of-fit.

6.8 Testing Moderating Effects in Structural Equation Models

Development of social sciences resulted in complexity of hypotheses (Cortina, 1993a) and frequent presence of non-linear moderating effects (Carte and Russell, 2003; Cortina, 1993a; Little *et al.*, 2006). Although there is a good body of research on modelling interaction effects (Kenny and Judd, 1984; Schumacker and Marcoulides, 1998; Marsh *et al.*, 2004b; Lee *et al.*, 2004; Little *et al.*, 2006; Klein and Muthén, 2007), discussion still continues and there is neither consensus nor single superior method for testing moderation (Kline, 2011). Indeed simulation study by Henseler and Chin (2010) demonstrated that method performance may vary with model complexity, sample size and research aims. However, the plethora of methods could be classified into the two major groups: (1) assessment of moderating effects through multiple-group analysis (Hair *et al.*, 2010; Henseler and Fassott, 2010) and (2) testing interaction using product terms (Kline, 2011). Kline (2011) notes that the latter category is based on the seminal method of Kenny and Judd (1984). Indeed works of Jöreskog and Yang (1996), Marsh *et al.* (2006), Jonsson (1998), Little *et al.* (2006) and many other originated from the product indicator approach initially suggested by Kenny and Judd (1984). In order to select the most appropriate method for the given conditions, the two categories will be discussed in more detail.

Testing Moderating Effects with Multiple-Group Analysis

Moderation assessment using multigroup analysis involves comparison of the two model groups (Hair *et al.*, 2010; Rigdon *et al.*, 1998). Firstly, unconstrained group model is estimated calculating totally free and identical structural model in every group of comparison (Hair *et al.*, 2010). Secondly, constrained group model is estimated fixing path estimates to be equal between the groups of comparison. Moderation is supported if the χ^2 difference between the two groups is statistically significant (*ibid*., p. 771).

While multigroup analysis with a categorical moderator causes no problems, testing of interactions with continuous moderators can be carried out only splitting them into several

categories and thus may result in serious problems. Although Henseler and Fassott (2010) encourages dichotomization of continuous variables using mean or median split, Hair *et al.* (2010, p. 773) warn that "unimodal data should not be split into groups based on simple median split". MacCallum *et al.* (2002) echo that median-split dichotomization results in many issues such as loss of information, effect size, power, reliability and the other problems. However, the problems are often ignored in studies of relationship marketing (see Deepen, 2007) as well as cross-cultural research (Hewett *et al.*, 2002; see Cahill, 2007). As organizational culture in this study is operationalized as a continuous construct, it can be concluded that multigroup analysis is not suitable method for testing moderating effects because of the mentioned problems.

Testing Moderating Effects with Product Terms

The another group of moderation methods involves testing interactions using product terms and is based on the product indicator approach suggested by Kenny and Judd (1984). Kline (2011, p. 327) explains that "a product term is literally the product of the scores from two different variables", which can be expressed by the equation bellow (Henseler and Fassott, 2010), where:

$$Y = a + bX + cM + d(XM) = (a + cM) + (b + dM)X$$

Y – endogenous variable

X – exogenous variable

M – moderator

XM – interaction term

a – the intercept

b – slope of X

c – slope of M

d – slope of interaction between X and M

The interaction variable XM is formed of product indicators, which are the all possible pairwise products of the indicators of the moderator (M) and exogenous variable (X) (Henseler and Fassott, 2010).

Testing Moderating Effects with Product Terms: Orthogonalizing Approach

Unfortunately, the method of Kenny and Judd (1984) has several shortcomings (Kline, 2011). Firstly, "It requires the imposition of nonlinear constraints in order to estimate some parameters of the measurement model for the product indicators" (Kline, 2011, p. 337), which are not supported in AMOS software and involves complex matrix-based programming when specifying them in LISREL package (*ibid.*, 337). Secondly, a product interaction term is always not normally distributed and this violates the normality assumption of structural equation modelling. Although there is possibility to estimate model using robust maximum likelihood method (Yang-Wallentin and Jöreskog, 2001), it makes the complex procedure even more complicated. Moreover, the robust maximum likelihood estimation method is not always available.

Moderation analysis is always problematic in the presence of correlation between exogenous variable and moderator (Cohen and Cohen, 1983; Gogineni *et al.*, 1995; Pedhazur, 1997; Henseler and Chin, 2010). Besides the mentioned problems, the method of Kenny and Judd (1984) may suffer from extreme collinearity or even failure (Little *et al.*, 2006; Kline, 2011) caused by strong correlations between product terms and the variables used to create them by pairwise multiplications. The problem is frequently solved by mean centering of product term, which involves adjusting the average to zero (Cohen, 1978; Kline, 2011). Although mean centering is adequate solution (Little *et al.*, 2006), it does not eliminate the problem of collinearity completely (Cronbach, 1987; Little *et al.*, 2006; Echambadi and Hess, 2007; Kline, 2011).

An alternative to mean centering is residual centering (Marsh *et al.*, 2007) which was originally introduced by Lance (1988) and later developed by Little *et al.* (2006) to tackle the

problems of collinearity. Little *et al.* (2006) explain that the method is fully orthogonal, which means that interaction term is not correlated with the main effects. The another advantage is stability of regression coefficients and standard errors which results in unbiased significance (Little *et al.*, 2006). That is, contrary to the method of Kenny and Judd (Baron and Kenny, 1986a), regression coefficients do not differ with or without presence of interaction term (Henseler and Chin, 2010).

The Procedure of Testing Moderation Using Orthogonal Approach

The procedure of testing moderation using orthogonal method will be explained based on a theoretical example presented in Figure 6.8, in which the relationship between trust and co-operation is hypothesized to be moderated by uncertainty avoidance.

Figure 6.8: A Hypothetical Model with a Moderation Effect
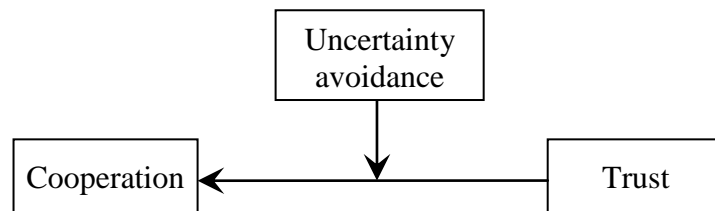
Let's assume that the co-operation, trust and uncertainty avoidance have 3 indicators per construct denoted as C1, C2, C3, T1, T2, T3, UA1, UA2 and UA3.

Firstly, the indicators of the exogenous and the moderator variables are multiplied forming all possible pairwise products. As the both exogenous and moderator variables have 3 indicators per construct, there are nine possible products:

$T_1 UA_1$,

$T_1 UA_2$,

$T_1 UA_3$

$T_2 UA_1$

$T_2 UA_2$

T₂ UA₃

T₃ UA₁

T₃ UA₂

T₃ UA₃

Secondly, each product indicator is regressed on the all indicators of the independent variable and moderator variables. The following nine regressions will be calculated:

$$T_1UA_1 = \alpha_{10} + \beta_{11}T_1 + \beta_{12}T_2 + \beta_{13}T_3 + \beta_{14}UA_1 + \beta_{15}UA_2 + \beta_{16}UA_3 + \boldsymbol{r_{11}}$$

$$T_1UA_2 = \alpha_{20} + \beta_{21}T_1 + \beta_{22}T_2 + \beta_{23}T_3 + \beta_{24}UA_1 + \beta_{25}UA_2 + \beta_{26}UA_{13} + \boldsymbol{r_{21}}$$

$$T_nUA_n = \alpha_{n0} + \beta_{n1}T_1 + \beta_{n2}T_2 + \beta_{n3}T_3 + \beta_{n4}UA_1 + \beta_{n5}UA_2 + \beta_{n6}UA_{13} + \boldsymbol{r_{n1}}$$

Fourthly, the residuals of the regression equations are saved and added to the model later as the indicators of interaction term (see Figure 6.9).

The another very important feature of interaction term is that correlations between residual variances of indicators should be freely estimated when "there is unique variance common to (...) indicators" (Little *et al.*, 2006, p. 505). The product terms **T₁UA₁**, **T₁UA₂** and **T₁UA₃** share indicator **T₁** therefore correlations between their error variances must be estimated freely. The two remaining product sets demonstrate similar pattern: **T₂UA₁**, **T₂UA₂**, **T₂UA₃** shares **T₂** while **T₃UA₁**, **T₃UA₂**, **T₃UA₃** includes **T₃** thus freely estimated correlation of the error variances must specified in the every set. The same rule applies to the three sets of indictors sharing variables of uncertainty avoidance: **UA₁** (T₁**UA₁**, T₃**UA₁**, T₃**UA₁**), **UA₂** (T₁**UA₂**, T₂**UA₂**, T₃**UA₂**) and **UA₃** (T₁**UA₃**, T₂**UA₃**, T₃**UA₃**).

Finally, the correlation between the exogenous variable (Trust) and the moderator (Uncertainty Avoidance) is also specified to be freely estimated. As the path diagram in Figure 6.9 is used for illustrative purposes. It is simplified therefore it does not include any correlation effects between error variances.

The interpretation of path coefficients (see Figure 6.9) is as follows:

β₁ – The strength of effect of exogenous variable on outcome when moderator has an average level.

β₂ – The strength of effect of moderator on outcome when exogenous variable has an average level.

β₃ – The path coefficient represents for how much the strength of the relationship between exogenous variable and outcome changes, if the level of moderator of the focal respondent is one standard deviation above the mean.

Figure 6.9: An Example of a Hypothetical Interaction Using Orthogonal Method
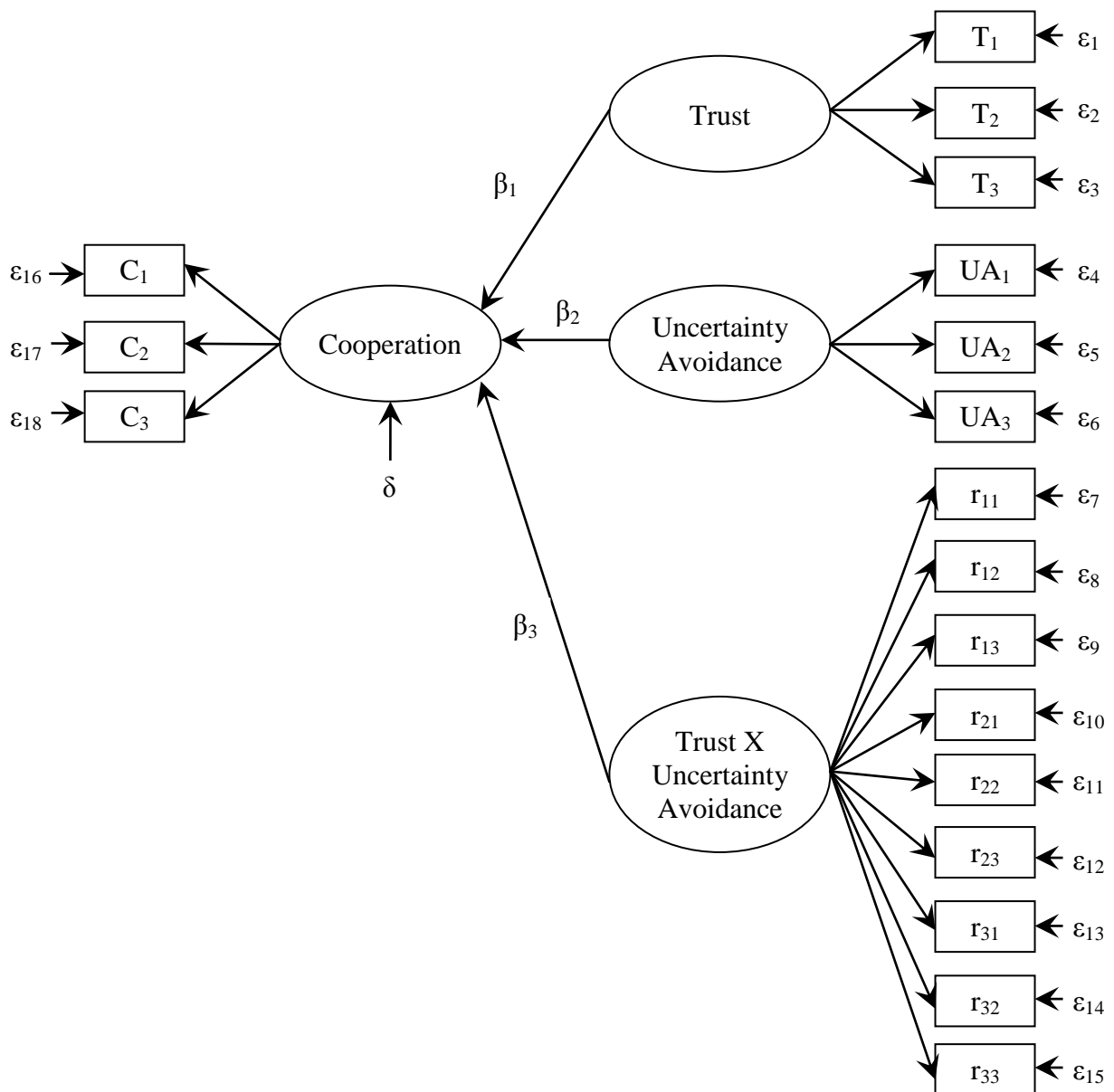
The monte carlo experiment by Henseler and Chin (2010) compared the orthogonal method to the others by estimate accuracy, statistical power and prediction accuracy and demonstrated that it is recommended under the most circumstances. Moreover, the method is easily implemented by the all software of structural equation modelling including AMOS. Drawing conclusions based on the literature reviewed, it was decided to use the orthogonal method to test moderating effects of organizational culture.

6.9 Concluding Remarks

Chapter 6 is organized into two major parts. *The first part* encompasses sections 6.2 through 6.6 and centres on the following aspects: research design, questionnaire development, sample, common method bias and level of analysis in cultural research. *The second part* involves sections 6.7 through 6.8 and focuses on structural equation modelling. That is, this part forwards the methodological approach employed in order to test empirically the direct and moderating effects of interest conceptualized in Chapter 5. Concluding remarks are drawn using the same structure.

Firstly, given the structural essence of the research objective, aims and hypotheses, a descriptive cross-sectional design is deemed the most suitable for the current study.

Secondly, owing to the advantages of web-based survey, the method is deemed the most appropriate for the current study. Although the method comprises several potential challenges related to error-of-coverage and security, they have been carefully addressed using the methodological and technological solutions such as the sampling frame including a huge variety of target individuals and advanced survey software preventing access to out-of-sample persons.

Thirdly, as the current study employs the Popperian philosophical stance (Popper, 1963; Popper, 2002a), the variables and constructs were evaluated using two criteria: falsifiability and utility. As suggested by Bacharach (1989), falsifiability of the potential scales was assessed using the concepts of content and construct validity. Content validity of the potential

scales was assured by a priori theoretical (see Chapter 3 and Chapter 4) as well as item generation and judging efforts while construct validity was assessed inspecting the evidence of convergent validity, reliability, discriminant validity, nomological validity and face validity.

Fourthly, owing to the co-variance based method of structural equation modelling, multichotomous response formats are employed to create more variance and meet the criterion of data continuousness thus all the scales comprise seven categories. Furthermore, as recommended by Podsakoff et al. (2003), the dimensions of organizational culture were measured by several types of scales (see Section 6.3.4, Form of Response) leading to methodological separation which is a procedural remedy for common method bias.

Fifthly, wording clarity as well as the other elements of content and face validity, was assessed by six top academics and six judges from logistics industry. Moreover, following the recommendations of Podsakoff et al. (2003) and Netemeyer et al. (2003, p. 99), both the relationship quality and organizational culture scales include negatively worded items in order to reduce response bias "in the form of acquiescence, affirmation and yea-saying".

Sixthly, following the recommendation of Podsakoff *et al.* (2003, p. 887) advanced question sequence solutions were employed in order to minimize common method bias by creation of temporal separation which refers to "a time lag between the measurement of predictor and criterion variables". The dimensions of relationship quality were separated from each other mixing them with the factors of organizational culture. Moreover, the indicators within each dimension were randomized automatically.

Seventhly, the most advanced web-based Qualtrics survey software was employed in order to ensure *uniformity* of the questionnaire across the main web-browsers: Mozilla Firefox, Google Chrome, Apple Safari, and Internet Explorer. *Usability* of the questionnaire was assessed during the pre-testing procedure. Several technological and methodological solutions helped to ensure *security.* Firstly, access to the questionnaire was granted to only

those individuals who received invitation emails. Secondly, responding of out-of-sample individuals as well as questionnaire forwarding was prevented by the filtering questions.

Eighthly, the sample representativeness was ensured by the clear definition of the population for generalization. Moreover, the selection of the sampling frame containing a huge variety of target individuals contributed to the representativeness as well. Indeed, the analysis of the respondent characteristics demonstrates that the collected sample match the definition of population for generalization. Finally, as the sample size table forwarded by Hair *et al.* (2010) is consistent with the empirical findings of the Monte Carlo simulation study of Reinartz *et al.* (2009), both the sources will be employed in the current study in order to determine sample size adequacy for structural equation modelling.

Ninthly, besides the mentioned procedural remedies for common method bias, modelling of latent factor will be employed as a statistical remedy to control for common method bias.

Finally, as there is evidence (Peterson and Castro, 2006) that the GLOBE scales of organizational culture were designed following the cross-level approach instead of taking the convergent-emergent perspective as claimed by the authors (House and Hanges, 2004), the use of them at the individual level in the current study is justified.

Having drawn the conclusions for the first major part of Chapter 6, this section will proceed with concluding remarks for sections 6.7 through 6.8, which focus on structural equation modelling and explore the methodological approach employed in order to test empirically the measurement models and structural relationships.

Firstly, as advocated by Diamantopoulos and Siguaw (2000), the process of structural equation modelling consisting of the eight elements will be employed to test the hypothesized relationships. Although this process may slightly differ accordingly to aims (Schumacker and Lomax, 2004; Kline, 2005; Byrne, 2010; Schumacker and Lomax, 2010), its elements are essential.

Secondly, the models conceptualized in Chapter 5 follow the positivistic logic expressed by the sequential steps of conceptualization (see sub-sections 6.7.1.1 and 6.7.1.2) thus they satisfy the conditions of falsifiability and utility which are the prerequisites for the further stages of structural equation modelling.

Thirdly, as recommended by Hair *et al.* (2010), a congeneric factor should comprise four or more indicators to achieve over-identification. Nevertheless, a factor consisting of three indicators is acceptable when the other factors are comprised of more indicators. The same rules apply to second-order factors. Identification of overall model as well as of separate factors should be evaluated using counting rule (t-rule), which is the necessary, but not sufficient condition of identification (Kline, 2011). The necessary and sufficient rule of identification is the recursive rule, which states that model is identified if it is recursive (Paxton et al., 2011).

The identification of non-recursive models should be assessed using a different set of rules: besides the counting rule, the rank and order conditions should be evaluated (Blalock, 1964; Kline, 2011; Paxton et al., 2011). The procedure developed by Kline (2011) is the most advanced, easiest to use and less error-prone thus it will be employed in this study.

Fourthly, assessment of goodness-of-fit should be carried using the two steps: assessing goodness-of-fit of the measurement and structural models. The former is aimed at determining construct validity of the measures representing the constructs while the latter evaluates the degree of consistency between the theoretical relationships and empirical data at hand. Discussion of construct validity encompasses convergent and discriminant validity as recommended by Hair *et al.* (2010). The evidences of convergent validity are: (1) factor loadings of a congeneric model above .7, (2) average variance extracted equal to .5 or greater and (3) composite reliability value of minimum .7. Finally, discriminant validity should be assessed by both Fornell-Larcker and χ^2 difference tests.

Drawing conclusions based on the literature reviewed, it was decided to use the following set of goodness-of-fit indices: χ^2 and its degrees of freedom, normed χ^2 index, RMSEA, CFI, TLI and SRMR. As advocated by Hair *et al.* (2010), thresholds of goodness-of-fit indices will be selected based on the model complexity and sample size (see Table 6.3, p. 256).

Assessment of goodness-of-fit of the structural model will involve discussion of parameter estimates, explanatory power (utility) and overall goodness-of-fit which differs from the measurement model stage in several aspects. As advocated by Hair *et al.* (2010), goodness-of-fit of the measurement and recursive structural models will be compared by χ^2 difference test because significant result means that structural theory lacks validity. Moreover, the assumption of equilibrium is critical to non-recursive structural models therefore it will be assessed by stability index as advocated by Paxton *et al.* (2011). Since the study is comprised of the two competitive structural models, their relative superiority will be additionally assessed by χ^2 difference test, AIC and ECVI.

Fifthly, maximum likelihood method of estimation is accompanied by a wide range of statistics which can be used to evaluate the consistency of the theoretical model with the data (Diamantopoulos and Siguaw, 2000) thus it will be employed in the current study. However, the method requires satisfaction of the normality and data continuousness assumptions. Assessment of structural equation modelling assumptions will encompass several parts: assessment of data continuousness and normality and the process and options of dealing with non-normal continuous data (see Figure 6.7, p. 262).

All the Likert scales employed in the current study have more than 4 points thus the data can be treated as continuous (Byrne, 2010). As there is no agreement what constitutes non-normality, the conservative approach will be adopted and univariate non-normality will be diagnosed in the presence of statistically significant kurtosis at univariate level. Multivariate normality holds true when Mardia's normalized estimate of multivariate Kurtosis is not greater than 5. Maximum likelihood estimation can be used in the presence of both univariate

and multivariate normality. As suggested by Finney and DiStefano (2006), both robust maximum likelihood and maximum likelihood with bootstrapping will be employed as remedies for non-normality.

Finally, looking from the positivistic perspective, the GLOBE theory of culture demonstrates the strongest evidence for *falsifiability* and *utility* (see Section 4.3). The study is based on the cross-level approach therefore the constructs and relationships should be valid at all the levels of analysis. In other words, the measures can be applied to explore the effects of organizational culture at the individual level of analysis, which is extremely important to relationship marketing. Indeed, the notions of full-time and part-time marketing make "legitimate and imperative for everyone to influence customer relationships" (Gummesson, 2008b, p. 77). Moreover, another advantage of the GLOBE theory is that organizational culture is operationalized as continuity. Indeed, the construct by its very nature is continuity. In other words, it is not a nominal, but continues variable. Consequently, the current study draws on the GLOBE theory of culture.

As organizational culture is operationalized as a continuous construct in this study, it can be concluded that multigroup analysis is not suitable method for testing moderating effects because of the mentioned problems (see Section 6.8 p. 264). Consequently, it is impossible to employ a typology-based approach in order to test moderating effects. As the orthogonal method allows the use of continuous moderators and is recommended under the most circumstances (Henseler and Chin, 2010), it will be employed in the current study to test moderation effects. However, there is a limitation inherent in this method. As the specification of an interaction term is based on the product terms approach (see p. 265-270), it significantly increases number of items and sample size required for structural equation modelling. Consequently, instead of using the whole structural models to test moderation, they were split into several smaller parts.

CHAPTER 7

MEASUREMENT MODELS

7.1 Introduction

Based on the methodology discussed in section 6.7.4.1 and the concluding remarks, Chapter 7 evaluates the measurement models. Firstly, the measurement model of relationship quality is assessed. Secondly, the analysis proceeds with confirmatory factor analysis of organizational culture. The two sections have identical structure and are organized into four parts.

Firstly, construct validity and goodness-of-fit are assessed. The discussion of construct validity encompasses evaluation of convergent and discriminant validity as recommended by Hair *et al.* (2010). Convergent validity is assessed by evaluation of (1) factor loadings, (2) average variance extracted and (3) composite reliability. Discriminant validity is gauged by both Fornell-Larcker and χ^2 difference tests.

Having assessed construct validity, goodness-of-fit is evaluated using the following set of indices: χ^2 and its degrees of freedom, normed χ^2 index, RMSEA, CFI, TLI and SRMR. As advocated by Hair *et al.* (2010), thresholds of goodness-of-fit indices are selected based on the model complexity and sample size.

Secondly, the analysis proceeds with assessment of identification. In adhering to advice by Diamantopoulos and Siguaw (2000), both the hypothetical and trimmed models are evaluated.

Thirdly, normality of the measures employed is tested both at the univariate and multivariate levels of analysis as recommended by Byrne (2010). Univariate normality is assessed using statistics of skewness and kurtosis, while multivariate normality is gauged by Mardia's normalized estimate of multivariate Kurtosis.

Finally, both robust maximum likelihood and bootstrapping are employed to correct the effects of non-normality.

7.2 Measurement Model of Relationship Quality

The assessment of the measurement model of relationship quality will be carried out by two major steps. Firstly, the dimensions will be evaluated at first-order level. Secondly, the analysis will proceed with second-order level.

7.2.1 Assessment of Construct Validity and Goodness-of-Fit of First-Order Measurement Model

As the hypothesized relationship quality model involves the complex loyalty construct which comprises the four sequential dimensions, the analysis will begin with separate analysis of the loyalty construct.

The Sequential Levels of Loyalty

Initial inspection of the correlation matrix demonstrated substantial relationships between several dimensions of loyalty therefore the process of confirmatory factor analysis was started with separate evaluation of loyalty construct and testing hypothesis H_1, which states that loyalty comprises four sequential dimensions: *cognitive loyalty, conative loyalty, affective loyalty* and *action loyalty*.

Strong correlations were present between cognitive, affective and conative dimensions of loyalty. Namely, cognitive loyalty correlated with affective loyalty (.96) and conative loyalty (.99) while affective loyalty was found to be strongly related to conative loyalty (.98). As recommended by Kline (2011), further procedures were employed to rule out possible multivariate collinearity and to gauge discriminant validity using Fornell-Larcker and χ^2 difference tests as described in section 6.7.4.1.

Firstly, Fornell-Larcker test was employed to evaluate discriminant validity of cognitive, affective and conative dimensions of loyalty. In all the instances the average variance extracted of the two constructs was less than the square of correlation between them which indicated lack of discriminant validity. Secondly, discriminant validity was assessed by setting correlation between the two constructs to 1 and calculating χ^2 values of the constrained

and unconstrained models. The differences in χ^2 were not statistically significant and provided another evidence for the absence of discriminant validity.

Besides the problems pertinent to discriminant validity, cognitive loyalty had several loadings bellow recommended threshold of .7, which resulted in average variance extracted of .48. As less than half of the latent dimension was explained by its indicators and discriminant validity was absent, the variable was removed from the model.

This decision can be justified theoretically. Cognitive loyalty is brand belief based on brand attribute information, which helps to differentiate it as preference (Oliver, 1999; Harris and Goode, 2004). Although Harris and Goode (2004) have corroborated the evidence that cognitive loyalty is a part of the four-stage sequential construct, the study is based on the customers of rather transactional business-to-consumer services (online flight and book buyers). It is worth to note that the average length of relationship in the current study is 9.35 years which demonstrates relational continuum and may be the explanation why cognitive loyalty did not emerge as a valid factor.

Having strong evidence that the dimensions of affective and conative loyalty are the same construct, they were combined into a single factor. Several indicators with cross-loadings were removed and the final dimension of affective-conative loyalty comprised six indicators (LAF3, LAF4, LAF5, LCON1, LCON3 and LCON4). Both Fornell-Larcker and χ^2 difference tests demonstrated discriminant validity between the affective-conative and action loyalty constructs.

In the next step the overall measurement model of relationship quality was tested with all the eight dimensions present: affective-conative loyalty, action loyalty, provider's-response-to-harm, client's-response-to-harm, exchange-of-good, co-operation and opportunism. The analysis of correlations demonstrated that affective-conative loyalty had strong relationships with the other dimensions of relationship quality: trust (.88), co-operation (.86) and provider's-response-to-harm (.84). The strong correlations indicated the potential

problems with discriminant validity. Indeed, the Fornell-Larcker criterion revealed the absence of discriminant validity between the three dimensions. However, in all the cases the only offender of discriminant validity was affective-conative loyalty, which had the lowest value of average variance extracted in the model (.64). Contrary to affective-conative loyalty, the standardized factor loadings of provider's-response-to-harm, co-operation and trust were substantially higher thus resulting in average variance extracted of .75, .77 and .81 respectively. Finally, discriminant validity was re-assessed using χ^2 difference test, which produced identical results and indicated a lack of discriminant validity between the three dimensions. Consequently, it was deemed necessary to remove affective-conative loyalty from the model. In summary, confirmatory factor analysis of the loyalty construct resulted in disproving H_1, which states that there are four sequential stages of loyalty (respectively, cognitive, affective, conative, and action loyalty).

Action Loyalty

The final measurement model with standardized factor loadings and corresponding t-values will be discussed in detail (see Table 7.1).

The indicators of action loyalty load on their factor very well. All the standardized regression weights are statistically significant and vary from .82 (LAC3) to .94 (LAC4) resulting in average variance extracted and composite reliability of .75 and .92 respectively (see Table 7.2). The Cronbach alpha value of .92 equals the value of composite reliability and provides evidence for reliability.

Reciprocity

The reciprocity construct was firstly tested at the first-order level along with the other dimensions of relationship quality. Initial analysis demonstrated that all the factor loadings of reciprocity construct were statistically significant and very high. There was no standardized loadings bellow .70. However, inspection of modification indices revealed that there were four items indicative of cross-loadings. RHP2 (provider's-response-to-harm) cross-loaded on

the identical item RHC2 (client's-response-to-harm). Besides that, both the indicators cross-loaded on several indicators of the own factors as well as indicators of the other dimensions of relationship quality. Exactly the same problem was encountered with the items RHP6 and RHC6. As there was clear evidence for redundancy, all the four items were removed from the model.

Table 7.1: CFA Results of Relationship Quality Construct

Factor	Item	Estimation Methods			
		First-order Model		Second-order Model	
		Standardized Estimate	t-value	Standardized Estimate	t-value
Action Loyalty	LAC1	.83	------[a]	.83	------[a]
	LAC2	.88	17.60	.88	17.60
	LAC3	.82	15.53	.82	15.55
	LAC4	.94	19.32	.94	19.36
Provider's Response to Harm	RHP1	.84	------[a]	.84	------[a]
	RHP3	.85	16.92	.85	16.91
	RHP4	.85	16.92	.85	16.96
	RHP5	.91	18.80	.91	18.85
Client's Response to Harm	RHC1	.84	------[a]	.84	------[a]
	RHC3	.85	16.55	.85	16.56
	RHC4	.84	16.13	.84	16.14
	RHC5	.89	17.81	.88	17.50
Exchange of Good	EG1	.89	------[a]	.89	------[a]
	EG2	.94	24.31	.94	24.22
	EG3	.90	21.63	.90	21.56
	EG4	.86	19.43	.86	19.42
Co-operation	C3	.82	------[a]	.82	------[a]
	C4	.85	16.38	.85	16.43
	C5	.90	17.82	.90	17.84
	C6	.94	19.08	.94	19.13
Trust	T3	.90	------[a]	.90	------[a]
	T7	.90	22.42	.90	22.41
	T9	.87	20.76	.87	20.72
	T10	.92	23.76	.92	23.74
Opportunism	OP1	.66	------[a]	.66	------[a]
	OP2	.87	11.49	.87	11.47
	OP3	.82	11.05	.82	11.02
	OP4	.86	11.43	.86	11.41
Reciprocity Construct (Second-Order)					
Reciprocity	RHP	NA	NA	.92	------[a]
	RHC	NA	NA	.76	11.17
	EG	NA	NA	.86	13.59

The four remaining standardized factor loadings of provider's-response-to-harm are very high. They vary from .84 to .91 resulting in average variance extracted, composite reliability and Cronbach alpha values of .75, .92 and .92 respectively. The results provide evidence for convergent validity and reliability. Client's-response-to-harm demonstrates a quite similar pattern with standardized factor loadings varying from .84 to .89. Average variance extracted of .73 demonstrates convergent validity. The values of composite reliability and Cronbach alpha equal .91 and provide evidence for high reliability.

Table 7.2: Assessment of Reliability and Discriminant Validity of Relationship Quality (First-order model)

Variable	Cronbach alpha	Composite Reliability	Average Variance Extracted	1	2	3	4	5	6
1. Action Loyalty	.92	.92	.75						
2. Provider's Response to Harm	.92	.92	.75	.29					
3. Client's Response to Harm	.91	.91	.73	.09	.53				
4. Exchange-of-Good	.94	.94	.81	.20	.59	.48			
5. Co-operation	.98	.98	.77	.24	.73	.43	.66		
6. Trust	.94	.94	.81	.27	.74	.54	.65	.72	
7. Opportunism	.88	.88	.65	.08	.37	.23	.26	.36	.45

Note: Unless indicated, numbers are squared correlations from confirmatory factor analysis

All the four factor loadings linking exchange-of-good and its indicators are statistically significant with a magnitude ranging from .86 to .94 which converts into average variance extracted of .81. The values of composite reliability and Cronbach alpha equal .94 demonstrating evidence for reliability.

Co-Operation

Initially, co-operation comprised six indicators which appeared to load strongly on their factor. Although there were no standardized factor loadings bellow .07, the modification indices suggested problems with cross-loadings. Namely, C1 and C2 cross-loaded on the other indicators of relationship quality. Consequently, they were removed from the measurement model. The standardized factor loadings of the remaining four items range from .82 to .94 leading to average variance extracted of .77 and composite reliability of .98.

Communication

The two indicators of communication (COM1 and COM3) demonstrated weak factor loadings of .38 and .41 respectively. Moreover, the items were found to cross-load on each other therefore they were dropped from the model. The remaining four items cross-loaded on the indicators of action loyalty, reciprocity and co-operation. The finding demonstrates that communication is not a discriminant dimension of relationship quality, but is embedded in the other dimensions of the construct. Moreover, in all the cases the only offender of discriminant validity was communication, which had the lowest value of average variance extracted. Consequently, communication was dropped from the measurement model.

Trust

Although the initial pool of trust items was over-inclusive and comprised 11 indicators, only 4 of them are retained in the final model (see Table 7.1). The modification indices suggested problems with cross-loadings. Indeed, the biggest offenders were items T1 and T8 which had factor loadings bellow .7 and cross-loaded on each other as well as the other indicators of the model. Although the factor loadings of items T4, T5, T6 and T11 were high, the indicators demonstrated cross-loadings. Consequently, items T1, T2, T4, T5, T6, T8 and T11 were dropped from the model. The factor loadings of the remaining four items range from .87 to .92 resulting in average variance extracted and composite reliability of .81 and .94 respectively. The findings indicate convergent validity and reliability.

Opportunism

Since all the indicators of opportunism demonstrate adequate factor loadings, all of them are retained in the model. The standardized factor loadings vary from .66 to .86. Item OP1 is the only indicator with factor loading of .66 which is slightly below the suggested cut-off level of .7. Convergent validity of opportunism is supported by average variance extracted equal .65. Reliability is evidenced by both composite reliability and Cronbach alpha having the same value of .88.

Discriminant validity

Having discussed convergent validity and reliability of the trimmed model, discriminant validity of will be gauged using the method suggested by Fornell and Larcker (1981), which is rigorous and conservative (Hair *et al.*, 2010). The method comprises several steps. Firstly, average variance extracted is calculated for every construct. Secondly, correlations between all the constructs in the model are squared. Discriminant validity holds true when the average variance extracted of the two constructs is greater than the square of correlation between them. Every possible pair of constructs must be assessed using this method. The analysis of discriminant validity demonstrates that for all the constructs in the model average variance extracted exceeds squared correlation. Consequently, discriminant validity is supported (see Table 7.2).

Goodness-of-Fit

Having strong evidence for both construct validity and reliability, the analysis will proceed with the assessment of goodness-of-fit. Based on the rationale discussed in section 6.7.4, the following set of indices was used to evaluate goodness-of-fit: χ^2 and its degrees of freedom, normed χ^2 index, RMSEA, CFI, TLI and SRMR.

The measurement model of relationship quality results in significant χ^2 value of 595.05 with 329 degrees of freedom (see Table 7.3). The result is consistent with the literature explaining that, given the complexity and sample size of the current model, significant χ^2 values should be expected (Hair *et al.*, 2010; Byrne, 2011; Kline, 2011). The ratio of χ^2 and degrees of freedom equals 1.81 indicating good fit. The model results in RMSEA value of .057 with the confidence interval ranging from .050 to .064. The zero hypothesis that RMSEA value does not exceed .05 in the population is not rejected (p = .062). Consequently, the statistic indicates very good fit. Standardized mean square residual (SMSR) value of .035 is extremely low and demonstrates excellent fit. Finally, both CFI and TLI equals .962 and .956 respectively and indicate excellent goodness-of-fit.

Table 7.3: Assessment of Goodness-of-Fit of First-Order Relationship Quality Measurement Model

Statistic	First-Order CFA model
χ^2	595.054
df	329
P-value	.000
$\chi^2/\ df$	1.809
RMSEA	.057
Confidence Interval of RMSEA	.050; .064
P-value (90%) of close fit (RMSEA< .05)	.062
SRMR	.035
CFI	.962
TLI	.956

7.2.2 Assessment of Construct Validity and Goodness-of-Fit of Second-Order Measurement Model

Having strong evidence for both construct validity and goodness-of-fit of the first-order relationship quality model, reciprocity was specified as a second-order construct. Namely, provider's-response-to-harm, client's-response-to-harm and exchange-of-good were specified to serve as latent indicators of the reciprocity construct. The measurement model was re-estimated and re-assessed beginning with construct validity and ending with evaluation of goodness-of-fit.

The analysis demonstrates that all the factor loadings linking reciprocity and its indicators are statistically significant and range from .76 to .92 (see Table 7.1) resulting in average variance extracted of .72 and composite reliability of .89 (see Table 8.4). Consequently, the findings indicate convergent validity and reliability.

Having evaluated reciprocity, the parameter estimates of the other constructs were reviewed. The analysis demonstrates that the factor loadings changed very slightly with the difference visible only with three decimal places. The exception is the factor loading of RHC5 which decreased from .89 to .88 (see Table 7.1). The values of average variance extracted and composite reliability remain the same.

Table 7.4: Assessment of Reliability and Discriminant Validity of Relationship Quality construct (Second-order model)

Variable	Composite Reliability	Average Variance Extracted	1	2	3	4
1. Action Loyalty	.92	.75				
2. Reciprocity	.89	.72	.28			
3. Co-operation	.98	.77	.24	.85		
4. Trust	.94	.81	.27	.88	.72	
5. Opportunism	.88	.65	.08	.40	.36	.45

Note: Unless indicated, numbers are squared correlations from confirmatory factor analysis

Discriminant Validity

In the next step, the analysis proceeded with assessment of discriminant validity. As in the previous case, discriminant validity was initially evaluated using the criterion of Fornell and Larcker (1981). However, the squared correlation between reciprocity and trust exceeds average variance extracted of both the constructs (see Table 7.4). Moreover, the relationship between reciprocity and co-operation demonstrates a similar pattern. According to Hair *et al.* (2010), Fornell-Larcker method is rigorous and very conservative. Discriminant validity can be assessed by a number of methods (Campbell and Fiske, 1959; Fornell and Larcker, 1981; Bagozzi *et al.*, 1991). As all the dimensions are discriminant at first-order level, it was deemed appropriate to re-assess discriminant validity using a different method.

As was discussed previously (see section 6.7.4.1), discriminant validity can be evaluated by χ^2 difference test. The test involves constraining correlation between two constructs to 1 and later comparing χ^2 difference value between the constrained and unconstrained models. Discriminant validity holds true when χ^2 square of the unconstrained model is significantly lower with 1 degree of freedom (Netemeyer *et al.*, 2003b; Hair *et al.*, 2010).

Firstly, the correlation between reciprocity and trust was constrained to 1 and later the model was re-estimated. Constraining of the path resulted in χ^2 value of 631.13 with statistically significant difference of 5.10 ($\Delta\chi^2 = 631.13 - 626.03$). Consequently, discriminant

validity is supported. In the second step, the correlation between reciprocity and co-operation was constrained to 1 resulting in significant χ^2 difference of 4.80 ($\Delta\chi^2 = 630.82 - 626.03$) with 1 degree-of-freedom. As in the previous case, discriminant validity is supported.

Goodness-of-Fit

Having assessed construct validity of the second-order measurement model, the analysis proceeded with evaluation of goodness-of-fit indices. Specification of reciprocity as a second-order construct results in χ^2 value of 626.03 with 337 degrees of freedom (see Table 7.5). The χ^2 difference between the first-order and second-order models indicates a decrease in goodness-of-fit. Indeed, the χ^2 difference of 30.97 with 8 degrees of freedom is significant. The finding is consistent with the literature (Hair *et al.*, 2010, p. 756) explaining that first-order models fit better because they use "more paths to capture the same amount of covariance".

The ratio of χ^2 to degrees of freedom equals 1.858 demonstrating good fit. The model results in RMSEA value of .059 with the confidence interval ranging from .051 to .066. Contrary to the first-order measurement model, the zero hypothesis that RMSEA value does not exceed .05 in the population is rejected (p = .025). Standardized mean square residual (SMSR) value of .040 is less than conservative cut-off value of .05. Finally, the values of CFI and TLI are .958 and .953 respectively. Consequently, the model demonstrates excellent goodness-of-fit.

