DETERMINANTS OF BUYER RELATIONSHIP INTENTION FROM A SIGNALING PERSPECTIVE: THE CASE OF VIETNAMESE IMPORTERS

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

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I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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ABSTRACT

Marketing scholars and practitioners have recognised the importance of developing and nurturing relationships to achieve sustainable competitive advantages. However, while selling firms prefer to establish relationships with buyers, it is strongly argued that not all buyers have the motive or desire to do so. Therefore, understanding determinants of buyers' relationship intentions is crucial for sellers to develop appropriate relationship marketing strategies.

A review of the literature on business-to-business relationships reveals that limited research has investigated the existence of imperfect and asymmetric information in buyer–seller relationships. The degree of imperfection and asymmetry is more marked in the importer–exporter relationship context because of differences in cultural, social and business environments. Signaling theory suggests that sending signals can solve problems caused by asymmetric and imperfect information. Signaling theory has become a standard framework for studying a wide variety of phenomena. However, the question of how signals can help to encourage buyers to engage in long-term relationships with sellers has been largely ignored. This study attempts to enhance our knowledge by investigating the determinants of buyers' relationship intention from a signaling perspective.

Based on a review of literature on relationship intention, signaling theory and supplier selection, this study develops a theoretical model to explain: (1) how signal consistency and signal clarity determine importers' relationship intention; and, (2) how signal consistency and signal clarity influence importers' perceptions of the three critical supplier selection criteria (product quality, price competitiveness and delivery performance). Two competing models are also proposed in association with the theoretical model.

A transition economy (Vietnam) was selected in which to test these models. A survey questionnaire was developed based on the literature review and nine in-depth interviews, then tested via a pilot study. Survey data utilising a sample of 418

Vietnamese importers, was used to validate constructs via Confirmatory Factor Analysis, and then to test the theoretical model and its two competing models via two-step approach in Structural Equation Modeling. All constructs achieve reliability and validity, and the theoretical model is selected over its two competing models. All eleven hypotheses derived from the theoretical model are supported by the data.

The results show that signal consistency and signal clarity positively influence perceived product quality, perceived price competitiveness and perceived delivery performance. These perceptions then have positive effects on exporter credibility. Exporter credibility, in turn, positively influences importer relationship intention. The findings also support the moderating roles of ownership and relationship duration.

The study concludes with a discussion of theoretical, methodological and contextual contributions. Managerial implications for exporters, importers and government, as well as directions for future research, are also addressed.

CHAPTER 1

INTRODUCTION

1.1. INTRODUCTION

This chapter provides an overview of this study. It comprises five main sections. Section 1.2 identifies literature gaps, which help to reveal the research problem and explain the significance of this study. Section 1.3 identifies the research problem and describes how the questions are addressed. Section 1.4 introduces the research context, and explains why the context was selected to test the theoretical model. The research methodology is outlined in Section 1.5, and the thesis structure is presented in Section 1.6.

1.2. RESEARCH BACKGROUND AND JUSTIFICATION

Marketing scholars and practitioners have recognised the importance of developing and nurturing relationships with their customers and partners (for example, Berry 1983; Dwyer et al. 1987; Ford 1990; Gronroos 1990). In business-to-business (B2B) marketing, companies engage in relationships to achieve sustainable competitive advantages through lower cost, economies of scale, increased service, increased revenue (Ford 1990), shared research and development, efficient just-in-time manufacturing (Mohr and Spekman 1994), and enlarged markets through market power (Varadarajan and Cunningham 1995).

However, research is criticised for ignoring reasons why buyers are not particularly interested in, or reluctant to, build long-term relationships, and why they may actively avoid relationship-building efforts (Fournier et al. 1998; Noble and Phillips 2004). While selling firms prefer to establish relationships with buyers, it is strongly argued that not all buyers have motives and desires to do so (Bloise 2002; Brown 1998; Ganesan 1994; Sheth and Shah 2003). In other words, the seller's relationship intention can be different from or even far from the buyer's relationship intention. The degree of

asymmetry in the relationship intentions of buyers and sellers could lead to mismatches, which can then result in dissatisfaction and even relationship termination (Ganesan 1994). In addition, the key to achieving successful relationships is that sellers should commit to the relationships only if they are certain that buyers are also willing to commit (Sheth and Shah 2003). Moreover, the Theory of Reasoned Action also stresses the importance of studying intention, because intention determines behaviour (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975).

Therefore, understanding the determinants of buyers' relationship intentions is crucial to sellers for them to develop appropriate relationship marketing strategies to influence buyers' intention, manage relationships with buyers and avoid behaviour that may harm or negatively influence buyers' intentions. As Sheth and Shah (2003) point out, depending upon a set of contextual factors surrounding the exchange, customers will opt for a relational orientation with suppliers in some cases and for a more transactional orientation in others. Knowing buyers' relationship intentions enables sellers to invest selectively and effectively into building long-term relationships with high-relationship-intention buyers. In the case that buyers have low intentions and sellers cannot influence their intentions, sellers can select transactional strategies to save relational exchange costs (Sheth and Shah 2003).

Relationships between buyers and sellers are characterised by information asymmetry (Anderson and Weitz 1992). Signaling theory literature highlights that the phenomenon of signaling can be seen everywhere (Heil and Robertson 1991; Herbig and Milewicz 1994b, 1996; Herbig et al. 1994), because information gaps can be found in a variety of markets and market-like situations (Spence 1974). In buyer–seller relationships, each party possesses different pieces of information. This asymmetry affects the nature of their mutual relationship (Wulf et al. 2003). Under the condition of information asymmetry, buyers have difficulty distinguishing between high-quality and low-quality sellers. Similarly, sellers also face difficulty distinguishing themselves from low-quality suppliers (Horstmann and MacDonald 2003; Mishra et al. 1998). This information imperfection and asymmetry is even more serious in the importer–exporter relationship context because of differences in cultural, social and business environments (Samiee 2000).

A review of the literature on relationship intention demonstrates two main streams of research. In the first, research investigates relationship intention as a determinant of relationship outcomes such as relationship quality (Kim and Cha 2002), satisfaction (Janda et al. 2002), commitment and opportunism (Joshi and Stump 1999), and business performance outcome (Mentzer et al. 2000). In the second, studies explore determinants of relationship intention. Several factors have been suggested as determinants of relationship intention, such as trust, interdependence (for example, Ganesan 1994; Izquierdo and Cillan 2004; Mentzer et al. 2000; Yu and Pysarchik 2002), reputation, satisfaction, specific investment (for example, Ganesan 1994), communication (for example, De Ruyter and Wetzels 2000), reciprocity (for example, Izquierdo and Cillan 2004), and business environment factors (for example, Sheth and Shah 2003). However, limited research has explored the existence and influence of information asymmetry in buyer–seller relationships. The question of how to solve information-asymmetric problems in order to enhance buyer relationship intention as well as the success of relationships has been neglected.

Signaling theory suggests that information-asymmetric problems can be solved by sending signals (Spence 1973, 1974). Signaling theory has become a standard framework for studying a wide variety of phenomena (Herbig and Milewicz 1994a) from economics to management and even to politics (Riley 2001, also reviewed in section 2.3.3). Applications of signaling can be found wherever information asymmetry exists (Herbig and Milewicz 1994a). In industrial organisation and management, a rich set of signaling applications has been developed (Koku 1995).

The literature on signaling in marketing (for example, Boulding and Kirmani 1993; Erdem and Swait 1998; Heil 1988; Heil and Robertson 1991; Herbig and Milewicz 1996; Herbig et al. 1994; Prabhu and Stewart 2001; Rao et al. 1999) demonstrates that information asymmetry exists between buyers and sellers. The review of this literature (Section 2.3) reveals a common focus on which signals should be used to overcome asymmetric information conditions. In consumer marketing, most of the research focuses on what can be used to signal product quality. Studies of signaling in the business-to-business context (for example, Desai 2000; Farrell and Fearon 2005; Heil et al. 1997; Herbig and Milewicz 1994b; Herbig et al. 1994; Mishra et al. 1998; Worsham

and Gatrell 2005) also affirm the existence of information asymmetry and emphasise the role of signal and signaling as solutions of this asymmetry. There are two main streams in studying signaling in the business-to-business context. Research in the first stream focuses on studying signaling among competitors (for example, Heil 1988; Heil et al. 1997; Heil and Robertson 1991; Herbig and Milewicz 1995c). Studies on the second stream investigate signaling among business partners (for example, Herbig and Milewicz 1994b; Herbig et al. 1994; Milewicz and Herbig 1996). However, these studies commonly focus on which signals could be used. Limited research has investigated how signals and signaling work to enhance buyer–seller relationships (except Herbig et al. 1994), particularly how to use signals to influence buyers' relationship intentions. Therefore, a study of relationship intention from a signaling perspective can help to bridge the gap and provide a deeper and broader understanding of the role of signaling in influencing buyers' relationship intentions.

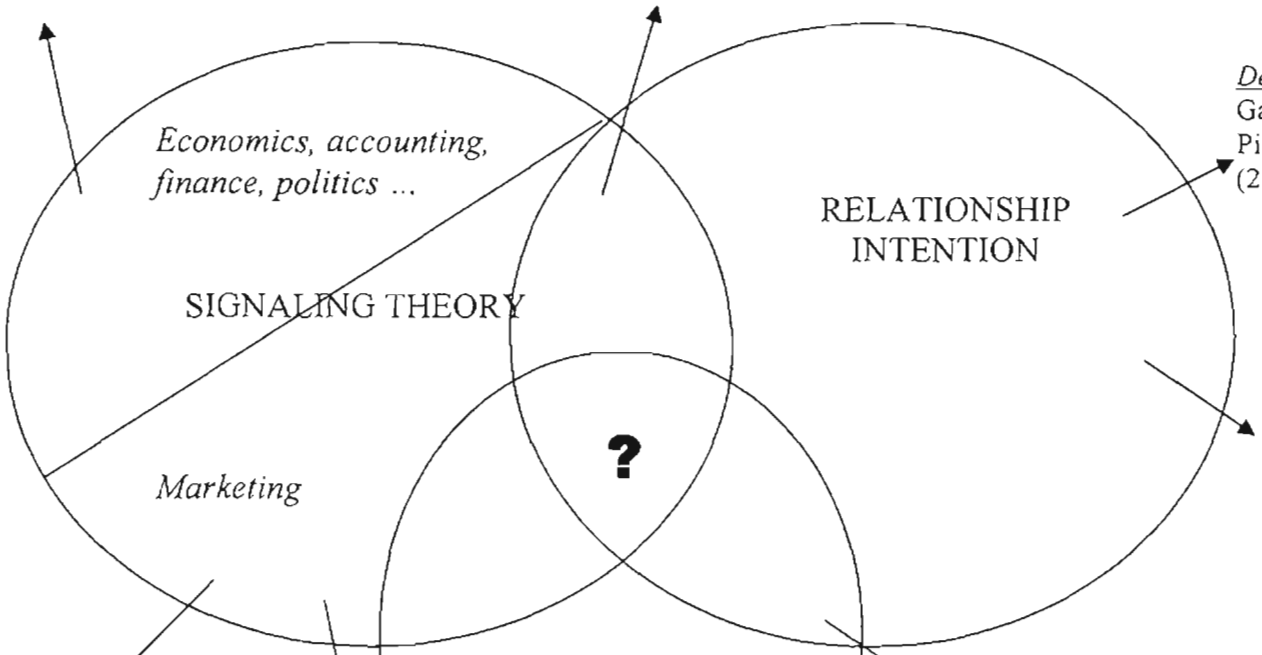
1.3. RESEARCH PROBLEM, RESEARCH QUESTIONS AND RESEARCH OBJECTIVE

As highlighted above, limited research has been undertaken to investigate how asymmetric information influences buyer–seller relationships, particularly, the question of how sellers can use signals to influence buyer relationship intentions. Figure 1.1 provides an overview of studies on relationship intention, signaling applications and supplier selection. The question mark in Figure 1.1 illustrates the research gap and the research focus of this study. In an attempt to bridge the aforementioned gaps, this study addresses the following research problem: "What are the determinants of buyer relationship intention from a signaling perspective?"

Spence (1974); Shapiro (1982); Stump and Heide 1991; Boulding and Kirmani (1993); Eisenhardt (1989); Competitive market signaling: Heil and Langvardt (1994); Heil and Roberson (1991); Kirmani and Rao (2000); Prabhu and Steward (2001).

Figure 1.1: Background Theories and the Research Gap

Herbig et al. (1994); Mishra et al. (1998).



Determinants of relationship intention: Ganesan (1994); Yu and Pysarchik (2002); Pillai and Sharma (2003); Sheth and Shah (2003); Lee and Dawes (2005)

Relationship intention as a determinant of relationship outcome: Kim and Cha (2002); Joshi and Stump (1999); Mentzer et al. (2000); Janda et al. (2000); Kumar et al. (2003).

E.g., Cameron and Shipley (1985); Ellram (1990); Choi and Harley (1996); Kannan and Tan (2003); Ulaga and Eggert (2006).

B2C:
Brand signaling: Erdem and Swait (1998); Erdem et al. (2002); Erdem et al. (2004); Rao et al. (1999).
Signals of product quality: price, advertising, warranty, guarantee: Wolinsky (1983); Kihlstrom and Riordan (1984); Bagwell and Riordan (1991); Boulding and Kirmani (1993); Moorthy and Srinivasan (1995); Srivastava and Mitra (1998); Erevelles et al. (2001); Tan et al. (2001); Chatterjee et al. (2002); Lee et al. (2005).

In international contexts: e.g., Hakansson and Wootz (1975); Ghymn (1983); Cavusgil and Yavas (1987); Leonidou (1988); Spekman (1991); Ghymn et al. (1993); Deng and Wortzel (1995); Rexha and Miyamoto (2000); Overby and Servais (2005).

B2B: Desai and Srinivasan (1995); Desai (2000); Shy (2000); Janda (2002); Worsham and Gatrell (2005); Farrell and Fearon (2005).

Signal receivers not only assess signals but also consider the quality of signals (Koku 1995). The consistency and clarity of signals influence receivers' interpretation of signals and their reactions (Heil 1988; Heil and Robertson 1991; Herbig and Milewicz 1994a; Herbig and Milewicz 1995c). A clear signal means the signal is unambiguous (Jervis 1970) and can be interpreted quickly with minimum effort and error (Heil and Robertson 1991). Signal consistency refers to the degree to which each signal reflects the intended whole and the degree of consistency among signals over time (Erdem and Swait 1998). Studies of signaling among competitors affirm the positive effects of signal clarity and consistency on profitability and performance (Herbig and Milewicz 1994a; Herbig and Milewicz 1995c). Other studies on competitive signaling also suggest the important role of signal consistency and signal clarity in influencing signal interpretation, signal reaction and the receivers' perceptions (Heil and Robertson 1991; Prabhu and Stewart 2001).

However, the review of literature on marketing signaling in Section 2.3.3.2 reveals that studies focus primarily on exploring *what kind of signals* one party can (and should) use to signal the other party. The review of literature related to signal quality (Section 2.3.5) also reveals that most of these studies focus on discussing and explaining how signal quality is important in signal interpretation. The questions of how signal quality influences behavioural dimensions, how to manage and how to influence receivers' reactions (Heil 1988), and how to influence the receivers' behaviour and intentions are largely neglected. More specifically, limited research has been conducted to investigate how the signal consistency and signal clarity improve buyer–seller relationships in general, and also, to keep buyers in long-term relationships in particular. Therefore, a study of how signal consistency and signal clarity (signal consistency and signal clarity) influences buyer relationship intention would provide a deeper understanding of signaling applications in the buyer–seller relationship context.

Based on the above discussion, the first research question is:

1. How do signal consistency and signal clarity influence buyer relationship intention?

A review of the literature on supplier selection (details are in Section 2.4) reveals that offer quality has been one of the most critical criteria influencing buyers' decisions to select suppliers. Even though a variety of selection criteria have been proposed, regardless of nations, cultures, buying situations and organisation types, the most important criteria can be classified into three groups: product-related criteria (such as product quality, warranty, after-sales service, product availability, suitability for local market, value for money, product technology, packaging, product safety); price criteria; and delivery performance criteria (such as timely delivery, reliability of delivery, shipping procedure). In organisational buying behaviour, Anderson and Narus (1999) refer to these three groups as offer characteristics. Other researchers use the term "offer quality" to refer to product quality, price and delivery performance (Chryssochoidis and Theoharakis 2004; Eggert et al. 2006; Leuthesser 1997; Steenkamp 1990).

In order to be selected as long-term partners, sellers have to persuade importers of their capabilities and competiveness to offer what buyers want. Under the condition of asymmetric information, sending clear and consistent signals enables sellers to demonstrate their abilities/capabilities to supply and to distinguish themselves from other sellers (or show "we are the best selection"). Therefore, the second research question of this study is:

2. How do signal consistency and signal clarity influence buyers' perceptions of sellers' offer quality?

In order to answer these research questions, the overall objective of this study is to develop a model that conceptualises the relationships between signal quality (signal consistency and signal clarity), perceived offer quality and importer relationship intention.

To demonstrade their capabilities to supply and to distinguish themselves from other competitors, it is agured that exporters need to signal to show that they offer superior product quality, at more competitive prices, and to show their superior delivery performance. Sending signals consistently and clearly is emphasised as the key to managing buyers' perceptions (Duncan and Moriarty 1998). Hence, it is proposed that

the consistency and clarity of signals sent by exporters influence importers' perceptions of sellers' offer quality (Figure 1.2).

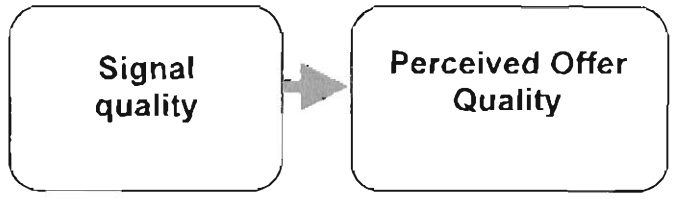


Figure 1.2. Signal Quality and Perceived Offer Quality

Assuming business buyers are rational in making decisions (Wathne et al. 2001), importers would therefore not consider building long-term relationships with exporters if they are not confident of exporters' capabilities and intentions to supply. Importers' perceptions of high offer quality could be expected to encourage importers to become more confident in exporters' capabilities of fulfilling their obligations and promises. In the inter-firm relationship literature, buyers' beliefs in sellers' capabilities and intentions of performing their jobs are referred to as the sellers' credibility (Doney and Cannon 1997; Ganesan 1994). Therefore, it is proposed that perceived offer quality has positive effects on exporter credibility, as illustrated in Figure 1.3.

Figure 1.3. Relationship between Signal Quality, Perceived Offer Quality and Exporter Credibility

Moreover, the inter-firm relationship literature highlights the central role of credibility in relationship models (Doney and Cannon 1997; Ganesan 1994). Credibility, as a dimension of trust, is claimed as a catalyst in buyer–seller transactions (Ba and Pavlou 2002). Trust is viewed as one of the most important factors characterising a good relationship (Nielson 1998), and is a fundamental building-block included in most relationship models. Under the conditions of imperfect, incomplete and asymmetric

information in developing and transition economies, it has been argued that partner credibility is much more important (Batt 2004). Confidence in partners' capabilities and intentions of fulfilling their obligations is considered as a precondition in the development of efficient economic exchange (Batt 2004). Partner credibility often results in long-standing relationships (Dowling 2004; Heil and Robertson 1991; Herbig and Milewicz 1993). Thus, it is proposed that exporter credibility plays an important role in forming importer relationship intention. Figure 1.4 presents an overview of the conceptual framework. It highlights the relationships among signal quality, perceived offer quality, exporter credibility and importer relationship intention.

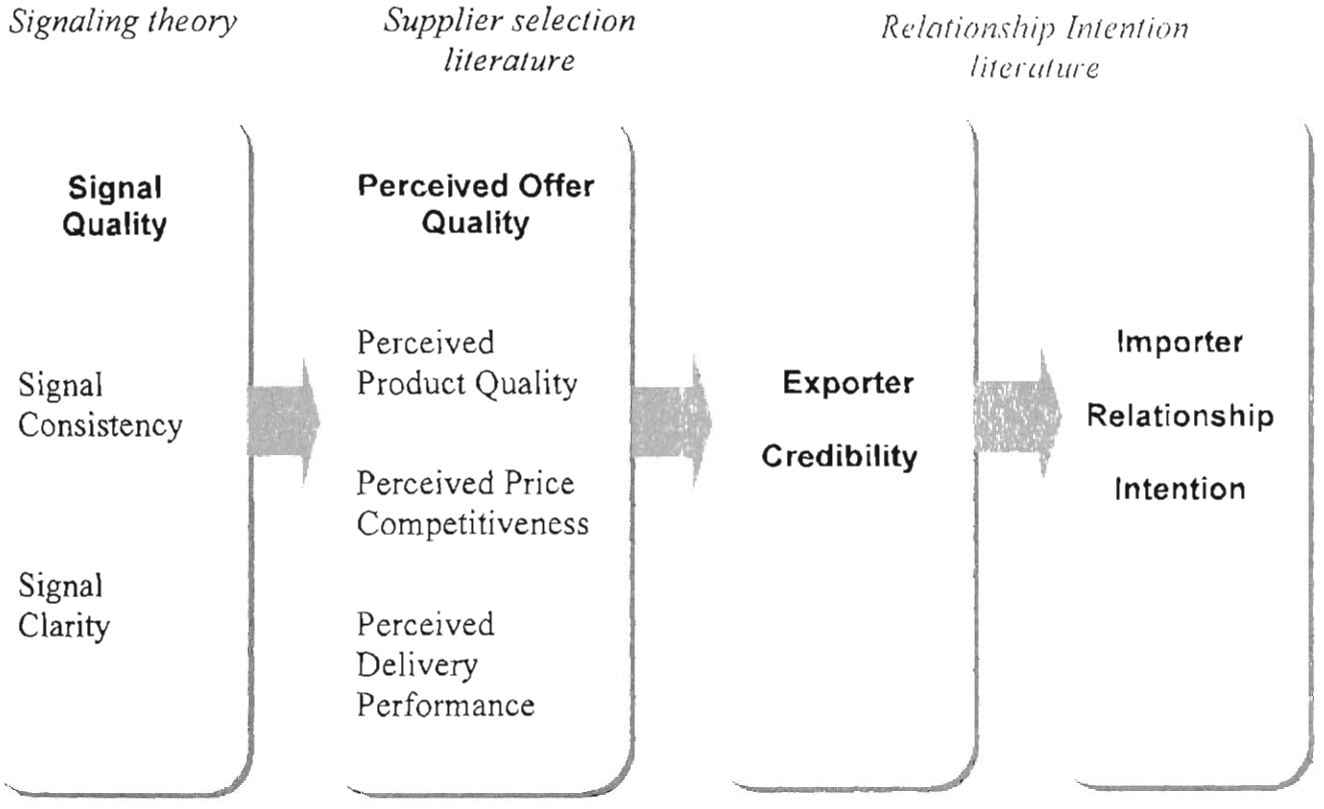


Figure 1.4: Foundation Theories and an Overview of the Conceptual Framework

1.4. RESEARCH CONTEXT

Vietnam is a transition economy[1], located in South East Asia. The country started its transformation from a centrally planned economy into a market-oriented economy in 1986. Having been isolated from the rest of the world for several decades, the Vietnamese economy is characterised not only by numerous opportunities and potential markets, but also by a great deal of uncertainty (Luo and Peng 1998; Peng and Luo 2000). Similar to other transition economies, Vietnam is increasingly attracting the attention of exporters and foreign investors, due to its significant potential for growth (Arnold and Quelch 1998; Batra 1997), substantial long-term raw material sources (Napier and Vu 1998) and large untapped markets (Zeybek et al. 2003). Vietnam's economy has been growing rapidly during the last two decades, making it one of the ten fastest growing economies in the world (Benzing et al. 2005). Between 1991 and 1995, Vietnam's GDP grew at an impressive average rate of 8.2% per annum. Even during the Asian financial crisis, Vietnam continued to achieve an average GDP growth rate of 6.9%. In the first decade of this century, the average growth rate is estimated at 7.5% (MPI 2005). However, trade deficits have been common since the early 1990s.

Similar to China, the transitional process in Vietnam was initiated and led by the communist government, which retained ownership and control over many sectors of the economy. The transformation process in Vietnam still retains the traditional socialist ideology "market economy under socialist guidance" (Communist Party VIth Congress 1986). The existence of a dual ideology (market vs socialist) creates challenges in developing a comprehensive market-oriented legal system (Le et al. 2006).

Similar to other transition economies, Vietnam has low per-capita income, underdeveloped infrastructure (Zeybek et al. 2003), high levels and frequent changes in taxation, high import duties, strict foreign exchange control, investment controls and protection, policy reversals, a lack of coordination across government ministries (Batra 1997; Das 1994). The legal system is largely underdeveloped and non-transparent (Batra 1997; Li 2002). A vast amount of discretion ("rule by man" rather than "rule by

[1] A transition economy is a economy that is changing from a centrally planned economic system (closed economy), with limited private enterprise, to a free(er) market (open economy).

law") is still used by political leaders and bureaucratic administrators (Han and Baumgarte 2000; Luthans et al. 1995). While a number of new laws have been established, the ability to enforce and implement those laws is minimal (Han and Baumgarte 2000; McMillan and Woodruff 2002). Therefore, firms operate in an "extremely uncertain environment" (Le et al. 2006, p. 209) characterised by lack of simplicity/transparency, absence of consistency, and poor administration (Han and Baumgarte 2000).

In addition, there is a lack of readily available and reliable market information in many transition economies (Mottner and Johnson 2000). Importing firms face difficulties in obtaining information about specific markets or products in international markets. The general problems of a transition economy and specific problems in Vietnam magnify information asymmetry, resource asymmetry and market asymmetry (Mottner and Johnson 2000). In addition, the lack of English-language ability among many Vietnamese managers, as well as the underdeveloped information technology infrastructure (Nguyen 2000), reduce the effectiveness of the Internet as a source of market information, particularly information about exporters. Therefore, in relationships with exporters, information tend to be more asymmetric and incomplete for Vietnamese importers. Lack of access to information on product quality, availability of suppliers, product prices in international markets, and exporters' marketing activities (Mottner and Johnson 2000) results in situations in which exporters sometimes become the sole source of information. Thus, as signaling theory proposes, signals and signaling become critical to solving problems caused by information asymmetry in this market.

Moreover, operating in transition markets, faced with high uncertainty, high risks and volatility in business environments, successful inter-firm relationships play key roles in firm performance (Hallen and Johanson 2004; Hutchings and Michailova 2004; Meyer 2000; Quang et al. 1998; Smith and Pham 1996). Inter-firm relations help transmit information, manage uncertainty, open up new opportunities, reduce the transaction costs of designing complex contracts through the development of trust, and alternative enforcement mechanisms (Zhou et al. 2003).

The discussion above clearly illustrates that Vietnamese importers are operating in an extreme condition of incomplete and asymmetric information and the absence of well-established legal and information infrastructures. It also highlights the crucial role of inter-firm relationships in doing business under such conditions. Accordingly, Vietnam is seen as an appropriate context in which to investigate the determinants of importer relationship intention from a signaling perspective.

Moreover, the complexities and problems stemming from transitional processes are different in different transition economies (Lascu et al. 1993). While network marketing, relationship marketing and inter-firm relationships have been extensively studied in China (for example, Abramson and Ai 1997; Ambler 1994; Koku 1995; Peng and Luo 2000; Zhou et al. 2003) and Eastern European countries (for example, Hallen and Johanson 2004; Hutchings and Michailova 2004; Michailova and Worm 2003), Vietnam is a under-investigated market (Batt 2003; Tsang et al. 2004), particularly in the area of inter-firm relationships (Nguyen et al. 2005) and importers' behaviour. Therefore, a study of relationship intention from a signaling perspective in the Vietnamese context could be expected to enhance our understanding of inter-firm relationships in this market.

1.5. RESEARCH METHODOLOGY

The research methodology involved three phases. First, the questionnaire was developed based on a literature review and in-depth interviews. Constructs' scales were primarily adapted from existing scales in the literature. The questionnaire was translated from English into Vietnamese and back-translated to validate the translation equivalence. Second, a pilot study was undertaken to pretest the questionnaire and constructs' measures. Third, a survey with a sample of Vietnamese importers from the two major cities in Vietnam was undertaken. The key informant method was selected to collect data.

Data obtained from the survey was used to validate constructs via reliability analysis and confirmatory factor analysis. Both Cronbach's alpha and reliability coefficients were used to test construct reliability. Constructs were also tested for unidimensionality,

convergent and discriminant validity. The findings strongly support the reliability and validity of all constructs.

Finally, structural equation modeling was employed to test the theoretical model and its two competing models, via the AMOS 6 program. The chi-square difference test, model fit and structural path analysis were used to compare the theoretical model and its two competing models. The findings support the selection of the theoretical model over its competing models. Multi-group analysis offered by AMOS 6 was applied to test the moderating effects of ownership type and relationship duration.

1.6. THESIS STRUCTURE

This thesis is structured as follows.

Chapter 2 reviews the literature on relationship intention in the buyer–seller relationship context and on supplier selection criteria. This chapter also outlines the central arguments of signaling theory, and reviews applications of signaling theory in marketing. The review reveals that limited reseach has been undertaken to investigate the role of signaling and signals in the buyer–seller relationship context. The role of signal consistency and signal clarity in influencing buyers' intentions is largely ignored. The review identifies the conceptual gaps in the literature.

Based on the review in Chapter 2, a theoretical model to identify the determinants of importer relationship intention from a signaling perspective is developed in Chapter 3. The model describes how signal consistency and signal clarity influence perceived product quality, perceived price competitiveness, and perceived delivery performance. These perceptions, in turn, have positive effects on exporter credibility, which influences importer relationship intention. This chapter also considers the moderating effects of ownership type and relationship duration on relationships among the model's constructs. Two competing models (the more restrictive and less restrictive competing models) are discussed at the end of this chapter.

Chapter 4 presents the research methodology used to test the theoretical model. The scales used to measure the theoretical model's constructs are developed based on the literature review and in-depth interviews. Results of a pilot study to test the reliability of constructs are also described in this chapter. The sample design, survey method and response rate are addressed at the end of Chapter 4. Research ethics are also considered in this chapter.

Chapter 5 firstly describes the sample characteristics. Then, the process used to test constructs' reliability and validity is outlined. The results of the reliability analysis and confirmatory factor analysis are presented to demonstrate that all constructs' measures achieve reliability and validity.

Chapter 6 reports the test results from the theoretical model and its two competing models via structural equation modeling. The theoretical model is tested via two steps: the measurement model and the structural model. Results of the measurement model and the structural model confirm that the model achieves an acceptable fit to the data. Model fit comparisons and structural path analysis between the theoretical model and its two competing models are described. The comparison strongly supports the selection of the theoretical model over its competing models. Then, results of the theoretical model are used to discuss the hypotheses presented in Chapter 3. The results of the tests for the moderating effects of ownership type and relationship duration are covered at the end of Chapter 6. The findings support the moderating effects of these two factors.

Chapter 7 summarises the main findings of the research. Then the theoretical, methodological and contextual contributions of the research are presented. This chapter also suggests research implications for managers and government. Next, the limitations of this research are considered. The last section covers directions for future research.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

Chapter 1 points out the research problem and research questions of this study. This chapter reviews literature on relationship intention, signaling theory and supplier selection criteria in order to lay a theoretical foundation for developing a conceptual model (Chapter 3). The chapter comprises five main sections excluding the introduction and conclusions. Section 2.2 discusses the concept of relationship intention; reviews literature on relationship intention; and addresses the importance of modeling the determinants of buyer relationship intention. The section points out the limited attention paid to the existence of information asymmetry in the buyer–seller relationship literature. Next, Section 2.3 reviews the literature on signaling theory and applications of signaling theory in non-marketing and marketing fields. The role of signal clarity and consistency in influencing buyers' relationship intentions is also discussed in this section. Section 2.4 reviews the supplier selection literature to point out how signal quality influences importers' perceptions of exporters' offer quality and the role of offer quality perceptions in modeling the determinants of importer relationship intention. Section 2.5 presents several types of signals that exporters can use to influence importers' perceptions, beliefs, intentions and behaviour.

2.2. RELATIONSHIP INTENTION

There is no strong consensus about the terminology and definition for describing the tendency and willingness to build long-term relationships with a partner (Kalwani and Narayandas 1995). Several terms have been proposed in the literature, such as relationship intention (Kumar et al. 2003); long-term orientation (for example, Ganesan 1994; Joshi and Campbell 2003; Lee and Dawes 2005; Yu and Pysarchik 2002);

relational orientation (Pillai and Sharma 2003); relational exchange orientation (Sheth and Shah 2003); relationship orientation (Kim and Cha 2002); or relational orientation (Janda et al. 2002). Therefore, this section firstly defines the concept of relationship intention and clarifies it in relation to similar concepts developed in the context of buyer–seller relationships. Then, studies that have investigated concepts similar to relationship intention as well as its antecedents and consequences are reviewed. Limitations of studies on the area of relationship intention are then addressed.

2.2.1. Relationship Intention Defined

This research utilises Kumar et al.'s (2003) definition of relationship intention and adapts it into the importer–exporter context. The following paragraphs explain the relationship intention concept first. Then, other terms and their definitions are discussed in comparison with the relationship intention concept employed in this study in order to clarify the concept and explain why it is selected.

An importer's relationship intention is defined as the importer's intention and willingness to develop a long-term relationship with a specific exporter. Kumar et al. (2003) refer to relationship intention as a continuum, ranging from the absence of relationship intention to a high degree of relationship intention. At the discrete end, the importers buy without any involvement or relationship, or any liking for exporters. These types of importers can switch at any time if the situation is favourable for doing so (Kumar et al. 2003). As importers move toward the relational end, they are more willing to build a relationship with exporters, less likely to switch, willing to buy more, and willing to sacrifice short-term benefits for a long-term relationship. They possess a greater trust in exporters; they also become emotionally attached to exporters. The importer relationship intention influences the nature and success of importer–exporter relationships. If importers stay at the discrete end with no relationship intention, the exporters' relationship-marketing strategies and tactics will become less effective (Sheth and Shah 2003).

The stage theory of relationship development argues that relationships develop continuously through stages (Dwyer et al. 1987; Rao and Perry 2002). These researchers argue that relationships develop from the traditional end to the relational

end of a continuum, with gradually increasing resource commitment and interdependence (for example, Dwyer et al. 1987; Ford 1980; Wilson 1995). In other words, inter-firm relationship development occurs in sequential, incremental and irreversible stages (Batonda and Perry 2003b), for example, from awareness to dissolution (Dwyer et al. 1987). However, there is evidence that relationships seldom go through a stage-by-stage process (Batonda and Perry 2003b). "Relationship development can move forward and backward or even stay in the same state for an undetermined period and in unpredicted manner" (Rao and Perry 2002, p. 604). Ford and Rosson (1982) develop a model of manufacturer–overseas distributors and propose that relationships can be in troubled, static and inert states.

On the basis of the above discussion, it is argued that relationship intention not only indicates the intention to change from a transactional stage into a relational stage, as proposed by the stage theory of relationship development. The intention to develop and maintain a relationship with a partner exists throughout the whole life of the buyer–seller relationship from the beginning to the end. The buyer relationship intention can be lower or higher in certain stages or states of the relationship development. For example, the buyer relationship intention can become lower and lower when the relationship moves from commitment into dissolution.

The following sections present and distinguish several similar concepts in the literature in order to help clarify the concept of relationship intention employed in this study.

Relationalism and Relationship Intention

It should be noted that relationship intention, as employed in this study, is different from relationalism or relational governance (proposed by Noordewier et al. 1990). Relationship intention focuses on one party's willingness to build and maintain a long-term relationship with one specific party. Research in relationalism (for example, Bello et al. 2003; Bonner and Calantone 2005; Heide and John 1992; Macneil 1980; Paswan et al. 1998; Skarmeas and Katsikeas 2001; Yilmaz et al. 2004) focuses on relational norms governing the relationships and how these norms influence relationship quality, success or performance. Relational norms are based on mutuality of interest, essentially

prescribing stewardship behaviour, and are designed to enhance the well-being of the relationship (Heide and John 1992, p. 34).

Relationship Orientation and Relationship Intention

There is no strong consensus on the terminology and definitions of relationship orientation in the literature. One group of researchers describes relationship orientation as a firm's culture or climate. Day (2000) emphasises that "relationship orientation must pervade the mind-set, values and norms of the organization" (p. 24). In Day's definition, the relationship orientation of a firm reflects its competency in building better relationships with its customers. This is a firm's general characteristic and it is pre-determined before entering any relationship with any specific partner (Anderson and Narus 1991; Day 2000). On the basis of this concept, researchers suggest that selling firms should use customers' transactional or relational orientation to segment their markets (Anderson and Narus 1991). Other researchers such as De Ruyter and Wetzels (2000); Sin et al. (2005) and Izquierdo and Cillan (2004) use the term relationship marketing orientation in a similar way. The relationship intention concept used in this study refers to the intention of a firm to build a long-term relationship with a specific partner; it is not a general orientation of a firm, and it is not pre-determined before entering the relationship.

While the first group refers to relationship orientation as a general characteristic of a firm, the second group emphasises relationship orientation as specific to a partner. Researchers in this group argue that relationship orientation cannot be the same to all business partners. The intention to build a relationship with one partner can be higher or lower than other partners. In the B2B context, Sheth and Shah (2003) use the term customer preference for relational exchange vs transactional exchange to a specific firm. Pillai and Sharma (2003) use the term relational orientation, which is defined as the propensity to engage in relational behaviour. Palmatier (2004), in his PhD thesis, defines relationship orientation as "the need or desire of a customer to have a strong relationship with an exchange partner to successfully conduct a specific exchange and can vary across a continuum from needing no relationship to needing a strong relationship" (p. 11). In the business-to-customer (B2C) context, Kim and Cha (2002)

base their definition on Crosby et al. (1990) and refer to relational orientation as a behavioural tendency to cultivate the buyer–seller relationships and see to its maintenance and growth. The common theme among these definitions is the tendency, or intention, or orientation of one party to develop a relationship with another specific partner.

The two approaches create confusion in understanding the concept of relationship orientation. Kurmar et al.'s (2003) use of the term relationship intention overcomes the problem. This concept is similar to the definition of relationship orientation of the second group. However, using the term "relationship intention" brings the benefit of clear, simple meaning and makes it different from the first group's terminology. The Consise Oxford English Dictionary defines intention as "the action of straining or directing the mind or attention to something" or "the action of intending or purposing" (Soanes and Stevenson 2006), while orientation has different meanings such as "relative position or direction to something, a person's basic attitude, beliefs, or feelings" (Soanes and Stevenson 2006). Hence, it can be argued that the use of the term "relationship intention" provides a clearer meaning than relational or relationship orientation.

Long-term Orientation and Relationship Intention

Long-term orientation is firstly defined by Kelly and Thibaut (1978) and further developed by Ganesan (1994). Long-term orientation refers to the "perception of interdependence of outcomes in the long-term" (Ganesan 1994, p. 2). Ganesan argues that short-term partners are only concerned with options and outcomes in the current period by relying on discrete exchange to maximise profit. The long-term partners focus on future goals, concerning both current and future outcomes via relational exchanges to maximise profits over a series of transactions. This orientation is toward a specific partner, not all partners.

The definitions of long-term orientation and relationship intention appear similar to some extent: both concepts focus on the long-term orientation of a party toward a relationship with a specific party. However, while relationship intention emphasises the

tendency or intention to build a relationship, the long-term orientation definition emphasises the perception of interdependence. In practice, there may exist situations in which buyers perceive high interdependence with sellers but may or may not intend to build long-term relationships (Palmatier 2004). High-outcome interdependence means the parties involved have more motivation, but it might not mean they have high intentions to build and maintain relationships. Besides interdependence, the current literature finds that many other factors influence buyer relationship intention (as reviewed in Section 2.2.2). In addition, Ganesan's use of the word "long-term" suggests time as the defining dimension of the relationship (Palmatier 2004). There are cases in which firms have long-term exchanges with partners without any relational intent (Cannon and Perreault 1999; Kalwani and Narayandas 1995). In the business-to-business context, frequent and regular exchanges can be observed between sellers and buyers, however, what is being observed may be "nothing more than a sequence of discrete exchanges rather than a situation when the two parties recognize that they have interests or intentions to establish a long-term relationship" (Bloise 2002, p. 254). Therefore, time and high interdependence probably do not sufficiently measure the relational content of a long-term relationship. As a result, it can be argued that the use of the term relationship intention is probably more descriptively accurate than long-term orientation.

Relationship Orientation and Commitment

Commitment is defined as "an enduring desire to maintain a valued relationship" (Moorman et al. 1992, p. 316). A firm can have an intention to develop a long-term relationship with a seller before they even meet (Palmatier 2004), "While a firm must develop a relationship before he or she can be committed or have an enduring desire to maintain a valued relationship" (Palmatier 2004, p. 11).

The above discussion clarifies the differences between relationship intention and other similar concepts in the literature, then explains why the concept of relationship intention introduced by Kumar et al. (2003) is utilised in this study. The next section provides an overview of the literature on relationship intention.

2.2.1. Relationship Intention Studies

As presented in the above section, several concepts have been used to describe the tendency, willingness or desire to build a long-term relationship with business partners, such as long-term orientation, relational or relationship orientation, relational preference or relationship intention. Therefore, the following reviews studies that investigate this tendency. In the following review, all the terms used in the literature to describe this tendency are referred to as relationship intention.

The literature on relationship intention tends to form two main research perspectives. The first perspective considers mutual long-term orientation for both parties involved in the relationship (for example, Griffith et al. 2006; Izquierdo and Cillan 2004; Janda et al. 2002; Mentzer et al. 2000; Yu and Pysarchik 2002). In these studies, the relationship between two parties is the unit of analysis, even though data might be collected from one or both sides. However, this perspective can be criticised, in that the seller's tendency to form long-term relationships might be different from the buyer's (Noble and Phillips 2004; Sheth and Shah 2003), and in that not all customers want long-term relationships (Bonner and Calantone 2005; Ganesan 1994). Hence, the factors influencing sellers' long-term orientation are probably different, to some extent, from the factors influencing buyers' long-term orientation. The second perspective considers relationship intention in terms of one party's intention to build a long-term relationship with a specific party. This study follows the second approach.

Regardless of the conceptual approaches mentioned above, the literature on relationship intention appears to develop into two main research streams (summarised in Table 2.1 and illustrated in Figure 1.1). In the first, research investigates relationship intention as an antecedent or determinant of relationship outcomes such as relationship quality (Kim and Cha 2002), business performance (Mentzer et al. 2000), satisfaction (Janda et al. 2002), commitment and opportunism (Joshi and Stump 1999), conflict reduction, and relational behaviour (Griffith et al. 2006). In the second, studies explore determinants or antecedents of relationship intention (for example, Ganesan 1994; Izquierdo and Cillan 2004; Lee and Dawes 2005; Pillai and Sharma 2003; Sheth and Shah 2003; Yu and Pysarchik 2002).

Trust and interdependence are suggested to be the main motivators to building long-term relationships between buyers and sellers (Ganesan 1994; Izquierdo and Cillan 2004; Mentzer et al. 2000; Yu and Pysarchik 2002). In the retailer–manufacturer context, Ganesan (1994) reports on other determinants of long-term orientation: environmental diversity, transaction-specific investment by retailer, perception of specific investment by vendor, the retailer's experience with the vendor, environmental volatility, the vendor's reputation, satisfaction with previous outcomes. Joshi and Stump (1999) investigate the role of manufacturer asset specificity, technological unpredictability, relational norms governing the relationships.

Other factors are also reported to influence long-term orientation, such as communication difficulties, procedure fairness, inter-functional rivalry, inter-functional distance (De Ruyter and Wetzels 2000), reciprocity (Izquierdo and Cillan 2004). Pillai and Sharma (2003) conceptually propose an antecedent model of relational orientation, which takes into account factors from both the sellers' and buyers' side, the environmental factors, and individuals involved in the relationship. They propose that these antecedents are supplier relational assets, transaction-specific investment by the buyer, quality of alternatives, higher level of knowledge of seller, lack of innovation, dissatisfaction, personal/social bonds, and environmental changes. However, Pillai and Sharma (2003) focus only on the mature stage of relationship development.

The literature on relationship intention appears to face several limitations. Firstly, the above review of literature reveals that studies focus mostly on relationships inside a country; relationship intention in the international context has not been a focus of attention. As Ganesan (1994) suggests, buyers' long-term orientation in other contexts may be affected by a different set of factors. Research is called to investigate the antecedents of relationship intention in other contexts and from other perspectives. Therefore, investigating determinants of the importer relationship intention in the importer–exporter relationship context could enrich our understanding of relationship intention determinants in the international context.

Table 2.1: Relationship Intention Literature: A Summary

Determinants of relationship intention				
Researchers	*Constructs-definition and measurement*	*Antecedents*	*Consequences*	*Context*
Ganesan (1994)	Retailer and vendor's long-term orientation: perception of interdependence of outcomes in the long term.	Mediator: dependence of retailer on vendor, perceived dependence of vendor on retailer, vendor's creditability, vendor's benevolence (not significant). Environmental diversity, transaction specific investment by retailer, perception of specific investment by vendor, retailer's experience with the vendor, environmental volatility, reputation of the vendor, satisfaction with previous outcomes (not significant).		Empirical study Vendor–retailer relationship in U.S.A.
Pillai and Sharma (2003)	Buyer's transactional vs relational orientation in mature relationships: Relational orientation: the propensity to engage in relational behaviour. comprised of trust, commitment and information exchange.	Supplier relational assets, transaction specific investment by the buyer, quality of alternatives, higher level of knowledge of seller, lack of innovation, dissatisfaction, personal/social bonds, environmental changes.		Conceptual study B2B
Sheth and Shah (2003)	Customer's preference for a relational exchange orientation vs a transactional exchange orientation.	Industry structure, decision-making culture, decision making structure, tolerance for risk, nature of purchase and transaction cost.		Conceptual study B2B
Lee and Dawes (2005)	Customer's long-term orientation = perception of interdependence of outcomes.	Guanxi, interaction, trust in salesperson, trust in supplier Control variable: salesperson characteristics.		Empirical study B2C relationship in China
Yu and Pysarchik (2002)	Long-term orientation between two parties.	Mediators: trust, dependence. Retailer's economic, non-economic satisfaction, economic, non-economic conflict, manufacturer's coercive and non-coercive power.		Empirical study Manufacturer–retailer relationship in Korea

Relationship intention as an antecedent of relationship outcomes				
Researchers	*Constructs-definition and measurement*	*Antecedents*	*Consequences*	*Context*
Joshi and Stump (1999)	Manufacturer's long-term orientation defined similar to Ganesan (1994).	Manufacturer asset specificity, technological unpredictability, relational norms governing the relationships.	Manufacturer's commitment, and opportunism.	Empirical study Manufacturer–supplier relationship in Canada
Griffith et al. (2006)	Long-term orientation is defined as when an exchange partner believes that the on-going relationship with another is so important as to warrant maximum effort in maintaining the relationship.	Procedure justice, distributive justice.	Relational behaviour, satisfaction, conflict reduction.	Empirical study Supplier–distributor relationships in a supply chain, U.S.A.
Izquierdo and Cillan (2004)	Relational-oriented exchange based on the interaction of efficiency, stability and reciprocity motivations.	Economic factors, linked to efficiency and stability motivations: dependence: magnitude and asymmetry social factors, linked to motivations of reciprocity.		Empirical study Supplier–manufacturer relationships in Spain
Janda et al.(2002)	Relational orientation: an integrated construct comprising supplier flexibility, supplier assistance, information provided to supplier, supplier monitoring, and expectations of continuity.		Relational orientation as antecedents of service quality, acquisition costs, possession costs, satisfaction.	Empirical study Manufacturer–supplier relationships in U.S.A.
Mentzer et al. (2000)	Partnering orientation: partner's pattern of shared values and beliefs that help individuals in the partner firms understand the functioning of the partnership, and thus provide partnership behavioural norms.	Partnering antecedent: interdependent, trust, conflict, commitment, organisational compatibility, top management vision.	Partnering implementation (information sharing, technology utilisation, strategic interface teams, organisational issues, joint program, access specificity, establish joint performance measures) -> competitive attainment -> business performance outcomes.	Conceptual study Partnership in supply chain
Kim and Cha (2002)	Hotel relationship orientation: behavioural tendency to cultivate the buyer–seller relationship and see to its maintenance and growth.		As an antecedent of relationship quality.	Empirical study Hotel–guest relationships in Korea
Kumar et al. (2003)	Consumer relationship intention includes: involvement, expectation, forgiveness, feedback, fear of relationship loss.	Brand/product equity, firm equity, channel equity.	Low cost to serve, price premium, words of mouth, promotion, company advertisement Moderators: life-time duration and profitability.	Conceptual only Consumer–firm relationship

Second, limited research has investigated the effects of information asymmetry in buyer–seller relationships. Information economists claim that information asymmetry exists everywhere (Akerlof 1970) and information gaps can be found in a variety of markets and market-like situations (Spence 1974, 1976). Buyer–seller relationships are also characterised by asymmetric information (Anderson and Weitz 1992; Duncan and Moriarty 1998). Each party in buyer–seller relationships possesses different pieces of information, and sellers have more information about the exchange than buyers (Mishra et al. 1998). This information asymmetry affects the nature of buyer–seller relationships (De Wulf et al. 2003). Under the condition of information asymmetry, high-quality sellers could not be distinguished from low-quality sellers; buyers would not have information to recognise the differences among sellers (Akerlof 1970). If sellers could not distinguish themselves from others, buyers would perceive all sellers as the same (Akerlof 1970).

Signaling theory argues that sending signals can solve information-asymmetric problems (Spence 1973, 1974). Signals can help sellers distinguish themselves from others (Herbig and Milewicz 1996; Herbig et al. 1994) and help attract buyers' intentions. However, the applications of signaling in determining buyer relationship intention have been largely neglected in the literature. Most of the studies are grounded in relational exchange theory and transaction cost analysis theory[2] (for example, Ganesan 1994; Izquierdo and Cillan 2004; Janda et al. 2002; Joshi and Stump 1999; Pillai and Sharma 2003; Sheth and Shah 2003).

The next section outlines the development of signaling theory and signaling theory's main arguments, and then reviews studies of signaling applications in the non-marketing and marketing fields. The review helps reveal the importance of signals and signaling in buyer–seller relationships. Then, the review points out the significance of signal consistency and signal clarity in influencing importer relationship intentions.

[2] Other theories have been used as background theories: resource dependence (Ganesan 1994; Izquierdo and Cillan 2004; De Ruyter and Wetzels 2000); power source (Yu and Pysarchik 2002); communication (De Ruyter and Wetzels 2000); firm and brand equity theory (Kumar et al. 2003); organisational cognition; persuasion knowledge (Pillai and Sharma 2003); symbolic interactionism (Janda et al. 2002).

2.3. SIGNALING THEORY AND SIGNALING APPLICATIONS IN BUSINESS-TO-BUSINESS RELATIONSHIPS

2.3.1. Information Economics and Signaling Theory

"Information economics represents a fundamental change in the prevailing paradigm within economics" (Stiglitz 2002, p. 460). Information asymmetry exists pervasively in the economy: different people know and believe in different things (Stiglitz 2002, p. 469); one party knows more about the exchange than others (MacMillan 1990). In one of the key articles in information economics[3], Akerlof (1970) argues that asymmetric information drives the good car out of the used car market because buyers do not have enough information to distinguish good cars from bad cars. In this "lemon" market, all sellers' claims are suspected and buyers perceive all products as being of the lowest quality. Good-quality car sellers cannot distinguish themselves from bad-quality car sellers.

Information economists propose two approaches to solve asymmetric information problems: one from the buyers' perspective (screening) and one from the sellers' perspective (signaling).[4] Buyers can screen all available choices; evaluate the costs and benefits through a process of self-selection (Rothschild and Stiglitz 1976) to select the best. From the sellers' perspective, Spence (1974) asserts that sending signals can eliminate "lemon" problems. Sellers can use observable signals to help buyers convey information about unobservable product quality. By using costly signals that lower quality sellers cannot imitate, high-quality sellers can be distinguished from low-quality sellers and can get rewards by charging higher prices. Signaling "allows efficiency and ease of communication between firms, whether they are competitors, suppliers or customers" (Herbig et al. 1994, p. 20).

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[3] The 2001 Nobel Prize for Economics was awarded to three researchers whose articles became the keystones in information economics: Akerlof 1970; Spence 1974; and Rothschild and Stiglitz 1976.
[4] Some researchers consider signaling and screening as the twin theories in information economics (1997), because they are the opposite sides of the same coin (Herbig and Milewicz 1996).

2.3.2. Signal Definitions

2.3.2.1. Signal Definitions in Different Contexts

This section firstly reviews several definitions of the signal in different research contexts. Next, the section outlines different types of signals mentioned in the literature to provide a more precise understanding of the signal definition. These reviews help to develop an appropriate definition of signals in the buyer–seller relationship context.

Signals have been defined slightly differently in different research contexts. In his research on the labour market, Spence defines signals as "activities or attributes of individuals in a market which alter the beliefs of, or convey information to, other individuals in the market" (Spence 1974, p. 1). Because Spence focuses on the labour market, his signal definition is narrowed to the activities or attributes of individuals. In the competitive signaling research, Porter (1980) introduces the term "market signal" and defines it as "any action by a competitor that provides a direct or indirect indication of its intentions, motives, goals or internal situation" (p. 75). The definitions of Spence and Porter state that signals could be actions, activities or attributes.

In his PhD thesis on competitive signaling, Heil (1988) provides a clarification of marketing signaling. He states, "marketing signaling means that a marketing activity can provide information that *goes beyond the marketing activity's mere form*" (p. 10) (emphasis added). In that sense, marketing activities activate and provide marketing signals. Marketing activities or actions are not the signals, however, "a marketing signal allows a firm to discover information covered by the marketing activity" (Heil 1988, p. 10).

As Spence (1973; 1974) emphasises, the signal *works when there is information asymmetry*. If information is complete and there is no asymmetry, everyone possesses exactly the same information, then signals are not needed. Therefore, there must be some *unobservable things* to a certain party as a condition for signaling to work. Herbig et al. (1994) provide a more comprehensive definition of the marketing signal:

"marketing activity that provides information beyond the activity itself and reveals insights into the unobservable" (p. 19).

In a study of brands as a signaling phenomenon in consumer marketing, Erdem and Swait (1998) define brand signal as "firms' past and present marketing mix strategies and activities associated with that brand" (p. 135). In another study of quality signals in consumer marketing, Bloom and Reve (1990) provides a more general definition of signal: "a marketer-controlled, easy-to-acquire informational cue, extrinsic to the product itself, that consumers use to form inferences about the quality or value of that product" (p. 59). Bloom and Reve's (1990) definition clearly set the characteristics of the product quality signal: the signal is controlled by the sender, is easy to see, is not the product but can be used to refer to product quality.

While an education signal, such as a diploma degree introduced by Spence (1973) is true and clear, marketing signals are different. "Marketing signals can be clear or ambiguous, true or false, honest or deceptive, cooperative or misleading. They can be properly transmitted or they may change during transmission. Once received they can be properly understood or misinterpreted" (Heil 1988, p. 60).

Different types of signals have been mentioned in the literature. Commonly, signals are classified into verbal signals vs non-verbal signals[5] (for example, Spence 1976). Verbal signals are fast, flexible, low cost (Spence 1976), easy to understand and interpret (Milewicz and Herbig 1997), and easy to tailor to senders' intention (Heil et al. 1997). However, as announcements are so easy, bluffing is more likely. Verbal signals do not provide the means to differentiate between high- and low-quality sellers; as a result, they are less believable (Heil et al. 1997). In that case, bluffed verbal signals may lead to a loss of sellers' perceived trustworthiness or cost a loss of business (Spence 1976). The credibility of verbal signals can be strengthened if they are followed by more interactions and transactions between buyers and sellers.

[5] Similar to announcement vs action signals in Heil et al. (1997); or overt vs covert signal in Milewicz and Herbig (1997).

Non-verbal or action signals take more time and effort to deliver. They are more expensive and difficult to reverse (Heil et al. 1997; Milewicz and Herbig 1997). Consequently, they are more credible, as they require high costs, risks and commitment to send. However, action signals provide less ability to refer and tailor to the senders' intention; require a longer time to achieve and can possibly be ambiguous in their meaning (Heil et al. 1997; Milewicz and Herbig 1997).

Other types of signals are mentioned in the literature. Based on the monetary cost occurrence when activating a signal, Kirmani and Rao (2000) classify quality signals into default-independent signals (signaling costs occur when signals are sent), such as advertising expenditures and default-contingent signals (signaling costs may or may not occur and occur after signals are sent), such as a warranty. Insch (2003) classifies quality signals into intrinsic (product-specific and cannot serve as quality signals across all types of products) vs extrinsic cues (not product-specific and can serve as signals of quality across product types). Signals are also classified into internal signals (dealing with internal stakeholders such as employees) vs external (dealing with external stakeholders such as customers, distributors) (Harvey et al. 2002).

In summary, the abovementioned signal definitions, characteristics and types offer general views of signals. Signals could be attributes (Spence 1974), actions (Porter 1980), activities (Heil 1988; Herbig and Milewicz 1994a; Herbig et al. 1994; Spence 1974), marketing mix strategies and activities (Erdem and Swait 1998; Erdem et al. 2006). Signals can also be verbal statements (Heil et al. 1997) or announcements (Eliashberg and Robertson 1988). However, all of these definitions emphasise the information aspect of signals: signals are used to refer to or convey information about the unobservable.

2.3.2.2. Signal Definition in the Buyer–Seller Relationship Context

Under the condition of asymmetric and imperfect information, sellers are faced with difficulties in distinguishing themselves from other sellers while buyers have difficulty in differentiating between high- and low-qualification providers (Akerlof 1970). In order to encourage buyers to build long-term relationships, sellers have to persuade

buyers that they are the best. This study argues that sellers should send observable signals to buyers to (1) show their qualifications and capabilities of fulfilling buyers' requirement as long-term suppliers; (2) distinguish themselves from lower qualified sellers or assert that they are superior than other sellers; and (3) address their true intentions to build long-term relationships with buyers.

On the basis of these signaling purposes and current definitions of signals in the literature, this study defines signals in the buyer–seller relationship context as seller-controlled and observable information cues that buyers can use to form inferences about sellers' capabilities, intentions and motives.

The following key points elaborate on this definition. Firstly, signals must be deliberately transmitted by sellers who have abilities to control, alter the nature and intensity of signals (Bloom and Reve 1990; Downes and Heinkel 1982). Secondly, signals are observable and extrinsic cues, which are used to convey information about the unobservable (Spence 1974) such as sellers' capabilities, intentions and motives). Signals do not reflect the detail or absolute true capabilities, intentions or motives of sellers, they provide only references (Bloom and Reve 1990; Herbig and Milewicz 1996). Therefore, different receivers can perceive and interpret a signal differently (Heil 1988). Thirdly, as senders can use different types of signals to convey information about one unobservable thing, sellers can use a single signal or multiple signals at the same time. Fourthly, while product quality signals are assumed to inform buyers before they purchase the product, signals in buyer–seller relationships could be sent continuously. In other words, signals can be sent during the whole relationship life.

This definition indicates that any action, activity, behaviour, statement or, announcement from sellers, which can be used to convey information about the unobservable, can be seen as signals. Therefore, sellers can use signals to send information about anything that is unobservable to buyers or that buyers do not have enough information to know about with certainty. In buyer–seller relationships, the unobservable might be sellers' capabilities, product quality, price competitiveness, sellers' delivery performance, intentions, or commitment to the relationship.

2.3.2.3. Signaling Cost and Signaling Effectiveness

Costs involved in signaling determine the success and effectiveness of signals, because signaling costs eliminate low-quality sellers' abilities to imitate the signals (Spence 1973, 1976). A signal can distinguish between a cooperator and a cheater only if the cooperator can afford to issue the signal and the cheater cannot (Posner 1998). Any cost (whether a monetary cost or non-monetary cost) related to the sending and the result of signal sending can be seen as a signaling cost (Spence 1974). Example of signaling costs are: time (Spence 2002), competitive cueing (revealing one's intention to competitors), purchase delaying while customers are waiting for signalled action, reputation loss, loss of face, lost customers and lost sales if senders fail to deliver on promises (Herbig et al. 1994).

There are several other conditions that determine the success and effectiveness of sending signals. First, signaling works when there is information asymmetry (Spence 1973). The second is post-purchase clarity, which means the unobservable things can be observed better after the signal is sent (Kirmani and Rao 2000). However, as Heil (1988) argues, because of the complexity of marketing signals, situations exist in which the unobservable (for example, the sender's intention, commitment) may not be clear. Third, signaling is more effective if the risks of bluff signals are high and the probability to detect the deceit is high and easy (Martin and Camarero 2005). For example, sending cheating signals may cost senders a loss of reputation, loss of customers and reduction of sales and revenue (Rao et al. 1999). Buyers may reduce their purchase volume, or never buy again or switch to other suppliers if they receive bluffing signals. In the case of high cost and high risks, buyers would perceive that sellers are confident and credible, and the probability of cheating is low. Fourth, the longer the time lag to reveal the true or bluffing signals, the higher the risk to buyers, and the lower the effectiveness of signals (Rao and Monroe 1996).

2.3.3. Research Streams in Signaling Theory

2.3.3.1. Signaling Studies on Non-Marketing Fields

Signaling theory literature develops into two main streams. In the first, research focuses on game theory and examines issues related to stable equilibrium signaling positions among actors (Eliashberg and Robertson 1988). In the second, signaling theory has been significantly applied in many different areas in which information asymmetry exists. Signaling theory applications can be seen from business management to politics.

In the labour market and human resource management, education and qualifications have been analysed as signals of productivity (Noldeke and Damme 1990; Spence 1974) and of the ability (Swinkels 1999) of employees and job candidates. In the insurance market, the price or premium of health insurance plans gives a reliable signal of the objective quality level of the plan (Dasgupta and Ghose 1994). In law studies, a portfolio of patent rights is used to signal information about firms (Long 2002). Riley (2001) reviews and indicates that several types of signals have been used in politics, such as campaign platforms as signals of candidates' behaviour. In finance, researchers find different signals of firms' value or success, such as dividend decisions (Bar-Yosef and Huffman 1986; Mougoue and Rao 2003); revaluating asset decisions (Gaeremynck and Veugelers 1999); open-market repurchase announcements (Fried 2001); levels of investment, debts and dividends (Luo et al. 2002).

2.3.3.2. Signaling Studies on Marketing

This section reviews signaling studies on marketing in three areas. Firstly, studies of signaling theory applications in consumer marketing are reviewed. Next, studies of signaling in the business-to-business context are covered. This section also reviews studies that describe applications of signaling in the import–export context.

Signaling in Consumer Marketing

In consumer marketing, research related to signaling theory largely focuses on how signals influence consumers' perceptions of product quality. Marketing mix elements are often studied as signals of product quality.

A number of studies examine the role of *advertising* as a signal of product quality (for example, Barone et al. 2005; Gotlieb and Saren 1992; Kirmani and Wright 1989; Nelson 1974; Schmalensee 1978). Consumers believe that advertising expenditure signals a firm's confidence in its product quality, its financial strengths and its quality investment (Kirmani and Wright 1989). Therefore, consumers have a perception of high quality and a favourable brand evaluation when they see high advertising expenditure, (Gotlieb and Saren 1992; Kirmani 1990; Kirmani and Wright 1989), advertisement repetition (Kirmani 1997).

Price signal is used in preference to other marketing mix components because it is easy to reverse, easy to apply for different segments or channels (Milewicz and Herbig 1997), and easy for buyers to observe. In the situation of information asymmetry, consumers perceive high price as an indicator of high product quality because they believe that sellers will not risk their future sales and reputation if their product quality is low (Bagwell and Riordan 1991; Dodds et al. 1991; Kalita et al. 2004; McConnell 1968; Rao and Monroe 1989). However, there is no consensus on the role of high price as a signal of high product quality. When there is a single cue, price is found as a good indicator of product quality (Monroe 1971). Multi-cue studies reviewed by Monroe (1971); Erickson and Johansson (1985) show that price loses its importance as an indicator of quality when multiple signals are used. Other signals are found to be more important than price signal, such as brand image (for example, Dawar and Parker 1994; Gardner 1970, 1971), word-of-mouth communication (Kennedy 1994). In contrast, other multiple-cue studies claim a more significant effect of the price–quality relationship (Caves and Greene 1996; Chao 1989).

Product warranties provide direct and credible signals of product quality (Boulding and Kirmani 1993; Erevelles et al. 2001; Grossman 1981; Price and Dawar 2002; Tan et al.

2001). Long-term warranty periods show sellers' commitment to product quality. Consumers assume that firms with low-quality products will not be interested in offering long-term warranties, as this could involve more costs deriving from more complaints than in the case of high-quality products (Martin and Camarero 2005).

Brand name is also studied as a signal of product quality (Chu et al. 2005; Erdem and Swait 1998; Erdem et al. 2004; Tsao et al. 2005). Sellers have to invest in building a brand with the expectation of future sales. Low-quality sellers will lose branding investment, because future sales will not accrue when low quality is revealed (Kirmani and Rao 2000).

Reputation also serves as a signal of product quality in the literature (Boulding and Kirmani 1993; Rao and Monroe 1996; Shapiro 1982). Buyers believe that good reputation firms sell high-quality products (Shapiro 1982). Firm reputation is also found to signal service quality (Eichenseher and Shields 1985; Rogerson 1983; Wilson 1983); and successful brand name (Herbig and Milewicz 1993). Sellers' reputation signal is claimed to become more important in online marketing (Biswas and Biswas 2004; Chu et al. 2005; Noll 2004).

Other marketing elements also have been studied as quality signals in the literature, such as: word-of-mouth communication (Kennedy 1994); money-back guarantee (Moorthy and Srinivasan 1995); price promotion (Raghubir and Corfman 1995); scarcity of product (Stock and Balachander 2005); widespread use, popularity or big market share (Hellofs and Jacobson 1999); strategic alliance with well-known suppliers (Rao et al. 1999).