Table 7.5: Assessment of Goodness-of-Fit of Relationship Quality Measurement Models

Statistic	First-Order CFA model	Second-Order CFA model
χ^2	595.054	626.026
df	329	337
P-value	.000	.000
χ^2/df	1.809	1.858
RMSEA	.057	.059
Confidence Interval of RMSEA	.050; .064	.051; .066
P-value (90%) of close fit (RMSEA< .05)	.062	.025
SRMR	.035	.040
CFI	.962	.958
TLI	.956	.953

Sampling Adequacy for Structural Equation Modelling

Having evaluated construct validity and goodness-of-fit of the second-order measurement model, the analysis will proceed with the assessment of sampling adequacy for structural equation modelling. The model of relationship quality comprises five dimensions: action loyalty, reciprocity, co-operation, trust and opportunism. Every construct, with one exception, consists of four indicators. Reciprocity is a second-order construct comprising the three latent indicators. As 94% of the factor loadings are high (.6 or higher), the model falls into the second category of the sample size table suggested by Hair *et al.* (2010, p. 662). The table indicates that a sufficient sample size for the relationship quality model is 150 (see Table 6.2, p. 226). However, the recommendations of Hair et al. (2010) are approximate. Moreover, it is not clear whether the latent indicators of reciprocity (second-order factor) should be counted as separate constructs. Nevertheless, the Monte-Carlo simulation study by Reinartz et al. (2009) has demonstrated that the model with six latent variables and sample size of 250 performs almost equally well if operationalized with four or eight indicators per construct. Reinartz et al. (2009) explain that structural equation modelling can be employed if sample size is at least 250 and there are no low factor loadings ($\leq$ .5) and (or) constructs with few indicators. As the model satisfies all the conditions, it can be stated that sample size of 251 is sufficient.

Assessment of Common Method Bias and Non-Response Bias

Having evaluated construct validity, goodness-of-fit and sampling adequacy of the second-order measurement model, the analysis will proceed with the assessment of common method bias. Most scholars agree that common method bias is a potential problem (Podsakoff *et al.*, 2003; Malhotra *et al.*, 2006), which should be tackled by both procedural and statistical remedies (Chang *et al.*, 2010; Podsakoff *et al.*, 2011). As the former remedies were discussed in sections 6.3.4 and 6.3.6, this section will focus on statistical methods to control common method bias. Although the measurement models of relationship quality demonstrate construct

288

validity, they may be biased by common method variance thus assessment of common method bias is essential. Chang *et al.* (2010) argue that common method variance should be evaluated by at least two tests: Harman's single-factor test and another statistical procedure. However, Podsakoff *et al.* (2003, p. 889) warn that Harman's single-factor test "actually does nothing to statistically control for (or partial out) method effects". As there is a consensus that modelling of common method latent factor is a superior procedure (Podsakoff *et al.*, 2003; Chang *et al.*, 2010), it will be employed in the current study.

Following the recommendation of Podsakoff *et al.* (2003), human orientation dimension was borrowed from the organizational culture scale to increase the number of indicators relative to the number of constructs. Common method factor was allowed to load freely on the every indictor. However, the model was still not identified thus the factor loadings of common method factor were constrained to be equal and the models was re-estimated. Although Podsakoff *et al.* (2003, p. 894) explain that this solution "undermines one of the advantages of this technique", Lindell and Whitney (2001, p. 116) argue that "an assumption of equal weights in the CMV model will not distort the results significantly enough to alter conclusions".

As the two models are nested, they were compared by χ^2 difference test which has yielded value of 3.50 ($\Delta\chi^2$ = 799.10 - 795.60) with 1 degree of freedom (Δdf = 446 - 445) demonstrating that the model with common method factor does not fit better. All the factor loadings of the common method dimension appear to be insignificant (p > .05).

Finally, owing to the recommendations of Armstrong and Overton (1977), the collected sample was devided into early and late responses in order to assess non-response bias. All the differences between variables as well as factors are insignificant (p < .01).

7.2.3 Identification

Byrne (2010, p. 33) warns that if a model is not identified, "the parameters are subject to arbitrariness, thereby implying that different parameter values define the same model".

Indeed, Diamantopoulos and Siguaw (2000) posit that it is essential to assess identification of both the hypothetical and trimmed models. Firstly, identification of the hypothetical measurement model will be assessed. Secondly, the discussion will proceed with identification of the trimmed model.

Identification of the Hypothetical Measurement Model

Identification of the hypothetical measurement model (see Table 7.6) will be evaluated using the rules of congeneric models, which represent good measurement practise as discussed in section 6.7.2.

The hypothetical measurement model consists of 11 first-order factors, which have at least 4 indicators therefore all the first-order factors are over-identified and meet the minimum indicator per construct requirement (see Table 7.6). The overall model satisfies the counting rule (t-rule) with 1655 degrees of freedom and is over-identified.

Table 7.6: Number of Indicators of the Hypothetical Measurement Model of Relationship Quality

Factor	Number of Indicators	Second-Order Factor	Number of Second-Order Indicators
Cognitive Loyalty	4	Loyalty	4
Affective Loyalty	5		
Conative Loyalty	4		
Action Loyalty	4		
Provider's Response to Harm	6	Reciprocity	3
Client's Response to Harm	6		
Exchange of Good	4		
Co-operation	6	NA	NA
Communication	6	NA	NA
Trust	11	NA	NA
Opportunism	4	NA	NA

The model includes the two second-order factors. Loyalty has 4 latent variables serving as its indicators while reciprocity consists of 3. Hair *et al.* (2010) posit that the same identification rules apply for second-order factors: a second-order factor is under-identified, just-identified and over-identified when number of indicators is two, three and four or more respectively.

Although a second-order factor should ideally comprise four latent indicators, three indicators per construct is acceptable if the other factors are over-identified (Hair *et al.*, 2010). As indicated in Table 7.6, the second-order construct of reciprocity comprises 3 indicators. However, the other factors of the model are over-identified. The overall second-order model meets the counting rule (t-rule) with 1688 degrees of freedom indicating over-identification.

Identification of the Trimmed Measurement Model

The trimmed measurement model of relationship quality consists of 5 factors: action loyalty, reciprocity, co-operation, trust and opportunism (see Table 7.7). Reciprocity is a second-order construct, which consists of 3 latent variables serving as its indicators: provider's response-to-harm, client's-response-to-harm and exchange-of-good.

All the first-order factors have 4 indicators and are over-identified. The overall first-order model satisfies the counting rule (t-rule) with 329 degrees of freedom and is over-identified. The second-order construct of reciprocity has 3 latent indicators and is just-identified, which is acceptable, because all the other factors are over-identified (Hair *et al.*, 2010). The Second-order measurement model has 337 degrees of freedom resulting in over-identification.

Table 7.7: Number of Indicators of the Trimmed Measurement Model of Relationship Quality

Factor	Number of Indicators	Second-Order Factor	Number of Second-Order Indicators
Action Loyalty	4	NA	NA
Provider's Response to Harm	4		
Client's Response to Harm	4	Reciprocity	3
Exchange of Good	4		
Co-operation	4	NA	NA
Trust	4	NA	NA
Opportunism	4	NA	NA

7.2.4 Assessing Normality

As advocated by Byrne (2010), the assessment of normality involves two steps (see section 6.7.5). Firstly, univariate normality is evaluated using the statistics of skewness and kurtosis. Secondly, multivariate normality is assessed by Mardia's normalized estimate of multivariate kurtosis.

Positive kurtosis values of relationship quality scale range from .13 to 2.06 while negative values vary from -.07 to -.91 resulting in an overall mean univariate kurtosis of .54 (see Table 7.8). As there are no values greater than 7, there is no evidence for substantial kurtosis.

Table 7.8: Summary Normality Statistics of the Relationship Quality Scale

Factor	Variable	min	max	skew	c.r.	kurtosis	c.r.
Action Loyalty	LAC1	1	7	-.23	-1.47	-.22	-.72
	LAC2	1	7	-.22	-1.40	-.13	-.41
	LAC3	1	7	-.18	-1.19	-.37	-1.20
	LAC4	1	7	-.13	-.86	-.53	-1.71
Provider's Response to Harm	RHP1	1	7	-.91	-5.90**	1.47	4.75**
	RHP3	1	7	-.76	-4.94**	.59	1.92
	RHP4	1	7	-.52	-3.38**	-.13	-.43
	RHP5	1	7	-.62	-4.04**	.52	1.69
Client's Response to Harm	RHC1	2	7	-.93	-6.00**	.87	2.80**
	RHC3	2	7	-.90	-5.80**	.79	2.55*
	RHC4	2	7	-.65	-4.20**	-.07	-.22
	RHC5	1	7	-1.18	-7.64**	2.06	6.65**
Exchange of Good	EG1	1	7	-1.04	-6.74**	1.83	5.91**
	EG2	1	7	-.90	-5.79**	1.47	4.75**
	EG3	1	7	-.84	-5.41**	.95	3.07**
	EG4	1	7	-.72	-4.68**	1.03	3.33**
Co-operation	C3	2	7	-.54	-3.49**	.13	.43
	C4	2	7	-.71	-4.60**	.64	2.05*
	C5	1	7	-.76	-4.89**	.71	2.29*
	C6	1	7	-1.02	-6.62**	1.49	4.83**
Trust	T10	1	7	-1.00	-6.48**	1.69	5.45**
	T3	1	7	-.83	-5.38**	1.17	3.79**
	T7	2	7	-.72	-4.66**	.53	1.73
	T9	2	7	-.73	-4.70**	.94	3.04**
Opportunism	OP1	1	7	.13	.86	-.84	-2.72**
	OP2	1	6	.75	4.85**	-.31	-.99
	OP3	1	7	.32	2.09*	-.91	-2.95**
	OP4	1	6	.85	5.51**	-.22	-.72
Multivariate Normality						**151.28**	**29.24**

** $p < .01$; * $p < .05$

However, the kurtosis values of 16 variables are statistically significant either at 95% or 99% confidence level. Univariate normality is the necessary, but not sufficient condition for multivariate normality therefore assessment of multivariate kurtosis is essential (Byrne, 2010). Since Mardia's normalized estimate of multivariate Kurtosis equals 29.24 and exceeds the critical level of 5, the value is highly suggestive of multivariate non-normality (see Table 7.8).

In summary, there is no evidence for substantial kurtosis at the univariate level. However, the scale of relationship quality demonstrates highly significant multivariate kurtosis thus the following remedies will be applied as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). As recommended by Finney and DiStefano (2006), both robust maximum likelihood and maximum likelihood with bootstrapping will be employed to assess the parameters and goodness-of-fit of the measurement model (see steps 3.1, 3.2, 4.1 of Figure 6.7, p. 262).

7.2.5 Correcting Non-Normality

As the relationship quality scale is kurtotic both at the univariate and multivariate levels, several methods recommended in the literature were employed as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). Both robust maximum likelihood and bootstrapping were used to correct the effects of non-normality. Firstly, t-values and confidence intervals will be discussed. Secondly, the analysis will proceed with evaluation of goodness-of-fit.

Assessment of T-Values and Confidence Intervals

Robust maximum likelihood estimation results in the same standardized estimates, but different standard errors and t-values (see Table 7.9). Eleven out of thirty-one items (35%) appear to have smaller standard errors. The magnitudes of decrease in t-values vary from -.03 (LAC3, Action Loyalty) to -5.01 (T7, Trust). Ten items (32%) have greater standard errors with differences in t-values ranging from .03 (OP4, Opportunism) to 2.94 (EG2, Exchange-of-

good, reciprocity). Robust maximum likelihood estimation demonstrates that all the relationship quality items remain highly significant despite several changes in standard errors.

In the next step bootstrapping procedure with maximum likelihood estimation was employed in order to evaluate bias-corrected confidence intervals of standardized estimates at 90% confidence level (see Table 7.9). The confidence intervals are interpreted in the usual manner.

Table 7.9: Comparison of CFA Results Based on Maximum Likelihood, Robust ML and Bootstrapped ML Estimation Methods

| Factor | Item | ML estimation | | Robust ML | ML with Bootstrapping | | |
		Standardized Estimate	t-value	t-value	Lower Limit	Upper Limit	p
Action Loyalty	LAC1	.83	------[a]	------[a]	.78	.87	.00
	LAC2	.88	17.60	17.86	.84	.92	.00
	LAC3	.82	15.53	15.50	.74	.87	.00
	LAC4	.94	19.32	18.79	.91	.96	.00
Provider's Response to Harm	RHP1	.84	------[a]	------[a]	.79	.88	.00
	RHP3	.85	16.92	12.63	.80	.90	.00
	RHP4	.85	16.92	14.82	.81	.89	.00
	RHP5	.91	18.80	14.00	.87	.93	.00
Client's Response to Harm	RHC1	.84	------[a]	------[a]	.78	.89	.00
	RHC3	.85	16.55	17.70	.80	.89	.00
	RHC4	.84	16.13	14.69	.78	.88	.00
	RHC5	.89	17.81	19.14	.84	.93	.00
Exchange of Good	EG1	.89	------[a]	------[a]	.85	.92	.00
	EG2	.94	24.31	27.25	.91	.96	.00
	EG3	.90	21.63	20.87	.85	.93	.00
	EG4	.86	19.43	20.81	.81	.90	.00
Co-operation	C3	.82	------[a]	------[a]	.76	.86	.00
	C4	.85	16.38	18.87	.81	.89	.00
	C5	.90	17.82	15.31	.87	.92	.00
	C6	.94	19.08	16.02	.91	.96	.00
Trust	T3	.90	------[a]	------[a]	.86	.93	.00
	T7	.90	22.42	17.41	.90	.94	.00
	T9	.87	20.76	17.88	.87	.92	.00
	T10	.92	23.76	24.20	.84	.90	.00
Opportunism	OP1	.66	------[a]	------[a]	.57	.73	.00
	OP2	.87	11.49	12.19	.81	.91	.00
	OP3	.82	11.05	12.46	.77	.86	.00
	OP4	.86	11.43	11.46	.81	.90	.00
Reciprocity (Second-Order)[b]	RHP	.92	14.51	NA	.87	.95	.00
	RHC	.76	11.71	NA	.68	.83	.00
	EG	.86	14.57	NA	80	.91	.00

------[a] Dashes represent parameters, which were fixed to 1 for identification purposes.
[b] Second-order loadings were freely estimated fixing the variance of loyalty second-order construct to 1.

The zero hypothesis that a factor loading is equal to zero in the population is rejected if a confidence interval does not include zero. P-values indicate the minimum confidence level, at which confidence interval would include zero. The widths of confidence intervals vary from .04 (C6, Co-operation) to .16 (OP1, Opportunism). All the p-values are zero demonstrating that confidence intervals would have to be at 100% confidence level in order to include zero.

Assessment of Goodness-of-Fit

Goodness-of-fit statistics pertinent to Maximum Likelihood and Robust Maximum Likelihood estimation methods are provide in Table 7.10. Robust Maximum Likelihood estimation has produced Satorra-Bentler scaled χ^2 of 501.88 with 329 degrees of freedom, which results in a highly significant decrease in χ^2 value equal to 93.17 as well as lower ratio of χ^2 and its degrees of freedom (1.52). The values of CFI and TLI have increased from .96 to .99 indicating excellent goodness-of-fit. Finally, RMSEA value has decreased from .057 to .046. The 90% confidence interval of RMSEA ranges from .038 to .054 and demonstrates improvement. Finally, RMSEA p-value has increased from .062 to .80. Consequently, thus the null hypothesis of close fit is not rejected.

Table 7.10: Comparison of CFA Fit Statistics Based on Maximum Likelihood and Robust ML Estimation Methods

	Estimation Methods	
	ML	**Robust ML**
χ^2 and Satorra-Bentler Scaled χ^2	595.050	501.880
df	329	
P-value		
χ^2 / df	1.809	1.525
RMSEA	.057	.046
RMSEA Confidence Interval (90%)	.050, .064	.038, .054
P-value (RMSEA < 0.05)	.062	.801
CFI	.962	.993
TLI	.956	.992

In summary, the CFA results produced by different estimation methods demonstrate very good properties of the relationship quality scale. Both the standardized factor loadings and their t-values are very high. Bootstrapped Maximum Likelihood indicates that neither of the items have confidence interval including zero therefore the hypothesis that true value of factor loading is equal to zero in the population are rejected in all the cases.

Goodness-of-fit analysis based on robust maximum likelihood method indicates substantial improvement. The new values of CFI, χ^2 / df and RMSEA demonstrate excellent goodness-of-fit. Moreover, the true value of RMSEA lies between 0.038 and 0.054 in the population. Although, the upper bound of the statistic slightly exceeds the conservative criterion of excellent fit (≤ 0.05), the probability value is equal to 0.801 indicating that the hypothesis of close fit (RMSEA ≤ 0.05) is not rejected.

7.3 Measurement Model of Organizational Culture

Having assessed construct validity of the relationship quality scale, analysis will proceed with assessment of organizational culture.

7.3.1 Assessment of Construct Validity and Goodness-of-Fit

The scale of organizational culture demonstrates weaker evidence for construct validity. The standardized factor loadings and corresponding t-values of the organizational culture items are provided in Table 7.11.

Uncertainty Avoidance

The factor loadings of uncertainty avoidance range from .43 to .97 (see Table 7.11). Although two loadings are bellow the suggested cut-off value of .70 (Hair *et al.*, 2010), average variance extracted equals .52 (see Table 7.12). Following the advice of Fornell and Larcker (1981) and Hair *et al.* (2010), composite reliability was calculated to assess reliability. As the statistic equals .90, it is suggestive of high reliability. However, the value of Cronbach alpha equals .69 and is slightly below the suggested threshold of .70.

Collectivism

The initial pool of collectivism items comprised 5 indicators. However, the factor loading of COLG4 was low and equalled .32. Moreover, the modification indices suggested a cross-loading of COLG4 on COLG2 thus the latter item was dropped from the model. The factor loadings of the remaining items range from .56 to .87 resulting in average variance extracted and composite reliability values of .59 and .85 respectively. Consequently, convergent validity and reliability are supported (see Table 7.12).

Table 7.11: CFA Results of Organizational Culture Construct

Factor	Indicator	Standardized Estimate	t-value
Uncertainty Avoidance	UA1	.43	------[a]
	UA2	.97	5.18
	UA3	.64	6.42
Collectivism	COLG1	.73	------[a]
	COLG2	.87	12.97
	COLG3	.87	12.90
	COLG5	.56	8.48
Human Orientation	HO1	.81	------[a]
	HO2	.88	15.27
	HO3	.75	12.65
	HO4	.80	13.78
Assertiveness	A1	.66	------[a]
	A2	.88	6.72
	A3	.56	6.92
Power Distance	PD1	.57	------[a]
	PD2	.65	7.46
	PD3	.74	7.43

Human Orientation

All the factor loadings of human orientation are above .7 and range from .75 to .88. Average variance extracted demonstrates that the latent structure explains 66% of the variance thus supporting convergent validity. Both composite reliability and Cronbach alpha equal .88 suggesting high reliability (see Table 7.12).

Assertiveness

Although assertiveness initially comprised four indicators, the factor loading of item A4 equalled .54 and was below the suggested threshold of .70 (Hair *et al.*, 2010). Moreover, the indicator exhibited multiple cross-loadings thus it was dropped from the model. The standardized factor loadings of the remaining items range from .56 to .88 resulting in average variance extracted of .51 and composite reliability of .75. The value of Cronbach alpha is slightly lower and equals.74.

Table 7.12: Assessment of Reliability and Discriminant Validity of Organizational Culture Construct

Variable	Cronbach Alpha	Composite Reliability	Average Variance Extracted	1	2	3	4
1. Uncertainty Avoidance	.69	.90	.52				
2. Collectivism	.83	.85	.59	.03			
3. Human Orientation	.88	.88	.66	.01	.20		
4. Assertiveness	.74	.75	.51	.02	.05	.06	
5. Power Distance	.69	.69	.43	.00	.14	.32	.02

Note: Unless indicated, numbers are squared correlations from confirmatory factor analysis

Power Distance

All the three factor loadings of power distance are significant and ranges from .57 to .74. As two indicators are below the recommended level of .70, both average variance extracted and composite reliability are below the suggested thresholds and equals .43 and .69 respectively. Nevertheless, the factor is retained in the model to ensure conceptual completeness.

Assessment of Goodness-of-Fit

Having assessed construct validity of organizational culture, the analysis will proceed with evaluation of goodness-of-fit. The construct yields a significant χ^2 value of 186.03 with 109 degrees-of-freedom resulting in normed χ^2 index of 1.71 (see Table 7.13). Although χ^2 statistic is significant, this should be expected due to the given complexity and sample size (Hair *et al.*, 2010). RMSEA value equals .053 with the confidence interval ranging from .040 to .066.

The hypothesis of close fit (RMSEA ≤ .05) has not been rejected (p = .33) indicating excellent goodness-of-fit. Although standardized mean square residual (SMSR) of .059 slightly exceeds the conservative threshold of .05 recommended by Diamantopoulos and Siguaw (2000), it is less than the suggested upper limit of .08 (Hair *et al.*, 2010) for models of the given complexity and sample size (see Table 6.3, p. 256). Finally, CFI and TLI values equals .953 and .941 respectively indicating excellent goodness-of-fit.

Table 7.13: Assessment of Goodness-of-Fit of Organizational Culture Measurement Model

Statistic	Result
χ^2	186.032
df	109
P-value	.000
χ^2 / df	1.707
RMSEA	.053
Confidence Interval of RMSEA	.040; .066
P-value (90%) of close fit (RMSEA< .05)	.332
SRMR	.059
CFI	.953
TLI	.941

Sampling Adequacy for Structural Equation Modelling

Having evaluated construct validity and goodness-of-fit of the measurement model, the analysis will proceed with the assessment of sampling adequacy for structural equation modelling. The model of organizational culture comprises five constructs: uncertainty avoidance, collectivism, human orientation, assertiveness and power distance. Human orientation and collectivism include four indicators while uncertainty avoidance, assertiveness and power distance are operationalized using three items. As 41% of the communalities are below .45, the model falls into the third category of the sample size table suggested by Hair *et al.* (2010, p. 662) indicating that a sufficient sample size for the organizational culture is 300 (see Table 6.2, p. 226). Nevertheless, the simulation study by Reinartz *et al.* (2009) has demonstrated that structural equation modelling provides accurate results as long as the sample size exceeds 250 and the measurement model is more reliable with no communalities

below .25 and factors consisting of less than 3 indicators. As only one indicator has communality below .25, it can be concluded that sample size of 251 can be regarded as a sufficient for the measurement model of organizational culture.

Assessment of Common Method Bias and Non-Response Bias

As in the case of the relationship quality scale, the common method latent factor approach will be employed to assess common method bias of organizational culture. Following the recommendation of Podsakoff *et al.* (2003), common method factor was allowed to load on the every indicator. As in the previous case, the model was not identified thus the factor loadings were constrained to be equal.

As the two models are nested, they were compared by χ^2 difference test which resulted in value of .10 ($\Delta\chi^2 = 211.9 - 211.8$) with 1 degree of freedom ($\Delta df = 109 - 108$) demonstrating that the model with common method factor does not fit better. All the factor loadings of common method dimension appear to be insignificant ($p > .05$).

Finally, owing to the recommendations of Armstrong and Overton (1977), the collected sample was devided into early and late responses in order to assess non-response bias. All the differences between variables as well as factors are insignificant ($p < .01$).

7.3.2 Identification

Identification of the measurement model of organizational culture will be discussed using the same logic as previously. Firstly, the hypothetical measurement model will be evaluated. Secondly, the trimmed measurement model will be assessed.

Identification of the Hypothetical Measurement Model

The hypothetical measurement model of organizational culture comprises 6 factors (see Table 7.14). On one hand, uncertainty avoidance, in-group collectivism and power distance have 3 indicators and are just-identified.

Table 7.14: Number of Indicators of the Hypothetical Measurement Model of Organizational Culture

Factor	Number of Indicators
Uncertainty Avoidance	3
Institutional Collectivism	3
In-Group Collectivism	5
Human Orientation	4
Assertiveness	4
Power Distance	3

On the other hand, human orientation, assertiveness and in-group collectivism are operationalized using at least 4 indicators resulting in over-identification. The overall hypothetical measurement model is over-identified with 194 degrees of freedom.

Identification of the Trimmed Measurement Model

The trimmed measurement model of organizational culture comprises 5 factors (see Table 7.15). On one hand, uncertainty avoidance, assertiveness and power distance are measured using 3 indicators and thus are just-identified. On the other hand, in-group collectivism and human orientation include 4 items resulting in over-identification. Although the three factors are in breach of the four-items rule, it is acceptable because the other factors are over-identified (Hair *et al.*, 2010). As the overall measurement model has 109 degrees of freedom, it satisfies the counting rule and is over-identified.

Table 7.15: Number of Indicators of the Trimmed Measurement Model of Organizational Culture

Factor	Number of Indicators
Uncertainty Avoidance	3
In-Group Collectivism	4
Human Orientation	4
Assertiveness	3
Power Distance	3

7.3.3 Assessing Normality

Assessment of normality was carried out by two steps as recommended by Byrne (2010) . Firstly, univariate normality was evaluated using the statistics of skewness and kurtosis. Secondly, multivariate normality was assessed by Mardia's normalized estimate of multivariate Kurtosis. As kurtosis affects both variances and covariances, its assessment is of critical importance to structural equation modelling (Byrne, 2010).

The results of normality tests are provided in Table 7.16. The positive kurtosis values of the organizational culture scale range from .88 to .40 while the negative kurtosis values vary from -.02 to -1.12 resulting in mean univariate kurtosis of -.32. As in the case of relationship quality scale, there are no substantial kurtotic departures, but nine items demonstrate statistically significant kurtosis at the univariate level. However, Mardia's normalized estimate of multivariate kurtosis exceeds the threshold of 5 and equals 19.84 (see Table 7.16) suggesting non-normality (Byrne, 2010). Finally, the values of skewness range from .49 to -.92 and do not exceed the recommended threshold of 2 (Finney and DiStefano, 2006).

Table 7.16: Summary Normality Statistics of Organizational Culture Scale

Factor	Variable	min	max	skew	c.r.	kurtosis	c.r.
Uncertainty Avoidance	UA1	1	7	.10	.63	-.84	-2.71[**]
	UA2	1	7	.10	.62	-1.04	-3.35[**]
	UA3	1	7	.01	.07	-1.12	-3.63[**]
Collectivism	COLG1	1	7	-.30	-1.91	-.19	-.62
	COLG2	1	7	-.77	-4.98[**]	-.33	-1.05
	COLG3	1	7	-.67	-4.31[**]	-.65	-2.10[*]
	COLG5	1	7	-.52	-3.37[**]	-.80	-2.58[**]
Human Orientation	HO1	1	7	-.92	-5.92[**]	.88	2.84[**]
	HO2	1	7	-.73	-4.70[**]	.87	2.81[**]
	HO3	1	7	-.72	-4.64[**]	.40	1.30
	HO4	1	7	-.45	-2.89[**]	-.02	-.05
Assertiveness	A1	1	7	.33	2.11[*]	-.74	-2.40[*]
	A2	1	7	.29	1.85	-.07	-.24
	A3	1	6	.11	.72	-.18	-.59
Power Distance	PD1	1	7	.20	1.28	-.95	-3.07**
	PD2	1	7	.49	3.17[**]	-.49	-1.57
	PD3	1	7	.23	1.47	-.21	-.67
Multivariate Normality						**63.66**	**19.84**

[**] p<0.01; [*] p<0.05

In summary, there is no evidence for substantial kurtosis at the univariate level. However, the organizational culture scale demonstrates highly significant multivariate kurtosis thus the following remedies will be applied as discussed in section 6.7.5 and outline in Figure 6.7 (p. 249). As recommended by Finney and DiStefano (2006), both robust maximum likelihood and maximum likelihood with bootstrapping will be employed to assess the parameters and goodness-of-fit of the measurement model (see steps 3.1, 3.2, 4.1 of Figure 6.7, p. 262).

7.3.4 Correcting Non-Normality

As the scale of organizational culture is kurtotic both at the univariate and multivariate levels, several methods recommended in the literature were employed as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). Both robust maximum likelihood and bootstrapping were used to correct the effects of non-normality. Firstly, t-values and confidence will be discussed. Secondly, the analysis will proceed with evaluation of goodness-of-fit.

Assessment of T-Values and Confidence Intervals

Robust Maximum Likelihood estimation results in the same standardized estimates, but different standard errors and t-values (see Table 8.17). The differences in t-values range from -.56 (COLG3, Collectivism) to -4.57 (HO2, Human Orientation). Although the standard errors of 11 variables have increased, all the t-values remain significant. In the next step bootstrapping with Maximum Likelihood estimation was employed in order to evaluate bias-corrected confidence intervals of standardized estimates at 90% confidence level (see Table 7.17). The confidence intervals are interpreted in the usual manner. The hypothesis that a factor loading is equal to zero in the population is rejected if a confidence interval does not include zero. P-values indicate the minimum confidence level, at which confidence interval would include zero. The widths of confidence intervals vary from .01 to .05. All the p-values are zero, which means that confidence intervals would have to be at 100% confidence level in order to include zero.

Table 7.17: Comparison of CFA Results Based on Maximum Likelihood and Robust Maximum Likelihood Estimation Methods (Organizational Culture Construct)

Factor	Item	ML estimation		Robust ML	ML with Bootstrapping		
		Standardized Estimate	t-value	t-value	Lower Limit	Upper Limit	p
Uncertainty Avoidance	UA1	.43	------[a]	------[a]	.42	.45	.00
	UA2	.97	5.18	4.19	.95	1.00	.00
	UA3	.64	6.42	5.47	.62	.67	.00
Collectivism	COLG1	.73	------[a]	------[a]	.72	.74	.00
	COLG2	.87	12.97	11.94	.86	.88	.00
	COLG3	.87	12.90	12.34	.86	.88	.00
	COLG5	.56	8.48	6.97	.55	.58	.00
Human Orientation	HO1	.81	------[a]	------[a]	.79	.82	.00
	HO2	.88	15.27	10.70	.87	.88	.00
	HO3	.75	12.65	9.64	.74	.76	.00
	HO4	.80	13.78	9.89	.79	.81	.00
Assertiveness	A1	.66	------[a]	------[a]	.64	.67	.00
	A2	.88	7.46	8.20	.86	.90	.00
	A3	.56	7.43	6.51	.53	.58	.00
Power Distance	PD1	.57	------[a]	------[a]	.55	.59	.00
	PD2	.65	6.72	6.10	.63	.66	.00
	PD3	.74	6.92	6.30	.73	.76	.00

------[a] Dashes represent parameters, which were fixed to 1 for identification purposes.

Assessment of Goodness-of-Fit

The goodness-of-fit statistics based on maximum likelihood and robust maximum likelihood estimation methods are provided in Table 7.18.

Table 7.18: Comparison of CFA Fit Statistics Based on Maximum Likelihood and Robust Maximum Likelihood Estimation Methods

χ^2 and Satorra-Bentler Scaled χ^2	186.032	158.585
df	109	
p-value	.00	.00
χ^2 / df	1.707	1.455
RMSEA	.053	.043
RMSEA Confidence Interval (90%)	.040, .066	.027, .057
P-value (RMSEA < 0.05)	0.332	.796
CFI	.953	.98
TLI	.941	.975

Robust Maximum Likelihood estimation has produced Satorra-Bentler Scaled χ^2 of 158.58 with 109 degrees of freedom, which results in highly significant decrease of χ^2 value equal to 27.44 as well as lower ratio of χ^2 and degrees of freedom (1.45). CFI has increased from .95 to .98 indicating excellent fit. RMSEA has decreased from .053 to .043. The 90% confidence interval of RMSEA ranges from .027 to .057 indicating improvement. Finally, the p-value of RMSEA has increased substantially from .332 to .796. Consequently, the null hypothesis of close fit is not rejected.

7.4 Concluding Remarks

Based on the methodology outlined in section 5.7.4.1 and concluding remarks provided in section 6.9, Chapter 7 evaluated the measurement models. Firstly, the measurement model of relationship quality was assessed. Secondly, the analysis proceeded with confirmatory factor analysis of organizational culture. Concluding remarks will be drawn using the same order.

H$_1$, stating that there are four sequential stages of loyalty (respectively, cognitive, affective, conative, and action loyalty) has been rejected. As cognitive loyalty demonstrated low factor loadings and poor discriminant validity, it was removed from the model. Having evidence that conative-affective loyalty is a unidimensional construct, the dimensions were combined. Nevertheless, the construct appeared to be the only offender of discriminant validity in respect to the other dimensions of relationship quality thus it was removed from the model. Action loyalty has emerged as a single dimension of loyalty in business-to-business context.

As was hypothesized, reciprocity appears to be a valid second-order construct comprising the three dimensions: provider's-response-to-harm, client's-response-to-harm and exchange-of-good.

Confirmatory factor analysis demonstrates that relationship quality consists of six dimensions: action loyalty, reciprocity, co-operation, trust and opportunism. All the dimensions demonstrate evidence for convergent validity and reliability. Convergent validity

is supported by high factor loadings and average variance extracted, while reliability is evidenced by both composite reliability and Cronbach alpha. Although all the dimensions satisfy the criterion of Fornell-Larcker at the first-order level, two dimensions do not discriminate at the second-order level. Nevertheless, discriminant validity is supported by χ^2 difference test. Finally, goodness-of-fit indices based on various estimation methods provide evidence for excellent consistency between the trimmed measurement model and data at hand. Having assessed the measurement model of relationship quality, the analysis proceeded with organizational culture. As hypothesized, organizational culture comprises uncertainty avoidance, collectivism, human orientation, assertiveness and power distance. All the dimensions except power distance demonstrate adequate evidence for construct validity. As both average variance extracted and composite reliability of power distance are only slightly below the suggested thresholds, the dimension is retained in the model to ensure conceptual completeness. Finally, goodness-of-fit indices based on various estimation methods testify to excellent consistency between the trimmed measurement model and the data at hand.

CHAPTER 8

STRUCTURAL MODELS OF RELATIONSHIP QUALITY

8.1 Introduction

Having assessed the measurement models, the analysis will proceed with the structural models. As the study comprises the two competing models, section 8.2 (Assessment of Structural Models of Relationship Quality) is organized into several parts. Firstly, the recursive model will be discussed (8.2.1). Secondly, the analysis will proceed with the non-recursive model (8.2.2). Both the models will be assessed using the same logic and discussion will involve the following aspects: direct effects, indirect effects, total effects, explanatory power and goodness-of-fit. Section 9.2.3 will compare the two competing models. As the models are not nested, they will be compared using Akaike's Information Criterion (AIC) and Expected Cross Validation Index (ECVI) as recommended by Kline (2011) and Diamantopoulos and Siguaw (2000).

Having assessed and compared the two competing models, section 9.3 evaluates identification of the non-recursive model using the algorithm suggested by Kline (2011) and discussed in section 6.7.2.

Finally, as the relationship quality scale is kurtotic both at the univariate and multivariate levels (see section 7.2.4), several methods recommended in the literature will be used as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). Both robust maximum likelihood and bootstrapping will be employed to correct the effects of non-normality. Firstly, t-values and confidence intervals will be discussed. Secondly, the analysis will proceed with evaluation of goodness-of-fit.

8.2 Assessment of Structural Models of Relationship Quality

Assessment of the structural models of relationship quality involves two major steps. Firstly, the recursive model will be evaluated. Secondly, the analysis will proceed with assessment of the non-recursive model.

8.2.1 Assessment of Recursive Model

The evaluation of the recursive model of relationship quality (see Figure 8.1) comprises two steps. Having evaluated parameter estimates, the analysis proceeds with assessment of goodness-of-fit.

Direct Effects

Consistent with the literature, opportunism has a significant negative effect on trust (β = -.67, t = -8.91, p < .001) and explains 46% of the variance in the latter dimension (see Table 8.1 and Figure 8.1). Trust has a significant and strong effect on co-operation (β = .85, t = 14.42, p < .001) explaining 73% of the variance and providing support for hypothesis H_3. As expected, trust (β = .56, t = 7.54, p < .001) and co-operation (β = .45, t = 6.11, p < .001) are the significant antecedents of reciprocity explaining 93% of the variance in the latter construct. Consequently, hypotheses H_4 and H_9 are supported. Surprisingly, the effect of trust on action loyalty is statistically insignificant (β = .12, t = .5, p > .05). Hence, hypothesis H_6 is rejected. As communication was the offender of discriminant validity and has been removed from the measurement model (see Section 7.2.1), hypotheses H_7 and H_8 have not been tested. Reciprocity has a significant positive effect on action loyalty (β = .54, t = 7.94, p < .001) thus supporting hypothesis H_{10} (see Table 8.1 and Figure 8.1). The squared multiple correlation of action loyalty demonstrates that reciprocity explains 29% of the variance in this dimension (see Figure 8.1).

Table 8.1: Parameter Estimates of Recursive Structural Model of Relationship Quality

Hypothesis	Endogenous Variables	Exogenous Variables	Standardized Path	t-value	Outcome
H_2	Trust	Opportunism	-.67	-8.91	Accepted
H_3	Cooperation	Trust	.85	14.42	Accepted
H_4	Reciprocity	Trust	.56	7.54	Accepted
H_6	Action Loyalty	Trust	.12	.5	Rejected
H_9	Reciprocity	Cooperation	.45	6.11	Accepted
H_{10}	Action Loyalty	Reciprocity	.54	7.94	Accepted

Figure 8.1: Recursive Structural Model of Relationship Quality
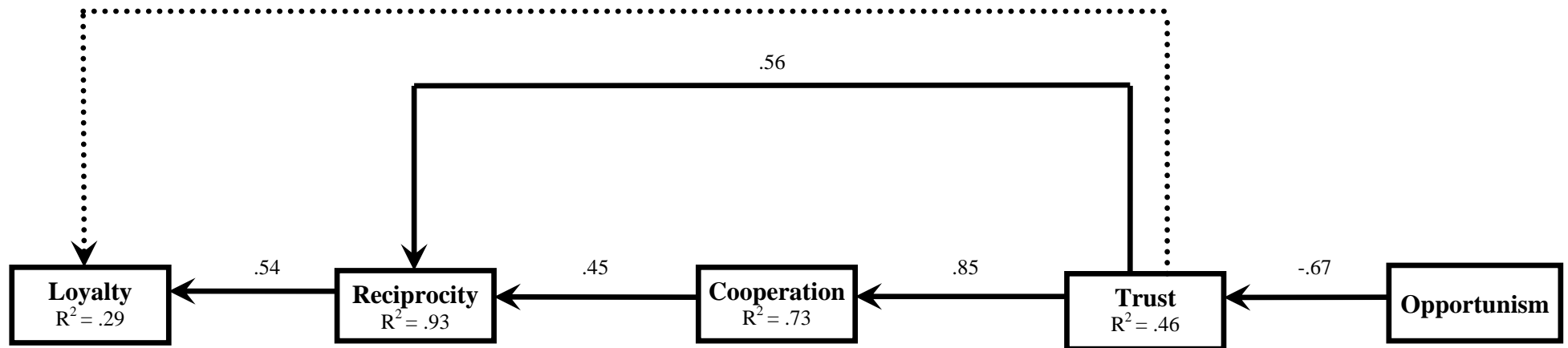
Indirect and Total Effects

Trust is the strongest indirect antecedent of action loyalty having an indirect effect of .50 through two mediators: co-operation and reciprocity (see Table 9.2). Opportunism has an indirect effect on action loyalty of -.34 through the entire chain of mediators: trust, co-operation and reciprocity. Finally, co-operation appears to be the weakest indirect antecedent of action loyalty having an indirect effect of .24 through the construct of reciprocity.

Table 8.2: Standardized Indirect and Total Effects of Recursive Structural Model of Relationship Quality

	Action Loyalty		Reciprocity		Co-operation		Trust	
	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total
Action Loyalty	NA	NA	NA	NA	NA	NA	NA	NA
Reciprocity	NA	.54	NA	NA	NA	NA	NA	NA
Co-operation	.24	.24	NA	.45	NA	NA	NA	NA
Trust	.50	.50	.38	.94	.00	.85	NA	NA
Opportunism	-.34	-.34	-.63	-.63	-.58	-.58	.00	-.67

The indirect effect of trust on reciprocity equals .34. As trust affects reciprocity both directly (.56) and indirectly (.38), the total effect is substantial and equals .94. Opportunism is another indirect antecedent of reciprocity. It affects the construct trough two mediators: trust and co-operation. The indirect effect of opportunism on reciprocity equals -.63.

In summary, the findings pertinent to indirect effects explain some contrasts between the literature and the current study. Hypothesis H_6, suggesting a positive effect of trust on action loyalty has been corroborated by a number of studies (Morgan and Hunt, 1994; Harris and Goode, 2004; Pervan *et al.*, 2009). However, the current study indicates that trust affects action loyalty only indirectly through the mediating chain comprising co-operation and reciprocity. Consequently, full mediation is supported. Hence, the study addresses the call of Palmatier *et al.* (2006) to conceptualize reciprocity as a mediator of the classic model of relationship marketing suggested by Morgan and Hunt (1994) and provides empirical support for the hypothesis of full mediation.

Goodness-of-Fit

Having assessed parameter estimates of the structural model, the analysis will proceed with evaluation of goodness-of-fit. The recursive structural model of relationship quality results in significant χ^2 value of 628.75 with 342 degrees of freedom and normed χ^2 index of 1.84 (see Table 8.3). As recommended by Hair *et al.* (2010), χ^2 values of the measurement and structural models are compared (see Table 8.3). As expected, the comparison yields insignificant χ^2 difference value of 2.72 (628.75 - 626.03) with 5 degrees of freedom (342 – 337).

Table 8.3: Goodness-of-Fit of Recursive Relationship Quality Model

Statistic	Second-Order CFA model	Structural Model
χ^2	626.026	628.747
df	337	342
P-value	.000	.000
χ^2/df	1.858	1.838
RMSEA	.059	.058
Confidence Interval of RMSEA	.051; .066	.051; .065
P-value (90%) of close fit (RMSEA< .05)	.025	.035
SRMR	.040	.041
CFI	.958	.959
TLI	.953	.954

Hair *et al.* (2010) posit that significant χ^2 difference would mean that structural theory lacks validity. As in the case of the measurement model, RMSEA value of .058 with the confidence interval ranging from .051 to .065 suggests very good fit. However, the hypothesis of close fit (RMSEA $\leq$ .05) is rejected (p = .035). The value of standardized mean square residual (SMSR) equals .041 and is below the conservative cut-off level of .05. Finally, CFI and TLI equal .959 and .954 respectively. Consequently, all the indices demonstrate excellent consistency between the theoretical relationships and empirical data at hand.

Statistical Control

Having assessed the recursive model of relationship quality, the effects of control variables will be evaluated. The model with control variables is provided in Figure 8.2.