Other types of signals have also been considered in B2C marketing: high price as a signal of product availability (Dana 2001); providing access to competitors' price as a signal of price competitiveness (Trifts and Häubl 2003); product origin (local or non-local) as a signal of social status (Batra et al. 2000); consumer's brand choice as a signal of personal type (Wernerfelt 1990); use of direct mail, preferential treatment, interpersonal communication, and tangible rewards as signals of relationship investment (De Wulf et al. 2003).

Signaling in the Business-to-Business Context

Studies on business-to-business signaling can be classified into two groups: competitive signaling between competitors and signaling between business partners. Studies on competitive signaling focus on factors that influence signal interpretation, signal reaction (Heil 1988; Heil and Robertson 1991) and competitive interaction (Prabhu and Stewart 2001). Competitive signaling research also focuses on how signals and signaling can be used as competitive strategies (Heil et al. 1997); how marketing signals conveyed from marketing actions such as new product introduction (for example, Heil and Walters 1993), pre-announcement (for example, Eliashberg and Robertson 1988); and price reduction (Moore 1992) influence competitors' beliefs and reactions.

Studies of signaling between business partners largely focus on providing an overview of concepts and types of signals in the context. Examples of these overviews are a series of studies by Herbig and Milewicz.[6] In the manufacturer–retailer signaling research, manufacturers signal the high demand for their products by increasing the wholesale price and advertising (Chu 1992). Desai (2000) finds that manufacturers use advertising support and slotting allowance as a signal of a high demand for their products. Desai and Srinivasan (1995) consider the signaling process between franchisers and franchisees and find that franchisers signal their high demand by increasing the royalties and decreasing the franchise fee from their symmetric information levels. Worsham and Gatrell (2005) investigate the effect of signaling theory between principals and agents.

[6] These two authors provide overall views of signaling in the B2B context, including: clarifying the marketing signaling concept (Milewicz et al. 2002); the efficiency of verbal and non-verbal signals (Milewicz and Herbig 1996); comparison of B2B international signaling behaviour from different cultures (Herbig and Milewicz 1995b); differences between signaling behaviour between manufacturers and service firms (Herbig and Milewicz 1994b); signaling and pricing behaviour (Herbig and Milewicz 1995c); how signals and signaling work in different industrial markets (Herbig et al. 1994), and in B2B communication (1988). Most of these are conceptual papers with some examples in different industries. They have undertaken an empirical study which investigates signal impact on strategic decision-making ability and profitability (1995) in the airline industry.

Signaling in the Import–Export Context

Although research has investigated the signaling phenomenon in the import–export context, most of the studies focus on which signals can be used. Janda (2002) proposes that in order to signal their strength, exporters can show that they have previously entered markets which are protected by import quota or voluntary export restraints. Shy (2000) finds that manufacturers show export ability as a signal of their product quality to local consumers. Farrell and Fearon (2005) explore how foreign manufacturers can rent the reputation of domestic importers to use as a signal of product quality and create preference for foreign products.

To sum up, the studies reviewed above mostly focus on what kind of observable signals influence receivers' perceptions of unobservable product quality or product demand. Limited research has investigated the effects of signals on post-perception issues such as receivers' behaviour or intentions (Heil 1988). More specifically, the question of how signals and signaling influence the buyer relationship intention is largely neglected in the literature.

2.3.4. Signaling in Buyer–Seller Relationships

Researchers have asserted the existence of incomplete, imperfect and asymmetric information in any business-to-business relationships (Anderson and Weitz 1992; Herbig et al. 1994). According to the information economics theory, information is complete if both buyers and sellers know with certainty all information about the factors that influence the exchanges between buyers and sellers (Phlips 1988). Complete information means noiselessness and certainty (Phlips 1988). However, in buyer–seller relationships, both buyers and sellers cannot estimate with certainty all factors influencing their relationships. Buyers and sellers cannot manage and control external factors from business environments. In importer–exporter relationships, differences in economic, political, legal, social and cultural environments cause information to become more incomplete (Samiee 2000). These differences create more uncertainty in managing relationships. These differences also create more noise in the signaling process between exporters and importers.

Imperfect information occurs when there is uncertainty about the actual behaviour of players in the game (Milgrom and Roberts 1986). In buyer–seller relationships or exporter–importer relationships, one party cannot know and estimate with certainty the actual intentions and behaviour of others. Importers may fear exporters' cheating behaviour, such as no delivery after payment or delayed delivery. Under these circumstances, exporters' credibility may help to reduce uncertainty and guarantee that exporters will not exhibit opportunistic behaviour (Morgan and Hunt 1994).

Information asymmetry exists if one party has information that others do not have (Phlips 1988). In buyer–seller relationships, each party knows more than the other about its own capability and intention. In importer–exporter relationships, importers know more about their payment ability, their product requirements, and their intentions to build long-term relationships with exporters. Exporters know more about their product quality, the competitiveness of the prices they offer, their abilities to deliver on time, their flexibility in managing the relationships with importers, their abilities to assist importers, and their intentions to engage in relationships. In addition, geographical distance, psychic distance, differences in business and social environments increase the asymmetry and imperfection of information in importer–exporter relationships (Samiee 2000). Importers cannot know, with certainty, the product quality, exporters' delivery ability, after-sales services, exporters' technical ability, exporters' warranty service etc., even after they purchase the products. Importers might not be aware of exporters' credibility and relationship intentions, even after several transactions or a relatively long period of transactions.

From an industrial buying behaviour perspective, Liang and Parkhe (1997) argue that industrial buyers will optimise decision choice within the bounds of rationality. Over those bounds, they intend to choose a more simplified decision process. Importers tend to "rely on information that is easily recalled and readily accessible, such as vendor reputation, country of origin, or word of mouth recommendations" (Liang and Parkhe 1997, p. 513). Therefore, under the condition of asymmetric and incomplete information (as demonstrated above), importers tend to evaluate signals to compare and select long-term exporting partners.

In the buyer–seller relationship context, signaling has been proposed to enhance long-term relationships. In their paper on industrial signaling, Herbig et al. (1994) mention the signaling process between manufacturers and distributors. They argue that in order to gain the benefits of productive working partnerships, manufacturers must demonstrate that they are committed to distributors for the long-term. Distributors, likewise, also send similar commitment signals such as directly investing time, effort and resources in the proper marketing of the manufacturer's product line; always meeting or exceeding a manufacturer's recommended inventory stock quota; employing well-trained personnel; sending technical and repair staff to manufacturers' facilities for extensive training; and forwarding to their principals all relevant marketing information. However, the study does not provide any empirical support for their arguments. In addition, the study is limited to listing what activities or behaviour can be used to signal commitment, it does not investigate how these signals and signal quality influence both parties' commitment or their intentions to build long-term relationships.

2.3.5. Roles of Signal Quality in Influencing Buyer Relationship Intention

While studies reviewed in the previous section mostly focus on types of signals, it is widely emphasised in signaling studies that receivers not only look at the signals but they also evaluate the characteristics or quality of signals (Heil 1988; Heil and Robertson 1991; Herbig and Milewicz 1994a; Herbig and Milewicz 1995c; Koku 1995). As illustrated in Figure 2.1, the signals are sent by sellers to overcome problems caused by incomplete and asymmetric information. Receivers/buyers interpret and evaluate signals to convey information about unobservable capabilities, characteristics or qualities. In the signaling process, researchers observe that the signal consistency and signal clarity play important roles in influencing receivers' interpretation of signals and the receivers' reactions (Heil and Robertson 1991; Prabhu and Stewart 2001).

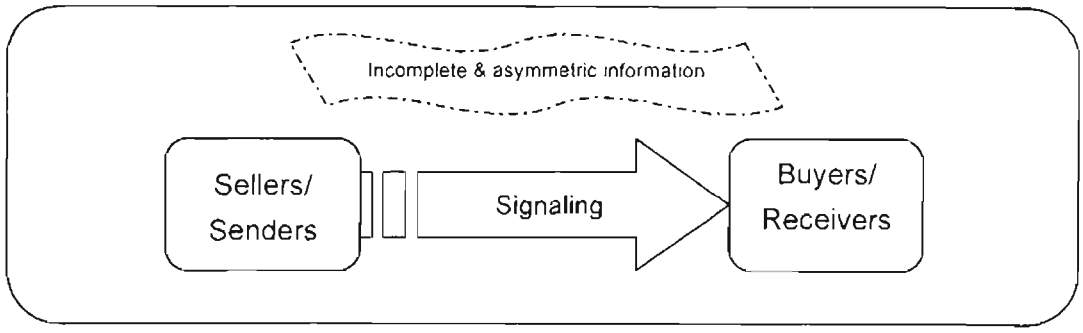


Figure 2.1: Signaling Process

Early recognition of the importance of signal clarity is found in the communication literature by Shannon and Weaver (1949), and in international relations literature by Jervis (1970). In business, the early studies on signal clarity and signal consistency are in competition analysis (for example, Heil 1988; Heil and Robertson 1991; Porter 1980). These researchers argue that the quality or characteristics of signals influence signal interpretation, signal reactions and signaling effects. The research by Herbig and Milewicz (1994a; 1995c) explores the influence of signal clarity and consistency among competitors in the airline industry. Their market simulation study provides evidence that signal clarity has a positive impact on sender's credibility and reputation. They also support the hypothesis that signal consistency helps receivers react more appropriately in order to optimise firms' profit.

In finance, a review by Brucato and Smith (1997) shows the attention of researchers to the importance of consistency among signals. For example, Kane, Lee and Marcus (1984) find that if an announcement of a dividend increase is not corroborated by a nearby announcement of higher earnings, the usual dividend-driven increase in a firm's market value is not realised.

In consumer marketing, Erdem and Swait (1998) introduce signal clarity and signal consistency into brand management in consumer marketing. In their study of brand as a signaling phenomenon, Erdem and Swait (1998) find that signal consistency and signal clarity influence brand credibility, then perceived quality.

As buyer–seller relationships are characterised by information asymmetry (Anderson and Weitz 1992), signal clarity and consistency affect the framing of actions, reduce the chance of a misunderstanding, reduce signal bluffing and increase the speed of reaction (Heil and Langvardt 1994). Geographic and psychic distance particularly the cultural differences in inter-organisational relationships across borders increase the difficulties of information-sharing (Boyacigiller 1990; Erramilli and Rao 1993), complicate information interpretation and understanding (Marshall and Boush 2001), and increase the cost of acquiring information (Erramilli and Rao 1993). Hence, it can be argued that psychic distance in importer–exporter relationships probably requires exporters to be much clearer and more consistent in communicating their messages. As Herbig et al. (1994) emphasise, firms are now not really faced with questions "should we signal?", but the more appropriate question: "are we signaling what we intended to communicate?" (p. 20). Delivering clear and consistent signals indicates the senders' willingness to communicate, the senders' desire to get quick feedback, and the senders' efforts to build long-term relationships (Heil 1988). Unclear and inconsistent signals not only require more time and effort to understand the signals' meaning, but also cause importers to feel uncertain about exporters' true capabilities and intentions.

In summary, the above review of signaling applications in marketing reveals that a large part of the studies focus on which signals should be used to overcome asymmetric information conditions. In marketing, research mostly focuses on what can be used to signal product quality in the business-consumer context. In the business-to-business and import–export contexts, research concentrates on how signals are used by sellers to show product quality and product demand. Although research asserts the existence of the information asymmetry in buyer–seller relationships, limited research has investigated how signals and signaling work in buyer–seller relationships. In particular, the question of how the clarity and consistency of signals influence buyer–seller relationships is largely neglected. Therefore, exploring influences of signal quality in buyer relationship intention could broaden the signaling application in buyer–seller relationships. It also provides significant implications for sellers/exporters to develop signaling strategies to encourage buyers/importers to build long-term relationships.

As argued in Section 2.3.2.2, in buyer–seller relationships, sellers send signals to show their capabilities to supply. Sellers also signal to distinguish themselves from others and to demonstrate: We are the best choice. As business buyers are rational in making buying decisions (Liang and Parkhe 1997; Wathne et al. 2001), they assess sellers' capabilities to supply before making the selection decision. Under the condition of information asymmetry, delivering signals consistently and clearly is the key to managing buyers' perceptions (Duncan and Moriarty 1998). Hence, this study proposes that signal consistency and signal clarity likely influence importers' perceptions of exporters' capabilities to supply what they want. The next section reviews the literature related to supplier selection decisions in order to explore how signal quality influences importers' perceptions of exporters' capabilities to supply, and the role of those perceptions in modeling the determinants of importer relationship intention.

2.4. SUPPLIER SELECTION LITERATURE AND OFFER QUALITY

This research argues that a selling firm must be selected first as a supplier before it can be considered to be a long-term partner. Studies on supplier selection criteria are commonly developed in two main streams. The first stream emphasises the rational economic and quantifiable factors such as product quality, lowest price, shortest delivery time, buying from firms with potential reciprocal buying agreements and similar factors (Ellram 1990; Kelly and Coaker 1976). The second stream asserts that both economic factors and relational factors are important in the supplier selection decision (for example, Banville and Dornoff 1973; Cameron and Shipley 1985; Shipley et al. 1991). This section reviews both streams of supplier selection criteria in domestic and international contexts.

Studies on the first stream argue that business buyers are rational, they assess suppliers by economic criteria. Various factors have been identified, in the supplier selection literature, as criteria for selecting suppliers. In 1966, Dickson (1966) identifies 23 supplier attributes that buying managers should consider. For the automotive supply chain, Choi and Hartley (1996) suggest 23 selection criteria. Among these factors, price, quality and delivery performance are often viewed as among the most critical criteria (Cameron and Shipley 1985; Cunningham and White 1973; Ellram 1990; Lehmann and

O'Shaughnessy 1982). For example, Weber (1991) reviews 74 articles in supplier selection from 1967 to 1990, based on Dickson's 23 factors, and concludes that quality is the most important factor, followed by price and then delivery performance. In addition, 30 years after Dickson's research, Thomas and Janet (1996) still find product quality and delivery as the most important criteria in the automotive industry in the USA Kannan and Tan (2003) review 29 studies from 1982 to 2001 and conclude that price, quality, delivery reliability and service are typical determinants of supplier selection decisions. And 40 years after Dickson's study, respondents in Ugala and Eggert's (2006) study assert quality, delivery performance and price as the three must-haves of suppliers.

The economic selection criteria vary in different purchase situations; product types (Kannan and Tan 2003); organisation types (Min 1994); and vary over time (Trent and Moczka 1999). The difference in the importance of criteria is also found between perceived importance and actual choice (Verma and Pullman 1998). However, regardless of the situations, product quality, price and on-time delivery have been found among the most important factors (Wilson 1994).

The second stream strongly argues that buyers are influenced by both economic and behavioural or relational criteria (Banville and Dornoff 1973; Cameron and Shipley 1985). As Kumar and Kumar (2004) state, all buyers require "the right product (meeting the requirements of quality, reliability and maintain ability) to be delivered in the right quantity, at the right time, in the right place, from the right source (a vendor who is reliable and will meet commitments in a timely fashion), with the right service (both before and after sale), and, finally, at the right price" (p. 310). While economic factors are important, buying organisations feel the strong need to maintain good business relationships with suppliers (Woodside et al. 1978) because buyer–seller relationships bring mutual benefits (Ellram 1990). However, there is no consensus on the relative importance of relational and economic factors. Some researchers find evidence to support that relational factors are more important. For example, Eggert et al. (2006), in their study using data collected from US purchase managers, suggest that relationship benefits display a stronger potential for differentiation in key supplier relationships than cost considerations do. Product quality and delivery performance, along with

acquisition costs and operation costs, display a moderate potential to help a firm gain and maintain the key supplier status. Other researchers support the argument that while both criteria influence the selection decision, basic economic criteria such as criteria related to product quality, price and delivery performance are still among the most important criteria (Choi and Hartley 1996; Kannan and Tan 2003; Shahadat 2003; Shipley and Prinja 1988).[7] The relative importance of relational vs economic criteria is also found to vary in different countries (Kannan and Tan 2003) and in different types of organisations (Shipley et al. 1991).

In the international context, issues of which criteria to use in selecting suppliers have also been investigated extensively. Table 2.2 presents selection criteria found by studies in different countries (American, European, Asian countries) over 30 years (1975–2005). Studies in international contexts also confirm the critical roles of quality, delivery performance and price (Bowman et al. 2000). These three factors consistently rank in the highest positions (see Table 2.2). However, relational factors such as meeting commitments, customer orientation and reputation are also highlighted.

In brief, although there has been extensive research on supplier selection criteria, these studies mostly focus on listing the factors (criteria), rating and ranking the importance of factors (Ellram 1990). This descriptive method is limited in analysing the behavioural effects of these factors. The research has primarily focused on understanding the actual criteria and purchase process of industrial buyers and has given limited attention to post-choice purchase behaviour (Qualls and Rosa 1995).

[7] Shipley and Prinja (1988) find that economic factors rank in the four highest-ranking choices (quality of products, quality of delivery service, range of products, and products superior to competitors. Choi and Harley (1996) consider both economic and relationship factors in their study of auto assemblers and find that quality and on-time delivery are still the first-ranking factors, followed by relational factors (reliability, relationship and flexibility). Shahadat (2003) studies supplier choice criteria of executing agencies in developing countries and finds that price is the most important considered factor, followed by timely delivery, favourable financial capacity, reliable quality, regularly meeting quality specifications, better warranty, reputation, technical ability, handling rejection promptly. Kannan and Tan (2003) provide evidence to show that objective criteria such as cost and price are more important than subjective criteria such as supplier commitment.

Table 2.2: Supplier Selection Criteria in International Contexts

Studies	*Sample*	*Importer's ranking of exporter's selection criteria*	
Hakansson and Wootz (1975)	43 Swedish purchasers	Supplier characteristics (location, reputation, size), bid characteristics (price and quality), no ranking	
White (1979)	US managers, Exporters from England, France, Italy, West Germany	1. Quality 2. Market characteristics (highly advertised, promoted, recognised brand names, easy to service, large choice of size and model), 3. Price	
Ghymn (1983)	198 managers of import/export firms in California, Nevada, USA	1. Timely delivery 2. Price	3. Dependability 4. Transportation cost 5. Ordering/shipping procedures.
Monczka and Giunipero (1984)	26 US firms	1. Price 2. International orientation	3. Availability 4. Quality
Cavusgil and Yavas (1987)	54 Importing distributors in Saudi Arabia	1. Suitability for local market 2. Supplier benefits (timely delivery, warranty, after-sale service).	3. Price 4. Commercial risk 5. Expatriate appeal
Leonidou (1988)	21 British importers	1. Good value for money 2. Reliable delivery 3. Quality	4. Shipping procedures 5. High margin for the importer
Spekman (1991)	163 purchasing managers, USA	1. Dependable delivery 2. Quality control 3. Responsiveness to buyers' problems	4. Product durability 5. Competitive price
Kraft and Chung, (1992)	300 Korean importers in trading with Japanese and US exporters	Product characteristics (product information, quality, improvement, good design, technical training, price), exporters' characteristics (reputation, negotiation style, customer orientation, cultural awareness, personal communication), no ranking, comparison of US and Japanese exporters only	
Birou and Fawcett, (1993)	149 US purchasing managers	1. Quality 2. Availability 3. Price	4. Delivery dependability 5 Service
Ghymn et al., (1993)	52 import managers in Thailand	1. Quality 2. Price 3. Timely delivery	4. Product demand at home 5. Packaging
Ghymn and Jacobs, (1993)	48 Japanese import managers	1. Quality 2. Timely delivery 3. Price	4. Vendor dependability 5. Product safety 6. Vendor dependability 7. Delivery

Table 2.2: Supplier Selection Criteria in International Contexts (Continue)

Studies	*Sample*	*Importer's ranking of exporter's selection criteria*	
Chao et al., (1993)	47 Chinese purchasing managers. Exporters: U.S. firms	1. Reliable delivery 2. Quality 3. Price 4. Professionalism of salespersons	5. Service and responsiveness to customers' needs 6. Buyer–seller relationships
Scully and Fawcett (1994)	72 US manufacturer firms	1. Price 2. Availability	3. Quality 4. Delivery dependability
Deng and Wortzel, (1995)	580 US senior buyers, Exporters: Asian suppliers	1. Price 2. Quality	3. On-time delivery
Mummalaneni et al. (1996)	47 Chinese purchase managers	1. Quality 2. On-time delivery 3. Responsiveness to customer needs	4. Price 5. Relationship with vendors
Piercy et al. (1997)	242 UK importers trading with US exporters	Product factors (quality, warranty, after-sale services), relationship factors (fairness and trustworthiness, ability to keep promise, continuity of supply, regular communications, company reputation): compare high performers with low performers, no ranking	
Miyamoto and Rexha (2004)	111 Australian firms	1. Availability 2. Price	3. Product technology 4. Quality
Lye and Hamilton, 2000 (2001)	36 importer–exporter dyad from New Zealand	1. Quality 2. Meeting commitments 3. Timely delivery	4. Price 5. Profit
Overby and Servais (2005)	139 small and medium-sized firms in Denmark	1. Price 2. Quality 3. Reliability of delivery,	4. Environmental friendliness 5. Location.

Partly adapted from Liang and Parkhe 1997; Overby and Servais 2005.

On the other hand, in the relationship paradigm, more and more researchers acknowledge the importance of both economic and relational criteria in selecting suppliers (Piercy et al. 1997). The summary of supplier selection in the international context (Table 2.2) also demonstrates this direction. Ellram (1990) suggests that further research should consider developing a quantifiable selection model, then testing the impact of these factors on supplier choice in terms of ensuring successful buyer–seller relationships. In other words, investigating how supplier selection criteria and relational factors interact can provide a deeper insight into supplier selection practice.

In summary, the above sections review current literature related to three main groups of constructs in this study: relationship intention, signaling theory and signal quality, and offer quality. As limited research has investigated signaling applications in buyer–seller relationships, in general, and importer–exporter relationships, in particular, the next section addresses several types of signals that exporters can employ in importer–exporter relationships.

2.5. SIGNALS IN IMPORTER–EXPORTER RELATIONSHIPS

As this study defines, signals in buyer–seller relationships are seller-controlled and observable information cues that buyers can use to form inferences about sellers' capabilities, intentions and motives. According to this definition, all activities, behaviour, statements and announcements deliberately sent from exporters to reveal the unobservable, such as sellers' credibility, intentions and motives, can be seen as exporters' signals. The following paragraphs outline several types of signals that can be employed in importer–exporter relationships.

Price signal: Researchers find that price conveys information about product quality. High prices are believed to be associated with high product quality (Mishra et al. 1998). However, this study argues that price signals not only provide information about product quality but can also: (1) demonstrate the exporters' abilities to offer competitive prices, (2) distinguish themselves from other exporters, and (3) imply the exporters' willingness to build long-term relationships with importers. Competitive price has been shown as one of the important criteria in selecting exporters (for example, Birou and Fawcett 1993; Cavusgil and Yavas 1987; Deng and Wortzel 1995; Ghymn 1983; Kraft and Chung 1992; Perreault and Russ 1976; Spekman 1991). In addition, exporters can use price reductions to show the relationship intention and reduce adverse selection risk by preventing exporters with insufficient ability from providing bluffing signals to importers (Mishra et al. 1998). Access to competitors' price can also provide a signal of price competitiveness (Rao and Ruekert 1994).

Product warranties provide direct and credible signals of product quality (Katsikeas 1998; Wei and Zee 1997). Exporting products with long warranty times shows that

exporters are confident of their quality and it also shows their commitment in the relationship with importers.

Observable product attributes can also work to signal exporters' capability. The availability of export product has been found as an important criterion for supplier selection in the literature (Boulding and Kirmani 1993; Erevelles et al. 2001; Grossman 1981; Price and Dawar 2002; Tan et al. 2001). A wide range of products gives importers more choices. Showing its product availability and wide range helps exporters to distinguish exporters from others. New product development is also proposed as a type of product quality signal (Lee and Stove 1993; Long et al. 1994).

Trade credit can also be used to send signals to importers (Smith 1987). By offering favourable trade credit, exporters show their confidence in product quality (Hudson and Jones 2003; Jones and Hudson 1996), their assistance to and their support of importers. If the trade credit is specially offered to an importer, it can send a signal of exporters' intentions to commit to the relationship with these importers. Offering trade credit also signals exporters' responsibility, risk-sharing attitude with importers, and trust of importers (Hudson and Jones 2003). This is a high-cost signal, as exporters face a certain risk of delay or non-payment. Hence, it could be an effective signal to distinguish exporters from others who cannot offer trade credits.

Certifications can also be used as signals to show high product quality to importers and distinguish one exporter from other exporters. Certifications of management or quality standards granted by a third party, such as the International Standard Organization (ISO) are used as a signal of high-quality product in the export–import context (Chu et al. 2005; Tsao et al. 2005). By showing importers that exporters are members of well-known trade groups, trade associations or organisations can signal product quality and reputation. As Hudson and Jones (Kirmani and Rao 2000) affirm, certification of a product quality standard is a very important signal of product quality in exporting, where information is much more asymmetric than in domestic trading.

Brand names also can signal product quality (Anderson and Weitz 1992) and product demand. As exporters have to invest in building brand equity with the expectation of

future sales, low-quality exporters will lose the investment because future sales will not accrue when quality is revealed (Fillis 2003). Hence, the low-quality exporters have no incentive for investing in brand names. As a consequence, exporters with investment in brand name can raise exporters' credibility.

Reputation: Literature has widely recognised the benefit of a good reputation in doing business. A strong corporate reputation creates market barriers and strengthens the corporate strategic position in the competition (Dowling 2004; Heil and Robertson 1991; Herbig and Milewicz 1993). In export marketing, several exporting stages can be leapfrogged, thanks to a strong image and reputation (Dowling 2004). Studies on information economics and signaling also emphasise the informative aspect of reputation (Heil 1988).

Reputation signals enable exporters to differentiate themselves from other exporters and to persuade importers that they have qualifications for being selected as long-term partners. Reputation signals are credible (Heil and Robertson 1991) because reputation is an intangible asset that is scarce, valuable, sustainable and difficult for competitors to imitate (Fombrun and Shanley 1990). Hence, a high-status reputation places exporters in a privileged position in comparison with other exporters (Cravens et al. 2003; Resnick 2004).

Evaluating reputation signals enables importers to select the right exporters and prevent adverse selection problems, because reputation signals acts as an important mechanism to ensure the consistency and credibility of other signals (Cravens et al. 2003; Reuber and Fischer 2005; Turnbull 1985). Reputation signals promise the fulfilment of other signals because good reputation firms are more likely reluctant to risk their reputation by bluffs and false signals (Cravens et al. 2003; Reuber and Fischer 2005; Turnbull 1985). Keeping their reputation is an incentive for exporters to provide high-quality products, reduce motivation to act opportunistically, and increase motivation to keep promises. Therefore, reputation signals not only provide information of the past behaviour of the exporters but also guarantee current and future behaviour.

In importer–exporter relationships, reputation can be signalled via financial performance (Reuber and Fischer 2005); strategic alliances (Herbig et al. 1994) and relationships with well-known exchange partners (including strategic alliance partners, suppliers and customers) (Herbig et al. 1994).

Other activities can be used as signals in importer–exporter relationships. Participation in domestic and international *trade shows* with impressive exhibits can provide a signal to buyers that exhibitors have good product quality, good financial capabilities and potential for future development (Duncan and Moriarty 1998). Exporters that cannot attend the current year's trade show after many years of attending may send a signal that they have financial problems. Advertising in *trade publications* can also send signals of product quality, industry intent and industry interest (Riley 2001).

2.6. SUMMARY AND CONCLUSIONS

This chapter reviews studies on relationship intention, signaling theory and supplier selection in order to point out the research gaps. The review reveals that although researchers recognise the existence of information asymmetry in buyer–seller relationships, limited research has investigated how signals and signaling work and affect buyer–seller relationships. The review also demonstrates that the significant role of signaling in solving asymmetric information problems is widely recognised in economics, finance, accounting, politics and marketing. However, limited research has explored how signaling can solve the asymmetric information problems in buyer–seller relationships. Moreover, the question of how the clarity and consistency of signals sent from sellers influence buyer relationship intention is largely neglected. Therefore, this study attempts to bridge the gaps by investigating determinants of relationship intention through a signaling approach. Specifically, this study explores how signal consistency and signal clarity influence buyer relationship intention.

On the basis of these reviews, Chapter 3 develops a conceptual model, which identifies determinants of importer relationship intention and how signal consistency and signal clarity influence buyer relationship intention.

CHAPTER 3

CONCEPTUAL MODEL – DETERMINANTS OF IMPORTER RELATIONSHIP INTENTION

3.1. INTRODUCTION

Chapter 2 reviewed studies on relationship intention, signaling theory and supplier selection in order to point out the research gaps. This chapter concentrates on developing a theoretical framework to investigate how signal consistency and signal clarity influence perceived offer quality and relationship intention. This framework provides conceptual determinants of importer relationship intention from a signaling perspective.

This chapter comprises five main sections covering the determinants of importer relationship intention: exporters' credibility, perceived product quality, perceived price competitiveness and perceived delivery performance, which are presented in Section 3.2 to 3.5, respectively. Signal consistency and signal clarity, as two components of signal quality, are presented in Section 3.6. Section 3.7 addresses moderating variables: ownership type and relationship duration. Section 3.8 develops two competing models (the more restrictive model and the less restrictive model).

3.2. EXPORTER CREDIBILITY

3.2.1. Credibility in Buyer–Seller Relationships

Credibility is commonly accepted as an integral component of trust in the relationship marketing literature (for example, Doney and Cannon 1997; Ganesan 1994; Geyskens et al. 1996; Moorman et al. 1992; Smith and Barclay 1997). The importance of credibility as a part of trust has been widely recognised in business relationships. Trust is alluded to by scholars as the critical component and the cornerstone of a successful partnering (Nielson 1998; Spekman 1988), the catalyst in buyer–seller transactions (Ba and Pavlou 2002), one of the most important factor characterising a good relationship (Rempel et

al. 1985), the centrality of long-term buyer–seller relationships (Dwyer et al. 1987) and the fundamental building-block in most relationship models (Wilson 1995).

3.2.2. Exporter Credibility

Numerous definitions of credibility and trust have been offered in marketing and the social sciences (Seppanen et al. 2005). Although there is a wide agreement on credibility as a dimension of trust, there appears to be no consensus on the semantic meaning of the words (reviewed by Raimondo 2000; Seppanen et al. 2005). In the marketing communication literature, source credibility is referred to as the degree to which a communication source or channel is perceived as trustworthy and competent by the receiver (Goldsmith et al. 2000; Gotlieb and Saren 1991; Sharma 1990; Sternthal et al. 1978). Signaling studies define credibility as the believability of an entity's intentions at a particular time (in brand signaling, for example, Erdem and Swait 1998; Erdem and Swait 2004; in competitive signaling, for example, Herbig and Milewicz 1993; Herbig and Milewicz 1995a). Brand credibility is argued to depend on the willingness and the ability of firms to deliver what they promise (Erdem et al. 2006).

In the business-to-business relationship literature, credibility is defined as being similar to honesty (for example, Crosby et al. 1990; Dwyer and Oh 1987; Geyskens et al. 1996; John and Reve 1982; Kumar et al. 1995), reliability (Aulakh et al. 1996; Morgan and Hunt 1994), expectancy or cognitive trust (Geyskens et al. 1998; Medlin and Quester 2002) and capability or ability (reviewed by Seppänen et al. 2004). The common agreement among the different terms above is: credibility reflects the extent to which a relationship partner is believed to stand by his/her word (Doney and Cannon 1997), and to make promises with the ability and intention of fulfilling them (Moorman et al. 1993). Credibility arises from accumulated knowledge, information and past interaction experiences to allow one to make predictions about the fulfilment of another's committed obligations (Johnson and Grayson 2005). Two common quoted definitions of credibility are: "expectancy that the partner's word or written statement can be relied on" (Doney and Cannon 1997, p. 36) and "extent to which the retailer believes that the vendor has the required expertise to perform the job effectively and reliably" (Ganesan 1994, p. 2, definition of vendor credibility).

In brief, the research in business relationships agrees on the two aspects of credibility: the intention/trustworthiness and the ability/competency to deliver what has been promised. Therefore, this study adapts the credibility definitions by Ganesan (1994) and Doney and Cannon (1997) in the business relationship marketing literature. Exporter credibility is defined as the extent to which an exporter is believed to stand by his/her word (Doney and Cannon 1997; Ganesan and Hess 1997) and has the required expertise to fulfil his/her obligations and promises reliably and effectively (Ganesan 1994). This definition shows two aspects: the trustworthiness and the competency of the exporter.

Credibility becomes especially critical when information is imperfect, incomplete or asymmetric (Swan and Nolan 1985). Under this condition, responses and reactions to signals are heavily influenced by senders' credibility (Herbig and Milewicz 1995a). In exporter–importer relationships, imperfect and asymmetric information creates higher degrees of risks to importers. Examples of these risks can be unjustifiable delay in product delivery or receiving payment without delivery of products, misrepresentation of the true characteristics of a product, quality cheating, contract default or failure to acknowledge warranties (Mishra et al. 1998). Exporter credibility can help reduce importers' perceived risks associated with engaging in the relationship, reduce the information-gathering and information-processing costs that importers need to incur during their decision-making (Srinivasan and Ratchford 1991). Exporter credibility guarantees exporters' fulfilment of their obligations. Therefore, signaling to increase exporter credibility can work as an effective tool to reduce importers' fear of risks caused by asymmetric and imperpect information.

3.2.3. Exporter Credibility and Importer Relationship Intention

Being perceived as credible, exporters are believed to have abilities and intentions to deliver what they have promised. Importers prefer to work and build long-term relationships with trustworthy and capable exporters rather than untrustworthy and incapable exporters. According to Ganesan (1994), exporter credibility can affect importer relationship intention in three ways: (1) it reduces the importers' perceptions of risks associated with opportunistic behaviour by exporters; (2) it increases importers' confidence that exporters will sacrifice short-term inequities for long-term benefits; and (3) it reduces the transaction cost incurred in the exchange relationships. Under the

condition of imperfect information and a high degree of uncertainty, the benefits of exporter credibility are the most apparent in persuading importers to build long-term relationships (Moorman et al. 1993).

Studies on the business relationship marketing field support the notion that the credibility of selling firms is central to buyers' intentions to build and maintain long-term relationships. If sellers are credible, buyers are more likely to commit to the relationships (for example, Andaleeb 1996; Anderson and Weitz 1989; Ganesan 1994; Moorman et al. 1992; Morgan and Hunt 1994). Credibility, as a component of trust, enhances the cooperation between buyers and sellers (Andaleeb 1996; Anderson and Narus 1990) and encourages buyers to invest in the relationship (Gounaris 2005). The more reliable the sellers are, the less propensity buyers have for switching to other suppliers (Morgan and Hunt 1994). Therefore, it is reasonable to argue that exporter credibility can have positive effect on importers' intentions to build and maintain long-term relationships.

The direct effect of seller credibility on buyer relationship intention is also supported in the business-to-business relationship literature. For example, Ganesan's (1994) study on vendor–retailer relationships finds that vendor credibility increases retailer long-term orientation. Geysken et al. (1998) find that seller credibility (honesty) has a positive effect on buyer long-term orientation in their sample of both European and American firms. Johnson and Grayson (2005) find that cognitive trust (defined as being similar to credibility) encourages future interaction.

Based on the above discussion, the following hypothesis is proposed (as illustrated in Figure 3.1):

H1: Exporter credibility has a positive effect on importer relationship intention.

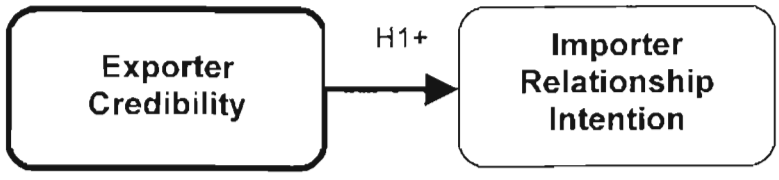


Figure 3.1: Exporter Credibility and Importer Relationship Intention

3.3. PERCEIVED PRODUCT QUALITY

3.3.1. Product Quality in Buyer–Seller Relationships

Because the product is the core of exchange, product quality is likely to have a considerable impact on buyer–seller relationships (Hakansson 1982). The Industrial Marketing and Purchasing Group (IMP) classifies product and service as one of the four major elements of the interaction approach, which describes buyer–seller relationships (Ford 1990). Organisational buying behaviour theory[8] also emphasises product quality, price, the ability to meet specifications, delivery time and after-sales service as important sellers' characteristics that influence buyer behaviour. Product quality is found to enhance profitability and strengthen competitive position (Cravens et al. 1988; Hansen and Bush 2000). High product quality at a competitive price creates critical competitive advantages for sellers. In the international context, product quality is described as the most important force leading to the growth of a company (Korneliussen et al. 2005).

3.3.2. Perceived Product Quality

Quality is an "unusually slippery concept and exasperatingly difficult to define" (Garvin 1988, p. 1). Defining product quality perception is a more challenging task in industrial buying situations (Dzever and Quester 1999; Qualls and Rosa 1995). Quality perception may also have different meanings in different industries (Garvin 1984).

In the consumer marketing literature, a review by Steenkamp (1990) demonstrates various definitions of perceived quality. Perceived quality has been defined based on the fitness for use; the degree of providing customer's satisfaction relative to available alternatives; and the degree of fulfilling its functions, given customer needs and the product's physical attributes (Steenkamp 1990). Steenkamp (1990) defines perceived product quality based on the judgment of intrinsic and extrinsic signals (cues).

In general, Garvin (1984) identifies five approaches to defining product quality:

[8] Three main models of organisational buying behaviour theory are proposed by Robinson, Faris and Wind (1967); Webster and Wind (1972); and Sheth (1973).

- *Transcendent approach,* in which quality is defined as a simple, unanalysable property that people can evaluate only through experience.

- *Product-based approach,* in which quality of a product is reflected by its ingredients or attributes.

- *User- (buyer-) based approach* in which product quality is based on the user/buyer's assessment of quality.

- *Manufacturing-based approach*: product quality is considered in terms of engineering and manufacturing practice.

- *Value-based approach*: considers the trade-off between quality and price.

In the business-to-business context, the buyer-based approach (the buying firm's evaluation of the offer) is appropriate to defining product quality (Homburg et al. 2002). In this approach, Garvin (1984) suggests that quality consists of the capacity to satisfy the wants of buyers. Researchers appear to agree on defining product quality based on how buyers perceive it (Qualls and Rosa 1995; Westbrook and Peterson 1998). For example, Cravens et al. (1988, p. 286) state: "Comparison of customer expectations with product and supporting service performance provides a basis for measuring quality". Calantone and Knight (2000) review perceived quality in the B2B context and suggest a definition of perceived quality as: "perceived fundamental characteristics of products which meet or exceed customer expectations regarding features and performance" (Calantone and Knight 2000, p. 495).

In accordance with the above studies, this research conceptualises perceived product quality on the basis of importers' evaluation of the product in comparison with their requirements and expectations. This view of perceived quality emphasises that the perceived high-quality product does not always mean a high-quality product (Erdem and Swait 1998). A high-perceived quality product means the product can meet or exceed importers' expectations and requirements.

3.3.3. Perceived Product Quality and Exporter Credibility

Product quality is claimed as a key consideration in evaluating suppliers' performance (Janda et al. 2002) and evaluating suppliers' competencies to meet buyers' requirements. Business buyers are likely attach to products that meet or exceed their quality requirements. Perceptions of high offer quality increase importers' confidence in exporters' abilities to complete their obligations and promises (Calantone and Knight 2000). Perceptions of high product quality likely lead to perceptions that exporters have the capabilities to meet importers' quality expectations (Calantone and Knight 2000) and have the competency to be long-term partners. Hence, it is reasonable to argue that perceived product quality influences the importers' perception of exporters' credibility.

The geographic and psychic distances between importers and exporters likely cause perceived product quality to become more important in determining exporters' capabilities and performances in an international setting (Korneliussen and Grønhaug 2003). Studies support the effect of perceived product quality on trust (of which credibility is one dimension). Chryssochoidis and Theoharakis (2004), based on a sample of Greek importers, find that product and service quality characteristics[9] have positive impacts on exporter trust and performance. Ouwersloot et al. (2004), use a simulation method, find that product performance, product output and after-sales service have positive effects on trust. Homburg et al. (2002) find that perceived product quality increases trust and customer satisfaction in transnational business-to-business relationships.

Based on the above discussion, the following hypothesis, illustrated in Figure 3.2, is proposed:

H2: Perceived product quality has a positive effect on exporter credibility

[9] Including product quality, provision of after-sales service, provision of warranties, timely and reliable deliveries, ease of ordering, transport and customs clearance.

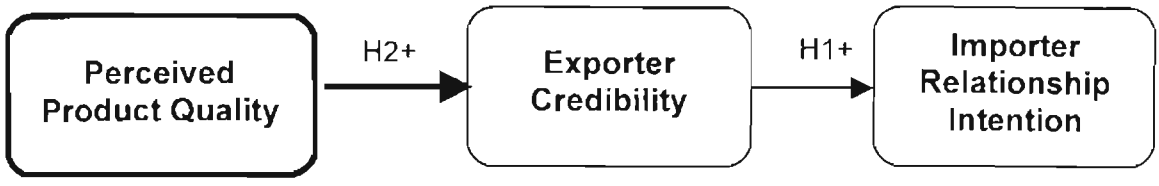


Figure 3.2: Perceived Product Quality and Exporter Credibility

3.4. PERCEIVED PRICE COMPETITIVENESS

3.4.1. Perceived Price Competitiveness in Buyer–Seller Relationships

The review of the literature on supplier selection (Section 2.4) denotes price as one of the most important attributes in making the selection decision. Failure to set an appropriate price can lead to missing opportunities and lowering profits. Price policy can affect customer retention, market share, customer relationship, domestic and international sales (Lancioni 2005). Under the condition of fierce market competition, wherein multiple suppliers are marketing relatively undifferentiated product offerings, "effective pricing is a paramount necessity" (Shipley and Bourdon 1990, p. 215).

In the import–export context, price is viewed as a key selection factor (Deng and Wortzel 1995; Ghymn and Jacobs 1993; Kraft and Chung 1992; Overby and Servais 2005; Rexha 2000). Buyers have certain evaluation criteria and decision rules when they make purchase decisions (Avila et al. 1993). The importer perception of price competitiveness is considered as one of the "pivotal determinants of the buyer behaviour and supplier choice" (Kortge and Okonkwo 1993, p.134). Competitive price is found positively associated with a selling firm's success (Thach and Axinn 1991), particularly in international contexts (Christensen et al. 1987).

In this research, price competitiveness is defined as an importer's perception of an exporter's price competitiveness. Price competitiveness can be reflected by the degree that an exporter's price is lower than competitors' prices, price discount (in comparison

with other buyers from the same exporter) and favourable credit terms (Katsikeas and Kaleka 1999).

3.4.2. Perceived Price Competitiveness and Exporter Credibility

In the trend of market globalisation and out-sourcing, "there can be no doubt that most industrial markets are more price-driven than they were a decade ago" (Voeth and Herbst 2006, p. 84). In addition, business buyers are rational in making buying decisions (Wathne et al. 2001). Other things being equal, buyers certainly purchase from suppliers that meet their required quality level at the lowest price (Mason 1974). Hence, offering a competitive price is a critical condition for retaining customers in the relationships, reduce the likelihood of relationship termination (Wathne et al. 2001), and attracting switching from competitors' customers (Bonner and Calantone 2005). Under the condition of incomplete and asymmetric information, where importers lack information about the available price offered, sellers have to use signals to persuade their potential buyers that they offer the most competitive price. Therefore, a competitive price offering can positively influence the importers' beliefs in exporters' competencies to provide good quality products at low prices. Competitive price demonstrates the capability and competency in supplying what importers want. Buyers cannot believe in the long-term supplying capabilities of sellers who cannot provide products at lower prices than other suppliers (McMahon-Beattie et al. 2002).

The role of price in enhancing buyer–seller relationships has been recognised in the literature (Voeth and Herbst 2006). MacKenzie and Hardy (1996) find that price positively influences buyers' trust and satisfaction. Sellers are suggested as making price decisions in consideration of how to influence the buyers' trust in the selling firms (Kucher and Hilleke 1993).

Based on the above discussion, the following hypothesis is proposed (as illustrated in Figure 3.3):

H3: Perceived price competitiveness has a positive effect on exporter credibility

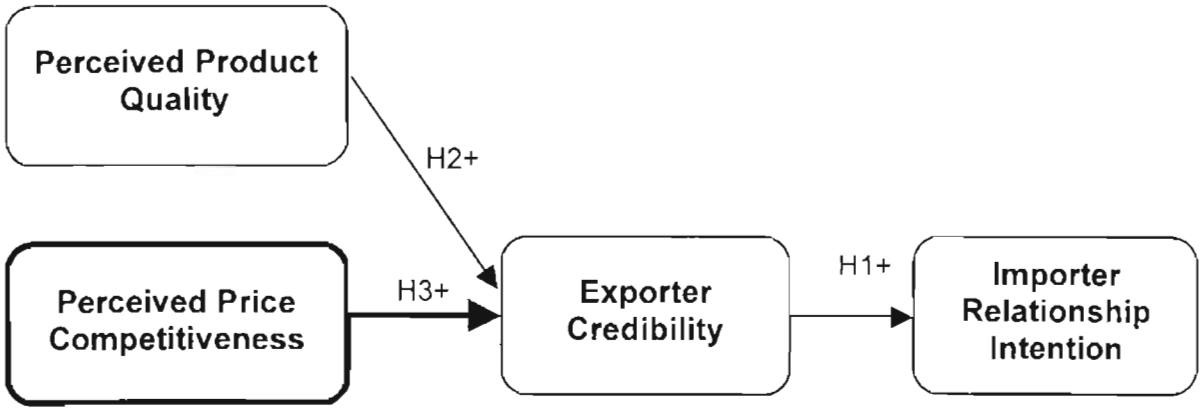


Figure 3.3: Perceived Price Competitiveness and Exporter Credibility

3.5. PERCEIVED DELIVERY PERFORMANCE

3.5.1. Perceived Delivery Performance in Buyer–Seller Relationships

Delivery performance has been regarded as a critical factor in the literature on supplier selection decision (for example, Ghymn 1983; Kannan and Tan 2003; Leonidou 1988; Shahadat 2003; Shipley and Prinja 1988), as a key management concern among supply chain practitioners (Vachon and Klassen 2002). Business buyers are not only concerned with how well products are made, but also with how well they are delivered to buyers (Fleisch and Powell 2001). Delivery performance becomes more and more important in a highly competitive environment and in the trend of just-in-time management. Delivery performance is classified as a strategic-level supply-chain performance measure (Guiffrida and Nagi 2006). In the increasingly competitive world, a firm's long-term success depends on its ability to consistently differentiate itself from the competition. Delivery performance is claimed in the literature as a viable differentiator (Fawcett et al. 1997).

Delivery performance becomes a measure of sellers' success in international markets where more complex systems are required to manage differences in cultures, technical standards and regulatory requirements and greater physical distances (Korneliussen and Grønhaug 2003; Milgate 2000; Vachon and Klassen 2002). Firms that establish strong

delivery capabilities are able to meet market requirements, achieve customer satisfaction (Stewart 1995), build positive reputations and are thus able to achieve higher levels of overall firm performance (Fawcett et al. 1997).

3.5.2. Perceived Delivery Performance

In the business-to-business context, delivery performance is commonly reflected by three elements: on-time delivery, accuracy and delivery flexibility (Fawcett et al. 1997; Mudambi et al. 1997; Ulaga 2003). In this study, on-time delivery refers to the ability of exporters to meet delivery schedules (Handfield and Pannesi 1992; Mandal and Deshmukh 1994). Delivery accuracy (Ulaga 2003) or delivery reliability (Handfield and Pannesi 1992) reflects the degree to which exporters can accurately deliver what is promised. Highly accurate delivery performance minimises missing or wrong items, reduces costs and risks, saves time and effort for buyers (Ulaga 2003). In their in-depth interviews with purchasing managers, distributors and manufacturers, Mudambi et al. (1997) find that delivery accuracy is one of the first elements in mind highlighted by the participants. Delivery flexibility is another component of delivery performance (Gunasekaran et al. 2001; Mandal and Deshmukh 1994; Mudambi et al. 1997). When delivery requirements change, importers expect that their suppliers are willing to adjust to these modifications. Delivery flexibility is more important in the international context, wherein importers may face more uncertainty (Ulaga 2003). Delivery flexibility is particularly important when importers require just-in-time delivery services (Mudambi et al. 1997; Ulaga 2003).

3.5.3. Perceived Delivery Performance and Exporter Credibility

In buyer–seller relationships, delivery performance positively enhances the relationship value between buyers and sellers (Eggert et al. 2006). Accurate and on-time delivery in all transactions is strong evidence that exporters have the capabilities and intentions of keeping their promises (Fawcett et al. 1997). An accurate and on-time delivery performance over past transactions strengthens the importers' beliefs that exporters have the competency to fulfil their obligations. Exporters' high level of delivery performance also increases importers' prediction about the exporters' future delivery performance. A poor delivery performance indicates a lack of capability to fill orders,

and/or inadequate control of the flow of orders and/or lack of intention to fulfil buyers' orders (Dale and Willey 1980). Buyers believe that the poor delivery performance can also be due to sellers allowing more profitable or more valued orders to jump the queue (Dale and Willey 1980). It makes buyers feel that these sellers are willing to violate their promises and obligations. This belief seriously damages buyers' perceptions of sellers' trustworthiness and fairness (Yilmaz et al. 2004).

In accordance with the above discussion, the following hypothesis is proposed (illustrated in Figure 3.4):

H4: Perceived delivery performance has a positive effect on exporter credibility

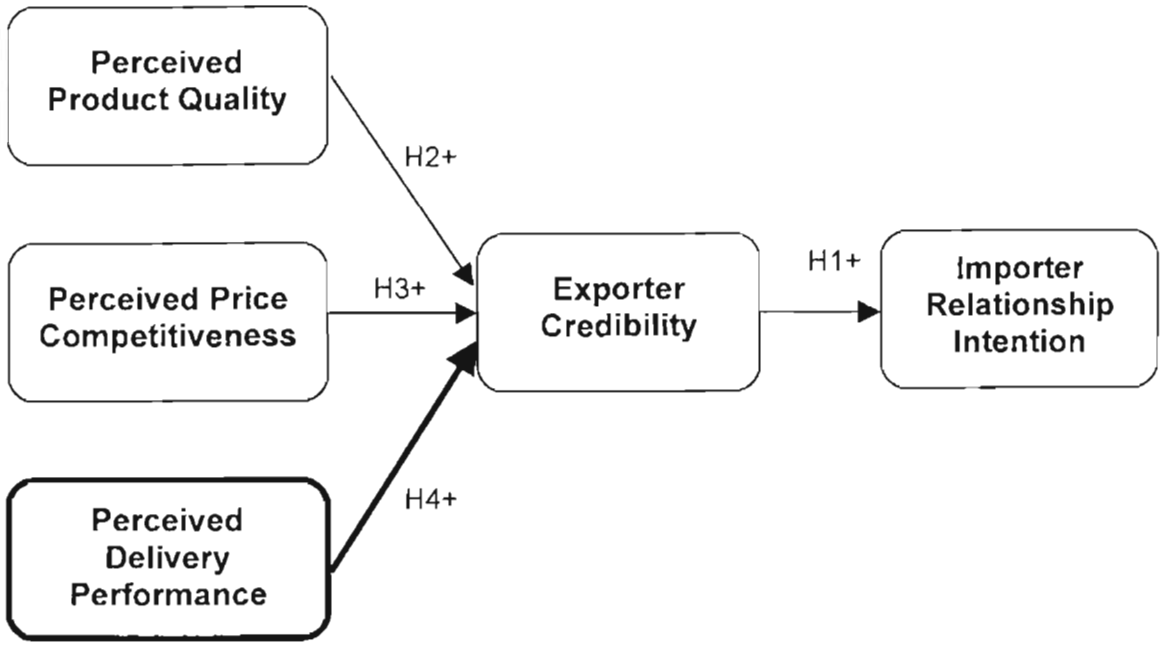


Figure 3.4: Perceived Delivery Performance and Exporter Credibility

To sum up, the above sections present definitions of constructs and their relationships in the conceptual model. As the catalyst and centrality in all buyer–seller relationships (Young 2006), exporter credibility is proposed to mediate the effects of perceived product quality, perceived price competitiveness and perceived delivery performance on importer relationship intention. The next sections discuss how signal clarity and signal consistency affect perceived product quality, perceived price competitiveness and perceived delivery performance.

3.6. SIGNAL CONSISTENCY AND SIGNAL CLARITY

3.6.1. Definitions

Product quality, price and delivery capabilities are important and necessary, but not usually sufficient determinants of supplier choices (Ellram 1990). Shipley (1985) emphasises the role of sellers' abilities to communicate with buyers by using other marketing elements. From the signaling perspective, sending signals effectively is the way to communicate the unobservable to buyers. The following sections present signal consistency and signal clarity concepts and their effects on perceived product quality, price competitiveness and delivery performance. The last section discusses the direct effect of signal consistency on signal clarity.

3.6.1.1. Signal Consistency

Porter (1980) introduces the role of signal consistency into competition research and emphasises the necessity of analysing and checking the consistency in the history of the way that competitors send signals. This research adapts a simple definition of signal consistency presented by Erdem and Swait (1998). Signal consistency refers to the degree to which each signal reflects the intended whole and the degree of consistency among signals over time. There are two aspects to this definition. First, signals are required to be consistent with each other in delivering the message (meaning or content) (Erdem and Swait 1998). Second, messages delivered by signals also have to be consistent over time (Erdem and Swait 1998).

Repeated transactions between importers and exporters provide importers with opportunities to test the consistency of signals (Heil 1988). Signal consistency significantly influences signal interpretation. Receivers (importers) check the consistency of signals before they interpret and react, hence, signal consistency builds importers' confidence in signal interpretation (Heil and Robertson 1991).

The importance of signal consistency in interpreting market signals has been confirmed in the literature. Brucato and Smith (1997) emphasise the role of signal consistency in

finance. In the competition signaling literature, Prabhu and Steward (2001) observe that receivers evaluate signal consistency and signal clarity in their interpretation process.

3.6.1.2. Signal Clarity

A clear signal means a signal is unambiguous (Jervis 1970) and can be read quickly with minimum effort and error (Herbig and Milewicz 1994a; Herbig and Milewicz 1995c). Jervis (1970) also emphasises that a clear signal has a known cause. Signal clarity refers to the absence of ambiguity in signals sent (Erdem and Swait 1998). "A clear signal gives little room for speculation about its meaning and is easier and quicker to assess than is a noisy signal" (Heil 1988, p. 94). In importer–exporter relationships, the clarity of signals enhances the signaling process and ensures that importers understand the exact meanings sent by exporters. Signal clarity affects the framing of signal interpretation, reduces the chance of a misunderstanding, reduces signal bluffing and increases the speed of reaction (Heil and Langvardt 1994). A signal will be effective only if it is clear. Ambiguous signals are more likely to be ignored or discarded by receptors (Herbig and Milewicz 1994a), and cannot influence receptors' decisions (Herbig and Milewicz 1995c). A clear signal also helps reduce noise in the signaling process (Heil 1988).

3.6.2. Signal Consistency, Signal Clarity and Perceived Product Quality

In the business-to-business market, a number of products have nearly identical physical specifications and performance (Mudambi et al. 1997). As buyers perceive quality based on incomplete and asymmetric information (Garvin 1984), the sellers' challenge is in finding effective signaling ways to enable buyers to understand their product quality and capabilities. Sending signals consistently and clearly enables sellers to distinguish themselves from other suppliers, attract buyers' attention, and influence buyers' purchasing decisions and relationship intentions. A lack of accurate, clear and consistent information likely leads to incorrect perceptions of product quality.

In the international context, importers and exporters are faced with asymmetric and incomplete information (Samiee 2000). The lack of information reduces importers' ability to distinguish among product qualities offered from hundreds of suppliers all

over the world. Consistent and clear signals can be used as effective tools to show exporters' capabilities and distinguish themselves from others. Sending consistent signals also helps importers to distinguish between true vs bluffing signals (Heil and Robertson 1991).

In addition, as importers can use multiple signals to evaluate product quality, by ensuring consistency among these multiple signals, exporters can also influence importers' perceptions of product quality. For example, in order to signal their high product quality, quality standards, and their production capabilities, exporters can show that they have obtained international certificates for the production and management such as ISO 9000 (Hudson and Jones 2003; Jones and Hudson 1996). They can also show domestic and international quality awards or prizes or certificates awarded to their products. A list of their current well-known customers can also serve as a signal of their product quality and reputation (Resnick 2004; Reuber and Fischer 2005). Their business performance and history of sales revenues, gross profit, number of offices or manufacturing sites etc. (Fombrun and Shanley 1990) can be used as signals of sellers' capabilities and product quality. Some of these signals probably do not work immediately to increase importers' perceptions of product quality, but can perform a consistency check (Heil 1988).

In the case of using multiple signals, if signals are unclear, they can lead to misunderstanding, forming incorrect perceptions of product quality. If signals are inconsistent with each other and are inconsistent with signals sent in the past (inconsistent over time), these signals would have negative impacts on importers' quality perceptions. Receiving inconsistent signals likely makes importers think that exporters are sending bluff signals. As a result, importers would doubt the product quality. In their studies, Piercy et al. (1997) and Shahadat (2003) also conclude that consistently meeting product quality promises is an important supplier selection criterion.

The above discussion leads to the following hypotheses (illustrated in Figure 3.5):

H5: Signal consistency has a positive effect on perceived product quality

H6: Signal clarity has a positive effect on perceived product quality

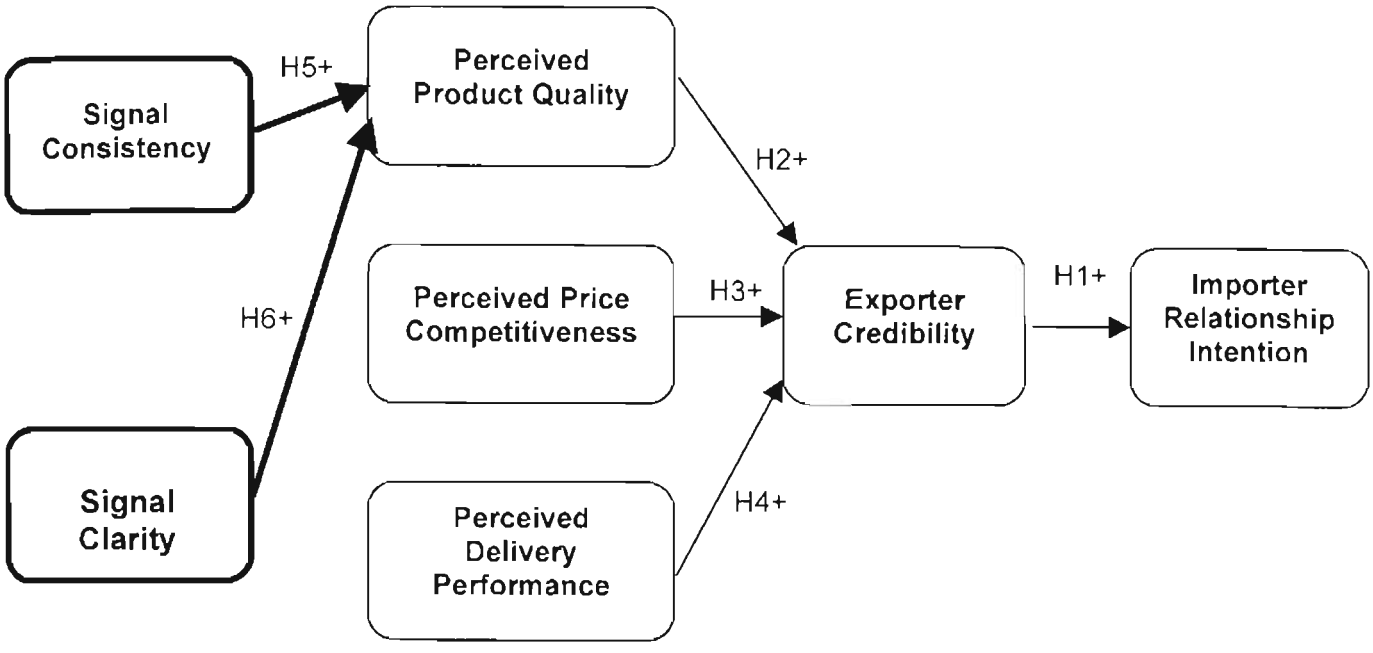


Figure 3.5: Signal Consistency, Signal Clarity and Perceived Product Quality

3.6.3. Signal Consistency, Signal Clarity and Perceived Price Competitiveness

Consistency among signals and consistency over time can positively impact on importers' perceptions of exporters' price competitiveness. For example, an exporter states that s/he is committing to sell at a competitive price (verbal signal), later s/he sells at a higher price than other exporters (action signal). This inconsistency reduces importers' perceptions of price competitiveness. Highly consistent signals create a low variance estimate of exporters' future actions (Heil and Robertson 1991), and guarantee price competitiveness in the future.

Sending clear signals plays a critical role in demonstrating sellers' price competitiveness. In the exporter–importer relationship, exporters can use multiple signals to show importers that they are offering more competitive price than others. For example, exporters can provide information about competitors' prices, and show that they are selling at a lower price to the importer than to other buyers. Sending clear and compatible price information enables exporters to show their intentions and efforts to offer a more competitive price than any other exporters. For example, if an exporter offers a special discount to an importer but cannot signal clearly that this is special only

to the importer, the importer will not receive the signal of "a special discount only to you". The importer will probably not recognise the exporter's effort to offer a special competitive price, and as a result, the special offer's objective fails to improve the importer's perception of the exporter's price competitiveness.

Therefore, the following hypotheses, illustrated in Figure 3.6, are proposed:

H7: Signal consistency has a positive effect on perceived price competitiveness

H8: Signal clarity has a positive effect on perceived price competitiveness

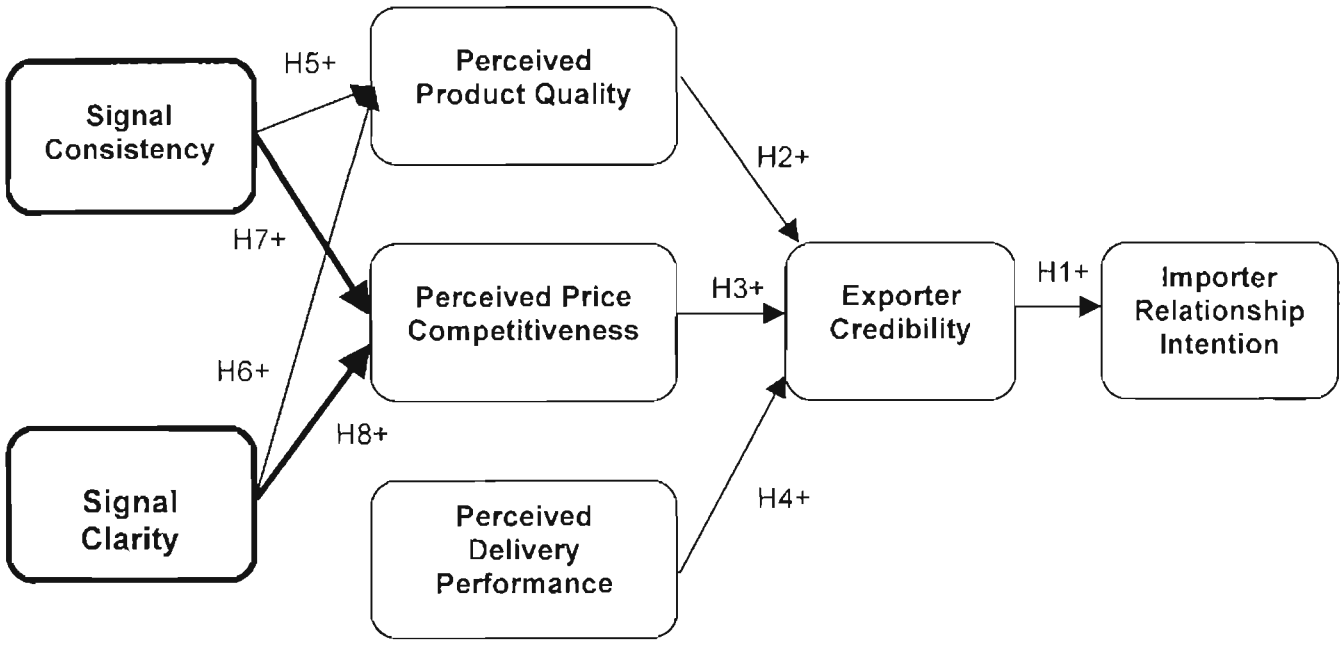


Figure 3.6: Signal Consistency, Signal Clarity and Perceived Price Competitiveness

3.6.4. Signal Consistency, Signal Clarity and Perceived Delivery Performance

Inconsistent and unclear signals from exporters complicate the communication process between exporters and importers. As the complexity increases, importers' expectations of on-time and reliable delivery are reduced; importers' perceptions of delivery performance is worse (Vachon and Klassen 2002). Inconsistent and ambiguous signals also reduce the degree to which importers can predict exporters' future intentions and

behaviour. Low predictability creates more uncertainty in dealing with exporters. High degree of uncertainty is likely to be reflected in late delivery and poor delivery performance (Vachon and Klassen 2002). Simple, clear and consistent signals also serve to improve importers' perceptions of delivery reliability and flexibility. If any delivery problem occurs, it is clearly and quickly advised to importers, importers will then feel more confident with the exporters' capabilities to deliver accurately and on-time. Hence, signal consistency and signal clarity are likely to improve importers' perceptions of exporters' delivery performance.

The role of the quality of information exchange between buyers and sellers in enhancing delivery performance has been emphasised in the literature (Gunasekaran et al. 2001). Clarity and comprehensiveness of product catalogues is found as an important factor to ensure a high level of delivery performance (Mudambi et al. 1997). In international operations, the availability, accuracy and consistency of information significantly affect the development of delivery as a distinctive competitive competency (Fawcett et al. 1997). Consistency of information and consistency of sellers in their interaction with buyers have been found as the most important factors when buyers select suppliers (Choi and Hartley 1996; Nilsson 1977).

Based on the above discussion, the following hypotheses are proposed (illustrated in Figure 3.7):

H9: Signal consistency has a positive effect on perceived delivery performance

H10: Signal clarity has a positive effect on perceived delivery performance

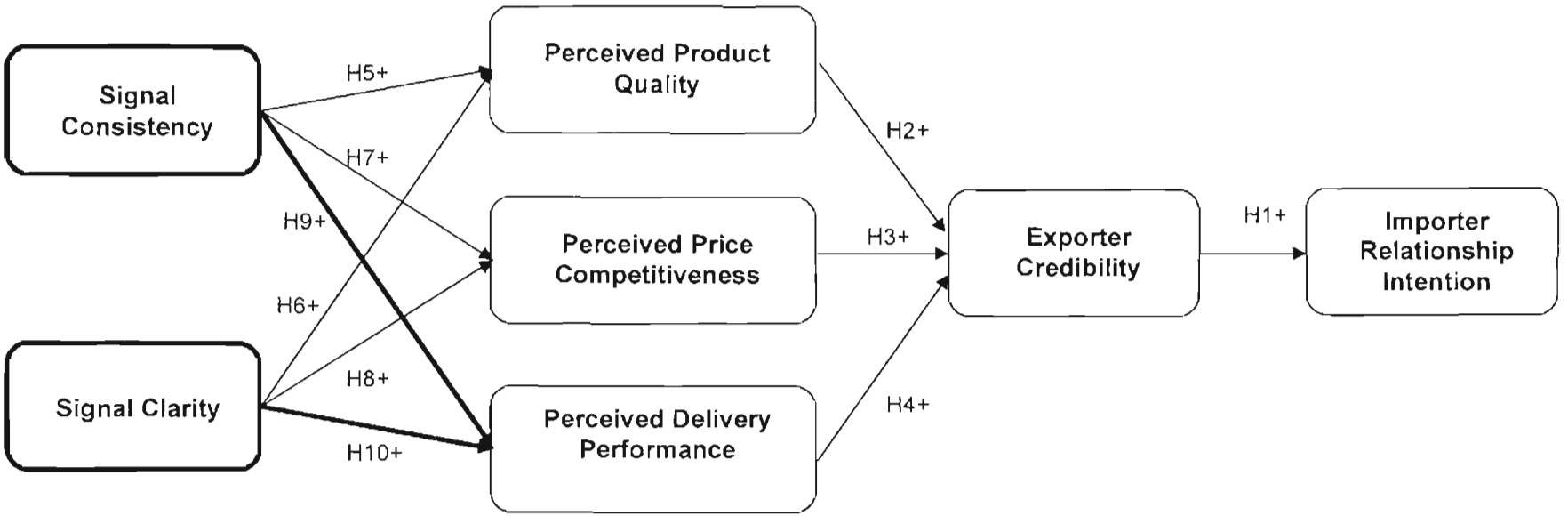


Figure 3.7: Signal Consistency, Signal Clarity and Perceived Delivery Performance

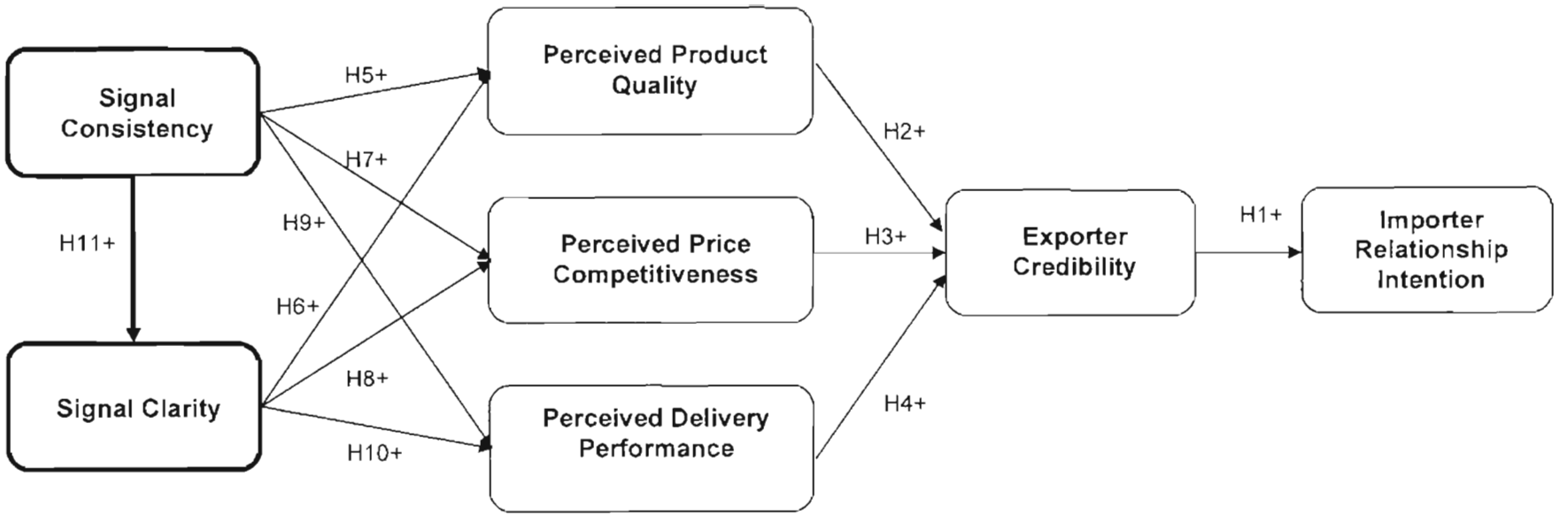


Figure 3.8: Theoretical Model – Determinants of Importer Relationship Intention from a Signaling Perspective

3.6.5. Relationship between Signal Consistency and Signal Clarity

As signal clarity is defined as the ease and minimum effort required in interpretation, it can be argued that signal consistency increases the clarity of signals. Signal consistency builds more confidence in signal interpretation (Heil 1988). The more consistent it is, the easier and the faster it is for the signal to be clearly understood and correctly responded to (Heil et al. 1997; Herbig and Milewicz 1995c). Signal consistency also creates a signaling pattern that helps interpret signals more clearly and more precisely (Heil and Robertson 1991). Signal consistency over time also reduces noise in the signaling process (Erdem et al. 2004), thus, increases the degree of clarity.

The complexity of the international business environment widens the asymmetry and imperfection of information, and creates more uncertainty (Samiee 2000; Samiee and Walters 2003). In order to narrow down the asymmetry, exporters need to expend considerable effort in sending consistent signals (Milewicz and Herbig 1994) to ease the signal interpretation process.

Based on the above discussion, the following hypothesis is proposed (as illustrated in Figure 3.8):

H11: Signal consistency has a positive effect on signal clarity.

The above sections present and discuss relationships among constructs in the conceptual model, which is illustrated in Figure 3.8. The following section concentrates on the moderating effects of ownership type and relationship duration.

3.7. MODERATING FACTORS

This section discusses how two factors (ownership type and relationship duration) moderate relationships among constructs in the theoretical model.

3.7.1. Ownership Type: Privately Owned Firms vs State-Owned Firms

3.7.1.1. Overview of Ownership Type in Vietnam

Prior to 1986, state-owned firms (hereafter, SOEs) were the sole players in the Vietnamese economy (Thang and Quang 2005). The Vietnamese economy has opened since 1986 through the so-called Economy Reform (Doi moi). The first wave of restructuring SOEs by partial privatisation (selling part of companies' shares to the employees and public buyers) commenced in 1992 (Ramamurthy 2001). The state-owned sector has been rationalised with a dramatic reduction in numbers from over 12,000 enterprises in 1990 to 6,300 in 1992 (Ronnas 2001; Thang and Quang 2005). At the end of 2005, Vietnam had about 5,000 state-owned enterprises with a combined capital accounting approximately for 60% of the total capital of all businesses in the economy. SOEs still remain as the key sector in the economy, contributing to 38 per cent of the GDP; 50% of the country's exports; and 70% of the total tax revenue (MPI 2005) (also see Table 3.1). There are several reasons for the dominant role of SOEs in Vietnam. First, SOEs have been controlling the key industries in the economy. Second, while encouraging the development of the private sector, the Communist Party and the government have always been emphasising the leading role of SOEs. (Communist Party Congress VI). Therefore, the state sector receives favourable incentives and policies from the government. Third, SOEs both through their own funds and funds from the state, have invested in new machinery to increase their competitiveness against both domestic private firms and foreign invested firms (Heberer 2003).

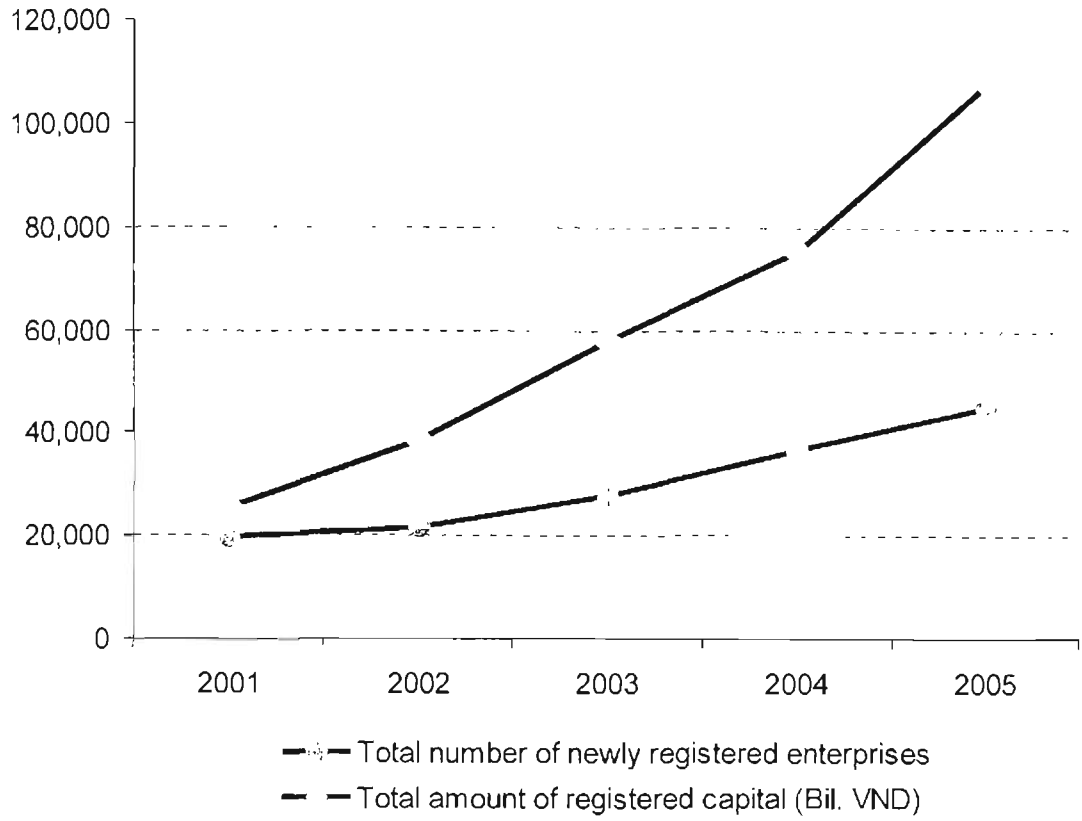
Table 3.1. Economic Sectors in Vietnam and their Contributions to GDP (%)

Sectors	1995	2000	2005
State sector	40.2 %	38.5 %	38.0 %
Non-state sector	53.5 %	48.2 %	47.0 %
Foreign invested sector	6.3 %	13.3 %	15.0 %

Source: MPI, SEDP 2005

The first Private Company and Enterprise Law was passed in 1989, which opened up the booming period of private sector development in Vietnam. In 1991–1999, over 40,000 private enterprises were set up (Pham 2005). Since the launch of the revised and more opened Enterprise Law in 2000, over 160.000 private companies were set up in

the first five years of this century, which represented four times the number established during the last decade (VCCI 2005) (also see Figure 3.9). At the end of 2005, the number of private companies in Vietnam was over 200,000 firms (MPI 2005).



(Source: MPI 2005)

Figure 3.9: Newly Registered Privately Owned Enterprises in Vietnam

As it does in other transition economies, the private sector is playing an increasingly important role in the Vietnam economy. By the end of 2002, the aggregate registered capital of the private sector was estimated to be around US$4.8 billion (Nguyen 2006). The private sector enjoys the highest growth rate, of over 30% per annum (Nguyen 2006) and an increased share of the economy – 47–49% of the GDP (see Table 3.1). The growth of the private sector has been found to have a significant and positive impact on GDP growth. The private sector has created almost all the new jobs (about five million jobs in 2000–2003, representing about 63% of all new employment) while the State sector only generated 9% of new jobs, and developed at an annual growth rate of 2% (Nguyen 2006). Becoming an official member of the World Trade Organisation in November 2006, Vietnam is entering a new stage of development. The business environment has been improving toward a completed market system. The private sector

will develop faster, and become a more important sector in the development of the economy.

3.7.1.2. Ownership Type and the Moderating Effect

Fundamental differences between private and public firms have been identified in the literature. Perry and Rainey (1988) review studies concerning the differences between public vs private sector and classify the differences into three main groups: overall firms' goals and motivations, funding or resources and mode of control, and decision-making procedures. These differences lead to distinct differences in the mind-set and behaviour between purchasing managers from the public and private sectors (Perry and Rainey 1988).

Studies on Western countries assert that differences in *firms' goals and motivations* are the primary causes of differences between public and private buying behaviour (Perry and Rainey 1988). The privately owned firms' performances are measured by firms' profit or sales (Uppal 1982). SOEs bear a burden of social goals, such as economic stability and employment generation (Ramaswamy et al. 1995). These social objectives are more likely to take precedence over profits and rates of return (Karande et al. 1999). In transition and developing countries, SOEs play an even greater role with regard to social objectives such as the distribution of income and wealth to the weaker sections of the society; and balancing the regional development. Beside the above-mentioned goals, SOEs in Vietnam have an additional role: to maintain the Communist Party's control over the economy (Heberer 2003).

Ownership differences between the two sectors lead to different *sources of funding and modes of control*. SOEs are funded and monitored by complicated and bureaucratic procedures with strong requirements and administrative controls (Karande et al. 1999; Perry and Rainey 1988). Private owners or shareholders fund and monitor private firms' performances. The government does not monitor SOEs' performance as closely as the private owners monitor POEs. Therefore, while private firms' managers are motivated by profit and monetary incentives, state-owned firms' managers lack monetary incentives (Ramaswamy et al. 1995).

State-owned firms must follow administrative *procedures to make decisions*, while managers of privately owned firms make decisions based on maximising profits and excellent performance (Schaumburg-Muller 2005). A variety of goals and objectives and bureaucratic procedures lead to more conflicts in the decision-making process in SOEs (Karande et al. 1999).

These above differences lead to significant differences in strategic *orientations, behaviour, and determinants of behaviour and decision-making between managers* of SOEs and POEs in transition economies. Under the centrally planned system, SOEs were protected from competitors (Tan 2002) and were directed what to do with suppliers, distributors and even customers. Because of the long-term living and working in a bureaucratic system, SOEs are generally bureaucratic, static, and internally focused cultures (Nguyen 2003). Vietnamese SOEs managers are biased toward administration (Nguyen 2003). The fear of making mistakes and causing conflicts drives public-sector buyers to focus on "avoiding the worst" rather than "choosing the best" (Patton 1996). They are more likely unwilling to make decisions and accept responsibility. They remain less innovative and more risk-averse (Shama 1995; Tan 2002) and appear to be ultra-conservative (Tan 2002). The literature related to information search behaviour and supplier selection decisions also provides evidence of the behavioural differences between SOEs and POEs. A study by Nutt (2006) reveals that SOEs' managers are reluctant to expend resources to collect data, even when information collection is available. Public-sector managers are less likely to support decisions backed by analysis (Nutt 2006).

Managers in different vulnerable conditions also differ in their reliance on sources of information and in their evaluation of supplier/product characteristics (Spekman 1988). "Private firms in transition economies are operating in an extremely uncertain environment ... poorly defined property rights, and absence of reliable business data" (Le et al. 2006, p. 209). In Vietnam, while SOEs receive favourable incentives and funding conditions from the government, POEs are faced with tight budget conditions and financial difficulties (Nguyen et al. 2005). They have much more limited access (than SOEs) to critical resources such as raw materials, marketing channels, human resources (Tan 2002), formal capital (Friedman 2004; Le et al. 2006), and land (Shultz

et al. 2000) because they are at the "bottom of government priority list" (Heberer 2003; Shultz et al. 2000; Tan 2002). As POEs operate under more vulnerable conditions, they are more active searchers of purchasing-related information (Spekman 1988) and they are willing to spend considerable funds to acquire information (Nutt 2006). In pursuing the maximisation of profits, POEs' managers also favour making decisions based on analysis and speculation (Nutt 2006). POEs' managers exhibit a stronger propensity for risk taking and innovation, and pro-activeness in their decisions (Tan 2002).

These above differences in information search behaviour and decision-making behaviour between SOEs' and POEs' managers suggests the differences in managers' evaluations of information and signals, perceptions of offer characteristics; and evaluations of supplier' credibility. In addition, SOEs' and POEs' managers are also claimed to have different orientation to relationship marketing. POEs' managers are more likely to pay more attention to relationship management than SOEs'. Owners of private firms rely on personal relations, trust and inter-organisational networks instead of formal rules, while SOEs are more bureaucratic (for example, Schlevogt 2001; Su and Littlefield 2001; Vyas and Math 2006).

As a result of the above discussion, this study proposes that ownership type (state-owned vs privately owned) moderate the relationships among constructs in the conceptual model proposed in Chapter 3 (as illustrated in Figure 3.8).

3.7.2. Relationship Duration

The literature on buyer–seller relationships emphasises that buyer–seller relationships develop through different stages (Rao and Perry 2002). There is no consensus on how many stages there are, or the classifications of stages in the relationship development[10].

[10] Dwyer et al. (1987) integrate a model of five phases of relationship development, identified as awareness, exploration, expansion, commitment and dissolution, in which each phase represents a major transition in the behaviour of each party involved in the relationship. Wilson (1995) integrates a model of buyer–seller relationship with five stages, including partner selection, defining purpose, setting the relationship, creating relationship value and relationship maintenance. In industrial buyer–seller relationships, Ford (1980) focuses on specific tasks carried out in each stage, then suggests a model of five stages of relationship development: the pre-relationship stage, in which buyers evaluate the potential supplier; the early stage, in which they negotiate for the sample delivery; the development stage, in which contracts are signed; the long-term stage after several large purchases; and the final stage is a long-established stable market. Cunningham and Homse (1988) use a three-stage model; Pillai and Sharma

However, there is wide agreement that the roles of relationship elements (such as trust, commitment, interdependence, satisfaction, relationship investment, information exchange etc.) vary in different stages of relationship development (Batonda and Perry 2003b; Dwyer et al. 1987; Ford 1980). Wilson (1995) argues that many of the variables that affect buyer–seller relationships are active in one state and become latent in the others. For example, trustworthiness is more important at the search stage and the selection stage (Wilson 1995). In manufacturer–distributor relationships, Hibbard et al. (2001) find that trust, commitment, communication, shared values and mutual dependence still have positive effects on relationship strengths over time, but they are diminishing at different ages (years) of the relationship.

In the international context, Conway and Swift (2000) argue that the importance of relationship marketing variables (empathy, experience, satisfaction, commitment and trust) are varying in relationship stages. Studies related to information exchange and communication also reveal differences of information exchanged in different stages of relationship development. For example, Claycomb and Frankwick (2004) find the effect of relationship duration on the association between a buyer's search effort and communication quality, participation, information-sharing and conflict resolution. Therefore, this study proposes that relationship duration moderates relationships among constructs in the theoretical model.

3.8. COMPETING MODELS

The literature on theory construction strongly recommends that researchers should investigate and test alternative and competing models as a necessary step in building a theory (Bagozzi 1984; Zaltman et al. 1982). There also exists a common agreement among structural equation modeling researchers that competing models should be tested (for example, Bentler and Chou 1987; Bollen and Long 1993; MacCallum et al. 1993). Testing competing models brings researchers closer to the true theoretical model (Hair et al. 2006). The performance of competitive model testing also increases the validity of

(2003) investigate three stages of buyer relational orientation in a buyer–seller relationship (a predominantly transactional orientation, increasing relational orientation, predominantly relational orientation); Lye and Hamilton (2001) test four stages (emerging, growth, maturity and decline) in an study in international relationships; Palmer and Bejou (1994) substitute age (one year; one–two years; two–three years; and over three years) for relationship stages.

the model (Bagozzi 1984). Therefore, this section presents a more restrictive model and a less restrictive model, which will be tested in conjunction with the theoretical model (illustrated in Figure 3.8).

3.8.1. A More Restrictive Competing Model

The central argument of signaling theory is: under the condition of asymmetric information, observable things are used to signal/convey information about unobservable things. For example, in Spence's article (Spence 1973), job candidates use educational qualifications, which are observable, to signal their job performance and ability. In consumer marketing, when buyers do not have enough information to evaluate product quality, observable signals such as price, warranty time, brand and money-back guarantees are used to send signals of product quality.

This study argues that in buyer–seller relationships, sellers send signals to show their capabilities to supply, to distinguish themselves from other competitors and to show their long-term intentions. Sending signals consistently over time and consistently among each other can show exporters' long-term and true competitiveness, which, in turn, demonstrates their true intentions and true capabilities. However, business buyers are rational and have a certain knowledge of prices in the market (Liang and Parkhe 1997). The development of the the Internet has increased the transparency of prices in business buying (Deeter-Schmelz et al. 2001). In addition, price is observable so buyers can easily compare differences among prices offered by different sellers to find the most competitive price. Buyers can quickly understand the price competitiveness of an offer with minimum effort. Hence, it appears reasonable to argue that signal clarity may not play an important role in showing price competitiveness. In the more restrictive competing model, the path from signal clarity to perceived price competitiveness is deleted (this is illustrated by the dashed line in Figure 3.10).

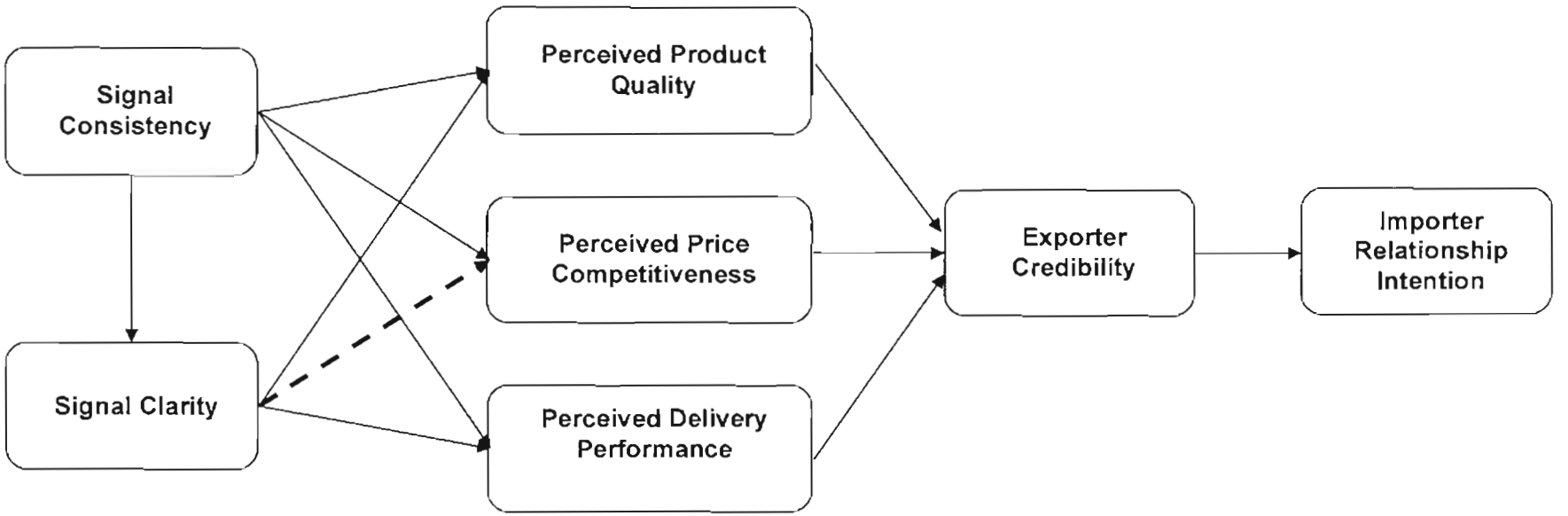


Figure 3.10: A More Restrictive Competing Model

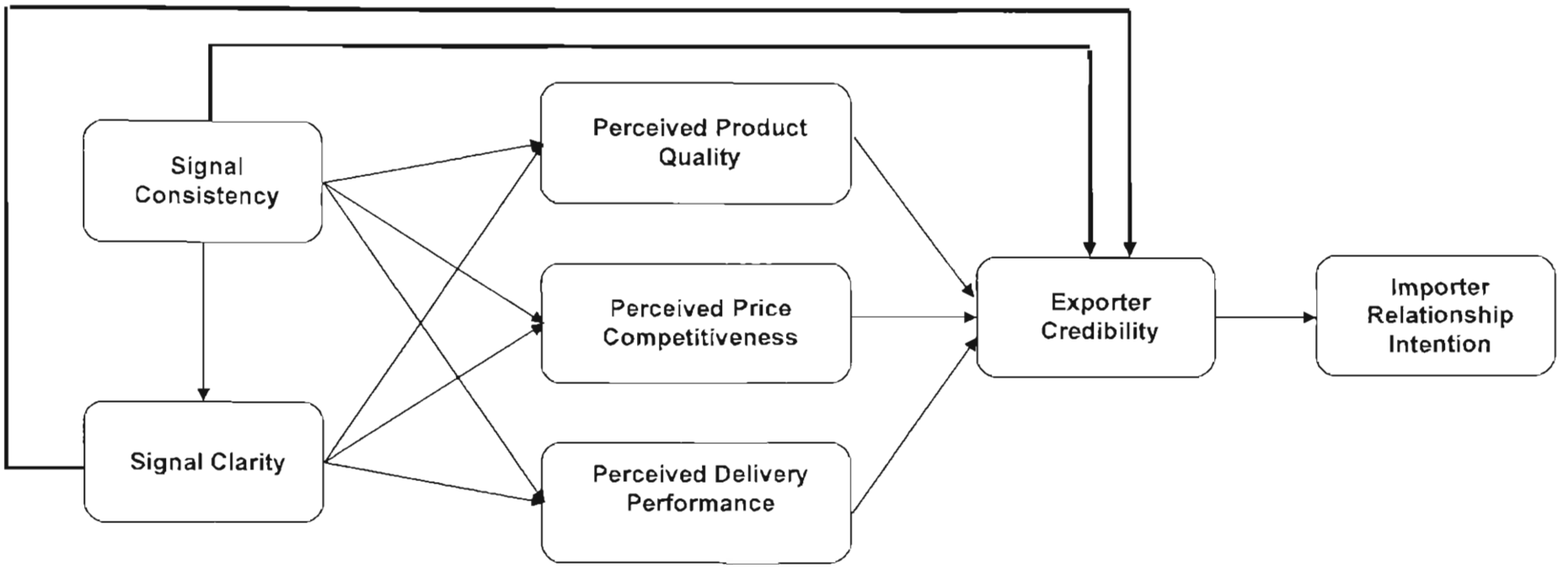


Figure 3.11: A Less Restrictive Competing Model

3.8.2. A Less Restrictive Competing Model

In exporter–importer relationships, the clarity and consistency of signals increase the signaling process and ensure that importers understand the true meanings sent by exporters. When importers receive ambiguous and inconsistent signals, they are more likely to doubt the capabilities and trustworthiness of exporters. In addition, it can be argued that exporters' credibility increases when behaviour is consistent with promises, signals are repeatedly fulfilled and market signals are consistently followed (Heil 1988; Milewicz and Herbig 1997). Exporters will lose their credibility if they repeatedly fail to fulfil the signals sent (Heil 1988).

Therefore, signal consistency and clarity can guarantee exporters' future action and prevent opportunistic behaviour. Herbig and Milewicz (1995c), in their study of competitive signals using the experiment method in the airline industry, find that unclear, ambiguous and inconsistent signals have negative effects on senders' reputation and credibility. In a study of brand as a signaling phenomenon, signal consistency and signal clarity are found to directly increase brand credibility (Erdem and Swait 1998). As a result, the less restrictive competing model proposes that signal consistency and signal clarity have positive effects on exporter credibility. Figure 3.11 illustrates the less restrictive competing model, in which the added paths are represented by bold lines.

3.9. SUMMARY AND CONCLUSIONS

On the foundation of literature on signaling theory, supplier selection and relationship intention, this chapter develops a theoretical model to investigate the influences of signal consistency and signal clarity on perceived offer quality and importer relationship intention. Signal consistency and signal clarity are hypothesised to have direct effects on perceived product quality, perceived price competitiveness and perceived delivery performance. These perceptions, in turn, are hypothesised to influence exporter credibility. Then, exporter credibility affects importer relationship intention. Table 3.3 summarises the research hypotheses.

This chapter also discusses the moderating effects of ownership type (state-owned firms vs privately owned firms) and relationship duration on relationships among constructs in the theoretical model. Moreover, two competing models are developed for testing in conjunction with the theoretical model in order to increase the validity of the theoretical model. On the basis of the theoretical concepts and models developed in this chapter, the following chapter presents the research methodology.

Table 3.3. Summary of Research Hypotheses

H1:	Exporter credibility has a positive effect on importer relationship intention.
H2:	Perceived product quality has a positive effect on exporter credibility
H3:	Perceived price competitiveness has a positive effect on exporter credibility
H4:	Perceived delivery performance has a positive effect on exporter credibility
H5:	Signal consistency has a positive effect on perceived product quality
H6:	Signal clarity has a positive effect on perceived product quality
H7:	Signal consistency has a positive effect on perceived price competitiveness
H8:	Signal clarity has a positive effect on perceived price competitiveness
H9:	Signal consistency has a positive effect on perceived delivery performance
H10:	Signal clarity has a positive effect on perceived delivery performance
H11:	Signal consistency has a positive effect on signal clarity.

CHAPTER 4

RESEARCH METHODOLOGY

4.1. INTRODUCTION

This chapter presents the research methodology. It comprises six main sections. The research design and justification are presented in Section 4.2. Section 4.3 develops measures of constructs. Section 4.4 presents results of the quantitative pilot survey, and the assessment of construct reliability. The research design of the main survey and response rate are described in Section 4.5. Section 4.6 considers ethical issues related to the study.

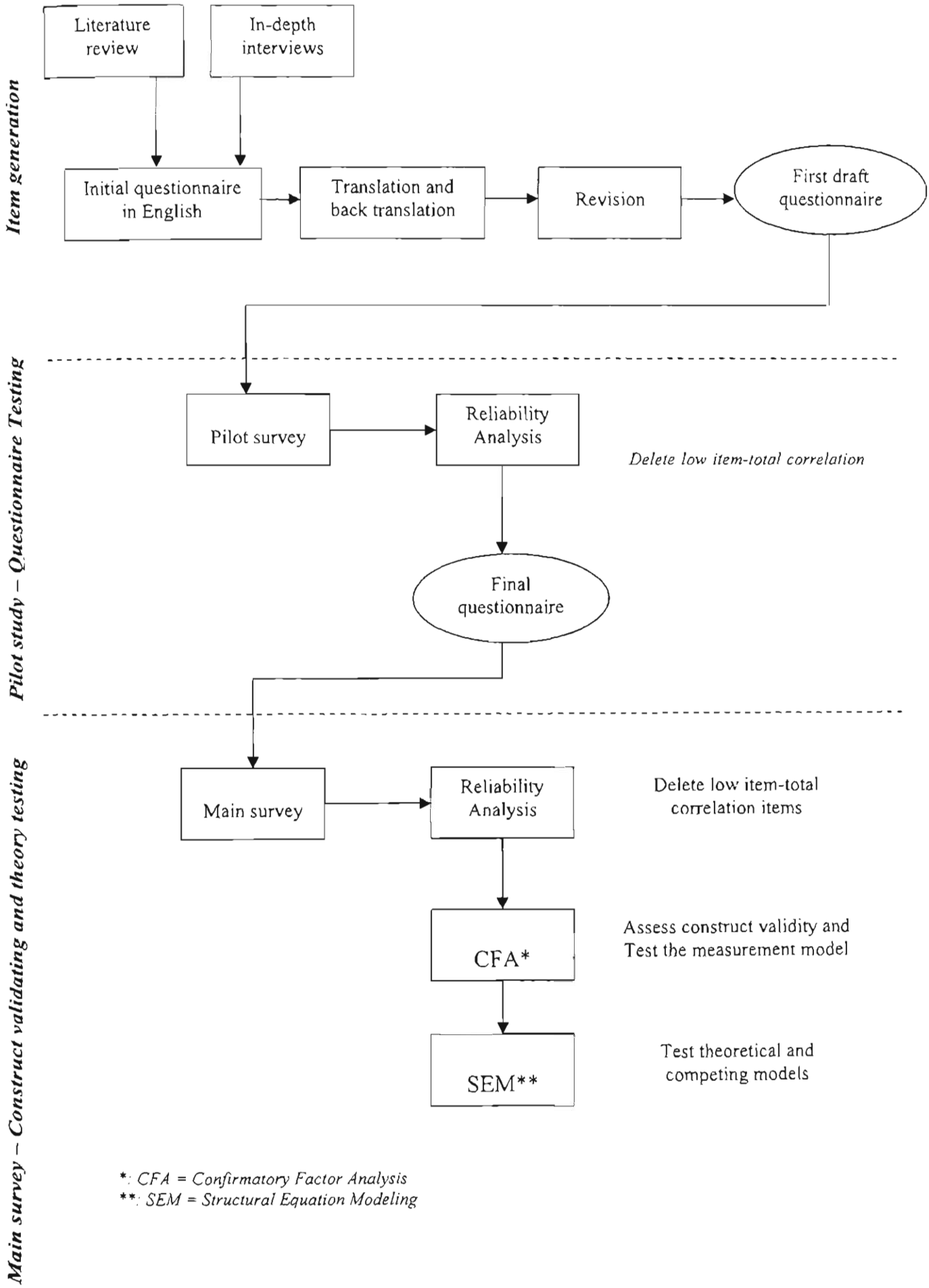
4.2. RESEARCH DESIGN AND JUSTIFICATION

The approach utilised in this study follows Churchill's (1979) process to develop measures of constructs in marketing. Figure 4.1 illustrates the research design and the research process.

Phase 1: Item Generation

The literature relating to the model's constructs was reviewed to define domains of constructs. Items were selected based on existing scales developed in the literature. In addition, constructs' dimensions and attributes, defined in Chapter 3, were carefully followed to ensure the content validity of constructs. As Rossiter (2002) suggests, rater characteristics should be considered in the scale development. Items in this research were mostly generated from existing scales in the business-to-business context, in which sales executives or purchasing executives are raters. In the case of no existing scale in the B2B context (such as signal consistency and signal clarity), existing scales used in the consumer marketing were considered and adapted.

Figure 4.1: Research Process



*: *CFA = Confirmatory Factor Analysis*
**: *SEM = Structural Equation Modeling*

As indicated in Chapters 2 and 3, limited research has investigated the role of signaling theory as well as signal consistency and signal clarity in the buyer–seller relationship context. In-depth interviews were considered as appropriate in this situation in order to explore the little-known phenomenon (Young 2005) and gain insight into the signaling phenomenon in buyer–seller relationships. In-depth interviews offered access to the importers' opinions, beliefs and perspectives, which might not emerge from a mail survey (Goodwind et al. 1997). In-depth interviews brought the researcher into the informants' world (Patton 1990). The method also allowed the researcher to understand importing managers' opinions and beliefs (Goodwind et al. 1997) about the effects of signal clarity and signal consistency on their relationship intention. It enabled the researcher to have deeper and broader views on how importers assess exporters via signals and signal quality when they consider building a long-term relationship with exporters.

In addition, as adapted scales were originally developed and tested in American and European markets, in-depth interviews helped verify the appropriateness of these scales in a developing market like Vietnam. The results of in-depth interviews enabled the researcher to check the clarity and understanding of scale items. The results were also used to generate new items of scales to measure signal clarity and signal consistency.

Interviews were semi-structured: that is, both guided and open-ended. The interview employed the "general interview guide approach" (Patton 1990), which outlined a set of questions and issues that were to be explored before interviewing. The question list served as a guide to make sure that all relevant topics were covered. This approach was selected in order to appropriately use the limited time available in an interview situation (Patton 1990). This approach also allowed flexibility for the interviewer to explore, ask about and probe particular issues; to develop questions, a sequence of questions; and make decisions about which information to pursue in greater depth. Interviews then could become "free-style" conversations within the area explored.

A convenience sample of nine informants was selected in this exploratory research. Interviewers were Vietnamese importing managers or executives. Interviews were conducted in interviewees' offices. Interviews were recorded and transcribed. As the

interviews progressed, the researcher revised questions to explore in-depth issues that emerged in previous interviews.

The initial version of the survey questionnaire was designed based on scales selected from the literature review and verified via in-depth interviews. New items were also added based on the results of the in-depth interviews. The initial questionnaire was designed in English, then it was translated into Vietnamese. A back translation was undertaken by another translator. Both translators are fluent in English. Translation into Vietnamese was necessary in this study because not all Vietnamese managers can use and understand English. The original and back-translated English questionnaires were compared to validate the translation equivalence, as suggested by Craig and Douglas (1999). Items were revised when necessary. Participants in the in-depth interviews were asked to review the questionnaire in order to check the meaning of items and the suitability of scales in the context. Eight out of nine interviewees agreed. As these participants can understand and use English, both English and Vietnamese questionnaires were e-mailed to them. Their comments were considered for a further revision. At the end of the process, the first draft of the questionnaire was obtained.

Phase 2: Pilot Survey

This phase involves the administration of a pilot survey in order to pretest the questionnaire and construct measures. Results of this pilot study provided a refinement and a preliminary evaluation of measurement scales. Reliability analysis was used to test the reliability of measures. As Nunnally (1978) suggests, items with corrected-item-total-correlations smaller than 0.30 and/or Cronbach's-alpha-if-item-deleted higher than the average Cronbach's alpha should be considered for deletion. The content validity of constructs was also considered when deciding which items should be finally deleted.

Phase 3: Main Survey

In the final phase, a survey utilising a sample of Vietnamese importers was undertaken to validate constructs as well as to test the theoretical model and its competing models. Measures of constructs were further refined via Cronbach's alpha and Construct

reliability. Confirmatory factor analysis (hereafter, CFA) was employed to confirm the validation of these constructs (Chapter 5 presents construct validating results). CFA was run for each pair of constructs to validate construct unidimensionality, reliability, convergent and discriminant validity (as suggested by Fornell and Larcker 1981). Items were further deleted as required at each step, to obtain an adequate measurement model fit, and thus construct validity, while maintaining content validity (as recommended by Ping 2004; Steenkamp and van Trijp 1991).

Structural equation modeling (hereafter, SEM) was employed to test the conceptual model because SEM allowed the researcher to "explicitly take into account the inherent fallibility of data and to assess and correct for measure unreliability" (Baumgartner and Homburg 1996, p. 158). SEM also takes into account measurement errors and models the influence of environmental and managerially controllable stimuli (Steenkamp and Baumgartner 2000). And, more importantly, it allows researchers to investigate a comprehensive theoretical framework and to take into account direct, indirect and bi-directional path effects of multiple variables (Baumgartner and Homburg 1996).

The following section discusses the operationalisation of construct measures.

4.3. MEASURE DEVELOPMENT

This section presents the operationalisation of measures of the model's constructs: relationship intention; exporter credibility; perceived product quality; perceived price competitiveness; perceived delivery performance; signal consistency; signal clarity; and two moderators (ownership type and relationship duration). All scale items were 7-point Likert scale anchored by strongly agree (1) and strongly disagree (7). All constructs were measured by standard items. Although some researchers (for example. Bagozzi 1994; Hair et al. 2006; Malhotra and Birks 2003) suggest that reverse items can avoid biases and avoid the tendency to agree or disagree with questionnaire items regardless of content, reverse items have some limitations. Mixing standard and reverse (positively and negatively) worded items could adversely affect the consistency/unidimenionality of measures (Ray 1983). Goldsmith and Desborde's (1991) assessment of an opinion leadership measure revealed that eliminating a negatively worded item from the

measure would drive up the internal consistency. Mixing items also causes confusion, especially when respondents complete long questionnaires (DeVellis 1991). In factor analysis, reverse items are more likely to produce artificial factors resulting from careless respondents (Schrietheim and Eisenbach 1995). Therefore, no reverse items were used in construct measures in this study. In addition, all of the construct items were reflective indicators[11], which were affected by their underlying constructs.

4.3.1. Relationship Intention

There is no consensus on defining and operationalising the relationship intention construct. As discussed in Section 2.2, several similar concepts are introduced in the literature, such as relational orientation, long-term orientation and relationship intention. Generally, these concepts refer to the tendency toward a long-term relationship, however, they tend to be defined and operationalised differently. This section reviews the literature related to measurements of the willingness to develop long-term relationships, as well as the tendency toward a long-term relationship.

Two approaches are used in operationalising these constructs: some researchers measure as unidimensional constructs (for example, Ganesan 1994; Joshi and Stump 1999) while others measure as multi-dimensional constructs (for example, Janda et al. 2002; Kumar et al. 2003; Pillai and Sharma 2003). The following reviews both approaches, then the relationship intention scale employed in this research is presented.

Pillai and Sharma (2003) utilise the construct of relational orientation by focusing on the fundamental attitude toward a long-term relationship and define it as the propensity to engage in relational behaviour. They operationalise relational orientation as a higher order construct of trust, commitment and information exchange. However, this measurement is similar to the measurement of relationship quality in the literature (for example, Hennig-Thurau and Klee 1997; Hewett et al. 2002; Lages et al. 2005). In addition, no empirical study has been undertaken to test the reliability and validity of this measure.

[11] Reflective measures caused by the latent variable; they are the reflection or manifestation of underlying construct (Edwards and Bagozzi 2000; Fornell and Bookstein 1982).

Kumar et al. (2003) measure relationship intention as a multi-dimensional construct comprising involvement, expectation, forgiveness, feedback, and fear of relationship loss. Kumar et al. adapt the scale from Mathwick (2002), who measures online relational orientation. However, their relationship intention construct is designed in the consumer context and has not been tested to verify its reliability and validity.

In the business relationship literature, researchers commonly agree on measuring relationship intention as a unidimensional construct. Lusch and Brown (1996) use the term long-term orientation and define it as the distributor's expectation that its relationship with the main supplier will continue in the future. Griffith et al.'s (2006) scale adopted from Lusch and Brown's achieve a significant reliability and validity. However, their measure focuses on expectation of, and belief in relationship continuity, and measures long-term orientation as a long-term alliance.

The unidimensional scale developed by Ganesan (1994) has been used and found to exhibit high validity and reliability in studies in different contexts (for example, Ganesan 1994; Joshi and Stump 1999; Lages et al. 2005; Lee and Dawes 2005; Wong et al. 2005; Yu and Pysarchik 2002). The relationship intention construct in this study presents an importer's intention and willingness to develop a long-term relationship with a specific exporter. Although the relationship intention is not identical to Ganesan's long-term orientation, both definitions refer to the willingness to develop a long-term relationship. Therefore, this study employed four items from Ganesan's scale (Ganesan 1994), with modifications to suit in the importer–exporter relationship context. The first item was selected from Kumar et al.'s scales (2003) to measure the importer's general intention to build a long-term relationship with an exporter. The in-depth interview results indicated high agreement among interviewees on this scale.

Table 4.1 presents measurement items of the importer relationship intention construct. The scale's items were on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

Table 4.1. Indicators of the Importer Relationship Intention (REIN) Scale

REIN1	We really intend to build a positive long-term relationship with exporter A.
REIN2	We believe that in the long run our relationship with exporter A will be profitable.
REIN3	We believe that over the long term our relationship with exporter A will be effective.
REIN4	Our relationship with exporter A will have long-term potential.
REIN5	We are willing to make short-term sacrifices to help exporter A in order to obtain long-term benefits.

4.3.2. Exporter Credibility

Conceptualisations of trust and its dimensions (including credibility) are claimed as the most controversial issue in the trust literature (Raimondo 2000). Seppanen et al.'s (2005) review of inter-firm trust reveals that although measurement of trust varies significantly, "interestingly enough, replication is not commonly used, and it seem to be a tendency for each author to develop his/her own measures" (p. 12).

Credibility reflects the extent to which relationship partners are believed to stand by their word (Ganesan 1994; Morgan and Hunt 1994), and to make promises with the intention of fulfilling them (Moorman et al. 1993). In this study, exporter credibility is defined as the extent to which an exporter is believed to stand by her/his word (Doney and Cannon 1997; Ganesan and Hess 1997) and has the required expertise to fulfil her/his obligations and promises reliably and effectively (Ganesan 1994).

The original scales from studies by John and Reve (1982); Ganesan (1994) and Kumar et al. (1995) were adapted for this context. Then, comments from the in-depth interviewees were used to revise the construct measure. In-depth interview results suggested deleting several items that appeared to be inappropriate in the context. For example, most of the interviewees stated that their exporters rarely gave advice on their business operations when they saw one item from Kumar's scale (Whenever the exporter gives us advice on our business operations, we know that it is sharing the best judgment.). Ganesan (1994) also omits this item when he adopts Kumar et al.'s (1995) scale. Thus, this item was not included in the scale. Table 4.2 presents the measure of exporter credibility employed in this study. The items are on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

Table 4.2. Indicators of the Exporter Credibility (CRED) Scale

CRED1	Exporter A often keeps promises that it makes to our firm.
CRED2	Exporter A has been frank in dealing with us.
CRED3	In the relationship with Exporter A, there have never been instances where we have felt deceived.
CRED4	Exporter A does not make false claims.
CRED5	In general, our organisation can count on exporter A to be sincere.
CRED6	When we make agreements with Exporter A we can always rely on them to fulfil all requirements.
CRED7	Exporter A has the ability to handle most of our requests.

4.3.3. Perceived Product Quality

There are two main approaches to measuring the perception of product quality in the literature. Researchers in the first approach argue that business buyers have to consider a whole range of criteria when they assess product quality (Cravens et al. 1988; Dzever and Quester 1999), therefore they measure perceived product quality by multiple dimensions. For example, Janda et al. (2002) conceptualise product quality in terms of four dimensions: performance, reliability, conformance, and durability. Mudambi et al. (1997) use a combination of technical product specifications, underlying design features, reliability and innovation to measure product quality. Calantone and Knight (2000), in a study of the role of product quality in the international performance of industrial firms, measure product quality by the degree that the quality dimensions (quality, performance, service and customer support) meet customers' expectation. Qualls and Rosa (1995), in their study of industrial perception of product quality and satisfaction, identify key factors in measuring perceived quality in business buying situations as: technological leadership; providing competitiveness; responsiveness to day-to-day issues; distribution services; technical resources; expertise; and sensitiveness to operational concerns.

However, product quality perception has been found to vary differently across product types (Qualls and Rosa 1995), industries (Garvin 1984), and cultures (Garvin 1986; Kaynak 1989; Sjolander 1992). Korneliussen and Grønhaug (2003), in their study of perceived quality in the supply chain, find differences between perception of importers and exporters in product quality and the importance of product quality.

The variation of product quality perception in different situations explains why the majority of studies on the area follow the second approach. In this approach, researchers measure perceived quality as a unidimensional construct (Dzever and Quester 1999). This study measures perceived product quality on the basis of comparing between exporters' product quality with importers' requirements, expectations and value for money. In addition, product quality is evaluated not only by core physical attributes but also supporting services (Craven et al. 1988; Mundabi et al. 1997) such as customer support and after sales service.

Calantone and Knight's (2000) measure of product quality was adapted in this study. In-depth interview results strongly emphasised the aspect of quality that meets importers' requirements and expectations. Interviewees explained that each of their customer segments requires a certain level of product quality. Therefore, they import products that can meet their customers' quality demands. For example, one interviewee said: "why do I need to import premium quality products charged with premium prices while my customers do not look for premium products?" (DI3).

Table 4.3 presents measures of perceived product quality on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

Table 4.3: Indicators of the Perceived Product Quality (PRO) Scale

PROD1	Quality of products offered by the Exporter A meets our requirements and expectations.
PROD2	Exporter A offers products and services that are good value for money.
PROD3	Service and customer support offered by the Exporter A meet our requirements and expectations.

4.3.4. Perceived Price Competitiveness

Price competitiveness is defined as the importer's perception of the exporter's price competitiveness in comparison with other exporters in the market. In the literature on supplier selection criteria, price competitiveness is often referred to as a one-item construct. For example, Katsikeas and Al-Khalifa (1993) and Shipley et al. (1991) investigate price competitiveness and use one item to measure price competitiveness. Choi and Harley (1996), in a study of supplier selection practice in the supply chain,

measure price competitiveness by low price. Thach and Axinn (1991) examine exporters' performance using a sample of exporters from Canada and the USA. In their study, respondents were asked to assess the competitiveness of the exporter's price by comparing the exporter's price with competitors on three levels (lower, higher or about the same).

More commonly, researchers measure price competitiveness by multi-items. In the import–export context, Katsikeas and Kaleka (1999), in their study of import motivations utilising a sample of UK importers, measure exporter pricing competitiveness by three items: attractive credit terms, attractive discount and competitive price. The scale obtains a Cronbach's alpha of .75, although the competitive price item has a low factor loading (.5). This scale is also used in other studies by Katsikeas and co-authors (for example, Katsikeas 1998; Katsikeas and Dalgic 1995; Katsikeas and Kaleka 1999; Katsikeas et al. 2004) and confirms significant reliability (for example, Cronbach's alpha =.81 in Katsikeas et al. 2004) and validity.

Therefore, this study operationalised price competitiveness as a unidimensional construct, with three indicating items on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7). Table 4.4 shows the measure of perceived price competitiveness.

Table 4.4: Indicators of the Perceived Price Competitiveness (PRI) Scale

PRI1	Exporter A offers us very competitive prices.
PRI2	We often receive discounts/reductions from Exporter A.
PRI3	Exporter A offers us very favourable credit terms.

4.3.5. Perceived Delivery Performance

As defined in Chapter 3, importers' perceptions of the exporters' delivery performance is reflected via the perception of on-time delivery, accuracy and flexibility. On-time delivery refers to the ability of exporters to meet delivery schedules (Handfield and Pannesi 1992; Mandal and Deshmukh 1994). Delivery accuracy (Ulaga 2003) or delivery reliability (Handfield and Pannesi 1992) reflects the degree to which exporters can accurately deliver what has been promised. Delivery flexibility is reflected in the

willingness to adapt to importers' changing requirements (Mandal and Deshmukh 1994; Mudambi et al. 1997).

Researchers commonly operationalise delivery performance as a unidimensional construct. For example, Ulaga (2003), in a study of capturing value creation in business relationships, defines and measures delivery performance via on-time delivery, delivery flexibility and accuracy of delivery. Milgate (2000) and Vachon and Klassen (2002) define delivery performance as speedy and reliable delivery and operationalise it as an unidimensional scale. Iyer et al. (2005) measure deliver performance as delivery lead-times and on-time delivery. Yilmaz et al. (2004) measure delivery performance as lengths of ordering time; degree of meeting delivery date; accuracy in filling orders; and ability to provide rushed service on product orders. Eggert et al. (2006) measure delivery performance using three items, which reflect meeting delivery due dates, degree of error in delivery, and accuracy of delivery. Fawcett et al. (1997) investigate firms' international performance and measure delivery performance via the ability to consistently meet production schedules, and the ability to meet promised due date and back-ordered products. In brief, researchers appear to agree that delivery performance can be reflected by on-time delivery, accuracy (no error) and flexibility.

Based on the definition of delivery performance and the operationalisation of delivery performance in the literature review, this study operationalised perceived delivery performance as a unidimensional construct with three items (timely delivery, accuracy and flexibility). In-depth interview results also emphasised the importance of timely delivery, flexibility and accuracy of delivery. The scale items were adapted from the scales of Eggert et al. (2006) to measure timely delivery (DELI1) and accuracy (DELI2). Item DELI3 was adapted from Yilmaz et al. (2004) to measure delivery flexibility. In-depth interview results showed an agreement on three measurement items. Interviewees strongly emphasised the importance of flexibility in handling delivery jobs. For example, one of the interviewees explained: "the complicated and unclear import regulation system in Vietnam requires our importers to be flexible to adapt to our requests, otherwise, we could not do business with them" (DI5). The measure of perceived delivery performance is shown in Table 4.5 with items on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

Table 4.5: Indicators of the Perceived Delivery Performance (DELI) Scale

DELI1	Exporter A always meets the delivery due date.
DELI2	Exporter A always delivers accurately.
DELI3	Exporter A is always flexible in handling our orders.

4.3.6. Signal Consistency

Limited research has investigated the effects of signal consistency and signal clarity in the literature. Even fewer efforts have been made to measure these two constructs using the survey method (except for Erdem and Swait 1998; Sweeney and Swait 1999 in B2C marketing). In competitive signaling studies, researchers use experiments to test their hypotheses relating to the effects of signal consistency and signal clarity (for example, Herbig and Milewicz 1994a; Herbig and Milewicz 1995c).

In the consumer marketing literature, Sweeney and Swait (1999) use data from a survey and find positive effects of signal clarity on perceived service quality and information costs saved. Erdem and Swait (1998) define brand signals as all past marketing strategies and activities related to that brand. Thus, they define signal consistency as the "degree to which each component mix or decision reflects the intended whole" (p. 137). They also emphasise the consistency over time of signals. However, their signal consistency's measurement does not completely reflect this definition. They operationalise signal consistency as a unidimensional construct with four items: (1) This brand's image in commercials and ads has been consistent for many years; (2) The quality of this brand has been consistent for many years; (3) This brand's ads, prices, specials and products match its overall image; (4) Everything is consistent about this brand fit, quality, price, ads, variety, specials, etc. The first item focuses on only commercials and ads, while they define brand signals as all marketing activities and strategies. The second item measures consistency over time, but they use brand quality instead of the consistency of brand signals. The third item intends to indicate overall consistency among signals, however, they list only the brand's ads, price, specials, and products. Ads, price, specials and products cannot reflect the entirety of marketing activities and strategies related to this brand. A similar limitation can be seen in the fourth item.

As there is limited operationalisation of signal consistency in the literature, this study operationalised signal consistency based on its definition in the importer–exporter relationship context and Erdem and Swait's (1998) scale. Rossiter's approach (2002)[12] and the widely accepted approach suggested by Churchill (1979) were used to develop measurement scales of signal consistency and signal clarity. Indicating items of signal consistency and signal clarity were firstly generated based on construct domain or attributes (signal consistency and signal clarity), objects (exporters) and raters (importers). Erdem and Swait's (1998) scale was adapted when relevant. The scales were then validated through importing managers in in-depth interviews. Measurement items were revised based on the results of in-depth interviews and comments from experts. Reliability and factor analysis were used to validate constructs using data from a pilot study and a survey (as suggested by Churchill 1979) in Sections 4.4 and 5.4.

Signal consistency refers to the degree to which each signal reflects the intended whole and the degree of consistency in messages over time (adapted from Erdem and Swait's (1998) definition). Two aspects of consistency are presented in this definition: consistency among signals, and consistency over time. In this study, exporters' signals are defined as all activities, behaviour, and statements, which are deliberately sent from the exporters and can be used to convey information beyond themselves. In order to avoid respondents' misunderstanding of signals, this study uses the term: actions, behaviour, and statements instead of signals in item statements.

Table 4.6 presents the indicating items of CONS's measure. Item CONS1 measured consistency among signals; item CONS2 measured the consistency of signals with the overall ability and image (adapted from Erdem and Swait's item 3). CONS3 was generated to check the reliability of CONS1 and CONS2; CONS4 measured the consistency of signals over time (adapted from Erdem and Swait's (1998) items 1 and 2). The items are on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

[12] Rossiter (2002) asserts that only the content validity assessed by raters is important, and there is no need for empirical validity by the universe. This is suggested as one of the limitations of Rossiter's approach (for example, Diamantopoulos 2005; Finn and Kayande 2005). This study utilises both Rossiter's approach and the widely accepted approach suggested by Churchill (1979) in developing marketing measures to overcome this limitation.

Table 4.6: Indicators of the Signal Consistency (CONS) Scale

CONS1	Exporter A's actions, behaviour and statements are always consistent with each other.
CONS2	Exporter A's actions, behaviour, statements have consistently shown their ability and intention.
CONS3	We have no reason to doubt the exporter's intention and ability because their actions, behaviour are consistent.
CONS4	Exporter A's action, behaviour and statements have been consistent over time.

4.3.7. Signal Clarity

As defined in Chapter 3, signal clarity refers to importers' perceptions of clarity of all signals sent by exporters. A clear signal is unambiguous (Jervis 1970) and can be read quickly with minimum effort and error (Herbig and Milewicz 1995c). Erdem and Swait (1998) measure brand signal clarity by two items: I know what this brand stands for; and, I have trouble figuring out what image this brand is trying to create. These items indicate the degree to which consumers understand signals and the difficulty in interpreting signals. These items are not concerned with the clarity, ease, effort and quick speed of signal interpretation.

This study generates measurement items of signal clarity based upon a consideration of suitability in the importer–exporter relationship context, and the effect of signal clarity on importer relationship intention. From the definition of signal clarity, five items were generated (Table 4.7). Item CLAR5 was generated based on Jervis's (1970) definition of signal clarity, in which he emphasizes that a clear signal has a known cause. As noted in the previous section, newly generated measures were validated via in-depth interviews, the pilot study and CFA using data from a survey. Indicating items of signal clarity are on a 7-point Likert scale, anchored by strongly agree (1) and strongly disagree (7).

Table 4.7: Indicators of the Signal Clarity (CLAR) Scale

CLAR1	Exporter A's actions, behaviour, statements and information they provided are always clear.
CLAR2	We have no trouble interpreting the purposes and intentions of Exporter A's actions, behaviour, and statements.
CLAR3	We can easily and quickly understand all the exporter's actions, behaviour, and statements.
CLAR4	We do not need much effort to understand all the exporter's actions, behaviour, and statements.
CLAR5	We always understand the causes and effects of the exporter's behaviour, actions and statements.

4.3.8. Moderating Variables

4.3.8.1. Ownership Type

As presented in Chapter 3 (Section 3.7.1), the moderating effect of ownership type is explored via the two main types of ownership: state-owned firms and privately owned firms. The questionnaire asked respondents to select the corresponding ownership type for their firms. If responding firms did not belong to the state-owned sector or the privately owned sector, then respondents were asked to nominate another type.

4.3.8.2. Relationship Duration

Although researchers agree on the argument that buyer–seller relationships develop by stages (for example, Dwyer et al. 1987; Ford 1980; Wilson 1995), there is no strong consensus on the name and number of stages, nor on how to measure the duration of relationship development (as reviewed in Section 3.7.2). Some researchers measure the relationship development by stages (for example, Cunningham and Homse 1988; Dwyer et al. 1987; Ford 1980; Wilson 1995), others measure by states (such as Batonda and Perry 2003b, 2003a; Ford and Rosson 1982; Moore 1991; Rao and Perry 2002). The relationship duration in buyer–seller relationships is also measured by the number of years in the relationships. For example, Claycomb and Franwick (2004) investigate the moderating role of relationship duration on the effects of relationship communication elements on buyers' search efforts. They measure relationship duration by the number of years over which buying firms have been working with their suppliers. Claycomb and Franwick (2004) and Graham and Daugherty (1994) classify business relationships into two durations: young relationships which are less than six

years old, and mature relationships which are over six years old. Palmer and Bejou (1994) divide relationship duration into four groups (one year; one to two years; two to three years; and three or more years). This study also employed the number of years in relationships as the measure of relationship duration.

The research context (Vietnam) also supports measuring relationship duration by years. As Vietnam was a centrally planned economy, only limited SOEs were allowed to become involved in exporting and importing activities (Decree 33/CP, Government, 19/4/1994) before May 1994. After May 1994, privately owned firms that met certain requirements were allowed to apply for importing and exporting licences. However, a limited number of privately owned firms were granted the importing and/or exporting licences. Since September 1998 (Decree 57/CP, Government, 31/7/1998), the door to international markets has been opened to all Vietnamese registered traders, firms, and individuals. As a result, only SOEs have more than 10 years in relationships with foreign partners, and a very limited number of privately owned firms have been in relationships between five and ten years. Most of the relationships between Vietnamese importers and their foreign partners have been established for five years or less. Therefore, this research measures relationship duration by two categories: up to five years and more than five years.

4.4. PILOT STUDY

The objectives of the pilot study were to check the respondents' understanding of questions and to assess the construct reliability.

The pilot study was undertaken using a sample of thirty-six students in a Director and Executive training course at the National Economics University, Ha Noi, Vietnam. Only students whose companies were involved in importing activities were asked to participate in the pilot study. Face-to-face interviews were employed in order to check respondents' reactions to the questions and the clarity of items' meaning (Aaker et al. 2004). As Churchill (1979) recommends, comments on the meaning and wording of items were considered in editing the questionnaire, to make it as clear as possible. Data

selected from the pilot study was used to assess construct measures and revise measures when necessary (as suggested by Churchill 1979).

4.4.1. Reliability Assessment Method

Reliability refers to the accuracy or precision of a measuring instrument or scale, that it is free from errors and therefore will yield consistent results (Peterson 1994). The Coefficient alpha enables researchers to test the internal consistency or reliability of a measure. The Coefficient alpha is recommended as "the first measure one calculates to assess quality of a instrument" (Churchill 1979, p. 68). Cronbach's alpha (developed by Cronbach in 1951) is the most commonly accepted formula for assessing reliability (Peter 1979). A low coefficient alpha indicates a poor performance of measurement items. The coefficient alpha is high when items correlate well and reflect the true scores (Churchill 1979). As a rule of thumb, a coefficient alpha of .50 or .60 is satisfactory in the exploratory research (Nunnally 1978). A coefficient alpha of .70 or higher is considered to be satisfactory for most research purposes (Nunnally 1978).

Cronbach's alpha is calculated as follows (Peter 1979, p. 9):

$$\alpha = \left(\frac{k}{k-1}\right)\left[1 - \frac{\sum_{i=1}^{k}\sigma_i^2}{\sum_{i=1}^{k}\sigma_i^2 + 2\sum_{i}^{k}\sum_{j}^{k}\sigma_{ij}}\right] \qquad \text{(Eq. 4.1)}$$

in which:

α: Cronbach's alpha

k: Number of items in the scale

σ^2_i:Variance of item i

σ_{ij}: Covariance of item i and item j

The following section presents the preliminary assessment of measures by reliability analysis.

4.4.2. Preliminary Assessment of Reliability

Table 4.8 summarises the results of the constructs' reliability analysis. This section summarises the results of the reliability analysis of each construct using data from the pilot study.

Importer Relationship Intention (REIN)

Although the Cronbach's alpha of the REIN's scale was relatively high (.810), one item (REIN5) had a negative item-total correlation. Table 4.8 also shows that, if REIN5 was deleted, the Cronbach's alpha of REIN increased from .810 to .932. In addition, most of the respondents stated in the face-to-face interviews that they did not think of sacrificing their benefits. Consequently, REIN5 was deleted. After refinement, the revised REIN obtained a Cronbach's alpha of .935 and a high item-total correlation ranging from .805 to .927 (see Table 4.8).

Exporter Credibility (CRED)

The CRED's scale obtained a relatively high Cronbach's alpha of .925. Item-total correlations ranged from .559 to .848. The results in Table 4.8 indicate that, if item CRED4 was deleted, the Cronbach's alpha of CRED could increase from .925 to .931. However, as the sample size of the pilot study was small, CRED4 was still kept in the CRED's scale for a further analysis using data from the survey. In addition, the high Cronbach's alpha of the CRED's scale suggests that the Western developed items of the credibility construct also suit the Vietnamese context.

Perceived Product Quality (PROD)

The Cronbach's alpha of the PROD's scale was .837, which was higher than the recommended value of .70 (Nunnally 1978). This high value of Cronbach's alpha showed the reliability of the PROD's measurement scale. Item-total correlations were high and varied from .655 to .742. No item was suggested for deletion, because all

Cronbach's-Alpha-if-Item-Deleted values were smaller than the Cronbach's alpha of PROD (.837).

Perceived Price Competitiveness (PRI)

The PRI's scale obtained a Cronbach's alpha at .865, which indicated that the measurement scale of PRI met reliability requirement. The item-total correlations ranged from .671 to .818. The Cronbach's-Alpha-if-Item-Deleted value of PRI2 (.874) was slightly higher than the Cronbach's alpha of PRI (.865). Because of the small difference, PRI2 was retained in the measurement scale for further analysis using the data from the main survey. In addition, the small sample size of the pilot study could cause inaccurate results in the reliability analysis.

Perceived Delivery Performance (DELI)

The DELI's scale obtained a Cronbach's alpha of .785, with item-total correlation ranging from .585 to .686. No Cronbach's-Alpha-if-Item-Deleted value was higher than the Cronbach's alpha of the DELI's scale. In other words, no item was suggested for deletion.

Signal Consistency (CONS)

The CONS's scale obtained a Cronbach's alpha of .891, which showed the high reliability degree of the CONS's measurement scale. All item-total correlations were in the range of .671 to .849. The Cronbach's-Alpha-if-Item-Deleted value of CONS4 was .892, which was slightly higher than the CONS's Cronbach's alpha (.891). However, it was decided to retain CONS4 in the measurement scale of CONS, for further analysis using the data from the main survey.