Figure 8.2: Recursive Structural Model of Relationship Quality with Control Variables
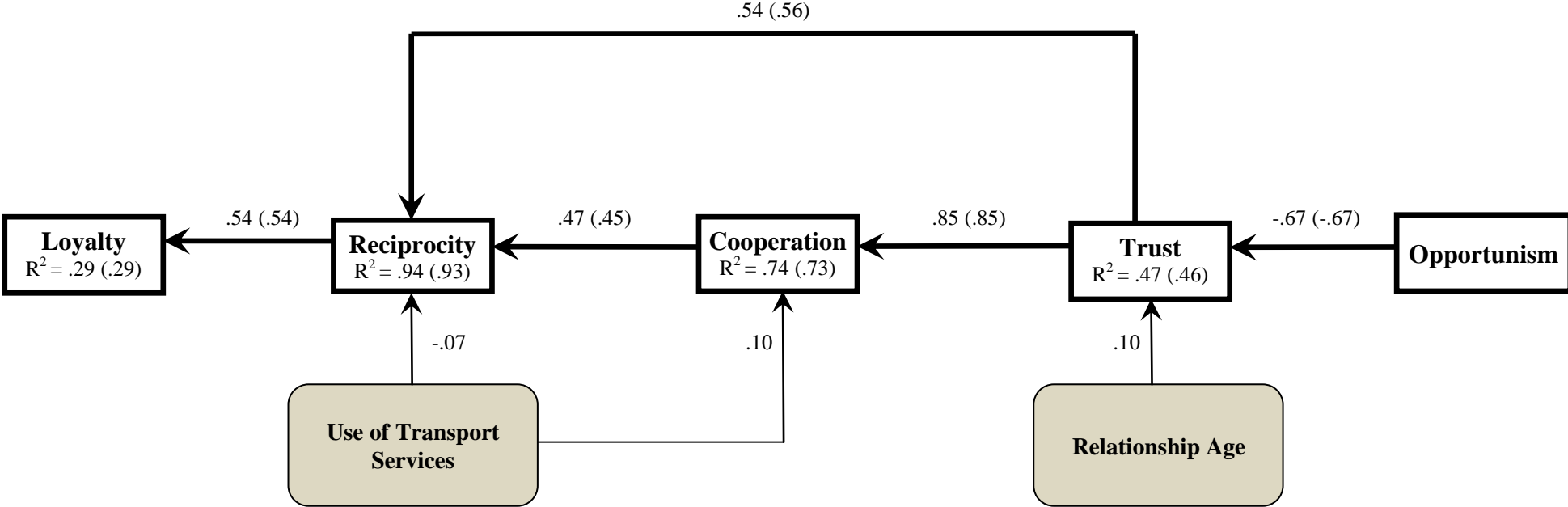
Note: the values in brackets represent the parameters of the recursive model without control variables

Statistical control helps to find additional effects and contributes to better understanding of the phenomena under investigation. As several sources of literature argue that there are variables which might potentially alter the main effects of the relationship quality model, several control variables were included in the study: company size, relationship age, use of transport services and number of services used. Since the study focuses on medium and large companies, company size varies from 51 to 500000 employees. Relationship age ranges from several months to more than twenty years. Finally, the number of services used varies from 1 to 12 resulting in the median value of 4.

Although the sample comprises diverse companies, only two control variables appear to be statistically significant (see Figure 8.2). Relationship age has a significant positive effect on trust ($\beta = .10$, $t = 2.03$, $p < .05$). The effects of use-of-transport-services are somewhat controversial. On hand it has a positive effect on co-operation ($\beta = .10$, $t = 2.56$, $p < .05$). On the other hand, the effect on reciprocity is negative ($\beta = -.07$, $t = -2.44$, $p < .05$). Despite the significant effects of the two control variables, the parameters and explanatory power of the model remain almost the same. The effect of co-operation on reciprocity has increased from .45 to .47 while the effect of trust on the latter construct has decreased from .56 to .54 demonstrating only minor differences (see the values in brackets of Figure 8.2). The values of explained variance of reciprocity and trust have increased from .93 to .94 and from .46 to .47 respectively. Finally, Akaike's information criterion (AIC) was employed to compare the two models. AIC values of the recursive model and the model with control variables equal 825.61 and 756.75 respectively. Consequently, the model without control variables is favoured. In summary, the analysis of statistical control demonstrates that the model is very stable and the findings can be generalized to the population of interest.

8.2.2 Assessment of Non-Recursive Model

The evaluation of the non-recursive model of relationship quality (see Figure 8.3) comprises two steps. Having evaluated parameter estimates, the analysis proceeds with assessment of goodness-of-fit.

Direct Effects

As was expected, opportunism is the significant negative antecedent of trust ($\beta = -.44$, $t = -7.75$, $p < .001$). All the three relationships in the feedback loop between trust, co-operation and reciprocity are statistically upheld. Firstly, trust has a significant direct effect on co-operation ($\beta = .73$, $t = 11.18$, $p < .001$). Secondly, co-operation is the antecedent of reciprocity ($\beta = .85$, $t = 12.16$, $p < .001$). Thirdly, reciprocity has a significant direct effect on trust ($\beta = .47$, $t = 6.10$, $p < .001$) thus supporting hypothesis H_5 (see Table 8.4). Finally, reciprocity has a significant positive influence on action loyalty ($\beta = .53$, $t = 7.81$, $p < .001$). The squared correlation of the latter equation remains unchanged indicating that 29% of the variance in action loyalty is explained by its antecedents.

Table 8.4: Parameter Estimates of Non-Recursive Structural Model of Relationship Quality

Hypothesis	Endogenous Variables	Exogenous Variables	Standardized Path	t-value	Outcome
H_2	Trust	Opportunism	-.44	-7.75	Accepted
H_3	Cooperation	Trust	.73	11.18	Accepted
H_5	Trust	Reciprocity	.47	6.10	Accepted
H_9	Reciprocity	Cooperation	.85	12.16	Accepted
H_{10}	Action Loyalty	Reciprocity	.53	7.81	Accepted
-	Reciprocity	Relationship Age	.08	2.44	Accepted

Besides the relationships in the feedback loop, both trust and reciprocity were conceptualized to have a unique exogenous antecedent for purposes of identification which will be discussed more broadly in section 8.3. Opportunism is a unique antecedent of trust whereas relationship age ($\beta = .08$, $t = 2.44$, $p < .05$) is a unique cause of reciprocity.

Figure 8.3: Non-Recursive Structural Model of Relationship Quality
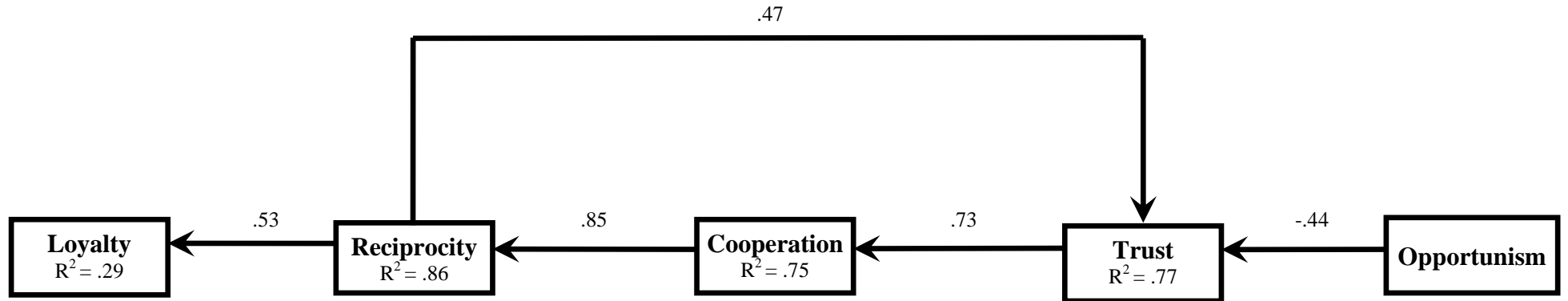
Specification of the feedback loop between the three variables results in improved explanatory power of the model. The proportions of variance explained in reciprocity, co-operation and trust are substantial and equal 86%, 75% and 77% respectively.

Goodness-of-Fit

Having assessed the parameters estimates, the analysis proceeds with evaluation of goodness-of-fit. The non-recursive model results in statistically significant χ^2 of 701.03 with 369 degrees of freedom and normed χ^2 index equal to 1.90 (see Table 8.5). The value of RMSEA of .06 with the confidence interval ranging from .053 to .067 does not exceed the recommended threshold of .07 (Hair *et al.*, 2010) for models demonstrating the given complexity and sample size (see Table 6.3, p. 256). However, the zero hypothesis of close fit (RMSEA $\leq$ .05) is rejected (p = .008). The value of SRMR equals .07 and does not exceed the critical level of .08 for models demonstrating the given complexity and sample size (see Table 6.3, p. 256). Finally, CFI and TLI values equal .952 and .947 respectively providing evidence for excellent consistency between the model and data at hand.

Table 8.5: Goodness-of-Fit Assessment of Non-Recursive Structural Model of Relationship Quality

Statistic	Values
χ^2	701.026
df	369
P-value	.000
χ^2/ df	1.900
RMSEA	.060
Confidence Interval of RMSEA	.053; .067
P-value (90%) of close fit (RMSEA< .05)	.008
SRMR	.0704
CFI	.952
TLI	.947

Statistical Control

As in the case of the recursive model, only two control variables appear to be statistically significant (see Figure 8.4).

Figure 8.4: Non-recursive Structural Model of Relationship Quality with Control Variables
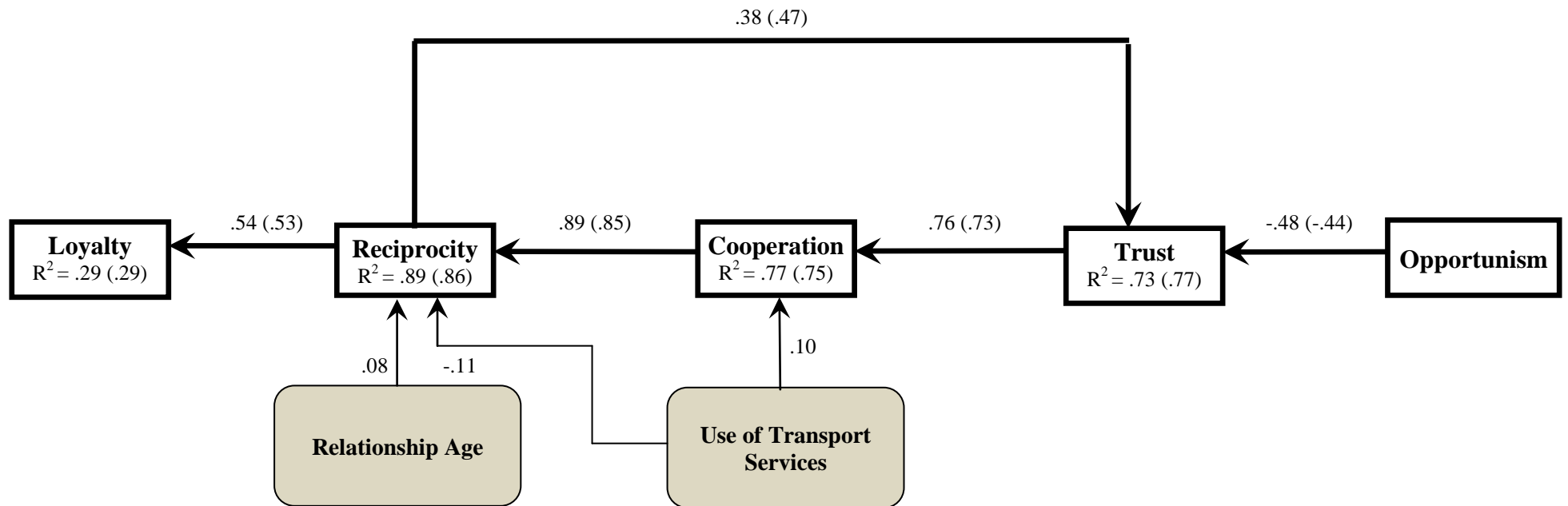
Note: the values in brackets represent the parameters of the non-recursive model without control variables

Use of transport services has a positive effect on co-operation ($\beta = .10$, $t = 2.76$, $p < .05$) and a negative effect on reciprocity ($\beta = -.11$, $t = -3.19$, $p < .05$). The effect of relationship age on reciprocity appears to be positive ($\beta = .08$, $t = 2.29$, $p < .05$).

Despite the significant effects of the two control variables, the parameters and explanatory power of the model remain almost the same. All the path coefficients, except one, have slightly increased (see the values in brackets in Figure 8.4). The effect of reciprocity on trust has decreased from .47 to .38. The variance explained of action loyalty remains the same. The addition of control variables has increased the variance explained of reciprocity and co-operation. However, the variance explained of trust has slightly decreased. Nevertheless, the changes are minor. As in the case of the recursive model, Akaike's information criterion (AIC) was drawn on to assess goodness-of-fit of the two models. The AIC values of the non-recursive model and the model with control variables equal 833.03 and 872.77 respectively. The results indicate that the model without control variables is favoured. In summary, the analysis of statistical control demonstrates that the model is very stable and the findings can be generalized to the population of interest.

8.2.3 Comparison of Recursive and Non-Recursive Models

Comparison of the recursive and non-recursive structural models will be organized into two parts. Having assessed goodness-of-fit, the assessment will proceed with comparison of explanatory power.

Comparison of Goodness-of-Fit

As was mentioned previously, relationship age was added to the non-recursive model for purposes of identification thus the models have different variables and are not nested. Since the models are not nested, their χ^2 values can be compared, but the difference cannot be treated as a statistical test (Kline, 2011).

As suggested by Kline (2011), Akaike's information criterion (AIC) was drawn on to assess goodness-of-fit of the competing models. The formula of AIC involves χ^2 value of the

model plus the number of free parameters multiplied by 2 therefore it penalizes for complexity and rewards for parsimony. In reviewing AIC values across the two competing models, it is evident that the recursive model has lower AIC value and thus is favoured (see Table 8.6).

Table 8.6: Goodness-of-Fit Comparison of Recursive and Non-Recursive Structural Models of Relationship Quality

Statistic	Recursive Structural Model	Non-Recursive Structural Model
χ^2	628.747	701.026
df	342	369
P-value	.000	.000
χ^2/ df	1.838	1.900
RMSEA	.058	.060
Confidence Interval of RMSEA	.051; .065	.053; .067
P-value (90%) of close fit (RMSEA< .05)	.035	.008
SRMR	.041	.0704
CFI	.959	.952
TLI	.954	.947
AIC	756.747	833.026
ECVI	3.027	3.332

Expected cross validation index (ECVI) is another statistic which can be used to compare goodness-of-fit of non-nested models. It "measures the discrepancy between the fitted covariance matrix in the analysed sample, and the expected covariance matrix that would be obtained in another sample of equivalent size" (Byrne, 2010, p. 82). As the value of ECVI pertinent to the recursive model is smaller (see Table 9.6), it has the greatest potential for replication.

The comparison of the models across the remaining goodness-of-fit statistics demonstrates that the recursive mode fits better (see Table 8.6). However, the differences are very small.

Comparison of Explanatory Power

Having compared goodness-of-fit of the competing models, the analysis will proceed with comparison of explanatory power. The explained variance of trust has increased substantially

from .46 to .77 with the difference in R^2 equal to .31 (see Table 8.7). However, the non-recursive model explains a smaller part of reciprocity (.86) with the difference in R^2 equal to -.07. As the difference in the variance explained of co-operation equals .02, it can be regarded as trivial.

Table 8.7: Explained Variance of Recursive and Non-Recursive Structural Models of Relationship Quality

Equation	Recursive Structural Model	Non-Recursive Structural Model	R^2 Difference
Action Loyalty	.29	.29	0
Reciprocity	.93	.86	-.07
Co-operation	.73	.75	.02
Trust	.46	.77	.31

In summary, the results of comparison are somewhat controversial. On one hand, the recursive model demonstrates slightly better goodness-of-fit, but explains a smaller part of trust. On the other hand, the non-recursive model possesses the opposite qualities. As both the models demonstrate very good fit and the differences are not substantial, it can be concluded that the models are equally valid. Consequently, both of them will be used to model the effects of organizational culture on relationship quality.

8.3 Identification of Non-Recursive Model

As the model in Figure 8.3 (p. 303) includes a feedback loop between reciprocity, trust and co-operation, it is not recursive. Consequently, this section proceeds with identification of the non-recursive model which is assessed using a different set of rules. Besides the counting rule, the rank and order conditions are evaluated using the algorithm developed by Kline (2011), which was discussed in section 6.7.2.

1. In the first step, the system matrix of the model was formed (see Matrix 5, Appendix A). The rows represent endogenous variables, while the columns list all the variables in the model. Direct effects between them are represented by 1. According to Kline (2011, p. 151), "a 1 also appears in the column that corresponds to the endogenous variable represented by

that row". Finally, zeros represent variables (in columns) excluded from the equation of endogenous variable (a certain row).

The last right column of the system matrix indicates the number of excluded variables in every equation. The information is used to check the order condition of identification. The non-recursive structural model of relationship quality consists of 7 simultaneous equations therefore an equation is identified if it omits 7-1 variables (endogenous or exogenous). As indicated in the system matrix, all the structural equations met the order condition except equation of trust, which had order of 5. The remedy for this problem will be discussed later.

2. In the second step, the first row of the system matrix (equation of loyalty) was crossed out. Later all the columns containing 1 in this row were crossed out as well. The result of step 2 is represented in Matrix 6 (see Appendix A).

3. A new matrix was formed of the entries, which remained after crossing-out in step 2 (see Matrix 7).

4. There was no need to further simplify the matrix because it satisfied the three conditions: (1) neither row had all the entries zeros, (2) the matrix did not include any duplicate rows and (3) there were no any rows, which could be reproduced by adding other rows together. After the final step it is possible to determine the rank, which equals the number of remaining rows. Matrix 7 has 6 rows indicating that its rank is 6, which equals the total number of structural equations in the model minus one (6) thus equation of action loyalty satisfies the rank condition.

Steps from 1 through 4 were repeated for the remaining equations in the structural model (see Matrixes 8-19). All the structural equations except trust met the rank condition. The reduced matrix of trust equation (Matrix 13) had two identical rows which were deleted. Consequently, rank of the matrix decreased from 6 to 4 resulting in failure of the rank condition.

In order to solve the identification problems pertinent to the trust equation, a new variable was added to the structural model. It was decided to specify a structural relationship between relationship age (exogenous) and reciprocity (endogenous). Relationship age was operationalized as a single-item construct fixing its factor loading to 1 and error variance to 0 as recommended by Hair *et al.* (2010).

The new system matrix demonstrates (see Matrix 20, p. 396) that all the structural equations meet the order condition. The number of excluded variables varies from 6 to 7 and never is less than the number of equations in the model minus one (6). Consequently, all the equations are identified (see Matrixes 20-34).

8.4 Correcting Non-Normality

As the study comprises the two competing models, the discussion of the remedies for non-normality will be organized into two parts. Firstly, the recursive model will be evaluated. Secondly, the analysis will proceed with assessment of the non-recursive model.

8.4.1 Correcting Non-Normality of Recursive Model

As the relationship quality scale is kurtotic both at the univariate and multivariate levels, several methods recommended in the literature are employed as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). Both robust maximum likelihood and bootstrapping are used to correct the effects of non-normality. Firstly, t-values and confidence will be discussed. Secondly, the analysis will proceed with evaluation of goodness-of-fit.

As indicated in Table 8.8, all the t-values remain highly significant. The standard errors of path coefficients increased as a result of robust maximum likelihood estimation with differences in t-values ranging from $|0.33|$ (Trust $\leftarrow$ Reciprocity) to $|1.21|$ (Trust $\leftarrow$ Opportunism). However, all the path coefficients are significant.

Table 8.8: Comparison of Structural Models Based on Maximum Likelihood and Robust Maximum Likelihood Estimation Methods

Factor	Item	ML estimation Standardized Estimate	ML estimation t-value	Robust ML t-value	ML with Bootstrapping Lower Limit	ML with Bootstrapping Upper Limit	p
Action Loyalty	LAC1	.83	------[a]	------[a]	.78	.87	.00
	LAC2	.88	17.61	17.83	.83	.92	.00
	LAC3	.82	15.55	15.50	.74	.87	.00
	LAC4	.94	19.35	18.84	.91	.96	.00
Provider's Response to Harm	RHP1	.84	------[a]	------[a]	.79	.88	.00
	RHP3	.85	16.90	12.59	.80	.89	.00
	RHP4	.85	16.95	14.85	.81	.89	.00
	RHP5	.91	18.85	13.93	.88	.94	.00
Client's Response to Harm	RHC1	.84	------[a]	------[a]	.77	.88	.00
	RHC3	.85	16.55	17.65	.81	.89	.00
	RHC4	.84	16.14	14.51	.79	.88	.00
	RHC5	.88	17.48	18.97	.84	.92	.00
Exchange of Good	EG1	.89	------[a]	------[a]	.85	.92	.00
	EG2	.94	24.21	27.10	.91	.96	.00
	EG3	.90	21.56	20.80	.85	.93	.00
	EG4	.86	19.42	20.83	.81	.90	.00
Co-operation	C3	.82	------[a]	------[a]	.76	.86	.00
	C4	.85	16.43	18.93	.81	.89	.00
	C5	.90	17.83	15.28	.87	.92	.00
	C6	.94	19.12	15.93	.91	.96	.00
Trust	T3	.90	------[a]	------[a]	.86	.93	.00
	T7	.90	22.45	17.42	.87	.92	.00
	T9	.87	20.71	17.87	.84	.90	.00
	T10	.92	23.75	24.18	.90	.94	.00
Opportunism	OP1	.66	------[a]	------[a]	.57	.73	.00
	OP2	.87	11.46	12.08	.81	.91	.00
	OP3	.82	11.03	12.29	.77	.87	.00
	OP4	.86	11.42	11.41	.82	.90	.00
Reciprocity Construct (Second-Order)							
Reciprocity	RHP	.92	------[a]	NA	.88	.95	.00
	RHC	.76	11.16	NA	.68	.83	.00
	EG	.86	13.57	NA	.80	.91	.00
Structural Model (Recursive)							
Endogenous Variables	Exogenous Variables	Standardized Path	t-value	t-value	Lower Limit	Upper Limit	p
Action Loyalty	Reciprocity	.54	7.94	7.55	.45	.62	0.00
Reciprocity	Cooperation	.45	6.11	5.56	.33	.56	0.00
Reciprocity	Trust	.56	7.54	7.21	.44	.67	0.00
Cooperation	Trust	.85	14.42	13.23	.81	.89	0.00
Trust	Opportunism	-.67	-8.91	-7.70	-.76	-.57	.000

In the next step, bootstrapping with Maximum Likelihood estimation was employed in order to assess confidence intervals. The widths of confidence intervals vary from .08 (Co-operation ← Trust) to .23 (Reciprocity ← Co-operation and Reciprocity ← Trust). Neither of confidence intervals include zero in lower bound. The lowest and highest values in confidence intervals are .33 (Reciprocity ← Co-operation) and .89 (Co-operation ← Trust) respectively.

The final step of dealing with non-normality is assessment of goodness-of-fit of the structural model based on different estimation methods (see Table 8.9). Robust maximum likelihood estimation yields Satorra-Bentler Scaled χ^2 of 530.44 with 342 degrees of freedom, which results in highly significant decrease of χ^2 value equal to 98.3 as well as lower ratio of χ^2 and degrees of freedom (1.55). The value of CFI increased from .959 to .993 indicating excellent fit.

Table 8.9: Comparison of Goodness-of-Fit Statistics Based on Maximum Likelihood and Robust Maximum Likelihood Estimation Methods

	Estimation Methods	
	ML	**Robust ML**
χ^2 and Satorra-Bentler Scaled χ^2	628.747	530.44
df	342	
p-value	.00	.00
χ^2 / *df*	1.838	1.551
RMSEA	.058	.047
RMSEA Confidence Interval (90%)	.051, .065	.039, .055
P-value (RMSEA < 0.05)	.035	.736
CFI	.959	.993
TLI	.947	.992

The RMSEA value decreased from .058 to .047 with the confidence interval ranging from .039 to .055. The zero hypothesis of close fit is not rejected (p = .736).

In summary, the results of structural equation modelling based on different estimation methods demonstrate validity of the structural theory and testify to excellent goodness-of-fit. Both the standardized path coefficients and their t-values are high.

Table 8.10: Comparison of Structural Model Based on Maximum Likelihood and Maximum Likelihood with Bootstrapping Estimation Methods

Factor	Item	ML Standardized Estimate	ML with Bootstrapping Confidence Interval Lower Limit	Upper Limit	p
Action Loyalty	LAC1	.83	.81	.85	.00
	LAC2	.88	.86	.90	.00
	LAC3	.81	.78	.84	.00
	LAC4	.94	.92	.95	.00
Provider's Response to Harm	RHP1	.83	.81	.86	.00
	RHP3	.85	.83	.88	.00
	RHP4	.86	.83	.88	.00
	RHP5	.90	.88	.92	.00
Client's Response to Harm	RHC1	.84	.81	.86	.00
	RHC3	.85	.83	.87	.00
	RHC4	.84	.81	.86	.00
	RHC5	.88	.86	.90	.00
Exchange of Good	EG1	.89	.87	.91	.00
	EG2	.94	.93	.95	.00
	EG3	.90	.87	.91	.00
	EG4	.85	.83	.87	.00
Co-operation	C3	.81	.79	.83	.00
	C4	.84	.82	.86	.00
	C5	.89	.87	.90	.00
	C6	.93	.92	.94	.00
Trust	T3	.89	.88	.91	.00
	T7	.90	.88	.91	.00
	T9	.86	.84	.88	.00
	T10	.92	.90	.93	.00
Opportunism	OP1	.66	.61	.69	.00
	OP2	.87	.84	.89	.00
	OP3	.82	.80	.84	.00
	OP4	.86	84	.88	.00
Relationship Age	AGE	1.00	1.00	1.00	...

Reciprocity Construct (Second-Order)					
Reciprocity	RHP	.93	.90	.95	.00
	RHC	.75	.71	.79	.00
	EG	.86	.83	.89	.00

Structural Model (Non-Recursive)					
Endogenous Variables	**Exogenous Variables**	**Standardized Estimate**	**Lower Limit**	**Upper Limit**	**p**
Action Loyalty	Reciprocity	.53	.49	.58	.00
Reciprocity	Cooperation	.85	.79	.93	.00
Reciprocity	Relationship Age	.09	.06	.12	.00
Cooperation	Trusts	.73	.64	.84	.00
Trust	Reciprocity	.47	.21	.63	.02
Trust	Opportunism	-.44	-.58	-.35	.00

As neither confidence interval includes zero, the hypothesis that path coefficient is equal to zero is rejected in all the instances.

8.4.2 Correcting Non-Normality of Non-Recursive Model

The assessment of normality of the relationship quality scale demonstrated that the scale is kurtotic both at the univariate and multivariate levels. Correction of non-normality for the non-recursive structural model will be implemented using different logic. Instead of using both robust maximum likelihood and bootstrapping only the latter remedy will be employed. The decision rests on the rationale discussed in section 6.7.5.

As indicated in Table 8.10, the measurement part of the non-recursive model almost does not differ from that of the recursive model. All the confidence intervals do not include zero (see Table 8.10). All the p-values except one are zeros indicating that the confidence intervals would have to be at 100% level in order to include zero.

Only one p-value is greater than zero (.02; Trust ← Reciprocity), which means that the confidence interval would include zero at confidence level of 98%. The widths of confidence intervals vary from .06 (Reciprocity ← Relationship Age) to .42 (Trust ← Reciprocity). Finally, all the confidence intervals of standardized path coefficients do not include zero.

8.5 Concluding Remarks

This chapter documents the results of SEM-based path analysis for the two competing models conceptualised in Chapter 5. Five of the six paths specified in the recursive structural model, are statistically significant. However, the effect of trust on action loyalty is insignificant (β = .12, t = .5, p > .05). Although a number of studies have corroborated this relationship (Harris and Goode, 2004; Pervan *et al.*, 2009), the current study demonstrates that trust affects loyalty only indirectly through the mediating chain comprising co-operation and reciprocity. The determination coefficients (R^2) demonstrate that explanatory power of the recursive model varies from 29% (action loyalty) to 93% (reciprocity).

As action loyalty is the highest stage of loyalty which refers to "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" overcoming obstacles (Oliver, 1997, p. 36), the explanatory power can be regarded as adequate. Finally, all the goodness-of-fit indices testify to excellent consistency between the recursive model and data at hand.

All the paths of the non-recursive model are statistically upheld. Specification of a feedback loop between the three variables results in greater explanatory power. The proportions of variance explained in reciprocity, co-operation and trust are substantial and equal 86%, 75% and 77% respectively. Although the non-recursive model demonstrates good fit, the comparison of the models indicates that the recursive model fits slightly better. However, the differences are very small. The non-recursive model satisfies the order and rank conditions of identification.

Finally, the results of robust maximum likelihood and bootstrapping indicate validity of the structural theory and testify to excellent goodness-of-fit. Consequently, both the models will be used to model the effects of organizational culture in the following chapter.

CHAPTER 9

THE IMPACT OF ORGANIZATIONAL CULTURE ON RELATIONSHIP QUALITY

9.1 Introduction

Having assessed the structural models, the analysis will proceed with the impact of organizational culture on relationship quality. The study comprises the two competing structural models which are valid. Consequently, the structure of this chapter will be identical to that of the preceding chapter. Firstly, the recursive model will be discussed. Secondly, the analysis will proceed with the non-recursive model.

As the hypotheses are developed step-by-step using the five dimensions of organizational culture (see Chapter 5), the results will be summarized using the same order: (1) individualism and collectivism, (2) human orientation, (3) power distance, (4) assertiveness and (5) uncertainty avoidance.

The discussion will combine direct, indirect, total and moderating effects of organizational culture. As in the previous case, the two stage approach will be employed to assess the models. Firstly, parameter estimates will be evaluated and later the analysis will proceed with assessment of goodness-of-fit.

Having evaluated the structural models, they will be compared using Akaike's information criterion (AIC) and expected cross validation index (ECVI) as recommended by Kline (2011) and Diamantopoulos and Siguaw (2000).

Following the suggestion of Paxton *et al.* (2011), identification of the non-recursive model will be evaluated using the algorithm suggested by Kline (2011) and discussed in section 6.7.2.

As the relationship quality scale is kurtotic at both the univariate and multivariate levels (see section 7.2.4), several methods recommended in the literature will be used as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). Both robust maximum likelihood and bootstrapping will be employed to correct the effects of non-normality. Firstly, t-values and confidence will be discussed. Secondly, the analysis will proceed with evaluation of goodness-of-fit.

9.2 Assessment of Structural Models of Relationship Quality and Organizational Culture

As both the recursive and non-recursive models of relationship quality are valid and demonstrate excellent goodness-of-fit, the effects of organizational culture will be modelled using both of them.

9.2.1 Assessment of Recursive Model

The addition of power distance and human orientation to the recursive model results in several changes: the effects of opportunism on trust and reciprocity on action loyalty decreased from -.67 to -.65 and from .54 to .53 respectively (see Figure 10.1). However, all the path coefficients of relationship quality remain highly significant ($p < .001$).

Individualism and Collectivism

Collectivism has a negative moderating effect on the relationship between opportunism and trust ($\beta = -.12$, $t = -2.11$, $p < .05$) thus supporting H_{C1} (see Figure 9.1 and Table 9.1). The finding demonstrates that opportunism has a stronger negative effect on trust in collectivistic organizational cultures. As communication was the offender of discriminant validity and was removed from the measurement model (see Section 7.2.1), hypothesis H_2 was not tested. Collectivism is the only moderator of the relationship between trust and co-operation ($\beta = .08$, $t = 2.94$, $p < .05$) indicating that the higher collectivism, the stronger positive effect of trust on co-operation. Hence, hypothesis H_{C3} is supported (see Figure 9.1 and Table 9.1). In addition, collectivism moderates the effect of trust on the overall construct of reciprocity ($\beta = .13$, $t = 3.34$, $p < .001$) indicating that the positive effect increases by .13 if the level of collectivism of the focal respondent goes up by one standard deviation. Consequently, hypothesis H_{C4A} is supported.

As reciprocity is a second-order construct, the indirect moderating effects of collectivism on individual dimensions of reciprocity are evaluated as well.

Figure 9.1: The Effects of Organizational Culture on Relationship Quality (Recursive Model)
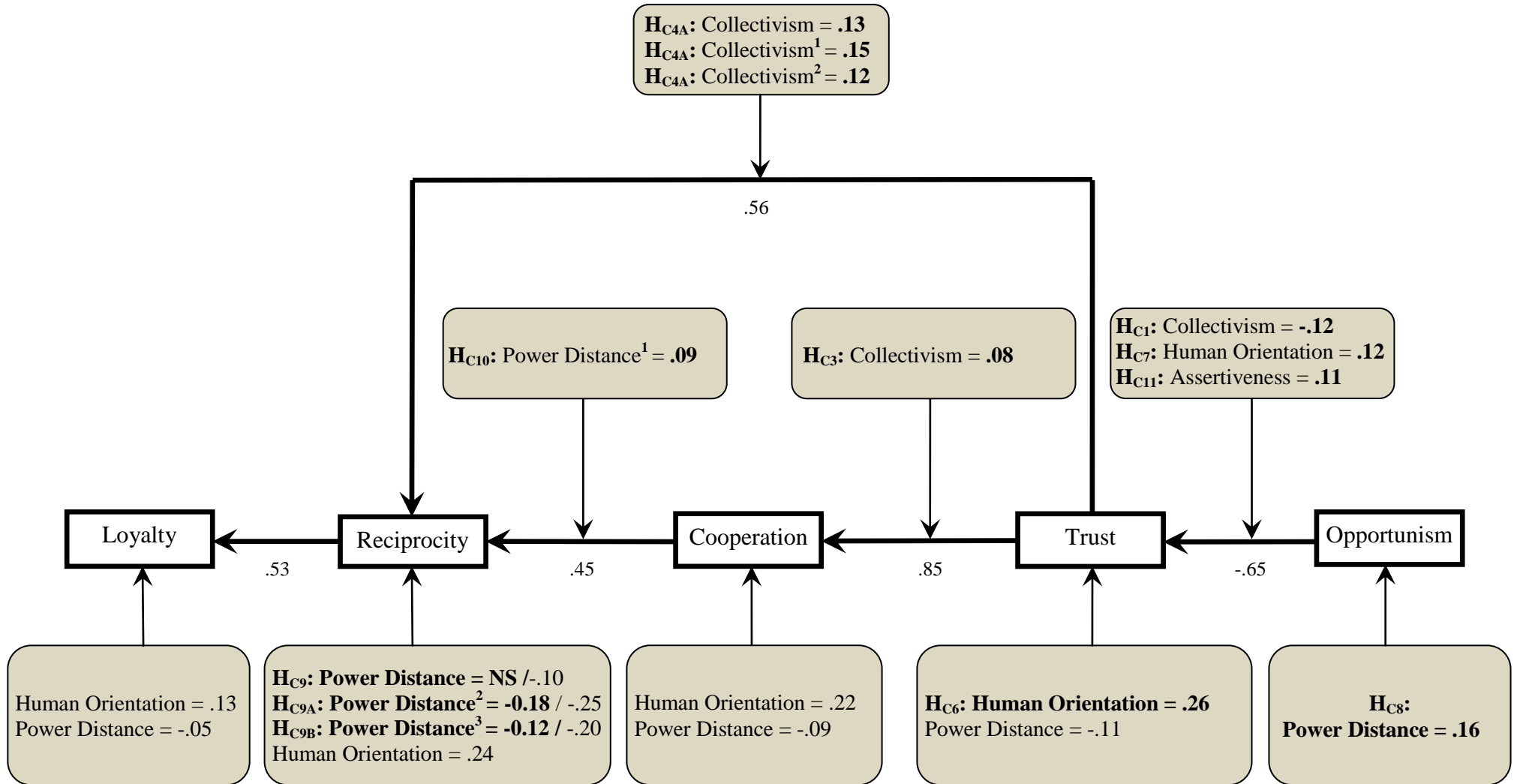
H_{C4A}: Collectivism = **.13**
H_{C4A}: Collectivism[1] = **.15**
H_{C4A}: Collectivism[2] = **.12**

.56

H_{C10}: Power Distance[1] = **.09**

H_{C3}: Collectivism = **.08**

H_{C1}: Collectivism = **-.12**
H_{C7}: Human Orientation = **.12**
H_{C11}: Assertiveness = **.11**

Loyalty

Reciprocity

Cooperation

Trust

Opportunism

.53

.45

.85

-.65

Human Orientation = .13
Power Distance = -.05

H_{C9}: **Power Distance = NS /**-.10
H_{C9A}: **Power Distance[2] = -0.18 /** -.25
H_{C9B}: **Power Distance[3] = -0.12 /** -.20
Human Orientation = .24

Human Orientation = .22
Power Distance = -.09

H_{C6}: **Human Orientation = .26**
Power Distance = -.11

H_{C8}:
Power Distance = .16

Note: bolded text represents standardized direct effects; regular text represents standardized total effects (the lowest part) or moderating effects (upper part); [1]endogenous variable is provider's response to harm; [2] endogenous variable is client's response to harm; [3] endogenous variable is exchange of good.

332

Table 9.1: Parameter Estimates and Goodness-of-Fit Indices of Moderating Effects

	Hypotheses of Moderation							
	H_{C1}	H_{C3}	H_{C4A}	H_{C4A}	H_{C4A}	H_{C7}	H_{C10}	H_{C11}
Exogenous Variable	Opportunism	Trust	Trust	Trust	Trust	Opportunism	Co-Operation	Opportunism
Endogenous Variable	Trust	Co-Operation	Reciprocity	Provider's Response to Harm	Client's Response to Harm	Trust	Provider's Response to Harm	Trust
Moderating Variable	Collectivism	Collectivism	Collectivism	Collectivism	Collectivism	Human Orientation	Power Distance	Assertiveness
Standardized moderation effect	-.12	.08	.13	.15	.12	.12	.09	.11
t-value	-2.11	2.94	3.34	3.31	2.40	2.30	1.99	2.77
$\chi2$	220.49	352.58	758.45	382.39	336.99	178.37	289.51	195.37
df	298	298	539	298	298	298	196	196
P-value	1	.02	0	.00	.06	1	0	.50
$\chi2$ / df	.74	1.18	1.41	1.28	1.13	.60	1.48	1.00
RMSEA	0	.03	.04	.03	.02	0	.04	0
Confidence Interval of RMSEA	.00; .00	.01; .04	.03; .05	.02; .04	.00; .03	.00; .00	.03; .05	.00; .03
P-value (90%) of close fit (RMSEA < .05)	1	1	.99	1	1	1	.84	1
CFI	1	.99	.98	1	1	1	.98	1
TLI	1	.99	.98	.99	.99	1	.98	1

Table 9.2: The Rejected Hypothesis of Moderation (Recursive Model)

	H_{C15}
Exogenous Variable	Opportunism
Endogenous Variable	Trust
Moderating Variable	Uncertainty Avoidance
Standardized moderation effect	-.05
t-value	-.99

Table 9.3: Standardized Indirect and Total Effects of Organizational Culture (Recursive Model)

	Endogenous Variables													
	Action Loyalty		**Reciprocity**		**Provider's Response to Harm**		**Client's Response to Harm**		**Exchange of Good**		**Co-operation**		**Trust**	
	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total
Power Distance	-.05	-.05	-.10	-.10	-.09	-.09	-.07	-.25	-.08	-.20	-.09	-.09	-.11	-.11
Human Orientation	.13	.13	.24	.24	.22	.22	.18	.18	.20	.20	.22	.22	NA	.26

The standardized indirect effects of collectivism on (1) provider's-response-to-harm, (2) client's-response-to-harm and (3) exchange-of-good equal .11, .11 and .12 respectively.

Besides testing H_{C4A} with the overall construct of reciprocity, the moderating effects are also examined with individual dimensions of reciprocity acting as separate endogenous variables. The rationale for this decision will emerge later when examining the effects of power distance. Collectivism appears to have the strongest moderating effect on the relationship between trust and provider's-response-to-harm (β = .15, t = 3.31, p <.001; see Figure 9.1 and Table 9.1). Interestingly, collectivism positively moderates the relationship between trust and client's-response-to-harm (β = .12, t = 2.40, p <.05), but does not have a significant effect on the relationship between trust and exchange-of-good (β = .07, t = 1.57, p >.05). As the direct effect of trust on loyalty is insignificant, the moderating effect of collectivism on this relationship (H_{C5}) was not tested.

Human Orientation

Human orientation has a significant direct positive effect on trust (β = .26, t = 4.80, p <.001) providing support for H_{C6}. The finding is consistent with the GLOBE theory of organizational culture stating that human oriented organizations demonstrate higher levels of trust. The moderating effect of human orientation decreases the negative effect of opportunism on trust (β = .12, t = 2.30, p < .05) indicating that individuals from human oriented organizational cultures are more forgiving and tolerant to opportunism. Consequently, hypothesis H_{C7} is supported.

Human orientation has an indirect positive effect on co-operation. The effect equals .22 and is mediated by trust. Further, human orientation appears to have an indirect positive effect on reciprocity. The effect of .24 is mediated by trust and co-operation (see Table 9.3). Finally, the indirect effect of human orientation on action loyalty is .13.