Table 4.8: Summary of Pilot Study Data Analysis: Reliability Analysis

Constructs			*Items*	*Corrected Item-Total Correlation*	*Cronbach's Alpha if Item Deleted*	*Items Considered for Deletion*
Relationship intention (REIN)	Cronbach's alpha	.810	REIN1	.639	.693	REIN5
			REIN2	.781	.641	
			REIN3	.871	.624	
			REIN4	.760	.641	
			REIN5	-.022	.932	
Relationship intention (revised) – REIN	Cronbach's alpha	.935	REIN1	.805	.922	
			REIN2	.838	.911	
			REIN3	.927	.887	
			REIN4	.806	.925	
Credibility (CRED)	Cronbach's alpha	.925	CRED1	.807	.897	CRED4*
			CRED2	.816	.897	
			CRED3	.844	.893	
			CRED4	.559	.931	
			CRED5	.797	.898	
			CRED6	.644	.914	
			CRED7	.848	.894	
Product quality (PROD)	Cronbach's alpha	.837	PROD1	.655	.815	
			PROD2	.742	.731	
			PROD3	.708	.764	
Price (PRI)	Cronbach's alpha	.865	PRI1	.747	.808	PRI2*
			PRI2	.671	.874	
			PRI3	.818	.735	
Delivery performance (DELI)	Cronbach's alpha	.785	DELI1	.686	.637	
			DELI2	.605	.729	
			DELI3	.585	.750	
Signal consistency (CONS)	Cronbach's alpha	.891	CONS1	.811	.833	CONS4*
			CONS2	.849	.816	
			CONS3	.701	.871	
			CONS4	.671	.892	
Signal clarity (CLAR)	Cronbach's alpha	.911	CLAR1	.860	.874	CLAR5*
			CLAR2	.858	.874	
			CLAR3	.785	.890	
			CLAR4	.819	.882	
			CLAR5	.567	.932	

** Reliability analysis suggested that these items be deleted, however, they were retained for further analysis in the main survey.*

Signal Clarity (CLAR)

The Cronbach's alpha of the CLAR's scale was .911, with item-total correlations ranging from .567 to .860. Results of the reliability analysis indicated that if item CLAR93 was deleted, the Cronbach's alpha of the CLAR scale increased from .911 to .932. However, the small sample size of the pilot study may not produce an accurate assessment of dimensionality. Hence, this item was retained in the scale for a further assessment.

In summary, results of the reliability analysis using data from the pilot study illustrate that all constructs' scales meet requirements of reliability. Only one item (REIN5) was deleted.

After testing for the reliability of measures, the questionnaire was refined by deleting REIN5. Then, the questionnaires in English and Vietnamese were sent to in-depth interviewers for their comments. Wording and statements in Vietnamese were finally refined to ensure accurate understanding of questions. The final version of the questionnaire was used in the main survey. Survey questionnaires in English and Vietnamese are presented in Appendices A1 and A2, respectively. The following section presents the research design of the main survey and general results from the survey's data collection.

4.5. MAIN SURVEY

This section outlines the design of the main survey including sampling, sample size, and survey method.

4.5.1. Sample Design

4.5.1.1. Sampling

The population of the main survey represents local companies who are involved in importing activities with foreign exporters and are located in Ha Noi and Ho Chi Minh City, Vietnam. These two cities were selected because they are the two major cities in Vietnam. These companies were identified from the Online 2005 Vietnam Business Directory published by the Vietnam Chamber of Commerce and Industry. This was the most up-to-date and the most comprehensive business directory in Vietnam at the time of conducting the main survey. Businesses involved in importing activities (importing was listed in the main activity column of the directory) were selected to be the sample frame of this study. The sample frame consists of about 6,400 importing firms. Systematic random sampling was adopted to select the sample.

4.5.1.2. Sample Size

There is a common agreement among SEM researchers that SEM requires a considerable sample size to reliably estimate and test the model (Hair et al. 2006; Kline 2005). Sample size provides the basis for estimation of sampling errors (Hair et al. 2006). The general agreement is that a larger sample size provides more proper solutions, more accurate parameter estimates and better fitness test statistics (Anderson and Gerbing 1984; Bagozzi 1981a; Boomsma 1982; Gerbing and Anderson 1985). However, there is no consensus on how large a sample is sufficient. Different guidelines have been suggested by different researchers. Some researchers suggest the minimum sample size required, for example, 200 by Boomsma (1982); 400 by Joreskog and Sorbom (1981). However, the minimum required sample approach is criticised for over-simplification of the issue (Hair et al. 2006). Hair et al. (2006) suggest several considerations when making the sample size decision: the multivariate distribution of

data, the complexity of the model, the estimation technique, the missing data issue, and the amount of average error variances among reflective indicators (Hair et al. 2006). In the case of normal multivariate distribution data, a sufficient sample size in SEM analysis depends on the complexity of the model (that is, the size of the model measured by free parameters and the population covariance structure) (Fornell 1983; Kline 2005).

Bagozzi (1981b) provides a more specific calculation of a sufficient sample size. He states that a sample size is sufficient if the sample size minus the number of parameters is greater than 50. The sample size/free parameter ratio is widely accepted in the literature. A ratio suggested by Nunnally (1978) is ten times as many subjects as variables. Bentler and Chou (1987), suggest the ratio of sample size per free parameter is 5:1 when data distribution is normal.

Following the common trend in SEM research, this study bases on Bentler and Chou's (1987) suggestion in order to make the sample size decision. The less restrictive competing model (Figure 3.11), which has the highest number of free parameters among three conceptual models, contained 71 free parameters. If this number of free parameters is multiplied by five, then the minimum required sample size is 71 x 5 = 355.

4.5.2. Survey Method

No survey method is superior in all situations, because each method has its own strengths and weaknesses (Hair et al. 2006). Depending on information requirements, budgetary constraint, and respondent characteristics, researchers can select the most appropriate survey method (Malhotra and Birks 2003). Researchers can also employ a combination of methods to take advantages of the best features of each and to minimise limitations (Aaker et al. 2004).

Respondents of this study are importing managers or importing executives. It is difficult and costly to conduct a long personal interview. In addition, not all Vietnamese business managers are familiar with responding to market research questionnaires.

Consequently, they are more likely to refuse to respond if they receive a mailed questionnaire from an unknown person (Tsang et al. 2004). In addition, the time frame for a PhD degree research normally requires quick responses from respondents. Considering these issues, this study employed a combination of telephone requests, followed by mail survey, and collection of questionnaires from respondents' offices (suggested by Nguyen 2000).

The combination of methods enabled the researcher to maximise the advantages as well as minimise the weaknesses of these data-collection methods (face-to-face interview; telephone interview; and mail survey). As telephone is the best way to reach "hard-to-reach" people such as business managers or executives (Aaker et al. 2004), telephone requests were made to the companies in the sample to encourage importing managers or executives to participate in the survey. During the phone call, the interviewer explained the research purpose, the research process, the risks that respondents and their companies could face if they participated in the research, and other ethical issues. The explanation and discussion with informants encouraged them to participate. As face-to-face interviews may cause interviewer bias (Aaker et al. 2004), and to reduce cost, the mail survey method was selected. In addition, the mail survey also helped yield more accurate results, as respondents could answer the questionnaire in their offices, at their discretion, with more thoughtful considerations and the chance to consult more necessary information. After informants agreed to participate, a covering letter (with the signature of the researcher and the principal supervisor) and a questionnaire in Vietnamese were sent to them. An appointment to clarify confusing questions and collect the questionnaire was also made in the first phone call. A few days before the appointment date, a phone call was made to remind respondents about the research and confirm the collection day. Any questions from respondents were answered during that phone call. On the collection day, confusing or complex questions were also explained to respondents. The researcher also checked the questionnaire to ensure that all questions had been answered.

This combination of three survey methods significantly improved the response rate. It also created opportunities to clarify confusing questions, encouraged respondents to

answer all questions, and hence increased the quality of responses. Close contact with respondents also increased the speed of response.

4.5.3. Key Informant Method

Two data-collection methods regarding informants have been commonly used in the literature: key informant and multiple informants. The key informant method is a technique of collecting quantified information about a social setting by interviewing a single key participant (Campbell 1955; Phillips 1981, p. 396; Phillips and Bagozzi 1986). In the multiple informant method, data is collected from more than one informant of the same organisation.

Questions have been raised about the ability of key informants to provide reliable data. Researchers express concern over potential sources of measurement errors and random errors associated with the key informant method (Bagozzi et al. 1991). Variations in measurement may be caused by a systematic source of error (Bagozzi 1980), the complexity of organisational context and observations, and the volatility of external and internal changes (Bagozzi et al. 1991). Informant biases (such as hindsight bias, attributional bias, subconscious attempts to maintain self-esteem) are other limitations. Collecting information from a single informant may also face problems of convergent and discriminant validity of informant reports (Phillips 1981).

However, the widespread use of the key informant method in industrial research can be explained by its considerable strengths. The key informant method "reduces the costs, requires fewer interviewers to be trained and this reduces interviewer bias, reduces the time taken to collect data, allows more time to be spent with a single respondent to gain a deeper understanding, and increases the likelihood of a good overall response by reducing the commitment required to be given by a single organisational unit" and provides generalisable results (Mitchell 1994, p. 139). Key informants can generalise about patterns of behaviour after summarising either observed (actual) or expected (prescribed) organisational behaviour (Seidler 1974).

Collecting data through the multiple informant method also faces certain drawbacks. The multiple informant method is criticised for the difficulty in terms of time; the financial resources; the need for considerable cooperation from all key informants (Wilson and Nielson 1990) and the lack of qualified informants in the unit of analysis (Heide and John 1990). In addition, Leonidou and Kaleka (1998), in their study of behavioural aspects in international buyer–seller relationships, assert that collecting data from multiple informants in a highly centralised management system (Vietnam is an example) is impractical and unnecessary to some degrees. Other marketing and management research undertaken in Vietnam shares the same experiences (for example, Appold and Phong 2001; Buchel and Thuy 2001; Quang et al. 1998; Tuan and Napier 2000).

Moreover, a variety of industrial studies on marketing have found that the key informant method is a reasonable and justifiable approach (Heide and John 1990; John and Reve 1982). John and Reve (1982), in their study of the reliability and validity of key informant data from dyad relationships in marketing channels, conclude that a careful selection of informants in conjunction with the use of internally consistent multi-item scales can provide reliable and valid data.

Considering the above strengths and weaknesses of the key informant method, this study employed the key informant method to collect data in the main survey. A multiple-item scale and a carefully designed data collection process can ensure the reliability and validity of informants' responses, as well as the reliability and validity of constructs. In addition, the combination of survey methods employed in this study took advantage of the mail survey method and limited interviewer biases of the face-to-face interview method. Different techniques recommended by John and Reve (1982) and Phillips (1981) such as asking specific and direct questions, using as much as possible the language of respondents and using multiple items were also utilized to minimise key informant biases. In addition, the questionnaire was also tested via the pilot study and commented upon by in-depth interview participants. Constructs were also validated via CFA (the results are presented in Chapter 5, Section 5.4).

Several guidelines and criteria were followed to select key informants. As Campbell (1955) recommends, key informants must be knowledgeable about the research issues, willing and able to communicate about them. Informants in this study were importing managers or executives who understood their firms' relationships with exporters, were involved in the interactions with the focal exporters, and understood the exporters and the history of their companies's transactions with exporters. These people were key decision-makers in building long-term relationships with exporters. Their positions in the business provided them with more complete and specialised knowledge about relationships between their companies and their exporting partners. In addition, as Seidler (1974) suggests, informants with similar positions in organisations can reduce problems associated with using key informants. Informants in this study held similar positions: importing managers or executives who were in charge of importing activities in their businesses. These informants were also in relatively high positions that allowed them to assess all information relating to the relationships between their companies and exporters. As Phillips (1981) comments, higher ranking informants generally provide more reliable information than lower ranking informants.

4.5.4. Response Rate and Response Bias

As indicated in Section 4.6.1.2, the minimum sample size required to test the conceptual model is about 355. Survey research in Vietam has often achieved low response rates. For example, Tsang et al. (2004), in their mail survey of international joint ventures in Vietnam, achieved a response rate of only 7.9%. It is not common for Vietnamese companies to share information with outsiders by responding to survey questionnaires (Tsang et al. 2004). However, other studies, which employed a similar method to this study's, gained relatively high response rates. For example, Nguyen's (2000) research in internationalisation obtained a response rate of 76.5%, and another study on the relationships of Vietnamese exporters and foreign importers yielded a response rate of 80% (Nguyen 2002). Taking these experiences into consideration, the sample of this study comprises 1,000 companies, which were randomly selected from the sample frame of 6,400 importing companies (500 companies in Ha Noi and 500 companies in Ho Chi Minh City). Eight hundred and twenty phone calls reached the informants, 513 people agreed to participate. One hundred and eighty firms could not be reached because they had changed phone numbers or no longer existed, or it was impossible to

reach the appropriate informants after several attempts. After sending the questionnaire, 434 questionnaires were collected. Among those, 418 were useable, and other 16 questionnaires were not used because the companies were importing agents or forwarding companies. As a result, the survey achieved a response rate of 43.4% (434 completed questionnaires out of 1,000 firms in the sample).

4.6. ETHICAL CONSIDERATIONS

The research was considered as creating a minimum risk to survey respondents and in-depth interview participants. All companies participating in the survey remained anonymous. Only the statistics of all companies sampled were used for analysis. In-depth interview records and mail survey responses are held in several secure places. All responses are coded and stored in SPSS files with passwords. Records of in-depth interview are also stored in computer files with passwords. Coding and data are kept in different files. Hence, other people cannot detect company names or details from the responses.

Moreover, respondents were aware of all ethical issues related to this research. A covering letter (mailed along with the questionnaire) explained the purpose of the research; time required to answer the questionnaire; and all associated risks. Responses were guaranteed to be strictly confidential and respondents' companies would remain anonymous. The contact details of the principal supervisor and a local contact person (Professor Pham Duc Than, Head of Faculty of Commerce, National Economics University, Ha Noi, Vietnam), as well as the contact details of the UTS Ethics Committee were provided on the covering page for respondents' reference. No monetary or similar incentive was offered to respondents, however, they were promised a summary report on request. In brief, this research met all ethical requirements of the UTS Human Research Ethics Committee. The research was approved by the UTS Human Research Ethics Committee (Reference number: UTS HREC REF NO. 2005-94A).

4.7. SUMMARY AND CONCLUSIONS

This chapter presents the research design and research process of the thesis. The test results of constructs' reliability using data from the pilot study conclude that all construct measures developed in Section 4.3 satisfy the reliability requirements. Construct measures yielded Cronbach's alphas ranging from .780 to .935. These Cronbach's alpha values satisfactorily meet the recommended value of over .70 (Nunnally 1978). Only one item (REIN5) was deleted as the result of reliability analysis.

Employing a combination of three data-collection methods (telephone interview, mail survey and face-to-face interview) enabled the main survey to achieve a high response rate. The sample of 418 useable questionnaires collected from the main survey met the sample size requirement to test the theoretical model and its competing models. The research process was carefully designed to reduce measurement errors, biases and other limitations of the key informant approach employed. All ethical issues were considered and informed to respondents before they agreed to participate in the research.

On the basis of data collected, the following chapter presents the main survey's sample characteristics and assesses the reliability and the validity of construct measures.

CHAPTER 5

CONSTRUCT VALIDATION

5.1. INTRODUCTION

On the basis of data collected from the main survey in Chapter 4, this chapter presents the main characteristics of the survey sample and validation results of constructs through Confirmatory Factor Analysis (CFA). The chapter comprises three main sections. Section 5.2 describes the survey sample characteristics. Section 5.3 outlines the methods and criteria used to assess construct validity. Section 5.4 presents the validating results of the constructs of the theoretical model proposed in Chapter 3. Preliminary assessments of construct reliability are presented first. Then, the section discusses the unidimensionality, reliability, convergent and discriminant validity of constructs based on the CFA results.

5.2. SAMPLE CHARACTERISTICS

As mentioned in Chapter 4, 418 importing firms constitute the sample for this study. The following section describes the main characteristics of the sample by ownership type, firms' age, type of business, geographic location of exporting partners, experience of firms in doing business with foreign partners, and relationship duration.

5.2.1. Ownership

As proposed in Chapter 3, this study investigates the differences between privately owned firms and state-owned firms in reacting to exporters' signals. The questionnaire classified importing firms in the sample into state-owned, privately owned and other types. Since Vietnam is a transition economy, state-owned companies represent a significant percentage. However, as the economy has increasingly opened up, the

privately owned sector is becoming an important part of the economy. In this study, partly state-owned joint stock companies[13] were classified into the "other" type.

The sample comprises 35.4% (148 firms) state-owned firms and 57% (242 firms) privately owned firms. "Other" firms comprise 6.7% (28 firms). The higher percentage of responding firms from the private sector represents the changing firm ownership pattern in Vietnam since 1999[14] (see Table 5.1).

Table 5.1: Firm Ownership

Ownership	Number	Percentage
State-owned	148	35.4
Privately Owned	242	57.9
Other	28	6.7

5.2.2. Firm Age

Table 5.2 reveals that most the responding firms are relatively young. 40.7% of firms in the sample (170 firms) have been in business from one to five years; 26.3% of firms (110 firms) have been engaged in business from six to ten years; and one-to ten-year-old firms represent 67%. 7.2 % (30 firms, all stated-owned) have been operating for over 20 years. Firms that have been in business for over 20 years are all state-owned firms. This is because the private sector has only been in existence since the Private-owned Enterprise Law was passed by the Parliament in 1989.

Table 5.2: Firm Age

Firms' age (years)	Number	Percentage	Cumulative Percentage
1–5 years	170	40.7	40.7
6–10 years	110	26.3	67.0
11–20 years	108	25.8	92.8
21–30 years	15	3.6	96.4
Over 30 years	15	3.6	100.0

[13] Partly state-owned joint stock companies are the firms that were privatised by selling stocks to private shareholders, however, the government still holds a certain part of companies' ownership.
[14] At the end of September 2005, the number of private firms in Vietnam was over 200,000; the number of wholly state-owned firms was over 4,000. However, most of the private firms are small. State-owned firms contribute about 38% of the GDP (MPI 2005).

5.2.3. Types of Business

Firms involved in manufacturing comprise 32.8% (137 firms) of the sample (Table 5.3). Wholesaling and distributing firms represent the largest percentage (45.5%, 190 firms). Retailers represent 10.3% (43 firms) of the sample. 11.5% of the firms (48 firms) belong to other types.

Table 5.3: Types of Responding Firms

Types	Number	Percentage
Manufacturer	137	32.8
Distributor, wholesaler	190	45.5
Retailer	43	10.3
Others	48	11.5

5.2.4. Geographic Location of Exporting Partners

The questionnaire asked respondents to select one of their exporting partners to answer questions about their relationship. Exporting partners from Asian countries comprise 53.1% (222 firms) (see Table 5.4). Exporting partners from North America and EU represent 17% (71 firms) and 17.7% (74 firms) of the sample, respectively. There is small numbers of exporting partners who locate in Eastern Europe (24 firms or 5.7%) and South America (20 firms or 4.8%). Only one exporter comes from Africa. Exporters from other regions represent 1.4% (six firms), and include five Australian firms.

Table 5.4: Geographic Location of Exporting Partners

Geographic location	Number	Percentage
North America	71	17.0
South America	20	4.8
EU	74	17.7
Eastern Europe	24	5.7
Asia	222	53.1
Africa	1	.2
Other regions	6	1.4

5.2.5. Experience in Doing Business with Foreign Partners

Responding firms' experiences in doing business with foreign partners are presented in Table 5.5. Most of responding firms have less than 10 years' experience in international business (92.8%). 50.2% (210 firms) of the responding firms have up to five years of doing business with foreign partners. Only 5.1% of firms in the sample have been doing business with foreign partners for from 15 to 20 years, and only 2.2% of responding firms have been importing for more than 20 years.

Table 5.5: Number of Years in Doing Business with Foreign Partners

Years	Number	Percentage	Cumulative Percentage
1–5 years	210	50.2	50.2
6–10 years	119	28.5	78.7
11–15 years	59	14.1	92.8
15–20 years	21	5.0	97.8
Over 20 years	9	2.2	100.0

5.2.6. Relationship Duration

The relationship durations that responding firms had with their exporting partners are presented in Table 5.6. Most relationships are relatively young. 90.7% of the responding firms (379 firms) have had a relationship with their exporting partners for ten years or less; 62.7% of the relationships have existed for five years or less. Only 9.3% of responding firms have had a relationship with their exporting partners for more than ten years. Only three (0.7%) firms have had relationships that are longer than 20 years. The reason is that the door to the international market was opened to all Vietnamese business in 1995. Before that time, a limited number of state-owned firms were allowed to be involved in importing–exporting activities.

Table 5.6: Relationship Duration

Years	Number	Percentage	Cumulative Percentage
1–5 years	262	62.7	62 7
6–10 years	117	28.0	90.7
11–15 years	28	6.7	97 4
15–20 years	8	1.9	99.3
Over 20 years	3	.7	100.0

5.3. CONSTRUCT VALIDITY AND THE USE OF CONFIRMATORY FACTOR ANALYSIS

5.3.1. Construct Validity

The validity of constructs is a necessary condition for theory development and theory testing. Construct validity is defined as the degree to which a scale measures what it intends to measure (Bagozzi and Phillips 1982, p. 468; Bagozzi et al. 1991; Heeler and Ray 1972; Peter 1981). Alternatively, "construct validity is the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure" (Hair et al. 2006, p. 776).

Methodology researchers propose different types of construct validity (Ping 2004). For example, Bagozzi and Phillips (1982) and Bagozzi et al. (1991) classify construct validity into two broad criteria including convergent validity and discriminant validity. Healer and Ray (1972) classify construct validity into four general types: face validity, concurrent validity, measure validity, and construct validity (including convergent and discriminant validity). Bagozzi (1981a) states that construct validity can be determined by analysing six criteria: theoretical meaningfulness of concepts, observational meaningfulness of concepts, internal consistency of operationalisation (reliability), convergent validity, discriminant validity, and nomological validity. Bagozzi's (1981) theoretical meaningfulness of concept is similar to the face or content validity proposed by Heeler and Ray (1972). Face or content validity refers to the extent to which the domain of the concept is captured by the measure of how well items match their conceptual definition (Bollen 1989; Nunnally 1978). In this thesis, the content validity of measurement is discussed in Chapter 4 (Section 4.3).

Although there are different arguments on a maximal set of validity tests, and labels (types) of validity[15], researchers commonly suggest that validity should be gauged using the following criteria: unidimensionality, reliability, convergent validity, discriminant

[15] Ping (2004) reviewed methodology papers in marketing and concluded that different labels have been used for the same validity concept. For example, content validity has been called face or consensus validity (Heeler and Ray 1972). Construct validity was used by Peter (1981) for content validity. Construct validity has been called nomological validity (Peter 1981). Trait validity has been used for a combination of reliability, and convergent and discriminant validity (Campbell 1960).

validity and nomological validity (reviewed by Garver and Mentzer 1999; Ping 2004; Steenkamp and van Trijp 1991).

In their guidelines for validating marketing constructs, Steenkamp and van Trijp (1991) emphasise that construct validation should follow a sequence of steps in which the earlier criteria should be satisfied before the later criteria. The first step tests constructs in the measurement model for unidimensionality. Once unidimensionality is achieved, then reliability can be assessed. Once each scale is assessed to be unidimensional and reliable, researchers can test for convergent, and discriminant validity (Gerbing and Anderson 1988). Therefore, the sequence for validating a construct is: establishing unidimensionality, showing construct reliability and providing evidence of construct validity (convergent, discriminant and nomological). This study followed these steps to validate the construct measures.

The following sections present the definition of each type of validity, and discuss how CFA can be used to validate construct validity.

5.3.1.1. Unidimensionality

The concept of unidimensionality has long been recognised as one of the most basic assumptions in measurement theory (Hattie 1985). Unidimensionality becomes critically important when more than two constructs are involved (Steenkamp and van Trijp 1991). Unidimensionality can be defined as the existence of one construct underlying a set of items (Steenkamp and van Trijp 1991). Unidimensionality reflects the degree to which items represent one and only one underlying latent variable (Hair et al. 2006).

Traditionally, the evaluation of a measure's unidimensionality relies on coefficient alpha, item-total correlation and exploratory factor analysis (Hair et al. 2006). Recent developments in research methodology suggests that CFA is a more rigorous and precise test of unidimensionality (Anderson and Gerbing 1982; Anderson et al. 1987). CFA provides a stricter interpretation of unidimensionality (Gerbing and Anderson 1988). A pair-wise CFA analysis of constructs in the model should be conducted

(Gerbing and Anderson 1988) to assess construct unidimensionality. Items can also be deleted to ensure construct unidimensionality (Ping 2004).

The criteria for testing the unidimensionality of a measure (Garver and Mentzer 1999; Gerbing and Anderson 1988; Medsker et al. 1994; Steenkamp and van Trijp 1991) are:

- The CFA model shows a satisfactory fit.

- Loadings of items on the construct are substantial: Standardised loading estimates should be .50 or higher, and ideally .70 or higher (Hair et al. 2006).

- Standardised residuals should be relatively small (Gerbing and Anderson 1988): smaller than 2.58 (Medsker et al. 1994).

5.3.1.2. Reliability

After the scale achieve an acceptable unidimensionality, construct reliability should be assessed (Gerbing and Anderson 1988). Reliability is a necessary (but not sufficient) condition for the validity of a measure (Peter 1981). The development of reliability scales is also a necessary condition for improving the quality of marketing research and theory (Peter 1979). Reliability can be defined broadly as "the degree to which measures are free from errors and therefore yield consistent results" (Peter 1979, p. 6). Scale reliability refers to the internal consistency of a scale to measure a latent variable (Peter 1979, 1981). It assesses the consistency, but not accuracy, of the measurement scale (Churchill and Peter 1984). Unidimensionality and reliability are distinct concepts, and reliability does not indicate unidimensionality (Bagozzi and Fornell 1989; Gerbing and Anderson 1988).

The coefficient alpha offers a useful and useable approach to assess the reliability of a measure (Peter 1979, 1981). Among different approaches to measuring the coefficient alpha, the Cronbach's alpha is considered to be the most commonly accepted and most preferred formula for assessing the reliability of a measurement scale with multi-point items (Gerbing and Anderson 1988; Peter 1979), because it does not depend on the

assumptions required of other indices of reliability (Bollen 1989).[16] However, Cronbach's alpha has some limitations. The Cronbach's alpha assumes that items are perfectly correlated with their underlying construct (measure without error) (Bollen 1989). This assumption causes Cronbach's alpha to underestimate reliability (Bollen 1989; Steenkamp and van Trijp 1991). In addition, Cronbach's alpha tends to artificially inflate if the scale has a large number of items (Churchill and Peter 1984). The larger the number of items in a scale, the greater is its reliability (Peterson 1994).

There are different approaches to measuring the reliability of items with error. The most accepted is Composite reliability, proposed by Werts et al. (1974) (as reviewed by Gerbing and Anderson 1988). Composite reliability does not assume an equal loading of each measurement item on the latent variable, as Cronbach's alpha does. It evaluates the relative weight of each measurement item according to its estimated loading on the latent variable (Fornell and Larcker 1981).

Researchers can use CFA results to calculate construct reliability by the formula proposed by Werts et al. (1974) as (Fornell and Larcker 1981, p. 45):

$$\rho_{\eta} = \frac{\left(\sum_{i=1}^{k} \lambda_{yi}\right)^2}{\left(\sum_{i=1}^{k} \lambda_{yi}\right)^2 + \sum_{i=1}^{k} Var(\varepsilon_i)} \qquad \text{(Eq. 5.1)}$$

in which:

ρ_{η}:	Reliability of construct η
λ_{yi}:	Loading of item i on factor y
$Var(\varepsilon_i)$:	Variance of error i
k:	The number of items

Due to the Cronbach's alpha's limitations, this research reports both the Cronbach's alpha and the Composite reliability coefficient to ensure all constructs obtain a satisfactory reliability. According to Nunnally (1978), the rule of thumb for the reliability estimate is: .70 or higher suggests good reliability. Reliability between .60

[16] The formula to calculate Cronbach's alpha was presented in Chapter 4, Section 4.5.1.

and .70 may be acceptable, provided that other indicators of a model's construct validity are good. High construct reliability indicates the existence of internal consistency, and items all consistently represent the same latent construct.

5.3.1.3. Convergent Validity

Convergent validity refers to "the degree to which two or more attempts to measure the same concept through maximally dissimilar methods are in agreement" (Bagozzi and Phillips 1982, p.468). Failure to meet convergent validity indicates that one or more of the measures are poor.

There are several criteria for assessing the convergent validity of a construct (Steenkamp and van Trijp 1991):

- Measurement items are significantly and substantially loaded on the latent variable. In the case of high convergent validity, high loadings on a factor would indicate that they converse on some common points. A good rule of thumb is that standardised loading estimates should be .50 or higher, and ideally .70 or higher (Hair et al. 2006)

- The measurement model shows a satisfactory fit.

- The Average Variance Extracted (AVE) >.50 (Fornell and Larcker 1981)

Reliability is also an indicator of convergent validity. Nunnally (1978) suggested that a .70 or higher reliability implies convergent validity.

5.3.1.4. Discriminant Validity

"Discriminant validity is the degree to which measures of distinct concepts differ" (Bagozzi and Phillips 1982, p. 469). The measure of one concept should have low variance from measures of other concepts. High discriminant validity provides evidence that a construct is unique and captures some phenomena which other measures do not

(Fornell and Larcker 1981). Discriminant validity also means that individual measured items should represent only one latent construct (Hair et al. 2006).

Hair et al. (2006) recommend that Fornell and Larcker's (1981) method is the best way to use CFA to assess discriminant validity of a construct. Fornell and Larcker (1981) propose a method using average variance extracted (AVE) to assess both the convergent and the discriminant validity.

Variance extracted can be calculated as (Fornell and Larcker 1981, p. 46):

$$\rho_{vc(\eta)} = \frac{\sum_{i=1}^{k} \lambda_{yi}^2}{\sum_{i=1}^{k} \lambda_{yi}^2 + \sum_{i=1}^{k} Var(\varepsilon_i)} \qquad \text{(Eq. 5.2)}$$

$\rho_{vc(\eta)}$:	Average variance extracted of construct η
λ_{yi}:	Loading of item i on factor y
$Var(\varepsilon_i)$:	Variance of error i
k:	The number of items

If the AVE is less than .50, the variance due to measurement errors is larger than the variance captured by the construct, and the validity of the individual indicator and the construct is questionable (Fornell and Larcker 1981). Fornell and Larcker (1981) assert that AVE is more conservative than construct reliability in assessing discriminant validity. Therefore, a condition of construct reliability of over .70 and an AVE of over .50 can provide more confidence in the convergent validity of a construct.

The AVE can also be used to assess discriminant validity between any pair of constructs. To fully satisfy the discriminant validity requirement, the individual AVE of each construct should be smaller than the squared correlation of it with another construct in the model (Fornell and Larcker 1981). When the squared correlation between constructs is less than either of their individual AVEs, "this suggests that the construct each have more error-free (extracted) variance than variance shared with other constructs" (Hair et al. 2006, p. 778). In other words, the latent construct explains its item measures better than it explains another construct.

Fornell and Larker's method has several strengths in comparison with the Chi-square test. This approach recognises that measurement errors can vary in magnitude across a set of methods (Fornell and Larcker 1981). It is also sensitive to both convergent and discriminant validity, less sensitive to sample size, and does not rely on standard errors (Fornell and Larcker 1981). Therefore, Fornell and Larcker's (1981) approach was selected in this study.

5.3.1.5. Nomological Validity

An investigation of reliability, convergent, discriminant validity provides necessary but not sufficient information to accept the validity of a construct. A measure of a construct must be useful for making observable predictions (Peter 1981). In other words, a measure needs to be assessed for nomological validity. "Nomological (lawlike) validity is based on the explicit investigation of constructs and measures in terms of formal hypotheses derived from theory. Nomological validation is primarily external and entails investigating both the theoretical relationship between different constructs and the empirical relationship between measures of those different constructs" (Peter 1981, p. 135). The nomological validity demonstrates whether correlations among the constructs in a measurement theory make sense (Hair et al. 2006).

The nomological validity is assessed by testing the relationships among constructs in a nomological net (Peter 1981). The overall goodness of structural relations is evidence of nomological validity (Steenkamp and van Trijp 1991). Chapter 6 deals with testing the theoretical and competing models and assesses the nomological validity of constructs.

In summary, on the basis of the above discussion about construct validation, this study validated the constructs in the process illustrated in Figure 5.1. First, Cronbach's alpha was calculated for each construct. An item was considered for deletion if its item-total correlation was smaller than 0.30 or Cronbach's alpha-if-item-deleted was higher than the average Cronbach's alpha. Construct reliability was preliminarily satisfactory if it was .70 or over (Nunnally 1978). Then, pair-wise CFAs were undertaken for pairs of each construct with another construct. The model's goodness of fit was evaluated based on fit indices presented in Section 5.3.3. Unidimensionality of measure was satisfactory

if the CFA model showed a satisfactory fit; and factor loadings were significant and substantial (item loadings were .50 or higher). Then, the reliability of the measure was achieved when its composite reliability was equal to or over .70 (Nunnally 1978).

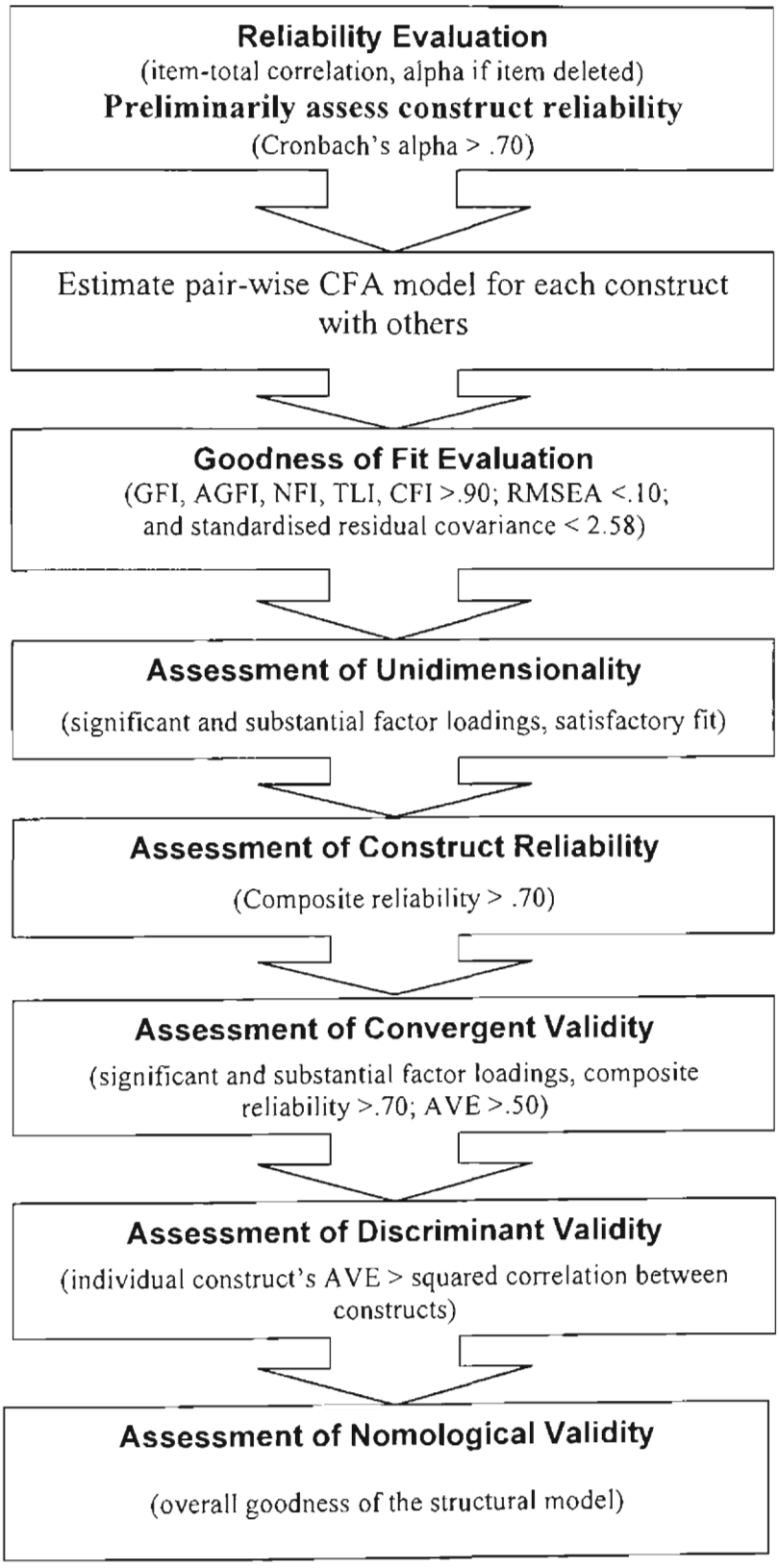


Figure 5.1: Construct Validation Process

Fornell and Larcker's approach to test the convergent and discriminant validity was applied. In each pair-wise CFA model analysis, the individual AVE of each construct, the squared correlation, the construct reliability and the model's goodness of fit were reported. An individual construct achieved convergent validity if its AVE >.50 and composite reliability (CR) >.70, while the CFA model achieved a satisfactory fit. The individual construct received discriminant validity if its individual AVE was less than squared correlation between two constructs and the model's goodness of fit was satisfactory.

The nomological validity was assessed based on the overall goodness of fit of the structural model. During the construct validating process, items could be deleted, with consideration of content validity, to achieve construct validity (Ping 2004; Steenkamp and van Trijp 1991).

5.3.2. Estimation Method

The Maximum Likelihood Estimation (hereafter, ML) is the most widely used estimation method in the SEM research (Hair et al. 2006). Anderson and Gerbing (1988), review estimation methods in the literature, and conclude that ML has several relative strengths in theory testing and development compared to other methods. ML provides parameter estimates that best explain the observed covariances. ML also provides the most efficient parameter estimates and an overall test of model fit (Anderson and Gerbing 1988).

The results of normality tests indicate that the data exhibits slight deviation from normality (see Appendix B for skewnesses and kurtoses). Since sample size can increase the statistical power by reducing sampling errors (Kline 2005), Hair et al. (2006) suggest that the effect of a slight non-normality may be negligible when the sample size is 200 or over. As the sample size of this study is 418, it could be expected that the sample size of this research can reduce the effect of a slight non-normality of variables. In addition, research has shown that when the data has a slight or moderate deviation from multi-normality, ML has been proven to be a preferable method (Bollen 1989; Muthen and Kaplan 1985). Thus, ML was used for estimating parameters of each

measurement scale and for testing the overall model fit. The AMOS 6 program was employed to perform estimations.

5.3.3. Overall Model Fit Measures

Selecting goodness of fit indices is one of the most controversial issues related to SEM. There is limited agreement on the appropriate index of fit (Bollen and Long 1993). The existence of over 30 indices (as reviewed by Marsh et al. 1988) and the increasing number of fit indices (reviewed by Gerbing and Anderson 1993; Hu and Bentler 1998) provide good evidence for this controversy. A consistent guideline of how to select fit indices is also lacking (Hair et al. 2006).

Marsh, Balla, and McDonald (1988), in a review of goodness of fit indices in CFA, suggest three main criteria for ideal fit indices: (1) the relative independence of sample size; (2) the accuracy and consistency in assessing different models; and (3) the ease of interpretation aided by a well-defined continuum or pre-set range. However, many indices could not meet these criteria (Garver and Mentzer 1999). As each fit index has its own strengths and weaknesses, Hair et al. (2006) suggest that researchers should use multiple indices of different types: beside Chi-square value and the associated degrees of freedom, researchers should report at least one incremental index, one absolute index, and at least one badness-of-fit index. They also emphasise the importance of adjusting the index cut-off value based on model characteristics (complexity and sample size).

In accordance with the above recommendations, this study has selected the most commonly accepted indices, which have been found to have good performances across a wide range of situations (Hair et al. 2006). These indices come from different types: absolute fit measures (Chi-square, GFI, AGFI, RMSEA) and incremental fit indices (NFI, CFI, TLI). Among these indices, RMSEA is the badness-of-fit index. Chi-square, GFI and AGFI were selected because they are among the most widely reported indices in the literature (MacKenzie et al. 2005) NFI, CIF and RMSEA were selected because they are the most sensitive goodness-of-fit indices in detecting the measurement model misspecification (Hu and Bentler 1999). TLI was selected because it can avoid the

variation of sample size (Hu and Bentler 1999). The following describes the characteristics and cut-off values of these indices.

The *Chi-square* statistic is the most popular and fundamental index for assessing the overall goodness of fit of a model (Baumgartner and Homburg 1996; Hair et al. 2006). Chi-square statistic tests the null hypothesis that the observed sample and SEM estimated covariance matrices are equal, meaning that the model fits perfectly. The smaller the p-value, the greater the chance that the observed sample and SEM estimated covariance matrices is not equal. Thus, the small Chi-squared value and a corresponding large p-value indicate no statistically significant difference between the matrices (Hair et al. 2006) or a good fit. However, the Chi-square test has been criticised for its heavy sensitiveness to sample size (Bentler 1990a) and to model complexity (Kline 2005). The Chi-squared value tends to be substantial when the sample size is large and/or the model is complex (Joreskog and Sorbom 1993).

The *Goodness-of-Fit Index* (GFI) and *Adjusted Goodness-of-Fit Index* (AGFI) are the very first standardised fit indices (Joreskog and Sorbom 1981; Joreskog and Sorbom 1982). The AGFI takes into account the degree of a model's complexity. AGFI penalises more complex models and favours a minimum number of free paths. GFI and AGFI are classified into the absolute fit indices because they compare the hypothesised model with no model at all (Hu and Bentler 1995). These indices attempt to produce fit statistics that are less sensitive to sample size, however, GFI and AGFI are still indirectly sensitive to the sample size, due to the effect of sample size on sampling distributions (Fan et al. 1999; Hair et al. 2006). AGFI is typically lower than GFI. Both indices range from 0 to 1, with a value of .90 or greater showing a good fit (Joreskog and Sorbom 1993).

The *Root Mean Square Error of Approximation (RMSEA)*, developed by Steiger and Lind (1980), measures the discrepancy between the observed and estimated covariance matrices per degree of freedom (Steiger 1998). RMSEA has been recognised as one of the most informative criteria in covariance structure modeling (Byrne 2001). It represents how well a model fits a population, not just a sample used for estimation. RMSEA has several advantages over other fit indices. It takes into account the error of

approximation in the population (Browne and Cudeck 1993). Its formula includes a built-in correction for both model complexity (Kline 2005) and sample size (Hair et al. 2006). In addition, the RMSEA's confidence interval can be constructed giving the range of RMSEA values for a given level of confidence (Hair et al. 2006).

RMSEA is a "badness-of-fit" index, in that a value of zero indicates the best fit and higher values indicate worse levels of fit. However, methodology researchers propose different cut-off values. For example, Browne and Cudeck (1993) suggest that an RMSEA value of below 0.05 indicates a close fit and that values up to 0.08 are reasonable. Hu and Bentler (1999) suggest a value of .06 is an indicator of good fit between the hypothesised model and the observed data. MacCallum et al. (1996) recommend that an RMSEA value of over .10 indicates poor fit. Hair et al. (2006) review these cut-off values and conclude that an RMSEA value of below .10 is mostly acceptable. Although different RMSEA cut-off values have been proposed, researchers commonly recommend the use of RMSEA's confidence intervals. A wide confidence interval indicates that the estimated discrepancy value is relatively imprecise. A narrow confidence interval shows good precision of the RMSEA value (MacCallum et al. 1996).

The Normed Fit Index (NFI) and Comparative Fit Index (CFI): NFI is a practical criterion choice of fit index for a decade (Bentler 1990b; Byrne 2001). However, NFI shows a tendency to underestimate goodness of fit when the sample size is small. CFI is an incremental fit index, and is the improved version of NFI. CFI is a noncentrality parameter-based index to overcome the limitation of sample size effects (Bentler 1990b). CFI is the more preferred index (Bentler 1990b), as it is relatively sensitive to the model's complexity (Hair et al. 2006). Values of both NFI and CFI range between 0 and 1, with higher values indicating a better fit. A value of .90 or higher for NFI and CFI shows a good fit.

The *Tucker Lewis Index* (TLI) involves a mathematical comparison of a specified theoretical measurement model and a baseline null model (Hair et al. 2006). TLI can avoid the variation of the sample size. It is highly recommended for reporting a model's goodness of fit (Kline 2005). The value of TLI can fall below 0 or above 1, with higher

values suggesting a better fit. A TLI value close to .95 indicates a good fit (Hu and Bentler 1999).

5.4. CONSTRUCT VALIDATION RESULTS

This section presents results of the construct validation. The first section explains why two items were deleted during the validating process. The second section provides preliminary analysis results of construct reliability using Cronbach's alpha. The last section presents construct validity (unidimensionality, reliability, convergent and discriminant validity), which are assessed through the CFA approach.

5.4.1. Item Deletion

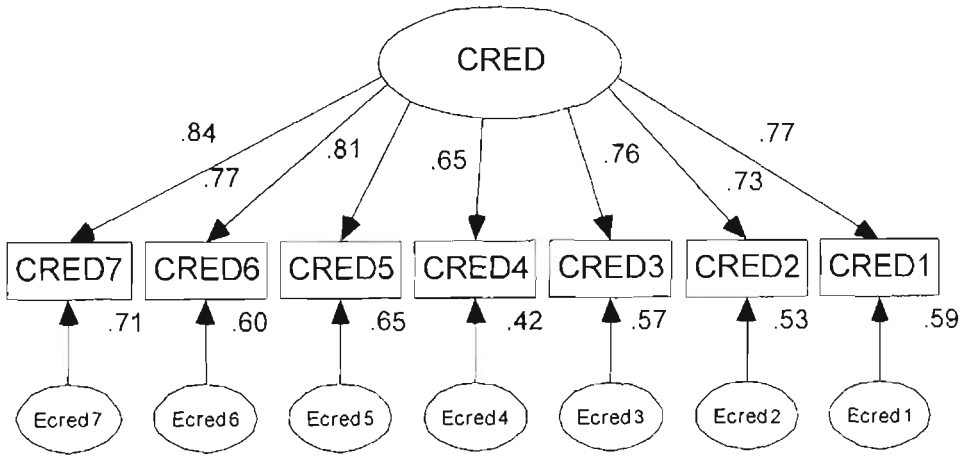
Two items (CRED4 and CLAR5) were deleted during the construct validating process. This section explains why they were deleted.

Reliability analysis results of CRED (operationalised with seven items in Chapter 4) and CLAR (operationalised with five items) showed high reliability degrees: Cronbach's alphas of CRED and CLAR are .906 and 930, respectively. The Cronbach's alpha-if-item-deleted of CRED4 (.903) was slightly higher than the Cronbach's alpha of CRED (.906) (see Table 5.7). The Cronbach's alpha-if-item-deleted of CLAR5 (.932) was slightly higher than the Cronbach's alpha of CLAR (.930). Because these differences are small for use in deciding to delete items, CFAs for each latent construct (CRED and CLAR) were undertaken to refine the constructs' unidimensionality, as suggested by Steenkamp and van Trijp (1991).

Table 5.7: Reliability Analysis Results of CRED and CLAR

Constructs	Cronbach's alpha	Items	Corrected item-total correlation	Cronbach's alpha-if-item-deleted
CRED	.906	CRED1	.718	.889
		CRED2	.683	.893
		CRED3	.713	.890
		CRED4	.614	.903
		CRED5	.776	.883
		CRED6	.732	.888
		CRED7	.789	.882
CLAR	.930	CLAR1	.853	.907
		CLAR2	.816	.915
		CLAR3	.842	.910
		CLAR4	.854	.907
		CLAR5	.720	.932

The CFA results of CRED in Figure 5.2 reveal that the model received a poor fit to the data. The Chi-square value was 108.585 ($p < .001$), χ^2/Df was high (7.756). Other fit measures such as AGFI (= .849) were lower than the good fit value (> .90). In addition, RMSEA = .127 was relatively higher than the acceptable value (.10 suggested by Hair et al. 2006). The model needed a modification to improve its goodness of fit.



χ^2	Df	p	χ^2/Df	GFI	AGFI	NFI	TLI	CFI	RMSEA
108.585	14	.000	7.756	.924	.849	.939	.919	.946	.127(.106-.150)

Figure 5.2a: CFA Results of CRED Scale (7 items)

The modification index of each fixed parameter is the value that represents the expected drop in the overall Chi-square value if the parameter is to be freely estimated in a subsequent run (Byrne 2001). The modification index can suggest how to modify the measurement model. The modification index of the CRED items provided by the

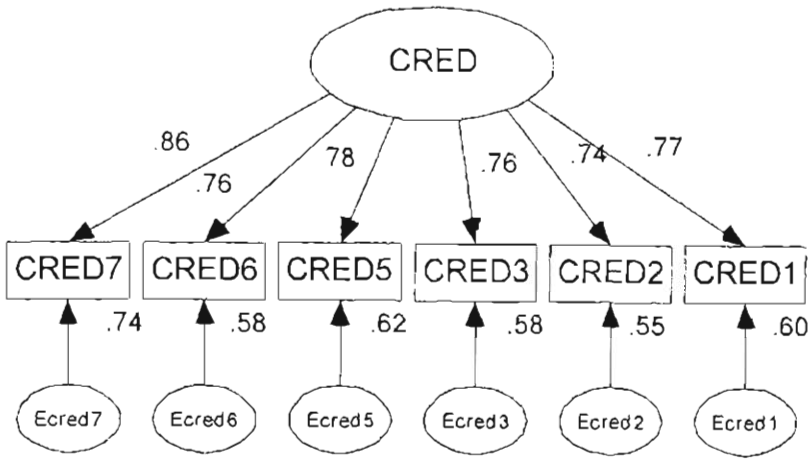
AMOS 6 program (see Table 5.8) revealed that the covariance between Ecr4 ↔ Ecr5 was high (56.489) and the expected parameter change was .237. This appeared to relate to an error covariance. A comparison between the statement of item CRED4 (Exporter A does not make false claims) and CRED5 (In general, our organisation can count on exporter A to be sincere) showed that they were likely similar in meaning. In addition, the results of the pair-wise CFA of CRED (including CRED4) with other constructs in the theoretical model revealed a poor fit. The absolute values of standardised residuals of CRED4 with some other variables were higher than 2.58.

On the basis of the modification index results, model fit and content validity, CRED4 was deleted in order to achieve a better model's goodness of fit. Figure 5.2b provides the CFA results of CRED with six items. The results indicated that CRED with six items achieved a better level of fit (Chi-square = 36.109; GFI = .970; AGFI = .929; NFI = .975; TLI = .968; CFI = .981; RMSEA = .085). Six items loaded substantially on CRED. No absolute value of standardised residuals was higher than 2.58.

Table 5.8. Modification Index and Expected Parameter Change of CRED Scale

			M.I.	Par Change
Ecred5	↔	Ecred7	8.433	-.077
Ecred4	↔	Ecred7	17.727	-.121
Ecred4	↔	Ecred5	56.489	.237
Ecred3	↔	Ecred7	11.304	.103
Ecred3	↔	Ecred6	7.945	-.099
Ecred3	↔	Ecred5	5.726	-.081
Ecred2	↔	Ecred7	5.990	.074
Ecred2	↔	Ecred5	8.551	-.097
Ecred2	↔	Ecred3	14.730	.146

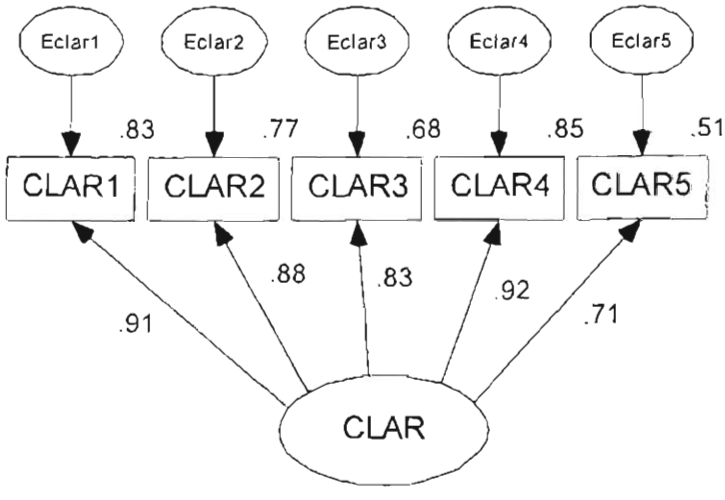
MI: Modification index



χ^2	Df	p	χ^2/Df	GFI	AGFI	NFI	TLI	CFI	RMSEA
36.109	9	.000	4.012	.970	.929	.975	.968	.981	.085

Figure 5.2b: CFA Results of CRED Scale (6 items)

The CFA results of CLAR with five items are presented in Figure 5.3. The results indicate that the model received a considerably poor fit (Chi-square = 304.515; AGFI = .420; TLI = .681; CFI = .841; RMSEA = .379). The standardised residual covariance between CLAR5 ↔ CLAR3 (5.564) was higher than 2.58. In addition, the loading of CLAR5 on CLAR was .704. These results suggested that CLAR5 should be deleted to improve the model's fit. Moreover, the pair-wise CFA results of CLAR (including CLAR5) with other constructs in the theoretical model also revealed poor fits.



χ^2	=	304.515
Df	=	5
p	=	.000
GFI	=	.807
AGFI	=	.420
NFI	=	.839
TLI	=	.681
CFI	=	.841
RMSEA	=	.379
		(.343-.416)

Figure 5.3a: CFA Results of CLAR Scale (5 items)

From the perspective of the content validity, item CLAR5 (We always understand the causes and effects of exporter's behaviour, actions and statements) was generated based on Jervis's (Jervis 1970) definition of signal clarity. Jervis states that a clear signal is unambiguous and has known causes. Erdem and Swait (1998) do not include this aspect into their measure of signal clarity. In addition, in the international business situation, it appears imposible to understand of all causes and effects that stem from exporters' signals. This explains why the item obtained a low loading and the measurement model received a poor fit. As a result, CLAR5 was deleted from the indicating items of the CLAR scale.

Figure 5.3b presents the CFA results of CLAR with four items. The results indicated that CLAR with four items achieved a significantly better fit than when it had five items: Chi-square = 6.682; p = .035; GFI = .992; AGFI = .959; NFI = .995; TLI = .990; CFI = .997; RMSEA = .075. Four items loaded substantially on CLAR.

In brief, as the result of the refining process, items CRED4 and CLAR5 were deleted from the CRED and CLAR measures, respectively. The next section presents the validating results of constructs.

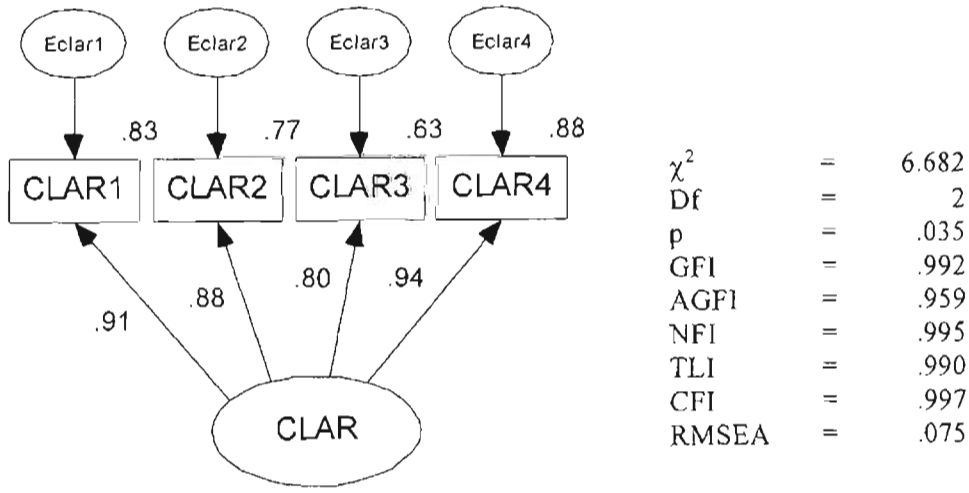


Figure 5.3b: CFA Results of CLAR Scale (4 items)

5.4.2. Results of Reliability Analysis

Table 5.9 summarises the results of the reliability analysis of construct measures. The findings indicate that all items meet the reliability requirement. All item-to-total correlation values are greater than the cut-off value of .50 (Hair et al. 2006). The lowest item-total correlation is .662 (PRO3). All Cronbach's alpha-if-item-deleted values are lower than or equal to the Cronbach's alpha of the construct. The findings also reveal that Cronbach's alphas of all construct measures are greater than .70. The lowest Cronbach's alpha value is .851 (DELI). The findings preliminarily confirm that all construct measures are reliable.

Table 5.9: Results of Construct Reliability Analysis – Cronbach's Alpha

Constructs	Cronbach's alpha		Corrected item-total correlation	Cronbach's alpha-if-item-deleted
REIN	.921	REIN1	.810	.900
		REIN2	.825	.895
		REIN3	.826	.895
		REIN4	.812	.900
CRED	.906	CRED1	.718	.889
		CRED2	.683	.893
		CRED3	.713	.890
		CRED4	.614	.903
		CRED5	.776	.883
		CRED6	.732	.888
		CRED7	.789	.882
PROD	.853	PROD1	.759	.754
		PROD2	.747	.770
		PROD3	.662	.849
PRI	.888	PRI1	.764	.857
		PRI2	.792	.832
		PRI3	.790	.834
DELI	.851	DELI1	.721	.789
		DELI2	.753	.758
		DELI3	.686	.825
CONS	.911	CONS1	.809	.880
		CONS2	.820	.876
		CONS3	.733	.907
		CONS4	.831	.872
CLAR	.930	CLAR1	.853	.907
		CLAR2	.816	.915
		CLAR3	.842	.910
		CLAR4	.854	.907
		CLAR5	.720	.932

5.4.3. Pair-wise CFA Results

This section presents pair-wise CFA results of all pairs of constructs in the conceptual model to assess the construct validity. Constructs were validated by the process illustrated in Figure 5.1. Assessing criteria are presented in Section 5.3.1. CFA was undertaken for pairs between each construct with one another. The goodness of fit of the CFA model was assessed via the fit indices presented in Section 5.3.3. Appendix D presents factor loadings and p-values of each construct in the pair-wise CFA model. Table 5.10 summarises construct composite reliability coefficients, AVEs, and squared correlations to assess constructs' convergent and discriminant validity. The following sections present construct validation results via the CFA approach.

Importer Relationship Intention–Exporter Credibility (REIN–CRED)

The CFA results of REIN–CRED pairs are shown in Figure 5.4. The model has 34 degrees of freedom. Since the Chi-square statistic largely depends on the sample size and the model complexity, the measurement model can still provide an acceptable fit even though the Chi-square value is statistically significant (Anderson and Gerbing 1988; Kline 2005). Other fit indices such as NFI, RMSEA and standardised residuals should be considered to assess the model's goodness of fit.

In the case of the REIN–CRED pair, although the Chi-square statistic does not show a good fit (χ^2 = 85.942 and p = .000), other fit statistics indicate a satisfactory level of fit. Other fit measures are all greater than .90 (for example, GFI = .960; NFI = .971; TLI = .977; CFI = .982). The RMSEA of .061 indicates an acceptable fit (Hair et al. 2005). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.038 (CRED3 ↔ CRED2).

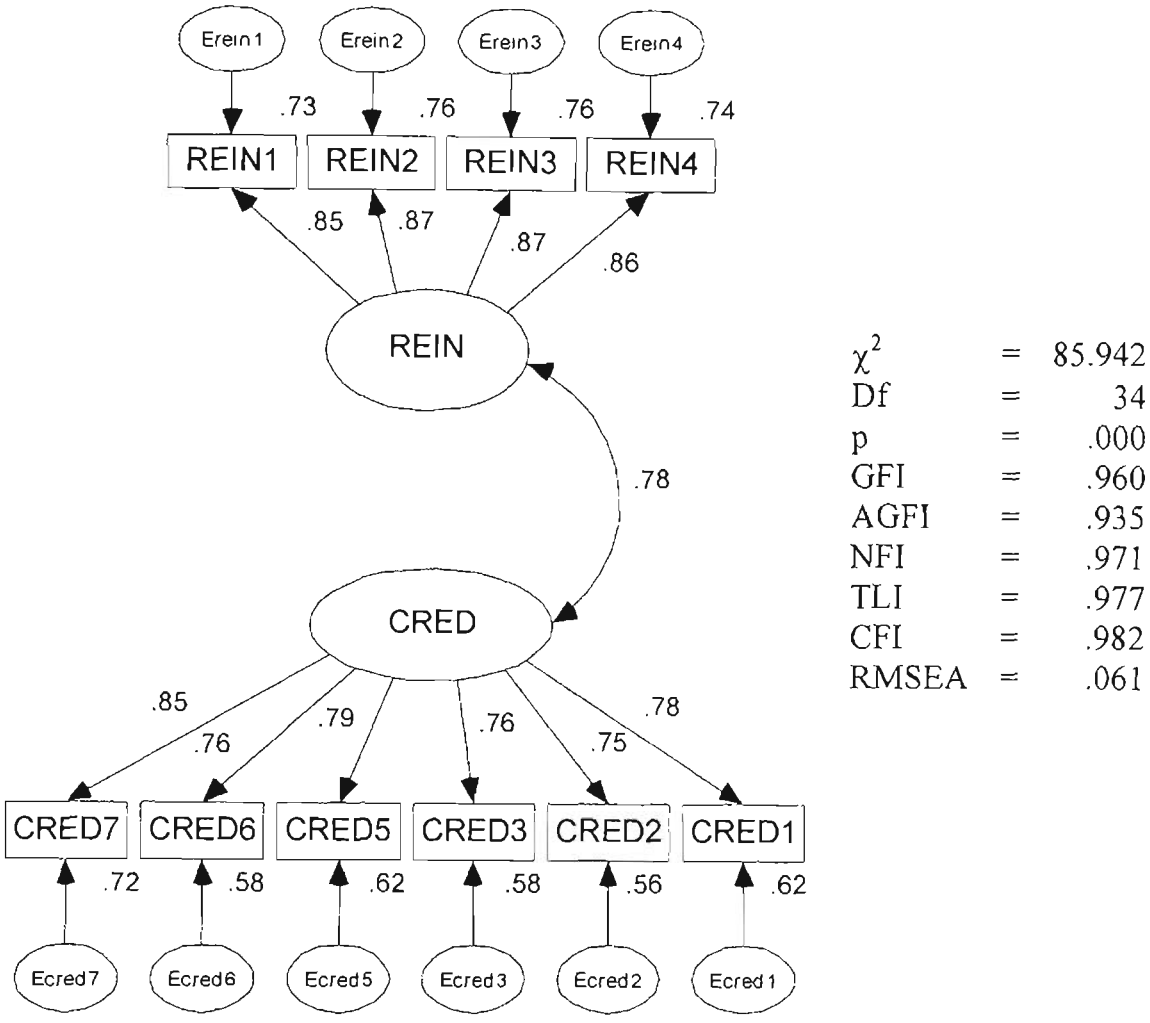


Figure 5.4: Pair-wise CFA Results of REIN–CRED[17]

The findings also reveal that all factor loadings of indicators on REIN and CRED are significant ($p < .001$) and substantial. The lowest loading on REIN is .85 (REIN1) and the lowest loading on CRED is .75 (CRED2). The average loading on REIN is .8625 and on CRED is .78. The construct reliability of REIN (.921) and CRED (.904) are greater than .70. The AVE of REIN (.746) and CRED (.611) are greater than .50. These findings indicate that both REIN and CRED satisfy the requirements of the unidimensionality and convergent validity.

The AVE of REIN (.746) and CRED (.611) are greater than their shared variance (that is, squared inter-correlation = .607) (see Table 5.10). These results indicate that the latent construct explains its measurement items better than it explains another construct. Thus, the convergent and discriminant validity of REIN and CRED are supported.