Power Distance

Power distance has a significant direct positive effect on opportunism (β = .16, t = 2.02, p < .05) thus supporting H_{C8} (see Figure 9.1 and Table 9.1). As was expected, opportunism mediates the effect of power distance on trust. The standardized indirect effect equals -.11 (see Figure 9.1 and Table 9.1). Although power distance has no direct effect on the overall construct of reciprocity, the antecedent affects directly separate dimensions of the latter construct: client's-response-to-harm (β = -.18, t = -2.94, p <.01) and exchange-of-good (β = -.12, t = -2.43, p <.05). Thus, hypotheses H_{C9A} and H_{C9B} are supported (see Figure 9.1 and Table 9.1). Moreover, the relationship between co-operation and reciprocity demonstrates an interesting phenomenon. On one hand, power distance has direct negative effects on both client's-response-to-harm and exchange-of-good (H_{C9A} and H_{C9B}), but does not affect directly provider's-response-to-harm (see Figure 9.1). On the other hand, the effect of co-operation on reciprocity is moderated by power distance with the effect equal to .09 (H_{C10}; see Figure 9.1). The findings indicate that the higher power distance, the greater imbalance of reciprocity which is followed by greater sensitivity to problems in co-operation. The rationale behind analysing separate dimensions of reciprocity is rooted in the equity theory and is clearly supported by the data. As was hypothesized, organizations (clients) high in power distance demonstrate lower levels of reciprocity by comparison with service providers across the two dimensions: *client's-response-to-harm* and *exchange-of-good.* Indeed*,* high power distance or hierarchy is antithetical to co-operation (Carl *et al.*, 2004). Moreover, members of cultures high in power distance strive to achieve as much as "possible utility with the least possible expenditure" (Davis *et al.*, 1997, p. 22). Thus, organizations (clients) high in power distance are more sensitive to issues in provider's co-operation when evaluating provider's-response-to-harm (H_{C10}; see Figure 9.1).

Although the direct effect of power distance on the overall construct of reciprocity is insignificant, the indirect effect equals -.10. The effect is mediated by opportunism, trust and

co-operation (see Figure 9.1 and Table 9.3). As reciprocity is a second-order construct, indirect effects on its individual dimensions are evaluated as well. The indirect effects of power distance on provider's-response-to-harm, client's-response-to-harm and exchange-of-good are equal to -.09, -.07 and -.08 resulting in standardized total effects of -.09, -.25 and -.20 respectively (see Figure 9.1).

Having analyzed the five hypotheses pertaining to power distance, the analysis will proceed with the remaining indirect effects. Power distance has an indirect negative effect on trust equal -.11. The effect is mediated by opportunism. Further, power distance has an indirect negative effect on co-operation. The effect is mediated by opportunism and trust and equals -.09 (see Table 9.3). Moreover, power distance appears to be the indirect antecedent of reciprocity. The effect of -.10 is mediated by a chain comprising three variables: opportunism, trust and co-operation. Finally, the indirect effect of power distance on action loyalty equals -.05.

Assertiveness

Interestingly, assertiveness has a positive moderating effect (β = .11, t = 2.77, p < .05) on the negative relationship between opportunism and trust thus supporting H_{C11} (see Figure 9.1 and Table 9.1). The path coefficient indicates that the negative relationship between opportunism and trust decreases by .10 if the level of assertiveness of the focal respondent goes up one standard deviation above the mean.

The finding demonstrates that individuals from assertive cultures indeed value assertive, competitive, dominant, and tough behaviour and "have relatively positive connotations for the term aggression" (House, 2004, p. 405). Besides acting and thinking opportunistically, they are also more tolerant to opportunism of others (*ibid.*, p. 405).

Uncertainty Avoidance

The direct effect of uncertainty avoidance on trust is insignificant thus H_{C12} is rejected. As communication was the offender of discriminant validity and was removed from the

measurement model (see Section 7.2.1), hypotheses H_{C13} and H_{C14} were not tested. Finally, uncertainty avoidance does not moderate the effect of opportunism on trust ($\beta = -.05$, t = -.99, p > .05). Consequently, hypothesis H_{C15} is rejected (see Table 9.2).

Assessment of Goodness-of-Fit

Having assessed the parameter estimates of the structural model, the analysis will proceed with evaluation of goodness-of-fit. The recursive model of relationship quality including dimensions of power distance and human orientation results in significant χ^2 value of 975.11 with 548 degrees of freedom and normed χ^2 index of 1.78 indicating (see Table 9.4).

Table 9.4: Goodness-of-Fit of Recursive Structural Model of Relationship Quality and Organizational Culture

Statistic	Result
χ^2	975.11
df	548
P-value	.000
χ^2/df	1.78
RMSEA	.056
Confidence Interval of RMSEA	.050; .062
P-value (90%) of close fit (RMSEA< .05)	.047
SRMR	.076
CFI	.945
TLI	.940

The RMSEA statistic equals .056 with the confidence interval ranging from .050 to .062. However, the zero hypothesis of close fit (RMSEA $\leq$ .05) is rejected (p = .047). Although the value of standardized mean square residual (SMSR) equals .076 and is slightly above the conservative cut-off level of .05, it is not greater than .08 as recommended by Hair *et al.* (2010) for models demonstrating the given complexity and sample size (see Table 6.3, p. 256). Finally, both CFI and TLI values of .945 and .940 respectively testify to excellent consistency between the structural model and data at hand.

Four moderation models have statistically insignificant χ^2 values which indicate excellent goodness-of-fit (see Table 9.1). Normed χ^2 index varies from .6 to 1.48. The values

of RMSEA range from 0 to .04 with the confidence intervals not exceeding .05 and all the p-values greater than .05 indicating not rejection of all the hypotheses of close fit. Finally, both CFI and TLI vary from .98 to 1 demonstrating excellent goodness-of-fit.

Sampling Adequacy for Structural Equation Modelling

Having evaluated construct validity and goodness-of-fit of the recursive structural model, the analysis will proceed with the assessment of sampling adequacy. The model of relationship quality and organizational culture comprises seven constructs: action loyalty, reciprocity, co-operation, trust, opportunism, human orientation and power distance. Every construct, except reciprocity and power distance, consists of four indicators. Reciprocity is a second-order construct which comprises three latent variables while power distance is a first-order dimension operationalized using three indicators. The analysis of communalities demonstrates that 84% of the factor loadings are high (.6 or higher), 5% are moderate and 11% are low (below .45) thus the model falls between the second and third categories of the sample size table suggested by Hair *et al.* (2010, p. 662). Consequently, the table indicates that a sufficient sample size for the model is between 150 and 300 (see Table 6.2, p. 226). The recommendations forwarded by Hair *et al.* (2010) are approximate. Moreover, it is not clear whether the latent indicators of reciprocity (second-order factor) should be counted as separate constructs. However, the Monte-Carlo simulation study by Reinartz *et al.* (2009) has demonstrated that a model with six latent variables and sample size of 250 performs almost equally well if operationalized with four or eight indicators per construct. Reinartz *et al.* (2009) explain that structural equation modelling can be employed if sample size is at least 250 and there are no low factor loadings ($\leq$ .5) and (or) constructs with few indicators. As the model satisfies all the conditions, the sample size of 251 can be regarded as sufficient.

9.2.2 Assessment of Non-Recursive Model

The addition of power distance and human orientation to the non-recursive model resulted in slight changes in the path coefficients of relationship quality. However, all of them remain highly significant ($p < .001$).

The effect of reciprocity on trust is not moderated neither by collectivism nor uncertainty avoidance. Hence, hypotheses H_{C4B} ($\beta = -.03$, $t = -.96$, $p > .05$) and H_{C16} ($\beta = .05$, $t = 1.51$, $p > .05$) are rejected (see Table 9.5). The other moderating effects remain the same as in the case of the recursive model (see Figure 9.2).

The effect of power distance on opportunism is statistically upheld and equals .18 ($\beta = .18$, $t = 2.24$, $p < .05$). The indirect effect of power distance on trust equals -.17 and is mediated by opportunism as well as the loop formed of trust, co-operation and reciprocity (see Figure 9.2 and Table 9.6). The indirect effects of power distance on co-operation, reciprocity and action loyalty are -.13, -.11 and -.11 respectively. Contrary to the recursive model, power distance affects the overall construct of reciprocity both directly ($\beta = -.10$, $t = -2.32$, $p < .05$) and indirectly (-.11). Consequently, the standardized total effect is equal to -.21 (see Figure 9.2).

As in the case of the recursive model, the direct effect of human orientation on trust is significant ($\beta = .18$, $t = 4.19$, $p < .001$). Human orientation also appears to be the indirect antecedent of trust having effect on the latter variable through co-operation and reciprocity. The indirect and total effects of human orientation on trust are .06 and .24 respectively (see Table 9.6). Finally, the indirect effect of human orientation on action loyalty equals .08.

Assessment of Goodness-of-Fit

Having assessed the parameter estimates of the non-recursive model, the analysis will proceed with evaluation of goodness-of-fit.

Figure 9.2: The Effects of Organizational Culture on Relationship Quality (Non-Recursive Model)
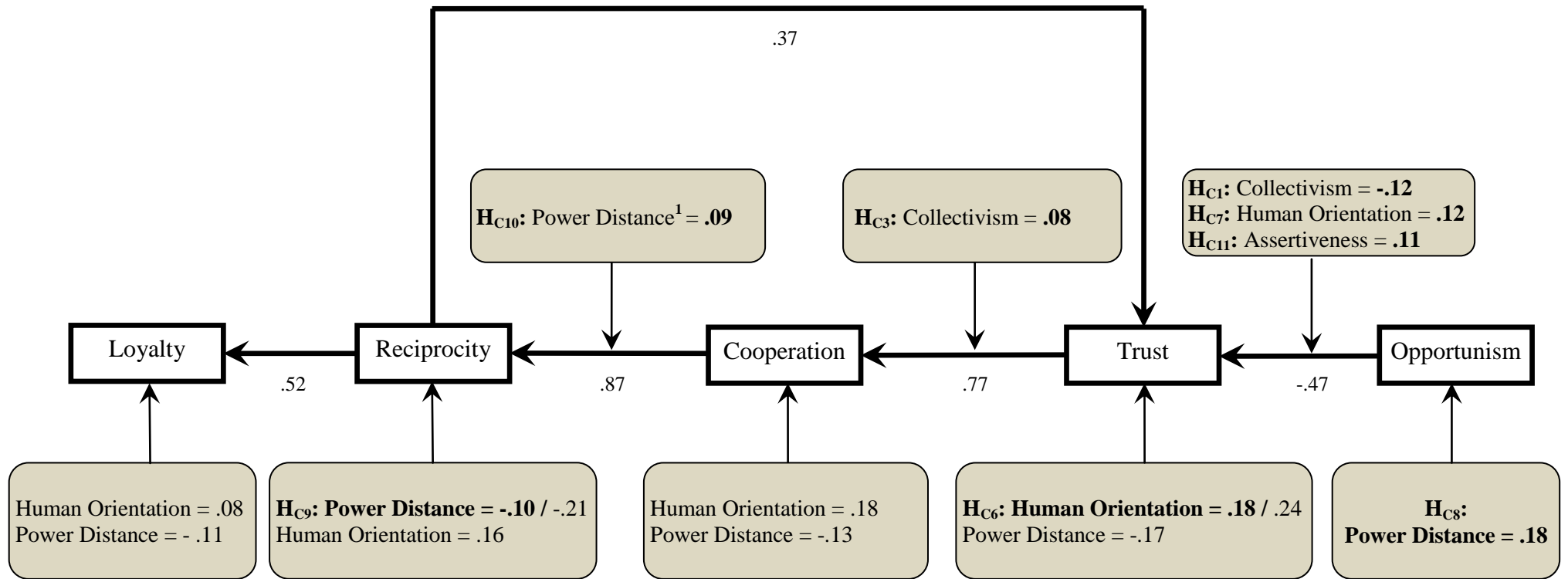
.37

H_{C10}: Power Distance[1] = **.09**	H_{C3}: Collectivism = **.08**	H_{C1}: Collectivism = **-.12** H_{C7}: Human Orientation = **.12** H_{C11}: Assertiveness = **.11**

Loyalty ← Reciprocity ← Cooperation ← Trust ← Opportunism

.52   .87   .77   -.47

| Human Orientation = .08
Power Distance = - .11 | H_{C9}: **Power Distance = -.10** / -.21
Human Orientation = .16 | Human Orientation = .18
Power Distance = -.13 | H_{C6}: **Human Orientation = .18** / .24
Power Distance = -.17 | H_{C8}:
Power Distance = .18 |

Note: bolded text represents standardized direct effects; regular text represents standardized total effects (the lowest part) or moderating effects (upper part);
[1]endogenous variable is provider's response to harm.

Table 9.5: The Rejected Hypotheses of Moderation (Non-Recursive Model)

	H_{C4B}	H_{C16}
Exogenous Variable	Reciprocity	Reciprocity
Endogenous Variable	Trust	Trust
Moderating Variable	Collectivism	Uncertainty Avoidance
Standardized moderation effect	-.03	.05
t-value	-.96	1.51

Table 9.6: Standardized Indirect and Total Effects of Organizational Culture on Relationship Quality (Non-Recursive Model)

	Endogenous Variables													
	Action Loyalty		Reciprocity		Provider's Response to Harm		Client's Response to Harm		Exchange of Good		Co-operation		Trust	
	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total
Power Distance	-.11	-.11	-.11	-.21	-.20	-.20	-.16	-.16	-.18	-.18	-.13	-.13	-.17	-.17
Human Orientation	.08	.08	.16	.16	.15	.15	.12	.12	.14	.14	.18	.18	.06	.24

The non-recursive model of relationship quality including dimensions of power distance and human orientation yields significant χ^2 value of 1063.32 with 583 degrees of freedom and normed χ^2 index of 1.82 (see Table 9.7). The RMSEA value of .057 with confidence interval ranging from .052 to .063 demonstrates very good fit.

Table 9.7: Goodness-of-Fit of Non-Recursive Structural Model of Relationship Quality and Organizational Culture

Statistic	Result
χ^2	1063.32
df	583
P-value	.000
χ^2/ df	1.82
RMSEA	.057
Confidence Interval of RMSEA	.052; .063
P-value (90%) of close fit (RMSEA< .05)	.014
SRMR	.0905
CFI	.938
TLI	.933

However, the zero hypothesis of close fit (RMSEA $\leq$ .05) is rejected (p = .014). The value of standardized root mean square residual (SRMR) equals .09 and slightly exceeds the recommended threshold of .08 for models demonstrating the given complexity and sample size (see Table 6.3, p. 256). However, CFI and TLI equal .938 and .933 respectively and testify to good consistency between the structural model and data at hand.

9.2.3 Comparison of Recursive and Non-Recursive Models

As the recursive and non-recursive models comprise different variables, they cannot be regarded as nested. Relationship age was added to the non-recursive model to overcome problems of identification. Since the models are not nested, their χ^2 values can be compared, but the difference cannot be treated as a statistical test (Kline, 2011).

As suggested by Kline (2011), Akaike's information criterion (AIC) was drawn on to compare goodness-of-fit of the competing models. The formula of AIC involves χ^2 value of the model plus the number of free parameters multiplied by 2 therefore it penalizes for complexity and rewards for parsimony. In reviewing AIC values across the two competing

models it is evident that the recursive model has a lower AIC value and thus is favoured (see Table 9.8).

Expected cross validation index (ECVI) is another statistic which can be used to compare goodness-of-fit of non-nested models. A smaller ECVI value of the recursive model indicates greater potential for replication (see Table 9.8). Finally, the other goodness-of-fit indices demonstrate that the recursive models fits slightly better.

Having compared goodness-of-fit of the competing models, the analysis will proceed with comparison of standardized indirect and total effects of organizational culture. The majority of direct and total negative effects of power distance are stronger in the non-recursive model (see Table 9.9). However, there are two exceptions: the effects on client's-response-to-harm and exchange-of-good demonstrate the opposite pattern. Contrary to power distance, the effects of human orientation are weaker in the non-recursive model.

In summary, the comparison indicates that the recursive model fits slightly better. Nevertheless, as both the models demonstrate good fit and the differences are not substantial, the models can be regarded as equally valid.

9.3 Identification of Non-Recursive Model

The non-recursive structural model of relationship quality had an identification issue (see section 8.3). Namely, the equation of trust was not identified, because it did not satisfy the order and rank conditions. The problem was successfully solved by the addition of relationship age, which was specified to influence reciprocity.

In order to model the direct effects of organizational culture, the non-recursive model underwent more changes: (1) human orientation was specified as a direct antecedent of trust and (2) power distance was modelled to have a direct effect on opportunism. Although the two dimensions of organisational culture were added to the structural model, the equation of trust did not satisfy the order condition as in the previous case.

Table 9.8: Goodness-of-Fit Comparison of Recursive and Non-Recursive Overall Models (Including Direct Effects of Organizational Culture)

Statistic	Recursive Model	Non-Recursive Model
χ^2	975.11	1063.32
df	548	583
P-value	.000	.000
χ^2/df	1.78	1.82
RMSEA	.056	.057
Confidence Interval of RMSEA	.050; .062	.052; .063
P-value (90%) of close fit (RMSEA< .05)	.047	.014
SRMR	.0762	.0905
CFI	.945	.938
TLI	.940	.933
AIC	1139.113	1229.32
ECVI	4.556	4.92

Table 9.9: Comparison of Standardized Indirect and Total Effects of Organizational Culture on Relationship Quality

	Endogenous Variables													
	Action Loyalty		Reciprocity		Provider's Response to Harm		Client's Response to Harm		Exchange of Good		Co-operation		Trust	
	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total
Recursive Model														
Power Distance	-.05	-.05	-.10	-.10	-.09	-.09	-.07	-.25	-.08	-.20	-.09	-.09	-.11	-.11
Human Orientation	.13	.13	.24	.24	.22	.22	.18	.18	.20	.20	.22	.22	NA	.26
Non-Recursive Model														
Power Distance	-.11	-.11	-.11	-.21	-.20	-.20	-.16	-.16	-.18	-.18	-.13	-.13	-.17	-.17
Human Orientation	.08	.08	.16	.16	.15	.15	.12	.12	.14	.14	.18	.18	.06	.24
Differences of Effects (Effect of Non-Recursive Model – Effect of Recursive Model)														
Power Distance	-.06	-.06	-.01	-.11	-.11	-.11	-.09	.09	-.10	.02	-.04	-.04	-.06	-.06
Human Orientation	-.05	-.05	-.08	-.08	-.07	-.07	-.06	-.06	-.06	-.06	-.04	-.04	.06	-.02

Hence, relationship age was again specified as a direct antecedent of reciprocity. Since the specification of the non-recursive model was changed, it is essential to re-assess identification in order to ensure that the model satisfies the order and rank conditions. As in the previous case, identification will be evaluated using the algorithm developed by Kline (2011), which was described previously (see Section 6.7.2). The algorithm comprises 4 steps:

1. The system matrix of the model (see Matrix 35, Appendix B) demonstrates that all the five equations meet the order condition: the number of excluded variables varies from 4 to 6 and in all cases is not less than the total number of equations minus one (4).

2. In the second step, the reduced matrixes were formed for every equation crossing out the relevant rows and columns (see Matrixes 36-45). Having crossed-out the relevant row of the system matrix, any columns containing 1 in the row were crossed-out as well as specified in the algorithm developed by Kline (2011).

3. There was no necessity for further simplification of the matrixes because they satisfied the three conditions: (1) neither row had all the entries zeros, (2) the matrixes did not include any duplicate rows and (3) there were no any rows, which could be reproduced by adding other rows together. With 5 endogenous variables, all the equations are identified because a "nonzero determinant of order (p-1) (p-1) can be constructed" (Paxton *et al.*, 2011, p. 34) in all cases. Indeed, all the reduced matrixes have 4 rows indicating rank of 4.

9.4 Correcting Non-Normality

As the study comprises the two competing models of relationship quality and organizational culture which have appeared to be valid, the remedies for non-normality will be discusses by the three steps. Firstly, the recursive model will be evaluated. Secondly, the analysis will proceed with the non-recursive model. Finally, the moderating effects of organizational culture will be assessed.

Correcting Non-Normality of Recursive Model

As both the relationship quality and organizational culture scales are slightly kurtotic at the univariate and multivariate levels, several methods recommended in the literature were considered as remedies for non-normality as discussed in section 6.7.5 and outlined in Figure 6.7 (p. 249). The structural models involving the dimensions of organizational culture are complex thus correction of non-normality will be limited to maximum likelihood with bootstrapping, which is easier to implement and less error prone. Byrne (2010) explains that this approach can be used as a single remedy in any case of non-normality.

All the t-values of the recursive model involving organizational culture remain significant (see Table 9.10). The widths of confidence intervals vary from .08 (Action Loyalty ← Reciprocity) to .13 (Opportunism ← Power Distance). Neither of confidence interval includes zero thus the hypothesis that a factor loading is equal to zero is rejected in all the cases. This information can also be derived from the p-values, which are equal to zero indicating that all the confidence intervals would have to be at the 100% level in order to include zero in the lower bound.

Correcting Non-Normality of Non-recursive Model

As in the case of the recursive model, all the t-values of the non-recursive model with the effects of organizational culture remain statistically significant (see Table 9.11). The widths of confidence intervals vary from .02 (Reciprocity ← Relationship Age) to .42 (Reciprocity ← Trust). As was mentioned previously, relationship age was added to the model for identification purposes (see Section 8.3). Neither of confidence interval includes zero thus the zero hypothesis that a factor loading equals zero is rejected in all cases. This information can also be derived from the p-values which, with one exception, equal zero indicating that the confidence intervals would have to be at the 100% level in order to include zero in the lower bound.

Table 9.10: Comparison of Recursive Structural Model Based on ML and ML with Bootstrapping Estimation Methods

Dimensions	Indicators	ML estimation		ML with Bootstrapping		
		Standardized Estimate	t-value	Lower Limit	Upper Limit	p
Action Loyalty	LAC1	.83	------[a]	.81	.85	.00
	LAC2	.88	17.61	.86	.90	.00
	LAC3	.82	15.55	.78	.84	.00
	LAC4	.94	19.35	.92	.95	.00
Provider's Response to Harm	RHP1	.84	------[a]	.81	.85	.00
	RHP3	.85	16.90	.82	.87	.00
	RHP4	.85	16.95	.83	.87	.00
	RHP5	.91	18.85	.89	.92	.00
Client's Response to Harm	RHC1	.84	------[a]	.80	.86	.00
	RHC3	.85	16.55	.82	.87	.00
	RHC4	.84	16.14	.81	.85	.00
	RHC5	.88	17.48	.86	.90	.00
Exchange of Good	EG1	.89	------[a]	.87	.90	.00
	EG2	.94	24.21	.93	.95	.00
	EG3	.90	21.56	.87	.91	.00
	EG4	.86	19.42	.83	.87	.00
Co-operation	C3	.82	------[a]	.79	.84	.00
	C4	.85	16.43	.83	.87	.00
	C5	.90	17.83	.88	.91	.00
	C6	.94	19.12	.92	.95	.00
Trust	T3	.90	------[a]	.88	.91	.00
	T7	.90	22.45	.89	.91	.00
	T9	.87	20.71	.85	.89	.00
	T10	.92	23.75	.91	.93	.00
Opportunism	OP1	.66	------[a]	.62	.70	.00
	OP2	.87	11.46	.84	.89	.00
	OP3	.82	11.03	.80	.84	.00
	OP4	.86	11.42	.84	.88	.00
Reciprocity Construct (Second-Order)						
Reciprocity	RHP	.92	------[a]	.90	.94	.00
	RHC	.76	11.16	.68	.76	.00
	EG	.86	13.57	.81	.86	.00
Structural Model (Recursive)						
Endogenous Variables	**Exogenous Variables**	Standardized Path	t-value	Lower Limit	Upper Limit	p
Action Loyalty	Reciprocity	.54	7.94	.49	.57	.00
Reciprocity	Cooperation	.45	6.11	.39	.51	.00
Reciprocity	Trust	.56	7.54	.50	.61	.00
Cooperation	Trust	.85	14.42	.82	.87	.00
Trust	Opportunism	-.67	-8.91	-.70	-.60	.00
Trust	Human Orientation	.26	4.80	.20	.32	.00
Opportunism	Power Distance	.16	2.02	.10	.23	.00
Client's Response to Harm	Power Distance	-.16	-2.94	-.24	-.12	.00
Exchange of Good	Power Distance	-.11	-2.43	-.16	-.08	.00

Table 9.11: Comparison of Non-recursive Structural Model Based on ML and ML with Bootstrapping Estimation Methods

Factor	Item	ML Standardized Estimate	ML with Bootstrapping Confidence Interval Lower Limit	ML with Bootstrapping Confidence Interval Upper Limit	p
Action Loyalty	LAC1	.83	.81	.85	.00
	LAC2	.88	.86	.90	.00
	LAC3	.81	.78	.84	.00
	LAC4	.94	.92	.95	.00
Provider's Response to Harm	RHP1	.83	.81	.86	.00
	RHP3	.85	.83	.88	.00
	RHP4	.86	.83	.88	.00
	RHP5	.90	.88	.92	.00
Client's Response to Harm	RHC1	.84	.81	.86	.00
	RHC3	.85	.83	.87	.00
	RHC4	.84	.81	.86	.00
	RHC5	.88	.86	.90	.00
Exchange of Good	EG1	.89	.87	.91	.00
	EG2	.94	.93	.95	.00
	EG3	.90	.87	.91	.00
	EG4	.85	.83	.87	.00
Co-operation	C3	.81	.79	.83	.00
	C4	.84	.82	.86	.00
	C5	.89	.87	.90	.00
	C6	.93	.92	.94	.00
Trust	T3	.89	.88	.91	.00
	T7	.90	.88	.91	.00
	T9	.86	.84	.88	.00
	T10	.92	.90	.93	.00
Opportunism	OP1	.66	.61	.69	.00
	OP2	.87	.84	.89	.00
	OP3	.82	.80	.84	.00
	OP4	.86	84	.88	.00
Relationship Age	AGE	1.00	1.00	1.00	...
Reciprocity Construct (Second-Order)					
Reciprocity	RHP	.93	.90	.95	.00
	RHC	.75	.71	.79	.00
	EG	.86	.83	.89	.00
Structural Model (Non-Recursive)					
Endogenous Variables	**Exogenous Variables**	**Standardized Estimate**	**Lower Limit**	**Upper Limit**	**p**
Action Loyalty	Reciprocity	.53	.49	.58	.00
Reciprocity	Cooperation	.85	.79	.93	.00
Reciprocity	Relationship Age	.09	.08	.10	.00
Cooperation	Trusts	.73	.64	.84	.00
Trust	Reciprocity	.47	.21	.63	.02
Trust	Opportunism	-.44	-.58	-.35	.00
Trust	Human Orientation	.18	.13	.24	.00
Opportunism	Power Distance	.18	.12	.25	.00
Reciprocity	Power Distance	-.10	-.15	-.06	.00

However, the p-value of the relationship between trust and reciprocity is equals .02 demonstrating that the confidence interval would include zero at 98% confidence level.

Correcting Non-Normality of Moderating Effects of Organizational Culture

Orthogonalizing moderation involves specification of regression residuals as indicators of latent interaction term (see Section 6.8). Distributions of regression residuals generally are fairly normal therefore maximum likelihood method should provide robust standard errors and t-values (Little *et al.*, 2006). Despite that Little *et al.* (2006) suggest bootstrapping and robust estimation in order to estimate more precisely standard errors and parameter estimates of interaction term. The authors note that robustness of the method under diverse conditions at the moment is not known and should be examined in the future.

The results of bootstrapping with maximum likelihood method are provided in Table 9.12. The widths of confidence intervals of standardized moderating effects range from .02 (Provider's-Response-to-Harm ← Co-operation; ↓ Power Distance) to .12 (Trust ← Opportunism; ↓ Collectivism). Neither confidence interval includes zero. All the p-values are equal to zero indicating that the confidence intervals would include zero at confidence level of 100%.

Table 9.12: The Results Pertaining to Bootstrapping of Moderating Effects

Endogenous Variable	Exogenous Variable	Moderator	Standardized Estimate	Lower	Upper	P
Trust	Opportunism	Assertiveness	.11	.05	.16	.00
Trust	Opportunism	Collectivism	-.12	-.18	-.06	.00
Trust	Opportunism	Human Orientation	.12	.07	.17	.00
Cooperation	Trust	Collectivism	.08	.06	.10	.00
Reciprocity	Trust	Collectivism	.13	.12	.15	.00
Provider's-Response-to-Harm	Trust	Collectivism	.15	.13	.17	.00
Client's-Response-to-Harm	Trust	Collectivism	.12	.11	.14	.00
Provider's-Response-to-Harm	Cooperation	Power Distance	.09	.08	.10	.00

9.5 Concluding Remarks

The study comprises the two competing models which are valid thus concluding remarks will be drawn for both of them.

As the hypotheses are developed step-by-step using the five dimensions of organizational culture (see Chapter 5), the results will be summarized using the same order: (1) individualism and collectivism, (2) human orientation, (3) power distance, (4) assertiveness and (5) uncertainty avoidance.

Individualism and Collectivism

Opportunism has a stronger negative effect on trust in collectivistic organizational cultures (H_{C1}). Collectivism is the only moderator of the relationship between trust and co-operation indicating that the higher collectivism, the stronger the positive effect of trust on co-operation (H_{C3}). Moreover, collectivism moderates the effect of trust on the construct of reciprocity (H_{C4A}). However, the effect of reciprocity on trust is not affected by collectivism (H_{C4B}). Although communication was expected to moderate the effect of communication on trust (H_{C2}), the former appeared to be the offender of discriminant validity and was removed from the measurement model. Hence, the hypothesis was not tested. As the direct effect of trust on loyalty is insignificant, the moderating effect of collectivism on this relationship (H_{C5}) was not tested as well.

Consistent with the literature, the findings indicate that collectivistic organizational cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders", (Schwartz, 1992). Moreover, the current study demonstrates that trust is the key prerequisite of out-group business relationships in collectivistic organizational cultures. Three out of the five hypotheses pertaining to collectivism are corroborated.

Human Orientation

Human orientation has a direct positive effect on trust (H_{C6}). The moderating effect of human orientation decreases the negative effect of opportunism on trust indicating that individuals from human oriented organizational cultures are more forgiving and tolerant to opportunism (H_{C7}). Both the hypotheses related to human orientation are corroborated.

Power Distance

Power distance has a direct positive effect on opportunism (H_{C8}). Although the direct effect of power distance on the overall construct of reciprocity is insignificant (H_{C9}), the indirect effect equals -.10. Drawing on the equity theory, the three dimensions of reciprocity were examined as individual endogenous variables. On one hand, power distance has direct negative effects on both client's-response-to-harm and exchange-of-good (H_{C9A} and H_{C9B}). On the other hand, the effect of co-operation on reciprocity is moderated positively by power distance (H_{C10}). The results indicate that the higher power distance (client's culture), the greater imbalance of reciprocity which is followed by greater sensitivity to problems in co-operation when evaluating provider's-response-to-harm. Four out of the five hypotheses related to power distance are corroborated.

Assertiveness

Interestingly, assertiveness has a positive moderating effect on the negative effect of opportunism on trust (H_{C11}). Hence, individuals from assertive organizational cultures indeed value assertive, competitive, dominant, and tough behaviour and "have relatively positive connotations for the term aggression" (House, 2004, p. 405). Besides acting and thinking opportunistically, they are also more tolerant to opportunism of others (*ibid.*, p. 405).

Uncertainty Avoidance

The direct effect of uncertainty avoidance on trust is insignificant (H_{C12}). As communication was the offender of discriminant validity and was removed from the measurement model,

hypotheses H_{C13} and H_{C14} were not tested. Uncertainty avoidance moderates neither the negative effect of opportunism on trust (H_{C15}) nor the positive effect of reciprocity on trust (H_{C16}).

The Non-recursive Model

The effect of reciprocity on trust is moderated neither by collectivism nor uncertainty avoidance. The other moderating effects remain the same as in the case of the recursive model. The effect of power distance on opportunism is statistically significant. The standardized indirect effect of power distance on trust is mediated by opportunism as well as the loop formed of trust, co-operation and reciprocity. Power distance has indirect effects on co-operation, reciprocity and action loyalty. Contrary to the recursive model, power distance affects the overall construct of reciprocity both directly and indirectly.

As in the case of the recursive model, the direct effect of human orientation on trust is significant. Human orientation also appears to be the indirect antecedent of trust having effect on the latter variable through co-operation and reciprocity. Finally, human orientation has an indirect effect action loyalty.

Goodness-of-Fit

As suggested by Kline (2011), Akaike's information criterion (AIC) is drawn on to compare goodness-of-fit of the competing models. In reviewing AIC values across the two competing models it is evident that the recursive model has a lower AIC value and thus is favoured (see Table 9.8). Expected cross validation index (ECVI) is another statistic which can be used to compare goodness-of-fit of non-nested models. A smaller ECVI value of the recursive model indicates greater potential for replication (see Table 9.8). The other goodness-of-fit indices demonstrate that the recursive models fits slightly better. However, both the models demonstrate excellent goodness-of-fit.

CHAPTER 10

CONCLUSIONS AND IMPLICATIONS

10.1 Introduction

The primary objective of this study is to conceptualize and test competing models in order to define relationship quality and explain its relationships with organizational culture. In doing so, the current study constitutes the first attempt to evaluate the direct and moderating effects of organizational culture on relationship quality in a holistic manner. This chapter is organized into five sections. *Firstly*, the study findings are summarized. This results in the discussion of six theoretical contributions. *Thirdly*, the managerial implications stemming from the study results are contemplated. *Fourthly*, the limitations of the study are revealed. *Finally*, avenues for future research are detailed.

10.2 Conclusions of the Study

This section is organized into three parts. *Firstly*, the conclusions pertaining to the study objectives and conceptualization are contemplated. *Secondly*, conclusions are drawn for the measurement models of relationship quality and organizational culture. *Thirdly*, the conclusions stemming from the structural models are discussed.

10.2.1 Study Objectives and Conceptualization

Having introduced the calls for research and practical context of the current study, Chapter 1 discussed the potential theoretical contribution and managerial implications. Further, section 1.3 forwarded the objective of the current study as; *to conceptualize rival models by amalgamating extant literature stemming from diverse theories in order to empirically corroborate (1) the dimensions of relationship quality, (2) the structural relationships between them and (3) the effects of organizational culture on relationship quality*. Owing to the three-fold structure of the objective, this section will draw conclusions pertaining to conceptualization for every part.

The Dimensions of Relationship Quality

Conceptualizations of relationship quality vary across studies indicating the absence of a general consensus (see Table 3.2, p. 60 and Table 3.3, p. 65). Consistent with the definition of Hennig-Thurau *et al.* (2002, p. 234), relationship quality most often refers to "a metaconstruct composed of several key components reflecting the overall nature of relationships between companies and consumers" (see Table 3.3, p. 65). Indeed, the literature review demonstrates that 19 out of 50 studies (38%) conceptualize relationship quality as a higher-order construct.

Consistent with previous studies (e.g., Palmatier *et al.*, 2006; Holmlund, 2008; Athanasopoulou, 2009), "the only area of convergence is three major dimensions of RQ [relationship quality] (trust, commitment and satisfaction)" (Athanasopoulou, 2009, p. 603), which have been conceptualized as a higher-order dimension by 32%, 20% and 22% of the studies respectively (see Table 3.2, p. 60). However, Palmatier *et al.* (2006, p. 152) argue that "research should expand the constructs ... and determine which aspects or dimensions should be included to obtain a multifaceted view of relational exchanges". Consequently, the conceptualization of relationship quality rests on various theories and perspectives.

Despite a consensus that loyalty comprises both attitudinal and behavioural elements (Jacoby, 1971; Olson and Jacoby, 1971; Harris and Goode, 2004; Oliver, 2010), the majority of studies are limited to relationship continuity (see Table 3.2, p. 60). Hence, the current study conceptualizes loyalty as a multi-dimensional construct and investigates its relationships with the other dimensions of relationship quality. Drawing on the seminal works of Oliver (1997) and Harris and Goode (2004), loyalty is conceptualized as a sequential chain which entails four stages: cognitive loyalty, conative loyalty, affective loyalty and action loyalty.

Although relationship quality is most often conceptualized as a second-order construct comprising trust, commitment and satisfaction, there is strong evidence that the construct "should be adapted to include alternative mediated pathways" such as reciprocity (Palmatier *et al.*, 2006, p. 150). Indeed, reciprocity is very closely related to the concept of adaptation

which is central to business-to-business industries (Håkansson, 1982; Ford *et al.*, 2003; Gummesson, 2008b) and is often present in the relationship marketing studies (see Table 3.2, p. 60). Drawing on the work of Hallén *et al.* (1991), Brennan *et al.* (2003, p. 1658) relate adaptations to reciprocity and contend that reciprocal adaptations is a part of trust-building process whereas unilateral adaptations is "a response to power imbalances within the relationship". Hence, the current study conceptualizes reciprocity as a pivotal mediator of relationship quality. Despite the evidence that opportunism, trust, co-operation, communication, reciprocity and multi-faceted loyalty are of critical importance in the business-to-business context, prior to the current study they were not integrated into the construct of relationship quality. Thus the current study addresses this gap and incorporates them within a single framework.

The Structural Relationships Pertaining to Relationship Quality

Drawing on a synthesis of extant literature, relationship quality is conceptualized as a six-dimensional construct comprising: opportunism, trust, co-operation, communication, reciprocity and the four-dimensional construct of loyalty. As there is no consensus about the directionality of the relationship between trust and reciprocity, two competing models are specified: recursive and non-recursive. The recursive model conceptualizes trust as the antecedent of reciprocity whereas the non-recursive model specifies the loop entailing trust, co-operation and reciprocity.

The Effects of Organizational Culture on Relationship Quality

Håkansson (1982) contends that the social system affects the interaction process. Indeed, Hennig-Thurau *et al.* (2004, p. 15) concur that "business relationships are embedded in a cultural environment that must be considered to fully understand the development of long-term relationships". Relationship marketing encompasses three important dimensions of consumer experience: service expectations, service evaluations and reactions to service (Zhang *et al.*, 2008; Schumann, 2009a) which are affected by culture (Liu *et al.*, 2001;

Patterson *et al.*, 2006; Patterson and Mattila, 2008; Zhang *et al.*, 2008; Schumann, 2009a). Indeed, there is some evidence that both national and organizational cultures moderate the effect of relationship quality on repurchase intentions in the business-to-business context (Hewett *et al.*, 2002; 2006). However, the link between relationship quality and culture is still underexplored thus "there is a need for further examination of people's cultural characteristics and their influence on ... relationship quality" (Athanasopoulou, 2009, p. 605). Consequently, this gap is addressed by the current study.

As was stated previously, the current study adopts *the contingency management perspective of organizational culture* which states that "organizational practices [culture] are largely directed toward meeting the requirements imposed on organizations by organizational contingencies" (House *et al.*, 2002, p. 9). In other words, "the central proposition of this theory is that there is a set of demands that are imposed on organizations that must be met for them to ensure survival and guarantee effectiveness" (House and Javidan, 2004, p. 26).

The contingency management perspective harmonizes with the definition of marketing and the concept of relationship marketing employed in the current study. Consistent with Gummesson (2008b, p. 14), "*marketing is a culture*, an organizational function and a set of processes for creating, communicating, and delivering value with customers and for interacting in networks of relationships in ways that benefit the organization, its customers and other stakeholders". Hence, *organizational culture is understood as a manageable process* oriented towards "meeting the requirements imposed on organizations by organizational contingencies" (House *et al.*, 2002, p. 9).

Looking from the positivistic perspective, the GLOBE theory of culture demonstrates the strongest evidence of *falsifiability* and *utility*. Moreover, the study is based on the cross-level approach therefore the constructs and relationships should be valid at all the levels of analysis. In other words, the measures can be applied to explore the effects of organizational culture at the individual level of analysis, which is extremely important to relationship

marketing. Indeed, the notions of full-time and part-time marketing make "legitimate and imperative for everyone to influence customer relationships" (Gummesson, 2008b, p. 77).

Finally, the literature review forwards the five dimensions of organizational culture relevant to the construct of relationship quality: *individualism and collectivism, human orientation, power distance, assertiveness* and *uncertainty avoidance*. As the current study entails the two rival models of relationship quality, both of them are employed as the bases to conceptualize the effects of organizational culture on relationship quality.

10.2.2 Conclusions Pertaining to Measurement Models

As the current study comprises the constructs of relationship quality and organizational culture, this section forwards conclusions pertaining to the two measurement models. Firstly, conclusions concerning the measurement model of relationship quality are drawn. Secondly, the measurement model of organizational culture is summarized.

The Measurement Model of Relationship Quality

As was stated, the current study conceptualizes relationship quality as a construct comprised of the six dimensions: *loyalty, reciprocity, co-operation, communication, trust* and *opportunism*. Firstly, the firs-order measurement model will be discussed. Secondly, the second-order measurement model will be summarized. Finally, conclusions will be drawn pertaining to the overall model of relationship quality.

The analysis demonstrates that H_1, stating that loyalty comprises the four sequential stages (cognitive, conative, affective and action loyalty), is rejected. As cognitive loyalty demonstrated low factor loadings and poor discriminant validity, it was removed from the model. Having evidence that conative-affective loyalty is a unidimensional construct, the two dimensions were combined. However, the construct exhibited a lack of convergent validity. Moreover, conative-affective loyalty emerged as the offender of discriminant validity with respect to the other dimensions of relationship quality: reciprocity, co-operation and trust. Namely, the average variance extracted (AVE) of conative-affective loyalty was less than the

359

squared correlations with the other constructs. Consequently, conative-affective loyalty was removed from the model. Finally, action loyalty appears to be a single dimension of loyalty in business-to-business context.

Although communication was hypothesized to be a dimension of relationship quality, it appeared to be the offender of discriminant validity with respect to the other dimensions of relationship quality. That is, its average variance extracted was less than the squared correlations with the other constructs. Hence, instead of being a discriminant dimension, communication is to some extent entailed in the four dimensions of relationship quality: opportunism, trust, co-operation and reciprocity. Consequently, communication was removed from the measurement model.

Although all the remaining dimensions satisfy Fornell-Larcker's criterion of discriminant validity at the first-order level (see Section 7.2.1), several variables do not discriminate at the second-order level (see Section 7.2.2). Nevertheless, Hair *et al.* (2010) argue that Fornell-Larcker's test is conservative, and especially for second-order constructs. Consequently, discriminant validity at the second-order level was re-assessed using χ^2 difference test (see Section 7.2.2). Following the advice of Anderson and Gerbing (1988, p. 416), the significance level was adjusted "to maintain the "true" overall significance level for" the two tests. As the family of tests comprised the two pairs of variables (reciprocity – co-operation, reciprocity – trust), the significance level was adjusted to .03 resulting in the critical χ^2 value of 4.71. The test was performed for one pair of dimensions at a time and demonstrates that the χ^2 differences exceed the stipulation. In other words, the χ^2 differences are significant and support discriminant validity.

As was hypothesized, *reciprocity* is a valid second-order construct comprising the three dimensions: provider's-response-to-harm, client's-response-to-harm and exchange-of-good. Confirmatory factor analysis indicates that relationship quality entails *the five dimensions: action loyalty, reciprocity, co-operation, trust* and *opportunism*. All the dimensions exceed

the stipulations and demonstrate excellent properties of construct validity. Convergent validity is supported by high factor loadings and average variance extracted (AVE), while reliability is evidenced by both composite reliability (CR) and Cronbach alpha. Finally, the goodness-of-fit indices based on the two estimation methods constitute evidence for excellent consistency between the trimmed measurement model and data at hand.

The Measurement Model of Organizational Culture

Having assessed the measurement model of relationship quality, the analysis proceeded with organizational culture. As hypothesized, organizational culture comprises the five dimensions: uncertainty avoidance, individualism and collectivism, human orientation, assertiveness and power distance. All the dimensions except power distance demonstrate construct validity. As both average variance extracted and composite reliability of power distance are only slightly below the suggested thresholds, the dimension was retained in the measurement model to ensure the conceptual completeness. Finally, the goodness-of-fit indices based on the two estimation methods provide evidence for excellent consistency between the trimmed measurement model and data at hand.

Common Method Bias

Having evaluated construct validity and goodness-of-fit of the measurement models, the author felt it pertinent to test the potential effects of common method bias on the constructs of relationship quality and organizational culture. Indeed, there is a consensus that common method bias is a potential problem (Podsakoff *et al.*, 2003; Malhotra *et al.*, 2006), which should be tackled by both procedural and statistical remedies (Chang *et al.*, 2010; Podsakoff *et al.*, 2011). As recommended by Podsakoff *et al.* (2003), the current study employs the two procedural remedies to control common method bias: (1) temporal, proximal, psychological, or methodological separation of measures and (2) ensuring anonymity as well as reducing evaluation apprehension. The procedural remedies are discussed in Sections 7.3.6 and 7.3.7.

Although the measurement models of relationship quality demonstrate strong evidence for construct validity, they can be biased by the common method variance thus assessment of common method bias is essential. As there is a consensus that modelling of common method latent factor is a superior procedure (Podsakoff *et al.*, 2003; Chang *et al.*, 2010), it is employed in the current study to test both the measurement models. The results indicate that the models with common method factor do not fit better. Moreover, all the factor loadings of common method dimension appear to be insignificant (p > .05).

10.2.3 Conclusions Pertaining to Structural Models

This section summarizes the results of SEM-based path analysis for the two competing models conceptualised in Chapter 5. Five of six paths pertaining to the recursive structural model are statistically significant. However, the effect of trust on action loyalty is insignificant (β = .12, t = .5, p > .05). Although a number of studies have corroborated this relationship (Harris and Goode, 2004; Pervan *et al.*, 2009), the current study demonstrates that trust affects loyalty only indirectly through the mediating chain comprising co-operation and reciprocity. The determination coefficients (R^2) indicate that explanatory power of the recursive model varies from 29% (action loyalty) to 93% (reciprocity). As action loyalty is the highest stage of loyalty which refers to "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" overcoming obstacles (Oliver, 1997, p. 36), the explanatory power can be regarded as adequate. Finally, all the goodness-of-fit indices constitute evidence for excellent consistency between the recursive model and data at hand.

All the paths of the non-recursive model are statistically upheld. The model demonstrates greater explanatory power which is the result of a feedback loop between the three variables: trust, co-operation and reciprocity. Indeed, the determination coefficients (R^2) indicate that the model explains 86%, 75% and 77% of the variance in reciprocity, co-operation and trust respectively. Although the non-recursive model demonstrates adequate

goodness-of-fit, the comparison of the models indicates that the recursive model fits slightly better. Nevertheless, the differences are very small.

Finally, validity of the structural theory and excellent goodness-of-fit are supported by both robust maximum likelihood and bootstrapping. Consequently, both the recursive and non-recursive models were used to model the effects of organizational culture on relationship quality.

The Impact of Organizational Culture on Relationship Quality

As the hypotheses are developed step-by-step using the five dimensions of organizational culture, the results are summarized using the same order: (1) individualism and collectivism, (2) human orientation, (3) power distance, (4) assertiveness and (5) uncertainty avoidance.

Individualism and Collectivism

Opportunism has a stronger negative effect on trust in collectivistic organizational cultures (H_{C1}; see Figure 8.1 and Table 8.1). Collectivism appears to be the only moderator of the relationship between trust and co-operation. Consequently, collectivism results in a stronger positive effect of trust on co-operation (H_{C3}). Moreover, collectivism moderates the effect of trust on the construct of reciprocity (H_{C4A}). However, the effect of reciprocity on trust is not affected by this moderator (H_{C4B}). Although collectivism was expected to moderate the effect of communication on trust (H_{C2}), the former appeared to be the offender of discriminant validity and was removed from the measurement model. Hence, the hypothesis was not tested. As the direct effect of trust on loyalty is insignificant, the moderating effect of collectivism on this relationship (H_{C5}) was not tested as well. Finally, three out of four hypotheses pertaining to collectivism are corroborated.

Human Orientation

Human orientation has a direct positive effect on trust (H_{C6}). The moderating effect of human orientation decreases the negative effect of opportunism on trust (H_{C7}). Consequently, the

finding indicates that individuals from human-oriented organizational cultures are more forgiving and tolerant to opportunism. All the hypotheses related to human orientation are corroborated.

Power Distance

As was hypothesized, power distance has a direct positive effect on opportunism (H_{C8}). Although the direct effect of power distance on the overall construct of reciprocity is insignificant (H_{C9}), the antecedent affects reciprocity indirectly. Drawing on the equity theory (Adams, 1966), the three dimensions of reciprocity were examined as separate endogenous variables. On one hand, power distance has direct negative effects on both client's-response-to-harm and exchange-of-good (H_{C9A} and H_{C9B}). On the other hand, the effect of co-operation on reciprocity is positively moderated by power distance (H_{C10}). The results indicate that the higher power distance (client's culture), the greater the imbalance of reciprocity which is followed by greater sensitivity to the problems in co-operation when evaluating provider's-response-to-harm.

Assertiveness

Interestingly, assertiveness has a positive moderating effect on the negative effect of opportunism on trust (H_{C11}). Hence, individuals from assertive organizational cultures value assertive, competitive, dominant, and tough behaviour and "have relatively positive connotations for the term aggression" (House, 2004, p. 405). Besides acting and thinking opportunistically, they are also more tolerant to opportunism of others (*ibid.*, p. 405).

Uncertainty Avoidance

The direct effect of uncertainty avoidance on trust is insignificant (H_{C12}). As communication was the offender of discriminant validity and was removed from the measurement model, hypotheses H_{C13} and H_{C14} were not tested. Moreover, uncertainty avoidance moderates neither

the negative effect of opportunism on trust (H_{C15}) nor the positive effect of reciprocity on trust (H_{C16}).

The Non-recursive Model

The effect of reciprocity on trust is moderated neither by collectivism (H_{C4B}) nor uncertainty avoidance (H_{C16}). The other moderating effects remain the same as in the case of the recursive model. The effect of power distance on opportunism is statistically significant. The indirect effect of power distance on trust is mediated by opportunism as well as the loop formed of trust, co-operation and reciprocity. Power distance has indirect effects on co-operation, reciprocity and action loyalty. Moreover, contrary to the recursive model, power distance affects the overall construct of reciprocity both indirectly and directly (H_{C9}).

As in the case of the recursive model, the direct effect of human orientation on trust is significant. Human orientation appears to be the indirect antecedent of trust. That is, its effect is mediated by co-operation and reciprocity. Finally, human orientation has an indirect effect action loyalty.

Goodness-of-Fit

As suggested by Kline (2011), Akaike's information criterion (AIC) is drawn on to compare goodness-of-fit of the competing models. In reviewing AIC values across the two competing models it is evident that the recursive model has lower AIC value and thus is favoured. Expected cross validation index (ECVI) is another statistic which can be used to compare goodness-of-fit of non-nested models. The smaller ECVI value of the recursive model indicates greater potential for replication. The other goodness-of-fit indices demonstrate that the recursive models fits slightly better. As the differences are not substantial, both the models demonstrate excellent goodness-of-fit.

10.3 Contribution

Through modelling relationship quality across organizational cultures, this research makes five theoretical contributions.

The first theoretical contribution of this study stems from the improved conceptual definition of relationship quality. The current study defines relationship quality as a construct which reflects the overall nature of relationships between stakeholders in interactive networks. The construct is composed of action loyalty, reciprocity, co-operation, trust and opportunism. Action loyalty is the final outcome and the highest stage of loyalty which refers to readiness to act overcoming obstacles. Readiness to act reflects "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" while overcoming of obstacles constitutes "re-buying despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 36). The construct of relationship quality is the outcome of marketing denoted as "a culture, an organizational function and a set of processes" (Gummesson, 2008b, p. 14). That is, relationship quality depends on the practices of organizational culture reflected in the four dimensions: individualism and collectivism, human orientation, power distance and assertiveness. The current study follows the service-dominant logic and treats customers as operant resources (see Section 2.2). Hence, "the customer is a coproducer of service" and "marketing is a process of doing things in interaction with the customer" (Vargo and Lusch, 2004, p. 7). The study demonstrates that the customer's perception of relationship quality depends on the customer's organizational culture which is embedded in various practices. Consequently, the customer's organizational culture has effect on the customer's ability to function as an operant resource and to build successful relationships according to the service dominant logic.

The second theoretical contribution is born from the identification of the boundary conditions of the seminal loyalty framework forwarded by Oliver (1997), which "constitutes the most comprehensive evaluation of the construct" (Harris and Goode, 2004, p. 141). As "a

366

theory is a statement of relations among concepts within a set of boundary assumptions and constraints", the notion of the latter condition is critical (Bacharach, 1989, p. 496). Indeed, "a high quality theory also states the conditions and boundaries of relationships" (Corley and Gioia, 2011, p. 18). According to Bacharach (1989, p. 499), "spatial boundaries are conditions restricting the use of the theory to specific units of analysis (e.g., specific types of organizations [or customers])".

The conceptual framework of the cognitive-to-action loyalty has been empirically tested by a number of studies (e.g., Eugene and Jamie, 2000; McMullan and Gilmore, 2003; McMullan, 2005; Harris and Goode, 2004; Evanschitzky and Wunderlich, 2006) in order to assess the sequence and distinctness of the stages. Having summarized the operationalizations of the sequential loyalty chain, Oliver (2010) calls for more intensive efforts to corroborate or refute his views and points out several potential weaknesses. Oliver (2010, p. 440) explains that "loyalty effects have been discussed largely in the context of product marketing" while "strong interpersonal character of services" requires "additional dimensions of a much more binding and even overriding nature". Indeed, the present operationalizations of the sequential chain are based on relatively transactional business-to-consumer samples: retail customers (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online shoppers (Harris and Goode, 2004) and restaurant visitors (McMullan and Gilmore, 2003; McMullan, 2005). Hence, it is important to assess validity of the sequential stages based on more complex business-to-business services samples. Moreover, Bagozzi (1995), Palmatier *et al.* (2006) and Oliver (2010) amongst others call for integration of additional dimensions (e.g. exchange efficiency, equity, relational norms and reciprocity) into relationship assessment frameworks. Following numerous calls to assess discriminant validity of loyalty in the light of the other variables, this study has integrated the sequential chain of loyalty with the other dimensions of relationship marketing.

H₁, stating that loyalty comprises the four sequential stages (cognitive loyalty, conative loyalty, affective loyalty and action loyalty), is rejected. As cognitive loyalty demonstrated low factor loadings and poor discriminant validity, it was removed from the model. Further, having evidence that conative-affective loyalty is a unidimensional construct, the dimensions were combined. However, the construct exhibited a lack of convergent validity. Moreover, conative-affective loyalty emerged as the offender of discriminant validity with respect to the other dimensions of relationship quality: reciprocity, co-operation and trust. Hence, it was removed from the model. Finally, action loyalty appears to be a single dimension of loyalty in the business-to-business context.

Consequently, the findings broaden the boundary conditions of the seminal loyalty framework forwarded by Oliver (1997). That is, the spatial boundaries of this framework is identical to the two conditions suggested by Hougaard and Bjerre (2003): continuity and complexity. *Firstly*, the four-stage loyalty framework is more relevant to relatively transactional services: retailing (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online retailing (Harris and Goode, 2004) and restaurant services (McMullan and Gilmore, 2003; McMullan, 2005). Indeed, the other dimensions of relationship quality take over when relationships "possess a high degree of embedded continuity" (Hougaard and Bjerre, 2003, p. 35). In the current study, relationship age ranges from several months to more than twenty years. The median value of relationship duration equals 8 years.

Secondly, the cognitive-to-action loyalty is relevant to rather simple services. According to Hougaard and Bjerre (2003, p. 35), "relationships differ in their degree of complexity", which is caused by the exchange, interaction and integration. The interaction or "social contact in the context of extensive networks of personal communication between people in organizations makes industrial relationship rather complex" (*ibid*., p. 36). The integration or "contracts and regulating mechanisms in business-to-business relationships can be complicated, incomplete and inconsistent" (*ibid*., p. 36).

As business-to-business services possess high levels of continuity and complexity, the psychological processes of cognition, affection and connation are perceived differently. In other words, the managers and executives working in the manufacturing and wholesale / retail trade industries demonstrate different patterns of cognition, affection and connation when evaluating the relationships pertinent to logistics outsourcing. That is, the other dimensions of relationship quality take over cognitive, affective and conative loyalty. Consequently, the sequential chain of loyalty suggested by Oliver (1997) demonstrate different dimensionality and psychometric properties in the business-to-business context.

Based on the classification of contribution forwarded by Summers (2001, p. 408), *the third theoretical contribution* centres around "the identification and conceptual definition of additional constructs [mediators] to be added to the conceptual framework" and "determining the degree to which a variable mediates the relationship between two constructs".

Although the majority of relationship quality conceptualizations rest on social exchange theory, which comprises many dimensions, prior to the current study generalizations were only possible about the three variables of this theory. Indeed, trust, commitment and satisfaction have been validated in different contexts (Lambe *et al.*, 2001; Holmlund, 2008; Vieira *et al.*, 2008; Athanasopoulou, 2009). The norm of reciprocity is the cornerstone of social exchange theory (Thibaut and Kelley, 1959; Gouldner, 1960; Blau, 1964; Kelley and Thibaut, 1978; Lambe *et al.*, 2001) and is regarded as having the potential for explanatory power in relationship marketing (Pervan *et al.*, 2009). Indeed, Bagozzi (1995, p. 275) argues that reciprocity "is at the core of marketing relationships" and refers to "an essential feature of self-regulation and the problem of coordinating mutual actions for parties in a marketing relationship". Hence, reciprocity provides "control over one's volitions and actions" (*ibid.*, p. 276). Palmatier et al. (2006) contend that, although commitment and trust have been important dimensions in relationship marketing, reciprocity along with relational norms, relationship satisfaction, exchange efficiency and equity, may play a critical role. Thus,

Palmatier et al. (2006) call for research of reciprocity and argue that the construct should be conceptualized as a mediator of the classic model of relationship marketing forwarded by Morgan and Hunt (1994). This argument is supported by the meta-analysis (Palmatier *et al.*, 2006), which indicates that relationship investment (seller's investment of time, effort, spending, and resources focused on building a stronger relationship) has a substantial effect on seller objective performance.

Despite the numerous calls to integrate reciprocity into relationship quality (Bagozzi, 1995; Lambe et al., 2001; Palmatier et al., 2006; Pervan et al., 2009), this study is the first to conceptualize reciprocity as a dimension of relationship quality along with the other five constructs derived from a synthesis of various theories.

The structural model indicates that reciprocity fully mediates the relationship between trust and action loyalty (see Figure 8.1). Indeed, the direct effect of trust on action loyalty becomes insignificant when the three effects are controlled (trust → co-operation → reciprocity → action loyalty). Consequently, full mediation is supported. According to Baron and Kenny (1986b, p. 1176), full mediation is "the strongest demonstration of mediation". The finding demonstrates that reciprocity is the missing dimension of the seminal commitment-trust theory forwarded by Morgan and Hunt (1994) as well as the other operationalizations of social exchange theory in the relationship marketing context.

The current study also makes a methodological contribution pertaining to the construct of reciprocity. Although reciprocity is "at the core of marketing relationships" (Bagozzi, 1995, p. 275), until very recently, "the absence of any measure of reciprocity between exchange partners ... [was] especially notable" (Palmatier *et al.*, 2006, p. 152). The problem was addressed by Pervan et al. (2009), who explored the psychological manifestations of reciprocity and suggested a multidimensional measurement scale. Although the scale development procedure was rigorous and methodologically sound, the current study revealed several issues. Consequently, the scale underwent major modifications. Consistent with

Pervan *et al.* (2009), reciprocity was initially conceptualized as a second-order construct entailing two dimensions: response-to-harm and exchange-of-good. However, all the experts agreed that the measurement of provider's-response-to-harm and client's-response-to-harm by a single scale results in double-barrelled items. Based on the recommendations of the judges, the construct of reciprocity was re-conceptualized as a second-order construct comprising three dimensions: provider's-response-to-harm, client's-response-to-harm and exchange-of-good. As this improvement enhanced "the construct validity ... through the use of refined multiple-item measures" (Summers, 2001, p. 408), *it constitutes a methodological contribution*.

The third theoretical contribution of the current study is born from the structural conceptualization of relationship quality which specifies the nomological network or relationships between the dimensions of the construct. Besides improving the conceptual definitions of the relationship quality dimensions added to the relationship framework (e.g. reciprocity), this study contributes by "the development of additional theoretical linkages [research hypothesis] with their accompanying rationale" (Summers, 2001, p. 408). The study foregrounds the pivotal role of trust, co-operation and reciprocity as the antecedents of action loyalty and the consequences of opportunism.

As was stated previously, there is no consensus on the direction of the causal relationship between trust and reciprocity. On one hand, Palmatier et al. (2006) posit that one party may receive value earlier and therefore must have enough confidence in the relationship partners to expect reciprocity over time. On the other hand, Blau (1964) contends that social associations are based on seeking of social and economic rewards thus relationship continuity is only possible if exchange is based on *reciprocity*, which builds trust and commitment. Moreover, the evidence from experimental research indicates that the relationship between co-operation and reciprocity may be a part of the loop formed of trust, co-operation and reciprocity (Ostrom, 2003). As there is no consensus on the direction of causal relationship,

two competing models were specified and tested empirically. The statistical comparison of the two models generates a number of interesting conclusions. However, the results are somewhat controversial. On one hand, the recursive model demonstrates slightly better goodness-of-fit, but explains less of the variance in trust and co-operation and more of the variance in reciprocity. On the other hand, the non-recursive model possesses the opposite properties. As both the models demonstrate excellent goodness-of-fit and the differences are not substantial, it can be concluded that the models are equally valid.

Although the third theoretical contribution has the most significant implications for social exchange theory, it also contributes to the IMP model. Indeed, Håkansson (1982, p. 18) posits that "another important aspect of the relationship is the adaptations which one or other party may make in either the elements exchanged or the process of exchange". Drawing on the work of Hallén *et al*. (1991), Brennan *et al*. (2003, p. 1658) relate adaptations to reciprocity. The current study contributes to the IMP model by explanation of the structural relationships between reciprocity and other variables: opportunism, trust, co-operation and action loyalty.

Although culture is regarded as a very important contingency of business-to-business relationships (Järvelin, 2001; Hewett *et al.*, 2002; Hennig-Thurau *et al.*, 2004; Winklhofer *et al.*, 2006; Athanasopoulou, 2009), only several studies have provided some empirical evidence (Hewett *et al.*, 2002; Palmatier *et al.*, 2006). However, they suffer from limitations and are focused on several variables instead of taking a holistic approach.

The fourth theoretical contribution of this study is the most significant and relates to "the development of additional theoretical linkages [research hypotheses] with their accompanying rationale" (Summers, 2001, p. 408). That is, the current study (1) identifies the GLOBE theory of culture as applicable to relationship marketing, (2) extends social exchange theory and (3) forwards evidence that the direct and moderating effects of organizational culture offer important implications for actionable relationship marketing practice. In other

words, by synthesizing services marketing literature, social exchange theory, transaction-cost theory and the GLOBE theory of culture, the current study presents a new theory. Consequently, organizational culture demonstrates connectivity or "the ability of a new theory to bridge the gap between two or more different theories, thus explaining something between the domains of previous theories. In this way, new knowledge is created, and a more nearly continuous mapping of the empirical universe is achieved" (Bacharach, 1989, p. 511). Specifically, the current study corroborates eleven out of eighteen hypotheses pertaining to the four dimensions of organizational culture: individualism and collectivism, human orientation, power distance and assertiveness.

Although the fourth theoretical contribution has the most significant implications for social exchange theory, it also contributes to the IMP model. Indeed, Håkansson (1982) contends that the social system affects the interaction process. The current study is the first to explain the structural relationships between organizational culture (the social system) and several important variables of IMP model: reciprocity (adaptations), co-operation and trust.

Individualism and Collectivism

As was expected, both the antecedent of trust (H_{C1}, see Figure 9.1, p. 332 and Figure 9.2, p. 341) and trust itself (H_{C3} and H_{C4A}) have stronger effects in collectivistic organizational cultures. In other words, individualism and collectivism moderates the relationships pertaining to the antecedents and outcomes of trust.

The findings support the contention of Hofstede (2001) stating that trust is the key prerequisite of business relationships in collectivistic cultures. Through trust based "relationship, both parties adopt the other into their in-groups and from that moment onward both are entitled to preferential treatment" (*ibid.* p. 239). Doney *et al.* (1998) relates trust to collectivism and explains that in collectivistic cultures trust is formed via prediction and intentionality processes. Trust develops "via a prediction process whereby a trustor determines that a target's past actions provide a reasonable basis upon which to predict future

373

behavior" (*ibid.*, p. 605). Moreover, "using an intentionality process to establish trust, trustors interpret targets' words and behavior and attempt to determine their intentions in exchange" (*ibid.*, p. 606).

Although collectivism is praised for the focus on high morality, trusting relationships and other virtues, the qualities of this culture apply only to in-groups (Doney *et al.*, 1998; Yamagishi *et al.*, 1998; Gómez *et al.*, 2000; Huff and Kelley, 2003). Hence, the effects of collectivism on loyalty, reciprocity and co-operation are not relevant to out-group relationships. Indeed, collectivistic cultures "tend to show great concern for the welfare of members of their own in-group but relative indifference to the needs of outsiders" (Schwartz, 1992).

Human Orientation

As was expected, human orientation has a direct positive effect on trust (H_{C6}, see Figure 9.1, p. 332 and Figure 9.2, p. 341). Human orientation is related to benevolence and universalism (Kabasakal and Bodur, 2004). Larzelere and Huston (1980, p. 596) argue that "the more … the target person is seen as benevolent and honest toward the perceiver, the more likely the perceiver will be to predict a favorable future for the relationship". Hence, "trust exists to the extent that a person believes another person (or persons) to be benevolent and honest" (*ibid.*, p. 596). Mayer *et al.* (1995, p. 719) contends that "benevolence is the perception of a positive orientation of the trustee toward the trustor" which "plays an important role in the assessment of trustworthiness, in that high benevolence in a relationship would be inversely related to motivation to lie". Hence, Mayer *et al.* (1995) hypothesize that benevolence is the antecedent of trust. Doney and Cannon (1997) concur that perception of trust is dependent on credibility and benevolence. The current study corroborates this hypothesis.

Besides testing the direct effect of human orientation on trust, the current study demonstrates that *the higher human orientation, the weaker the effect of opportunism on trust* (H_{C7}, see Figure 9.1, p. 332 and Figure 9.2, p. 341). As benevolence encompasses helpfulness

and forgivingness (Schwartz, 1992; Bigoness and Blakely, 1996), individuals from human-oriented cultures are more tolerant towards opportunism of service providers. Moreover, tolerance is embedded in universalism (Schwartz, 1992) which is even more related to human orientation. Consequently, members of human-oriented cultures have wider zones of tolerance and perceive opportunistic behaviour less as opportunism itself and more as temporary relationship failure, which requires relationship recovery.

Power Distance

The current study demonstrates that power *distance has a direct positive effect on opportunism* (H$_{C8}$, see Figure 9.1, p. 332 and Figure 9.2, p. 341). As opportunism is the first stage of the relationship quality model, the dimension mediates the negative effects of power distance on trust, co-operation, reciprocity and loyalty. In other words, power distance prevents co-operation by decreasing trust and increasing perceptions of others as a threat (Doney *et al.*, 1998; Stephan *et al.*, 2008).

Doney *et al.* (1998) contends that "by establishing acceptable levels of power and coercion", power distance triggers opportunistic behaviour of both relationship partners. Indeed, John (1984) concurs that opportunistic behaviour of the relationship partner is induced by the perception that the other relationship party abuses power in the form of rules, authority structures and monitoring. Hence, opportunism may be both the perception of others as a threat and induced behaviour.

As was expected, *power distance has a direct negative effect on reciprocity.* However, this hypothesis is only supported in the non-recursive model (H$_{C9}$, see Figure 9.2, p. 341). The recursive model demonstrates that the effect of power distance on reciprocity is mediated by the three-fold chain of dimensions: opportunism, trust and co-operation (see Figure 9.1, p. 332).

Davis *et al.* (1997, p. 22) contend that people in high power distance cultures are more likely to develop principal-agent relationships, which are based on the assumption that both

agents and principals strive to achieve as much as "possible utility with the least possible expenditure". Moreover, power distance reflects unequal distribution of roles and resources (Schwartz, 1999) as well as abuse of power (Carl *et al.*, 2004).

The current study supports the three-fold set of hypotheses: **H$_{C9}$.** *Power distance has direct negative effects on the two dimensions of reciprocity: a) client's-response-to-harm, b) exchange-of-good.* **H$_{C10}$.** *The greater power distance, the stronger the effect of co-operation on provider's-response-to-harm* (see Figure 9.1, p. 332).

As was expected, power distance has direct negative effects on separate first-order dimensions of reciprocity. On one hand, organizations (clients) high in power distance demonstrate lower levels of reciprocity by comparison with service providers across the two dimensions: *client's-response-to-harm* (H$_{C9A}$) and *exchange-of-good* (H$_{C9B}$). On the other hand, organizations (clients) high in power distance are more sensitive to the issues pertaining to provider's co-operation when evaluating *provider's-response-to-harm* (H$_{C10}$). Hence, members of cultures high in power distance strive to achieve as much as "possible utility with the least possible expenditure" (Davis *et al.*, 1997, p. 22).

Assertiveness

As was expected, the greater assertiveness, the weaker the effect of opportunism on trust (H$_{C11}$; see Figure 9.1, p. 332 and Figure 9.2, p. 341). Individuals from assertive cultures, "build trust on the basis of capabilities or calculation" and "act and think of others as opportunistic" (Hartog, 2004, p. 405). The calculative process of trust building is based on the transaction-cost theory thus trustors must determine if the benefits of opportunistic behaviour exceed the targets' costs (Doney *et al.*, 1998). The assessment of trustworthiness is based on "the behavioural assumption that, given the chance, most people act opportunistically and in their own self-interest" (*ibid.*, p. 605). Hence, "trustors assume that targets exhibit "trust-like" behaviour because they are self-interest-seeking individuals, making net present value

calculations - the results of which indicate net benefits to refraining from opportunistic behaviour" (*ibid.*, p. 605).

As trust "incorporates the notion of risk as a precondition of trust" (Doney et al., 1998, p. 604), individuals from assertive cultures are both risk taking and more tolerant towards opportunism of others. Dickson *et al.* (2006) argue that members of assertive cultures are "more aggressive and proactive in dealing with situations in their ... relationships that might lead to opportunistic behaviour" and thus they are more tolerant towards opportunism. Indeed, the study of Dickson et al. (2006) provides some evidence that the greater assertiveness, the lower concerns about opportunistic behaviour. The current study corroborates this hypothesis in a holistic manner.

The fifth theoretical contribution of this study is indirect. Although the study did not explicitly aim to improve the dispositional conceptualization of organizational culture, the connection of relationship quality and organizational culture results in an inevitable indirect contribution. That is, the study broadens the dispositional conceptualisation of the GLOBE theory and demonstrates that the effects of organizational culture are not limited to the dimensions of implicit leadership. Hence, organizational culture predicts perception of relationship quality and is relevant to the marketing context.

The sixth contribution of this study is empirical and stems from the validation of the GLOBE scales of organizational culture at the individual level of analysis.

The issue of level of analysis in the organizational and cross-cultural literature has been central and fiercely debated for many years (Hofstede, 1980; Hofstede, 2006; Javidan *et al.*, 2006; Smith, 2006). Hofstede (2001, p. 16) argues that ecological fallacy is committed when relationships found at a collective level (e.g. national or organizational culture) "are interpreted as if they apply to individuals" and contends that reverse ecological fallacy refers to construction of "ecological indexes from variables correlated at the individual level". Moreover, Leung and Bond (1989) argue that level of analysis affects both structural

relationships and measurement models thus dimensionality can vary at different levels of analysis.

Dansereau and Yammarino (2006) explain that the theoretical approaches to constructing cultural scales can be classified into three categories: *emergent view*, *cross-level view* and *individual view*. *The emergent view* originates from the work of Glick (1985) who explains that some constructs emerge only at aggregated levels (e.g. organizational or societal culture) and are not present at a lower level of analysis (e.g. individuals).

The second approach to designing cultural scales is the *cross-level* (Dansereau and Yammarino, 2006) or *pan-cultural* (Leung and Bond, 1989) *view*, which originates from the work of Schneider (1987). Peterson and Castro (2006) posit that using this approach, measures are constructed at the individual level of analysis using respondents from a variety of organizations and departments.

Finally, the *individual view* originates from the work of James *et al.* (1984). According to this view "individual's perceptions may simply reflect the individual-level personality differences among people rather than culture" (Dansereau and Yammarino, 2006, p. 539) therefore constructs and relationships must be analysed at the individual, but not an aggregate level of analysis.

Although House and Hanges (2004) claim that the GLOBE theory of culture adopts the convergent-emergent approach, Peterson and Castro (2006) argue that the study, in fact, demonstrates the cross-level logic and does not provide sufficient evidence for the convergent-emergent method. Consistent with Peterson and Castro (2006), the current study forwards empirical evidence that the GLOBE scales of organizational culture follow the cross-level logic. Hence, the scales demonstrate construct and predictive validity at the individual level of analysis.

10.4 Managerial Implications

The findings of the current study have several managerial implications for practitioners. *Firstly*, the study demonstrates that action loyalty is the final outcome and the highest stage of loyalty which refers to readiness to act overcoming obstacles. Readiness to act reflects "deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future" while overcoming of obstacles constitutes "re-buying despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1997, p. 36). According to Oliver (1999), the loyalty construct comprises the four sequential stages (cognitive loyalty, affective loyalty, conative loyalty and action loyalty) which entail the specific vulnerabilities referred as the obstacles to loyalty. Namely, *the vulnerabilities of cognitive loyalty* comprise (Oliver, 1999, p. 36) "actual or imagined better competitive features or price through communication (e.g., advertising) and vicarious or personal experience ... [as well as] deterioration in brand features or price". *The obstacles to affective loyalty* encompass "cognitively induced dissatisfaction", "enhanced liking for competitive brands, perhaps conveyed through imagery and association ... " as well as "deteriorating performance" (*ibid.*, p. 36). Finally, the *hindrances to conative loyalty constitute* "persuasive counterargumentative competitive messages", "induced trial [and] deteriorating performance" (*ibid.*, p. 36).

As business-to-business services possess high levels of continuity and complexity, the psychological processes of cognition, affection and connation are perceived differently. That is, the other dimensions of relationship quality take over cognitive, affective and conative loyalty. Namely, reciprocity, co-operation and trust replace the three dimensions of the loyalty framework. Consequently, managerial implications with respect to fostering action loyalty are different. As reciprocity has the strongest total effect on action loyalty, a manager who desires to develop action loyalty should select relationship marketing strategies that foster reciprocity best. Consistent with Palmatier *et al.* (2006, p. 151), an "effective strategy is for managers to

379

make relationship investments and generate relationship-based benefits for customers". The current study demonstrates that reciprocity entails mutual exchange of value and reciprocal response to harm. Indeed, reciprocity is related to the concept of adaptation or investments which "tie the firms together in strong customer-supplier relationships" and "form the basis both for business expansion and for securing current sales or supply sources" (Hallén *et al.*, 1991, p. 35). As reciprocity is a three-dimensional construct, it highlights the importance of relationship recovery and stresses the need for training of the full-time and part-time marketers involved in the relationship. Indeed, "reciprocity provides a behavioral template and knowing how to act to stabilize exchange and maximize the potential for relationship development" (Pervan *et al.*, 2009, p. 68). It highlights the vital aspects of economic exchange and indicates the critical points of relationship recovery. Finally, although Morgan and Hunt (1994, p. 32) argue that "commitment and trust are key to understanding the relationship development process", the current research indicates that it is more important to understand the link between the three constructs. Indeed, reciprocity has the strongest effect on action loyalty (deeply-held commitment) and fully mediates the effect of trust. That is, trust affects action loyalty only indirectly through the construct of reciprocity. Moreover, as a relationship develops to higher stages, the effect of reciprocity on action loyalty may increase substantially. The non-recursive structural model provides evidence for this contention. The loop between reciprocity, trust and co-operation significantly increases the total effect of reciprocity on trust.

Secondly, the study demonstrates that the effect of trust on action loyalty is the second-strongest to reciprocity. Consistent with Harris and Goode (2004, p. 151) "practitioners should develop policies, procedures, and, systems that are designed to generate trust while recognizing that loyalty is not easily achievable". Opportunism appears to be the negative cause of trust and the third-strongest antecedent of action loyalty. However, as a relationship develops to higher stages, the total effect of co-operation on action loyalty may take over and

become stronger than the impact of opportunism. Indeed, the non-recursive structural model provides evidence for this contention. Namely, the loop between trust, co-operation and reciprocity significantly increases the total effect of co-operation on action loyalty. The finding demonstrates that the prevention of opportunism may be more important in the early stages of relationships. As a relationship matures, managers should centre more on the development of co-operation.

Thirdly, Palmatier *et al.* (2006) argue that the most effective relationship-building strategies are based on efficient communication. Indeed, communication was hypothesized to be a dimension of relationship quality in the current study. However, communication emerged as the offender of discriminant validity with respect to the other dimensions of relationship quality. That is, its average variance extracted was less than the squared correlations with the other constructs. Hence, instead of being a separate dimension, communication is to some extent entailed in the four dimensions of relationship quality: opportunism, trust, co-operation and reciprocity. The finding implies that managers should try to improve communication pertaining to the four dimensions of relationship quality.

Fourthly, Palmatier *et al.* (2006, p. 151) contend that "business executives focused on building and maintaining strong customer relationships should note that the selection and training of boundary spanners is critical; expertise, communication, and similarity to customers are the most effective relationship-building strategies". Although the current study did not examine the effects of similarity, it provides evidence that organizational culture has effect on the perception of relationship quality of boundary spanners. The finding has a number of implications for practitioners which stem from the four dimensions of organizational culture: individualism and collectivism, human orientation, power distance and assertiveness.

Individualism and Collectivism

As was mentioned, both the antecedent of trust and trust itself have stronger effects in collectivistic organizational cultures. In other words, individualism and collectivism moderates the relationships pertaining to the antecedents and outcomes of trust.

Consistent with Doney *et al.* (1998), in collectivistic organizational cultures trust is formed via prediction and intentionality processes. Trust develops "via a prediction process whereby a trustor determines that a target's past actions provide a reasonable basis upon which to predict future behavior" (*ibid.*, p. 605). Moreover, "using an intentionality process to establish trust, trustors interpret targets' words and behavior and attempt to determine their intentions in exchange" (*ibid.*, p. 606). Hence, managers dealing with stakeholders from collectivistic cultures should centre on the prevention of opportunism and building of trust which is a stronger antecedent of reciprocity in this type of culture compared to cultures demonstrating human orientation, assertiveness and power distance.

Human Orientation

As was stated, human orientation has a direct positive effect on trust. Human orientation is related to benevolence and universalism (Kabasakal and Bodur, 2004). Larzelere and Huston (1980, p. 596) argue that "the more … the target person is seen as benevolent and honest toward the perceiver, the more likely the perceiver will be to predict a favorable future for the relationship". Hence, "trust exists to the extent that a person believes another person (or persons) to be benevolent and honest" (*ibid.*, p. 596).

Besides testing the direct effect on trust, the current study demonstrates that *the higher human orientation, the weaker the effect of opportunism on trust*. As benevolence encompasses helpfulness and forgivingness (Schwartz, 1992; Bigoness and Blakely, 1996), individuals from cultures high in human orientation are more tolerant towards opportunism of service providers.

The findings imply that managers should try to identify human-oriented organizational cultures and use them as strategic opportunities to develop strong relationships. Indeed, stakeholders from cultures high in human orientation perceive higher levels of trust and demonstrate greater co-operation as well as reciprocity which result in deeply-help commitment. Moreover, members of human-oriented cultures have wider zones of tolerance and perceive opportunistic behaviour less as opportunism itself and more as temporary relationship failure, which requires relationship recovery.

Power Distance

As was mentioned previously, the current study demonstrates that power *distance has a direct positive effect on opportunism*. As opportunism is the first stage of the relationship quality model, the dimension mediates the negative effects of power distance on trust, co-operation, reciprocity and loyalty. In other words, power distance prevents co-operation by decreasing trust and increasing perceptions of others as a threat (Doney *et al.*, 1998; Stephan *et al.*, 2008). Doney *et al.* (1998) contends that "by establishing acceptable levels of power and coercion", power distance triggers opportunistic behaviour of both relationship partners. Hence, opportunism may be both the perception of others as a threat and induced behaviour.

As was expected, power distance has direct negative effects on separate first-order dimensions of reciprocity. On one hand, organizations (clients) high in power distance demonstrate lower levels of reciprocity by comparison with service providers across the two dimensions: *client's-response-to-harm* and *exchange-of-good.* On the other hand, organizations (clients) high in power distance are more sensitive to the issues pertaining to provider's co-operation when evaluating *provider's-response-to-harm.* Hence, members of cultures high in power distance strive to achieve as much as "possible utility with the least possible expenditure" (Davis *et al.*, 1997, p. 22).

The findings result in a number of managerial implications. Gummesson (2008b, p. 311) calls for a new synthesis and a shift from "exclusive hierarchies to inclusive networks

and processes". He argues that "an organization exists, but not in a physical and tangible body. Its most important resources – its intellectual capital and core competency – ... show in the network" (*ibid.,* p. 313). Grönroos (2000, p. 364) concurs that "a service oriented firm requires a relatively flat organizational structure with few hierarchical levels" in order to foster customer intimacy. However, the current study indicates that not only structure but also organizational culture is the obstacle to the development of inclusive network relationships. Hence, managers should critically evaluate the compatibility of their organizations with potential partners with respect with power distance. The differences across power distance may result in a partnership operating in different paradigms and partners pulling in different directions. Indeed, human orientation is consistent with the service dominant logic and relationship marketing whereas power distance is related to transaction-cost-theory. Consequently, power distance fosters exclusive hierarchies and opportunism.

Assertiveness

As was stated, the greater assertiveness, the weaker the effect of opportunism on trust. Individuals from assertive cultures, "build trust on the basis of capabilities or calculation" and "act and think of others as opportunistic" (Hartog, 2004, p. 405). As trust "incorporates the notion of risk as a precondition of trust" (Doney et al., 1998, p. 604), the individuals from assertive cultures are both risk taking and more tolerant towards opportunism of others. Dickson *et al.* (2006) argue that members of assertive cultures are "more aggressive and proactive in dealing with situations in their ... relationships that might lead to opportunistic behaviour" and thus they are more tolerant towards opportunism.

This finding has a managerial implication. Through careful evaluation of the compatibility of their organizations with potential suppliers of logistics services with respect to assertiveness, practitioners can eliminate the obstacles to the development of strong relationships. Indeed, the incompatibility of collectivistic and assertive cultures may be a strong hindrance to successful relationship building. On one hand, the former type of culture

centres on trust building via intentionality and predictive processes and thus is sensitive to opportunism. On the other hand, the latter type of culture tolerates opportunistic, proactive and aggressive behaviour. Consequently, the incompatibly may result in the absence of trust which has negative effects on co-operation, reciprocity and action loyalty.

10.5 Limitations of the Study

The theoretical contributions and managerial implications of this study are tempered by several limitations worthy further discussion. *Firstly*, the generalizability of the current study is limited to the logistics outsourcing industry of the United Kingdom. Consistent with Wilding and Juriado (2004, p. 628), logistics outsourcing is defined as third-party logistics services (3PLs) provided "by a vendor on a contractual basis". In line with the sampling procedure adopted, the sample comprises 26.29% of medium companies and 73.71% of large companies. The sample is almost equally distributed across the manufacturing and retail / wholesale industries. The former industry accounts for 55.38% while the latter equals 44.62% of the sample. Although logistics outsourcing industry is regarded as a relevant and fertile business-to-business setting to study relationships (McAfee *et al.*, 2002; Barratt, 2004; Wilding and Juriado, 2004; Deepen *et al.*, 2008), relationship continuity and complexity are the idiosyncrasies which may be the spatial boundaries. Hence, the findings cannot be universally generalized.