[17] CFA results reported in all figures in this study are standardised estimates

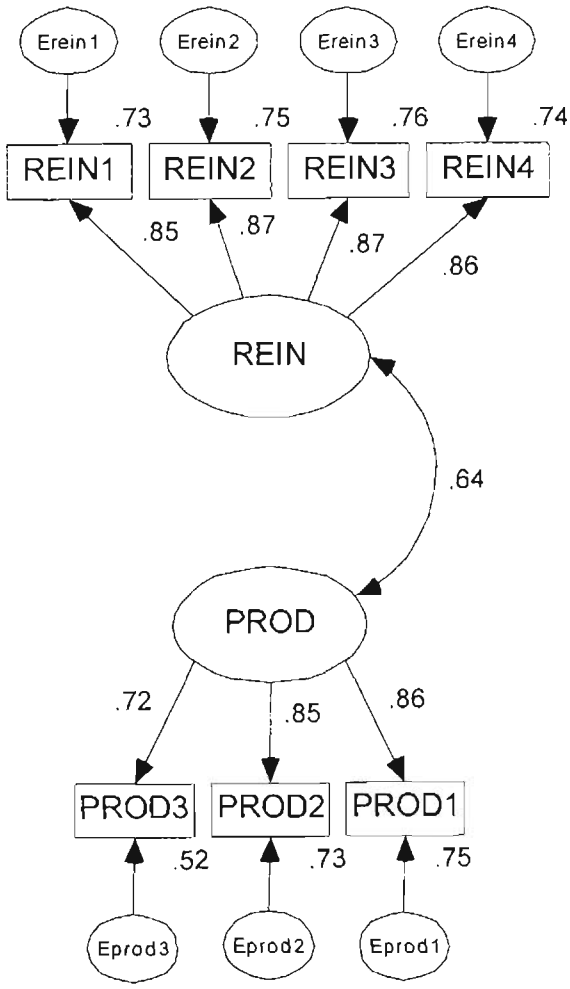
Table 5.10: Pair-wise CFA Results to Assess Construct Validity

Pair-wise	1st CR /EVA	2nd CR /EVA	Correlation	Squared correlation	Construct validation
REIN–CRED	0.921	0.904	.779	0.607	Satisfactory
	0.746	0.611			
REIN–PROD	0.922	0.856	.645	0.416	Satisfactory
	0.746	0.666			
REIN–PRI	0.921	0.889	.572	0.327	Satisfactory
	0.746	0.727			
REIN–DELI	0.921	0.853	.536	0.287	Satisfactory
	0.745	0.659			
REIN–CONS	0.921	0.913	.536	0.287	Satisfactory
	0.746	0.724			
REIN–CLAR	0.921	0.934	.566	0.320	Satisfactory
	0.746	0.779			
CRED–PROD	0.904	0.855	.745	0.555	Satisfactory
	0.611	0.665			
CRED–PRI	0.904	0.889	.608	0.370	Satisfactory
	0.611	0.727			
CRED–DELI	0.904	0.851	.688	0.473	Satisfactory
	0.611	0.657			
CRED–CONS	0.904	0.912	.704	0.496	Satisfactory
	0.611	0.723			
CRED–CLAR	0.903	0.934	.628	0.394	Satisfactory
	0.610	0.780			
PROD–PRI	0.856	0.889	.699	.489	Satisfactory
	0.666	0.727			
PROD–DELI	0.856	0.852	.752	0.566	Satisfactory
	0.666	0.658			
PROD–CONS	0.855	0.912	.761	0.579	Satisfactory
	0.665	0.723			
PROD–CLAR	0.856	0.934	.593	0.352	Satisfactory
	0.665	0.780			
PRI–DELI	0.889	0.853	.648	0.420	Satisfactory
	0.727	0.659			
PRI–CONS	0.889	0.913	.652	0.425	Satisfactory
	0.727	0.724			
PRI–CLAR	0.934	0.888	.613	0.376	Satisfactory
	0.780	0.726			
DELI–CONS	0.852	0.912	.789	0.623	Satisfactory
	0.658	0.723			
DELI–CLAR	0.852	0.970	.722	0.521	Satisfactory
	0.657	0.780			
CONS–CLAR	0.913	0.934	.764	0.584	Satisfactory
	0.724	0.780			

CR: Composite reliability, AVE: Average Variance Extracted.

Importer Relationship Intention–Perceived Product Quality (REIN–PROD)

The CFA results for the REIN–PROD pair (Figure 5.5) indicate that the measurement model receives a good fit to the data (χ^2 = .20.558, p = .082, which is larger than the conventional level of .05). Other good-fit statistics are all greater than .90, which also show a good fit (for example, GFI = .985; AGFI = .968; NFI = .990; TLI = .994; CFI = .996). RMSEA = 037 is smaller than .05, the recommended level. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is .439 (REIN2 ↔ PROD1).



χ^2	=	20.558
Df	=	13
p	=	.082
GFI	=	.985
AGFI	=	.968
NFI	=	.990
TLI	=	.994
CFI	=	.996
RMSEA	=	.037

Figure 5.5: Pair-wise CFA Results of REIN–PROD

Indicating items load significantly ($p < .001$) and substantially on their latent constructs. The lowest loading on REIN is .85 (REIN1), and the lowest loading on PROD is .72 (PROD3). The construct reliability of REIN (.922) and PROD (.856) are greater than .70. The AVE of REIN (.746) and PROD (.666) are greater than .50. These findings indicate that both REIN and PROD meet the criteria of the unidimensionality and convergent validity.

The AVE of REIN (.746) and the AVE of PROD (.666) are greater than the squared correlation between REIN and PROD (.416) (see Table 5.10). The results support the convergent and discriminant validity of REIN and PROD.

Importer Relationship Intention–Perceived Price Competitiveness (REIN–PRI)

The CFA results for the REIN–PRI pair are shown in Figure 5.6. The measurement model has thirteen degrees of freedom. The findings indicate that the model receives a good fit to the data ($\chi^2 = 15.316$ and $p = .288$; GFI = .990; AGFI = .978; NFI = .993; TLI = .998; CFI = .999; RMSEA = .021). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is .692 (REIN1 $\leftrightarrow$ PRI2).

Indicating items load substantially and significantly ($p < .001$) on their latent constructs. The lowest loading of REIN is .85 (REIN1), and the lowest loading of PRI is .83 (PRI1). The construct reliability of REIN (.921) and PRI (.889) are greater than .70. The AVE of REIN (.746) and PRI (.727) are greater than .50 (see Table 5.10). These findings indicate that REIN and PRI achieve the unidimensionality and convergent validity.

The AVE of REIN (.746) and the AVE of PRI (.727) are greater than the squared inter-correlation between REIN and PRI (.327) (see Table 5.10). This result supports the convergent and discriminant validity of REIN and PRI.

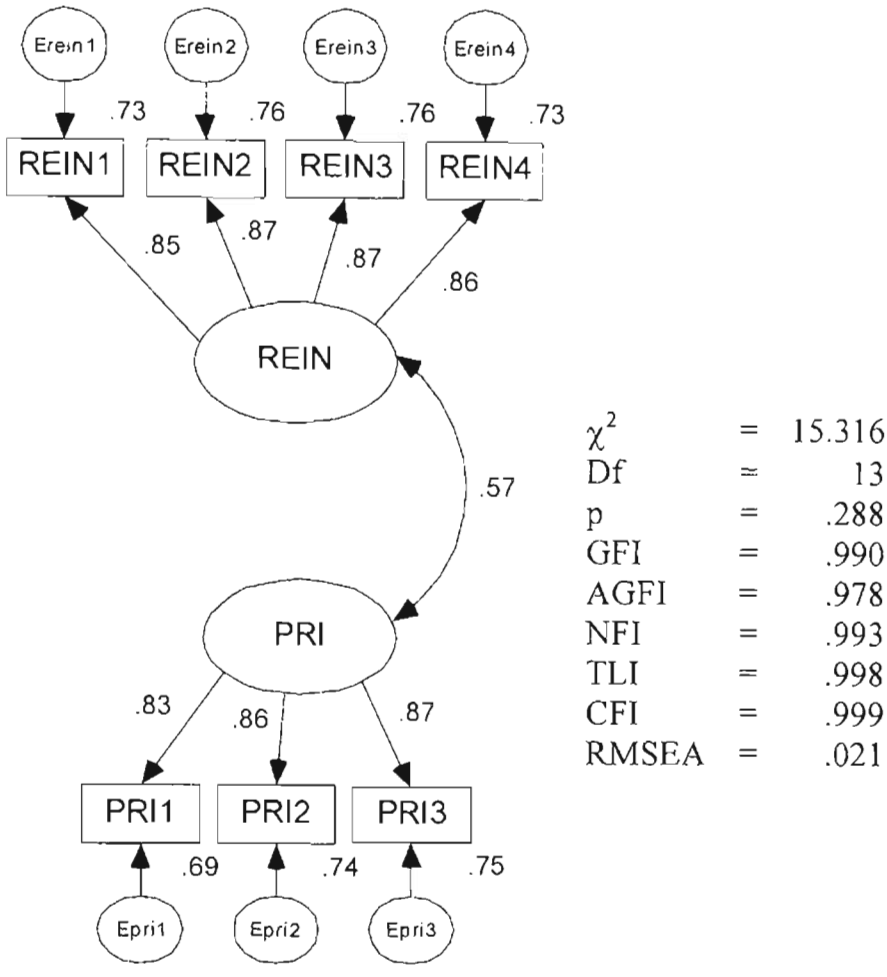


Figure 5.6: Pair-wise CFA Results of REIN–PRI

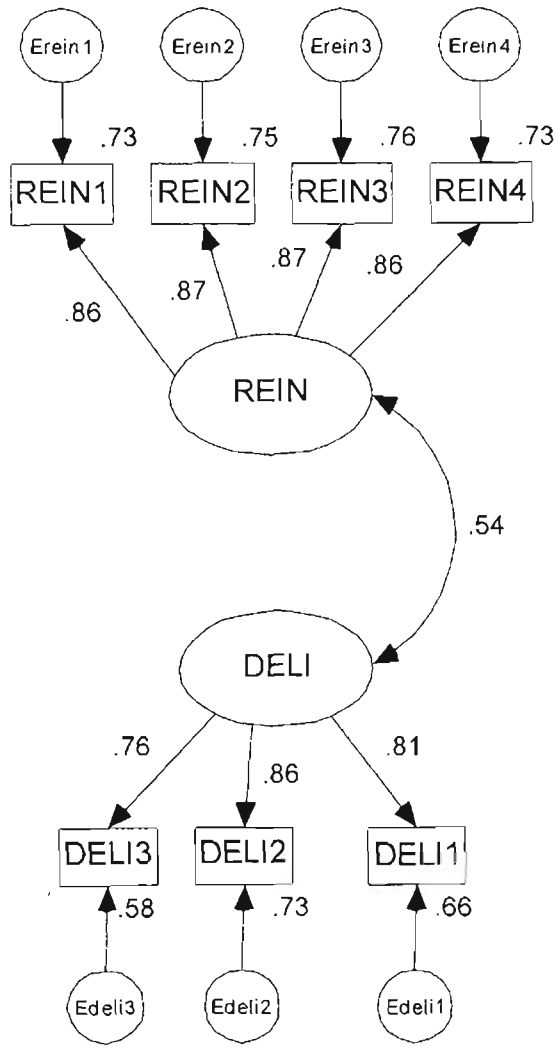
Importer Relationship Intention–Perceived Delivery Performance (REIN–DELI)

The measurement model has thirteen degrees of freedom. The findings (Figure 5.7) indicate that the model receives an acceptable fit to the data. Although the Chi-square statistic is not significant (χ^2 = 27.442 and p = .011), other fit measures significantly show a good fit (for example, GFI = .982; AGFI = .961; NFI = .986; TLI = .988; CFI = .992; RMSEA = .052). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.032 (REIN1 ↔ DELI4).

All factor loadings of indicators on REIN and DELI are significant (p < .001) and substantial. The lowest loading on REIN is .86 (REIN1 and REIN4), and the lowest loading on DELI is .76 (DELI4). The construct reliability of REIN (.921) and DELI (.853) are greater than .70 (see Table 5.10). The AVE of REIN (.745) and DELI (.659)

are greater than .50 (Fornell and Larcker 1981). These findings indicate that the measures of REIN and PROD achieve the unidimensionality and convergent validity.

The AVE of REIN (.745) and the AVE of DELI (.659) are larger than the squared inter-correlation between REIN and DELI (.287) (see Table 5.10). The results suggest that constructs have more error-free (extracted) variance than variances shared with other constructs (Hair et al. 2005). In other words, the latent construct explains its measurement items better than it explains another construct. Therefore, the convergent and discriminant validity of REIN and DELI are supported.

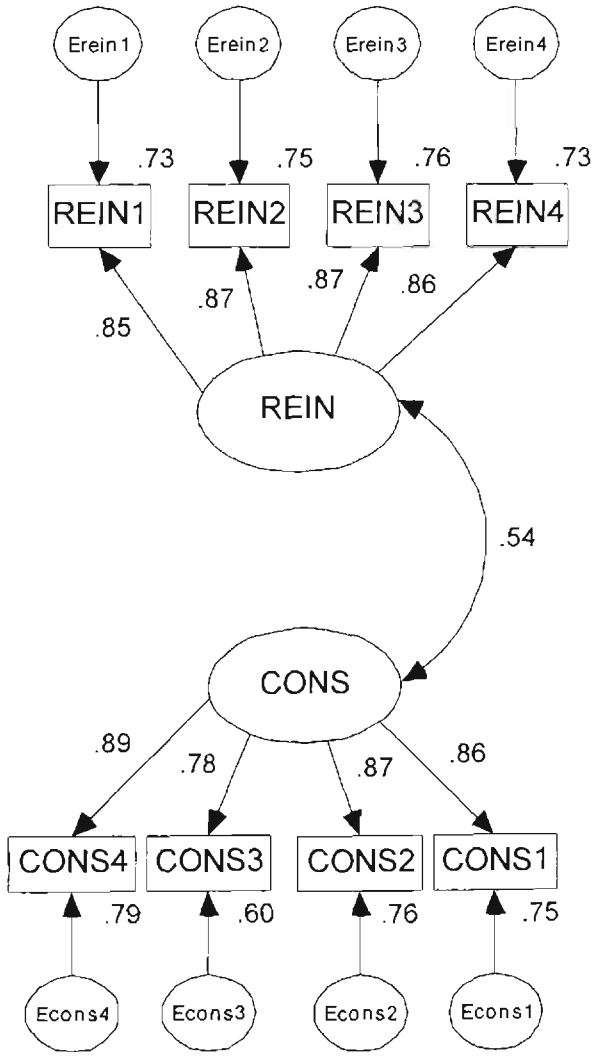


χ^2	=	27.442
Df	=	13
p	=	.011
GFI	=	.982
AGFI	=	.961
NFI	=	.986
TLI	=	.988
CFI	=	.992
RMSEA	=	.052

Figure 5.7: Pair-wise CFA Results of REIN–DELI

Importer Relationship Intention–Signal Consistency (REIN–CONS)

The CFA results for the REIN–CONS pair are shown in Figure 5.8. The model has 19 degrees of freedom. The findings indicate that the model receives a satisfactory fit to the data. Although the Chi-square statistic does not show a good fit (χ^2 = 31.260 and p = .038), other fit statistics indicate a satisfactory level of fit (for example, GFI = .960; NFI = .971; TLI = .977; CFI = .982; RMSEA = .061). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.698 (REIN3 ↔ CONS3).



χ^2	=	31.260
Df	=	19
p	=	.038
GFI	=	.981
AGFI	=	.964
NFI	=	.982
TLI	=	.993
CFI	=	.995
RMSEA	=	.039

Figure 5.8: Pair-wise CFA Results of REIN–CONS

The findings also reveal that all factor loadings of indicators on REIN and CONS are significant ($p < .001$) and substantial. The lowest loading on REIN is .85 (REIN1) and the lowest loading on CONS is .78 (CONS3). The average loading on REIN is .863 and on CONS is .849. As can be seen from Table 5.10, the construct reliability of REIN (.921) and CONS (.913) are greater than .70. The AVE of REIN (.746) and CONS (.724) are greater than .50. These findings indicate that both REIN and CONS meet the unidimensionality and convergent validity criteria.

The AVE of REIN (.746) and CONS (.611) are larger than their shared variance (that is, squared inter-correlation = .607) (see Table 5.10). These results indicate that the convergent and discriminant validity of REIN and CONS are supported.

Importer Relationship Intention–Signal Clarity (REIN–CLAR)

The measurement model of REIN and CLAR has 19 degrees of freedom. The CFA results for the REIN–CLAR pair (Figure 5.9) indicate that the model receives an acceptable fit to the data (χ^2 = 37.332 and p = .007; GFI = .978; AGFI = .958; NFI = .987; TLI = .990; CFI = .993). RMSEA = .048 (< .05), which indicates a good fit of the model. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.427 (REIN3 ↔ CLAR3).

Indicating items load substantially and significantly ($p < .001$) on their latent constructs. The lowest loading on REIN is .85 (REIN1), and the lowest loading on CLAR is .80 (CLAR3). The average loading on REIN is .863 and the average loading on CLAR is .88. The construct reliability of REIN (.921) and CLAR (.934) are greater than .70 (Table 5.10). The AVE of REIN (.746) and CLAR (.779) are greater than .50 (Fornell and Larcker 1981). These findings indicate that the measures of REIN and CLAR achieve the unidimensionality and convergent validity.

The AVE of REIN (.746) and the AVE of CLAR (.746) are larger than the squared inter-correlation between REIN and CLAR (.302) (see Table 5.10). This result supports the convergent and discriminant validity of REIN and CLAR.

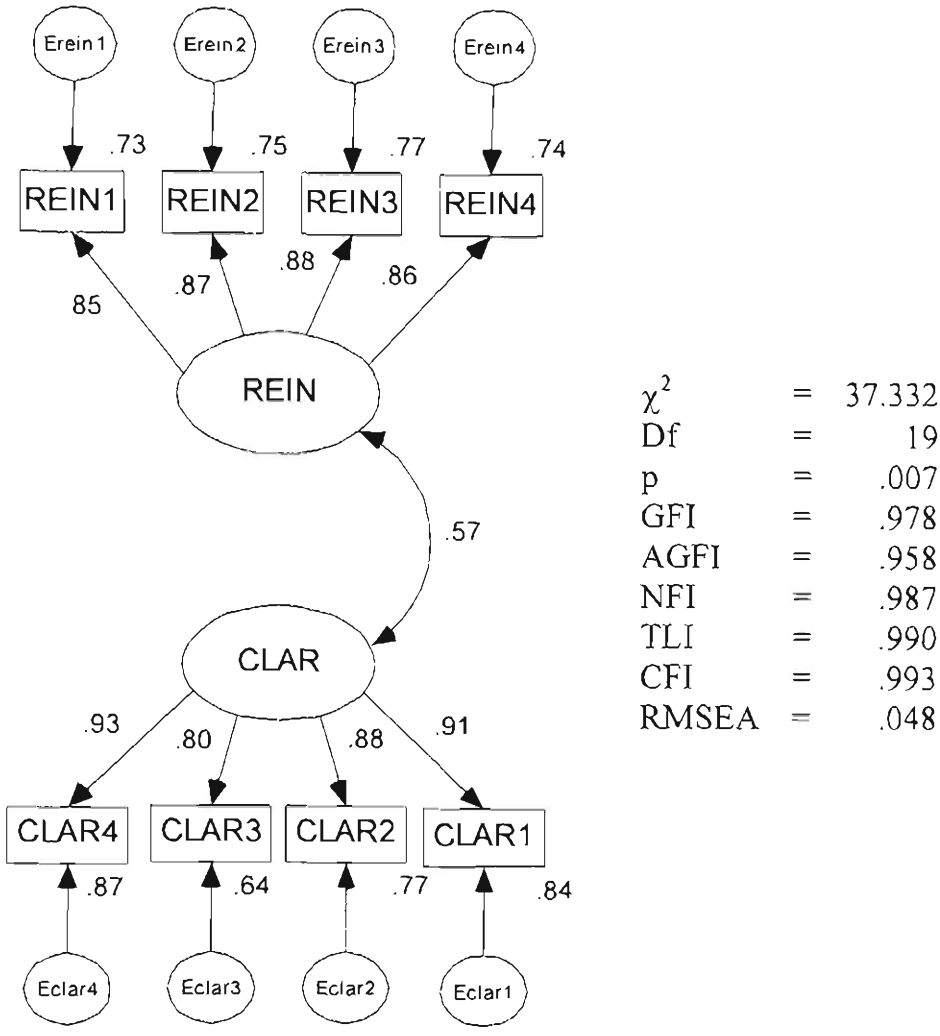


Figure 5.9: Pair-wise CFA Results of REIN–CLAR

Exporter Credibility–Perceived Product Quality (CRED–PROD)

The CFA results for the CRED–PROD pair (Figure 5.10) indicate that the measurement model receives an acceptable fit to the data. Although the Chi-square statistic is significant (χ^2 = 59.632, p = .000), other key fit statistics are all greater than .95, which shows a good fit (for example, GFI = .968; AGFI = .945; NFI = .974; TLI = .979; CFI = .985).

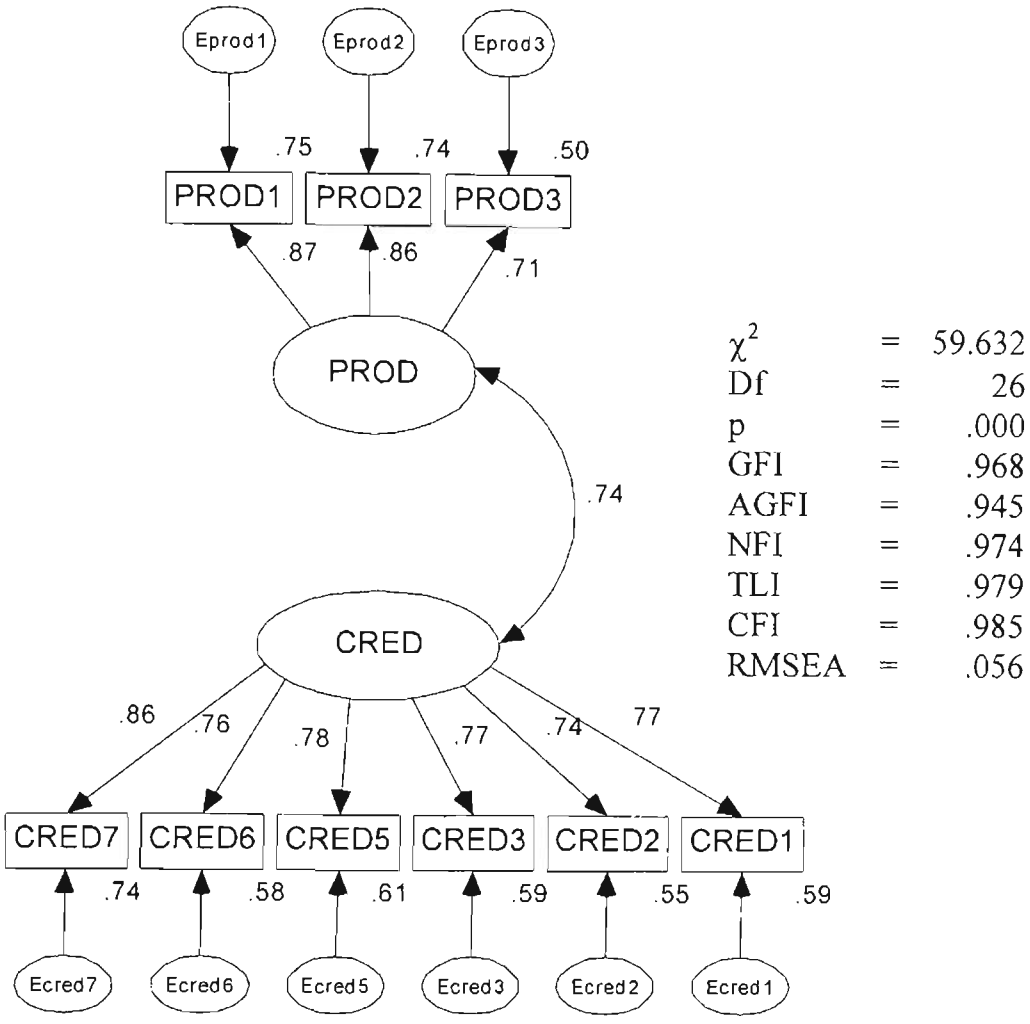


Figure 5.10: Pair-wise CFA Results of CRED–PROD

The badness-of-fit measure (RMSEA) is .056, which also shows an acceptable fit. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.017 (CRED5 ↔ PROD3).

Indicating items load substantially and significantly ($p < .001$) on their latent constructs. The lowest loading on CRED is .74 (CRED2), and the lowest loading on PROD is .71 (PROD3). The construct reliability of CRED (.904) and PROD (.855) are greater than .70. The AVE of CRED (.611) and PROD (.665) are greater than .50. These findings indicate that both CRED and PROD meet the criteria of unidimensionality and convergent validity.

The AVE of CRED (.611) and the AVE of PROD (.665) are greater than squared inter-correlation between CRED and PROD (.555) (see Table 5.10). This result supports the convergent and discriminant validity of CRED and PROD.

Exporter Credibility–Perceived Price Competitiveness (CRED–PRI)

The CFA results for the CRED–PRI pair are shown in Figure 5.11. The measurement model has 26 degrees of freedom. The findings indicate that the model receives a satisfactory fit to the data. Although the p-value of the Chi-square statistic is smaller than the conventional level of 5% (χ^2 = 63.800 and p =.000), other fit measures significantly show a good level of fit (for example, GFI = .966; AGFI = .941; NFI = .973; TLI = .977; CFI = .983; RMSEA = .059). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.366 (CRED2 ↔ PRI2).

Indicating items load substantially and significantly ($p < .001$) on their latent constructs. The lowest loading of CRED is .74 (CRED2), and the lowest loading of PRI is .83 (PRI1). The construct reliability of CRED (.904) and PRI (.889) are greater than .70. The AVE of CRED (.611) and PRI (.727) are greater than .50 (Fornell and Larcker 1981). These findings indicate that the measures of CRED and PRI achieve the unidimensionality and convergent validity.

The AVE of CRED (.746) and the AVE of PRI (.727) are greater than the squared inter-correlation between CRED and PRI (.370) (Table 5.10). This result supports the convergent and discriminant validity of CRED and PRI.

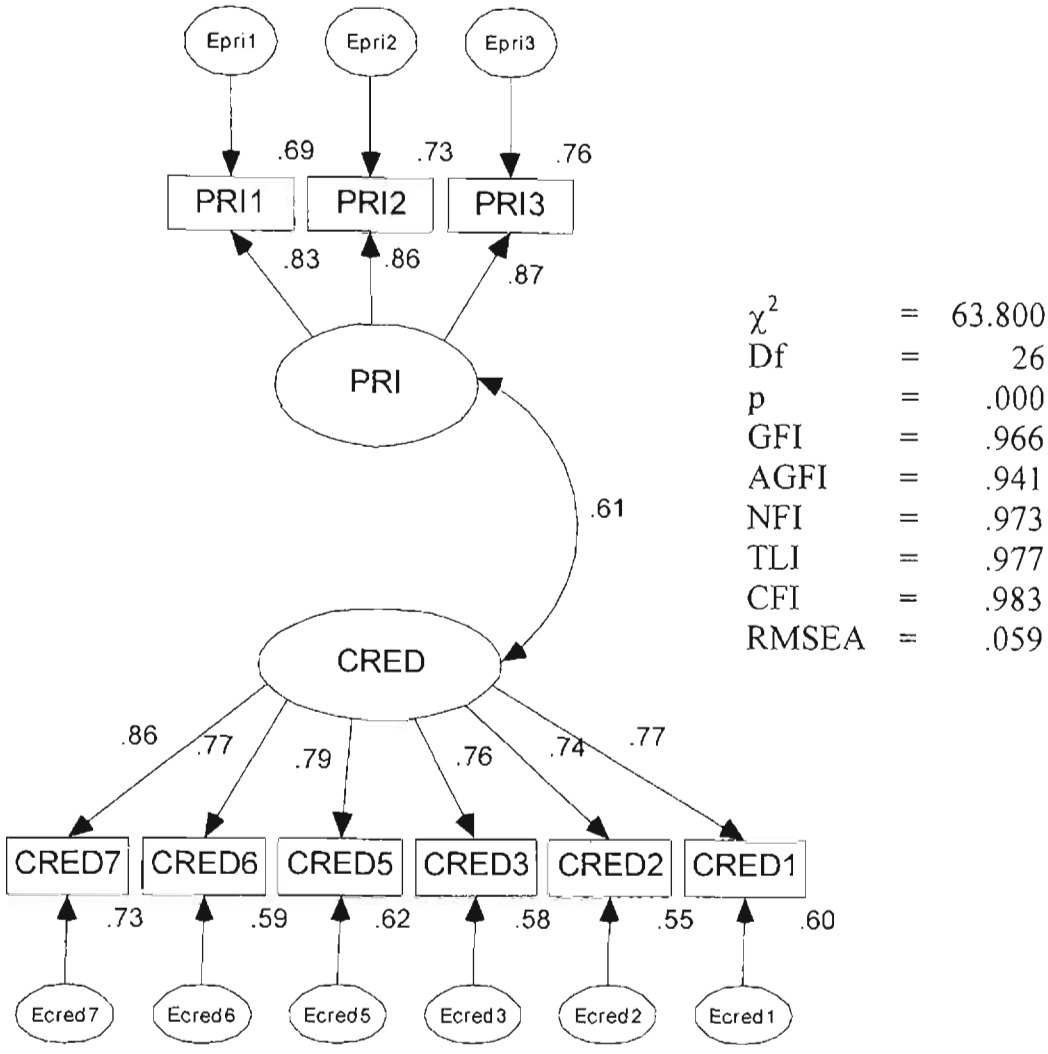


Figure 5.11: Pair-wise CFA Results of CRED–PRI

Exporter Credibility–Perceived Delivery Performance (CRED–DELI)

The pair-wise CFA results between CRED and DELI are shown in Figure 5.12. The measurement model has 26 degrees of freedom. The findings indicate that the model receives an acceptable fit to the data. Although the Chi-square statistic is significant (χ^2 = 68.156 and p = .000) other fit measures significantly show a good fit (for example, GFI = .963; AGFI = .936; NFI = .969; TLI = .973; CFI = .981; RMSEA = .062. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.140 (CRED2 ↔ DELI2).

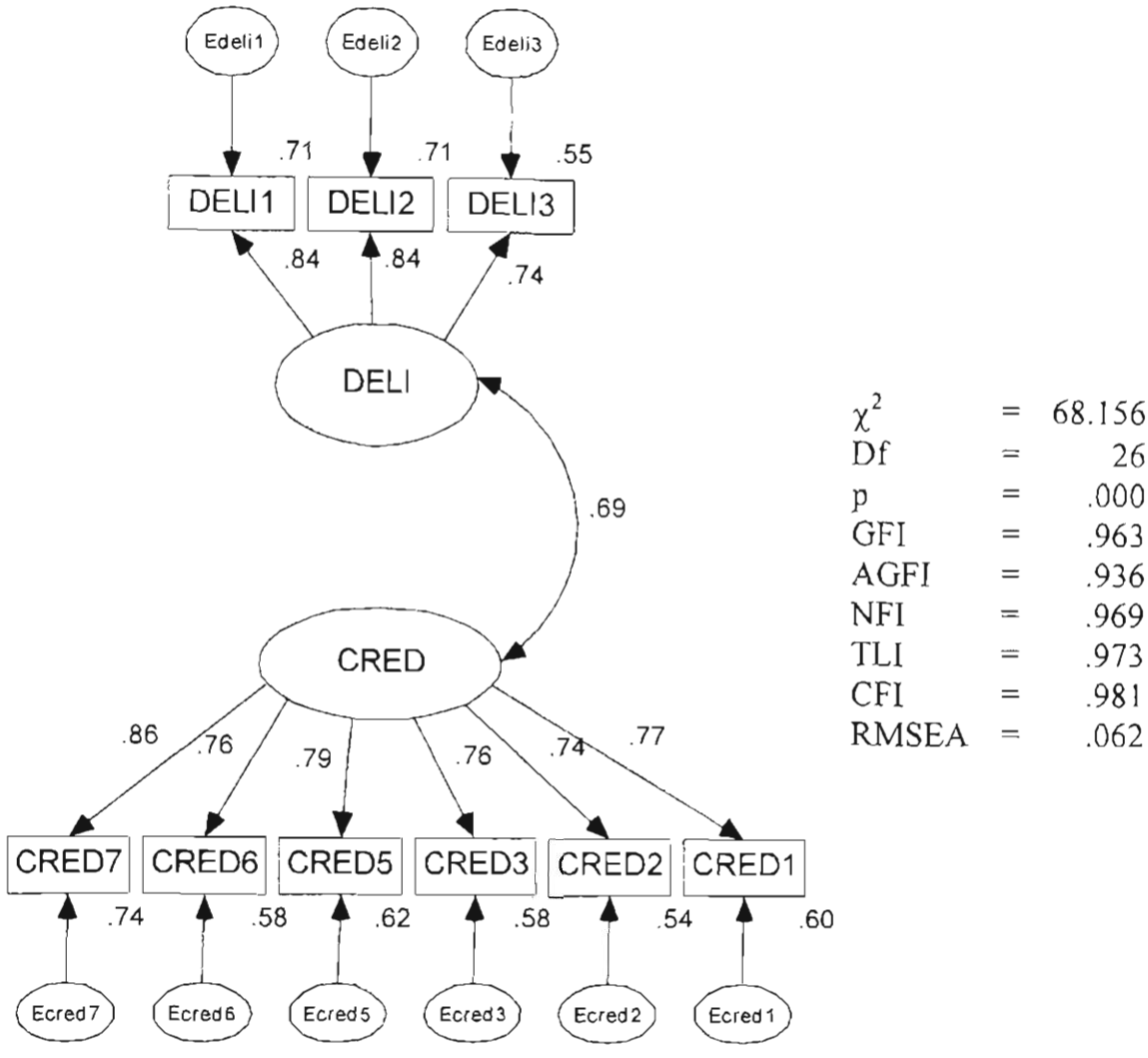


Figure 5.12: Pair-wise CFA Results of CRED-DELI

All factor loadings of items on CRED and DELI are significant ($p < .001$) and substantial. The lowest loading on CRED is .74 (CRED2); the average loading is .78. The lowest loading on DELI is .74 (DELI3); and the average loading on DELI is .809. The construct reliability of CRED (.904) and DELI (.851) are greater than .50 (Table 5.10). The AVE of CRED (.611) and DELI (.657) are greater than .50. These findings indicate that the measures of CRED and DELI achieve the unidimensionality and convergent validity.

The AVE of CRED (.611) and the AVE of DELI (.657) are greater than the squared inter-correlation between CRED and DELI (.473) (see Table 5.10). Thus, the convergent and discriminant validity of CRED and DELI are supported.

Exporter Credibility–Signal Consistency (CRED–CONS)

Figure 5.13 presents the CFA results of the CRED–CONS pair. The model has 34 degrees of freedom. The findings indicate that the measurement model receives a satisfactory fit to the data. Although the Chi-square statistic does not show a good fit (χ^2 = 91.454 and p = .000), other fit statistics indicate a satisfactory level of fit (for example, GFI = .956; AGFI = .929; NFI = .968; TLI = .973; CFI = .980; RMSEA = .064). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.123 (CRED2 ↔ CRED3).

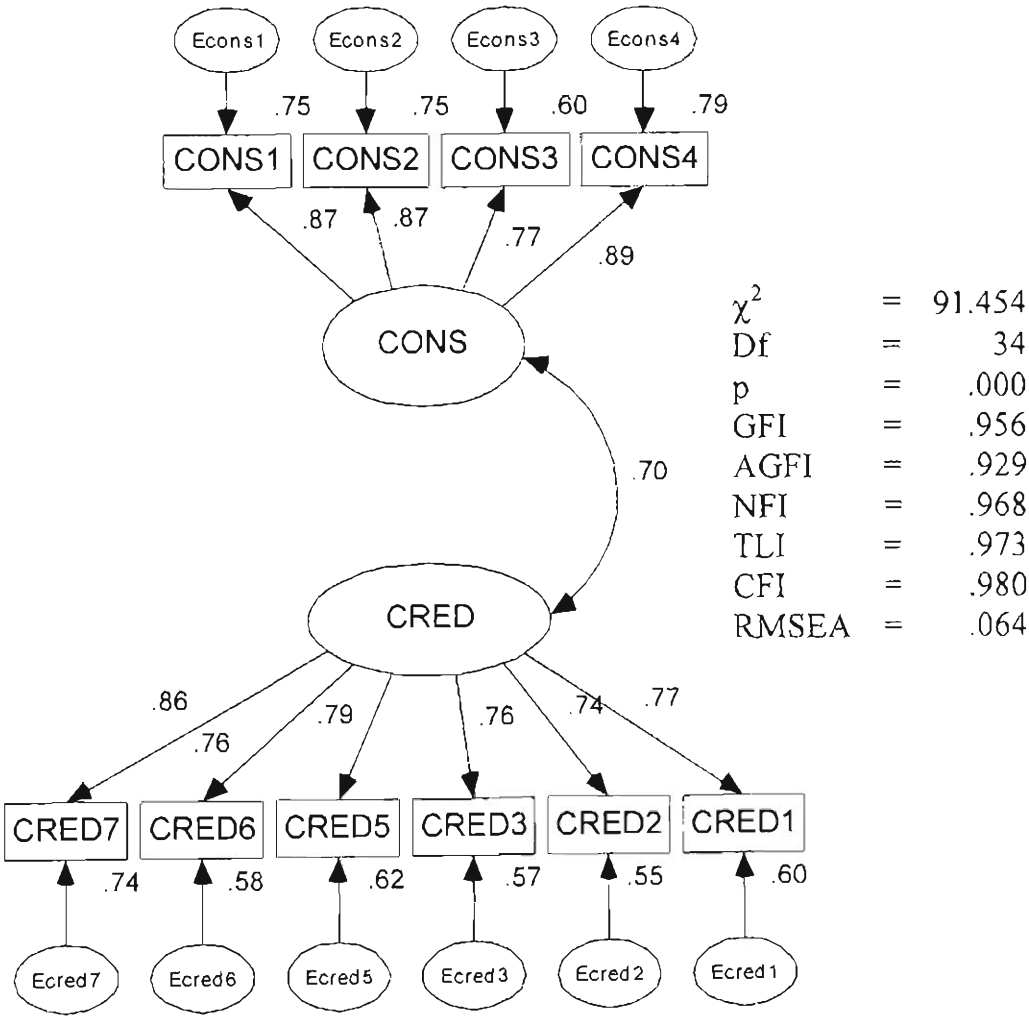


Figure 5.13: Pair-wise CFA Results of CRED–CONS

The findings also reveal that all of the factor loadings of indicators on CRED and CONS are significant ($p < .001$) and substantial. The lowest loading on CONS is .77 (CONS3) and the lowest loading on CRED is .74 (CRED2). The average loading on CRED is .78 and on CONS it is .849. As can be seen from Table 5.10, the construct reliability of CRED (.904) and CONS (.912) are greater than .70. The AVE of CRED (.611) and CONS (.723) are greater than .50. These findings strongly support that CRED and CONS are unidimensional and meet the requirement of convergent validity.

The AVE of CRED (.611) and CONS (.723) are greater than their shared variance (that is, squared inter-correlation = .496) (see Table 5.10). These results indicate that the convergent and discriminant validity of CONS and CRED are supported.

Exporter Credibility–Signal Clarity (CRED–CLAR)

CRED and CLAR were proposed as unidimensionality constructs. The measurement model has 34 degrees of freedom. The findings (Figure 5.14) indicate that the measurement model receives a satisfactory level of fit to the data. Although the Chi-square statistic (87.808) is significant ($p < .001$), other model fit measures indicate an acceptable fit of the model to the data (for example, GFI = .959; AGFI = .933; NFI = .972; TLI = .977; CFI = .982; RMSEA = .062). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.120 (CRED2 $\leftrightarrow$ CLAR3).

The indicating items loaded significantly ($p < .001$) on their latent constructs. The lowest loading on CRED is .75 (CRED2), and the average loading on CRED is .78. The lowest loading on CLAR is .80 (CLAR3), and the average loading on CLAR is .88. The construct reliability of CRED (.903) and CLAR (.934) are greater than .70. The AVE of CRED (.610) and CLAR (.780) are greater than .50 (see Table 5.10). These findings indicate that the measures of CRED and CLAR achieve the unidimensionality and convergent validity.

The AVE of CRED (.610) and the AVE of CLAR (.780) are greater than the squared inter-correlation between REIN and CLAR (.394) (see Table 5.10). This result supports the convergent and discriminant validity of CRED and CLAR.

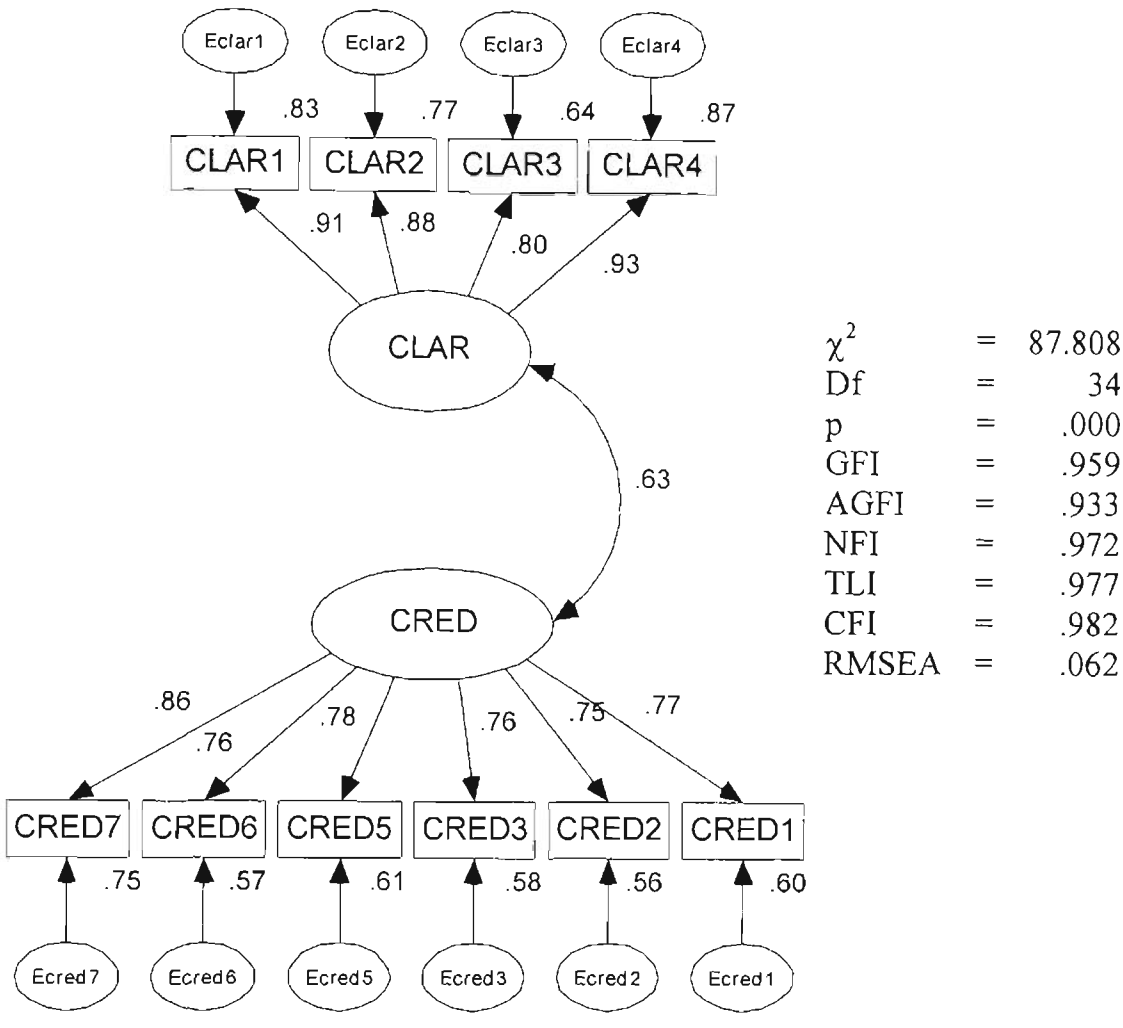
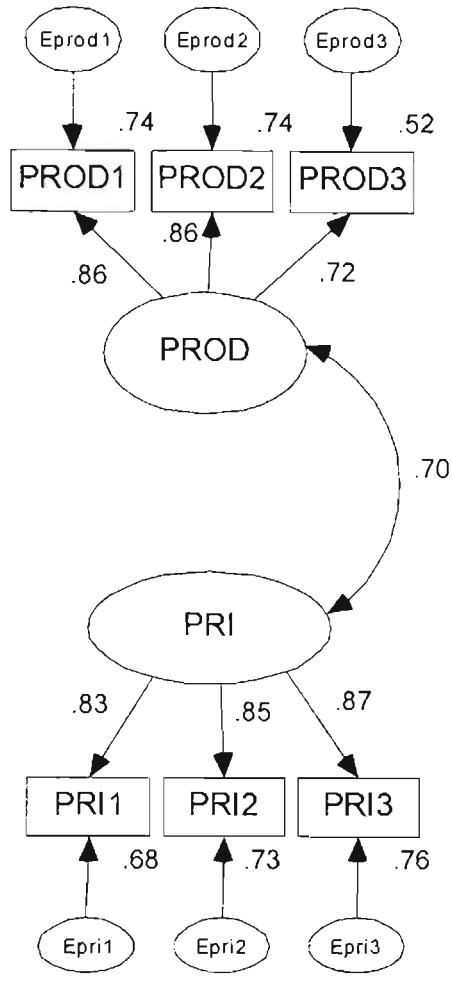


Figure 5.14: Pair-wise CFA Results of CRED–CLAR

Perceived Product Quality–Perceived Price Competitiveness (PROD–PRI)

PROD and PRI were proposed as unidimensionality constructs. Their pair-wise measurement model has eight degrees of freedom. The CFA results of PROD and PRI (Figure 5.15) strongly indicate that the measurement model receives a good fit to the data (χ^2 = 9.527 and p = .300). Other model fit measures support a good fit of the model (for example, GFI = .993; AGFI = .981; NFI = .994; TLI = .998; CFI = .999; RMSEA = .021). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is .686 (PROD3 ↔ PRI1).



χ^2 = 9.527
Df = 8
p = .300
GFI = .993
AGFI = .981
NFI = .994
TLI = .998
CFI = .999
RMSEA = .021

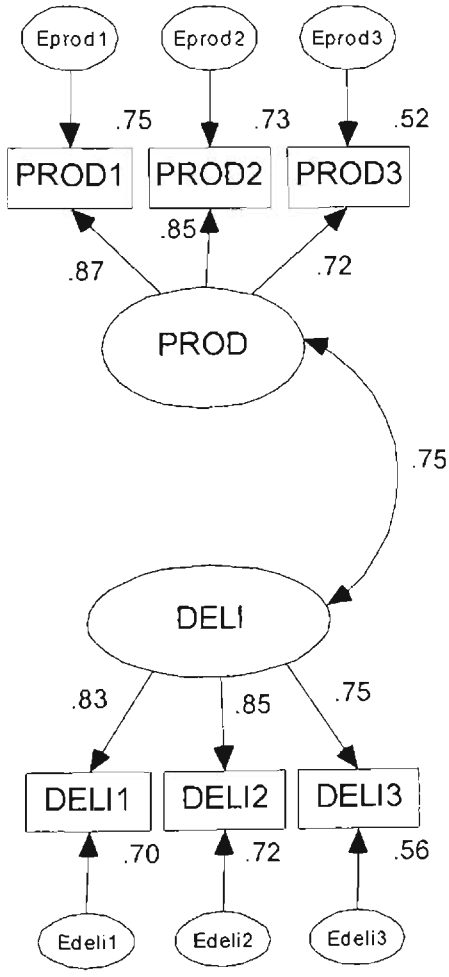
Figure 5.15: Pair-wise CFA Results of PROD–PRI

The indicating items of PROD and PRI significantly load on their latent constructs ($p < .001$). The lowest loading on PROD is .72 (PROD3), and the lowest loading on PRI is .83 (PRI1). The construct reliability of PROD (.856) and PRI (.889) are greater than .70. The AVE of PROD (.666) and PRI (.727) are greater than .50. These findings indicate that both PRI and PROD meet the unidimensionality and convergent validity criteria.

The AVE of PRI (.727) and the AVE of PROD (.666) are greater than the squared inter-correlation between PRI and PROD (.489) (see Table 5.10). This result supports the convergent and discriminant validity of PRI and PROD.

Perceived Product Quality–Perceived Delivery Performance (PROD–DELI)

The pair-wise CFA results between PRO and DELI are shown in Figure 5.16. The measurement model has eight degrees of freedom. The findings indicate that the model receives a good fit to the data (χ^2 = 7.785 and p = .455). Other fit measures significantly show a good fit (for example, GFI = .994; AGFI = .983; NFI = .994; CFI = 1.; and RMSEA = .000). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is .697 (PROD2 ↔ DELI4).



χ^2	=	7.785
Df	=	8
p	=	.455
GFI	=	.994
AGFI	=	.983
NFI	=	.994
TLI	=	1.000
CFI	=	1.000
RMSEA	=	.000

Figure 5.16: Pair-wise CFA Results of PROD–DELI

The indicating items of PROD and DELI significantly ($p < .001$) and substantially load on their latent constructs. The lowest loading on PROD is .72 (PROD3), the average loading on PROD is .81. The lowest loading on DELI is .75 (DELI4) and the average loading on DELI is .809. The construct reliability of PROD (.855) and DELI (.852) are greater than the recommended level of .70 (Nunnally 1978). The AVE of PROD (.666) and DELI (.658) are greater than the recommended level of .50 (Fornell and Larcker 1981). These findings indicate that the measures of PROD and DELI achieve the unidimensionality and convergent validity.

The correlation between PROD and DELI is .752. The AVE of PROD (.666) and the AVE of DELI (.658) are greater than the squared inter-correlation between PROD and DELI (.566) (see Table 5.10). The results indicate that PROD and DELI achieve convergent and discriminant validity.

Perceived Product Quality–Signal Consistency (PROD–CONS)

Figure 5.17 presents the CFA results for the PROD–CONS pair. The model has thirteen degrees of freedom. The findings indicate that the pair-wise measurement model receives a good fit to the data (χ^2 = 19.299 and p = .114). Other fit statistics also indicate a good level of model fit (for example, GFI = .987; AGFI = .971; NFI = .990; TLI = .995; CFI = .997). The RMSEA is .034, which indicates a good model fit. In addition, no absolute standardised residual is higher than 2.58. The highest absolute value of the standardised residuals is 1.133 (CONS3 ↔ PROD3).

All indicating items of PROD and CONS load significantly ($p < .001$) and substantially on their latent constructs. The lowest loading on CONS is .77 (CONS3) and the lowest loading on PROD is .72 (PROD3). The average loading on PROD is .812 and the average loading on CONS is .849. The construct reliability of PROD (.855) and CONS (.912) are greater than .70 (Table 5.10). The AVE of PROD (.665) and CONS (.723) are greater than .50. These findings strongly support that PROD and CONS are unidimensional and meet the requirement of convergent validity.

The AVEs of PROD (.665) and CONS (.723) are greater than their squared inter-correlation (.579) (see Table 5.10). These results indicate that the convergent and discriminant validity of PROD and CONS are supported.

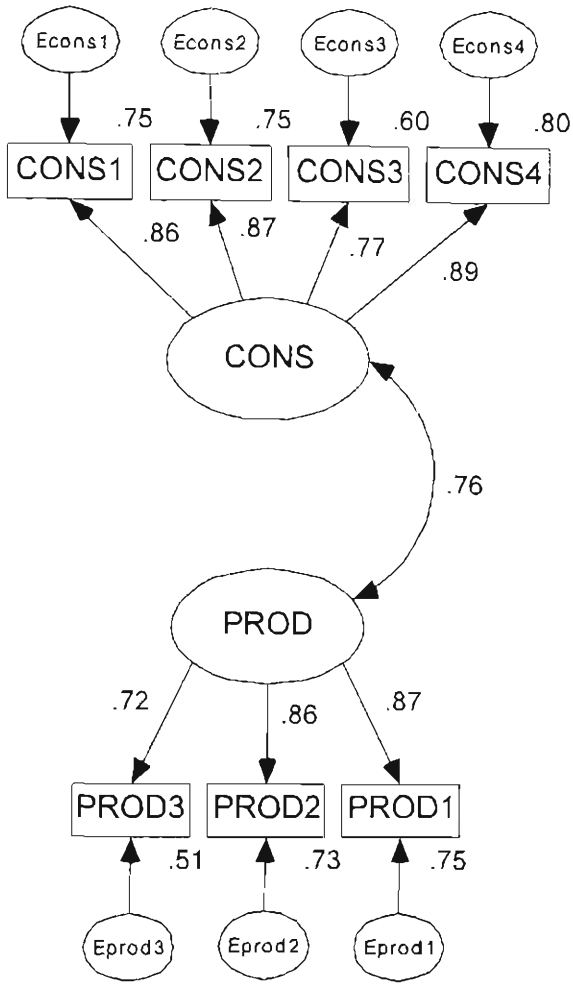


Figure 5.17: Pair-wise CFA Results of PROD–CONS

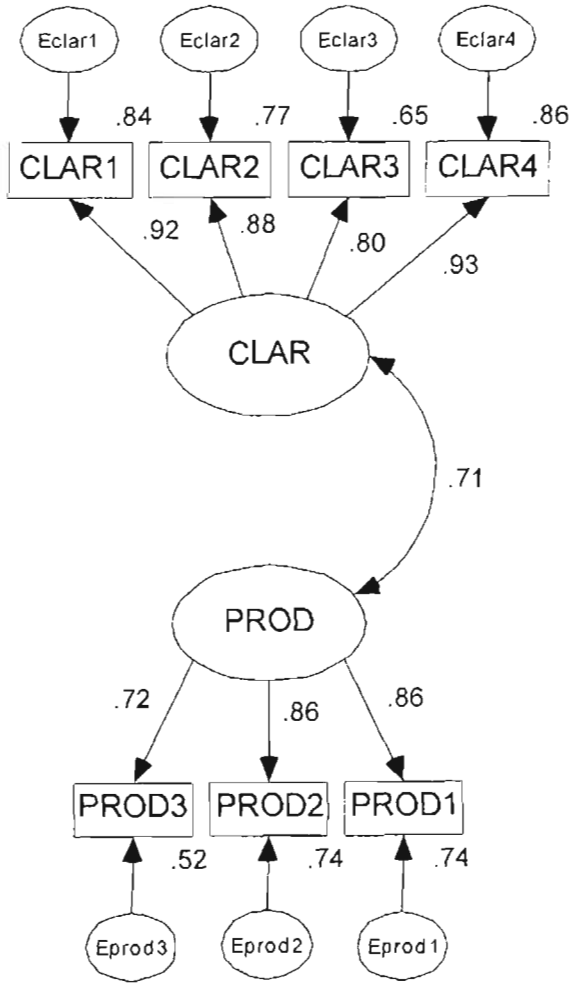
Perceived Product Quality–Signal Clarity (PROD–CLAR)

PROD and CLAR were proposed as unidimensionality constructs. The measurement model has thirteen degrees of freedom. The CFA results (Figure 5.18) indicate that the measurement model receives a satisfactory level of fit to the data. Although the Chi-square statistic is significant (χ^2 = 42.975 and p =.000), other model fit measures indicate an acceptable level of fit of the model to the data (for example, GFI = .972; AGFI = .939; NFI = .981; TLI = .979; CFI = .987). RMSEA = .074 (<.08 level recommended by Hu and Bentler 1996), which indicates a satisfactory fit of the model.

In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.756 (PRO2 ↔ CLAR3).

Items load significantly ($p < .001$) and substantially on their latent constructs. The lowest loading on PROD is .72 (PROD3), and the average loading on PROD is .813. The lowest loading on CLAR is .80 (CLAR3) and the average loading on CLAR is .88. The construct reliability of PROD (.856) and CLAR (.934) are greater than .70. The AVE of PROD (.665) and CLAR (.780) are greater than .50. These findings indicate that the measures of PROD and CLAR achieve the unidimensionality and convergent validity.

The AVE of PROD (.665) and the AVE of CLAR (.780) are higher than the squared inter-correlation between PROD and CLAR (.352) (see Table 5.10). The results support the convergent and discriminant validity of PROD and CLAR.



χ^2	=	42.975
Df	=	13
p	=	.000
GFI	=	.972
AGFI	=	.939
NFI	=	.981
TLI	=	.979
CFI	=	.987
RMSEA	=	.074

Figure 5.18: Pair-wise CFA Results of PROD–CLAR

Perceived Price Competitiveness–Perceived Delivery Performance (PRI–DELI)

The pair-wise CFA results between PRI and DELI are shown in Figure 5.19. The measurement model has eight degrees of freedom. The findings indicate that the model receives a satisfactory level of fit to the data (χ^2 = 15.862 and p = .044). Other fit measures also significantly show a good fit (for example, GFI = .987; AGFI = .967; NFI = .989; TLI = .990; CFI = .994; RMSEA = .049). In addition, no absolute standardised residual is higher than 2.58. The highest absolute value of the standardised residuals is 1.261 (PRI3 ↔ DELI3).

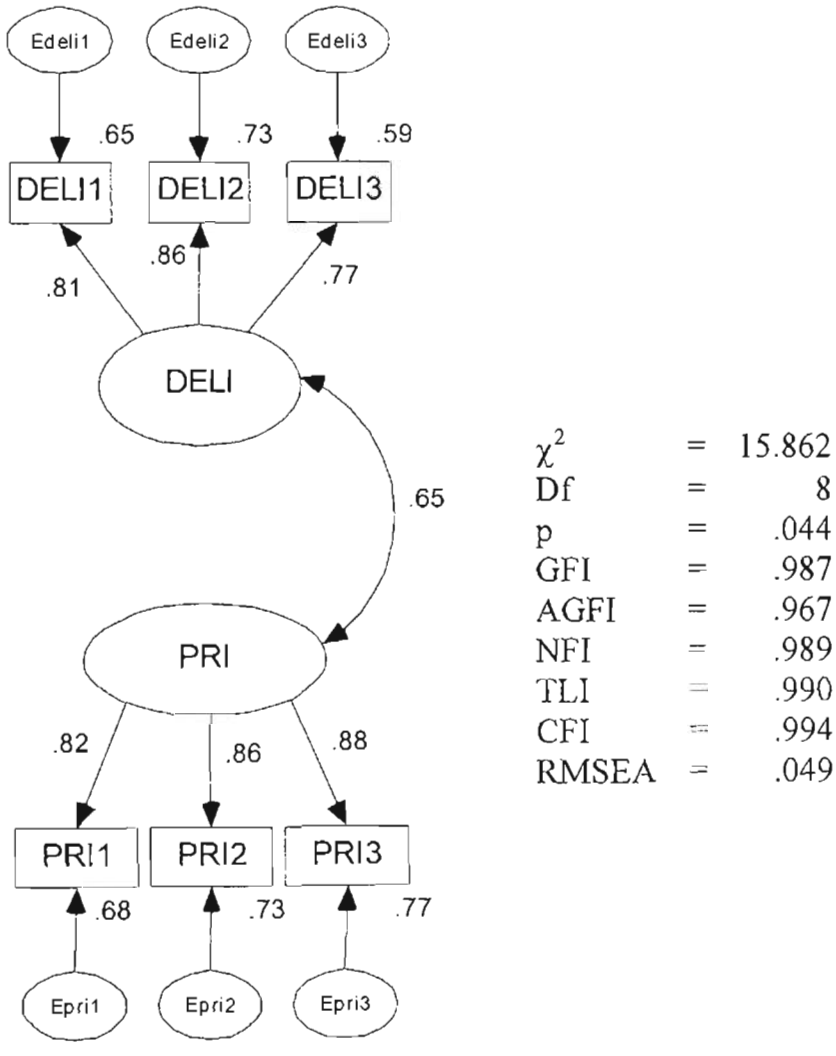


Figure 5.19: Pair-wise CFA Results of PRI–DELI

All factor loadings of items on PRI and DELI are significant (p < .001) and substantial. The lowest loading on PRI is .82 (PRI1), the average loading on PRI is .852. The lowest

loading on DELI is .77 (DELI3) and the average loading on DELI is .811. Table 5.10 shows that the construct reliability of PRI (.889) and DELI (.853) are greater than .50. The AVE of PRI (.727) and DELI (.659) are greater than .50 (Table 5.10). These findings indicate that the measures of DELI and PRI achieve the unidimensionality and convergent validity.

The AVE of PRI (.727) and the AVE of DELI (.659) are greater than the squared inter-correlation between PRI and DELI (.420) (see Table 5.10). The results indicate that PRI and DELI achieve convergent and discriminant validity.

Perceived Price Competitiveness–Signal Consistency (PRI–CONS)

Figure 5.20 presents the CFA results of the PRI–CONS pair. The model has thirteen degrees of freedom. The findings indicate that the pair-wise measurement model receives a good fit to the data (χ^2 = 14.965 and p = .310). Other fit statistics also indicate a good level of model fit (for example, GFI = .989; AGFI = .977; NFI = .993; TLI = .998; CFI = .999; RMSEA = .019. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.162 (PRI3 ↔ CONS3).

The findings also reveal that all of factor loadings of items on PRI and CONS are significant (p < .001) and substantial. The lowest loading on CONS is .78 (CONS3) and the lowest loading on PRI is .82 (PRI1). The average loading on PRI is .852 and the average loading on CONS is .85. The construct reliability of PRI (.889) and CONS (.913) are greater than .70. The AVE of PRI (.727) and CONS (.724) are greater than .50 (Tabl 5.10). These findings strongly support that REIN and CONS meet the requirements of the unidimensionality and convergent validity.

The AVE of PRI (.727) and CONS (.724) are larger than their squared correlation (.425) with each other (see Table 5.10). These results indicate that the convergent and discriminant validity of PRI and CONS are supported.

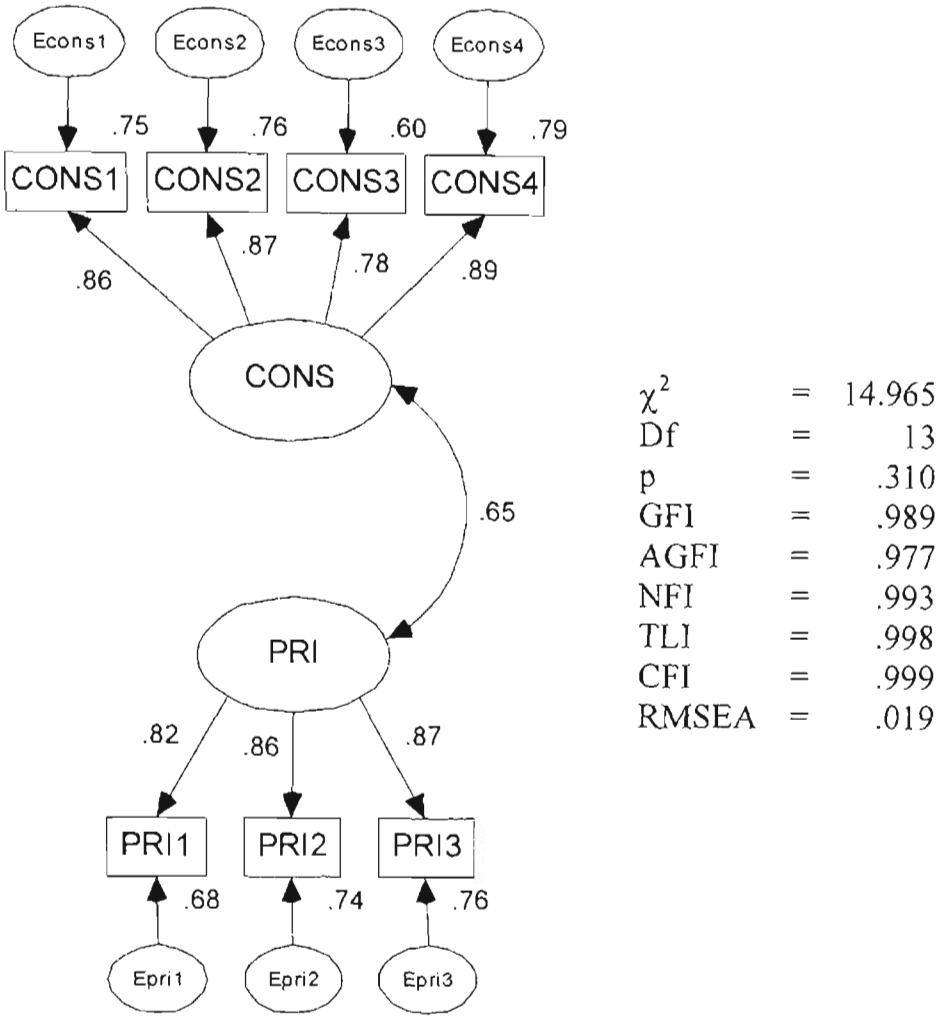


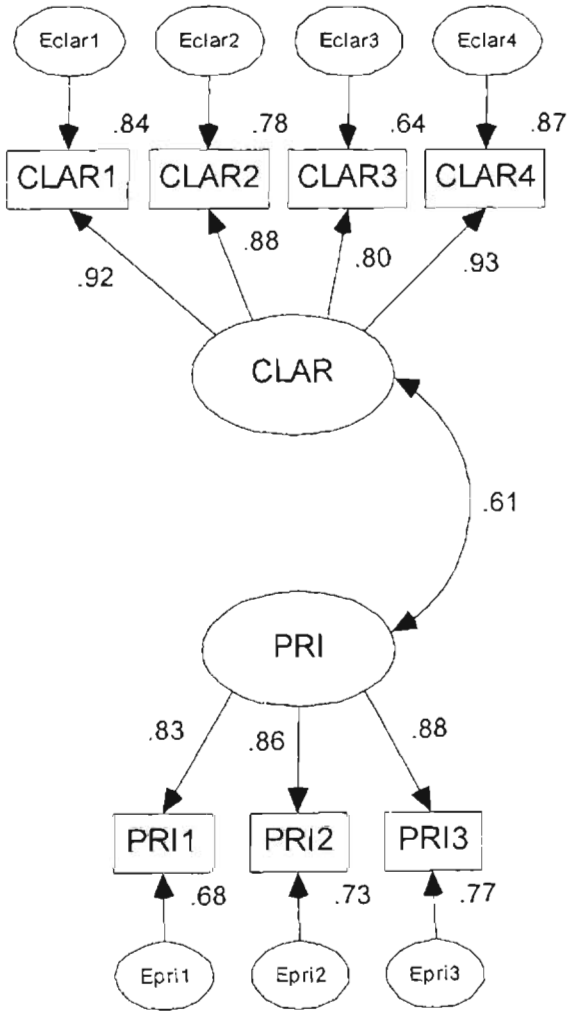
Figure 5.20: Pair-wise CFA Results of PRI–CONS

Perceived Price Competitiveness–Signal Clarity (PRI–CLAR)

PRI and CLAR were proposed as unidimensionality constructs. The CFA results for the pair are shown in Figure 5.21. The measurement model has thirteen degrees of freedom. The findings indicate that the measurement model receives a satisfactory level of fit to the data. Although the Chi-square statistic is significant (χ^2= 30.979, p = .003 – lower than the conventional level of five percent), other model fit measures indicate a good level of fit of the model to the data (for example, GFI = .979; AGFI = .955; NFI = .987; TLI = .987; CFI = .992; RMSEA = .058). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.142 (PRI3 ↔ CLAR3).

Items load significantly ($p < .001$) on their latent constructs. The lowest loading on PRI is .83 (PRI1), and the lowest loading on CLAR is .80 (CLAR3). Table 5.10 shows that the construct reliability of PRI (.888) and CLAR (.934) are greater than .70. The AVE of PRI (.726) and CLAR (.780) are greater than .50. These findings indicate that the measures of PRI and CLAR achieve the unidimensionality and convergent validity.

The AVE of PRI (.726) and the AVE of CLAR (.780) are larger than the squared inter-correlation between PRI and CLAR (.376) (Tabl 5.10). This result supports the convergent and discriminant validity of PRI and CLAR.

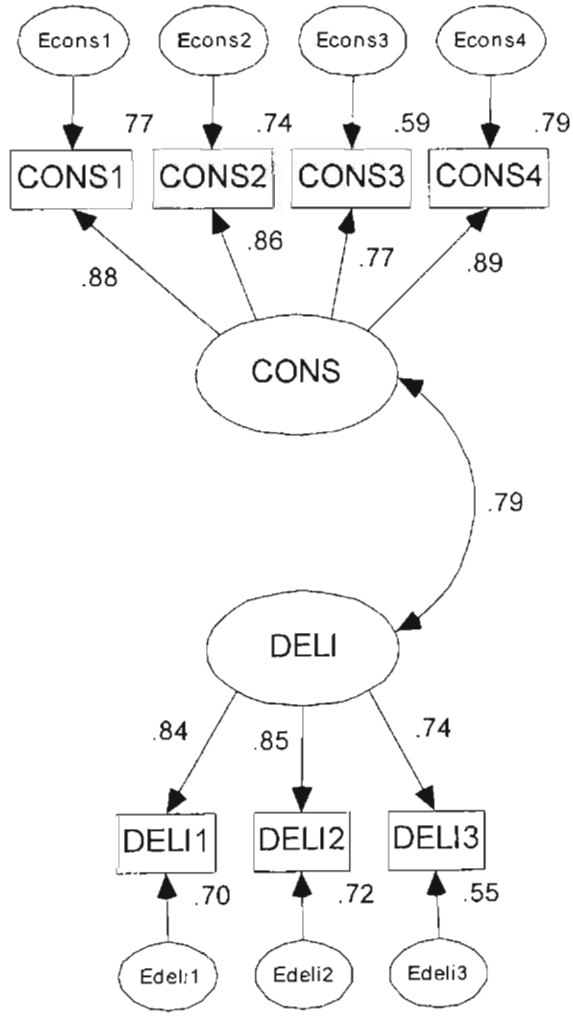


χ^2	=	30.979
Df	=	13
p	=	.003
GFI	=	.979
AGFI	=	.955
NFI	=	.987
TLI	=	.987
CFI	=	.992
RMSEA	=	.058

Figure 5.21: Pair-wise CFA Results of PRI–CLAR

Perceived Delivery Performance–Signal Consistency (DELI–CONS)

The pair-wise CFA results between CONS and DELI are shown in Figure 5.22. The measurement model has thirteen degrees of freedom. The findings indicate that the model receives an acceptable fit to the data. Although the Chi-square statistic is significant (χ^2 = 28.887 and p = .007), other fit measures significantly show a good fit (for example, GFI = .980; AGFI = .958; NFI = .986; TLI = .987; CFI = .992 and RMSEA = .054). In addition, no absolute standardised residual is higher than 2.58. The highest absolute value of the standardised residuals is .763 (DELI3 ↔ CONS4).



χ^2	=	28.887
Df	=	13
p	=	.007
GFI	=	.980
AGFI	=	.958
NFI	=	.986
TLI	=	.987
CFI	=	.992
RMSEA	=	.054

Figure 5.22: Pair-wise CFA Results of DELI–CONS

All factor loadings of items on CONS and DELI are significant (p < .001) and substantial. The lowest loading on CONS is .77 (CONS3), and the average loading is .849. The lowest loading on DELI is .74 (DELI3), and the average loading on DELI is

.809. Table 5.10 shows that the construct reliability of CONS (.912) and DELI (.851) are greater than .70. The AVE of CONS (.723) and DELI (.657) are greater than .50. These findings indicate that the measures of CONS and DELI achieve the unidimensionality and convergent validity.

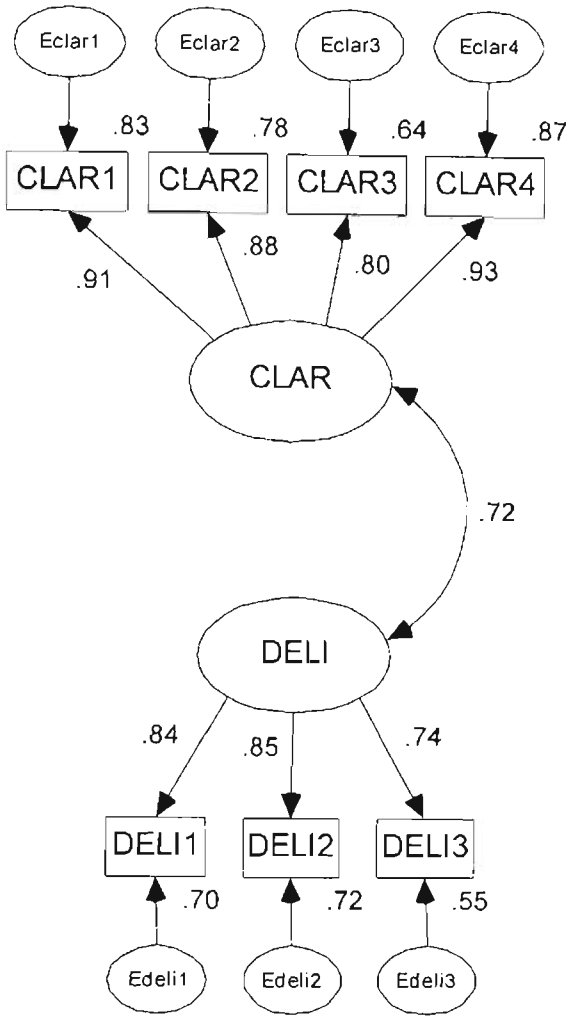
The AVE of CONS (.723) and the AVE of DELI (.657) are larger than the squared inter-correlation between CONS and DELI (.623) (see Table 5.10). The results indicate that CONS and DELI satisfy the requirements of the convergent and discriminant validity.

Perceived Delivery Performance–Signal Clarity (DELI–CLAR)

DELI and CLAR were proposed as unidimensionality constructs. The measurement model has thirteen degrees of freedom. The findings (Figure 5.23) indicate that the measurement model receives an acceptable level of fit to the data. Although the Chi-square statistics is significant (χ^2 = 28.790 and p = .007), other model fit measures indicate a good level of fit of the model to the data (for example, GFI = .981; AGFI = .958; NFI = .987; TLI = .989; CFI = .993 and RMSEA = .054). In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is .949 (DELI3 ↔ CLAR4).

Items load significantly (p < .001) and substantially on their latent constructs. The lowest loading on DELI is .74 (DELI4). The lowest loading on CLAR is .80 (CLAR3). The construct reliability of DELI (.852) and CLAR (.970) are greater than .70 (Table 5.10). The AVE of DELI (.657) and CLAR (.780) are greater than .50. These findings indicate that the measures of DELI and CLAR achieve the unidimensionality and convergent validity.

The AVE of DELI (.657) and the AVE of CLAR (.780) are greater than the squared inter-correlation between REIN and CLAR (.521) (see Table 5.10). The results support the convergent and discriminant validity of DELI and CLAR.



χ^2	=	28.790
Df	=	13
p	=	.007
GFI	=	.981
AGFI	=	.958
NFI	=	.987
TLI	=	.989
CFI	=	.993
RMSEA	=	.054

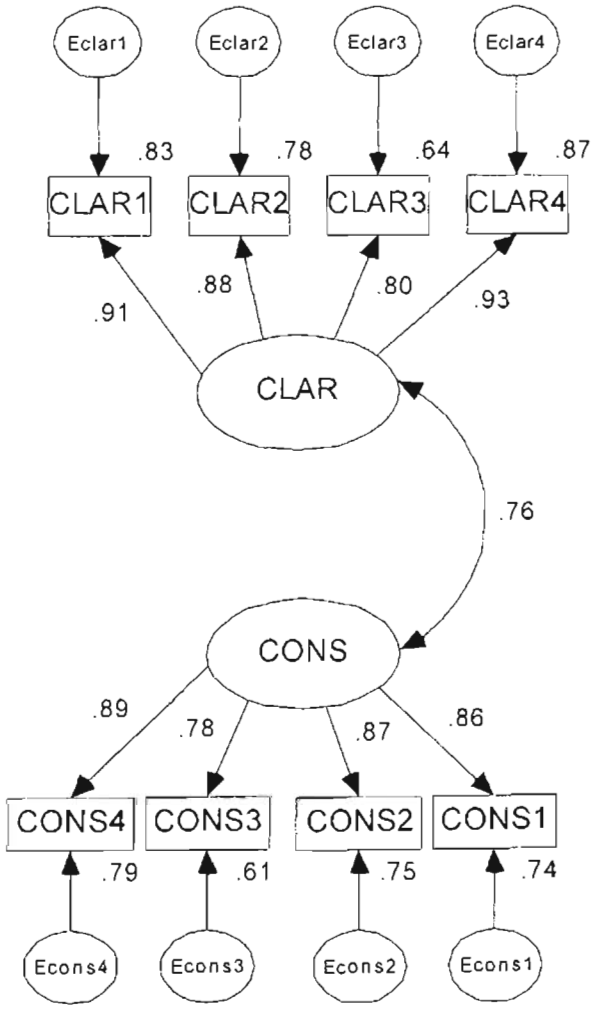
Figure 5.23: Pair-wise CFA Results of DELI–CLAR

Signal Consistency–Signal Clarity (CONS–CLAR)

The measurement model of the CONS and CLAR pair has 19 degrees of freedom. The CFA results of the CONS–CLAR pair (Figure 5.24) indicate that the model receives an acceptable fit to the data. Although the Chi-square statistic does not show a good fit (χ^2 = 52.574 and p = .001), other fit measures significantly show an acceptable fit (for example, GFI = .969; AGFI = .941; NFI = .982; TLI = .983; CFI = .988). The RMSEA = .065 (<.10 as suggested by Hair et al. 2005), which also indicates a good fit of the model. In addition, no absolute value of the standardised residuals is higher than 2.58. The highest absolute value of the standardised residuals is 1.677 (CONS3 ↔ CLAR3).

Items load substantially and significantly ($p < .001$) on their latent constructs. The lowest loading on CONS is .78 (CONS3), and the average loading on CONS is .85. The lowest loading on CLAR is .80 (CLAR3), and the average loading on CLAR is .87. The construct reliability of CONS (.913) and CLAR (.934) are greater than .70. The AVE of CONS (.725) and CLAR (.780) are greater than .50. These findings indicate that the measures of CONS and CLAR achieve the unidimensionality and convergent validity.

The AVE of CONS (.726) and the AVE of CLAR (.780) are larger than the squared inter-correlation between CONS and CLAR (.584) (Table 5.10). This result supports the convergent and discriminant validity of CONS and CLAR.



χ^2	=	52.574
Df	=	19
p	=	.000
GFI	=	.969
AGFI	=	.941
NFI	=	.982
TLI	=	.983
CFI	=	.988
RMSEA	=	.065

Figure 5.24: Pair-wise CFA Results of CONS–CLAR

5.5. SUMMARY AND CONCLUSIONS

This chapter describes the main characteristics of the survey sample, outlines the assessment criteria of construct validity, and presents the assessment results of construct validity.

The main part of this chapter presents the validation of construct measurement scales developed in Chapter 4 via the CFA approach. Reliability Analysis was employed to assess item reliability and construct reliability. Then, the key psychometric properties of each scale (unidimensionality, convergent validity, and discriminant validity) were investigated using the test results from pair-wise CFA models among each pair of constructs. Table 5.11 presents a summary of the psychometric properties of the measures.

All pair-wise CFA models receive acceptable fits to the data without any improper solution: no evidence of a Heywood case. All absolute values of standardised residuals are less than 2.58. All indicators are loaded significantly ($p < .001$) and substantially on their latent constructs. The average factor loading of constructs are all equal or higher than the ideal loading level of .70 (Hair et al. 2006). Significant and substantial factor loadings of items on each latent construct and satisfactory model fits indicate that all constructs obtain unidimensionality. Fornell and Larcker's (1981) criteria of convergent and discriminant validity were applied to assess the construct validity. The findings reveal that all single constructs' AVEs are higher than the conventional standard of .50. Each construct's AVE is greater than the squared correlations between constructs in their pair-wise CFA models. In addition, the results of the composite reliability are almost the same as the Cronbach's alphas and are all higher than the standard level of .70 (Nunnally 1978). In brief, the results confirm that all measures receive satisfactory levels of validity and reliability.

Based on the results of the construct validation discussed in this chapter, the following chapter (Chapter 6) presents the test results from the measurement model and the

structural (theoretical) model, and comparisons of the theoretical model and its competing models.

Table 5.11: Summary of Psychometric Properties of Measures

Constructs	Number of items	Reliability		AVE	Average item loading	Reliability & Validity
		Cronbach's alpha	Composite			
Importer relationship intention (REIN)	4	.921	.921	.746	.862	Satisfactory
Exporter Credibility (CRED)	6	.906	.904	.611	.780	Satisfactory
Perceived Product Quality (PROD)	3	.853	.856	.665	.810	Satisfactory
Perceived Price Competitiveness (PRI)	3	.888	.889	.727	.852	Satisfactory
Perceived Delivery Performance (DELI)	3	.851	.853	.658	.809	Satisfactory
Signal Consistency (CONS)	4	.911	.913	.724	.849	Satisfactory
Signal Clarity (CLAR)	4	.930	.934	.78	.880	Satisfactory

AVE: Average Variance Extracted

CHAPTER 6

DATA ANALYSIS – THEORETICAL MODEL TESTING

6.1. INTRODUCTION

Chapter 5 confirms that all constructs meet the reliability and validity requirements. This chapter presents the results from a test of theoretical model and hypotheses proposed in Chapter 3 via Structural Equation Modeling (SEM). The chapter comprises five main sections. Section 6.2 outlines the two-step approach utilised to test the theoretical model. SEM results from the measurement model and the structural model are presented in Section 6.3. Section 6.4 compares the results from the test of the theoretical model and its two competing models. Section 6.5 discusses the results of hypothesis testing. Finally, Section 6.6 addresses and discusses the moderating effects of ownership type and relationship duration.

6.2. TWO-STEP APPROACH IN STRUCTURAL EQUATION MODELING

Anderson and Gerbing (1982) suggest that a model-testing process should include the analysis of two conceptually distinct models: the measurement model and the structural model. This process is also called the simple two-step approach (Kline 2005), as distinct from the complex two-step approach of five models presented in Anderson and Gerbing (1988). The first step involves finding an acceptable measurement model (Kline 2005) through testing the construct validity and model fit. In this step, all inter-correlations among constructs are freely estimated. After the measurement model is found as being a satisfactory fit, the structural (theoretical) model is tested in the second step. In this step, the structural model specifies the causal relations of the constructs as proposed in the theoretical model (Anderson and Gerbing 1988).

In comparison with the one-step method, there are significant advantages in separating the model assessment into two steps. In the one-step method, the measurement model and the structural model are tested simultaneously in a single analysis (Kline 2005). Hence, it is difficult to identify the causes of a poor model fit (Anderson and Gerbing 1992). Testing the measurement model before testing the structural model is essential in validating the constructs (Hair et al. 2006). It enables a comprehensive assessment of the construct validity (unidimensionality, convergent and discriminant validity). The measurement model fit also provides a baseline from which to assess the nomological validity of the structural theory (Anderson and Gerbing 1988). Thus, it is advisable to test the structural model only after the measurement model shows a good fit to the collected data (Hair et al. 2006). In practice, the majority of SEM researchers employ the two-step approach in their research (reviewed by Garver and Mentzer 1999; Steenkamp and Baumgartner 2000).

It is advisable to check several considerations after conducting these two steps. The first consideration involves the model fit difference between the measurement and the structural models. It can be concluded that the theoretical (structural) model lacks validity if the structural model fit is substantially worse than the measurement model fit (Hair et al. 2006). Second, if the measurement model achieves an acceptable fit, only slight changes in the factor loadings are expected in the structural model. If the factor loadings change remarkably in the structural model (in comparison with the measurement model), this is evidence of interpretational confounding (Kline 2005).

Based on the above discussion on the two-step method, the following sections present the test results from the measurement model and the structural model.

6.3. TESTING THE CONCEPTUAL MODEL USING THE TWO-STEP APPROACH

6.3.1. Test Results from the Measurement Model

The results of pair-wise CFA tests (presented in Chapter 5) support the validity and reliability of all constructs of the theoretical model proposed in Chapter 3. This section

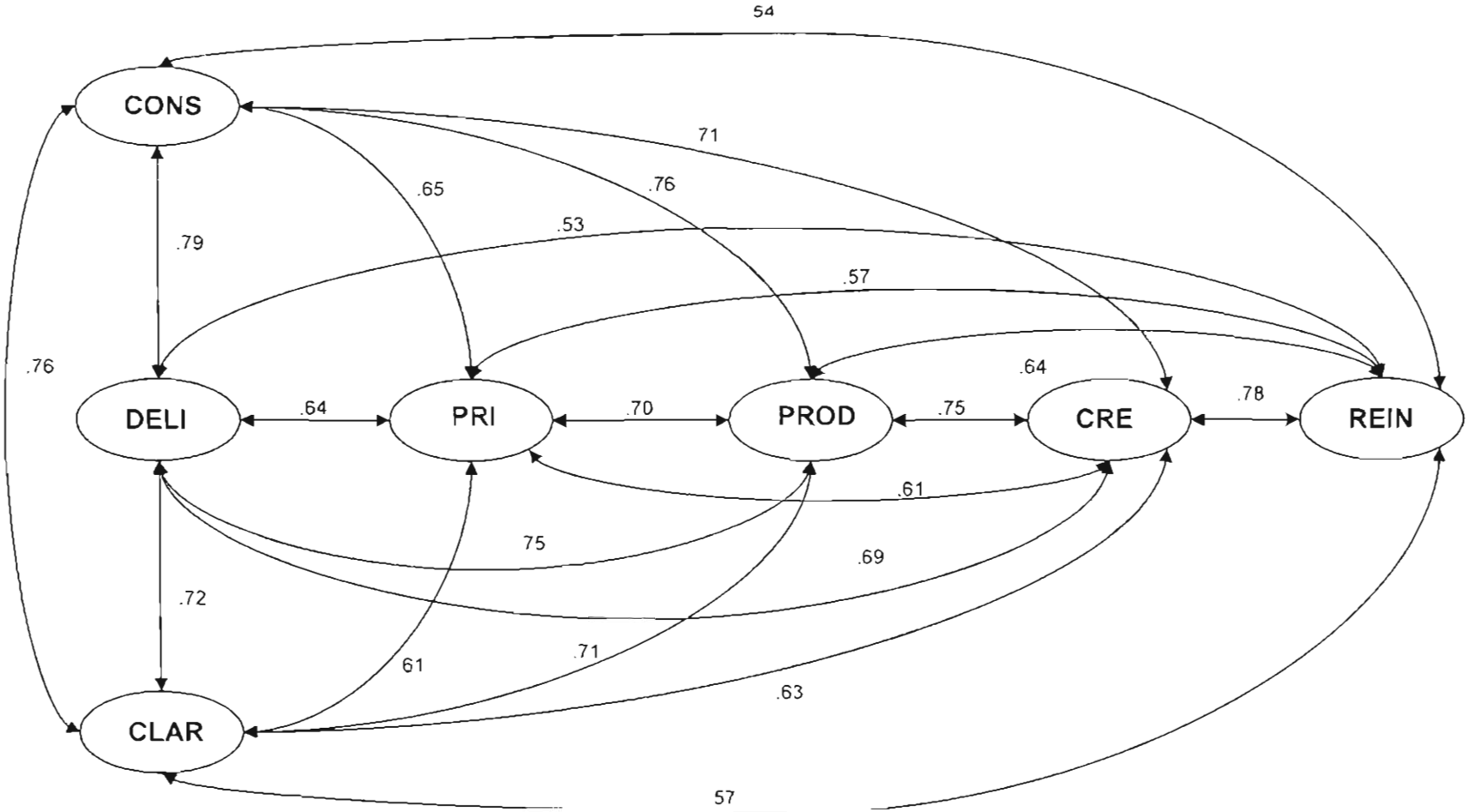
presents the results of testing the across-construct discriminant validity and the fit of the measurement model.

As discussed in Section 5.3.1.4, the Average Variance Extracted (AVE) of each construct and squared correlation of that construct with another construct in the measurement model can be used to assess the across-construct discriminant validity. If the AVE of an individual construct is greater than the squared correlations of that construct with any other construct in the final measurement model, and the model receives a satisfactory level of fit, then that construct achieves across-construct discriminant validity (Fornell and Larcker 1981).

As discussed in Section 6.2, testing the model fit of the measurement model is the first step (of the two steps) in assessing the validity of the structural model (Anderson and Gerbing 1992). The measurement model is the model in which all constructs are free to correlate with one another. There are seven constructs in the measurement model: Importer Relationship Intention (REIN); Exporter Credibility (CRED); Perceived Product Quality (PROD); Perceived Price Competitiveness (PRI); Perceived Delivery Performance (DELI); Signal Clarity (CLAR); and Signal Consistency (CONS). ML was used to estimate parameters and testing the model fit of the measurement model. The AMOS 6 program was used to conduct the test.

The findings (Figure 6.1)[18] show that some fit indices do not demonstrate a good fit, such as the Chi-square statistic (Chi-square = 549.051 and $p < .001$); and AGFI (.889, which is smaller than .90). However, these indices are sensitive to the sample size and the model complexity (reviewed by Hair et al. 2005; Kline 2005; Byrne 2001). It is more common to see a large Chi-square in models with high degrees of freedom or complex models (Joreskog and Sorbom 1993). Other fit measures indicate that the measurement model receive a good fit to the data (GFI = .911; NFI = .942; TLI = .969; CFI = .973; RMSEA = .044).

[18] Appendices E1 and E2 present the detailed fit indices and standardised residual covariances.



χ^2 = 549.051; Df = 303; p = .000; χ^2/Df = 1.812; GFI = .911; AGFI = .889; NFI = .942; TLI = .969; CFI = .973; RMSEA = .044 (.038 – .050)

Figure 6.1: CFA Results of the Final Measurement Model

As MacCallum et al. (1996) recommend, the confidence interval of RMSEA provides researchers with a more effective tool with which to evaluate the model fit. The confidence interval of the measurement model's RMSEA is relatively small (from .038 to .050). The confidence interval indicates that, at the 90% confidence level, the true RMSEA value of the population will fall within the bounds of .038 and .050. The upper-bound RMSEA value is still smaller than the acceptable fit value (.08, as suggested by Browne and Cudeck (1993); or .10, as suggested by Hair et al. (2006)). In addition, all standardised residuals (see Appendix E2) are lower than 2.58, which also indicates a good fit (Joreskog and Sorbom 1989). In short, it can be concluded that the measurement model receives a satisfactory fit to the data.

Table 6.1: Correlations among Constructs in the Measurement Model

			Correlation	S.E.	C.R.	p
CLAR	↔	PROD	0.713	0.087	8.195	.000
CONS	↔	CLAR	0.765	0.087	8.793	.000
CONS	↔	CRED	0.705	0.074	9.527	.000
CONS	↔	REIN	0.537	0.071	7.563	.000
CLAR	↔	CRED	0.629	0.073	8.616	.000
CLAR	↔	REIN	0.568	0.074	7.676	.000
CRED	↔	REIN	0.779	0.074	10.527	.000
CLAR	↔	DELI	0.725	0.081	8.951	.000
CRED	↔	PRI	0.608	0.066	9.212	.000
PROD	↔	DELI	0.753	0.082	9.183	.000
CONS	↔	PROD	0.762	0.087	8.759	.000
CRED	↔	PROD	0.745	0.078	9.551	.000
DELI	↔	REIN	0.535	0.066	8.106	.000
CRED	↔	DELI	0.689	0.069	9.986	.000
CONS	↔	DELI	0.789	0.082	9.622	.000
CLAR	↔	PRI	0.615	0.076	8.092	.000
PROD	↔	PRI	0.699	0.08	8.738	.000
REIN	↔	PRI	0.573	0.069	8.304	.000
PROD	↔	REIN	0.645	0.078	8.269	.000
DELI	↔	PRI	0.643	0.071	9.056	.000
CONS	↔	PRI	0.653	0.075	8.707	.000

S.E.: Standard Error; C.R.: critical Ratio.

All correlations of one construct and another construct in the measurement model are significant ($p < .001$) with small standard errors (Table 6.1). There is no evidence of a Heywood case: no correlation higher than 1.0; no negative variance, no negative value in the covariance or correlation matrices.

Table 6.2 presents an assessment of the across-construct discriminant validity. The AVE of each individual construct is greater than the squared correlations of that construct with one other construct in the measurement model. The results reveal that all measures achieve across-discriminant validity.

Table 6.2: Assessment of Across-Construct Discriminant Validity

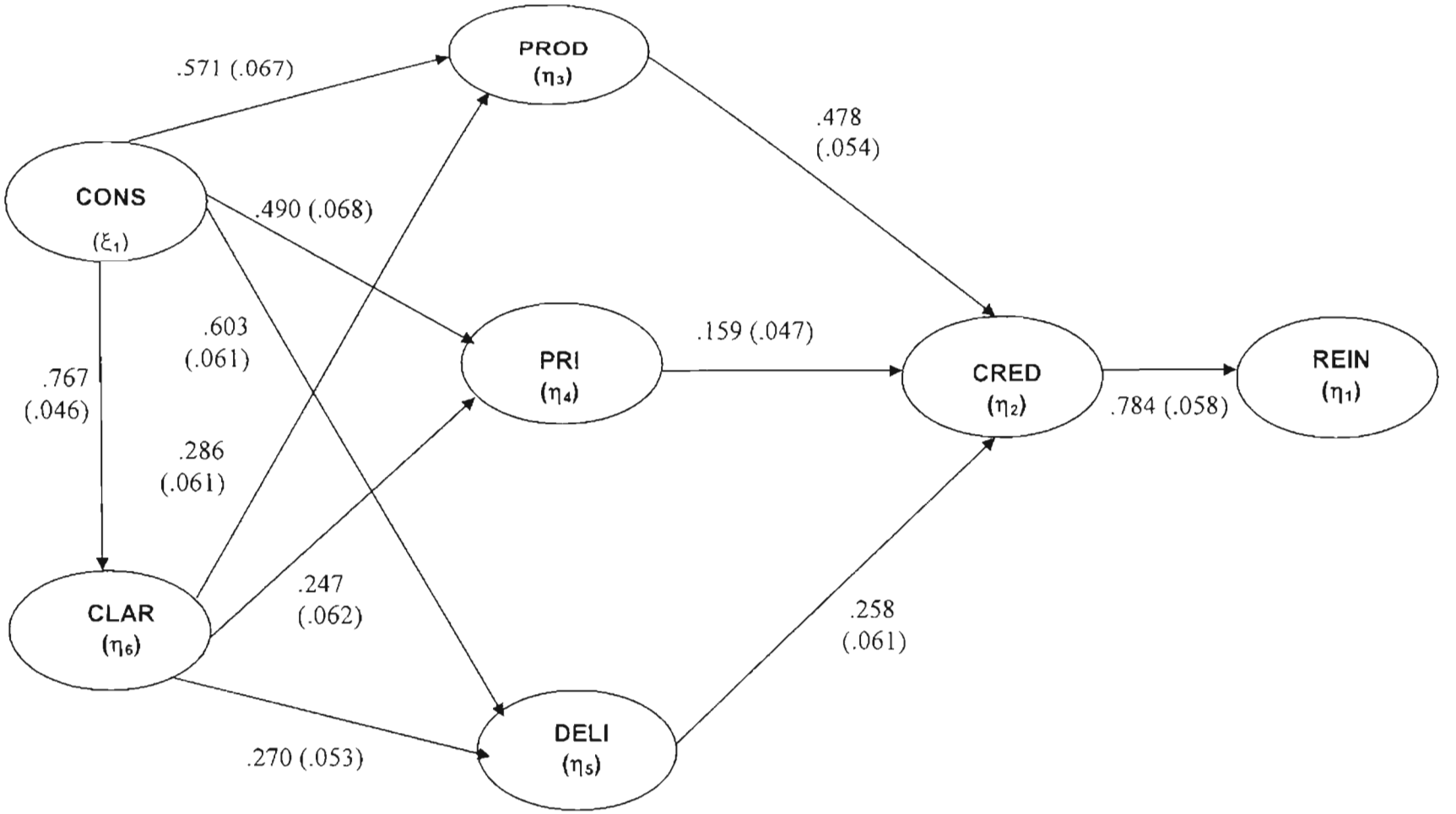
Relationships between			Correlations	Squared correlation	1st construct AVE	2nd construct AVE	Convergent & discriminant validity
CLAR	↔	PROD	0.713	0.508	0.781	0.665	Satisfactory
CONS	↔	CLAR	0.765	0.585	0.725	0.781	Satisfactory
CONS	↔	CRED	0.705	0.497	0.725	0.611	Satisfactory
CONS	↔	REIN	0.537	0.288	0.725	0.746	Satisfactory
CLAR	↔	CRED	0.629	0.396	0.781	0.611	Satisfactory
CLAR	↔	REIN	0.568	0.323	0.781	0.746	Satisfactory
CRED	↔	REIN	0.779	0.607	.611	0.746	Satisfactory
CLAR	↔	DELI	0.725	0.526	0.781	0.657	Satisfactory
CRED	↔	PRI	0.608	0.370	0.611	0.726	Satisfactory
PROD	↔	DELI	0.753	0.567	0.665	0.657	Satisfactory
CONS	↔	PROD	0.762	0.581	0.725	0.665	Satisfactory
CRED	↔	PROD	0.745	0.555	0.611	0.665	Satisfactory
DELI	↔	REIN	0.535	0.286	0.657	0.746	Satisfactory
CRED	↔	DELI	0.689	0.475	0.611	0.657	Satisfactory
CONS	↔	DELI	0.789	0.623	0.725	0.657	Satisfactory
CLAR	↔	PRI	0.615	0.378	0.781	0.726	Satisfactory
PROD	↔	PRI	0.699	0.489	0.665	0.726	Satisfactory
REIN	↔	PRI	0.573	0.328	0.746	0.726	Satisfactory
PROD	↔	REIN	0.645	0.416	0.665	0.746	Satisfactory
DELI	↔	PRI	0.643	0.413	0.657	0.726	Satisfactory
CONS	↔	PRI	0.653	0.426	0.725	0.726	Satisfactory

AVE: Average Variance Extracted

6.3.2. Test Results from the Structural/Theoretical Model

After the measurement model showed a satisfactory fit to the data, ML was employed to estimate the structural model via the AMOS 6 program. The structural test results from the theoretical model are presented in Figure 6.2. The model has 313 degrees of freedom, with 65 parameters. Traditional notations of SEM were used to present the results of structural tests, that is, eta (η) for endogenous constructs, ksi (ξ) for exogenous constructs. The covariance/correlation matrices of variables are presented in Appendix C.

The findings indicate that the fit indices, which are sensitive to the sample size and the model complexity, do not show a good fit (for example, Chi-square = 627.342 and $p < .001$; AGFI = .877; AFI = .898, which is smaller than the .90 cut-off point). However, other measures of fit indicate an acceptable fit. For example, NFI = .934; TLI = .961; CFI = .965; RMSEA = .049. The confidence interval of RMSEA is small (ranges from .043 to .055), which shows the reliability of the test results. The upper-bound RMSEA (.055) is still smaller than the acceptable cut-off value of .08, as recommended by Browne and Cudeck (1993) or .10, as recommended by Hair et al. (2006). Other fit indices also show a satisfactory fit to the data (see Table 6.6 for more detail). In addition, all standardised residuals are lower than 2.58 (see Appendix G1). Moreover, as suggested by Byrne (2001), even when a model shows a satisfactory fit, reviewing the modification indices is worthwhile to identify any model misfit or re-specification. The modification index results produced by the AMOS 6 program do not suggest any change to any regression path to improve the model's fit. As a result of the above discussion, it can be concluded that the theoretical model receives a satisfactory fit to the data.



χ^2 = 627.342; Df = 313; p = .000; χ^2/Df = 2.004; GFI = .898; AGFI = .877; NFI = .934; TLI = .961; CFI = .965; RMSEA = .049 (.043 – .055)

Figure 6.2: SEM Results of the Theoretical Model (Standardised Estimates)

(Numbers in brackets are standard errors.)

All theoretical relationships are found to be significant ($p < .001$), with small standard errors (see Table 6.3). All indicators are significantly loaded on their latent constructs ($p < .001$; see Table 6.5). There is no evidence of a Heywood case: no negative variance, no negative value in the covariance or the correlation matrices, and no estimated correlation between a factor and an indicator with the absolute value greater than 1.

Table 6.3: Standardised Regression Coefficients of the Theoretical Model

Relationships between			Estimate	S.E.	C.R.	p-value
CONS	→	CLAR	0.767	0.046	16.674	.000
CONS	→	PROD	0.568	0.067	8.478	.000
CONS	→	DELI	0.6	0.061	9.836	.000
CONS	→	PRI	0.484	0.074	6.541	.000
CLAR	→	DELI	0.271	0.053	5.113	.000
CLAR	→	PRI	0.232	0.068	3.412	.002
CLAR	→	PROD	0.287	0.061	4.705	.000
PROD	→	CRED	0.474	0.053	8.943	.000
DELI	→	CRED	0.258	0.06	4.300	.000
PRI	→	CRED	0.171	0.047	3.638	.001
CRED	→	REIN	0.784	0.058	13.517	.000

S.E.: standard error, C.R.: critical value.

As discussed in Section 6.2, it is recommended that the fit measures and factor loadings between the measurement model and the structural model should be compared. Table 6.4 illustrates that the values of the main fit measures of the structural model are similar to or slightly lower than those of the measurement model. The comparisons of other fit indices are presented in Appendix E1. This small difference supports the validity of the structural model (Hair et al. 2006).

Table 6.4: Comparison of Fit Measures between the Measurement and the Structural Models

	χ^2	Df	p	χ^2/Df	GFI	AGFI	NFI	TLI	CFI	RMSEA
Structural model	627.342	313	.000	2.004	.898	.877	.934	.961	.965	.049 (.043-.055)
Measurement model	549.051	303	.000	1.812	.911	.889	.942	.969	.973	.044 (.038-.050)

Table 6.5 provides comparisons of factor loadings across the measurement and structural models. The test results indicate that factor loadings of indicators on their latent constructs in the structural model are similar to those in the measurement model. All factor loadings are significant ($p < .001$).

Table 6.5: Comparison of Factor Loadings between the Measurement and the Structural Models

Construct		Indicators	Theoretical model		Measurement model	
			Estimate	S.E.	Estimate	S.E.
REIN	→	REIN1	.850*		.851*	
REIN	→	REIN2	.867	.044	.869	.044
REIN	→	REIN3	.872	.045	.873	.045
REIN	→	REIN4	.859	.047	.862	.047
CRED	→	CRED1	.778*		.784*	
CRED	→	CRED2	.738	.060	.743	.059
CRED	→	CRED3	.757	.063	.759	.062
CRED	→	CRED5	.783	.060	.789	.059
CRED	→	CRED6	.846	.055	.850	.054
CRED	→	CRED7	.756	.058	.762	.057
PROD	→	PROD1	.860*		.859*	
PROD	→	PROD2	.861	.043	.862	.043
PROD	→	PROD3	.712	.052	.718	.051
PRI	→	PRI1	.825*		.826*	
PRI	→	PRI2	.855	.052	.851	.052
PRI	→	PRI3	.877	.055	.878	.054
DELI	→	DELI1	.845	.063	.846	.063
DELI	→	DELI2	.841	.064	.843	.063
DELI	→	DELI3	.736*		.738*	
CONS	→	CONS1	.864	.037	.867	.036
CONS	→	CONS2	.861	.039	.865	.038
CONS	→	CONS3	.784	.044	.782	.044
CONS	→	CONS4	.881*		.887*	
CLAR	→	CLAR1	.914*		.914*	
CLAR	→	CLAR2	.881	.033	.881	.033
CLAR	→	CLAR3	.808	.037	.807	.037
CLAR		CLAR4	.926	.033	.927	.033

*S.E.: standard error; *: constrained to 1 for the unstandardised regression weights; all estimated parameters are significant at p = .000.*

Values of standard errors are small and similar across both the structural model and the measurement model. In brief, the comparison of fit indices and factor loadings between the structural model and the measurement model supports the validity of the structural model. Regarding the post-hoc analysis, the modification index results produced by the AMOS 6 program suggest that no regression path should be re-specified.

6.4. COMPARISONS BETWEEN THE THEORETICAL MODEL AND ITS COMPETING MODELS

This section discusses the results from testing the theoretical model and its two competing models. As presented in Chapter 3 (Section 3.8), the theoretical model was proposed for testing against two competing models: the less restrictive model and the more restrictive model. The test results for the theoretical model, the less restrictive and the more restrictive competing models are illustrated in Figures 6.2, 6.3 and 6.4, respectively.

These models comprise seven constructs (one exogenous – CONS, others are endogenous): Importer Relationship Intention (REIN), Exporter Credibility (CRED), Perceived Product Quality (PROD), Perceived Price Competitiveness (PRI), Perceived Delivery Performance (DELI), Signal Clarity (CLAR), Signal Consistency (CONS). The models were estimated using ML via the AMOS 6 program. As discussed in Section 3.8, the less restrictive competing model proposed two additional paths: the path from CLAR to CRED, and the path from CONS to CRED. The more restrictive competing model proposed that there was no relationship between CLAR and PRI in comparison with the theoretical model. The less restrictive competing model has 311 degrees of freedom and 67 parameters. The more restrictive competing model has 314 degrees of freedom, with 64 parameters. Comparisons are made based on the difference between model fits and structural path analysis. The following sections present comparisons between the fit measures and structural regression weights of the theoretical model and its two competing models.

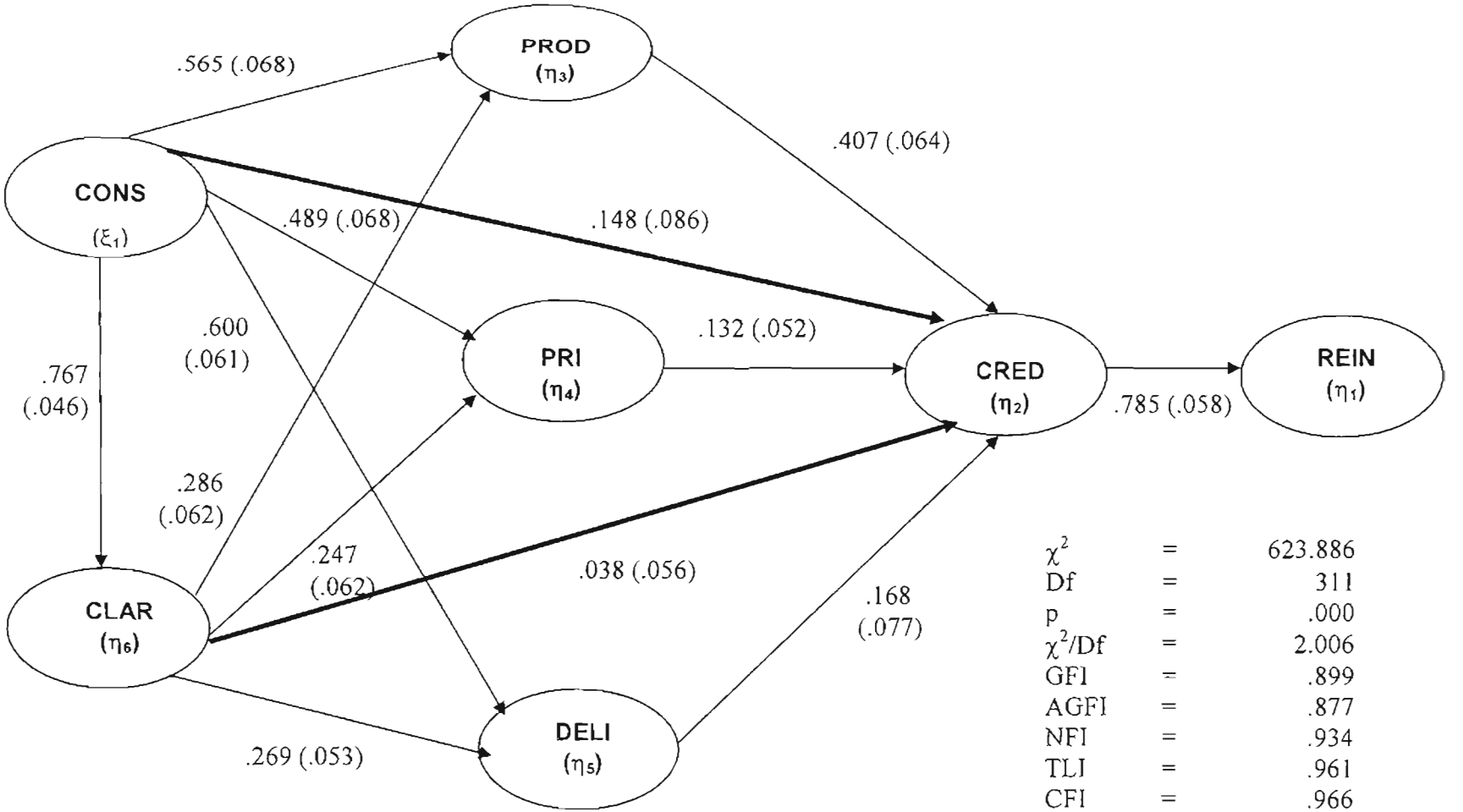


Figure 6.3: SEM Results of the Less Restrictive Competing Model (Standardised Estimates)

Bold arrows: relationships that were not hypothesised in the theoretical model.

(Numbers in brackets are standard errors.)

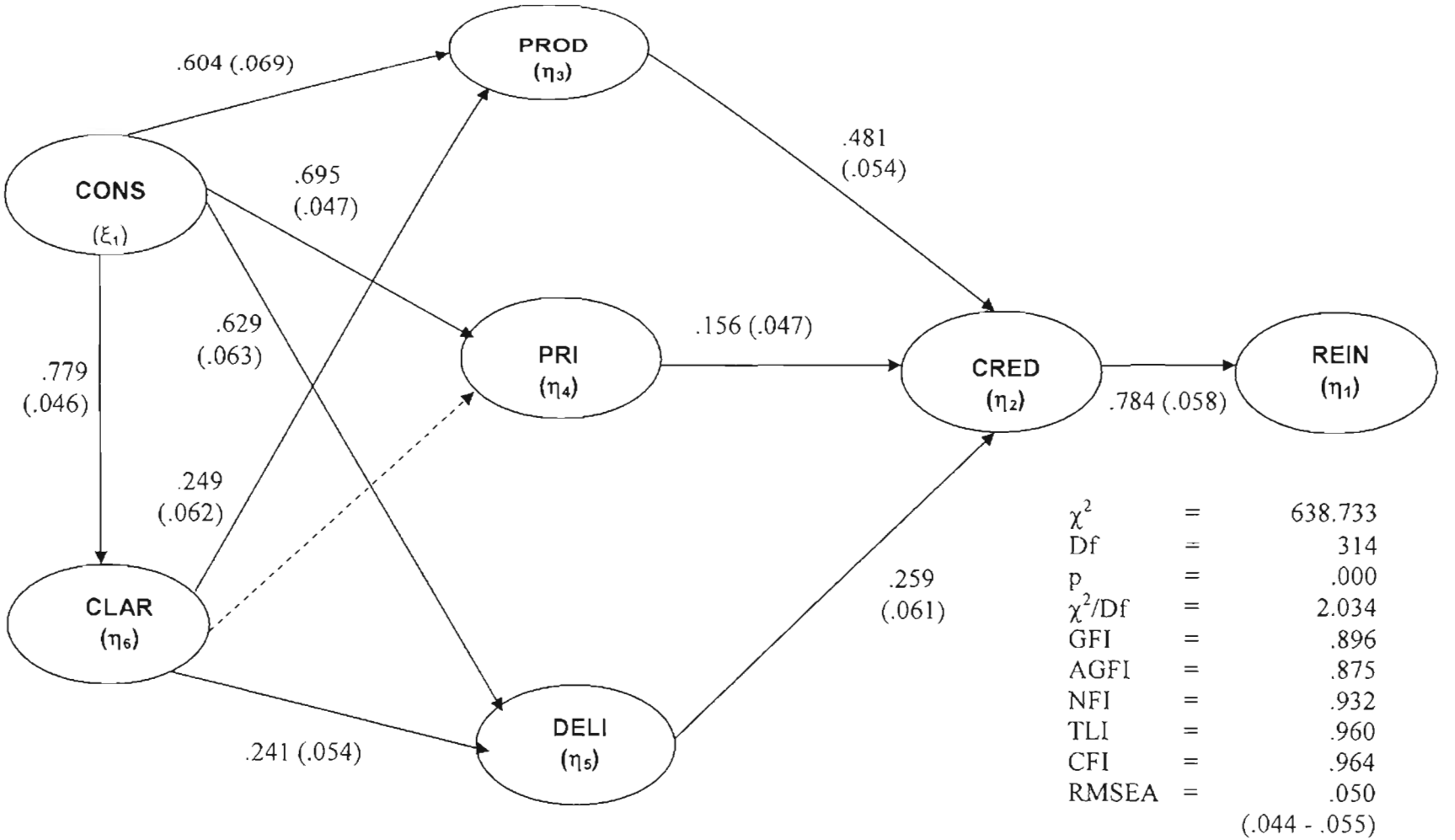


Figure 6.4: SEM Results of the More Restrictive Competing Model (Standardised Estimates)

------► Dashed arrow shows the relationship that was hypothesised in the theoretical model but was not in the more restrictive competing model. *(Numbers in brackets are standard errors)*

6.4.1. Comparisons of Model Fit

The Chi-square is the fundamental measure of fit in SEM (Kline 2005). As the theoretical and competing models are nested, the test of the Chi-square difference is used to compare the theoretical model and its competing models. The null hypothesis is no significant difference between two models. As "the difference between Chi-square statistics values for nested models is itself asymptotically distributed" (Anderson and Gerbing 1988, p. 418), the Chi-square statistic of this test is equal to the difference between the Chi-square statistics of the two models, with the degrees of freedom being the difference between the two models' degrees of freedom.

Since the Chi-square statistic is sensitive to sample size and model complexity (Joreskog and Sorbom 1993), the expected cross-validation index (ECVI) was also considered. Calculated as a function of the Chi-square value and its degrees of freedom, ECVI reduces the sensitivity of the index to the model complexity (Browne and Cudeck 1993). ECVI is also a preferred model comparison index (Bollen 1989), wherein only one set of sample data is available. ECVI provides similar results to those of the two-sample approach (MacCallum and Austin 2000). The model with a lower ECVI is more stable in the population. In addition, other commonly used fit measures (GFI, NFI, TLI, CFI and RMSEA) were used to make comparisons.

6.4.1.1 Comparison between the Theoretical Model and the Less Restrictive Competing Model

The test results from the less restrictive model are presented in Table 6.6 and Figure 6.3. The less restrictive model shows a satisfactory fit to the data (GIF = .899; AGFI = .877; NFI = .934; TLI = .961; CFI = .966. RMSEA = .049). The theoretical model has a Chi-square statistic of 627. 342 ($p < .001$) and 313 degrees of freedom. The less restrictive model has a Chi-square statistic of 623.886 ($p < .001$) and 311 degrees of freedom. The Chi-square difference value is 3.456 (627.342 - 623.886) and there are two degrees of freedom (313–311). Because the Chi-square difference is smaller than the critical value (9.21), the null hypothesis is supported. The results indicate that there is no significant difference between the two models.

Table 6.6: Measures of Fit of the Theoretical, Less Restrictive and More Restrictive Competing Models

		Theoretical model	*Less restrictive competing model*	*More restrictive competing model*
Discrepancy	CMIN	627.342	623.886	638.733
Degrees of freedom	Degrees of freedom	313	311	314
p value	p	.000	.000	.000
Number of parameters	NPAR	65	67	64
Discrepancy/df	CMIN/df	2.004	2.006	2.034
RMR	RMR	.066	.065	.071
GFI	GFI	.898	.899	.896
Adjusted GFI	AGFI	.877	.877	.875
Parsimony-adjusted GFI	PGFI	.744	.740	.745
Normed Fit Index	NFI	.934	.934	.932
Relative Fit Index	RFI	.926	.925	.924
Incremental Fit Index	IFI	.966	.966	.964
Tucker-Lewis Index	TLI	.961	.961	.960
Comparative Fit Index	CFI	.965	.966	.964
Parsimony Ratio	PRATIO	.892	.886	.895
Parsimony-adjusted NFI	PNFI	.833	.828	.834
Parsimony-adjusted CFI	PCFI	.861	.856	.863
Noncentrality Parameter Estimate	NCP	314.342	312.886	324.733
NCP lower bound	NCLPO	246.812	245.545	256.380
NCP upper bound	NCPHI	389.648	388.006	400.856
FMIN	FMIN	1.504	1.496	1.532
FO	FO	.754	.750	.779
FO lower bound	FOLO	.592	.589	.615
FO upper bound	FOHI	.934	.930	.961
RMSEA	RMSEA	.049	.049	.050
RMSEA lower bound	RMSEALO	.043	.044	.044
RMSEA upper bound	RMSEAHI	.055	.055	.055
P for test of close fit	PCLOSE	.600	.595	.516
Akaike Information Criteria	AIC	757.342	757.886	766.733
Browne-Cudeck Criteria	BCC	766.699	767.531	775.946
Bayes Information Criterion	BIC	1019.648	1028.263	1025.003
Consistent AIC	CAIC	1084.648	1095.263	1089.003
Expected Cross-validation Index	ECVI	1.816	1.817	1.839
ECVI lower bound	ECVILO	1.654	1.656	1.675
ECVI upper bound	ECVIHI	1.997	1.998	2.021
MECVI	MECVI	1.839	1.841	1.861
Hoelter .05 index	HHFIVE	237	237	233
Hoelter .01 index	HONE	249	249	245

Table 6.6 also reveals that the ECVI value of the theoretical model (2.004) is slightly smaller than that of the less restrictive model (2.006). Other most commonly used fit indices are similar between the two models (AGFI = .877; NFI = .934; TLI = .961; RMSEA = .049). The GFI of the less restrictive model (= .899) is slightly higher (.001) than that of the theoretical model (= .898). In brief, the comparison of these fit indices shows a similar level of fit between the theoretical and the less restrictive model.

6.4.1.2. Comparison between the Theoretical Model and the More Restrictive Competing Model

The test results from the more restrictive competing model are presented in Table 6.6 and Figure 6.4. The more restrictive competing model has a Chi-square statistic of 638.733 ($p < .001$) and 314 degrees of freedom. The Chi-square difference between the more restrictive competing model and the theoretical model is 11.391 (638.733–627.342) with one degree of freedom (314–313). Because the Chi-square difference is greater than the critical value at the significance level of .01 (6.64), the null hypothesis is not supported. It indicates that there is a significant difference between the two models at the significance level of .01. Hence, as Anderson and Gerbing (1988) suggest, the less constrained model (the theoretical model) is selected over the more restrictive competing model. In addition, the ECVI value of the more restrictive competing model (2.034) is slightly higher than that of the theoretical model (2.004). Other common fit measures (GFI, AGFI, NFI, TLI, CFI and RMSEA) of the more restrictive competing model are slightly worse than those of the theoretical model.

In brief, the fit measure comparison of the theoretical model and its two competing models reveals that the theoretical model has the smallest value of the ECVI. It also indicates that the theoretical model is the most stable model in the population among the three models. Common fit measures of the theoretical model are slightly better than those of the more restrictive competing model and are similar to those of the less restrictive competing model. Therefore, the comparisons of the model fit suggest that the theoretical model should be selected over its two competing models.

6.4.2. Comparisons of Structural Paths

Besie the overall model fit, the component fits (particularly the structural paths between constructs) are suggested for investigation (Bollen and Long 1993). Allowing more structural paths to be estimated might increase the model fit. However, researchers are not encouraged to increase the model fit by adding meaningless, trivial or non-significant paths (MacCallum and Austin 2000). This section compares structural paths of the theoretical model and its two competing models. Table 6.7 presents comparisons of standardised regression coefficients; standard errors; critical ratio; and p-value of structural paths of the three models. The standardised residuals of the theoretical model, the less restrictive and the more restrictive competing model are presented in Appendices F1, F2 and F3, respectively.

6.4.2.1. Comparison between the Theoretical Model and the Less Restrictive Competing Model

The results inTable 6.7 indicate that all regression coefficients of the theoretical models are significant ($p < .001$). There is no significant path from CONS to CRED ($p = .142$), neither is there a significant path from CLAR to CRED ($p = .575$). The findings suggest that there is no direct effect from signal consistency to exporter credibility. The direct effect from signal clarity to exporter credibility is not supported either. In addition, the model fit comparison (in Section 6.4.1.1) shows a similar fit between the two models. Together with this structural path analysis, the theoretical model is selected over the less restrictive competing model.

Table 6.7: Comparisons of Standardised Regression Coefficients of the Theoretical, the Less Restrictive and the More Restrictive Competing Models

Relationship between			*Theoretical model*				*Less restrictive competing model*				*More restrictive competing model*			
			Estimate	S.E.	C.R.	p	Estimate	S.E.	C.R.	p	Estimate	S.E.	C.R.	p
CONS	→	CLAR	0.767	0.046	16.674	.000	0.767	0.046	16.674	.000	0.779	0.046	16.935	.000
CONS	→	PROD	0.571	0.067	8.522	.000	0.565	0.068	8.309	.000	0.604	0.069	8.754	.000
CONS	→	DELI	0.603	0.061	9.885	.000	0.6	0.061	9.836	.000	0.629	0.063	9.984	.000
CONS	→	PRI	0.49	0.068	7.206	.000	0.489	0.068	7.191	.000	0.695	0.047	14.787	.000
CLAR	→	DELI	0.27	0.053	5.094	.000	0.269	0.053	5.075	.000	0.241	0.054	4.463	.000
CLAR	→	PRI	0.247	0.062	3.984	.000	0.247	0.062	3.984	.000	0.00*			
CLAR	→	PROD	0.286	0.061	4.689	.000	0.286	0.062	4.613	.000	0.249	0.062	4.016	.000
PROD	→	CRED	0.478	0.054	8.852	.000	0.407	0.064	6.359	.000	0.481	0.054	8.907	.000
DELI	→	CRED	0.258	0.061	4.230	.000	0.168	0.077	2.182	.034	0.259	0.061	4.246	.000
PRI	→	CRED	0.159	0.047	3.383	.002	0.132	0.052	2.538	.017	0.156	0.047	3.319	.002
CRED	→	REIN	0.784	0.058	13.517	.000	0.785	0.058	13.534	.000	0.784	0.058	13.517	.000
CLAR	→	CRED	0.00*				0.038	0.056	0.679	.575	0.00*			
CONS	→	CRED	0.00*				0.148	0.086	1.721	.142	0.00*			

*S.E.: Standard Error; C.R.: Critical Ratio; *: constrained to zero.*

Table 6.8: Comparisons of Factor Loadings on Latent Constructs of the Theoretical, Less Restrictive and More Restrictive Competing Models

Construct		Indicators	*Theoretical model*		*Less restrictive model*		*More restrictive model*	
			Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
REIN	→	REIN1	.850*		.851*		.850*	
REIN	→	REIN2	.867	.044	.868	.044	.867	.044
REIN	→	REIN3	.872	.045	.872	.045	.872	.045
REIN	→	REIN4	.859	.047	.859	.047	.859	.047
CRED	→	CRED1	.778*		.779*		.778*	
CRED	→	CRED2	.738	.060	.740	.060	.738	.060
CRED	→	CRED3	.757	.063	.758	.062	.757	.063
CRED	→	CRED5	.783	.060	.784	.060	.783	.061
CRED	→	CRED6	.846	.055	.847	.055	.756	.058
CRED	→	CRED7	.756	.058	.757	.058	.846	.056
PROD	→	PROD1	.860*		.862*		.860*	
PROD	→	PROD2	.861	.043	.862	.043	.861	.043
PROD	→	PROD3	.712	.052	.713	.051	.712	.052
PRI	→	PRI1	.825*		.825*		.824*	
PRI	→	PRI2	.855	.052	.855	.052	.857	.052
PRI	→	PRI3	.877	.055	.877	.055	.875	.055
DELI	→	DELI1	.845	.063	.844	.063	.845	.063
DELI	→	DELI2	.841	.064	.844	.063	.841	.063
DELI	→	DELI3	.736*		.738*		.737*	
CONS	→	CONS1	.864	.037	.864	.037	.860	.038
CONS	→	CONS2	861	.039	.861	.039	.859	.039
CONS	→	CONS3	.784	.044	.784	.044	.786	.045
CONS	→	CONS4	.881*		.881*		.877*	
CLAR	→	CLAR1	.914*		.914*		.913*	
CLAR	→	CLAR2	.881	033	.881	.033	.881	.033
CLAR	→	CLAR3	.808	.037	.808	.037	.808	.037
CLAR		CLAR4	.926	.033	.926	.033	.928	.033

*S.E.: Standard Error; *: constrained to 1 for the unstandardised regression weights; all estimates parameters are significant at $p < .001$.*

6.4.2.2. Comparison between the Theoretical Model and the More Restrictive Competing Model

The test results from the more restrictive competing model and the theoretical model (Table 6.7) indicate that all regression coefficients are significant ($p < .001$). However, the relationship between signal clarity (CLAR) and perceived price competitiveness (PRI), which was constrained in the more restrictive competing model, was found to be significant in the theoretical model ($\beta = .247$; $p < .001$). This finding supports the argument that the clarity of signals sent by exporters significantly improves importers' perceptions of price competitiveness. Therefore, constraining this path in the more restrictive competing model would result in a worse fit (as pointed out in Section 6.4.1.2). In brief, comparing the two models reveals that the theoretical model provides more reasonable explanations of the relationships among the model's constructs.

In conclusion, the comparisons of the theoretical model and its competing model significantly support the choice of the theoretical model over its competing models. The theoretical model receives a satisfactory level of fit to the data and is not worse than the competing models. It also provides the most reasonable explanations of relationships among constructs. This conclusion confirms the construct nomological validity (Steenkamp and van Trijp 1991).

Together with the achievement of unidimensionality, reliability, convergent and discriminant validity, this confirmation of the constructs' nomological validity demonstrates that the measures of constructs satisfy the requirements of construct validity (Bagozzi et al. 1991). In addition, Table 6.8 reveals that factor loadings of indicators on their latent constructs are stable. These factor loadings are almost the same across the theoretical and the two competing models.

6.5. HYPOTHESIS TESTING RESULTS AND DISCUSSION

As presented in Section 6.4, the theoretical model was found to provide the best explanation of relationships among constructs, and was selected over its competing models. The SEM test results from the theoretical model confirm that all eleven

hypotheses proposed in Chapter 3 were supported by the data. This section presents and discusses the hypothesis-testing results in detail.

The first hypothesis posits the relationship between importer relationship intention and exporter credibility. It states that:

H1: Exporter credibility has a positive effect on importer relationship intention.

The SEM results indicate that the structural path from exporter credibility to importer relationship intention is significant ($p < .001$). The unstandardised estimate of the direct effect of exporter credibility on importer relationship intention is .864. The standardised regression weight of the CRED–REIN path is .784. These results support hypothesis H1.

The findings affirm the central role of credibility in building and maintaining relationships between business partners. It confirms that the greater the perception of exporter credibility, the higher are importers' intentions to build and maintain long-term relationships with exporters. Exporter credibility helps to reduce importers' perceptions of risks associated with exporters' opportunistic behaviour; increases importers' confidence in exporters' competency and their intentions to fulfil their obligations (Ganesan 1994). Under the condition of imperfect and incomplete information, credibility is the most apparent reflection of exporters' capabilities and intentions (Moorman et al. 1993). Credibility entails desires to develop stable relationships, and increases confidence in the stability of the relationships. This finding, again, provides strong evidence (the coefficient of CRED–REIN path is .784) that credibility is the major factor affecting the buyer relationship intention, and the key to maintaining partners' relationship intentions.

In addition, the high correlation between exporter credibility and importer relationship intention found in this research provides evidence to support the argument in the literature that the role of firms' credibility in inter-firm relationships may be even more important in transition economies (Boisot and Child 1996). Exchange relations with other firms become a defining element of firms in transition economies, and partners'

credibility is essential for the relationship-building process (Meyer 2000). Since the market institutions and infrastructure in transitional economies are largely underdeveloped (Nguyen et al. 2005), firms rely extensively on trust to develop relationships with their business partners. "Trust is developed, early and intentionally, to facilitate transactions between firms, to provide more efficient resource allocation, and to serve as a firm's interim solution in the transition from a planned system to a market economy" (Nguyen et al. 2005, p. 233).

The product is claimed to be at the core of the exchanges between buyers and sellers, hence product quality is likely to have a strong impact on key elements of buyer–seller relationships (Hakansson 1982). The second hypothesis proposes that:

H2: Perceived product quality has a positive effect on exporter credibility.

The SEM test results show that the regression coefficient of the structural path from perceived product quality (PROD) to exporter credibility (CRED) is significant ($p < .001$). Hence, hypothesis H2 is supported by the data. The unstandardised regression weight of the PROD–CRED path is .403 (SE = .054). The standardised regression weight is .478.

This finding confirms the role of perceived product quality as a key consideration in evaluating the exporters' performance and evaluating exporters' competency and intention to fulfil their obligations. The finding suggests that product quality perception can increase importers' confidence in exporters' capabilities to not only meet quality expectations but also to be long-term partners. As information is more asymmetric and incomplete in the international business context, product quality becomes more important in investigating exporters' competency and performance (Kornelius sen and Grønhaug 2003). The perception of high product quality also helps importers to be more confident in exporters' competitive advantages over other exporters; in turn, it increases the probability that exporters can be selected as long-term partners.

However, premium product quality does not always guarantee competitive advantage and favourable purchasing decisions from buyers if the price does not represent value for money or is uncompetitive. Therefore, this study hypothesises that:

H3: Perceived price competitiveness has a positive effect on exporter credibility

The SEM results support hypothesis H3 (unstandardised coeeficient = .148; standardised coefficient = .159; SE = .047; $p < .001$). The finding supports the notion that price competitiveness can increase importers' confidence in exporters' competency in supplying and fulfilling what importers want. It also supports the literature that suggests price is one of the most important attributes in influencing supplier selection decisions. Under the condition of increasingly stronger global competition in which there is relatively limited product differentiation (Shipley and Bourdon 1990), the finding supports the role of price competitiveness as a pivotal evaluation of exporters' competency to supply. In addition, as "industrial markets are more price-driven" (Voeth and Herbst 2006, p. 84), the price competitiveness perception is more likely to influence importers' behaviour and intentions. Offering competitive prices is an effective way to gain purchasing decisions. Under the condition of asymmetric and incomplete information condition, signaling plays an important role in showing the competitiveness of sellers' price and demonstrating sellers' competency to supply. Importers' beliefs in exporters' long-term capabilities to supply is likely to decline if importers perceive that exporters are offering less competitive prices than other suppliers. This finding is found to be consistent with findings in the literature that price is one of the "pivotal determinants of buyer behaviour and supplier choice" (Kortge and Okonkwo 1993, p. 134).

Business buyers are not only concerned with how well products are made, but also with how well they are delivered to buyers (Fleisch and Powell 2001). Hypothesis H4 considers the relationship between perceived delivery performance and exporter credibility. It states that:

H4: Perceived delivery performance has a positive effect on exporter credibility

By supporting hypothesis H4 (unstandardised coefficient = .253; standardised coefficient = .258; SE = .061; $p < .001$) the perceived delivery performance is found to positively enhance importers' perceptions of exporters' competency and intention (credibility) to meet importers' demands. Accurate, reliable and timely delivery performance is persuasive evidence that exporters have capabilities and intentions of keeping their promises and fulfilling their obligations. A high level of delivery performance occurring over many transactions increases the importers' confidence in the exporters' trustworthiness. A high level of delivery performance also increases exporters' competitive advantage. Hence, importers are more likely to trust and select exporters that demonstrate a consistent level of delivery performance. This finding supports the claim of delivery performance being the focal point, namely the viable differentiator in the selling firm's international competitive strategy (Fawcet et al. 1997).

In brief, all three key elements influencing supplier selection decisions (perceived product quality, perceived price competitiveness and perceived delivery performance) were found to positively influence exporter credibility. Offering high product quality (as required by importers) at competitive prices and with good delivery performance substantially enhances the exporters' credibility. Among these three factors, the findings indicate that the perception of product quality is likely to be the most important. The magnitude of the standardised weight of perceived product quality on exporter credibility (.478) is about three times greater than that of perceived price competitiveness (.159); and is about 1.8 times greater than that of perceived delivery performance (.258). The results suggest that product quality is still the key differentiator, and the key to demonstrating sellers' credibility in order to encourage buyers to develop and maintain long-term relationships.

Under the condition of more severe asymmetric information in the international business context, the exporters' challenge lies in finding effective ways to persuade importers of their capabilities, their product quality, their price competitiveness and their ability to deliver what importers want, accurately and correctly when importers want. Signaling theory suggests that sending signals consistently and clearly can solve problems caused by information asymmetry. Hypotheses 5 to 10 reflect this argument.