Secondly, as this study is the first to conceptualize direct and moderating effects of organizational culture on relationship quality, it centres upon identifying the extent, to which, organizational culture has effect on business-to-business relationships. That is, the current study employs broad and the most general dimensions to test the effects. However, it would be naive to state that individualism and collectivism, human orientation, power distance and assertiveness are the only relevant cultural antecedents of relationship quality. Indeed, organizational culture is "an all-encompassing concept" (Ashkanasy *et al.*, 2000, p. 131). Nevertheless, at the moment, the GLOBE theory of culture demonstrates evidence for the

highest level of utility and falsifiability. On the other hand, the majority of the other conceptualizations of organizational culture reviewed lack construct validity. Consistent with Ashkanasy *et al.* (2000, p. 133), "the lack of theoretical basis for many of these instruments is further cause of concern on the part of cultural researchers and practitioners". Hence, future studies should combine "[a] qualitative approach for depth and empathy with a quantitative approach for confirmation" (Hofstede, 2001, p. 393) in order to improve construct validity of organizational culture and reveal its other effects on relationship quality.

The third limitation of the current study stems from the cross-sectional research design which prevents causal testing. Cross-sectional research design is static rather than dynamic. Indeed, "data from a cross-sectional design give only a "snapshot" of an ongoing dynamic process" (Kline, 2011, p. 108). Moreover, meeting all "the conditions required for inference of causality from covariances ... in a single study" is almost insurmountable (*ibid.*, p. 366). Hence, instead of interpreting the estimates of the effects "as proof of causality", the structural models should be viewed "as if" models of causality that may or may not correspond to causal sequences in the real world" (*ibid.*, p. 366).

The fourth limitation of this study relates to testing of the moderating effects of organizational culture. According to Henseler and Chin (2010), the orthogonal method of moderation testing (Little *et al.*, 2006) is recommended under the most circumstances. Indeed, it outperforms the other methods in estimate and prediction accuracy as well as statistical power (Henseler and Chin, 2010). Moreover, the method is residual centred thus allows to avoid the problems caused by collinearity (Little *et al.*, 2006). However, there is a limitation inherent in this method. As the specification of an interaction term is based on the product terms approach (see p. 265-270), it significantly increases number of items and sample size required for structural equation modelling. Consequently, instead of using the whole structural models to test moderation, they were split into several smaller parts.

10.6 Avenues for Future Research

The contributions and limitations of the current research relate to several potential avenues for future research. *Firstly*, the generalizability of the current study could be increased by extending it to different service contexts. As was stated before, the logistics outsourcing industry demonstrates relationship continuity and complexity. Hence, the two idiosyncrasies may be the spatial boundaries of the theory presented in this study. Hewett *et al.* (2002, p. 235) warns that "researchers should be cautious in attempting to generalize ... results to other forms of relationships or to different types of organizations". Indeed, the current study indicates that the seminal framework of loyalty forwarded by Oliver (1997) is irrelevant to highly relational and complex business-to-business services, but demonstrates construct validity in rather transactional industries: retailing (Eugene and Jamie, 2000; Evanschitzky and Wunderlich, 2006), online retailing (Harris and Goode, 2004) and restaurant services (McMullan and Gilmore, 2003; McMullan, 2005).

Secondly, this study is limited to a single country and focuses on the link between relationship quality and organizational culture within the United Kingdom. As was stated previously, the current study employs the items of the GLOBE theory to operationalize organizational culture. The items have "isomorphic structures across the levels of analysis **(societal and organizational)** and across the two culture manifestations [practices and values]" (House and Javidan, 2004, p. 21). Namely, each item has four forms: "organization and society practices (questions with *AS IS* response format) and organizational and societal values (questions with *SHOULD BE* response format)" (*ibid.*, p. 21).

Hanges and Dickson (2004) indicate that the scales posses the identical structure as well as adequate reliabilities at both the societal and organizational levels of analysis. Moreover, "societal-level differences have a substantial impact on the cultural practices of organizations" and explain from 21% (*in-group collectivism*) to 47% (*future orientation*) of the variance in the latter construct (Brodbeck *et al.*, 2004).

As the GLOBE scales have isomorphic structures at both the national and organizational levels, extending the model to include direct, mediating and moderating effects of national culture may be a potentially fruitful avenue for future research. Moreover, Hennig-Thurau *et al.* (2004, p. 28) posit that "one particularly interesting area of investigation involves examining how contrasting [national] culture effects may off-set each other in the moderating process". Finally, modelling relationship quality across national cultures may result in much stronger effects and greater explanatory power of national culture.

Thirdly, based on the findings of the current study, another fruitful area for future research may be the effects of the differences in the organizational cultures on relationship quality. Hewett *et al.* (2002, p. 235) concur that "an understanding of the differences of the corporate cultures of buyers and sellers ... [is] an interesting area for future research. It is possible that certain relationship partners are more compatible than others". Indeed, Bucklin and Sengupta (1993) demonstrate that the compatibility of the partners affects the effectiveness of the relationship. Hence, there is "the need for compatibility in terms of partner culture, operations, goals and objectives" (*ibid*., p. 43). The meta-analysis by Palmatier *et al.* (2006, p. 138) denotes similarity as "the commonality in appearance, lifestyle, and status between individual boundary spanners or the similar cultures, values, and goals between organizations". The study demonstrates that similarity has effect on relationship quality. Hence, "selection and training of boundary spanners is critical; expertise, communication, and similarity to customers are some of the most effective relationship-building strategies" (*ibid*., p. 151).

Fourthly, the research into the links between organizational culture, relationship quality and performance is fragmented and limited to conceptualization and testing of a relationship between two out of three constructs (e.g. Deshpandé *et al.*, 1993). Hence, future research should take a holistic approach. The current study demonstrates that organizational culture has effect on relationship quality. Palmatier *et al.* (2006, p. 149) posit that "that objective

performance is influenced most by relationship quality (a composite measure of relationship strength) and least by commitment". Hence, a multidimensional perspective should be employed because "no single or "best" relational mediator can capture the full essence or depth of a customer–seller relationship" (*ibid.*, p 149). On the other hand, many studies have corroborated the effect of organizational culture and business performance (Deshpandé *et al.*, 1993; 2004). Thus, relationship quality should mediate the effects of organizational culture on business performance. Moreover, logistics performance could be another mediator. Indeed, various variables of relationship marketing appear to have effect on logistics performance which comprises goal achievement, goal exceedance, level of logistics services and level of logistics costs (Deepen, 2007). Moreover, logistics performance, in turn, affects business performance which encompasses adaptiveness, market performance and financial performance (*ibid.*, 252).

Fifthly, future research might explore the effect of organizational culture on internal relationship quality. According to Gummesson (2008b, p. 20), instead of being limited to customer-client relationships, "marketing management should be broadened into marketing-oriented company management". As both full-time and part-time marketers influence relationships involving customers and other stakeholders, marketing orientation should encompass the whole company (Gummesson, 2008b). In other words, the notions of full-time and part-time marketing make "legitimate and imperative for everyone to influence customer relationships" (*ibid.*, p. 77). Moreover, "attracting employees with the potential to be part-time marketers, developing their marketing skills and knowledge, and building an organizational climate for marketing" are at the core of relationship marketing (Berry, 1995, p. 241). Although the concept of internal service quality has received some attention (Christo and Gerhard, 1995; Reynoso and Moores, 1995; Kang *et al.*, 2002; Voss *et al.*, 2005), internal relationship quality is clearly underexplored. Hence, future studies should conceptualize the

construct and assess the relationship between organizational culture and internal relationship quality.

The sixth avenue for future research relates to methodology. Although the GLOBE theory of culture demonstrates evidence for the highest level of utility and falsifiability, it would be naive to state that individualism and collectivism, human orientation, power distance and assertiveness are the only relevant cultural antecedents of relationship quality. Deshpande and Webster (1989) posit that both qualitative and quantitative methods should be employed to study organizational culture. Indeed, Hofstede (2001, p. 393) calls for "a combination of qualitative approach for depth and empathy with a quantitative approach for confirmation". Ashkanasy *et al.* (2000, p. 132) concurs "that there is a need for multilevel and multimethod conceptualization" of organizational culture. Hence, future studies should try to enrich conceptualization of organizational culture and might reveal its other effects on relationship quality.

Finally, *the seventh* potentially fruitful area of research is longitudinal causal research into the effects of organizational culture on relationship quality. Instead of giving "only a "snapshot" of an ongoing dynamic process" as cross-sectional research do (Kline, 2011, p. 108), longitudinal studies can reveal many important aspects. For example, it can corroborate of refute the true causal relationships between culture change and development of relationship quality.

10.7 Concluding Remarks

In summary, Chapter 10 forwards the conclusions and implications stemming from the current study. *Firstly*, the study findings are summarized. This section is organized into three parts: the study objectives and conceptualisation, conclusions pertaining to measurement models and conclusions pertaining to structural models. *Secondly*, the conclusions result in the discussion of six theoretical contributions. *Thirdly*, the managerial implications stemming

from the study findings are contemplated. *Fourthly*, the limitations of the study are revealed.

Finally, avenues for future research are detailed.

APPENDIX A

IDENTIFICATION MATRIXES OF NON-RECURSIVE RELATIONSHIP QUALITY MODEL

Matrix 5

	Opportunism	1	2	3	4	5	6	7	Number of Excluded Variables
1. Action Loyalty	0	1	1	0	0	0	0	0	6
2. Reciprocity	0	0	1	1	0	0	0	0	6
3. Co-operation	0	0	0	1	1	0	0	0	6
4. Trust	1	0	1	0	1	0	0	0	5
5. Client's Response to harm	0	0	1	0	0	1	0	0	6
6. Provider's Response to Harm	0	0	1	0	0	0	1	0	6
7. Exchange-of -Good	0	0	1	0	0	0	0	1	6

Matrix 6

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	~~0~~	~~1~~	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
2. Reciprocity	0	~~0~~	~~1~~	1	0	0	0	0
3. Co-operation	0	~~0~~	~~0~~	1	1	0	0	0
4. Trust	1	~~0~~	~~1~~	0	1	0	0	0
5. Client's Response to harm	0	~~0~~	~~1~~	0	0	1	0	0
6. Provider's Response to Harm	0	~~0~~	~~1~~	0	0	0	1	0
7. Exchange-of -Good	0	~~0~~	~~1~~	0	0	0	0	1

Matrix 7

0	1	0	0	0	0
0	1	1	0	0	0
1	0	1	0	0	0
0	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

Matrix 8

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	1	~~1~~	~~0~~	0	0	0	0
2. Reciprocity	~~0~~	~~0~~	~~1~~	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~
3. Co-operation	0	0	~~0~~	~~1~~	1	0	0	0
4. Trust	1	0	~~1~~	~~0~~	1	0	0	0
5. Client's Response to harm	0	0	~~1~~	~~0~~	0	1	0	0
6. Provider's Response to Harm	0	0	~~1~~	~~0~~	0	0	1	0
7. Exchange-of -Good	0	0	~~1~~	~~0~~	0	0	0	1

Matrix 9

0	1	0	0	0	0
0	0	1	0	0	0
1	0	1	0	0	0
0	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	1	1	~~0~~	~~0~~	0	0	0
2. Reciprocity	0	0	1	~~1~~	~~0~~	0	0	0
3. Co-operation	0	0	0	~~1~~	~~1~~	0	0	0
4. Trust	1	0	1	~~0~~	~~1~~	0	0	0
5. Client's Response to harm	0	0	1	~~0~~	~~0~~	1	0	0
6. Provider's Response to Harm	0	0	1	~~0~~	~~0~~	0	1	0
7. Exchange-of -Good	0	0	1	~~0~~	~~0~~	0	0	1

0	1	1	0	0	0
0	0	1	0	0	0
1	0	1	0	0	0
0	0	1	1	0	0
0	0	1	0	1	0
0	0	1	0	0	1

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	~~0~~	1	~~1~~	0	~~0~~	0	0	0
2. Reciprocity	~~0~~	0	~~1~~	1	~~0~~	0	0	0
3. Co-operation	~~0~~	0	~~0~~	1	~~1~~	0	0	0
4. Trust	~~1~~	0	~~1~~	0	~~1~~	0	0	0
5. Client's Response to harm	~~0~~	0	~~1~~	0	~~0~~	1	0	0
6. Provider's Response to Harm	~~0~~	0	~~1~~	0	~~0~~	0	1	0
7. Exchange-of -Good	~~0~~	0	~~1~~	0	~~0~~	0	0	1

1	0	0	0	0
0	1	0	0	0
0	1	0	0	0
0	0	1	0	0
0	0	0	1	0
0	0	0	0	1

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	1	~~1~~	0	0	~~0~~	0	0
2. Reciprocity	0	0	~~1~~	1	0	~~0~~	0	0
3. Co-operation	0	0	~~0~~	1	1	~~0~~	0	0
4. Trust	1	0	~~1~~	0	1	~~0~~	0	0
5. Client's Response to harm	~~0~~	~~0~~	~~1~~	~~0~~	~~0~~	~~1~~	~~0~~	~~0~~
6. Provider's Response to Harm	0	0	~~1~~	0	0	~~0~~	1	0
7. Exchange-of -Good	0	0	~~1~~	0	0	~~0~~	0	1

0	1	0	0	0	0
0	0	1	0	0	0
0	0	1	1	0	0
1	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	1	~~1~~	0	0	0	~~0~~	0
2. Reciprocity	0	0	~~1~~	1	0	0	~~0~~	0
3. Co-operation	0	0	~~0~~	1	1	0	~~0~~	0
4. Trust	1	0	~~1~~	0	1	0	~~0~~	0
5. Client's Response to harm	0	0	~~1~~	0	0	1	~~0~~	0
6. Provider's Response to Harm	0	0	~~1~~	0	0	0	~~1~~	0
7. Exchange-of -Good	0	0	~~1~~	0	0	0	~~0~~	1

0	1	0	0	0	0
0	0	1	0	0	0
0	0	1	1	0	0
1	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	1	~~1~~	0	0	0	0	~~0~~
2. Reciprocity	0	0	~~1~~	1	0	0	0	~~0~~
3. Co-operation	0	0	~~0~~	1	1	0	0	~~0~~
4. Trust	1	0	~~1~~	0	1	0	0	~~0~~
5. Client's Response to harm	0	0	~~1~~	0	0	1	0	~~0~~
6. Provider's Response to Harm	0	0	~~1~~	0	0	0	1	~~0~~
7. Exchange-of -Good	~~0~~	~~0~~	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~	~~1~~

0	1	0	0	0	0
0	0	1	0	0	0
0	0	1	1	0	0
1	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

	Relation-ship Age	Opportunism	1	2	3	4	5	6	7	Number of Excluded Variables
1. Action Loyalty	0	0	1	1	0	0	0	0	0	7
2. Reciprocity	1	0	0	1	1	0	0	0	0	6
3. Co-operation	0	0	0	0	1	1	0	0	0	7
4. Trust	0	1	0	1	0	1	0	0	0	6
5. Client's Response to harm	0	0	0	1	0	0	1	0	0	7
6. Provider's Response to Harm	0	0	0	1	0	0	0	1	0	7
7. Exchange-of -Good	0	0	0	1	0	0	0	0	1	7

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	~~0~~	~~0~~	~~1~~	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
2. Reciprocity	1	0	~~0~~	~~1~~	1	0	0	0	0
3. Co-operation	0	0	~~0~~	~~0~~	1	1	0	0	0
4. Trust	0	1	~~0~~	~~1~~	0	1	0	0	0
5. Client's Response to harm	0	0	~~0~~	~~1~~	0	0	1	0	0
6. Provider's Response to Harm	0	0	~~0~~	~~1~~	0	0	0	1	0
7. Exchange-of -Good	0	0	~~0~~	~~1~~	0	0	0	0	1

1	0	1	0	0	0	0
0	0	1	1	0	0	0
0	1	0	1	0	0	0
0	0	0	0	1	0	0
0	0	0	0	0	1	0
0	0	0	0	0	0	1

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	~~0~~	0	1	~~1~~	~~0~~	0	0	0	0
2. Reciprocity	~~1~~	0	0	~~1~~	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~
3. Co-operation	~~0~~	0	0	~~0~~	~~1~~	1	0	0	0
4. Trust	~~0~~	1	0	~~1~~	~~0~~	1	0	0	0
5. Client's Response to harm	~~0~~	0	0	~~1~~	~~0~~	0	1	0	0
6. Provider's Response to Harm	~~0~~	0	0	~~1~~	~~0~~	0	0	1	0
7. Exchange-of -Good	~~0~~	0	0	~~1~~	~~0~~	0	0	0	1

0	1	0	0	0	0
0	0	1	0	0	0
1	0	1	0	0	0
0	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	0	1	1	~~0~~	~~0~~	0	0	0
2. Reciprocity	1	0	0	1	~~1~~	~~0~~	0	0	0
3. Co-operation	~~0~~	~~0~~	~~0~~	~~0~~	~~1~~	~~1~~	~~0~~	~~0~~	~~0~~
4. Trust	0	1	0	1	~~0~~	~~1~~	0	0	0
5. Client's Response to harm	0	0	0	1	~~0~~	~~0~~	1	0	0
6. Provider's Response to Harm	0	0	0	1	~~0~~	~~0~~	0	1	0
7. Exchange-of -Good	0	0	0	1	~~0~~	~~0~~	0	0	1

Matrix 26

0	0	1	1	0	0	0
1	0	0	1	0	0	0
0	1	0	1	0	0	0
0	0	0	1	1	0	0
0	0	0	1	0	1	0
0	0	0	1	0	0	1

Matrix 27

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	~~0~~	1	~~1~~	0	~~0~~	0	0	0
2. Reciprocity	1	~~0~~	0	~~1~~	1	~~0~~	0	0	0
3. Co-operation	0	~~0~~	0	~~0~~	1	~~1~~	0	0	0
4. Trust	~~0~~	~~1~~	~~0~~	~~1~~	~~0~~	~~1~~	~~0~~	~~0~~	~~0~~
5. Client's Response to harm	0	~~0~~	0	~~1~~	0	~~0~~	1	0	0
6. Provider's Response to Harm	0	~~0~~	0	~~1~~	0	~~0~~	0	1	0
7. Exchange-of -Good	0	~~0~~	0	~~1~~	0	~~0~~	0	0	1

Matrix 28

0	1	0	0	0	0
1	0	1	0	0	0
0	0	1	0	0	0
0	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	0	1

Matrix 29

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	0	1	~~1~~	0	0	~~0~~	0	0
2. Reciprocity	1	0	0	~~1~~	1	0	~~0~~	0	0
3. Co-operation	0	0	0	~~0~~	1	1	~~0~~	0	0
4. Trust	0	1	0	~~1~~	0	1	~~0~~	0	0
5. Client's Response to harm	~~0~~	~~0~~	~~0~~	~~1~~	~~0~~	~~0~~	~~1~~	~~0~~	~~0~~
6. Provider's Response to Harm	0	0	0	~~1~~	0	0	~~0~~	1	0
7. Exchange-of -Good	0	0	0	~~1~~	0	0	~~0~~	0	1

Matrix 30

0	0	1	0	0	0	0
1	0	0	1	0	0	0
0	0	0	1	1	0	0
0	1	0	0	1	0	0
0	0	0	0	0	1	0
0	0	0	0	0	0	1

Matrix 31

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	0	1	~~1~~	0	0	0	~~0~~	0
2. Reciprocity	1	0	0	~~1~~	1	0	0	~~0~~	0
3. Co-operation	0	0	0	~~0~~	1	1	0	~~0~~	0
4. Trust	0	1	0	~~1~~	0	1	0	~~0~~	0
5. Client's Response to harm	0	0	0	~~1~~	0	0	1	~~0~~	0
6. Provider's Response to Harm	~~0~~	~~0~~	0	~~1~~	~~0~~	~~0~~	~~0~~	~~1~~	~~0~~
7. Exchange-of -Good	0	0	0	~~1~~	0	0	0	~~0~~	1

Matrix 32

0	0	1	0	0	0	0
1	0	0	1	0	0	0
0	0	0	1	1	0	0
0	1	0	0	1	0	0
0	0	0	0	0	1	0
0	0	0	0	0	0	1

Matrix 33

	Relationship Age	Opportunism	1	2	3	4	5	6	7
1. Action Loyalty	0	0	1	~~1~~	0	0	0	0	~~0~~
2. Reciprocity	1	0	0	~~1~~	1	0	0	0	~~0~~
3. Co-operation	0	0	0	~~0~~	1	1	0	0	~~0~~
4. Trust	0	1	0	~~1~~	0	1	0	0	~~0~~
5. Client's Response to harm	0	0	0	~~1~~	0	0	1	0	~~0~~
6. Provider's Response to Harm	0	0	0	~~1~~	0	0	0	1	~~0~~
7. Exchange-of -Good	~~0~~	~~0~~	0	~~0~~	~~1~~	~~0~~	~~0~~	~~0~~	~~1~~

Matrix 34

0	0	1	0	0	0	0
1	0	0	1	0	0	0
0	0	0	1	1	0	0
0	1	0	0	1	0	0
0	0	0	0	0	1	0
0	0	0	0	0	0	1

APPENDIX B

IDENTIFICATION MATRIXES OF RELATIONSHIP QUALITY STRUCTURAL MODEL WITH THE EFFECTS OF ORGANIZATIONAL CULTURE

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5	Number of Excluded Variables
1. Action Loyalty	0	0	0	1	1	0	0	0	6
2. Reciprocity	1	0	1	0	1	1	0	0	4
3. Co-operation	0	0	0	0	0	1	1	0	6
4. Trust	0	1	0	0	1	0	1	1	4
5. Opportunism	1	0	0	0	0	0	0	1	6

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5
1. Action Loyalty	0	0	0	1	1	0	0	0
2. Reciprocity	1	0	1	0	1	1	0	0
3. Co-operation	0	0	0	0	0	1	1	0
4. Trust	0	1	0	0	1	0	1	1
5. Opportunism	1	0	0	0	0	0	0	1

1	0	1	1	0	0
0	0	0	1	1	0
0	1	0	0	1	1
1	0	0	0	0	1

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5
1. Action Loyalty	0	0	0	1	1	0	0	0
2. Reciprocity	1	0	1	0	1	1	0	0
3. Co-operation	0	0	0	0	0	1	1	0
4. Trust	0	1	0	0	1	0	1	1
5. Opportunism	1	0	0	0	0	0	0	1

0	1	0	0
0	0	1	0
1	0	1	1
0	0	0	1

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5
1. Action Loyalty	0	0	0	1	1	0	0	0
2. Reciprocity	1	0	1	0	1	1	0	0
3. Co-operation	0	0	0	0	0	1	1	0
4. Trust	0	1	0	0	1	0	1	1
5. Opportunism	1	0	0	0	0	0	0	1

0	0	0	1	1	0
1	0	1	0	1	0
0	1	0	0	1	1
1	0	0	0	0	1

Matrix 42

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5
1. Action Loyalty	0	~~0~~	0	1	~~1~~	0	~~0~~	~~0~~
2. Reciprocity	1	~~0~~	1	0	~~1~~	1	~~0~~	~~0~~
3. Co-operation	0	~~0~~	0	0	~~0~~	1	~~1~~	~~0~~
4. Trust	~~0~~	~~1~~	~~0~~	0	~~1~~	0	~~1~~	~~1~~
5. Opportunism	1	~~0~~	0	0	~~0~~	0	~~0~~	~~1~~

Matrix 43

0	0	1	0
1	1	0	1
0	0	0	1
1	0	0	0

Matrix 44

	Power Distance	Human Orientation	Relationship Age	1	2	3	4	5
1. Action Loyalty	~~0~~	0	0	1	1	0	0	~~0~~
2. Reciprocity	~~1~~	0	1	0	1	1	0	~~0~~
3. Co-operation	~~0~~	0	0	0	0	1	1	~~0~~
4. Trust	~~0~~	1	0	0	1	0	1	~~1~~
5. Opportunism	~~1~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~1~~

Matrix 45

0	0	1	1	0	0
0	1	0	1	1	0
0	0	0	0	1	1
1	0	0	1	0	1

APPENDIX C
QUESTIONNAIRE

Q1. Warwick Business School is extremely grateful to you for your agreement to participate in this survey.

Anonymity guaranteed.

Survey is being conducted by an independent research body - Warwick Business School - which guarantees that all of your answers will be anonymous and will not be revealed to a third party. The data will be used for research purposes only. Your answers will be combined with others, and will never be linked with you personally.

Please press NEXT to proceed.

Q2. Which of the following categories best describes your job function?

❍ Logistics (e.g. logistics executive, logistics manager etc.)

❍ Supply chain (e.g. supply chain director, supply chain manager etc.)

❍ Transport (e.g. head of transport, transport manager etc.)

❍ Other (please specify)_____

Q3. What is the industry of your company?

❍ Manufacturing

❍ Wholesale trade

❍ Retail trade

❍ Other (please specify)_____

Q4. Which of the following logistics services does your company outsource? Please select all applicable services, which your company outsource.

❑ Transportation Operations
❑ Warehousing
❑ Transportation Planning
❑ Logistics Information Systems
❑ Lead Logistics Management
❑ Consulting services
❑ International Freight Forwarding
❑ Customs Clearance
❑ Cross-Docking
❑ Inventory Control / Management
❑ Pick/Pack Operations
❑ Assembly
❑ Product Returns
❑ NONE OF THE ABOVE

Q5. How many years have you used the services of your Logistics Service Provider (LSP)? If you have several providers, think about ONLY ONE, which is the most important to your company.

Please specify_____

Please indicate your level of agreement with the following statements about the Logistics Service Provider (LSP) of your company. If you have several providers, think about ONLY ONE, which is the most important to your company. LSP - Logistics Service Provider.

LCOG1. I believe that using this LSP is preferable to other companies.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCOG2. I believe that this LSP has the best offers at the moment.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCOG3. I believe that the services of this LSP are badly suited to what I like.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCOG4. I prefer the services of this LSP to the services of competitors.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAF1. I have a negative attitude to this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAF2. I dislike the offerings of this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAF3. I like the services of this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAF4. I like the offers of this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAF5. I like the overall performance of this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCON1. I have repeatedly found that this LSP is better than others.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCON2. I nearly always find the offers of this LSP inferior.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCON3. I have repeatedly found the services of this LSP inferior.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LCON4. Repeatedly, the overall performance of this LSP is superior to that of competitor firms.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAC1. I would always continue to choose this LSP before others.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAC2. I will always continue to choose the services of this LSP before others.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAC3. I would always continue to favour the offerings of this LSP before others.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

LAC4. I will always choose to use this LSP in preference to competitors.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements about different aspects of co-operation between your company and the Logistics Service Provider (LSP). If you have several providers, think about ONLY ONE, which is the most important to your company. LSP - Logistics Service Provider.

C1. The goals of our relationship with this LSP were jointly agreed.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

C2. Our approach to doing business is very similar to this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

C3. In the relationship with this LSP, we always pull together in the same direction.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

C4. When problems arise, we make decisions together with this LSP to get to adequate solutions.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

C5. I think that relationship with this LSP is based on mutual respect.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

C6. This LSP co-operates with us very well.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements about the Logistics Service Provider (LSP) of your company. If you have several providers, think about ONLY ONE, which is the most important to your company. LSP - Logistics Service Provider.

RHP1.   If this LSP realize that they have made a mistake, they seek to remedy the situation.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHP2. This LSP redresses any problems.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHP3. This LSP makes us aware of any problems.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHP4. If this LSP make a mistake, they always let us know.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHP5. This LSP is honest about the problems that arise.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHP6. Rather than reacting to problems at face value, this LSP seeks further explanation.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements about behaviour of YOUR COMPANY with THE LOGISTICS SERVICE PROVIDER (LSP). If you have several providers, think about ONLY ONE, which is the most important to your company. LSP - Logistics Service Provider.

RHC1. If your company realize that they have made a mistake, they seek to remedy the situation.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHC2. Your company redresses any problems that may have been caused to this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHC3. Your company makes this LSP aware of any problems they have caused to this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHC4. If your company make a mistake, they always let this LSP know.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHC5. Your company is honest about the problems that arise.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

RHC6. Rather than reacting to problems at face value, your company seeks further explanation.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements.

EG1. Overall, your company and this LSP provide each other with equal benefits.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

EG2. There is a balance in the dealings of your company and this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

EG3. There is equity in dealings of your company and this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

EG4. The exchange of benefits between your company and this LSP even out over time.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements about the Logistics Service Provider of your company. If you have several providers, think about ONLY ONE, which is the most important to your company. LSP - Logistics Service Provider.

OP1. Sometimes this LSP fails to keep promises.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

OP2. Sometimes this LSP alters the facts significantly.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

OP3. Sometimes this LSP exaggerates its requirements.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

OP4. On occasion this LSP lies to your company to protect own interests.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

Please indicate your level of agreement with the following statements.

COM1. We frequently discuss problems with this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

COM2. The exchange of information between us and this LSP works very well.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

COM3. To reach our goals, a lot of communication with this LSP is necessary.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

COM4. We always exchange information with this LSP that is relevant.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

COM5. This LSP appears to provide information as soon as it becomes available.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

COM6. Information provided by this LSP is reliable.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T1. This LSP cannot be trusted at times.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T2. This LSP can be counted on to do what is right.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T3. This LSP has high integrity.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T4. This LSP is interested in more than just selling services.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T5. There are no limits to how far this LSP will go to solve a service problem.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T6. This LSP appears to be genuinely committed to my satisfaction.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T7. Most of what this LSP says about its services is true.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T8. I think some of this LSP claims about its services are exaggerated.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T9. If this LSP makes a promise about its service, it's probably true.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T10. In my experience this LSP is very reliable.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

T11. I feel I know what to expect from this LSP.

Very strongly disagree			Neither agree nor disagree			Very strongly agree
○	○	○	○	○	○	○

In this section, we are interested in your beliefs about what the norms, values, and practices are in YOUR COMPANY. In other words, we are interested in the way YOUR COMPANY IS — not the way you think it should be. Again, there are no right or wrong answers, and answers don't indicate the goodness or badness of your company.

UA1. In your company, orderliness is stressed, even at the expense of experimentation and innovation

Very strongly agree			Neither agree nor disagree			Very strongly disagree
○	○	○	○	○	○	○

UA2. In your company, most work is highly structured, leading to few unexpected events.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
○	○	○	○	○	○	○

UA3. In your company, job requirements are spelled out in detail so employees know what they are expected to do.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
○	○	○	○	○	○	○

COLI1. In your company, managers encourage group work even if individual goals suffer.

Very strongly agree			Neither agree nor disagree			Very strongly disagree
○	○	○	○	○	○	○

COLI2. In your company, the pay / bonus system is designed to maximize:

Individual
interests

Collective
interests

○　　　○　　　○　　　○　　　○　　　○　　　○

COLI3. In your company:

Group cohesion
is more valued
than
individualism

Group cohesion
and
individualism are
equally valued

Individualism is
more valued
than group
cohesion

○　　　○　　　○　　　○　　　○　　　○　　　○

COLG1. In your company, members take pride in the accomplishments of their manager.

Very strongly
agree

Neither agree
nor disagree

Very strongly
disagree

○　　　○　　　○　　　○　　　○　　　○　　　○

COLG2. In your company, managers take pride in the accomplishments of their members.

Very strongly
agree

Neither agree
nor disagree

Very strongly
disagree

○　　　○　　　○　　　○　　　○　　　○　　　○

COLG3. In your company, employees feel loyalty to the organization

Very strongly
agree

Neither agree
nor disagree

Very strongly
disagree

○　　　○　　　○　　　○　　　○　　　○　　　○

COLG4. Members of your company:

Take no pride in
working for the
organization

Take a moderate
amount of pride
in working for the
organization

Take a great
deal of pride in
working for the
organization

○　　　○　　　○　　　○　　　○　　　○　　　○

COLG5. Your company shows loyalty towards employees.

Very strongly
agree

Neither agree nor
disagree

Very strongly
disagree

○　　　○　　　○　　　○　　　○　　　○　　　○

HO1 – HO4. In your company, people are generally:

Very concerned about others	○	○	○	○	○	○	○	Totally unconcerned about others
Very sensitive toward others	○	○	○	○	○	○	○	Not at all sensitive toward others
Very friendly	○	○	○	○	○	○	○	Very unfriendly
Very generous	○	○	○	○	○	○	○	Not at all generous

A1 - A4. In your company, people are generally:

Aggressive	○	○	○	○	○	○	○	Non-aggressive
Dominant	○	○	○	○	○	○	○	Non-dominant
Tough	○	○	○	○	○	○	○	Tender
Assertive	○	○	○	○	○	○	○	Non-assertive

PD1. In your company, a person's influence is based primarily on:

One's ability and contribution to the organization						The authority of one's position
○	○	○	○	○	○	○

PD2. In your company, subordinates are expected to:

Obey their boss without question						Question their boss when in disagreement
○	○	○	○	○	○	○

PD3. In your company, people in positions of power try to:

Increase their social distance from less powerful individuals						Decrease their social distance from less powerful people
○	○	○	○	○	○	○

Q9. Approximately, how many employees are there in your company?

Please specify_____

BIBLIOGRAPHY

Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67(5), 422-436.

Adams, J. S. (1966). Inequity in social exchange. In: Leonard, B. (ed.) Advances in experimental social psychology. Academic Press. 267-299.

Akaike, H. (1974). A new look at the statistical model identification. *Automatic Control, IEEE Transactions on*, 19(6), 716-723.

Allen, R., F. & Dyer, F., J. (1980). A tool for tapping the organizational unconscious. *Personnel Journal (pre-1986)*, 59(3), 192-192.

Anderson, E. & Weitz, B. (1992). The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research*, 29(1), 18-34.

Anderson, J. C. & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indexes for maximum-likelihood confirmatory factor-analysis. *Psychometrika*, 49(2), 155-173.

Anderson, J. C. & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.

Anderson, J. C. & Gerbing, D. W. (1992). Assumptions and comparative strengths of the two-step approach. *Sociological Methods & Research*, 20(3), 321-333.

Anderson, J. C., Håkansson, H. & Johanson, J. (1994). Dyadic business relationships within a business network context. *The Journal of Marketing*, 58(4), 1-15.

Anderson, J. C. & Narus, J. A. (1984). A model of the distributor's perspective of distributor-manufacturer working relationships. *The Journal of Marketing*, 48(4), 62-74.

Anderson, J. C. & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *The Journal of Marketing*, 54(1), 42-58.

Anderson, J. C. & Narus, J. A. (1991). Partnering as a focused market strategy. *California Management Review*, 33(3), 95-95.

Anderson, N. (2002). *Handbook of industrial, work and organizational psychology,* London, Sage.

Armstrong, J. S. & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. Journal of Marketing Research, 14(3), 396-402.

Ashford, S. J. & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance*, 32(3), 370-398.

Ashford, S. J. & Cummings, L. L. (1985). Proactive feedback seeking: The instrumental use of the information environment. *Journal of Occupational Psychology*, 58(1), 67-79.

Ashkanasy, N. M., Broadfoot, L. E. & Falkus, S. (2000). Questionnaire measures of organizational culture. In: Ashkanasy, N. M., Wilderom, C. & Peterson, M. F. (eds.) Handbook of organizational culture & climate. Thousand Oaks: Sage Publications. 131-145.

Ashnai, B., Smirnova, M., Kouchtch, S., Yu, Q., Barnes, B. R. & Naude, P. (2009). Assessing relationship quality in four business-to-business markets. *Marketing Intelligence & Planning*, 27(1), 86 - 102.

Athanasopoulou, P. (2009). Relationship quality: A critical literature review and research agenda. *European Journal of Marketing*, 43(5/6), 583-610.

Atkinson, L. (1988). The measurement-statistics controversy: Factor analysis and subinterval data. *Bulletin of the Psychonomic Society*, 26(4), 361-364.

Babakus, E., Ferguson, C. E., Jr. & Jöreskog, K. G. (1987). The sensitivity of confirmatory maximum likelihood factor analysis to violations of measurement scale and distributional assumptions. *Journal of Marketing Research*, 24(2), 222-228.

Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *The Academy of Management Review*, 14(4), 496-515.

Bacon, D. R., Sauer, P. L. & Young, M. (1995). Composite reliability in structural equations modeling. *Educational and Psychological Measurement*, 55(3), 394-406.

Bagozzi, R. (1995). Reflections on relationship marketing in consumer markets. *Journal of the Academy of Marketing Science*, 23(4), 272-277.

Bagozzi, R. P. (1974). Marketing as an organized behavioral system of exchange. *Journal of Marketing*, 38(4), 77-81.

Bagozzi, R. P. (1975). Marketing as exchange. *Journal of Marketing*, 39(4), 32-39.

Bagozzi, R. P. (1984). A prospectus for theory construction in marketing. *Journal of Marketing*, 48(1), 11-29.

Bagozzi, R. P. & Phillips, L. W. (1982). Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly*, 27(3), 459-489.

Bagozzi, R. P. & Yi, Y. (1991). Multitrait-multimethod matrices in consumer research. *Journal of Consumer Research*, 17(4), 426-439.

Bagozzi, R. P., Yi, Y. & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly*, 36(3), 421-458.

Bagozzi, R. P. & Youjae, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.

Bansal, H. S., Irving, P. G. & Taylor, S. F. (2004). A three-component model of customer to service providers. *Journal of the Academy of Marketing Science*, 32(3), 234-250.

Barabba, V. P. (1995). *Meeting of the minds : Creating the market-based enterprise,* Boston, Mass., Harvard Business School Press.

Barney, J. B. & Ouchi, W. G. (1986). *Organizational economics,* San Francisco, Jossey-Bass.

Baron, R. M. & Kenny, D. A. (1986a). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Baron, R. M. & Kenny, D. A. (1986b). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Baron, S., Conway, A. & Warnaby, G. (2010). *Relationship marketing : A consumer experience approach,* Los Angeles, Sage.

Barratt, M. (2004). Understanding the meaning of collaboration in the supply chain. *Supply Chain Management: An International Journal*, 9(1), 30-42.

Becker, L. C. (1990). *Reciprocity,* Chicago, University of Chicago Press.

Bejou, D., Wray, B. & Ingram, T. N. (1996). Determinants of relationship quality: An artificial neural network analysis. *Journal of Business Research*, 36(2), 137-143.

Bentler, P. & Chou, C. P. (1987a). Practical issues in structural modeling. *Sociological Methods and Research*, 16(1), 78-117.

Bentler, P. & Freeman, E. (1983). Tests for stability in linear structural equation systems. *Psychometrika*, 48(1), 143-145.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107 (2), 238-246.

Bentler, P. M. & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. . *Psychological Bulletin*, 88(3), 588-606.

Bentler, P. M. & Chou, C.-P. (1987b). Practical issues in structural modeling. *Sociological Methods & Research*, 16(1), 78-117.

Bentler, P. M. & Savalei, V. (2006). Structural equation modeling. In: Grover, R. & Vriens, M. (eds.) The handbook of marketing research : Uses, misuses, and future advances. Thousand Oaks: Sage Publications. 330-364.

Berry, L. (1995). Relationship marketing of services—growing interest, emerging perspectives. *Journal of the Academy of Marketing Science*, 23(4), 236-245.

Berry, L. L. (1983). Relationship marketing. In: Berry, L. L., Shostack, G. L. & Upah, G. D. (eds.) Emerging perspectives in services marketing. Chicago: AMA.

Berry, W. D. (1984). *Nonrecursive causal models,* Beverly Hills, Calif., Sage Publications.

Best, S. J. & Krueger, B. S. (2008). Internet survey design. In: Fielding, N., Lee, R. M. & Blank, G. (eds.) The sage handbook of online research methods. Los Angeles: Sage. 195-216.

BéTeille, A. (1977). *Inequality among men,* London, Blackwell.

Beugré, C. D. (2007). *A cultural perspective of organizational justice,* Charlotte, N.C., Information Age Pub.

Bigoness, W. J. & Blakely, G. L. (1996). A cross-national study of managerial values. *Journal of International Business Studies*, 27(4), 739-752.

Blake, R. R. & Mouton, J. S. (1964). *The managerial grid: Key orientations for achieving production through people,* Houston, Tex., Gulf Pub. Co.

Blalock, H. M. (1964). *Causal inferences in nonexperimental research,* Chapel Hill,, University of North Carolina Press.

Blau, P. M. (1964). *Exchange and power in social life,* New York, J. Wiley.

Bochner, S. & Hesketh, B. (1994). Power distance, individualism/collectivism, and job-related attitudes in a culturally diverse work group. *Journal of Cross-Cultural Psychology*, 25(2), 233-257.

Boles, J. S., Johnson, J. T. & Barksdale Jr, H. C. (2000). How salespeople build quality relationships:: A replication and extension. *Journal of Business Research*, 48(1), 75-81.

Bollen, K. A. (1987). Total, direct, and indirect effects in strcutural equation models. In: Clogg, C. C. (ed.) Sociological methodology. Washington, DC: American Sociological Association.

Bollen, K. A. (1989). *Structural equations with latent variables,* New York, Wiley.

Bollen, K. A. & Jöreskog, K. G. (1985). Uniqueness does not imply identification. *Sociological Methods & Research*, 14(2), 155-163.

Bollen, K. A. & Stine, R. A. (1992). Bootstrapping goodness-of-fit measures in structural equation models. *Sociological Methods & Research*, 21(2), 205-229.

Bonta, B. D. (1997). Cooperation and competition in peaceful societies. *Psychological Bulletin*, 121(2), 299-320.

Boomsma, A. & Hoogland, J. J. (2001). The robustness of lisrel modeling revisited. In: Cudeck, R., Du Toit, S. & Sörbom, D. (eds.) Structural equation modeling: Present and future: A festschrift in honor of karl jöreskog. Scientific Software International. 139-168.

Borgatta, E. F. (1964). The structure of personality characteristics. *Behavioral Science*, 9(1), 8-17.

Bouchard, T. J. J. (1976). Field research methods: Interviewing, questionnaires, participant observation, systematic observation, unobtrusive measures. In: Dunnette, M. D. (ed.) Handbook of industrial and organizational psychology. New York: Wiley. 363-414.

Bove, L. L., Pervan, S. J., Beatty, S. E. & Shiu, E. (2009). Service worker role in encouraging customer organizational citizenship behaviors. *Journal of Business Research*, 62(7), 698-705.

Breckler, S. J. (1990). Applications of covariance structure modeling in psychology - cause for concern. *Psychological Bulletin*, 107(2), 260-273.

Brehm, J. W. & Cohen, A. R. (1962). *Explorations in cognitive dissonance,* New York,, Wiley.

Brennan, D. R., Turnbull, P. W. & Wilson, D. T. (2003). Dyadic adaptation in business-to-business markets. *European Journal of Marketing*, 37(11), 1636-1665.

Brennan, R. & Turnbull, P. W. (1998). Adaptations in buyer-seller relationships. In: Naudé, P. & Turnbull, P. W. (eds.) Network dynamics in international marketing. 1st ed. Oxford; New York: Pergamon. 26-41.

Brodbeck, F. C., Hanges, P. J., Dickson, M. W., Gupta, V. & Dorfman, P. W. (2004). Societal culture and industrial sector influences on organizational culture. In: House, R. J.,

Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 654-668.

Brown, S. A., Upchurch, S. L. & Acton, G. J. (2003). A framework for developing a coding scheme for meta-analysis. *Western Journal of Nursing Research*, 25(2), 205-222.

Browne, M. W. & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate Behavioral Research*, 24(4), 445-455.

Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In: Bollen, K. A. & Long, J. S. (eds.) Testing structural equation models. Newbury Park: Sage Publications. 136-162.

Bruhn, M. (2003). *Relationship marketing : Management of customer relationships,* Harlow, FT/Prentice Hall.

Buchanan, D. A. & Bryman, A. (2009). *The sage handbook of organizational research methods,* London, Sage.

Bucklin, L. P. & Sengupta, S. (1993). Organizing successful co-marketing alliances. *Journal of Marketing*, 57(2), 32-46.

Burns, A. C. & Bush, R. F. (2010). *Marketing research,* Upper Saddle River, N.J. ; London, Prentice Hall.

Burt, R. S. (1976). Interpretational confounding of unobserved variables in structural equation models. *Sociological Methods & Research*, 5(1), 3-52.

Buttle, F. (2004). *Customer relationship management : Concepts and tools,* Amsterdam ; London, Elsevier Butterworth-Heinemann.

Buttle, F. (2009). *Customer relationship management : Concepts and technologies,* Amsterdam ; London, Butterworth-Heinemann.

Byrne, B. M. (1989). *A primer of lisrel : Basic applications and programming for confirmatory factor analytic models,* New York, Springer-Verlag.

Byrne, B. M. (1998). *Structural equation modeling with lisrel, prelis, and simplis : Basic concepts, applications, and programming,* Mahwah, N.J., L. Erlbaum Associates.

Byrne, B. M. (2001). *Structural equation modeling with amos : Basic concepts, applications, and programming,* Mahwah, N.J., Lawrence Erlbaum Associates.

Byrne, B. M. (2006). *Structural equation modeling with eqs : Basic concepts, applications, and programming,* Mahwah, N.J., Lawrence Erlbaum Associates.

Byrne, B. M. (2009). *Structural equation modeling with amos: Basic concepts, applications, and programming,* New York, Routledge.

Byrne, B. M. (2010). *Structural equation modeling with amos: Basic concepts, applications, and programming,* New York, Routledge.

Byrne, B. M. (2011). *Structural equation modeling with mplus : Basic concepts, applications, and programming,* New York, Routledge Academic.

C.A.S.R.O. (1982). On the definition of response rates, C.A.S.R.O. Special report. Port Jefferson, NY: The Council of American Survey Research Organizations.

Cahill, D. L. (2007). *Customer loyalty in third party logistics relationships : Findings from studies in germany and the USA.* Thesis (doctoral) - Otto Beisheim School of Management, Vallendar, 2006, Physica-Verlag,.

Cameron, K. S. & Quinn, R. E. (2006). *Diagnosing and changing organizational culture : Based on the competing values framework,* San Francisco, Calif., John Wiley.

Cameron, K. S. & Quinn, R. E. (2011). *Diagnosing and changing organizational culture : Based on the competing values framework,* San Francisco, CA, Jossey-Bass.

Campbell, D. T. & Fiske, D. V. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.

Carl, D., Gupta, V. & Javidan, M. (2004). Power distance. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 513-563.

Carlson, D. S. & Kacmar, K. M. (2000). Work–family conflict in the organization: Do life role values make a difference? *Journal of Management*, 26, 1031–1054.

Carmines, E. G. & Mciver, J. P. (1981). Analyzing models with unobserved variables: Analysis of covariance structures. *In:* Bohrnstedt, G. W. & Borgatta, E. F. (eds.) *Social measurement: current issues.* Beverly Hills, CA.

Carr, A. S. & Kaynak, H. (2007). Communication methods, information sharing, supplier development and performance: An empirical study of their relationships. *International Journal of Operations & Production Management*, 27(4), 346-370.

Carte, T. A. & Russell, C. J. (2003). In pursuit of moderation: Nine common errors and their solution. *MIS Quarterly*, 27, 479–501.

Casciaro, T. & Piskorski, M. J. (2005). Power imbalance, mutual dependence, and constraint absorption: A closer look at resource dependence theory. *Administrative Science Quarterly*, 50(2), 167-199.

Castro, S. L. (2002). Data analytic methods for the analysis of multilevel questions: A comparison of intraclass correlation coefficients, rwg(j), hierarchical linear modeling, within- and between-analysis, and random group resampling. *The Leadership Quarterly*, 13(1), 69-93.

Čater, T. & Čater, B. (2010). Product and relationship quality influence on customer commitment and loyalty in b2b manufacturing relationships. *Industrial Marketing Management*, 39(8), 1321-1333.

Cattell, R. (1947). Confirmation and clarification of primary personality factors. *Psychometrika*, 12(3), 197-220.

Chang, S. J., Van Witteloostuijn, A. & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2), 178-184.

Chatman, J. A. & Barsade, S. G. (1995). Personality, organizational culture, and cooperation: Evidence from a business simulation. *Administrative Science Quarterly*, 40(3), 423-443.

Chatman, J. A., Polzer, J. T., Barsade, S. G. & Neale, M. A. (1998). Being different yet feeling similar: The influence of demographic composition and organizational culture on work processes and outcomes. *Administrative Science Quarterly*, 43(4), 749-780.

Chen, C. C., Chen, X.-P. & Meindl, J. R. (1998). How can cooperation be fostered? The cultural effects of individualism-collectivism. *The Academy of Management Review*, 23(2), 285-304.

Cheung, G. W. & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233-255.

Chiles, T. H. & Mcmackin, J. F. (1996). Integrating variable risk preferences, trust, and transaction cost economics. *The Academy of Management Review*, 21(1), 73-99.

Christo, B. & Gerhard, M. (1995). A causal model to evaluate the relationships among supervision, role stress, organizational commitment and internal service quality. *European Journal of Marketing*, 29(2), 23-42.

Christopher, M., Payne, A. & Ballantyne, D. (2002). *Relationship marketing : Creating shareholder value,* Oxford ; Burlington, MA, Elsevier Butterworth-Heinemann.

Clark, L. A. & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3), 309-319.

Cohen, J. (1978). Partialed products are interactions; partialed powers are curve components. *Psychological Bulletin*, 85, 858–866.

Cohen, J. & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences,* Hillsdale, N.J., L. Erlbaum Associates.

Conger, J. A., Kanungo, R. N. & Menon, S. T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, 21, 747–767.

Cook, K. S. & Cooper, R. M. (2003). Experimental studies of cooperation, trust, and social exchange. In: Ostrom, E. & Walker, J. (eds.) Trust and reciprocity: Interdisciplinary lessons from experimental research. New York: Russell Sage Foundation. 209-244.

Cooke, R. A. & Lafferty, J. C. (1983). *Level v: Organizational cultural inventory-form i,* Plymouth, Human Synergistics.

Cooke, R. A. & Lafferty, J. C. (1986). *Level v: Organizational cultural inventory-form iii,* Plymouth, Human Synergistics.

Cooke, R. A. & Rousseau, D. M. (1988). Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture. *Group & Organization Management*, 13(3), 245-273.

Cooke, R. A. & Szumal, J. L. (2000). Using the organizational culture inventory to understand the operating cultures of organizations. In: Ashkanasy, N. M., Wilderom, C. & Peterson, M. F. (eds.) Handbook of organizational culture & climate. Thousand Oaks: Sage Publications. 147-162.

Corley, K. G. & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, 36(1), 12-32.

Cortina, J. M. (1993a). Interaction, nonlinearity, and multicollinearity: Implications for multiple regression. *Journal of Management*, 19, 915–922.

Cortina, J. M. (1993b). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78 (1), 98-104.

Coughlan, A. T., Anderson, E., Stern, L. W. & El-Ansary, A. I. (2001). *Marketing channels,* [Great Britain] ; Upper Saddle River, NJ, Prentice Hall.

Cox, T. H., Sharon, A. L. & Mcleod, P. L. (1991). Effects of ethnic group cultural differences on cooperative and competitive behavior on a group task. *The Academy of Management Journal*, 34(4), 827-847.

Creswell, J. W. (2009). *Research design : Qualitative, quantitative, and mixed methods approaches,* London, Sage.

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

Cronbach, L. J. (1950). Further evidence on response sets and test validity. *Educational and Psychological Measurement*, 10, 3-31.

Cronbach, L. J. (1987). Statistical tests for moderator variables: Flaws in analyses recently proposed. *Psychological Bulletin*, 102, 414–417.

Cronin, J. J., Brady, M. K. & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.

Cropanzano, R. & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.

Crosby, L. A., Evans, K. R. & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *The Journal of Marketing*, 54(3), 68-81.

Crowne, D. P., Marlowe & Marlowe, D. (1964). *The approval motive. Studies in evaluative dependence*, pp. xii. 233. John Wiley & Sons: New York.

Curran, P. J., Bollen, K. A., Chen, F., Paxton, P. & Kirby, J. B. (2003). Finite sampling properties of the point estimates and confidence intervals of the rmsea. *Sociological Methods & Research*, 32(2), 208-252.

Curran, P. J., West, S. G. & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16-29.

Cyert, R. M. & March, J. G. (1963). *A behavioral theory of the firm,* Englewood Cliffs, N.J.,, Prentice-Hall.

Cyert, R. M. & March, J. G. (1992). *A behavioral theory of the firm*, Blackwell.

Dannels, S. A. (2010). Research design. In: Hancock, G. R. & Mueller, R. O. (eds.) The reviewer's guide to quantitative methods in the social sciences. New York: Routledge. 343-355.

Dansereau, F. & Yammarino, F. J. (2006). Is more discussion about levels of analysis really necessary?When is such discussion sufficient? *The Leadership Quarterly*, 17(5), 537-552.

Davis, J. H., Schoorman, F. D. & Donaldson, L. (1997). Toward a stewardship theory of management. *The Academy of Management Review*, 22(1), 20-47.

Dawes, R. M. & Corrigan, B. (1974). Linear models in decision making. *Psychological Bulletin*, 81, 95-106.

Day, G. S. (1969). A two-dimensional concept of brand loyalty. *Journal of advertising research*, 9(3), 29-35.

Day, G. S., Deighton, J., Narayandas, D., Gummesson, E., Shelby, D. H., Prahalad, C. K., Roland, T. R. & Shugan, S. M. (2004). Invited commentaries on "evolving to a new dominant logic for marketing". *Journal of Marketing*, 68(1), 18-27.

De Luque, M. S. & Javidan, M. (2004). Uncertainty avoidance. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 602-653.

De Raad, B. & Peabody, D. (2005). Cross-culturally recurrent personality factors: Analyses of three factors. *European Journal of Personality*, 19(6), 451-474.

De Ruyter, K., Moorman, L. & Lemmink, J. (2001). Antecedents of commitment and trust in customer–supplier relationships in high technology markets. *Industrial Marketing Management*, 30(3), 271-286.

De Wulf, K., Odekerken-Schröder, G. & Iacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of Marketing*, 65(4), 33-50.

Deal, T. E. & Kennedy, A. A. (1982). *Corporate cultures : The rites and rituals of corporate life,* Reading, MA, Addison-Wesley.

Deal, T. E. & Kennedy, A. A. (2000). *Corporate cultures : The rites and rituals of corporate life,* Cambridge, Mass., Perseus Publishing.

Decarlo, L. T. (1997). On the meaning and use of kurtosis. *Psychological methods*, 2(3), 292-307.

Deepen, J. M. (2007). *Logistics outsourcing relationships : Measurements, antecedents, and effects of logistics outsourcing performance,* Heidelberg ; New York, Physica Verlag.

Deepen, J. M., Goldsby, T. J., Knemeyer, A. M. & Wallenburg, C. M. (2008). Beyond expectations: An examination of logistics outsourcing goal achievement and goal exceedance. *Journal of Business Logistics*, 29(2), 75-105.

Denison, D. R. (1996). What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *The Academy of Management Review*, 21(3), 619-654.

Deshpandé, R. & Farley, J. U. (2003). High performance firms in a complex new china. *Journal of Global Marketing*, 16(1-2), 207-229.

Deshpandé, R. & Farley, J. U. (2004). Organizational culture, market orientation, innovativeness, and firm performance: An international research odyssey. *International Journal of Research in Marketing*, 21(1), 3-22.

Deshpandé, R., Farley, J. U. & Webster, F. E., Jr. (1993). Corporate culture, customer orientation, and innovativeness in japanese firms: A quadrad analysis. *The Journal of Marketing*, 57(1), 23-37.

Deshpandé, R., Farley, J. U. & Webster Jr, F. E. (2000). Triad lessons: Generalizing results on high performance firms in five business-to-business markets. *International Journal of Research in Marketing*, 17(4), 353-362.

Deshpande, R. & Webster, F. E., Jr. (1989). Organizational culture and marketing: Defining the research agenda. *The Journal of Marketing*, 53(1), 3-15.

Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In: Jones, M. R. (ed.) Nebraska symposium on motivation. Lincoln: University of Nebraska press. 275-318.

Diamantopoulos, A. & Siguaw, J. A. (2000). *Introducing lisrel : A guide for the uninitiated,* London, Sage.

Diamantopoulos, A. & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. British Journal of Management, 17(4), 263-282.

Diamantopoulos, A. & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. Journal of Marketing Research, 38(2), 269-277.

Dick, A. S. & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.

Dickson, P. H., Weaver, K. M. & Hoy, F. (2006). Opportunism in the r&d alliances of smes: The roles of the institutional environment and sme size. *Journal of Business Venturing*, 21(4), 487-513.

Digman, J. M. & Takemoto-Chock, N. K. (1981). Factors in the natural language of personality: Re-analysis, comparison, and interpretation of six major studies. *Multivariate Behavioral Research*, 16(2), 149-170.

Dirks, K. T. (1999). The effects of interpersonal trust on work group performance. *Journal of Applied Psychology*, 84(3), 445-455.

Distefano, C. (2002). The impact of categorization with confirmatory factor analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(3), 327-346.

Donaldson, L. (1990). The ethereal hand: Organizational economics and management theory. *The Academy of Management Review*, 15(3), 369-381.

Donaldson, L. (2001). *The contingency theory of organizations,* Thousand Oaks, Calif., Sage Publications.

Doney, P. M. & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *The Journal of Marketing*, 61(2), 35-51.

Doney, P. M., Cannon, J. P. & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. *The Academy of Management Review*, 23(3), 601-620.

Dorfman, P. W., Hanges, P. & Brodbeck, F. C. (2004). Leadership and cultural variation: The identification of culturally endorsed leadership profiles. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 669-719.

Dorsch, M., Swanson, S. & Kelley, S. (1998). The role of relationship quality in the stratification of vendors as perceived by customers. *Journal of the Academy of Marketing Science*, 26(2), 128-142.

Duncan, O. D. (1975). *Introduction to structural equation models,* New York, Academic Press.

Dwyer, F. R. & Oh, S. (1987). Output sector munificence effects on the internal political economy of marketing channels. *Journal of Marketing Research*, 24(4), 347-358.

Dwyer, F. R., Schurr, P. H. & Oh, S. (1987). Developing buyer-seller relationships. *Journal of Marketing*, 51(2), 11-27.

Dyer, J. H. (1997). Effective interim collaboration: How firms minimize transaction costs and maximise transaction value. *Strategic Management Journal*, 18(7), 535-556.

Earley, P. C. (1989). Social loafing and collectivism: A comparison of the united states and the people's republic of china. *Administrative Science Quarterly*, 34(4), 565-581.

Earley, P. C. (1997). *Face, harmony, and social structure : An analysis of organizational behavior across cultures,* New York ; Oxford, Oxford University Press.

Eby, L. T. & Dobbins, G. H. (1997). Collectivistic orientation in teams: An individual and group-level analysis. *Journal of Organizational Behavior*, 18(3), 275-295.

Echambadi, R. & Hess, J. (2007). Mean-centering does not alleviate collinearity problems in moderated multiple regression. *Marketing Science*, 26, 438–445.

Efron, B. (1979). Bootstrap methods: Another look at the jackknife. *The Annals of Statistics*, 7(1), 1-26.

Efron, B. (1986). Jackknife, bootstrap and other resampling methods in regression-analysis - discussion. *Annals of Statistics*, 14(4), 1301-1304.

Eggert, A. & Ulaga, W. (2002). Customer perceived value: A substitute for satisfaction in business markets? *Journal of Business & Industrial Marketing*, 17(2), 107-118.

Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, 27, 31-41.

Enders, C. K. & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 8(3), 430-457.

Enz, C. A. (1986). *Power and shared values in corporate culture,* Ann Arbor, Umi Research.

Etzioni, A. (1975). *A comparative analysis of complex organizations : On power, involvement, and their correlates,* New York, Free Press.

Eugene, S. & Jamie, L. B.-P. (2000). An examination of the relationship between service quality, customer satisfaction, and store loyalty. *International Journal of Retail & Distribution Management*, 28(2), 73-82.

Eusebi, P. (2008). A graphical method for assessing the identification of linear structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 15(3), 403-412.

Evanschitzky, H. & Wunderlich, M. (2006). An examination of moderator effects in the four-stage loyalty model. *Journal of Service Research*, 8(4), 330-345.

Fan, X., Thompson, B. & Wang, L. (1999b). Effects of sample size, estimation methods, and model specification on structural equation modeling fit indexes. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 56-83.

Fan, X. & Wang, L. (1998). Effects of potential confounding factors on fit indices and parameter estimates for true and misspecified sem models. *Educational and Psychological Measurement*, 58(5), 701-735.

Feinian, C., Curran, P. J., Bollen, K. A., Kirby, J. & Paxton, P. (2008). An empirical evaluation of the use of fixed cutoff points in rmsea test statistic in structural equation models. *Sociological Methods & Research*, 36(4), 462-494.

Festinger, L. (1957). *A theory of cognitive dissonance,* Evanston, Peterson.

Fey, C. F. & Denison, D. R. (2003). Organizational culture and effectiveness: Can american theory be applied in russia? *Organization Science*, 14(6), 686-706.

Field, A. P. (2009). *Discovering statistics using spss : (and sex, drugs and rock 'n' roll),* Los Angeles, Sage.

Finney, S. J. & Distefano, C. (2006). Nonnormal and categorical data in structural equation modeling. In: Hancock, G. R. & Mueller, R. O. (eds.) Structural equation modeling: A second course. Greenwich: IAP.

Ford, D., Gadde, L. E., Håkansson, H. & Snehota, I. (2003). *Managing business relationships,* Chichester, Wiley.

Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.

Fouladi, R. T. (1998). Covariance structure analysis techniques under conditions of multivariate normality and nonnormality - modified and bootstrap based test statistics. *Paper presented at the annual meeting of the American Educational Research Association*, 1-27.

Fox, J. (1980). Effect analysis in structural equation models. *Sociological Methods & Research*, 9(1), 3-28.

Frazier, G. L. (1983). Interorganizational exchange behavior in marketing channels: A broadened perspective. *The Journal of Marketing*, 47(4), 68-78.

Frazier, G. L., Gill, J. D. & Kale, S. H. (1989). Dealer dependence levels and reciprocal actions in a channel of distribution in a developing country. *The Journal of Marketing*, 53(1), 50-69.

Frazier, G. L. & Summers, J. O. (1986). Perceptions of interfirm power and its use within a franchise channel of distribution. *Journal of Marketing Research*, 23(2), 169-176.

Frenkel-Brunswik (1951). Personality theory and perception. In: Blake, R. & Ramsey, G. (eds.) Perception: An approch to personality. New York: Oxford University Press. 356-421.

Fricker, R. D. (2008). Sampling methods for web and e-mail surveys. In: Fielding, N., Lee, R. M. & Blank, G. (eds.) The sage handbook of online research methods. Los Angeles: Sage. 195-216.

Friman, M., Gärling, T., Millett, B., Mattsson, J. & Johnston, R. (2002). An analysis of international business-to-business relationships based on the commitment–trust theory. *Industrial Marketing Management*, 31(5), 403-409.

Furnham, A. & Ribchester, T. (1995). Tolerance of ambiguity: A review of the concept, its measurement and applications. *Current Psychology*, 14(3), 179.

Fynes, B., De Búrca, S. & Marshall, D. (2004). Environmental uncertainty, supply chain relationship quality and performance. *Journal of Purchasing and Supply Management*, 10(4–5), 179-190.

Fynes, B., Voss, C. & De Búrca, S. (2005). The impact of supply chain relationship quality on quality performance. *International Journal of Production Economics*, 96(3), 339-354.

Gächter, S. & Herrmann, B. (2009). Reciprocity, culture and human cooperation: Previous insights and a new cross-cultural experiment. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1518), 791-806.

Galbraith, J. R. (1974). Organization design: An information processing view. *Interfaces*, 4(3), 28-36.

Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, 58(2), 1-19.

Garbarino, E. & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63(2), 70-87.

Gelfand, M. J., Bhawuk, D. P. S., Nishii, L. H. & Bechtold, D. J. (2004). Individualism and collectivism. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 437-512.

Gerbing, D. W. & Anderson, J. C. (1984). On the meaning of within-factor correlated measurement errors. *Journal of Consumer Research*, 11(1), 572-580.

Gerbing, D. W. & Anderson, J. C. (1993). Monte carlo evaluations of goodness-of-fit indices for structural equation models. In: Bollen, K. A. & Long, J. S. (eds.) Testing structural equation models. Newbury Park: Sage Publications. 40-65.

Geyskens, I., Steenkamp, J.-B. E. M. & Kumar, N. (1998). Generalizations about trust in marketing channel relationships using meta-analysis. *International Journal of Research in Marketing*, 15(3), 223-248.

Geyskens, I., Steenkamp, J.-B. E. M., Scheer, L. K. & Kumar, N. (1996). The effects of trust and interdependence on relationship commitment: A trans-atlantic study. *International Journal of Research in Marketing*, 13(4), 303-317.

Ghoshal, S. & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *The Academy of Management Review*, 21(1), 13-47.

Glaser, R. (1983). *The corporate culture survey,* Bryn Mawr, Organizational Design and Development.

Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *The Academy of Management Review*, 10(3), 601-616.

Gogineni, A., Alsup, R. & Illespie, D. F. (1995). Mediation and moderation in social work research. *Social Work Research*, 19(1), 57-63.

Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216-1229.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48(1), 26-34.

Golden, T. D. & Veiga, J. F. (2008). The impact of superior–subordinate relationships on the commitment, job satisfaction, and performance of virtual workers. *The Leadership Quarterly*, 19(1), 77-88.

Gómez, C., Kirkman, B. L. & Shapiro, D. L. (2000). The impact of collectivism and in-group/out-group membership on the evaluation generosity of team members. *The Academy of Management Journal*, 43(6), 1097-1106.

Goodman, L. E. & Dion, P. A. (2001). The determinants of commitment in the distributor–manufacturer relationship. *Industrial Marketing Management*, 30(3), 287-300.

Goodman, P. S. & Friedman, A. (1971). An examination of adams' theory of inequity. *Administrative Science Quarterly*, 16(3), 271-288.

Gough, H. & Heilbrun, A. (1980). *The adjective check list manual,* Alto, Consulting Psychologists Press.

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25(2), 161-178.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510.

Gremler, D. D. & Brown, S. W. (1996). Service loyalty: Its nature, importance, and implications. In: Edvardsson, B., Brown, S. W., Johnston, R. & Scheuing, E., E. (eds.) Advancing service quality: A global perspective. International Service Quality Association. 171-180.

Grönroos, C. (2000). *Service management and marketing: A customer relationship management approach,* Chichester, Wiley.

Grönroos, C. (2007). *Service management and marketing : Customer management in service competition,* Chichester, John Wiley.

Gruen, T. W., Summers, J. O. & Acito, F. (2000). Relationship marketing activities, commitment, and membership behaviors in professional associations. *Journal of Marketing*, 64(3), 34-49.

Gudykunst, W. B. & Nishida, T. (2001). Anxiety, uncertainty, and perceived effectiveness of communication across relationships and cultures. *International Journal of Intercultural Relations*, 25(1), 55-71.

Gummesson, E. (2008a). Extending the service-dominant logic: From customer centricity to balanced centricity. *Journal of the Academy of Marketing Science*, 36(1), 15-17.

Gummesson, E. (2008b). *Total relationship marketing,* Amsterdam ; Oxford, Butterworth-Heinemann.

Gummesson, E. & Grönroos, C. (2012). The emergence of the new service marketing: Nordic school perspectives. *Journal of Service Management*, 23(4), 479-497.

Gundlach, G. T. & Murphy, P. E. (1993a). Ethical and legal foundations of relational marketing exchanges. *The Journal of Marketing*, 57(4), 35-46.

Gundlach, G. T. & Murphy, P. E. (1993b). Ethical and legal foundations of relational marketing exchanges. *Journal of Marketing*, 57(4), 35-46.

Gupta, V., De Luque, M. S. & House, R. (2004). Multisource construct validity of GLOBE scales. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 152-177.

Gwinner, K., Gremler, D. & Bitner, M. (1998). Relational benefits in services industries: The customer's perspective. *Journal of the Academy of Marketing Science*, 26(2), 101-114.

Hair, J. F., Black, B., Babin, B., Anderson, R. E. & Tatham, R. L. (2006). *Multivariate data analysis,* Upper Saddle River, N.J., Pearson Prentice Hall.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective,* Upper Saddle River, N.J.; London, Pearson Education.

Hair, J. F., Bush, R. P. & Ortinau, D. J. (2009). *Marketing research : In a digital information environment,* New York, McGraw-Hill.

Håkansson, H. (1982). *International marketing and purchasing of industrial goods : An interaction approach,* Chichester ; New York, Wiley.

Håkansson, H. & Snehota, I. (1995). *Developing relationships in business networks,* London ; New York, Routledge.

Halinen, A. (1997). *Relationship marketing in professional services : A study of agency-client dynamics in the advertising sector,* London ; New York, Routledge.

Hallén, L., Johanson, J. & Seyed-Mohamed, N. (1991). Interfirm adaptation in business relationships. *Journal of Marketing*, 55(2), 29-37.

Hancock, G. R. & Mueller, R. O. (2010a). *The reviewer's guide to quantitative methods in the social sciences,* New York, Routledge.

Hancock, G. R. & Mueller, R. O. (2010b). Structural equation modeling. In: Hancock, G. R. & Mueller, R. O. (eds.) The reviewer's guide to quantitative methods in the social sciences. New York: Routledge. 371-383.

Handy, C. B. (1979). *Gods of management : How they work, and why they will fail,* London, Pan Books.

Hanges, P. J. & Dickson, M. W. (2004). The development and validation of GLOBE culture and leadership scales. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 122-151.

Hanges, P. J. & Dickson, M. W. (2006). Agitation over aggregation: Clarifying the development of and the nature of the GLOBE scales. *The Leadership Quarterly*, 17(5), 522-536.

Harman, H. H. (1976). *Modern factor analysis,* Chicago, University of Chicago Press.

Harris, L. C. & Goode, M. M. H. (2004). The four levels of loyalty and the pivotal role of trust: A study of online service dynamics. *Journal of Retailing*, 80(2), 139-158.

Harris, P. R. & Moran, R. T. (1989). *Managing cultural differences,* Houston, Gulf Publishing.

Harrison, A. W., Mclaughlin, M. E. & Coalter, T. M. (1996). Context, cognition, and common method variance: Psychometric and verbal protocol evidence. *Organizational Behavior and Human Decision Processes*, 68, 246-261.

Harrison, D. A. & Mclaughlin, M. E. (1993). Cognitive processes in self-report responses: Tests of item context effects in work attitude measures. *Journal of Applied Psychology*, 78, 129-140.

Harrison, R. (1975). Diagnosing organizational ideology. In: Jones, J. & Pfeiffer, P. (eds.) The 1975 annual handbook for group facilitators. La Jolla: University Associates. 101-107.

Hartog, D. N. D. (2004). Assertiveness. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 395-436.

Hattie, J. (1985). Methodology review: Assessing unidimensionality of tests and ltenls. *Applied Psychological Measurement*, 9(2), 139-164.

Hayduk, L., Cummings, G., Boadu, K., Pazderka-Robinson, H. & Boulianne, S. (2007). Testing! Testing! One, two, three - testing the theory in structural equation models! *Personality and Individual Differences*, 42(5), 841-850.

Hayduk, L. A. (1987). *Structural equation modeling with lisrel: Essentials and advances,* Baltimore, Johns Hopkins University Press.

Hayduk, L. A. (1996). *Lisrel issues, debates, and strategies,* Baltimore, Johns Hopkins University Press.

Heide, J. B. & John, G. (1992). Do norms matter in marketing relationships? *Journal of Marketing*, 56(2), 32-44.

Heise, D. R. (1975). *Causal analysis,* New York, Wiley.

Hennig-Thurau, T., Gwinner, K. P. & Gremler, D. D. (2002). Understanding relationship marketing outcomes. *Journal of Service Research*, 4(3), 230-247.

Hennig-Thurau, T., Gwinner, K. P., Gremler, D. D. & Paul, M. (2004). Managing service relationships in a global economy: Exploring the impact of national culture on the relevance of customer relational benefits for gaining loyal customers. *Advances in International Marketing*, 15, 11-31.

Henseler, J. & Chin, W. W. (2010). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 17(1), 82-109.

Henseler, J. & Fassott, G. (2010). Testing moderating effects in pls path models: An illustration of available procedures. In: Esposito Vinzi, V., Chin, W. W., Henseler, J. & Wang, H. (eds.) Handbook of partial least squares: Concepts, methods and applications. Berlin: Springer. 713-735.

Herting, J. R. & Costner, H. L. (1985). Respecification in multiple response indicator models. In: Blalock, H. M. (ed.) Causal models in the social sciences. New York: Aldine. 321-393.

Hewett, K., Money, R. & Sharma, S. (2006). National culture and industrial buyer-seller relationships in the united states and latin america. *Journal of the Academy of Marketing Science*, 34(3), 386-402.

Hewett, K., Money, R. B. & Sharma, S. (2002). An exploration of the moderating role of buyer corporate culture in industrial buyer-seller relationships. *Journal of the Academy of Marketing Science*, 30(3), 229-239.

Hibbard, J. D., Kumar, N. & Stern, L. W. (2001). Examining the impact of destructive acts in marketing channel relationships. *Journal of Marketing Research*, 38(1), 45-61.

Hill, C. W. L. (1990). Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory. *The Academy of Management Review*, 15(3), 500-513.

Hillman, A. J., Withers, M. C. & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404-1427.

Hoelter, J. W. (1983). The analysis of covariance structures. *Sociological Methods & Research*, 11(3), 325-344.

Hofstede, G. (1980). *Culture's consequences : International differences in work-related values,* Beverly Hills, Sage Publications.

Hofstede, G. (1983). National cultures in four dimensions. *International Studies of Management & Organization*, 13(1/2), 46-74.

Hofstede, G. (2006). What did GLOBE really measure? Researchers' minds versus respondents' minds. *Journal of International Business Studies*, 37(6), 882-896.

Hofstede, G. & Bond, M. H. (1988). The confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4), 5-21.

Hofstede, G., Neuijen, B., Ohayv, D. D. & Sanders, D. (1990). Measuring organizational cultures: A qualitative and quantitative study accross 20 cases. *Administrative Science Quarterly*, 35, 286-316.

Hofstede, G. H. (2001). *Culture's consequences : Comparing values, behaviors, institutions, and organizations across nations,* Thousand Oaks, Calif., Sage Publications.

Holma, A. (2009). *Adaptaion in triadic business relationship setting.* Ph.D. thesis, The Hanken School of Economics.

Holmlund, M. (1997). What are relationships in business networks? *Management Decision*, 35(4), 304-309.

Holmlund, M. (2008). A definition, model, and empirical analysis of business-to-business relationship quality. *International Journal of Service Industry Management*, 19(1), 32 - 62.

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63, 597-606.

Homans, G. C. (1961). *Social behavior : Its elementary forms,* Harcourt, Brace & world.

Hougaard, S. & Bjerre, M. (2003). *Strategic relationship marketing,* Berlin ; London, Springer.

House, R., Javidan, M., Hanges, P. & Dorfman, P. (2002). Understanding cultures and implicit leadership theories across the GLOBE: An introduction to project GLOBE. *Journal of World Business*, 37(1), 3-10.

House, R. J. (2004). *Culture, leadership, and organizations : The GLOBE study of 62 societies,* Thousand Oaks ; London, SAGE.

House, R. J. & Hanges, P. J. (2004). Research design. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 95-101.

House, R. J. & Javidan, M. (2004). Overview of GLOBE. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 9-48.

Hoyle, R. H. (1995). *Structural equation modeling : Concepts, issues, and applications,* Thousand Oaks, Sage Publications.

Hu, L.-T. & Bentler, P. M. (1995). Evaluation model fit. In: Hoyle, R. H. (ed.) Structural equation modeling : Concepts, issues, and applications. Thousand Oaks: Sage Publications. 76-99.

Hu, L.-T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.

Huff, L. & Kelley, L. (2003). Levels of organizational trust in individualist versus collectivist societies: A seven-nation study. *Organization Science*, 14(1), 81-90.

Hult, G. T. M., Ketchen, D. J., Cui, A. S., Prud'homme, A., M., Seggie, S., H. , Stanko, M., A. , Xu, A. S. & Cavusgil, S. T. (2006). An assessment of the use of structural equation modeling in international business research. In: Ketchen, D. J. & Bergh, D. D. (eds.) Research methodology in strategy and management. Oxford: Elsevier. 385-415.

Hunt, S. D. (1997). Competing through relationships: Grounding relationship marketing in resource-advantage theory. *Journal of Marketing Management*, 13(5), 431-445.

Huppertz, J. W., Arenson, S. J. & Evans, R. H. (1978). An application of equity theory to buyer-seller exchange situations. *Journal of Marketing Research*, 15(2), 250-260.

Iacobucci, D. & Churchill, G. A. (2010). *Marketing research: Methodological foundations,* Mason, Ohio, South-Western.

Ichikawa, M. & Konishi, S. (1995). Application of the bootstrap methods in factor-analysis. *Psychometrika*, 60(1), 77-93.

Inglehart, R., Basanez, M. & Menendez Moreno, A. (1998). *Human values and beliefs : A cross-cultural sourcebook : Political, religious, sexual, and economic norms in 43 societies ; findings from the 1990-1993 world value survey,* Ann Arbor, University of Michigan Press.

Iriana, R. & Buttle, F. (2008). Does organizational culture influence crm outcomes? *The Australian and New Zealand Marketing Academy Conference.* Sydney.

Jaafar, H. S. & Rafiq, M. (2005). Logistics outsourcing practices in the uk: A survey. *International Journal of Logistics Research and Applications*, 8(4), 299-312.

Jaccard, J. & Wan, C. K. (1996). *Lisrel approaches to interaction effects in multiple regression,* London, Sage.

Jackson, D. L. (2003). Revisiting sample size and number of parameter estimates: Some support for the n:Q hypothesis. *Structural Equation Modeling: A Multidisciplinary Journal*, 10(1), 128-141.

Jacoby, J. (1971). A model of multi-brand loyalty. *Journal of advertising research*, 11(3), 29-35.

Jacoby, J. & Kyner, D. B. (1973). Brand loyalty vs. Repeat purchasing behavior. *Journal of Marketing Research*, 10(1), 1-9.

James, K., Chen, D. L. & Cropanzano, R. (1996). Culture and leadership among taiwanese and u.S. Workers: Do values influence leadership ideals? In: Ruderman, M. N., Hughes-James, M. W. & Jackson, S. E. (eds.) Selected research on work team diversity. Greensboro: Center for Creative Leadership. 33-52.

James, L. R., Demaree, R. J. & Wolf, G. (1984). Estimating within-group inter-rater reliability with and without response bias. *Journal of Applied Psychology*, 69, 85-98.

James, L. R., Mulaik, S. A. & Brett, J. M. (1982). *Causal analysis: Assumptions, models, and data,* Beverly Hills ; London, Sage.

Jap, S. D. & Ganesan, S. (2000). Control mechanisms and the relationship life cycle: Implications for safeguarding specific investments and developing commitment. *Journal of Marketing Research*, 37(2), 227-245.

Järvelin, A.-M. (2001). *Evaluation of relationship quality in business relationships.* Ph.D. thesis, Tampere University Press.

Javidan, M., House, R. J. & Dorfman, P. W. (2004). A nontechnical summary of GLOBE findings. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 29-48.

Javidan, M., House, R. J., Dorfman, P. W., Hanges, P. J. & Luque, M. S. D. (2006). Conceptualizing and measuring cultures and their consequences: A comparative review of GLOBE's and hofstede's approaches. *Journal of International Business Studies*, 37(6), 897-914.

John, G. (1984). An empirical investigation of some antecedents of opportunism in a marketing channel. *Journal of Marketing Research*, 21(3), 278-289.

John, M., Amanda, B. & Chih-Hsuan, H. (2011). Investigating relationships between relationship quality, customer loyalty and cooperation: An empirical study of convenience stores' franchise chain systems. *Asia Pacific Journal of Marketing and Logistics*, 23(3), 367-385.

Johns, G. (1994). How often were you absent? A review of the use of self-reported absence data. *Journal of Applied Psychology*, 79, 574-591.

Johnson, P. & Duberley, J. (2000). *Understanding management research : An introduction to epistemology,* London, Sage.

Jonsson, F. Y. (1998). Nonlinear structural equation models: The kenny-judd model with interaction effects. In: Schumacker, R. E. & Marcoulides, G. A. (eds.) Interaction and

nonlinear effects in structural equation modeling. Mahwah, NJ: Lawrence Erlbaum Associates, Inc. 17–42.

Jöreskog, K. G. & Sörbom, D. (1982). Recent developments in structural equation modeling. *Journal of Marketing Research*, 19(4), 404-416.

Jöreskog, K. G. & Sörbom, D. (1989). *Lisrel 7 user's reference guide,* Chicago, Scientific Software International.

Jöreskog, K. G. & Sörbom, D. (1996). *Lisrel 8: User's reference guide,* Chicago, Scientific Software International.

Jöreskog, K. G. & Yang, F. (1996). Nonlinear structural relation models: The kenny–judd model with interaction effects. In: Schumacker, R. E. & Marcoulides, G. A. (eds.) Advanced structural equation modeling. Mahwah, NJ: Lawrence Erlbaum Associates, Inc. 57–88.

Jöreskog, K. J. (1993). Testing structural equation models. In: Bollen, K. A. & Long, J. S. (eds.) Testing structural equation models. Newbury Park: Sage Publications. 294-316.

Kabasakal, H. & Bodur, M. (2004). Human orientation in societies, organizations, and leader attributes. In: House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W. & Gupta, V. (eds.) Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, Calif.: Sage Publications. 564-601.

Kaczmirek, L. (2008). Internet sruvey software tools. In: Fielding, N., Lee, R. M. & Blank, G. (eds.) The sage handbook of online research methods. Los Angeles: Sage. 236-254.

Kang, G.-D., Jame, J. & Alexandris, K. (2002). Measurement of internal service quality: Application of the servqual battery to internal service quality. *Managing Service Quality*, 12(5), 278-291.

Kanungo, R. N. & Aycan, Z. (1997). Organizational culture and human recource practices from a cross-cultural perspective. *The annual meeting of the Canadian Psychological Association.* Toronto.

Kanungo, R. N. & Jaeger, A. M. (1990). Introduction: The need for indigenous management in developing countries. In: Kanungo, R. N. & Jaeger, A. M. (eds.) Management in developing countries. London: Routledge. 1-23.

Kaplan, D. (2001). Cross-sectional estimation of dynamic structural equation models in disequilibrium. In: Cudeck, R., Du Toit, S. & Sörbom, D. (eds.) Structural equation modeling: Present and future: A festschrift in honor of karl jöreskog. Scientific Software International. 315-339.

Kaplan, D. (2009). *Structural equation modeling: Foundations and extensions,* London, Sage.

Karin, A. V. & Pervez, N. G. (2004). Service quality and customer retention: Building long-term relationships. *European Journal of Marketing*, 38(11), 1577-1598.

Kashima, Y. & Callan, V. J. (1994). The japanese workgroup. In: Dunnette, M. D., Hough, L. M. & Triandis, H. C. (eds.) Handbook of industrial and organizational psychology. Palo Alto: Consulting Psychologists Press. 606-649.

Kasper, H., Helsdingen, P. V. & Gabbott, M. (2006). *Services marketing management : A strategic perspective,* Chichester, John Wiley.

Keating, B., Rugimbana, R. & Quazi, A. (2003). Differentiating between service quality and relationship quality in cyberspace. *Managing Service Quality*, 13(3), 217-232.

Kelley, H. H. & Thibaut, J. W. (1978). *Interpersonal relations : A theory of interdependence,* New York, Wiley.