Hypotheses 5, 7 and 9 were proposed to test the effects of signal consistency on perceived product quality, perceived price competitiveness and perceived delivery performance. They state that:

H5: Signal consistency has a positive effect on perceived product quality

H7: Signal consistency has a positive effect on perceived price competitiveness

H9: Signal consistency has a positive effect on perceived delivery performance

The SEM results from the theoretical model strongly support hypotheses H5, H7 and H9. The results indicate that signal consistency has a positive impact on perceived product quality (standardised coefficient = .571, SE = .067 and $p < .001$). The relationship between signal consistency and perceived delivery performance also achieves a substantial estimate (standardised coefficient = .603; SE = .061; $p < .001$). Signal consistency is also found to significantly influence importers' perceptions of exporters' price competitiveness (standardised coefficient = .49; SE = .068; $p < .001$).

The findings provide strong evidence supporting the role of signal consistency in overcoming problems caused by asymmetric information in the international business setting. The geographic, economic and cultural differences between exporters and importers increase the degree of the information asymmetry (Samiee 2000). As a consequence, importers tend to lack information about exporters' characteristics and performance (such as exporters' capabilities, product quality, and delivery performance). Information to evaluate exporters and their offers is likely incomplete, particularly in the case of transitional markets (Nguyen et al. 2005). It is a considerable challenge to exporters to persuade importers that they are the best suppliers. It is also a greater challenge for importers to evaluate and distinguish among these exporters in order to find the best supplier. The findings reveal that sending signals consistently and clearly to show exporters' product quality, price competitiveness, and delivery performance can overcome this challenge. By checking both consistency among signals and consistency over time of signals, importers can evaluate and judge product quality,

price competitiveness and predict exporters' future delivery performance, allowing importers to make the most appropriate selection decision.

In addition, signal consistency is likely to have a greater effect on perceived product quality (standardised coefficient = .571) and perceived delivery performance (standardised coefficient = .603) than on perceived price competitiveness (.49). Importers receive offers from a great number of exporters and domestic suppliers. As price is observable (Avila et al. 1994), it is easier for importers to calculate the price differences offered by different exporters and find out the lowest price. However, it is much more difficult to evaluate the differences of product quality offered by different exporters. It is even more difficult to predict exporters' delivery performance without any prior experience. As signaling theory suggests, importers can evaluate observable signals to convey information about the unobservable. Sending signals consistently and clearly can help exporters show evidence to persuade importers of the unobservable (such as their product quality and delivery performance). Therefore, it appears reasonable to expect that signal consistency has greater effects on perceived product quality and delivery performance than on perceived price competitiveness.

Signal clarity is also proposed to have positive impacts on perceived product quality, perceived price competitiveness and perceived delivery performance. This is reflected in hypotheses H6, H8 and H10.

H6: Signal clarity has a positive effect on perceived product quality

H8: Signal clarity has a positive effect on perceived price competitiveness

H10: Signal clarity has a positive effect on perceived delivery performance

The SEM findings indicate that hypotheses H6, H8 and H10 are strongly supported by the data. The SEM results show that the regression coefficient of the structural path between signal clarity and perceived product quality is significant (standardised coefficient = .286; $p < .001$; SE = .061). The results also reveal that the clarity of signals sent by exporters positively and significantly impacts on importers' perceptions of price

competitiveness (standardised estimate = .247; SE = .062 and $p < .001$). The regression coefficient of the structural path from signal clarity to perceived delivery performance is also significant (standardised estimate = .270; SE = .053; $p < .001$).

The findings verify that inaccurate, unclear or ambiguous signals probably reduce importers' perceptions of exporters' product quality. Unclear signals negatively influence the signal interpretation process and reactions (Heil and Langvardt 1994). Under the condition of incomplete information, signals cannot improve importers' perceptions of exporters' quality, price competitiveness and delivery performance if importers find difficulties in interpreting and evaluating these signals. Moreover, under the highly competitive conditions of the global market, signal receivers (importers) are more likely to ignore the signals if they cannot understand them easily, or they have to put in major efforts to understand them (Herbig and Milewicz 1994a; Herbig et al. 1994). Ambiguous signals can also lead to misunderstandings and conflicts in importer–exporter relationships. Receiving ambiguous signals can cause importers to doubt exporters' product quality. Unclear signals reduce the ability (of signals) to persuade importers of the exporters' price competitiveness. Inconsistent and unclear messages from exporters also complicate the communication process between exporters and importers. As the complexity increases, the expectation of on-time and reliable delivery is reduced, and the perception of delivery performance worsens (Vachon and Klassen 2002).

Therefore, sending clear signals is essential to enhancing the signaling process, improving the signal interpretation, and then, influencing importers' perceptions. Clear signals enable importers to distinguish between different suppliers and select the most appropriate supplier to meet their requirements. In addition, cultural differences (especially the language barrier) in importer–exporter relationships increase the importance of signal clarity.

A comparison of the effects of signal consistency and signal clarity reveals an interesting finding. Similar to the effects of signal consistency, signal clarity is found to have greater impact on perceived product quality (.286) and perceived delivery performance (.270) than on perceived price competitiveness (.232). It is also worth

noting that signal consistency appears to have a greater influence on those perceptions than signal clarity. More precisely, the standardised coefficients of signal consistency on perceived product quality (.571), perceived delivery performance (.603) and perceived price competitiveness (.490) are twice the standardised coefficients of signal clarity on those perceptions (.286; .270; .247, respectively). The findings suggest that signal consistency has a greater influence than signal clarity.

Hypothesis H11 proposes the relationship between signal consistency and signal clarity. It states that:

H11: Signal consistency has a positive effect on signal clarity

The SEM results strongly support hypothesis H11. The regression path from signal consistency to signal clarity is significant (standardised estimate = .767; SE = .046; $p < .001$). The findings support the contention that the consistency among signals and the consistency of signals over time create signal patterns that help importers interpret signals more clearly and more precisely (Heil and Robertson 1991). The more consistent the signals, the more easily and quickly signals can be understood and reacted to. Signal consistency helps reduce noise in the signaling process, and thus increases the clarity of signals.

6.6. MODERATING EFFECTS

This section presents the results of tests for invariance of structural paths across types of ownership and relationship duration between importers and exporters. The objective of these tests is to investigate whether the values of model parameters vary across ownership type and relationship duration. In other words, these tests verify whether the relationships among constructs are different in different ownership types, and different relationship durations.

6.6.1. Multi-group Analysis in Structural Equation Modeling

The SEM multi-group analysis of the structural invariance method using the AMOS 6 program was employed. Since the data exhibits slight deviation from normality, the ML was used. The multi-group analysis was conducted in two steps, as suggested by Sauer and Dick (1993) and Sharma et al. (1981). In the first step, the theoretical model with unconstrained parameters (variant model) was tested (illustrated in Figure 6.5a and 6.5b). The AMOS 6 program performed a multi-group analysis, which simultaneously estimated the theoretical model across two groups. AMOS 6 produced an estimated covariance matrix for each group and an overall Chi-square value as a part of a single structural system. In the second step, structural parameters were constrained to be equal across groups (the partial invariant model).

Figure 6.6 illustrates eleven structural path coefficients of both groups, A and B, which were constrained to equal values from p_1 to p_{11}.[19] The AMOS 6 program then produced an overall Chi-square value and other fit measures as part of a single structural system.

Through the specification of cross-group equality constraints, group differences in structural coefficients were tested. The fit of the unconstrained model was compared to the fit of the constrained model. Similar to sequential Chi-square difference tests, the Chi-square difference test was used to compare the constrained model and the unconstrained model. The null hypothesis of the test is: there is no significant difference in the path coefficients across two groups.

The Chi-square value is the difference between the Chi-square value of the unconstrained and constrained models, and its degrees of freedom are the difference between degrees of freedom of the unconstrained and constrained models (Anderson and Gerbing 1988). If the Chi-square difference is less than or equal to the critical value, it fails to reject the null hypothesis. If the Chi-square statistic is not significant, then there is no significant difference across groups. Consequently, the constrained model is selected (Anderson and Gerbing 1988), and it can be concluded that the structural paths are invariant among groups. If the Chi-square value is higher than the

[19] All factor loadings were freely estimated, because these tests were not aimed at testing the invariance of factor loadings.

critical value, then the Chi-square statistic is significant. The null hypothesis is rejected. There is a significant difference in the structural coefficients between two groups. In this case, the unconstrained model is preferred (Anderson and Gerbing 1988; Sauer and Dick 1993).

Because of the Chi-square limitations (sensitivity to the sample size and the model complexity), other measures of fit are recommended for examination and reporting (Anderson and Gerbing 1988; Baumgartner and Steenkamp 2003; Sauer and Dick 1993). In testing multi-group invariance, Beaugartner and Steenkamp (2003) suggest employing several valuable fit indices: RMSEA; CFI; and TLI. As they explain, RMSEA is a stand-alone index, which assesses the model fit in an absolute sense, while CFI and TLI (incremental indices) compare the fit of the target model to the baseline model. RMSEA and TLI also trade off the goodness of fit and the model parsimony.

As discussed in Chapter 3 (Section 3.7), this study proposed that ownership type (state-owned firms vs privately owned firms) moderates relationships among constructs in the theoretical model. The following sections present the results of the SEM multi-group analysis across ownership type and relationship duration. The ownership type (OWNER) consists of two groups: the state-owned sector and the privately owned sector. Relationship duration (RELENGTH) was classified into two groups: group 1 includes importing firms that have up to five years in relationships with their exporting partners; group 2 includes firms that have more than five years' relationship with their exporting partners.

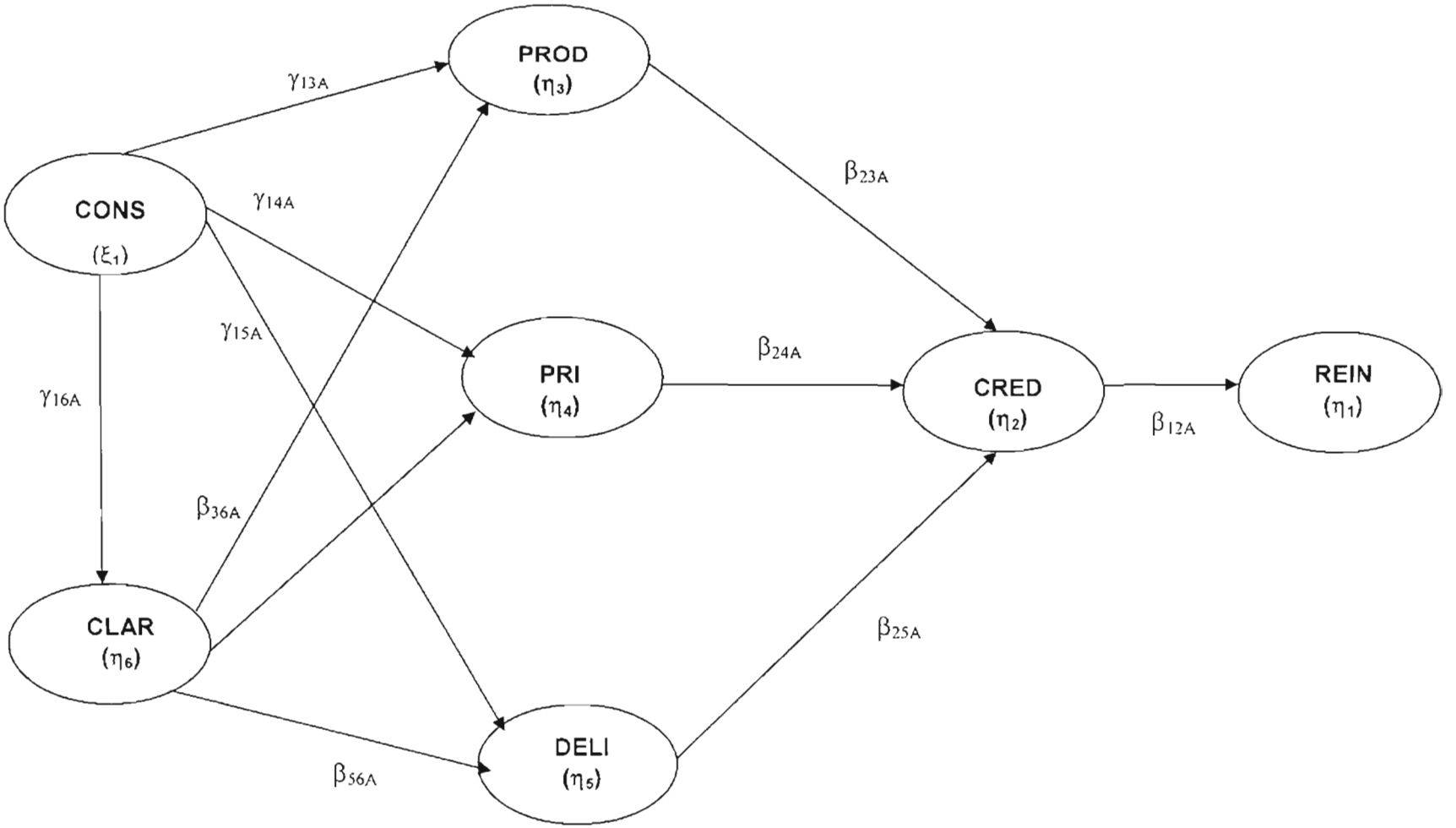


Figure 6.5a: Unconstrained Model: Structural Paths were Freely Estimated by SEM for Group A.

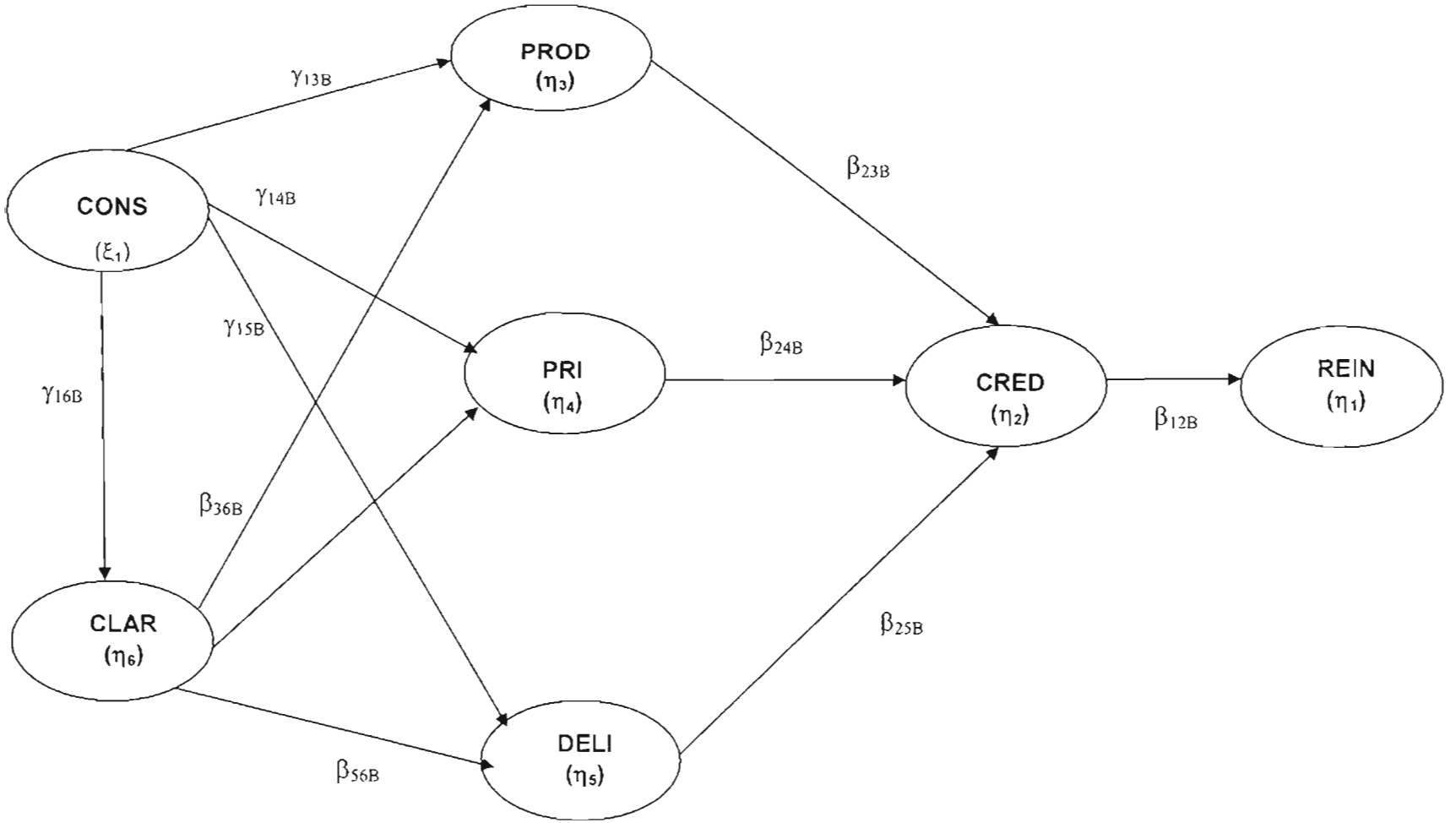


Figure 6.5b: Unconstrained Model: Structural Paths were Freely Estimated by SEM for Group B.

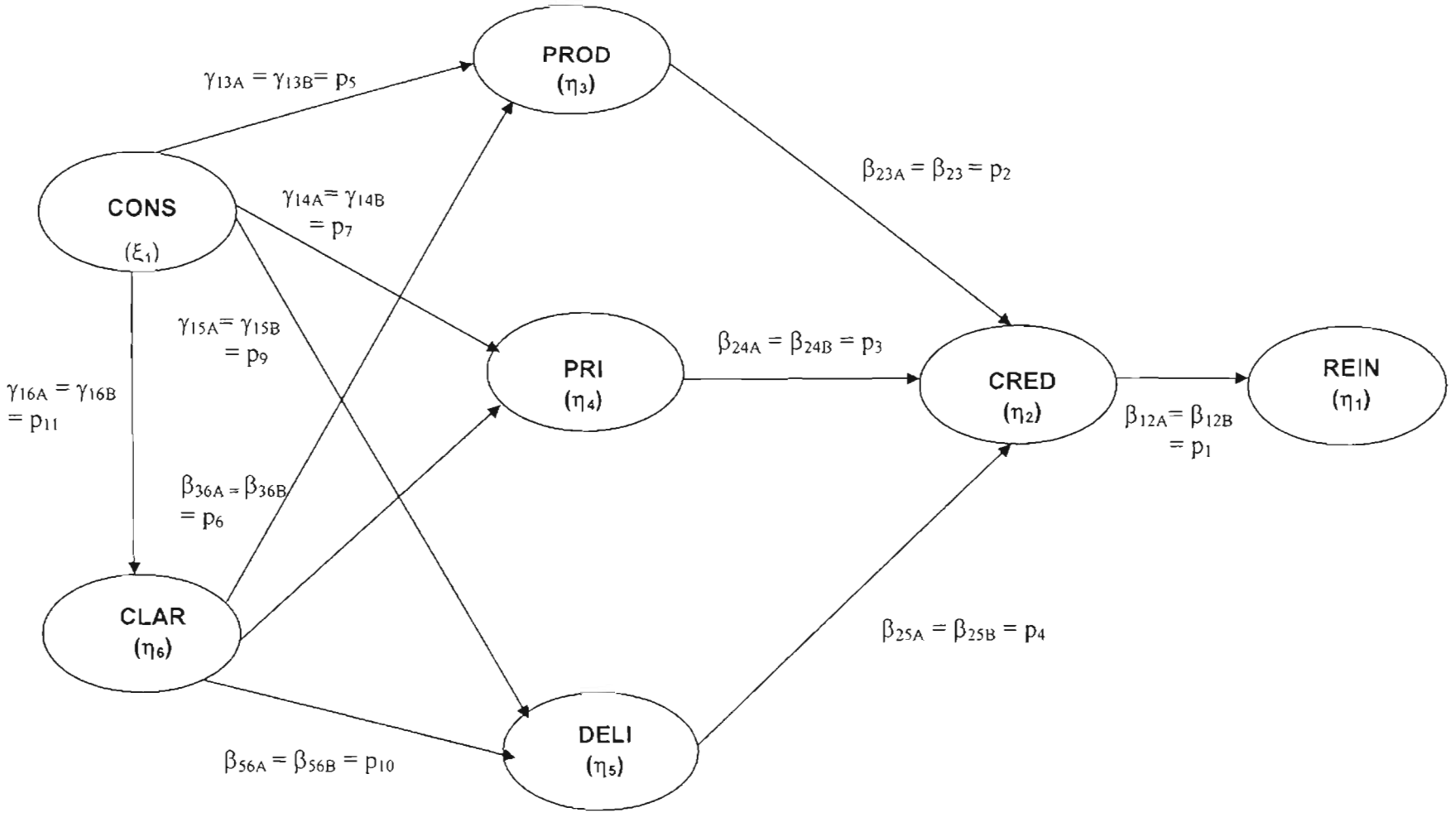


Figure 6.6: Constrained Model: Structural Paths were Constrained Equally across Two Groups.

6.6.2. SEM Results of Structural Path Invariance across Ownership Type

The test results from the SEM multi-group analysis across two ownership groups are illustrated in Figure 6.7a and 6.7b. Differences in fit measures between the unconstrained and constrained models across the state-owned sector and the privately owned sector are presented in Table 6.9.

Fit measures (other than Chi-square statistics) indicate that both the unconstrained model (for example, TLI = .934; CFI = .941; RMSEA =. 046) and the constrained model (for example, TLI = .934; CFI = .940; RMSEA = .046) receive acceptable levels of fit to the data. No absolute value of the standardised residuals is greater than 2.58 in these models (see Appendices I1, I2, I3 and I4).

The Chi-square difference is 21.65 (1146.35–1168.00) with eleven (637–626) degrees of freedom. Because the Chi-square difference is greater than the critical value at 5% significant level (19.68), the Chi-square difference is significant, hence, the null hypothesis is rejected. In other words, there is significant difference between the two groups. Therefore, the unconstrained model is selected. In addition, the unconstrained model also shows a slightly better fit than the constrained model (Table 6.9). In brief, the findings of the multi-group analysis support the hypothesis that the ownership type moderates the relationships among constructs in the theoretical model.

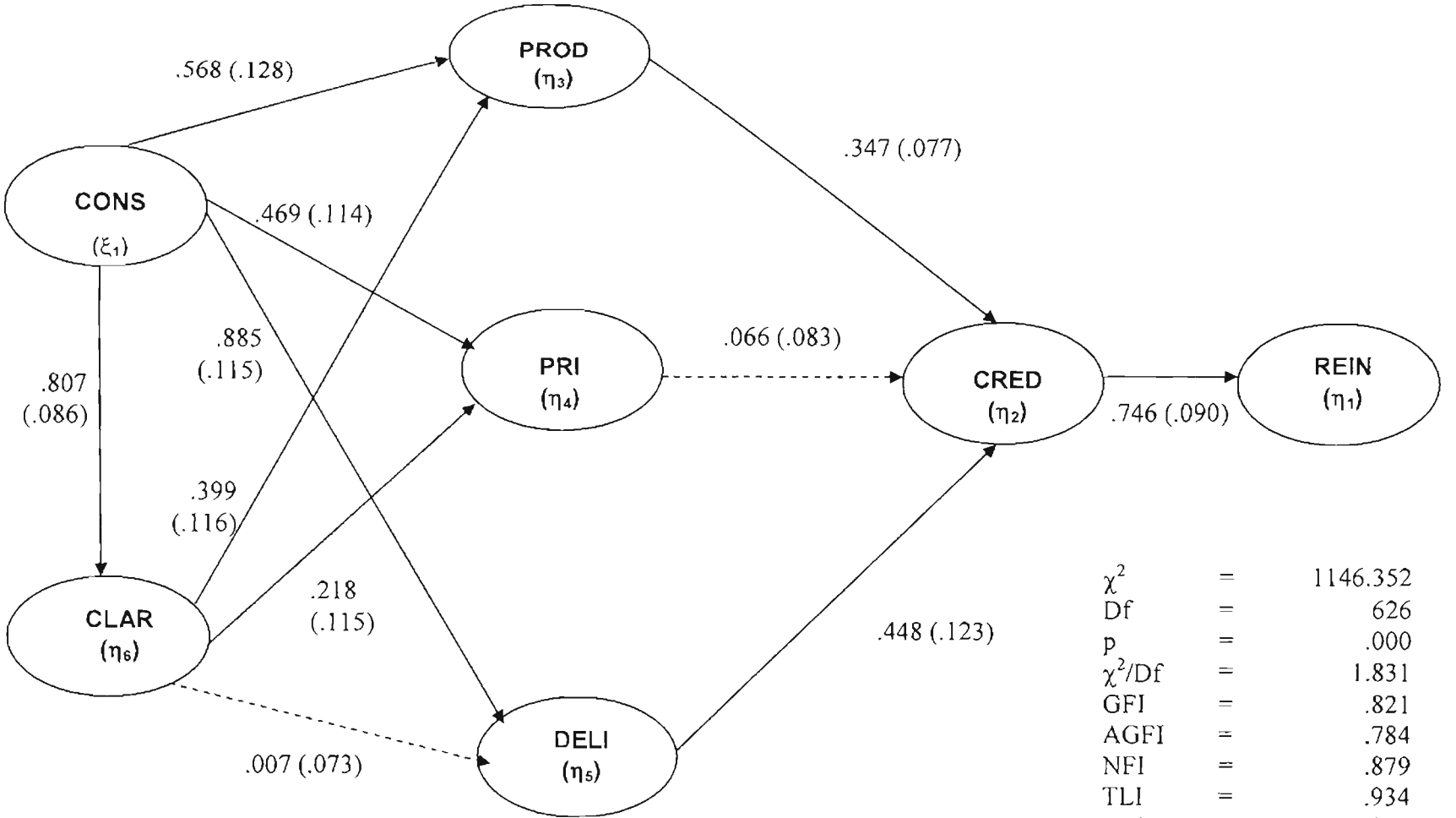
Table 6.9: Differences in Fit Measures between Unconstrained and Constrained Models across the State-owned Sector and the Privately Owned Sector

	χ^2	df	p	χ^2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA
Unconstrained	1146.35	626	0	1.831	0.821	0.784	0.879	0.934	0.941	0.046
Constrained	1168.00	637	0	1.834	0.819	0.785	0.877	0.934	0.94	0.046
Differences	21.65	11	0	0.003	-0.002	0.001	-0.002	0	-0.001	0

The estimation results of the unconstrained and constrained model are presented in Table 6.10. The differences between the state-owned and privately owned sectors can be seen in two structural paths. In the state-owned sector model, signal clarity (CLAR) was found to have no effect on Perceived Delivery Performance (DELI) ($p > .05$). Perceived Price Competitiveness (PRI) is not found to significantly affect Exporter Credibility (CRED) ($p > .05$).

In the private sector, the test results from the SEM multi-group analysis indicate that all hypothesised structural paths are significant ($p < .01$). The findings reveal that signal clarity and signal consistency are important to private firms in evaluating exporters' product quality, price competitiveness and delivery performance. The findings also reveal that the privately owned firms pay more attention to the economic criteria: perceived product quality (PRO), price competitiveness (PRI) and delivery performance (DELI). These economic factors significantly influence exporter credibility. However, in the state-owned sector, price competitiveness is not found to affect importers' perceptions of their exporters' credibility. The following discusses and explains the variation of the conceptual models between the two ownership sectors.

There is no difference in the effect of exporter credibility on importer relationship intention across public and private sectors. This result confirms the critical role of exporter credibility in forming importer relationship intention, regardless of ownership type. The reason for this is the severe asymmetric information conditions, the underdevelopment of market institutions and infrastructure in Vietnam. Under these conditions, partners' credibility (capability and trustworthiness) becomes essential (Meyer 2000; Nguyen et al. 2005). Exporters' credibility can reduce risks and transaction costs (Ganesan 1994), reduce opportunistic behaviour (Morgan and Hunt 1994), and guarantee exporters' future behaviour. Karande et al. (1999) also find no difference in the importance placed on the reliability of the supplier by public- and private-sector purchasing managers in India.



χ^2	=	1146.352
Df	=	626
p	=	.000
χ^2/Df	=	1.831
GFI	=	.821
AGFI	=	.784
NFI	=	.879
TLI	=	.934
CFI	=	.941
RMSEA	=	.046
		(.042 - .050)

Figure 6.7a: SEM Results of Multi-group Analysis across Ownership Type: State-owned Sector (Standardised Estimates)

------► : Dashed arrows -- relationships that are not significant in this model ($p < .05$.)
All other coefficients are significant ($p < .05$)

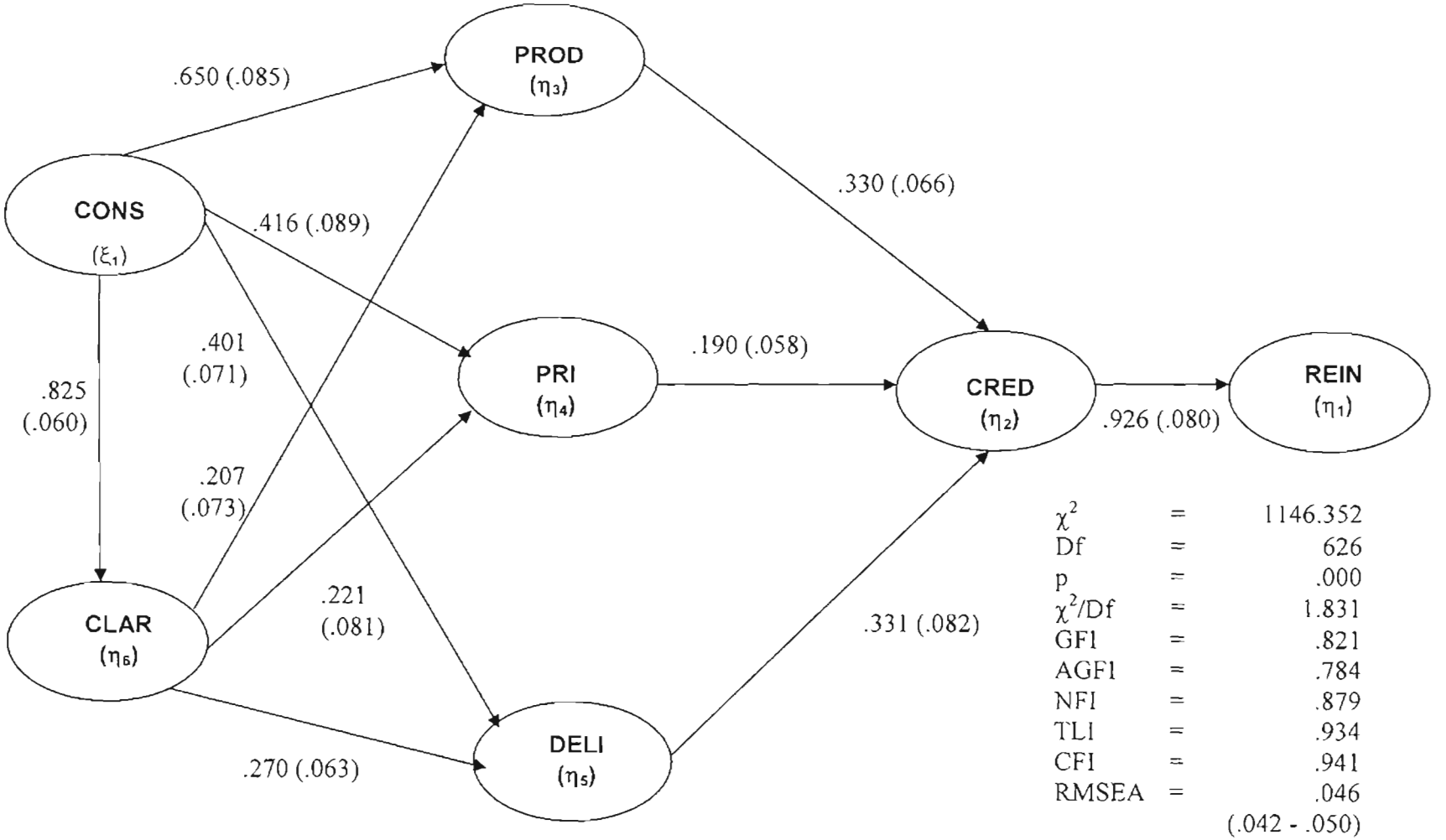


Figure 6.7b: SEM Results of Multi-group Analysis across Ownership Type: Privately Owned Sector (Standardised Estimates)

(Standard errors are inside the parentheses)

Table 6.10: Estimated Results of Unconstrained and Constrained Models across State-owned Sector and Privately Owned Sector

Relationships between			Unconstrained model								Constrained model			
			State-owned sector				Privately owned sector				State-owned & privately owned			
			Estimate	S.E.	C.R.	p	Estimate	S.E.	C.R.	p	Estimate	S.E.	C.R.	p
CONS	→	CLAR	.807	.086	9.428	.000	.825	.060	13.667	.000	.812	.049	16.588	.000
CONS	→	PROD	.568	.128	4.428	.000	.650	.085	7.672	.000	.657	.071	9.290	.000
CONS	→	DELI	.885	.115	7.695	.000	.401	.071	5.613	.000	.598	.061	9.871	.000
CONS	→	PRI	.469	.114	4.104	.000	.416	.089	4.668	.000	.451	.070	6.454	.000
CLAR	→	DELI	.007	.073	.095	.925	.270	.063	4.269	.000	.148	.047	3.154	.002
CLAR	→	PRI	.218	.101	2.149	.032	.221	.081	2.732	.006	.203	.063	3.230	.001
CLAR	→	PROD	.399	.116	3.440	.000	.207	.073	2.822	.005	.240	.062	3.846	.000
PROD	→	CRED	.347	.077	4.527	.000	.330	.066	4.976	.000	.343	.050	6.789	.000
DELI	→	CRED	.448	.123	3.653	.000	.331	.082	4.051	.000	.353	.068	5.180	.000
PRI	→	CRED	.066	.083	.789	.430	.190	.058	3.267	.001	.155	.047	3.295	.000
CRED	→	REIN	.746	.090	8.275	.000	.926	.080	11.612	.000	.864	.060	14.334	.000

S.E.: Standard Error; C.R.: Critical Ratio.

The effects of importers' perceptions of the influence of exporters' offer quality on their credibility are also different between the state-owned and privately owed sectors. In the state-owned sector, perceived product quality and perceived delivery performance play significant roles in forming exporter credibility, while price competitiveness does not. Perceived price competitiveness is not important in building supplier credibility ($p = .430$), probably because state-owned firm managers make decisions in the manner of "avoiding the worse" (Patton 1996), avoiding mistakes and ensuring job security. These managers are less likely to select the most price-competitive sellers because such decisions might involve higher risks. In addition, state-owned firms also operate for different social objectives, such as balancing regional development, economic stability, employment generation or distribution of income (Ramaswamy et al. 1995). As they have operated for a long time in a centrally planned economy, state-owned firm managers are more likely to make decisions that are not concerned with a profit-maximising objective (Karande et al. 1999). Therefore, it is reasonable to expect that price competitiveness is likely not to be as important in evaluating exporters' capabilities and credibility in the state-owned sector.

In the private sector, profit-maximising incentives increase the importance of product quality, price and delivery performance. In addition, in Vietnam, privately owned firms operate with tight budget conditions and financial difficulties (Nguyen et al. 2005). Thus, private firm managers carefully assess exporters' price competitiveness, product quality and delivery performance in order to select the best supplier (Patton 1996). The significant effects of perceived product quality, price competitiveness and delivery performance on exporter credibility confirm similar findings in the literature. For example, a study by Karande et al. (1999) in India, finds that private-sector managers perceive economic criteria to be more important than public-sector purchasing managers do.

The findings emphasise the important effects of signal consistency and signal clarity on the perceptions of state-owned firm managers and privately owned firm managers. However, the findings also reveal that signal clarity is not as important to state-owned firm managers as it is to private firm managers: signal clarity has no effect on the perceived delivery performance of state-owned managers, and the effect of signal

clarity on perceived price competitveness (p = .032) is significant only at 5% level, but not significant at 1% level.

Motivated by profit-maximising and excellent performance (Uppal 1982), private firm managers favour making decisions based on analysis and speculation (Nutt 2006). They are willing to spend more time and efforts searching for information (Nutt 2006). In addition, as discussed in Section 3.7.1.1, Vietnamese privately owned firms generally face more difficult conditions than state-owned firms. Privately owned firms and state-owned firms are regulated by two different laws, which provide more favourable conditions to state-owned firms. The lack of information support systems provided by the government and the underdeveloped information technology infrastructure puts firms in severely asymmetric information conditions. Therefore, private firm managers are likely to search more actively for purchasing-related information, and are more concerned about products and supplier characteristics (Spekman 1988). The findings confirm that evaluating partners' credibility and capabilities via observable behaviour, actions and information is vital for privately owned firms in this transitional market. Signal clarity and signal consistency are critical and vital tools for assessing exporters' capabilities and building importers' confidence in exporters' credibility. Since state-owned firm managers appear to be more risk-averse in their behaviour (Shama 1995), ultra-conservative (Tan 2002), and more job-security oriented, they tend to be more concerned with the consistency of signals.

6.6.3. SEM Results of Structural Path Invariance across Relationship Duration.

The SEM multi-group test results of the structural path invariance across relationship duration are illustrated in Figure 6.8a and 6.8b. Differences in fit measures between the unconstrained and constrained models across relationship duration are presented in Table 6.11. Fit measures (other than Chi-square statistics) indicate that both the unconstrained model (for example, NFI = .889; TLI = .941; CFI = .948; RMSEA = .043) and the constrained model (for example, NFI = .887; TLI= .941; CFI = .947; RMSEA = .043) receive acceptable levels of fit to the data. No absolute value of the standardised residuals is greater than 2.58 (see appendices J1, J2, J3 and J4).

The Chi-square difference between the two models is 21.784 (1132.33–1110.55) with eleven degrees of freedom (637–626). Because the Chi-square difference is greater than the critical value at 5% significance level (19.68), the Chi-square difference is significant. Hence the null hypothesis is rejected. In other words, there are significant differences across the two groups. As a result, the unconstrained model is selected. In addition, the unconstrained model also shows a slightly better fit than the constrained model (see Table 6.11). In brief, the findings support the argument that relationship duration moderates the relationships among constructs in the theoretical model.

Table 6.11: Differences in Fit Measures between Unconstrained and Constrained Models across Relationship Duration

	χ^2	df	p	χ^2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA
Unconstrained	1110.55	626	0	1.774	0.841	0.807	0.889	0.941	0.948	0.043
Constrained	1132.33	637	0	1.778	0.837	0.807	0.887	0.941	0.947	0.043
Differences	21.784	11	0	0.004	-0.004	0	-0.002	0	-0.001	0

The estimation results of the unconstrained and constrained models are presented in Table 6.12, and Figure 6.8 (a, b). The differences between the two groups can be seen in five structural paths. The young relationship group (up to five years in relationships) obtains significant coefficients ($p < .01$) in all eleven paths (hypothesised in the theoretical model). In the mature relationship group (more than five-years in relationships), five structural paths are not significant ($p > .05$): CLAR has no effect on PROD, PRI and DELI; DELI and PRI have no effect on CRED.

The findings suggest that, in the young relationship group, signal consistency and signal clarity play important roles in building importers' perceptions of exporters' product quality, price competitiveness and delivery performance. These factors, in turn, significantly influence exporters' credibility, and the importers' confidence in exporters' credibility significantly enhances their intention to build and maintain long-term relationships. However, after many years of doing business together, signal clarity plays a less important role in enhancing importers' perceptions of exporters' product quality, price competitiveness and delivery performance. In contrast, signal consistency remains the key factor influencing importers' perceptions in any relationship duration. The following explores reasons for these differences.

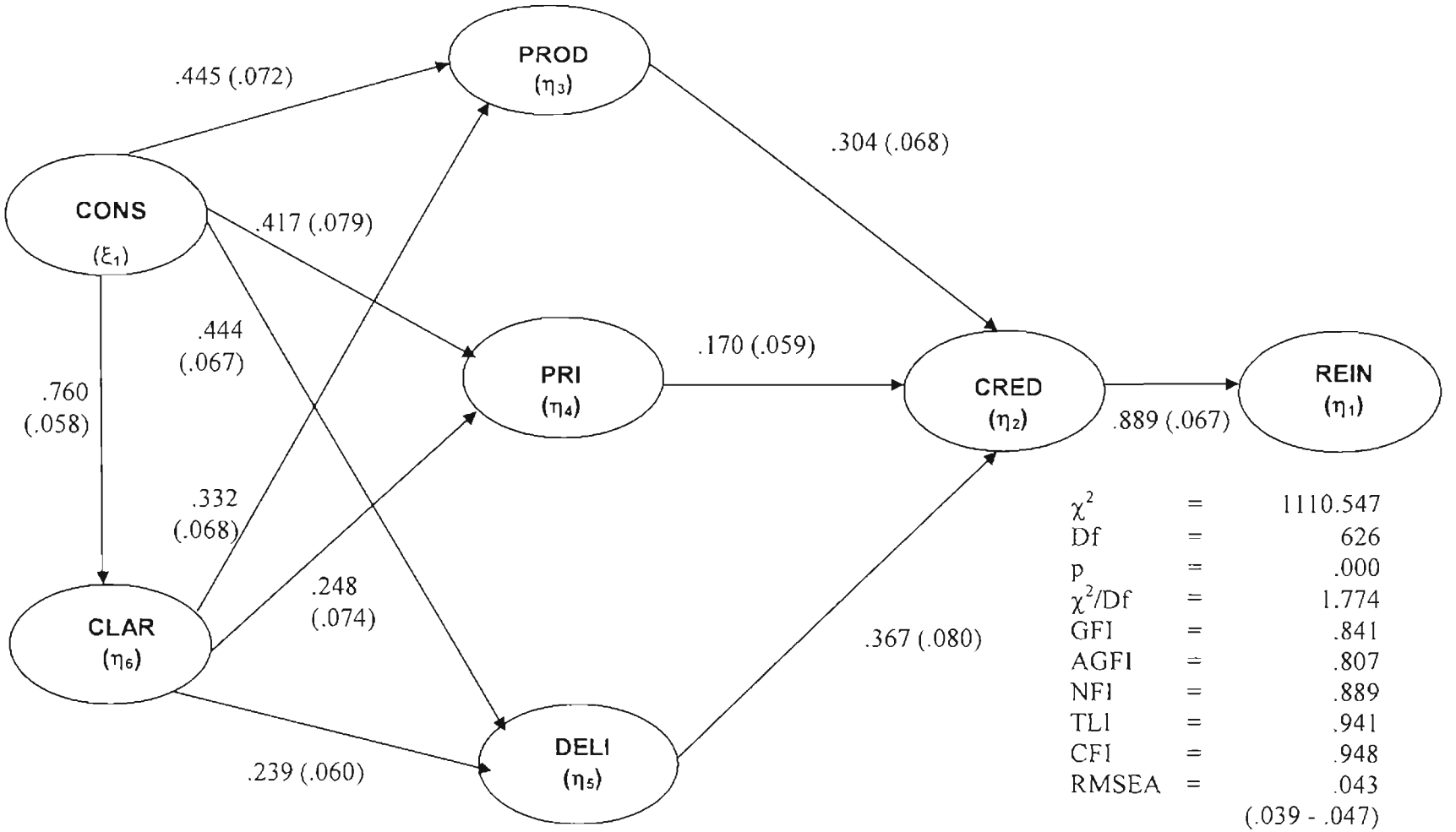


Figure 6.8a: SEM Results of Multi-group Analysis across Relationship Duration: up to Five Years in Relationships (Standardised Estimates)

All structural coefficients are significant at $p < .01$.

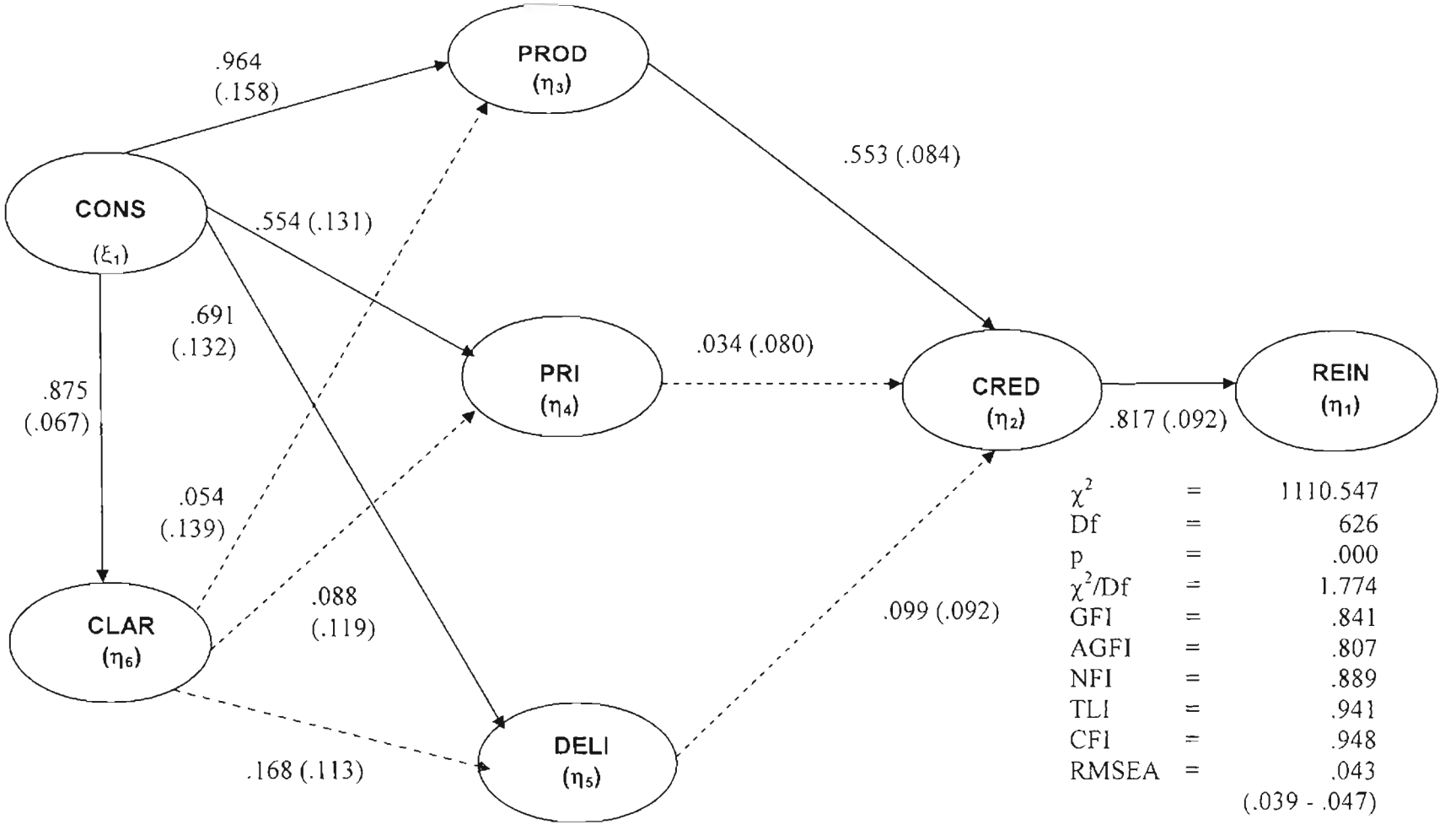


Figure 6.8b: SEM Results of Multi-group Analysis across Relationship Duration: More than Five Years in Relationships (Standardised Estimates)

- - - - - - - → : Relationships that are not significant in this model (p >.05).

Table 6.12: Estimated Results of Unconstrained and Constrained Models across Relationship Duration

Relationships between			Unconstrained model								Constrained model			
			Up to five years				More than five years							
			Estimate	S.E.	C.R.	P	Estimate	S.E.	C.R.	p	Estimate	S.E.	C.R.	p
CONS	→	CLAR	.760	.058	13.103	.000	.875	.076	11.545	.000	.799	.046	17.548	.000
CONS	→	PROD	.445	.072	6.162	.000	.964	.158	6.105	.000	.570	.066	8.610	.000
CONS	→	DELI	.444	.067	6.601	.000	.691	.132	5.223	.000	.518	.061	8.554	.000
CONS	→	PRI	.417	.079	5.276	.000	.554	.131	4.212	.000	.440	.067	6.582	.000
CLAR	→	DELI	.239	.060	3.991	.000	.186	.113	1.635	.102	.227	.053	4.292	.000
CLAR	→	PRI	.248	.074	3.366	.000	.088	.119	.741	.458	.211	.062	3.403	.000
CLAR	→	PROD	.332	.068	4.911	.000	.054	.139	.386	.700	.283	.060	4.676	.000
PROD	→	CRED	.304	.068	4.504	.000	.553	.084	6.554	.000	.412	.051	8.047	.000
DELI	→	CRED	.367	.080	4.585	.000	.099	.092	1.075	.283	.255	.060	4.264	.000
PRI	→	CRED	.170	.059	2.887	.004	.034	.080	.421	.674	.127	.047	2.690	.007
CRED	→	REIN	.889	.076	11.695	.000	.817	.092	8.924	.000	.862	.059	14.674	.000

S.E.: Standard Error; C.R.: Critical Ratio.

In the early stage of relationship development, importers have limited information about exporters. Importers have to expend more time and effort (Claycomb and Frankwick 2004) to investigate, evaluate and assess their exporting partners. Under the condition of asymmetric and incomplete information, signal consistency and signal clarity play critical roles in persuading importers about exporters' product quality, price competitiveness and delivery performance.

Over several years of transactions, importers learn much more about exporters' product quality and have much more experience in evaluating exporters' delivery performance. In addition, as Heil (1988) states, checking the consistency of signals enables signal receivers to predict signaling patterns. They can then more easily and quickly understand signals. Importers become more confident if exporters have continuously been sending signals clearly (Claycomb and Frankwick 2004) and consistently. Moreover, when their relationships mature, both importers and exporters understand the way each other does business. Exporters know more about how to send signals to enable importers to understand them quickly and unambiguously. Therefore, it is reasonable to find that after several years of checking the signal consistency and evaluating signals from exporters, signal clarity has less impact on importers' perceptions of quality, price and delivery performance. Although Claycomb and Franwick (2004) do not investigate the effect of signal consistency and signal clarity, their results refer to phenomena that are similar to those found in this study. They emphasise that at the commitment stage of buyer–seller relationships "buyer search effort is not determined by the mere presence of effective communication" but the "*only* (italics added) influence" is the "associations between relationship communication elements". Their findings clearly emphasise the critical role of the consistency among signals at the commitment stage, and show that simple clear and effective information alone does not play an important role.

In summary, the findings of this study reveal that ownership type and relationship duration moderate the relationships among the constructs proposed in the theoretical model. All regression coefficients are significant in the privately owned group and in the young relationship group. Signal clarity appears to play a less important role in the state-owned group and the mature relationship group. In the state-owned group, signal

clarity is found to have no effect on perceived delivery performance. Also, perceived price competitiveness has no effect on exporter credibility. When a relationship lasts longer than five years, signal clarity does not influence perceived product quality, perceived price competitiveness or perceived delivery performance. In addition, perceived price competitiveness and perceived delivery performance are also found to have no effect on exporter credibility.

6.7. SUMMARY AND CONCLUSIONS

This chapter presents the tests of the theoretical model and its two competing models. Comparing the results of the both model fit and the structural path significance supports the selection of the proposed theoretical model over its two competing models. All eleven hypotheses derived from the proposed theoretical model are supported by the data (summarised in Table 6.13). The test results also address the moderating effects of ownership type and relationship duration.

Table 6.13: Summary of Hypothesis Testing Results

	Hypothesis	*Supported at p-value of*
H1:	Exporter credibility has a positive effect on importer relationship intention	.000
H2:	Perceived product quality has a positive effect on exporter credibility	.000
H3:	Perceived price competitiveness has a positive effect on exporter credibility	.002
H4:	Perceived delivery performance has a positive effect on exporter credibility	.000
H5:	Signal consistency has positive effect on perceived product quality	.000
H6:	Signal clarity has a positive effect on perceived product quality	.000
H7:	Signal consistency has a positive effect on perceived price	.000
H8:	Signal clarity has a positive effect on perceived price competitiveness	.000
H9:	Signal consistency has a positive effect on perceived delivery performance	.000
H10:	Signal clarity has a positive effect on perceived delivery performance	.000
H11:	Signal consistency has a positive effect on signal clarity	.000

CHAPTER 7

SUMMARY AND CONCLUSIONS

7.1. INTRODUCTION

The overall objective of this study has been to discover the determinants of importers' intentions to build long-term relationships with their exporters from a signaling perspective. Specifically, the research has focused on the question of how signal consistency and signal clarity influence importers' perceptions and importers' relationship intentions. Based on the review of literature on relationship intention, signaling theory and supplier selection criteria (presented in Chapter 2), a theoretical model and its two competing models were developed in Chapter 3.

The methodology used to validate construct measures and to test these models was presented in Chapter 4. Measurement scales were adapted from existing scales in the literature. Additional items to measure signal clarity and signal consistency were generated from constructs' domains and nine in-depth interviews with import managers. A pilot study was conducted via face-to-face interviews with students of an executive course in Ha Noi to refine the measures. A survey was conducted with a sample of 418 importing firms from a variety of industries located in the two major cities in Vietnam (Ha Noi and Ho Chi Minh). Reliability analysis and Confirmatory Factor Analysis were employed to validate constructs. The results (presented in Chapter 5) indicated that all constructs achieve satisfactory reliability and validity.

The measurement model was tested via CFA. The findings (reported in Chapter 6) demonstrated that the measurement model received a satisfactory fit to the data. Then, Structural Equation Modeling (SEM) was employed to test the theoretical model and its two competing models. Comparing the test results via model fit and structural path analysis revealed that the theoretical model received the best fit to the data. Hence, the

theoretical model was selected over its competing models. In addition, all hypotheses were supported.

The aim of this final chapter is to summarise the findings and to draw conclusions from the results of the study. The chapter comprises five main sections. Section 7.2 summarises the main findings based on the hypothesis-testing results presented in Chapter 6. Section 7.3 addresses the theoretical, methodological and contextual contributions of the study. Implications for managers and governments are discussed in Section 7.4. Section 7.5 addresses the study's limitations. Finally, possible directions for future research are considered in Section 7.6.

7.2. SUMMARY OF MAIN FINDINGS

As discussed in Chapter 6, the theoretical model was strongly supported by the survey data against its two competing models. In addition, all eleven hypotheses were supported.

First, the support for hypothesis H1 (positive effect of exporter credibility on importer relationship intention) verifies the fundamental role of credibility in encouraging buyers to build long-term relationships found in the literature on buyer–seller relationships (for example, Andaleeb 1996; Anderson and Weitz 1989; Bennett and Gabriel 2001; Ganesan 1994; Kwon and Suh 2004; Moorman et al. 1992; Morgan and Hunt 1994; Siguaw et al. 2003; Walter and Ritter 2003). Feeling confident about exporters' abilities and intentions to fulfil their obligations and promises reduces importers' perceptions of risk associated with exporters' opportunistic behaviour (Ganesan 1994). Exporters' credibility also enhances importers' confidence in the stability of relationships (Anderson and Weitz 1992). As a result, importers are more willing to develop and maintain long-term relationships with exporters.

Second, perceived product quality, perceived price competitiveness and perceived delivery performance are found to have positive impacts on exporter credibility. A perception that exporters can provide the required products at competitive prices than competitors and deliver on time enhances importers' confidence in exporters' ability to

fulfil their present and future obligations. Importers cannot trust exporters' long-term abilities to supply if they perceive that exporters have low product quality offered at high prices and that they never meet the delivery due date. Consistently accurate and on-time delivery over many transactions provides strong evidence that exporters are more likely to keep their promises.

Third, the findings support the positive effects of signal consistency and signal clarity on perceived product quality, perceived price competitiveness and perceived delivery performance. As discussed in Chapter 2, signaling theory argues that sending signals can help buyers and sellers overcome problems caused by incomplete and asymmetric information (Spence 1974). The findings confirm that sending consistent and clear signals helps increase importers' perceptions of exporters' offers, and these perceptions, in turn, influence exporter credibility. Sending clear and unambiguous signals is critical in helping importers perceive more accurately exporters credibility and intentions.

Fourth, the findings support the hypothesis that signal consistency has a positive effect on signal clarity. Receiving consistent signals over time enables importers to understand the ways in which exporters send signals, and to predict the patterns of signals. Familiarity with patterns of signals helps importers to easily and quickly interpret new signals with minimum effort (signal clarity).

Fifth, the results support the moderating effects of ownership type (state-owned firms vs privately owned firms) on relationships among constructs in the theoretical model. The findings reveal that all relationships in the theoretical model were significant in the privately owned firm group, while signal clarity appears less important in the state-owned firm group. In the state-owned group, signal clarity had no effect on perceived delivery performance. Price competitiveness is likely to not be important in forming the state-owned firms' perceptions of exporter credibility. Only product quality and delivery performance are found to have positive impacts on state-owned firms' perceptions of exporters' credibility.

Sixth, relationship duration was found to have a moderating effect on relationships among constructs in the theoretical model. The findings demonstrate that signal clarity

and signal consistency play crucial roles in forming importers' perceptions of product quality, price competitiveness and delivery performance when relationships are at an early stage (five years or less). When relationships last longer (more than five years), signal clarity appears less important. At this later stage of relationship development, signal clarity has no effect on perceived product quality, delivery performance, and price competitiveness. On the other hand, signal consistency still plays a key role in forming importers' perceptions. Perceived delivery performance and perceived price competitiveness have no effect on exporter credibility. It should be noted that exporter credibility still maintains a central role in determining importer relationship intention in both ownership types and at any time during the development of relationships.

7.3. RESEARCH CONTRIBUTIONS

7.3.1. Theoretical Contributions

Signaling applications have been widely studied in economics (for example, Spence 1974), human resource management (Noldeke and Damme 1990), finance (for example, Bar-Yosef and Huffman 1986; Gaeremynck and Veugelers 1999), and in marketing. In the business-to-business context, signaling has been studied in two main streams: signaling between competitors and signaling between business partners. In the latter stream, the questions of how signals and signaling can be used to develop and strengthen buyer–seller relationships are largely neglected. Moreover, although signal consistency and signal clarity are asserted to have important effects on signal interpretation and the reactions of signal receivers (Heil 1988; Heil and Robertson 1991; Porter 1980), the role of signal consistency and signal clarity has not been widely recognised in marketing signaling studies (Duncan and Moriarty 1998; Erdem and Swait 1998; Herbig and Milewicz 1995c; Sweeney and Swait 1999). Limited research has been undertaken on the effect of signal consistency and signal clarity in buyer–seller relationships. Recognising the importance of buyer relationship intention in determining buyer–seller relationship success (Sheth and Shah 2003), this study attempts to enhance our knowledge by addressing the question of how signal consistency and signal clarity influence buyer relationship intention.

The study contributes to the literature on buyer–seller relationships by investigating determinants of relationship intention from a signaling perspective. It offers a challenging and interesting departure from the traditional and common view of signaling theory in marketing: signals to convey information about product quality or product attributes or product demand. Based on competitive signaling studies, the research enhances insights into signaling in the buyer–seller relationship context by arguing that signals can be used to demonstrate sellers' long-term capabilities to supply, sellers' intentions and commitment to the relationships, and to distinguish themselves from competitors.

Moreover, the research contributes to the signaling literature on importer–exporter relationships by developing and testing a theoretical model that explains how signal consistency and signal clarity influence importers' perceptions of exporter credibility as well as importers' relationship intentions. Recognising that "perception is more important than reality in managing many relationships" and that perceptions can drive intentions and behaviour (Duncan and Moriarty 1998, p. 7), the effects of signal clarity and signal consistency on importers' perceptions of product quality, price competitiveness and delivery performance were investigated. The findings emphasise the critical role of signal consistency and signal clarity in helping sales managers achieve their strategic relationship objectives. By bridging these gaps in the literature, this research serves as a stimulant to considerable future work that could enrich our understanding of how signals and signal quality are used to enhance buyer–seller relationships, particularly in the international business setting.

Researchers are increasingly acknowledging the importance of both economic and relational criteria in supplier selection decisions. However, the literature on supplier selection criteria often focuses on listing the factors (criteria), rating them, and ranking their importance (Ellram 1990), while giving limited attention to post-choice purchase behaviour (Qualls and Rosa 1995). The finding that importers' perceptions of offer quality have positive effects on exporter credibility enhances our understanding of the interactions between economic criteria and relational elements. The findings verify that the stronger the importers' perceptions of product quality, price competitiveness and

delivery performance the more likely that they will have favourable perceptions of exporters' abilities and intentions to fulfil obligations and promises.

Although differences between state-owned firms and privately owned firms have been recognised and reported in the literature (for example, Fahy et al. 2000; Lane et al. 2002; Vyas and Math 2006), minimal exploration of the differences between the two sectors in the context of relationship marketing has been undertaken (for example, Schlevogt 2001; Su and Littlefield 2001). Therefore, the findings offer deeper insights into how firms from the two sectors behave and react to sellers' relationship marketing efforts from a signaling perspective. More specifically, this research takes a deeper look at how signal clarity and signal consistency influence the relationship intention of state-owned importers and privately owned importers. Recommendations from the findings help exporters to design different and appropriate signaling strategies when they deal with importers from state-owned or privately owned sectors.

In addition, the findings verify the variations in the determinants of relationship intention at different stages of relationship development. They provide deeper insights into our understanding of the roles of signal clarity and signal consistency at different periods of the relationship development. The results reveal that both signal consistency and signal clarity are critical at early stages (up to five years). At the later stages (more than five years), signal clarity is not found to have important effects on importers' perceptions, while signal consistency still demonstrates considerable effects.

7.3.2. Methodological Contributions

Limited research has been undertaken to investigate the role of signal consistency and signal clarity in the business-to-business context and even fewer studies have focused on signaling in buyer–seller relationships. Therefore, generating and developing measures of constructs in this field of study is a methodological challenge. The literature review reveals that few attempts have been made to measure signal consistency and signal clarity using the survey research method. This research partly adapted Erdem and Swait's (1998) measures of signal consistency and clarity in consumer research and added new items on the basis of construct domains and in-depth interview results. The measures were validated by checking reliability, stability,

unidimensionality, convergent and discriminant validity using data from a survey. This study makes contributions to signaling research methodology by further developing and validating measurement scales of signal consistency and signal clarity in the buyer–seller relationship context.

Other scales used to measure constructs in this study (relationship intention, credibility, perceived product quality, price competitiveness and delivery performance) were based on existing scales. However, these scales were originally generated, developed and tested in developed countries. This study makes a contribution to the literature by adapting and testing them in the context of a developing and transition economy. Investigating these concepts in the context of a developing and transition economy enhances our understanding when conducting research in this type of market.

7.3.3. Contextual Contributions

This study has made contextual contributions in two ways. First, in the literature on exporter–importer relationships, research on exporters is dominant while limited attention has been paid to importers (Overby and Servais 2005; Skarmeas et al. 2002; Skarmeas and Katsikeas 2001). A review of export marketing and export channels by Liang and Parkhe (1997) reveals "a striking imbalance: while exporter behaviour has been extensively studied, importer behaviour remains a largely neglected area of study, even though importers are playing an ever more important (often dominant) role in consummating trade transactions" (p. 495). They conclude, "our knowledge of importer behavior remains fragmented, nascent, and incomplete" (p. 496). This study contributes to the international relationship marketing literature by investigating factors that determine an importer's willingness to build and maintain long-term relationships with an exporter.

Second, there is general agreement in the marketing literature about the predominance of American theories and research focusing on American companies (Adler 2002; Cheng et al. 2001). A theory originally developed in the USA may fail to work in contexts that are different from the USA (Cheng et al. 2001). In addition, transition economies (including very large markets such as those existing in China, Russia, other Eastern European countries, India and Vietnam) are increasingly becoming a significant

part of global trade (Karande et al. 1999). Studying importers' behaviour in the context of a transition economy could be expected to provide exporters with a better understanding of their counterparts when exporting.

7.4. RESEARCH IMPLICATIONS

7.4.1. Managerial Implications

The findings provide some guidelines for exporters on signaling strategies in their quest to encourage importers to engage in long-term relationships. Under the conditions of asymmetric and incomplete information, the most challenging job for exporters is persuading importers of their ability to be the preferred suppliers. Importers also face difficulties in evaluating and identifying the best supplier among the available suppliers in order to make the most appropriate selection decisions. Fortunately, signaling can help to solve the problems. By studying relationship intention from a signaling perspective, this research emphasises to exporters that everything they do (and say) sends signals. Not only statements they make, the information they provide, but also any behaviour from exporters' employees (such as managers, sales representative) inevitably conveys signals. These signals can strengthen or weaken the relationships with their importers (Duncan and Moriarty 1998).

The findings reveal that signal consistency and clarity are critical in encouraging importers to build long-term relationships. By clearly and consistently sending signals that show exporters' capabilities to supply and their true intentions in developing relationships, exporters can distinguish themselves from other competitors. Export managers should recognise that ensuring the consistency and clarity of signals is crucial in encouraging importers to build long-term relationships. Unclear signals are ignored by importers (Herbig and Milewicz 1994a; Herbig and Milewicz 1995c) and might cause misunderstandings. Clear signals help importers to interpret, understand exporters' capabilities, intentions and motives easily, quickly, and with minimum effort. Clarity and consistency of signals positively influence importers' perceptions of exporters' product quality, price competitiveness and delivery performance. Therefore, the most important criterion of any signaling strategy is to ensure the consistency and clarity of signals.

Since any communication (via email, Internet, word-of-mouth, any marketing or other organizational activities) will convey signals, maintaining consistency among signals and consistency over time is a challenging job for exporters. Duncan and Moriaty (1998) emphasise: "most organizational communication dimensions (other than marketing communication) are ignored, not recognized, or taken for granted" (p. 8). Therefore, in many cases, managers do not fully understand the critical role of signals in communication. Companies do not pay sufficient attention to adopting a process to efficiently and effectively manage interactivity among departments/units and their staff to achieve strategic consistency of signals. A successful signaling strategy should ensure that all departments and all staff who interact with importers send messages with consistent meanings. This study's findings emphasise the importance of cross-functional management to plan and monitor messages for strategic consistency. The power of signals under conditions of asymmetric and incomplete information would be compromised if the signaling strategies lack consistency. Therefore, senior managers in the firm should be encouraged to foster an awareness of the importance of signaling and signal consistency among employees and departments.