Kelloway, E. K. (1998). *Using lisrel for structural equation modeling : A researcher's guide,* London, Sage.

Kenny, D. A. (2009). *Terminology and basics of sem* [Online]. Available: http://www.davidakenny.net/cm/basics.htm [Accessed August 14 2011].

Kenny, D. A. & Judd, C. M. (1984). Estimating the nonlinear and interactive effects of latent variables. *Psychological Bulletin*, 96, 201–210.

Kenny, D. A. & Mccoach, D. B. (2003). Effect of the number of variables on measures of fit in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 10(3), 333-351.

Kilmann, R. H. & Saxton, M. J. (1983). *The kilmann-saxton culture gap survey,* Pittsburgh, Organizational Design Consultants.

Kipnis, D. (1972). Does power corrupt? *Journal of Personality and Social Psychology*, 24(1), 33-41.

Klein, A. G. & Muthén, B. O. (2007). Quasi-maximum likelihood estimation of structural equation models with multiple interaction and quadratic effects. *Multivariate Behavioral Research*, 42(4), 647-673.

Kline, R. B. (2005). *Principles and practice of structural equation modeling,* New York, Guilford Press.

Kline, R. B. (2011). *Principles and practice of structural equation modeling,* New York, Guilford Press.

Kline, T. J. B., Sulsky, L. M. & Rever-Moriyama, S. D. (2000). Common method variance and specification errors: A practical approach to detection. *The Journal of Psychology*, 134(4), 401-421.

Knemeyer, A. M. & Murphy, P. R. (2004). Evaluating the performance of third-party logistics arrangements: A relationship marketing perspective. *Journal of Supply Chain Management*, 40(1), 35-51.

Komorita, S. S., Hilty, J. A. & Parks, C. D. (1991). Reciprocity and cooperation in social dilemmas. *The Journal of Conflict Resolution*, 35(3), 494-518.

Kotler, P., Armstrong, G., Wong, V. & Saunders, J. (2008). *Principles of marketing,* Essex, Person Education Limited.

Kotz, S. & Johnson, N. L. (1997). *Breakthroughs in statistics: No special title*, Springer-Verlag.

Kumar, N., Scheer, L. K. & Steenkamp, J.-B. E. M. (1995a). The effects of perceived interdependence on dealer attitudes. *Journal of Marketing Research*, 32(3), 348-356.

Kumar, N., Scheer, L. K. & Steenkamp, J.-B. E. M. (1995b). The effects of supplier fairness on vulnerable resellers. *Journal of Marketing Research*, 32(1), 54-65.

Lambe, C. J., Wittmann, C. M. & Spekman, R. E. (2001). Social exchange theory and research on business-to-business relational exchange. *Journal of Business To Business Marketing*, 8(3), 1 - 36.

Lance, C. E. (1988). Residual centering, exploratory and confirmatory moderator analysis, and decomposition of effects in path models containing interactions. *Applied Psychological Measurement*, 12(2), 163-175.

Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly*, 37(1), 76-104.

Larson, P. D. & Kulchitsky, J. D. (1999). Logistics improvement programs: The dynamics between people and performance. *International Journal of Physical Distribution & Logistics Management*, 29(2), 88-103.

Larzelere, R. E. & Huston, T. L. (1980). The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and Family*, 42(3), 595-604.

Lee, S.-Y., Song, X. Y. & Poon, W.-Y. (2004). Comparison of approaches in estimating interaction and quadratic effects of latent variables. *Multivariate Behavioral Research*, 39(1), 37-67.

Lei, M. & Lomax, R. G. (2005). The effect of varying degrees of nonnormality in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 12(1), 1-27.

Leonidou, L. C., Barnes, B. R. & Talias, M. A. (2006). Exporter–importer relationship quality: The inhibiting role of uncertainty, distance, and conflict. *Industrial Marketing Management*, 35(5), 576-588.

Lessem, R. (1990). *Managing corporate culture,* Brookfield, Gower.

Leung, K. & Bond, M. H. (1989). On the empirical identification of dimensions for cross-cultural comparisons. *Journal of Cross-Cultural Psychology*, 20(2), 133-151.

Leuthesser, L. (1997). Supplier relational behavior: An empirical assessment. *Industrial Marketing Management*, 26(3), 245-254.

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In: Gergen, K. J. & Greenberg, M. S. (eds.) Social exchange: Advances in theory and research. New York; London: Plenum Press. 27.

Liljander, V. & Roos, I. (2002). Customer-relationship levels – from spurious to true relationships. *Journal of Services Marketing*, 16(7), 593 - 614.

Liljander, V. & Strandvik, T. (1995). The nature of customer relationships in services. In: Swartz, T. A., Bowen, D. E. & Brown, S. W. (eds.) Advances in services marketing and management. London: JAI Press Inc. 141-167.

Lindell, M. & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 81(1), 114-121.

Lindell, M. K. & Brandt, C. J. (2000). Climate quality and climate consensus as mediators of the relationship between organizational antecedents and outcomes. *Journal of Applied Psychology*, 85, 331-348.

Little, T. D., Bovaird, J. A. & Widaman, K. F. (2006). On the merits of orthogonalizing powered and product terms: Implications for modeling interactions among latent variables. *Structural Equation Modeling: A Multidisciplinary Journal*, 13(4), 497-519.

Little, T. D., Cunningham, W. A., Shahar, G. & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 151-173.

Liu, B. S.-C., Furrer, O. & Sudharshan, D. (2001). The relationships between culture and behavioral intentions toward services. *Journal of Service Research*, 4(2), 118-129.

Lockwood, C. M. & Mackinnon, D. P. (1998). Bootstrapping the standard error of the mediated effect. *Proceedings of the Twenty-Third Annual SAS Users Group International Conference*, 997-1002.

Loomis, J. L. (1959). Communication, the development of trust, and cooperative behavior. *Human Relations*, 12(4), 305-315.

Lova, R. & Jasmin, B. (2009). Antecedents and consequences of buyer-seller relationship quality in the financial services industry. *International Journal of Bank Marketing*, 27(5), 359-380.

Lovelock, C. H. & Wirtz, J. (2011). *Services marketing : People, technology, strategy,* London, Pearson.

Luque, M. F. S. D. & Sommer, S. M. (2000). The impact of culture on feedback-seeking behavior: An integrated model and propositions. *The Academy of Management Review*, 25(4), 829-849.

Lusch, R. F. & Brown, J. R. (1996). Interdependency, contracting, and relational behavior in marketing channels. *The Journal of Marketing*, 60(4), 19-38.

Lusch, R. F. & Vargo, S. L. (2006a). *The service-dominant logic of marketing : Dialog, debate, and directions,* Armonk, N.Y. ; London, M.E. Sharpe.

Lusch, R. F. & Vargo, S. L. (2006b). Service-dominant logic: What it is, what it is not, what it might be. In: Lusch, R. F. & Vargo, S. (eds.) The service-dominant logic of marketing : Dialog, debate, and directions. Armonk, N.Y. ; London: M.E. Sharpe. 43-56.

Lusch, R. F., Vargo, S. L. & O'brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing*, 83(1), 5-18.

Maccallum, R. C. (1995). Model specification: Procedures, strategies and related issuges. In: Hoyle, R. H. (ed.) Structural equation modeling: Concepts, issues, and applications. Thousand Oaks: Sage Publications. 16-36.

Maccallum, R. C. & Austin, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual Review of Psychology*, 51(1), 201-226.

Maccallum, R. C., Browne, M. W. & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.

Maccallum, R. C., Roznowski, M. & Necowitz, L. B. (1992). Model modifications in covariance structure-analysis - the problem of capitalization on chance. *Psychological Bulletin*, 111(3), 490-504.

Maccallum, R. C., Zhang, S., Preacher, K. J. & Rucker, D. D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods*, 7(1), 19-40.

Mackinnon, D. P., Lockwood, C. M. & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39(1), 99-128.

Macneil, I. R. (1980). *The new social contract : An inquiry into modern contractual relations,* New Haven, Yale University Press.

Maiti, S. S. & Mukherjee, B. N. (1991). Two new goodness-of-fit indices for covariance matrices with linear structures. *British Journal of Mathematical and Statistical Psychology*, 44(1), 153-180.

Malhotra, N. K. & Birks, D. F. (2007). *Marketing research : An applied approach,* Harlow, Prentice Hall/Financial Times.

Malhotra, N. K., Kim, S. S. & Patil, A. (2006). Common method variance in is research: A comparison of alternative approaches and a reanalysis of past research. *Management Science*, 52(12), 1865-1883.

Margerison (1979). *How to assess your management style,* New York, McB Human Resources.

Marsh, H. W., Balla, J. R. & Mcdonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological bulletin*, 103(3), 391-410.

Marsh, H. W., Hau, K.-T., Balla, J. R. & Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*, 33(2), 181-220.

Marsh, H. W., Hau, K.-T. & Wen, Z. (2004a). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing hu and bentler's (1999) findings. *Structural Equation Modeling: A Multidisciplinary Journal*, 11(3), 320-341.

Marsh, H. W. & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97 (3), 562-582.

Marsh, H. W., Wen, Z. & Hau, K.-T. (2004b). Structural equation models of latent interactions: Evaluation of alternative estimation strategies and indicator construction. *Psychological Methods*, 9(3), 275-300.

Marsh, H. W., Wen, Z. & Hau, K.-T. (2006). Structural equation modeling of latent interaction and quadratic effects. In: Hancock, G. R. & Mueller, R. O. (eds.) Structural equation modeling: A second course. Greenwich, Conn.: IAP. 225–265.

Marsh, H. W., Wen, Z., Hau, K.-T., Little, T. D., Bovaird, J. A. & Widaman, K. F. (2007). Unconstrained structural equation models of latent interactions: Contrasting residual- and mean-centered approaches. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(4), 570-580.

Mayer, R. C., Davis, J. H. & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709-734.

Mcafee, R. B., Glassman, M. & Honeycutt, E. D. (2002). The effects of culture and human resource management policies on supply chain management strategy. *Journal of Business Logistics*, 23(1), 1-18.

Mcdaniel, C. D. & Gates, R. H. (2007). *Marketing research,* Hoboken, N.J., Wiley.

Mcmullan, R. (2005). A multiple-item scale for measuring customer loyalty development. *Journal of Services Marketing*, 19(7), 470-481.

Mcmullan, R. & Gilmore, A. (2003). The conceptual development of customer loyalty measurement: A proposed scale. *Journal of Targeting, Measurement & Analysis for Marketing*, 11(3), 230.

Mead, M. (1976). *Cooperation and competition among primitive people.,* Boston, Beacon.

Meade, A. W., Johnson, E. C. & Brady, P. W. (2008). Power and sensitivity of alternative fit indices in tests of measurement invariance. *Journal of Applied Psychology*, 93, 568-592.

Meyer, J. P. & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89.

Micceri, T. (1989). The unicorn, the normal curve, and other improbable creatures. *Psychological Bulletin*, 105, 156-166.

Migliore, R. H., Conway, A., Martin, R. & Stevens, R. E. (Year). An analysis of pan-pacific canadian organizational climate. *In:* The Pan-Pacific Conference, 1992 Calgary.

Miles, J. & Shevlin, M. (2007). A time and a place for incremental fit indices. *Personality and Individual Differences*, 42(5), 869-874.

Miller, J. G. (1994). Cultural diversity in the morality of caring: Individually oriented versus duty-based interpersonal moral codes. *Cross-Cultural Research*, 28(1), 3-39.

Millsap, R. E. & Maydeu-Olivares, A. (2009). *The sage handbook of quantitative methods in psychology,* London, Sage.

Miner, J. B. (2007). *Organizational behavior: From theory to practice,* Armonk, NY, M.E. Sharpe.

Mintu-Wimsatt, A. & Madjourova-Davri, A. (2011). Reciprocal cooperation and the moderating effect of individualism: A five-country negotiation study. *Journal of Global Marketing*, 24(5), 385-396.

Mohr, J. J., Fisher, R. J. & Nevin, J. R. (1996). Collaborative communication in interfirm relationships: Moderating effects of integration and control. *Journal of Marketing*, 60(3), 103-115.

Molm, L. D. (1994). Dependence and risk: Transforming the structure of social exchange. *Social Psychology Quarterly*, 57(3), 163-176.

Molm, L. D., Schaefer, D. R. & Collett, J. L. (2007). The value of reciprocity. *Social Psychology Quarterly*, 70(2), 199-217.

Molm, L. D., Takahashi, N. & Peterson, G. (2000). Risk and trust in social exchange: An experimental test of a classical proposition. *American Journal of Sociology*, 105(5), 1396-1427.

Moorman, C., Zaltman, G. & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29(3), 314-328.

Moorman, R. H. & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 16(2), 127-142.

Morgan, R. M. & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *The Journal of Marketing*, 58(3), 20-38.

Morris, M. H., Davis, D. L. & Allen, J. W. (1994). Fostering corporate entrepreneurship: Cross-cultural comparisons of the importance of individualism versus collectivism. *Journal of International Business Studies*, 25(1), 65-89.

Morrison, E. W. (2002). Information seeking within organizations. *Human Communication Research*, 28(2), 229-242.

Moschandreas, M. (1997). The role of opportunism in transaction cost economics. *Journal of Economic Issues*, 31(1), 39-57.

Mueller, R. O. (1996). *Basic principles of structural equation modeling : An introduction to lisrel and eqs,* New York, Springer.

Mueller, R. O. (1997). Structural equation modeling: Back to the basics. *Structural Equation Modeling*, 4, 353-369.

Mulaik, S. A. & James, L. R. (1995). Objectivity and reasoning in science and structural equation modeling. In: Hoyle, R. H. (ed.) Structural equation modeling : Concepts, issues, and applications. Thousand Oaks: Sage Publications. 118-137.

Mulaik, S. A. (2009). *Linear causal modeling with structural equations,* Boca Raton ; London, Chapman & Hall/CRC.

Mulaik, S. A. & Millsap, R. E. (2000). Doing the four-step right. *Structural Equation Modeling: A Multidisciplinary Journal*, 7(1), 36-73.

Mulder, M. (1976). Reduction of power differences in practice: The power distance reduction theory and its implications. In: Hofstede, G. & Kassem, M. S. (eds.) European contributions to organization theory. Assen: Van Gorcum. 79-94.

Mulder, M. (1977). *The daily power game,* Leiden, Martinus Nijhoff Social Sciences Division.

Mulder, M., Ritsema, J. V. E. & Rendel, D. J. (1971). An organization in crisis and non-crisis situations. *Human Relations*, 24(1), 19-41.

Narayandas, D. & Rangan, V. K. (2004). Building and sustaining buyer-seller relationships in mature industrial markets. *Journal of Marketing*, 68(3), 63-77.

Naudé, P. & Buttle, F. (2000). Assessing relationship quality. *Industrial Marketing Management*, 29(4), 351-361.

Ndubisi, N. O. (2004). Understanding the salience of cultural dimensions on relationship marketing, it's underpinnings and aftermaths. *Cross Cultural Management: An International Journal*, 11(3), 70-89.

Nelson, D. L. & Quick, J. C. (2008). *Understanding organizational behavior,* Mason, OH, USA, Thomson/South-Western.

Netemeyer, R. G., Bearden, W. O. & Sharma, S. (2003a). *Scaling procedures : Issues and applications,* Thousand Oaks, Calif., Sage Publications.

Netemeyer, R. G., Bearden, W. O. & Sharma, S. (2003b). *Scaling procedures: Issues and applications,* Thousand Oaks, Calif., Sage Publications.

Netemeyer, R. G., Haws, K. L. & Bearden, W. O. H. O. M. S. (2011). *Handbook of marketing scales: Multi-item measures for marketing and consumer behavior research,* London, Sage.

Nevitt, J. & Hancock, G. R. (1997). Relative performance of rescaling and resampling approaches to model chi square and parameter standard error estimation in structural equation modeling. *Paper presented at the annual meeting of the American Educational Research Association*, 1-39.

Nevitt, J. & Hancock, G. R. (2000). Improving the root mean square error of approximation for nonnormal conditions in structural equation modeling. *Journal of Experimental Education*, 68(3), 251-268.

Nevitt, J. & Hancock, G. R. (2001). Performance of bootstrapping approaches to model test statistics and parameter standard error estimation in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 8(3), 353-377.

Nunnally, J. C. (1978). *Psychometric theory,* New York, McGraw-Hill.

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric theory,* New York ; London, McGraw-Hill.

Nunnally, J. C. & Bernstein, I. H. (2006). *Psychometric theory,* US, Academic Internet Publishers.

O'brien, R. M. (1985). The relationship between ordinal measures and their underlying values: Why all the disagreement? *Quality & Quantity*, 19(3), 265-277-277.

O'brien, R. M. (1994). Identification of simple measurement models with multiple latent variables and correlated errors. *Sociological Methodology*, 24, 137-170.

O'reilly, C. A., Chatman, J. & Caldwell, D. F. (1991). People and organizational culture: A profile comparison approach to assessing person-organization fit. *The Academy of Management Journal*, 34(3), 487-516.

Oliver, R. L. (1997). *Satisfaction : A behavioral perspective on the consumer,* New York, McGraw Hill.

Oliver, R. L. (1999). Whence consumer loyalty? *The Journal of Marketing*, 63(ArticleType: primary_article / Issue Title: Fundamental Issues and Directions for Marketing / Full publication date: 1999 / Copyright © 1999 American Marketing Association), 33-44.

Oliver, R. L. (2010). *Satisfaction : A behavioral perspective on the consumer,* Armonk, N.Y., M.E. Sharpe.

Oliver, R. L. & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. *Journal of Marketing*, 53(2), 21-35.

Olson, J. C. & Jacoby, J. (1971). A construct validation study of brand loyalty. *Proceedings of the Annual Convention of the American Psychological Association*, 6, 657-658.

Olsson, U. H., Foss, T., Troye, S. V. & Howell, R. D. (2000). The performance of ml, gls, and wls estimation in structural equation modeling under conditions of misspecification and nonnormality. *Structural Equation Modeling: A Multidisciplinary Journal*, 7(4), 557-595.

Ostrom, E. (2003). Toward a behavioral theory linking trust, reciprocity and reputation. In: Ostrom, E. & Walker, J. (eds.) Trust and reciprocity: Interdisciplinary lessons from experimental research. New York: Russell Sage Foundation. 19-79.

Palaima, T. & Auruskeviciene, V. (2007). Modeling relationship quality in the parcel delivery services market. *Baltic Journal of Management*, 2(1), 37 - 54.

Palmatier, R. W., Dant, R. P., Grewal, D. & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing*, 70(4), 136-153.

Palmer, A. (2000). Co-operation and competition: A darwinian synthesis of relationship marketing. *European Journal of Marketing*, 34(5/6), 687 - 704.

Parasuraman, A., Grewal, D. & Krishnan, R. (2007). *Marketing research,* Boston, Houghton Mifflin Co.

Patterson, P. G., Cowley, E. & Prasongsukarn, K. (2006). Service failure recovery: The moderating impact of individual-level cultural value orientation on perceptions of justice. *International Journal of Research in Marketing*, 23(3), 263-277.

Patterson, P. G. & Mattila, A. S. (2008). An examination of the impact of cultural orientation and familiarity in service encounter evaluations. *International Journal of Service Industry Management*, 19(5), 662-681.

Paxton, P. M., Hipp, J. R. & Marquart-Pyatt, S. T. (2011). *Nonrecursive models: Endogeneity, reciprocal relationships, and feedback loops,* Thousand Oaks, Sage.

Peabody, D. (1985). *National characteristics,* Cambridge, Cambridge University Press.

Peabody, D. (1987). Selecting representative trait adjectives. *Journal of Personality and Social Psychology*, 52(1), 59-71.

Peabody, D. (2011). *National characteristics,* Cambridge, Cambridge University Press.

Peabody, D. & De Raad, B. (2002). The substantive nature of psycholexical personality factors: A comparison across languages. *Journal of Personality and Social Psychology*, 83(4), 983–997.

Peabody, D. & Goldberg, L. R. (1989). Some determinants of factor structures from personality-trait descriptors. *Journal of Personality and Social Psychology*, 57(3), 552-567.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research : Explanation and prediction,* Forth Worth, Harcourt Brace College Publishers.

Pervan, S. J., Bove, L. L. & Johnson, L. W. (2009). Reciprocity as a key stabilizing norm of interpersonal marketing relationships: Scale development and validation. *Industrial Marketing Management*, 38(1), 60-70.

Peterson, M. F. & Castro, S. L. (2006). Measurement metrics at aggregate levels of analysis: Implications for organization culture research and the GLOBE project. *The Leadership Quarterly*, 17(5), 506-521.

Peterson, M. F., Smith, P. B., Akande, A., Ayestaran, S., Bochner, S., Callan, V., Cho, N. G., Jesuino, J. C., D'amorim, M., Francois, P.-H., Hofmann, K., Koopman, P. L., Leung, K., Lim, T. K., Mortazavi, S., Munene, J., Radford, M., Ropo, A., Savage, G., Setiadi, B., Sinha, T. N., Sorenson, R. & Viedge, C. (1995). Role conflict, ambiguity, and overload: A 21-nation study. *The Academy of Management Journal*, 38(2), 429-452.

Peterson, R. A. (1994). A meta-analysis of cronbach's coefficient alpha. *Journal of Consumer Research*, 21(2), 381-391.

Peterson, R. A. (2000). *Constructing effective questionnaires,* Thousand Oaks, Sage Publications.

Pfeffer, J. & Salancik, G. R. (1978). *The external control of organizations : A resource dependence perspective,* New York, Harper & Row.

Pfeffer, J. & Salancik, G. R. (2003). *The external control of organizations : A resource dependence perspective,* Standord, Stanford University Press.

Podsakoff, P. M., Mackenzie, S. B., Jeong-Yeon, L. & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.

Podsakoff, P. M., Mackenzie, S. B. & Podsakoff, N. P. (2011). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63(1), 539-569.

Popper, K. R. (1963). *Conjectures and refutations : The growth of scientific knowledge,* London, Routledge & Kegan Paul.

Popper, K. R. (2002a). *Conjectures and refutations : The growth of scientific knowledge,* London ; New York, Routledge.

Popper, K. R. (2002b). The logic of scientific discovery. *Routledge classics.* London ; New York: Routledge.

Preacher, K. J. & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research. In: Hayes, A. F., Slater, M. D. & Snyder, L. B. (eds.) The sage sourcebook of advanced data analysis methods for communication research. Los Angeles: Sage Publications.

Pruitt, D. G. (1981). *Negotiation behavior,* New York, Academic Press.

Raghuram, S. (2001). Cultural frames and values affecting employment practices. In: London, M. (ed.) How people evaluate others in organizations. Mahwah, N.J.: Lawrence Erlbaum. 279-294.

Ramaseshan, B., Yip, L. S. C. & Pae, J. H. (2006). Power, satisfaction, and relationship commitment in chinese store–tenant relationship and their impact on performance. *Journal of Retailing*, 82(1), 63-70.

Rauyruen, P. & Miller, K. E. (2007). Relationship quality as a predictor of b2b customer loyalty. *Journal of Business Research*, 60(1), 21-31.

Raykov, T. (1997). Estimation of composite reliability for congeneric measures. *Applied Psychological Measurement*, 21(2), 173-184.

Raykov, T. (2004). Behavioral scale reliability and measurement invariance evaluation using latent variable modeling. *Behavior Therapy*, 35(2), 299-331.

Raykov, T. & Marcoulides, G. A. (2006). *A first course in structural equation modeling,* Mahwah, NJ, Lawrence Erlbaum Associates, Publishers.

Ree, M. J., Carretta, T. R. & Earles, J. A. (1998). In top down decisions, weighting variables does not matter: A consequence of wilks' theorem. *Organizational Research Methods*, 3, 407-420.

Reinartz, W., Haenlein, M. & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based sem. *International Journal of Research in Marketing*, 26(4), 332-344.

Reynolds, K. & Harris, L. C. (2009). Dysfunctional customer behavior severity: An empirical examination. *Journal of Retailing: Consumer Behavior and Retailing*, 85 (3), 321-335.

Reynolds, K. E. & Beatty, S. E. (1999). Customer benefits and company consequences of customer-salesperson relationships in retailing. *Journal of Retailing*, 75(1), 11-32.

Reynoso, J. & Moores, B. (1995). Towards the measurement of internal service quality. *International Journal of Service Industry Management*, 6(3), 64-83.

Richman, W. L., Kiesler, S., Weisband, S. & Drasgow, F. (1999). A meta-analytic study of social desirability distortion in computeradministered questionnaires, traditional questionnaires, and interviews. *Journal of Applied Psychology*, 84, 754-775.

Rigdon, E. E. (1995). A necessary and sufficient identification rule for structural models estimated in practice. *Multivariate Behavioral Research*, 30(3), 359-383.

Rigdon, E. E. (1996). Cfi versus rmsea: A comparison of two fit indexes for structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 3(4), 369-379.

Rigdon, E. E., Schumacker, R. E. & Wothke, W. (1998). A comparative review of interaction and nonlinear modeling. In: Schumacker, R. E. & Marcoulides, G. A. (eds.) Interaction and nonlinear effects in structural equation modeling. Mahwah, NJ: Lawrence Erlbaum Associates, Inc. 1-16.

Roberts, K., Varki, S. & Brodie, R. (2003). Measuring the quality of relationships in consumer services: An empirical study. *European Journal of Marketing*, 37(1), 169-196.

Robles, J. (1996). Confirmation bias in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 3(1), 73 - 83.

Rodgers, J. L. (1999). The bootstrap, the jackknife, and the randomization test: A sampling taxonomy. *Multivariate Behavioral Research*, 34(4), 441-456.

Rokkan, A. I., Heide, J. B. & Wathne, K. H. (2003). Specific investments in marketing relationships: Expropriation and bonding effects. *Journal of Marketing Research*, 40(2), 210-224.

Rousseau, D. M. & Schalk, R. (2000). *Psychological contracts in employment : Cross-national perspectives,* Thousand Oaks, Calif., Sage Publications.

Ruben Chumpitaz, C. & Nicholas, G. P. (2007). Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty. *European Journal of Marketing*, 41(7), 836-867.

Sampson, R. V. (1965). *Equality and power,* London,, Heinemann.

Sashkin, M. & Fulmer, R. (Year). Measuring organizational excellence culture with a validated questionnaire. *In:* annual meeting of the Academy of Management, 1985 San Diego.

Satorra, A. & Bentler, P. M. (1994). Corrections to test statistics and standard errors on covariance

structure analysis. In: Eye, A. & Clogg, C. C. (eds.) Latent variables analysis: Applications for developmental research. Thousand Oaks: Sage.

Savalei, V. (2008). Is the ml chi-square ever robust to nonnormality? A cautionary note with missing data. *Structural Equation Modeling: A Multidisciplinary Journal*, 15(1), 1-22.

Schmitt, N. (1994). Method bias: The importance of theory and measurement. *Journal of Organizational Behavior*, 15(5), 393-398.

Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8 (4), 350-353.

Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40, 437-453.

Schumacker, R. E. & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling,* Mahwah, N.J., Lawrence Erlbaum Associates.

Schumacker, R. E. & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling,* New York, Routledge.

Schumacker, R. E. & Marcoulides, G. A. (1998). *Interaction and nonlinear effects in structural equation modeling,* Mahwah, N.J., L. Erlbaum Associates.

Schumann, J. H. (2009a). *The impact of culture on relationship marketing in international services,* Wiesbaden, Gabler Verlag / GWV Fachverlage GmbH.

Schumann, J. H. (2009b). *The impact of culture on relationship marketing in international services [electronic resource] : A target group-specific analysis in the context of banking services,* Wiesbaden, Gabler.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In: Zanna, M. P. (ed.) Advances in experimental social psychology. Orlando: Academic Press. 1-65.

Schwartz, S. H. (1994a). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, 50(4), 19-45.

Schwartz, S. H. (1994b). Beyond invididualism and collectivism: New cultural dimensions of values. In: Kim, U., Triandis, H. C., Kagitcibasi, C. & Choi, S. C. (eds.) Individualism and collectivism: Theory, method, and applications. Thousand Oaks, California: Sage Publications, Inc. 85-199.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology*, 48(1), 23-47.

Schwartz, S. H. (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology*, 38(6), 711-728.

Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M. & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519-542.

Schwartz, S. H. & Sagiv, L. (1995). Identifying culture-specifics in the content and structure of values. *Journal of Cross-Cultural Psychology*, 26(1), 92-116.

Selnes, F. (1998). Antecedents and consequences of trust and satisfaction in buyer-seller relationships. *European Journal of Marketing*, 32(3), 305-322.

Shah, D., Rust, R. T., Parasuraman, A., Staelin, R. & Day, G. S. (2006). The path to customer centricity. *Journal of Service Research*, 9(2), 113-124.

Sharma, S., Mukherjee, S., Kumar, A. & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58(7), 935-943.

Shelby, D. H. & Morgan, R. M. (1996). The resource-advantage theory of competition: Dynamics, path dependencies, and evolutionary dimensions. *Journal of Marketing*, 60(4), 107-114.

Sheth, J. N. & Parvatiyar, A. (2000). The domain and conceptual foundations of relationship marketing. In: Sheth, J. N. & Parvatiyar, A. (eds.) Handbook of relationship marketing. Thousand Oaks, Calif. ; London: Sage Publications. 3-38.

Shook, C. L., Ketchen, D. J., Hult, G. T. M. & Kacmar, K. M. (2004). An assessment of the use of structural equation modeling in strategic management research. *Strategic Management Journal*, 25(4), 397-404.

Simmel, G. & Wolff, K. H. (1950). *The sociology of georg simmel,* Glencoe, Ill.,, Free Press.

Sin, L. Y. M., Tse, A. C. B., Yau, O. H. M., Chow, R. P. M., Lee, J. S. Y. & Lau, L. B. Y. (2005). Relationship marketing orientation: Scale development and cross-cultural validation. *Journal of Business Research*, 58(2), 185-194.

Singelis, T. M., Triandis, H. C., Bhawuk, D. P. S. & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, 29(3), 240-275.

Sirdeshmukh, D., Singh, J. & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66(1), 15-37.

Smircich, L. (1983). Concepts of culture and organizational analysis. *Administrative Science Quarterly*, 28(3), 339-358.

Smith, J. B. (1998a). Buyer–seller relationships: Similarity, relationship management, and quality. *Psychology and Marketing*, 15(1), 3-21.

Smith, M. J. (1998b). Social science in question, London ; Thousand Oaks, Calif., Sage Publications in association with the Open University.

Smith, P. B. (2006). When elephants fight, the grass gets trampled: The GLOBE and hofstede projects. *Journal of International Business Studies*, 37(6), 915-921.

Smith, P. B., Peterson, M. F. & Schwartz, S. H. (2002). Cultural values, sources of guidance and their relevance to managerial behavior: A 47 nation study. *Journal of Cross-Cultural Psychology*, 33, 188-208.

Sorokin, P. A. & Lunden, W. A. (1959). *Power and morality; who shall guard the guardians?,* Boston,, P. Sargent.

Stanko, M. A., Bonner, J. M. & Calantone, R. J. (2007). Building commitment in buyer-seller relationships: A tie strength perspective. *Industrial Marketing Management*, 36(8), 1094-1103.

Stapleton, L. M. (2010). Survey sampling, administration, and analysis. In: Hancock, G. R. & Mueller, R. O. (eds.) The reviewer's guide to quantitative methods in the social sciences. New York: Routledge. 397-412.

Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences*, 42(5), 893-898.

Steiger, J. H. & Lind, A. (1980). Statistically based tests for the number of common factors.

Stephan, W. G., Renfro, C. L. & Davis, M. D. (2008). The role of threat in intergroup relations. Improving intergroup relations. Blackwell Publishing Ltd. 55-72.

Stern, L. W. & Ansary, A. I. (1992). *Marketing channels,* Englewood Cliffs, Prentice-Hall.

Stump, R. L. & Heide, J. B. (1996). Controlling supplier opportunism in industrial relationships. *Journal of Marketing Research*, 33(4), 431-441.

Su, Q., Song, Y.-T., Li, Z. & Dang, J.-X. (2008). The impact of supply chain relationship quality on cooperative strategy. *Journal of Purchasing and Supply Management*, 14(4), 263-272.

Summers, J. O. (2001). Guidelines for conducting research and publishing in marketing: From conceptualization through the review process. *Journal of the Academy of Marketing Science*, 29(4), 405-415.

Taggar, S. (2002). Individual creativity and group ability to utilize individual creative resources: A multilevel model. *The Academy of Management Journal*, 45(2), 315-330.

Tanaka, J. S. (1987). "How big is big enough?": Sample size and goodness of fit in structural equation models with latent variables. *Child Development*, 58, 134-146.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In: Bollen, K. A. & Long, J. S. (eds.) Testing structural equation models. Newbury Park: Sage Publications. 10-39.

Thibaut, J. W. & Kelley, H. H. (1959). *The social psychology of groups,* New York,, Wiley.

Thomas, D. C., Au, K. & Ravlin, E. C. (2003). Cultural variation and the psychological contract. *Journal of Organizational Behavior*, 24(5), 451-471.

Thompson, J. D. (1967). *Organizations in action; social science bases of administrative theory,* New York,, McGraw-Hill.

Thompson, J. D. (2003). *Organizations in action : Social science bases of administrative theory,* New Brunswick, NJ, Transaction Publishers.

Ting-Toomey, S. (1986). Conflict communication styles in black and white subjective cultures. In: Kim, Y. (ed.) Interethnic communication: Current research. Newbury Park: Sage.

Triandis, H. C. (1990). Cross-cultural studies of individualism and collectivism. In: Berman, J. (ed.) Nebraska symposium on motivation. Lincoln: University of Nebraska Press. 41-133.

Triandis, H. C. (1995a). *Individualism & collectivism,* Boulder, Westview Press.

Triandis, H. C. (1995b). *Individualism and collectivism,* Boulder, CO, Westview.

Triandis, H. C., Mccusker, C. & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology*, 59(5), 1006-1020.

Tucker, L. & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1-10.

Ulaga, W. & Eggert, A. (2006). Relationship value and relationship quality: Broadening the nomological network of business-to-business relationships. *European Journal of Marketing*, 40(3), 311-327.

Ullman, J. B. (1996). Structural equation modeling. In: Tabachnick, B. G. & Fidell, L. S. (eds.) Using multivariate statistics. New York: Harper Collins. 709–811.

Van Bruggen, G. H., Kacker, M. & Nieuwlaat, C. (2005). The impact of channel function performance on buyer–seller relationships in marketing channels. *International Journal of Research in Marketing*, 22(2), 141-158.

Varey, R. J. (2002). *Relationship marketing : Dialogue and networks in the e-commerce era,* Chichester, Wiley.

Vargo, S. & Lusch, R. (2008a). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.

Vargo, S. L. (2011). Market systems, stakeholders and value propositions: Toward a service-dominant logic-based theory of the market. *European Journal of Marketing*, 45(1), 217-222.

Vargo, S. L. & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17.

Vargo, S. L. & Lusch, R. F. (2008b). From goods to service(s): Divergences and convergences of logics. *Industrial Marketing Management*, 37(3), 254-259.

Vehovar, V. & Manfreda, K. L. (2008). Online research methods. In: Fielding, N., Lee, R. M. & Blank, G. (eds.) The sage handbook of online research methods. Los Angeles: Sage. 176-194.

Verhoef, P. C. (2003). Understanding the effect of customer relationship management efforts on customer retention and customer share development. *Journal of Marketing*, 67(4), 30-45.

Vieira, A. L. (2008). *An interpresonal approach to modelling business-to-business relationship quality.* Ph. D. thesis, The University of Nottingham.

Vieira, A. L., Winklhofer, H. & Ennew, C. T. (2008). Relationship quality: A literature review and research agenda. *Journal of Customer Behaviour*, 7(4), 269-291.

Vieira, V. A., Monteiro, P., R. R. & Veiga, R. T. (2011). Relationship marketing in supply chain: An empirical analysis in the brazilian service sector. *Journal of Business & Industrial Marketing*, 26(7), 524-531.

Voss, M. D., Calantone, R., J. & Keller, S., B. (2005). Internal service quality: Determinants of distribution center performance. *International Journal of Physical Distribution & Logistics Management*, 35(3), 161-176.

Wagner, J. A. (1995). Studies of individualism-collectivism: Effects on cooperation in groups. *The Academy of Management Journal*, 38(1), 152-172.

Walter, A., Müller, T. A., Helfert, G. & Ritter, T. (2003). Functions of industrial supplier relationships and their impact on relationship quality. *Industrial Marketing Management*, 32(2), 159-169.

West, S. G., Finch, J. F. & Curran, P. J. (1996). Structural equation models with nonnormal variables: Problems and remedies. In: Hoyle, R. H. (ed.) Structural equation modeling: Concepts, issues, and applications. Sage. 56-75.

Wetzels, M., De Ruyter, K. & Van Birgelen, M. (1998). Marketing service relationships: The role of commitment. *Journal of Business & Industrial Marketing*, 13(4), 406-423.

Wheaton, B., Muthen, B., Alwin, D. F. & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological Methodology*, 8, 84-136.

Whitener, E. M., Brodt, S. E., Korsgaard, M. A. & Jon, M. W. (1998). Managers as initiators of trust: An exchange relationship framework for understanding managerial trustworthy behavior. *The Academy of Management Review*, 23(3), 513-530.

Wilding, R. & Juriado, R. (2004). Customer perceptions on logistics outsourcing in the european consumer goods industry. *International Journal of Physical Distribution & Logistics Management*, 34(8), 628 - 644.

Wilkins, A. L. & Ouchi, W. G. (1983). Efficient cultures: Exploring the relationship between culture and organizational performance. *Administrative Science Quarterly*, 28(3), 468-481.

Williams, L. J. & Anderson, S. E. (1994). An alternative approach to method effects by using latent-variable models. *Applications in organizational behavior research*, 79, 323–331.

Williams, L. J., Gavin, M. B. & Williams, M. L. (1996). Measurement and nonmeasurement processes with negative affectivity and employee attitudes. *Journal of Applied Psychology*, 81, 88-101.

Williams, L. J., Hartman, N. & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive cfa marker technique. *Organizational Research Methods*, 13(3), 477-514.

Williamson, O. E. (1973). Markets and hierarchies: Some elementary considerations. *The American Economic Review*, 63(2), 316-325.

Williamson, O. E. (1975). *Markets and hierarchies, analysis and antitrust implications : A study in the economics of internal organization,* New York, Free Press.

Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations. *Journal of Law and Economics*, 22(2), 233-261.

Williamson, O. E. (1981). The economics of organization: The transaction cost approach. *American Journal of Sociology*, 87(3), 548-577.

Williamson, O. E. (1983). *Markets and hierarchies : Analysis and antitrust implications : A study in the economics of internal organization,* London, Collier Macmillan.

Williamson, O. E. (1985). *The economic institutions of capitalism : Firms, markets, relational contracting,* New York, Free Press ; London : Collier Macmillan.

Williamson, O. E. (1996). *The mechanisms of governance,* New York ; Oxford, Oxford University Press.

Wilson, B. (2010). Using pls to investigate interaction effects between higher order branding constructs. In: Esposito Vinzi, V., Chin, W. W., Henseler, J. & Wang, H. (eds.) Handbook of partial least squares: Concepts, methods and applications. Berlin: Springer. 621-654.

Winklhofer, H., Pressey, A. & Tzokas, N. (2006). A cultural perspective of relationship orientation: Using organisational culture to support a supply relationship orientation. *Journal of Marketing Management*, 22(1), 169 - 194.

Woo, K.-S. & Ennew, C. T. (2004). Business-to-business relationship quality: An imp interaction-based conceptualization and measurement. *European Journal of Marketing*, 38(9/10), 1252 - 1271.

Woodcock, M. & Francis, D. (1989). *Clarifying organizational values*, Gower.

Wulf, K. D. & Odekerken-Schröder, G. (2001). A critical review of theories underlying relationship marketing in the context of explaining consumer relationships. *Journal for the Theory of Social Behaviour*, 31(1), 73-101.

Yamagishi, T., Jin, N. & Miller, A. S. (1998). In-group bias and culture of collectivism. *Asian Journal of Social Psychology*, 1(3), 315-328.

Yang-Wallentin, F. & Jöreskog, K. G. (2001). Robust standard errors and chi-squares for interaction models. In: Marcoulides, G. A. & Schumacker, R. E. (eds.) New developments and techniques in structural equation modeling. Mahwah, NJ: Erlbaum. 159–171.

Yau, O. H. M., Mcfetridge, P. R., Chow, R. P. M., Lee, J. S. Y., Sin, L. Y. M. & Tse, A. C. B. (2000). Is relationship marketing for everyone? *European Journal of Marketing*, 34(9/10), 1111 - 1127.

Yongtao, S., Qin, S., Qiang, L. & Tieshan, W. (2012). Impact of business relationship functions on relationship quality and buyer's performance. *Journal of Business & Industrial Marketing*, 27(4), 286-298.

Young, L. C. & Wilkinson, I. F. (1998). The space between: Towards a typology of interfirm relations. *Journal of Business-to-Business Marketing*, 4(2), 53-97.

Yung, Y. F. & Bentler, P. M. (1994). Bootstrap-corrected adf test statistics in covariance structure-analysis. *British Journal of Mathematical & Statistical Psychology*, 47, 63-84.

Yung, Y. F. & Bentler, P. M. (1996). Bootstrapping techniques in analysis of mean and covariance structures. In: Marcoulides, G. A. & Schumacker, R. E. (eds.) Advanced structural equation modeling: Issues and techniques. Mahwah, N.J.: L. Erlbaum Associates. 195-226.

Zaheer, A., Mcevily, B. & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. Organization Science, 9(2), 141-159.

Zhang, J., Beatty, S. E. & Walsh, G. (2008). Review and future directions of cross-cultural consumer services research. *Journal of Business Research*, 61(3), 211-224.

Zhu, W. M. (1997). Making bootstrap statistical inferences: A tutorial. *Research Quarterly for Exercise and Sport*, 68(1), 44-55.