Different types of signals could be employed in exporters' signaling strategies. As presented in Section 2.3.2.1, exporters can utilize verbal or non-verbal (action) signals to influence on importers' perceptions and intentions. More specifically, as presented in Section 2.5, exporters can use different signaling tools such as price; product warranty policy; observable product attributes such as product availability and wide product range; trade credit, quality certifications, brand names; exporters' reputation; and exporters' appearances in trade shows in order to distinguish themselves from other exporters and persuade importers of their capability to fulfill importers' demands and requirements.

The positive linkages between perceived product quality, price competitiveness and delivery performance and exporter credibility suggest a number of strategic implications for exporters. From a signaling perspective, the findings reveal that in order to gain credibility and attract importers' attention, exporters should focus on signaling their superior product quality, their competitive prices than competitors', and their guarantees of a timely, reliable and flexible delivery service. Under the conditions of incomplete

and asymmetric information, signaling to heighten these perceptions is an effective way to distinguish themselves from competitors, influence importers' selection decisions and importers' relationship intentions.

The strong and positive effect of exporters' credibility on importer relationship intention, found in this study, reminds exporters of the centrality and the fundamental building-block of credibility in buyer–seller relationships. Success in signaling exporters' abilities and intentions to fulfil their obligations (credibility) can help importers become more confident in doing business with exporters, thereby, increasing importers' intentions of staying in and developing relationships.

Exporting firms need also to recognise the importance of the flexibility and adaptability of signaling strategies at different stages of their relationship development. In the early stages, signaling strategies should ensure the consistency and clarity of all signals sent. After several years of doing business together, signal clarity becomes less important in forming importers' perceptions, while signal consistency remains a crucial factor in maintaining importers' beliefs in exporters' quality, reasonable price and high delivery performance. The findings also help export managers understand that price competitiveness and delivery performance become less important in forming sellers' credibility the longer they have been doing business together.

Firms that export to or conduct business in transition markets will also benefit from this study. The findings reveal that state-owned firms and privately owned firms react differently to signals they receive. Privately owned firms, driven by efficiency considerations, undertake more extensive and rigorous information searches (Stump and Heide 1996; Stump and Sriram 1997). They are also more willing to allocate resources to searching for information (Nutt 2006). Therefore, signal consistency and signal clarity are critical in obtaining favourable perceptions of private firms' managers. On the other hand, since state-owned firms' managers are more concerned with job security and avoiding conflict (Patton 1996), exporters should pay more attention to the consistency of their information, behaviour and actions. In addition, findings also suggest to export managers that reasonable quality, reasonable prices, accurate, timely

and reliable delivery are all important in securing credibility from privately owned importers, while price is not as important to state-owned importers.

The findings also have significant implications for import managers. The study suggests import managers that evaluating signals from exporters can help them overcome conditions of incomplete and asymmetric information. Checking the consistency of signals is an effective way to assess exporters' abilities to provide what importers want, and to check the trustworthiness of exporters.

7.4.2. Implications for Government

There are a number of schemes that governments can implement to promote international trade by reducing asymmetric information conditions between importers and exporters, such as developing effective export assistance schemes, information supply, research and education (Barrett and Wilkinson 1990). Training programs should be organised and designed to help exporting firms realise the importance of signaling, signal consistency and signal clarity in contributing to the success of their exporting performances. Training programs can enrich export managers' knowledge of what and how to signal effectively in order to encourage their importing partners to engage in long-term relationships. Training programs can also enhance importers' skills and expertise in evaluating and assessing exporters' signals.

Government funded research projects to investigate what and how to signal to importers can provide deeper knowledge and information that will assist and enhance exporters' ability to plan and implement effective signaling strategies in international markets. In addition, the development of information technology is likely to enhance the signaling and communication process between exporters and importers (Nguyen 2000). Governments' direct investment or incentive policies to encourage investment in the development of information technology infrastructure can significantly reduce problems caused by asymmetric and incomplete information to the benefit of both importers and exporters.

Government trade representatives/departments can serve as third parties to provide importers with market information and information about exporters. Such assistance can

help verify the quality of products and provide credible information on exporters' credibility and capabilities. It also helps importers to obtain more information to cross check the consistency and reliability of signals. These trade representatives/departments can also interact with potential importers in foreign markets on behalf of exporters. As this research's findings suggest, these trade departments should also adopt a signaling approach. They should be aware of the critical role of the consistency and clarity of signals sent to exporters and importers. Inconsistent and ambiguous signals could lead to unfavourable perceptions by receivers.

7.5. RESEARCH LIMITATIONS

The generalisability of the present findings to other settings should be undertaken with a caution, since the conceptual model was tested in a special context. As argued in Chapter 1, a transition economy was selected to test the model because of the greater incidence of asymmetric and incomplete information that exists in transition economies. Generalising the findings and results into a developed market where information is less asymmetric and more complete might lead to different levels of strengths of relationships among constructs in the theoretical model. There is a need to replicate and extend this study in other developing, transition or developed economies. Conducting research in different settings would be a basis for further improvements in the conceptual framework.

In addition, all of the companies comprising the sample are located in Vietnam and are involved in business-to-business transactions. Thus, the model cannot be generalised to either the consumer setting or other cultures or countries without further testing. A cross-culture or cross-countries study would improve the generalisability and validity of the model.

One of the limitations is measuring relationship duration by the number of years. There is general agreement in the literature that buyer–seller relationships grow through different stages (Dwyer et al. 1987; Rao and Perry 2002). However, there is no consensus on how many stages exist and on classifications of stages (Batonda and Perry 2003a). Some researchers propose stages of relationship development (for example,

Cunningham and Homse 1988; Dwyer et al. 1987; Ford 1980; Wilson 1995), others substitute stages by years (for example, Hibbard et al. 2001; Palmer and Bejou 1994). Because of the special research context (a relatively new transition economy) and the early stage of development of international trade in Vietnam, this study selected two relationship durations: up to five years and over five years. However, if the effects of signal clarity and signal consistency were analysed at different stages (for example, awareness, exploration, expansion, commitment and dissolution as proposed by Dwyer et al. 1987), the findings would be expected to reveal greater insights into the moderating effects of the relationship development stage.

This study has investigated the moderating effect of ownership type on relationships among constructs in the theoretical model. However, it may be argued that the influence of signal clarity and signal consistency on exporter credibility, and subsequently, on importer relationship intention varies with other firm characteristics (such as the size of import firms) as well as characteristics of managers (such as age, experience, nationality etc.). Controlling for the effects of these factors have not been examined.

The cross-sectional nature of the data used in this study might limit the ability to make causal inferences. A longitudinal study could investigate how signal clarity and consistency might have an influence from the very first contact, and then subsequently track their influences over transactions or stages of relationship development. Although this study found a moderating effect of relationship duration on relationships among constructs, a longitudinal study would provide a more complete picture of how importer relationship intention and exporter credibility are affected differently by exporters' signals at different stages of relationship development.

Key informant bias could be argued as another limitation of this study. Decisions to establish a long-term relationship with a specific exporter, as well as relationship intention with that exporter, can involve more than one manager. Therefore, using a single manager as the key informant may potentially bias the results. However, approaches to minimize such bias have been used in this study. The solutions that have been applied include asking straightforward and easy-to-answer questions (Phillips 1981), combining in-depth interviews and a main survey, as well as careful design of

the questionnaire. Reliability and validity of constructs were also carefully tested, using the CFA approach. In addition, import managers generally understand the capabilities and characteristics of their exporting partners. Hence, import managers are assumed to be the key decision-makers or decision influencers in deciding their firms' intention to build long-term relationships with exporters.

7.6. PROPOSED DIRECTIONS FOR FUTURE RESEARCH

Conducting more studies on signaling in buyer–seller relationships as well as in the international business context would provide interesting and challenging areas for future research. In order to overcome the above-mentioned limitations of the conceptual model proposed in this study and to broaden studies on buyer–seller relationship signaling, directions for future research are highlighted in the following.

This study has examined the moderating effect of two types of ownership (public- and privately owned sectors). However, other characteristics of importing firms can be investigated. For example, firm size is reported to influence the associations between buyers' searching efforts and elements of communication between buyers and sellers (Claycomb and Frankwick 2004). In the supplier selection literature, large firms and small firms are found to use different methods to evaluate suppliers and have different criteria for making supplier selection decisions (Pearson and Ellram 1995). Pearson and Ellram (1995) also report that the relative importance of supplier selection factors varies with the size of buying organisations. In relationship marketing, small firms are proposed to be more likely to form stronger relationships with their business partners (for example, Barringer 1997). Therefore, finding differences in behaviour and signal reactions between large and small firms could be useful for exporters' signaling efforts and signaling strategies in order to encourage importers to build long-term relationships. Investigating the effect of firm size would also enrich the understanding of buying behaviour of small and large firms.

In addition, industry and product category could also be other factors which might moderate the relationships among contructs in the theoretical model. In a transition economy like Vietnam, some industries such as banking, telecommunication, and

electricity are benefits from favourable regulations from the government while other industries are not (MPI 2005). Therefore, firms in different industries might react differently to exporters' signals, signal consistency and signal clarity. Firms which import different product categories (such as consumer vs industrial products) might also look at different types of signals and different signal quality to evaluate their exporters' credibility.

Future research could also focus on how buyers' expertise in interpreting signals influences buyers' perceptions, intentions and behaviour. Signal expertise means the ability to perform signal interpretation accurately (Heil and Robertson 1991). It is proposed that signal interpretation depends on the signal-reading expertise of receiving firms (Heil 1988; Heil and Robertson 1991). Individuals with high signaling experience are more capable of noticing relative differences among signals (Heil and Robertson 1991). They are more capable of decoding and interpreting signals, recognising inconsistent facts, and reacting to signals more quickly. They also engage in more efficient information searches (Heil and Robertson 1991). As a result, receivers' expertise determines the ability to make better decisions based on deeper and more accurate signal-processing (Heil and Robertson 1991). Therefore, differences in importers' signal-interpreting expertise might influence importers' perceptions, intentions and behaviour.

This research has investigated the influence of signal clarity and signal consistency in the international business setting. However, no consideration was given to cultural differences between the parties involved. It would be beneficial to examine the role of cultural differences between importers and exporters in modeling the effects of exporters' signals on importers' perceptions and intentions. Cultural differences can be considered as one of the most crucial problems faced by firms in the international business setting (Hofstede 1983, 1984). The greater the cultural differences are, the greater the scope for misunderstanding (Adler and Graham 1989), and the greater the barriers to signaling and signal interpretation.

Therefore, national cultural differences, particularly language barriers, are likely to make the signaling process more difficult than when signaling to buyers of the same

culture. It is widely acknowledged that it is easier to communicate with partners who share the same view of the world (Tornroos and Moller 1993). The similarity or sensitivity to importers' cultures enables exporters to more easily signal to their importers by adapting to cultural norms. Understanding importers' national culture and business culture (culture sensitivity) also enables exporters to forecast how their partners interpret, perceive and react to signals. International marketing studies strongly emphasise the influence of psychic distance on interactions between exporters and importers (Fletcher and Bohn 1998). The literature confirms the positive effect of cultural sensitivity on the degree of information exchange between sellers/exporters and buyers/importers (Labahl and Harich 1997; Nguyen et al. 2003). In signaling studies, Heil and Robertson (1991) suggest that the similarity between signal senders and receivers can influence the signal interpretation process. Therefore, investigating the effect of cultural differences is likely to extend the understanding of the role of signal clarity and signal consistency, as well as the signaling process between exporters and importers.

Perceptual bias is one aspect that was not investigated in this study. Biases during signal sending and the interpretation process can cause misunderstanding. Heil (1988) highlights the awareness of two prominent biases: asymmetric perception and extrapolation bias. Asymmetric perception refers to the differences between exporters' and importers' perception and interpretation of the same signal or signal attributes. Extrapolation bias exists when "members of the signaling interaction may attribute the same meaning to the current signal as they attributed to previous signals of the same shape" (Heil 1988, p. 214). Extrapolation bias eliminates the signaling power of the current signal because receivers do not view and interpret it as a new signal. If the signal decodes used by importers are different from the signal codes used by exporters, then this differences cause biases. Both types of biases cause misunderstanding and endanger signaling interactions and signaling effects. Fortunately, signal clarity and signal consistency may enable senders to reduce biases. Clear signals can point out the difference between previous and current signals, which in turn, helps reduce extrapolation bias. In the case of asymmetric perception, clear signals may not help importers to interpret signals as the exporters intended to send them. However, signal consistency could help to some degree. By checking signal consistency, receivers can

predict the pattern of signaling, then identify the differences. Therefore, the current marketing signaling framework can be further enriched by incorporating the influence of perceptual biases. Issues that could be considered are: how biases influence signaling and signal interpretation (coding and decoding process); and, how signal clarity and signal consistency reduce these biases.

This study found support for the moderating role of relationship duration measured by the number of years in relationships. However, the speed of relationship development can vary among specific relationships between exporters and importers. Hence, investigating the influences of signal clarity and consistency on the importers' perceptions and importers' relationship intentions at different relationship stages (as suggested by, for example, Dwyer et al. 1987; Ford 1980; Wilson 1995) could reveal interesting results. Effects of signal consistency and signal clarity on buyers' perceptions might vary across different stages of relationship development. The findings could provide more specific recommendations and implications for export managers in developing appropriate signaling strategies in order to influence importers' relationship intentions.

This study has focused on the effects of signal clarity and consistency on importers' perceptions and relationship intentions. No consideration was given to the signaling environment or external factors. External environments determine the degree of information asymmetry between buyers and sellers. In addition, signaling studies emphasise the existence of noise in all signaling situations. Noise interferes with the signaling process (Duncan and Moriarty 1998). Signaling environments can reduce or increase the levels and effects of noise. Therefore, future research could investigate issues such as: what kinds of external environmental factors are likely to impact on the signaling process, and how do these factors influence the signaling process in buyer–seller relationships; and, how noise influences the effects of signal clarity and signal consistency on buyers' perceptions and intentions. As Internet may be seen as a source for obtaining information about foreign market (Nguyen 2000), the development of information technology infrastructure might be one of the external environmental factors that influences signal sending, interpretation and reaction.

Future research can also further explore the effect of the difference in the degree of the economic development between exporters' countries and importers' countries. It would be interesting to examine importers' reactions to signal consistency and signal clarity from exporters who come from similar and different business environments. For example, future research could examine whether there is any difference in the importers' perceptions and reactions when they receive signals from exporters from developed versus developing markets. The ability to access information about exporters from developed countries is likely to be easier than information about exporters from developing countries, where information systems are less developed. As a result, the degree of information asymmetry in the "developing importer–developed exporter dyad" is likely smaller than in the "developing importer–developing exporter dyad". Therefore, it can be proposed that the influence of signal clarity and signal consistency might be different between these two types of dyads.

This research has utilised the cross-sectional approach to investigate how quality of signals sent by exporters influences importers' perceptions and intentions. Future research can investigate issues such as the types of signals as well as how the quality of signals sent by importers influence exporters' behaviour and intentions. Moreover, a longitudinal study to explore the signaling process between importers and exporters could provide deeper insights into signaling applications in enhancing importer-exporter relationships. Studying signaling effects from both sides of the dyad can be expected to reveal practical implications to both importers and exporters as well as to contribute to the deeper understanding of inter-firm relationships.

As this study focused on the roles of signal consistency and signal clarity in forming exporter credibility and importer relationship intention, rates of return on various signaling efforts have not been investigated. However, rates of return on signaling efforts could be an interesting topic for future research as it helps to point out the effectiveness and the importance of signaling and signaling strategies in building and maintaining business relationships. Future reseach can investigate what rates of return can be used, and how to calculate them.

From the methodological perspective, future research could verify and revise the measures of signal consistency and signal clarity in contexts other than in transition economies. This study partly adapted the measurement scales of Erdem and Swait (1998) in consumer research and tested the measures in the international business-to-business context. However, as the testing context is a transition economy, further verification of measures in developed economies could therefore contribute to validating the measures.

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APPENDICES

Appendix A1: Questionnaire in English

School of Marketing
Faculty of Business

PO Box 123
Broadway NSW 2007
Australia

Tel +61 2 9514 3522
Fax +61 2 9514 3535

UTS CRICOS Provider Code 00099F

University of Technology, Sydney

Dear <Name of contact person or name of the Importer>

My name is Nguyen, Thi Tuyet Mai. I am a PhD student at the University of Technology, Sydney, Australia. I am conducting research to investigate how exporters' signals influence importers' relationship intentions and would welcome your assistance. You are invited to complete the questions on the following pages and return them by using the prepaid envelope enclosed. Your answers will provide important information for my research.

The information supplied by your company is strictly confidential and your company will remain anonymous. Only the statistics of all companies sampled will be used for analysis in my thesis. The summary report will be made available to participating companies on request.

Answering the questionnaire should take no more than 20 minutes of your time. You are under no obligation to participate in this research.

If you have concerns about the research that you think I, my supervisor or the local contact person can help you with, please feel free to contact me (us) via contact details bellows. If you would like to talk to someone who is not connected with the research, you may contact the Research Ethics Officer on 61-2 9514 9615, and quote this Ethics Reference number: UTS HREC REF NO. 2005-94A

Thank you for your assistance.

Yours sincerely,
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NOTE:
This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 9615 Research.Ethics@uts.edu.au). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

QUESTIONNAIRE

Research Objectives: This survey focuses on the relationship between your firm (as an importer) and a foreign firm (as the exporter). In this questionnaire I would like you to focus only on a specific relationship between your firm and an exporter (from which you import products), and that you are personally familiar with.

Non-commercialisation and Confidentiality: Data collected from firms will be used to test hypotheses relating to a theory developed as a part of a doctoral thesis. It does not involve any commercial activities. Please be assured that your responses will be kept strictly confidential and your company will remain anonymous. Your responses will only be analysed in conjunction with other responses.

Please think of a specific exporter, called firm A (or exporter A), whose characteristics satisfy the following criteria. Firm A:

- Is a foreign firm
- Your firm imports major product line regularly from the exporter A

HOW TO COMPLETE THE QUESTIONNAIRE

Which firms should complete the questionnaire?
Vietnamese-owned firms have been involved in importing activities from foreign countries
Who can complete the questionnaire?
Persons who are involved mainly in contacting the exporter and in importing activities
How to answer the questions?
Most questions require you to simply circle a number. For example, to answer the following question, if your firm is a state-owned company, you circle the number 1 as follows:

Please indicate the ownership type of your business (please circle the number that applies)

State-owned	(1)
Private owned firm	2
Other (please specify ....)	3

Some questions require you to write your answer in the space provided. For example, if your firm has 20 employees, you write in as follows:
Approximately, how many full-time employees does your firm have (please write in the space provided)

.....20..... persons	

The numbers in the column labelled Code are for researcher use only; they do not involve your answers. Please ignore these columns.

PLEASE ANSWER ALL THE QUESTIONS AND FOLLOW THE DIRECTIONS CAREFULLY

Please continue to the next page

PART 1: GENERAL INFORMATION

Q1: Please indicate the ownership type of your business (please circle the number that applies)

State-owned firm	1	Code
Privatelt owned firm	2	
Other (please specify .....)	3	OWNER

Q2: Approximately how long has your firm been engaged in business (please circle the number that applies)?

Up to five years	1	Code
From 6 to 10 years	2	
From 11 to 20 years	3	
From 21 to 30 years	4	AGE
Over 30 years	5	

Q3: Which of the following best describe your firm (please circle the number that applies)?

Types		Code
A manufacturer	1	
A distributor/dealer/wholesaler/agent	2	TYPE
A retailer	3	
Other (please specify .....)	4	

Q4: Approximately how many full-time employees does your firm have (please write in the space provided)?

..... persons	Code EMP

Q5: Approximately, how long has your firm been engaged in dong business with foreign companies (please write in the space provided)?

..... years	Code ForExp

Q6: How many years has your company been importing from company A (please write in the space provided)?

..... years	Code ReYear

Q7: In what region is Firm A based (please circle the number that applies)?

		Code
North America	1	
South America	2	ARegion
Western Europe	3	
Eastern Europe	4	
Asia	5	
Africa	6	
Other (please specify .....)	7	

Please continue to the next page

PART 2: RELATIONSHIP BETWEEN YOUR COMPANY AND THE EXPORTER A

Please indicate the extent of your agreement or disagreement with each of the following statements (please circle the number that applies to each statement)

Q8:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
We really intend to build a positive long-term relationship with exporter A.	1	2	3	4	5	6	7	REIN1
We believe that in the long run our relationship with exporter A will be profitable.	1	2	3	4	5	6	7	REIN2
We believe that over the long term our relationship with exporter A will be effective.	1	2	3	4	5	6	7	REIN3
Our relationship with exporter A will have long-term potential.	1	2	3	4	5	6	7	REIN4

Q9:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Exporter A often keeps promises that it makes to our firm.	1	2	3	4	5	6	7	CRED1
Exporter A has been frank in dealing with us.	1	2	3	4	5	6	7	CRED2
In the relationship with Exporter A, there have never been instances where we have felt deceived.	1	2	3	4	5	6	7	CRED3
Exporter A does not make false claims.	1	2	3	4	5	6	7	CRED4
In general, our organisation can count on exporter A to be sincere.	1	2	3	4	5	6	7	CRED5
When we make agreements with Exporter A we can always rely on them to fulfil all requirements.	1	2	3	4	5	6	7	CRED6
Exporter A has the ability to handle most of our requests.	1	2	3	4	5	6	7	CRED7

Q10:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Quality of products offered by the Exporter A meets our requirements and expectations.	1	2	3	4	5	6	7	PROD1
Exporter A offers products and services that are good value for money.	1	2	3	4	5	6	7	PROD2
Service and customer support offered by the Exporter A meet our requirements and expectations.	1	2	3	4	5	6	7	PROD3

Q11:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Exporter A offers us very competitive prices.	1	2	3	4	5	6	7	PRI1
We often receive discounts/reductions from Exporter A.	1	2	3	4	5	6	7	PRI2
Exporter A offers us very favourable credit terms.	1	2	3	4	5	6	7	PRI3

Please continue to the next page

Q12:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Exporter A always meets the delivery due date.	1	2	3	4	5	6	7	DELI1
Exporter A always delivers accurately.	1	2	3	4	5	6	7	DELI2
Exporter A is always flexible in handling our orders.	1	2	3	4	5	6	7	DELI3

Q13:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Exporter A's actions, behaviour and statements are always consistent with each other.	1	2	3	4	5	6	7	CONS1
Exporter A's actions, behaviour, statements have consistently shown their ability and intention	1	2	3	4	5	6	7	CONS2
We have no reason to doubt the exporter's intention and ability because their actions, behaviour are consistent.	1	2	3	4	5	6	7	CONS3
Exporter A's action, behaviour and statements have been consistent over time.	1	2	3	4	5	6	7	CONS4

Q14:

Statements	*Strongly Agree*						*Strongly disagree*	*Code*
Exporter A's actions, behaviour, statements and information they provided are always clear	1	2	3	4	5	6	7	CLAR1
We have no trouble interpreting the purposes and intentions of Exporter A's actions, behaviour, and statements	1	2	3	4	5	6	7	CLAR2
We can easily and quickly understand all the exporter's actions, behaviour, and statements	1	2	3	4	5	6	7	CLAR3
We do not need much effort to understand all the exporter's actions, behaviour, and statements	1	2	3	4	5	6	7	CLAR4
We always understand the causes and effects of the exporter's behaviour, actions and statements	1	2	3	4	5	6	7	CLAR5

Thank you very much for your time and effort in completing the questionnaire!

Appendix A2: Questionnaire in Vietnamese

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Kính gửi <Tên của người đã liên lạc hoặc tên của công ty nhập khẩu>

Tên tôi là Nguyễn Thị Tuyết Mai. Tôi là nghiên cứu sinh Tiến sỹ tại Đại học Công nghệ Sydney, Úc. Tôi đang tiến hành nghiên cứu ảnh hưởng của tín hiệu của công ty xuất khẩu tới dự định quan hệ lâu dài của công ty nhập khẩu. Tôi mong muốn được công ty giúp đỡ bằng cách trả lời các câu hỏi trong các trang sau và gửi lại cho tôi bằng phong bì trả trước đính kèm. Câu trả lời của Quý công ty sẽ cung cấp những thông tin quan trọng cho nghiên cứu của tôi.

Thông tin Quý công ty cung cấp sẽ được giữ hoàn toàn bí mật và công ty của Quý vị cũng hoàn toàn ẩn danh trong nghiên cứu này. Chỉ những kết quả thống kê từ tất cả các công ty trong mẫu nghiên cứu sẽ được dùng để phân tích trong đề tài của tôi. Tôi cũng sẵn sàng cung cấp bản tóm lược kết quả nghiên cứu nếu Quý công ty yêu cầu.

Quý công ty không mất quá 20 phút để trả lời các câu hỏi và Quý công ty cũng không bắt buộc phải tham dự vào nghiên cứu này.

Nếu Quý công ty quan tâm tới bất kỳ vấn đề nào liên quan đến nghiên cứu này mà tôi, hoặc giáo sư hướng dẫn, hoặc người liên lạc sở tại có thể giúp đỡ, xin hãy liên lạc qua địa chỉ cung cấp dưới đây. Nếu Quý công ty muốn liên lạc với người không liên quan tới nghiên cứu này, thì Quý công ty có thể liên lạc với nhân viên phụ trách các vấn đề về đạo đức trong nghiên cứu của UTS qua số điện thoại 61-2-9514 9615 và trích dẫn số phê chuẩn của Uỷ ban Đạo đức trong Nghiên cứu các vấn đề nhân sinh của UTS: UTS HREC REF NO. 2005-94A
Xin trân trọng cảm ơn sự giúp đỡ của Quý công ty.

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Lưu ý:
Nghiên cứu này đã được Uỷ ban Đạo đức trong nghiên cứu nhân sinh của UTS phê chuẩn. Nếu Quý vị có phàn nàn hoặc băn khoăn về bất kỳ vấn đề gì khi Quý vị tham gia vào nghiên cứu này mà không thể thoả mãn khi liên lạc với nghiên cứu viên, Quý vị có thể liên lạc với Uỷ ban qua nhân viên phụ trách các vấn đề đạo đức trong nghiên cứu theo số +61 2 9514 9615 hoặc email Research.Ethics@uts.edu.au. Mọi phàn nàn của Quý vị sẽ được giữ bí mật và điều tra cẩn thận, chúng tôi cũng sẽ thông báo cho Quý vị về kết quả điều tra.

BẢNG CÂU HỎI

Mục tiêu nghiên cứu: *Bảng câu hỏi này thiết kế nhằm nghiên cứu mối quan hệ giữa công ty nhập khẩu Việt nam và công ty xuất khẩu nước ngoài. Để trả lời bảng câu hỏi này, xin Quý vị chỉ nghĩ đến quan hệ kinh doanh cụ thể giữa công ty Quý vị và công ty xuất khẩu nước ngoài mà Quý vị biết rõ.*

Bảo mật thông tin và phi thương mại: Dữ liệu thu thập từ các công ty chỉ được dùng để kiểm nghiệm mô hình lý thuyết của một luận án tiến sỹ, hoàn toàn không có mục đích kinh doanh. Các dữ liệu thu thập từ công ty của Quý vị sẽ được xử lý kết hợp với dữ liệu từ các công ty khác ở dạng bảng biểu thống kê. Không ai (kể cả người nghiên cứu) có thể xác định được bảng câu trả lời nào là của công ty nào vì tất cả các thông tin được giữ ẩn danh.

Xin Quý vị vui lòng chọn một công ty xuất khẩu (trong bảng câu hỏi này gọi là công ty A, hoặc nhà xuất khẩu A) thoả mãn các tiêu chuẩn sau:

Công ty xuất khẩu A:

- Là một công ty nước ngoài
- Công ty của Quý vị nhập khẩu mặt hàng chính, tương đối thường xuyên từ công ty A.

HƯỚNG DẪN ĐIỀN BẢNG CÂU HỎI

Công ty nào nên điền bảng câu hỏi này?

Những công ty thuộc sở hữu người Việt nam có tham gia các hoạt động nhập khẩu từ nước ngoài

Ai có thể điền vào bảng câu hỏi này?

Những người tham gia chủ yếu vào hoạt động liên lạc với đối tác xuất khẩu và hoạt động nhập khẩu

Làm thế nào để trả lời câu hỏi?

Hầu hết các câu hỏi chỉ yêu cầu Quý vị khoanh tròn một số. Ví dụ, để trả lời câu hỏi sau, nếu công ty của Quý vị là công ty thuộc sở hữu của nhà nước, Quý vị khoanh tròn số 1 như sau

Xin hãy chỉ rõ loại hình sở hữu của công ty Quý vị (xin khoanh tròn số tương ứng)

Sở hữu Nhà nước	(1)
Sở hữu tư nhân	2
Loại khác (Xin ghi rõ.....)	3

Một số câu hỏi yêu cầu Quý vị viết ra câu trả lời vào vị trí để sẵn. Ví dụ, nếu công ty của Quý vị có 20 nhân viên, Quý vị viết như sau:

Một cách tương đối, Công ty Quý vị có bao nhiêu nhân viên (xin hãy viết ra)

.....20..... ... người

Những mã hiệu ghi trong cột Mã chỉ dành cho người nghiên cứu, không liên quan đến câu trả lời của Quý vị. Xin Quý vị bỏ qua các cột này.

XIN VUI LÒNG TRẢ LỜI TẤT CẢ CÁC CÂU HỎI
XIN CHÂN THÀNH CẢM ƠN!

Xin tiếp tục trả lời trang sau

PHẦN 1: THÔNG TIN CHUNG

Câu 1: Xin hãy chỉ rõ loại hình chủ sở hữu của công ty Quý vị (xin khoanh tròn số tương ứng)

Sở hữu Nhà nước	1	Mã
Sở hữu tư nhân	2	
Loại khác (xin ghi rõ .....)	3	OWNER

Câu 2: Công ty của Quý vị đã tham gia kinh doanh bao lâu (xin khoanh tròn số tương ứng)

Dưới 5 năm	1	Mã
Từ 6 - 10 năm	2	
Từ 11 - 20 năm	3	
Từ 21 - 30 năm	4	AGE
Trên 30 năm	5	

Câu 3: Lựa chọn nào dưới đây miêu tả chính xác nhất về công ty của Quý vị và công ty A (xin khoanh tròn số tương ứng)

Types		Mã
Công ty sản xuất	1	
Nhà phân phối/đại lý/ công ty bán buôn	2	TYPE
Công ty bán lẻ	3	
Loại khác (xin ghi rõ .....)	4	

Câu 4: Công ty của Quý vị có bao nhiêu nhân viên (xin viết vào khoảng trống):

..... người	Mã EMP

Câu 5: Công ty của Quý vị có bao nhiêu năm kinh nghiệm kinh doanh với các công ty nước ngoài (xin viết vào khoảng trống):

..... năm	Mã ForExp

Câu 6: Công ty Quý vị đã nhập khẩu từ công ty A bao nhiêu năm (xin viết vào khoảng trống):

..... năm	Mã ReYear

Câu 7: Công ty xuất khẩu A nằm trong khu vực địa lý nào (xin khoanh tròn số tương ứng):

Bắc Mỹ	1	Mã
Nam Mỹ	2	
Tây âu	3	ARegion
Đông âu	4	
Châu Á	5	
Châu Phi	6	
Khu vực khác (xin ghi rõ khu vực .....)	7	

Xin tiếp tục trả lời trang sau

PHẦN 2: QUAN HỆ GIỮA CÔNG TY CỦA QUÝ VỊ VÀ CÔNG TY XUẤT KHẨU

Xin hãy chỉ ra mức độ Quý vị đồng ý hoặc không đồng ý với từng phát biểu sau (xin khoanh tròn số tương ứng với từng phát biểu)

Câu 8:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Chúng tôi thực sự có dự định quan hệ lâu dài với công ty xuất khẩu A	1	2	3	4	5	6	7	REIN1
Chúng tôi tin tưởng rằng trong dài hạn quan hệ của công ty chúng tôi với công ty xuất khẩu A sẽ đem lại lợi nhuận	1	2	3	4	5	6	7	REIN2
Chúng tôi tin tưởng rằng trong dài hạn quan hệ của công ty chúng tôi với công ty xuất khẩu A có hiệu quả cao	1	2	3	4	5	6	7	REIN3
Quan hệ của công ty chúng tôi với công ty A có tiềm năng phát triển lâu dài	1	2	3	4	5	6	7	REIN4

Câu 9:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Công ty xuất khẩu A thường xuyên giữ lời hứa với công ty chúng tôi	1	2	3	4	5	6	7	CRED1
Công ty xuất khẩu A làm việc với chúng tôi rất thẳng thắn	1	2	3	4	5	6	7	CRED2
Trong quan hệ với công ty xuất khẩu A, chúng tôi chưa từng bao giờ cảm thấy bị lừa dối	1	2	3	4	5	6	7	CRED3
Công ty xuất khẩu A chưa tuyên bố điều gì sai	1	2	3	4	5	6	7	CRED4
Một cách tổng quát, công ty xuất khẩu A hoàn toàn đáng tin cậy	1	2	3	4	5	6	7	CRED5
Khi chúng tôi thoả thuận với công ty A, chúng tôi luôn tin tưởng họ có thể hoàn thành tất cả những thoả thuận đó	1	2	3	4	5	6	7	CRED6
Công ty A có đầy đủ năng lực hoàn thành các yêu cầu của chúng tôi	1	2	3	4	5	6	7	CRED7

Câu 10:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Chất lượng sản phẩm của công ty xuất khẩu A đạt yêu cầu và kỳ vọng của công ty chúng tôi	1	2	3	4	5	6	7	PROD1
Công ty xuất khẩu A bán sản phẩm và dịch vụ đáng giá tiền chúng tôi bỏ ra để mua	1	2	3	4	5	6	7	PROD2
Dịch vụ và hoạt động hỗ trợ khác hang của công ty xuất khẩu A đạt yêu cầu và kỳ vọng của công ty chúng tôi.	1	2	3	4	5	6	7	PROD3

Câu 11:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Công ty xuất khẩu A bán hàng cho chúng tôi với giá rất cạnh tranh	1	2	3	4	5	6	7	PRI1
Chúng tôi thường được công ty xuất khẩu khẩu A giảm giá	1	2	3	4	5	6	7	PRI2
Công ty xuất khẩu A thường cho chúng tôi hưởng các điều kiện thanh toán ưu đãi	1	2	3	4	5	6	7	PRI3

Xin tiếp tục trả lời trang sau

Câu 12:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Công ty xuất khẩu A thường giao hàng đúng hạn	1	2	3	4	5	6	7	DELI1
Công ty xuất khẩu A luôn giao chính xác hàng chúng tôi đặt mua	1	2	3	4	5	6	7	DELI2
Công ty xuất khẩu A luôn luôn linh hoạt khi xử lý các đơn đặt hàng của công ty chúng tôi.	1	2	3	4	5	6	7	DELI3

Câu 13:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Công ty A luôn thống nhất trong các phát biểu và hành vi	1	2	3	4	5	6	7	CONS1
Các hành vi, tuyên bố của công ty A luôn thể hiện một cách thống nhất khả năng và dự định của họ	1	2	3	4	5	6	7	CONS2
Chúng tôi không có lý do gì để nghi ngờ dự định và khả năng của công ty xuất khẩu A vì các hành vi và tuyên bố của họ luôn thống nhất	1	2	3	4	5	6	7	CONS3
Các hành vi, tuyên bố của công ty A luôn thể hiện một cách thống nhất, không thay đổi theo thời gian	1	2	3	4	5	6	7	CONS4

Câu 14:

Phát biểu	*Hoàn toàn đồng ý*						*Hoàn toàn không đồng ý*	*Mã*
Các hành vi, phát biểu của công ty xuất khẩu A luôn rõ ràng	1	2	3	4	5	6	7	CLAR1
Chúng tôi không gặp khó khăn gì để hiểu mục tiêu và dự định của những phát biểu và hành vi của công ty xuất khẩu A	1	2	3	4	5	6	7	CLAR2
Chúng tôi có thể dễ dàng và nhanh chóng hiểu tất cả các hành vi, phát biểu của công ty xuất khẩu A	1	2	3	4	5	6	7	CLAR3
Chúng tôi không cần nhiều cố gắng để hiểu tất cả các hành vi, phát biểu của công ty xuất khẩu A	1	2	3	4	5	6	7	CLAR4
Chúng tôi luôn hiểu nguyên nhân và kết quả các hành vi và phát biểu của công ty xuất khẩu A.	1	2	3	4	5	6	7	CLAR5

Xin chân thành cảm ơn Quý vị đã trả lời bảng câu hỏi!

Appendix B: Normality of Variables

Variables	min	max	Skewness	CR	Kurtosis	CR
Importer Relationship Intention (REIN)						
REIN1	1	7	1.447	12.080	1.830	7.638
REIN2	1	7	1.052	8.782	.792	3.307
REIN3	1	7	1.095	9.138	.964	4.023
REIN4	1	7	1.525	12.728	2.466	10.290
Exporter Credibility (CRED)						
CRED1	1	7	1.149	9.592	1.177	4.914
CRED2	1	7	1.397	11.662	2.152	8.982
CRED3	1	7	.959	8.004	.499	2.084
CRED5	1	7	1.322	11.035	1.888	7.879
CRED6	1	7	1.192	9.952	1.367	5.704
CRED7	1	7	1.265	10.558	1.807	7.541
Perceived Product Quality (PROD)						
PROD1	1	7	1.124	9.384	1.228	5.126
PROD2	1	7	.903	7.536	.801	3.344
PROD3	1	7	1.146	9.565	1.094	4.566
Perceived Price Competitiveness (PRI)						
PRI1	1	7	.978	8.167	1.005	4.196
PRI2	1	7	.515	4.301	-.049	-.204
PRI3	1	7	.706	5.893	.306	1.275
Perceived Delivery Performance (DELI)						
DELI1	1	7	1.142	9.535	1.394	5.819
DELI2	1	7	.878	7.331	.565	2.357
DELI3	1	7	1.068	8.912	.936	3.904
Signal Consistence (CONS)						
CONS1	1	7	1.065	8.890	1.480	6.178
CONS2	1	7	.986	8.230	1.250	5.216
CONS3	1	7	1.011	8.434	1.043	4.352
CONS4	1	7	.902	7.531	.649	2.706
Signal Clarity (CLAR)						
CLAR1	1	7	1.007	8.408	.809	3.377
CLAR2	1	7	1.077	8.987	1.341	5.595
CLAR3	1	7	.928	7.748	.812	3.389
CLAR4	1	7	.913	7.619	.579	2.416
CLAR5	1	7	1.098	9.166	1.413	5.897

Appendix C1: Covariance Matrix

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	1.574													
CLAR2	1.179	1.395												
CLAR3	1.129	.974	1.448											
CLAR4	1.370	1.264	1.139	1.651										
CONS1	.809	.796	.754	.872	1.310									
CONS2	.866	.844	.808	.906	1.007	1.396								
CONS3	.953	.916	.868	.994	.944	1.029	1.592							
CONS4	.940	.843	.895	.957	1.117	1.133	1.061	1.547						
DELI1	.852	.776	.821	.887	.849	.798	.801	.888	1.422					
DELI2	.826	.786	.748	.837	.848	.773	.739	.861	1.000	1.430				
DELI3	.733	.702	.696	.747	.743	.725	.805	.775	.949	1.014	1.686			
PRI1	725	.695	.643	.696	.612	.668	.722	.677	.604	.670	.647	1.490		
PRI2	.713	.641	.642	.690	.663	.700	.743	.726	.599	.639	.734	1.079	1.527	
PRI3	.883	.756	.766	.807	.740	.774	.825	.825	.723	.767	.852	1.131	1.203	1.685
PROD1	921	.777	.836	.887	.846	.847	.854	.938	.861	.830	.776	.760	.766	.883
PROD2	.847	.793	.844	.832	.740	.826	.802	.862	.810	.772	.680	.753	.711	.851
PROD3	.823	.671	.731	.751	.666	.707	.797	.778	.736	.714	.685	.729	.704	779
CRED1	.712	.586	.617	.671	.666	.686	.723	.737	.703	.634	.618	.577	.516	.691
CRED2	.704	.583	.642	.706	.544	.684	.685	.679	.652	.536	.513	.559	.470	.613
CRED3	.720	.556	.656	.712	.672	.643	.644	.709	.656	.676	.647	.658	.621	.674
CRED5	.656	.548	.674	.737	.743	.673	.695	.803	.755	.675	.572	.653	.609	.739
CRED6	.584	.538	.625	.615	.701	.656	.654	.671	.727	.607	.547	.630	.610	.653
CRED7	.778	.639	.680	.765	.673	.744	.709	.754	.731	.685	.586	.623	.609	.648
REIN1	.643	.567	.619	.649	530	.578	.666	.580	.519	.586	.639	.660	.578	.694
REIN2	.668	.564	.593	.621	.502	.569	.660	.539	.504	.505	.560	.628	.605	.688
REIN3	.769	.613	.692	.734	.551	.616	.696	.612	.599	.553	.639	.630	.617	.673
REIN4	.766	.647	.660	.734	.568	.612	.681	.579	.580	.586	.562	.658	.625	.702

Appendix C1: Covariance Matrix (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	1.664												
PROD2	1.137	1.416											
PROD3	1.061	.950	1.723										
CRED1	.772	.672	.633	1.468									
CRED2	.721	.740	.556	.833	1.478								
CRED3	.847	.808	.733	.875	.973	1.639							
CRED5	.780	.762	.587	.959	.834	.924	1.549						
CRED6	.759	.722	.557	.869	763	.806	.971	1.417					
CRED7	.842	.755	.684	924	.919	1.014	.944	.913	1.357				
REIN1	.712	.654	.693	.843	.746	.697	.836	.683	.745	1.483			
REIN2	.703	.672	.638	.794	.751	.787	.764	.715	.755	1.068	1.404		
REIN3	.756	.684	.708	.855	.764	.780	.804	.734	.813	1.134	1.078	1.485	
REIN4	.785	.776	.668	.887	.837	.871	.853	.760	777	1.103	1.145	1.147	1.600

Appendix C2: Correlation Matrix

	Mean	SD	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1
CLAR1	2.31	1.256	1.000											
CLAR2	2.25	1.183	.796	1.000										
CLAR3	2.37	1.205	.748	.685	1.000									
CLAR4	2.38	1.286	.850	.833	.737	1.000								
CONS1	2.22	1.146	.563	.589	.547	.593	1.000							
CONS2	2.39	1.183	.584	.605	.569	.597	.745	1.000						
CONS3	2.42	1.263	.602	.615	.572	.613	.654	.690	1.000					
CONS4	2.38	1.245	.602	.574	.598	.599	.784	.771	.676	1.000				
DELI1	2.17	1.194	.570	.551	.572	.579	.622	.566	.532	.599	1.000			
DELI2	2.29	1.197	.551	.557	.520	.545	.620	.547	.490	.579	.702	1.000		
DELI3	2.32	1.300	.450	.458	.446	.447	.500	.473	.492	.480	.613	.653	1.000	
PRI1	2.31	1.222	.473	.482	.438	.444	.438	.463	.469	.446	.415	.459	.408	1.000
PRI2	2.64	1.237	.460	.439	.432	.435	.469	.479	.476	.472	.406	.432	.457	.715
PRI3	2.52	1.300	.542	.493	.490	.484	.498	.504	.503	.511	.467	.494	.505	.713
PROD1	2.28	1.291	.569	510	.539	.535	.573	.556	.525	.585	.560	.538	.463	.483
PROD2	2.27	1.191	.567	.564	.589	.544	.543	.588	.534	.582	.571	.543	.440	.518
PROD3	2.22	1.314	.499	.433	.463	.445	.443	.456	.481	.477	.470	.455	.402	.455
CRED1	2.12	1.213	.469	.409	.423	.431	.481	.479	.473	.489	.487	.438	.393	.390
CRED2	2.05	1.217	.462	.406	.439	.452	.391	.476	.446	.449	.449	.369	325	.377
CRED3	2.30	1.282	.448	.368	.426	.433	.458	.425	.399	.445	.430	.441	.389	.421
CRED5	2.16	1.246	.420	.373	.450	.461	.521	.458	.443	.519	.509	.453	.354	.430
CRED6	2.15	1.192	.391	.382	.437	.402	.514	.466	435	.453	.512	.426	.354	.434
CRED7	2.13	1.166	.532	465	.485	.511	.504	.541	.483	.521	.526	.492	.387	.438
REIN1	1.92	1.219	.421	394	.423	.415	.380	.402	.434	.383	.358	.403	.404	.444
REIN2	2.10	1.186	.449	.403	.416	.408	.370	.407	.441	.366	.357	.357	.364	.434
REIN3	2 22	1.220	.503	.426	.472	.469	.395	.428	.452	.404	.413	.379	.404	.423
REIN4	2.01	1.267	.482	.433	.434	.452	.392	.409	.427	368	.385	.388	.342	.426

N= 418

Appendix C2: Correlation Matrix (Continued)

	PRI2	PRI3	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1															
CLAR2															
CLAR3															
CLAR4															
CONS1															
CONS2															
CONS3															
CONS4															
DELI1															
DELI2															
DELI3															
PRI1															
PRI2	1.000														
PRI3	.750	1.000													
PROD1	.481	.528	1.000												
PROD2	.484	.551	.741	1.000											
PROD3	.434	.457	.627	.608	1.000										
CRED1	.345	.440	.494	.466	.398	1.000									
CRED2	.313	.388	.460	.512	.348	.566	1.000								
CRED3	.392	.405	.513	.530	.436	.564	.625	1.000							
CRED5	.396	.457	.486	.514	.359	.636	.551	.580	1.000						
CRED6	.415	.422	.495	.510	.356	.602	.527	.529	.655	1.000					
CRED7	.423	.429	.561	.545	.447	.655	.649	.680	.651	.659	1.000				
REIN1	.384	.439	.453	.451	.434	.571	.504	.447	.552	.471	.525	1.000			
REIN2	.413	.447	.460	.477	.410	.553	.521	.519	.518	.507	.547	.740	1.000		
REIN3	.409	.425	.481	.471	.443	.579	.515	.500	.530	.506	.573	.764	.747	1.000	
REIN4	.400	.427	.481	.515	.402	.579	.544	.538	.542	.504	.527	.716	.764	.744	1.000

Appendix D: Pair-wise CFA Results: Factor Loadings

Pair-wise	1st construct factor loadings			2nd construct factor loadings		
	Indicators	Loadings	p-value	Indicators	Loadings	p-value
REIN-CRED	REIN1	0.852		CRED1	0.785	
	REIN2	0.869	.000	CRED2	0.746	.000
	REIN3	0.873	.000	CRED3	0.759	.000
	REIN4	0.86	.000	CRED5	0.787	.000
				CRED6	0.759	.000
				CRED7	0.849	.000
REIN-PROD	REIN1	0.853		PROD1	0.864	
	REIN2	0.869	.000	PROD2	0.854	.000
	REIN3	0.873	.000	PROD3	0.723	.000
	REIN4	0.86	.000			
REIN-PRI	REIN1	.855		PRI1	0.830	
	REIN2	.871	.000	PRI2	0.859	.000
	REIN3	.871	.000	PRI3	0.868	.000
	REIN4	.857	.000			
REIN-DELI	REIN1	0.856		DELI1	0.815	
	REIN2	0.867	.000	DELI2	0.855	.000
	REIN3	0.874	.000	DELI3	0.763	.000
	REIN4	0.856	.000			
REIN-CONS	REIN1	0.855		CONS1	0.864	
	REIN2	0.869	.000	CONS2	0.871	.000
	REIN3	0.874	.000	CONS3	0.776	.000
	REIN4	0.856	.000	CONS4	0.888	.000
REIN-CLAR	REIN1	0.852		CLAR1	0.915	
	REIN2	0.867	.000	CLAR2	0.878	.000
	REIN3	0.859	.000	CLAR3	0.8	.000
	REIN4	0.876	.000	CLAR4	0.932	.000
CRED-PROD	CRED1	0.769		PROD1	0.866	
	CRED2	0.742	.000	PROD2	0.86	.000
	CRED3	0.769	.000	PROD3	0.71	.000
	CRED5	0.781	.000			
	CRED6	0.761	.000			
	CRED7	0.861	.000			
CRED-PRI	CRED1	.771		PRI1	.831	
	CRED2	.738	.000	PRI2	.857	.000
	CRED3	.763	.000	PRI3	.870	.000
	CRED5	.788	.000			
	CRED6	.766	.000			
	CRED7	.857	.000			

Appendix D: Pair-wise CFA Results: Factor Loadings (Continued)

Pair-wise	1st construct factor loadings			2nd construct factor loadings		
	Indicators	Loadings	p-value	Indicators	Loadings	p-value
CRED-DELI	CRED1	0.774		DELI1	0.843	
	CRED2	0.737	.000	DELI2	0.843	.000
	CRED3	0.761	.000	DELI3	0.742	.000
	CRED5	0.787	.000			
	CRED6	0.764	.000			
	CRED7	0.86	.000			
CRED-CONS	CRED1	0.775		CONS1	0.867	
	CRED2	0.74	.000	CONS2	0.868	.000
	CRED3	0.758	.000	CONS3	0.772	.000
	CRED5	0.788	.000	CONS4	0.89	.000
	CRED6	0.764	.000			
	CRED7	0.859	.000			
CRED-CLAR	CRED1	0.771		CLAR1	0.914	
	CRED2	0.745	.000	CLAR2	0.877	.000
	CRED3	0.762	.000	CLAR3	0.801	.000
	CRED5	0.781	.000	CLAR4	0.934	.000
	CRED6	0.757	.000			
	CRED7	0.864	.000			
PROD-PRI	PROD1	.859		PRI1	.828	
	PROD2	.858	.000	PRI2	.855	.000
	PROD3	.723	.000	PRI3	.875	.000
PROD-DELI	PROD1	0.867		DELI1	0.834	
	PROD2	0.854	.000	DELI2	0.85	.000
	PROD3	0.719	.000	DELI3	0.745	.000
PROD-CONS	PROD1	0.867		CONS1	0.863	
	PROD2	0.856	.000	CONS2	0.868	.000
	PROD3	0.715	.000	CONS3	0.774	.000
				CONS4	0.892	.000
PROD-CLAR	PROD1	0.86		CLAR1	0.916	
	PROD2	0.861	.000	CLAR2	0.879	.000
	PROD3	0.718	.000	CLAR3	0.804	.000
				CLAR4	0.928	.000
PRI-DELI	PRI1	.823		DELI1	.807	
	PRI2	.856	.000	DELI2	.856	.000
	PRI3	.878	.000	DELI3	.770	.000

Appendix D: Pair-wise CFA Results: Factor Loadings (Continued)

Pair-wise	1st construct factor loadings			2nd construct factor loadings		
	Indicators	Loadings	p-value	Indicators	Loadings	p-value
PRI-CONS	PRI1	.822		CONS1	.869	
	PRI2	.862	.000	CONS2	.864	.000
	PRI3	.873	.000	CONS3	.775	.000
				CONS4	.890	.000
PRI-CLAR	PRI1	.825		CLAR1	.915	
	PRI2	.855	.000	CLAR2	.881	.000
	PRI3	.876	.000	CLAR3	.800	.000
				CLAR4	.930	.000
DELI-CONS	DELI1	0.836		CONS1	0.876	
	DELI2	0.849	.000	CONS2	0.862	.000
	DELI3	0.744	.000	CONS3	0.769	.000
				CONS4	0.889	.000
DELI-CLAR	DELI1	0.835		CLAR1	0.912	
	DELI2	0.851	.000	CLAR2	0.882	.000
	DELI3	0.742	.000	CLAR3	0.801	.000
				CLAR4	0.932	.000
CONS-CLAR	CONS1	0.862		CLAR1	0.91	
	CONS2	0.868	.000	CLAR2	0.883	.000
	CONS3	0.784	.000	CLAR3	0.802	.000
	CONS4	0.887	.000	CLAR4	0.932	.000

Appendix E1: Fit Indices of the Measurement Model

		Measurement model	Theoretical model
Discrepancy	CMIN	549.051	627.342
Degrees of freedom	Df	303	313
P	P	.000	.000
Number of parameters	NPAR	75	65
Discrepancy/df	CMIN/df	1.812	2.004
RMR	RMR	.046	.066
GFI	GFI	.911	.898
Adjusted GFI	AGFI	.889	.877
Parsimony-adjusted GFI	PGFI	.731	.744
Normed Fit Index	NFI	.942	.934
Relative Fit Index	RFI	.933	.926
Incremental Fit Index	IFI	.973	.966
Tucker-Lewis Index	TLI	.969	.961
Comparative Fit Index	CFI	.973	.965
Parsimony Ratio	PRATIO	.863	.892
Parsimony-adjusted NFI	PNFI	.813	.833
Parsimony-adjusted CFI	PCFI	.840	.861
Noncentrality Parameter Estimate	NCP	246.051	314.342
NCP lower bound	NCLPO	184.341	246.812
NCP upper bound	NCPHI	315.596	389.648
FMIN	FMIN	1.317	1.504
FO	FO	.590	.754
FO lower bound	FOLO	.442	.592
FO upper bound	FOHI	.757	.934
RMSEA	RMSEA	.044	.049
RMSEA lower bound	RMSEALO	.038	.043
RMSEA upper bound	RMSEAHI	.050	.055
P for test of close fit	PCLOSE	.951	.600
Akaike Information Criteria	AIC	699.051	757.342
Browne-Cudeck Criteria	BCC	709.848	766.699
Bayes Information Criterion	BIC	1001.712	1019.648
Consistent AIC	CAIC	1076.712	1084.648
Expected Cross Validation Index	ECVI	1.676	1.816
ECVI lower bound	ECVILO	1.528	1.654
ECVI upper bound	ECVIHI	1.843	1.997
MECVI	MECVI	1.702	1.839
Hoelter .05 index	HHFIVE	262	237
Hoelter .01 index	HONE	276	249

Appendix E2: Standardised Residual Covariance of the Measurement Model

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.155	.000												
CLAR3	.161	-.442	.000											
CLAR4	.045	.245	-.193	.000										
CONS1	-.746	.072	.212	-.385	.000									
CONS2	-.352	.384	.626	-.283	-.080	.000								
CONS3	.999	1.582	1.636	1.052	-.410	.241	.000							
CONS4	-.306	-.421	.898	-.525	.245	.066	-.296	.000						
DELI1	.173	.202	1.417	.189	.766	-.190	.185	.114	.000					
DELI2	-.129	.329	.494	-.380	.757	-.496	-.547	-.193	-.185	.000				
DELI3	-.709	-.253	.261	-.882	-.090	-.563	.673	-.663	-.185	.542	.000			
PRI1	.167	.641	.524	-.503	-.554	-.068	.879	-.603	-.638	.210	.299	.000		
PRI2	-.336	-.404	.173	-.931	-.248	-.024	.782	-.380	-1.052	-.540	1.010	.197	.000	
PRI3	.893	.317	1.016	-.301	.010	.156	1.025	.043	-.199	.333	1.666	-.204	.039	.000
PROD1	.167	-.535	.811	-.581	.097	-.178	.240	.070	.229	-.128	-.258	-.248	-.556	.002
PROD2	.094	.404	1.699	-.456	-.469	.347	.376	-.012	.385	-.083	-.716	.366	-.540	.389
PROD3	.587	-.344	.939	-.538	-.569	-.309	1.009	-.154	.246	-.020	.058	.751	.129	.307
CRED1	.345	-.464	.483	-.476	.027	.029	.773	-.016	.564	-.320	-.099	-.074	-1.156	.395
CRED2	.662	-.103	1.180	.359	-1.175	.433	.700	-.281	.316	-1 175	-1.006	.061	-1.364	-.163
CRED3	.230	-.995	.772	-.188	-.113	-.706	-.371	-.543	-.233	.006	.063	.748	-.016	-.007
CRED5	-.607	-1.193	.943	.028	.722	-.426	.148	.471	.913	-.083	-.891	.629	-.230	.674
CRED6	-.873	-.743	.954	-.783	.900	.035	.293	-.425	1.278	-.298	-.633	.969	.386	.291
CRED7	.805	-.114	1.003	.286	-.278	.404	.260	-.197	.570	-.028	-.841	.204	-.325	-.474
REIN1	-.373	-.592	.626	-.616	-.294	.133	1.475	-.419	-.513	.366	1.327	.780	-.581	.212
REIN2	-.026	-.598	.337	-.916	-.646	.065	1.474	-.906	-.682	-.665	.405	.432	-.200	.196
REIN3	.937	-.205	1.365	.170	-.216	.423	1.651	-.219	.338	-.271	1.146	.191	-.303	-.259
REIN4	.664	.032	.736	-.033	-.170	.181	1.251	-.804	-.096	-.013	.046	.348	-.385	-.110

Appendix E2: Standardised Residual Covariance of the Measurement Model (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	.005	.000											
PROD3	.176	-.183	.000										
CRED1	-.135	-.672	-.399	.000									
CRED2	-.289	.637	-.927	-.283	.000								
CRED3	.490	.781	.569	-.548	1.088	.000							
CRED5	-.347	.140	-1.175	.313	-.605	-.329	.000						
CRED6	.132	.378	-.963	.096	-.687	-.873	.960	.000					
CRED7	.300	-.026	-.133	-.191	.308	.592	-.330	.191	.000				
REIN1	-.325	-.394	.763	.943	.211	-1.026	.525	-.617	-.677	.000			
REIN2	-.392	-.111	.161	.407	.338	.079	-.281	-.163	-.502	.016	.000		
REIN3	-.040	-.251	.736	.827	188	-.302	-.113	-.226	-.098	.347	-.193	.000	
REIN4	.076	.671	.072	.948	.833	.508	.221	-.125	-.776	-.275	.249	-.139	.000

Appendix F1: Unstandardised Regression Weights of the Theoretical Model

			Estimate	S.E.	C.R.	p
CLAR	→	CONS	.833	.047	17.665	.000
PRI	→	CONS	.508	.076	6.728	.000
DELI	→	CONS	.526	.061	8.659	.000
PRO	→	CLAR	.224	.050	4.473	.000
PRI	→	CLAR	.236	.068	3.498	.000
DELI	→	CLAR	.217	.051	4.259	.000
PRO	→	CONS	.486	060	8.156	.000
CRED	→	PRO	.500	.068	7.343	.000
CRED	→	PRI	.136	.044	3.126	.002
CRED	→	DELI	.264	.063	4.191	.000
REIN	→	CRED	.867	.054	16.115	.000
REIN4	→	REIN	1.000			
REIN3	→	REIN	.978	.042	23.291	.000
REIN2	→	REIN	.946	.041	23.072	.000
REIN1	→	REIN	.953	.043	22.307	000
CRED7	→	CRED	1.000			
CRED6	→	CRED	.915	.051	18.043	.000
CRED5	→	CRED	.990	.052	18.999	.000
CRED3	→	CRED	.986	.055	18.082	000
CRED2	→	CRED	.913	.052	17.439	.000
CRED1	→	CRED	.958	.051	18.819	.000
PROD3	→	PRO	1.000			
PROD2	→	PRO	1.097	.067	16.311	.000
PROD1	→	PRO	1.187	.073	16.300	.000
PRI3	→	PRI	1.000			
PRI2	→	PRI	.928	.043	21.641	.000
PRI1	→	PRI	.885	.043	20.604	.000
DELI3	→	DELI	1.000			
DELI2	→	DELI	1.052	.064	16.553	.000
DELI1	→	DELI	1.054	.063	16.618	.000
CONS4	→	CONS	1.000			
CONS3	→	CONS	.902	.044	20.288	.000
CONS2	→	CONS	.928	.039	24.110	.000
CONS1	→	CONS	.902	.037	24.239	.000
CLAR4	→	CLAR	1.000			
CLAR3	→	CLAR	.818	.035	23.443	.000
CLAR2	→	CLAR	.875	.030	28.680	.000
CLAR1	→	CLAR	.964	.030	31.710	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix F2: Unstandardised Regression Weights of the Less Restrictive Competing Model

			Estimate	S.E.	C.R.	p
CLAR	→	CONS	.833	.047	17.661	.000
PRI	→	CONS	.508	.076	6.705	.000
DELI	→	CONS	.525	.061	8.584	.000
PRO	→	CLAR	.225	.051	4.417	.000
PRI	→	CLAR	.236	.068	3.492	.000
DELI	→	CLAR	.217	.051	4.229	.000
PRO	→	CONS	.483	.060	8.010	.000
CRED	→	PRO	.427	.080	5.319	.000
CRED	→	PRI	.114	.047	2.398	.016
CRED	→	DELI	.171	.081	2.125	.034
CRED	→	CONS	.132	.090	1.470	.141
CRED	→	CLAR	.032	.056	.561	.575
REIN	→	CRED	.867	.054	16.173	.000
REIN4	→	REIN	1.000			
REIN3	→	REIN	.978	.042	23.355	.000
REIN2	→	REIN	.946	.041	23.132	.000
REIN1	→	REIN	.953	.043	22.365	.000
CRED7	→	CRED	1.000			
CRED6	→	CRED	.914	.050	18.124	.000
CRED5	→	CRED	.990	.052	19.103	.000
CRED3	→	CRED	.984	.054	18.140	.000
CRED2	→	CRED	.914	.052	17.539	.000
CRED1	→	CRED	.958	.051	18.928	.000
PROD3	→	PRO	1.000			
PROD2	→	PRO	1.096	.067	16.352	.000
PROD1	→	PRO	1.188	.073	16.349	.000
PRI3	→	PRI	1.000			
PRI2	→	PRI	.928	.043	21.654	.000
PRI1	→	PRI	.884	.043	20.610	.000
DELI3	→	DELI	1.000			
DELI2	→	DELI	1.052	.063	16.628	.000
DELI1	→	DELI	1.050	.063	16.644	.000
CONS4	→	CONS	1.000			
CONS3	→	CONS	.903	.044	20.290	.000
CONS2	→	CONS	.929	.039	24.101	.000
CONS1	→	CONS	.902	.037	24.225	.000
CLAR4	→	CLAR	1.000			
CLAR3	→	CLAR	.818	.035	23.449	.000
CLAR2	→	CLAR	.874	.031	28.666	.000
CLAR1	→	CLAR	.964	.030	31.723	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix F3: Unstandardised Regression Weights of the More Restrictive Competing Model

			Estimate	S.E.	C.R.	p
CLAR	→	CONS	.851	.047	18.038	.000
PRI	→	CONS	.724	.050	14.397	.000
DELI	→	CONS	.552	.063	8.775	.000
PRO	→	CLAR	.195	.051	3.842	.000
DELI	→	CLAR	.193	.052	3.730	.000
PRO	→	CONS	.517	.062	8.364	.000
CRED	→	PRO	.502	.068	7.355	.000
CRED	→	PRI	.134	.043	3.112	.002
CRED	→	DELI	.264	.063	4.191	.000
REIN	→	CRED	.867	.054	16.097	.000
REIN4	→	REIN	1.000			
REIN3	→	REIN	.978	.042	23.277	.000
REIN2	→	REIN	.946	.041	23.058	.000
REIN1	→	REIN	.953	.043	22.294	.000
CRED7	→	CRED	1.000			
CRED6	→	CRED	.915	.051	18.030	.000
CRED5	→	CRED	.990	.052	18.984	.000
CRED3	→	CRED	.986	.055	18.064	.000
CRED2	→	CRED	.913	.052	17.420	.000
CRED1	→	CRED	.958	.051	18.802	.000
PROD3	→	PRO	1.000			
PROD2	→	PRO	1.096	.067	16.317	.000
PROD1	→	PRO	1.187	.073	16.306	.000
PRI3	→	PRI	1.000			
PRI2	→	PRI	.932	.043	21.631	.000
PRI1	→	PRI	.886	.043	20.507	.000
DELI3	→	DELI	1.000			
DELI2	→	DELI	1.051	.063	16.569	.000
DELI1	→	DELI	1.053	.063	16.631	.000
CONS4	→	CONS	1.000			
CONS3	→	CONS	.909	.045	20.279	.000
CONS2	→	CONS	.930	.039	23.789	.000
CONS1	→	CONS	.903	.038	23.853	.000
CLAR4	→	CLAR	1.000			
CLAR3	→	CLAR	.815	.035	23.471	.000
CLAR2	→	CLAR	.873	.030	28.850	.000
CLAR1	→	CLAR	.961	.030	31.773	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix G1: Standardised Residuals of the Theoretical Model

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.151	.000												
CLAR3	.143	-.447	.000											
CLAR4	.062	.275	-.186	.000										
CONS1	-.742	.087	.209	-.360	.000									
CONS2	-.350	.398	.622	-.258	.015	.000								
CONS3	.940	1.534	1.575	1.012	-.392	.258	.000							
CONS4	-.274	-.379	.921	-.471	.376	.195	-.248	.000						
DELI1	.069	.111	1.314	.105	.544	-.406	-.077	-.079	.000					
DELI2	-.218	.253	.406	-.448	.551	-.695	-.790	-.370	-.158	.000				
DELI3	-.789	-.322	.182	-.944	-.273	-.744	.447	-.822	-.161	.582	.000			
PRI1	.070	.556	.431	-.581	-.841	-.357	.556	-.871	.245	1.116	1.105	.000		
PRI2	-.487	-.541	.029	-1.063	-.599	-.376	.399	-.712	-.202	.328	1.804	.178	.000	
PRI3	.788	.227	.916	-.385	-.297	-.152	.682	-.244	.737	1.288	2.535	-.153	.017	.000
PROD1	.005	-.680	.656	-.721	-.241	-.514	-.134	-.247	1.320	.965	.718	1.551	1.229	1.904
PROD2	-.041	.283	1.566	-.569	-.776	.033	.026	-.300	1.509	1.040	.275	2.215	1.273	2.337
PROD3	.532	-.387	.884	-.574	-.773	-.515	.763	-.339	1.262	1.000	.966	2.381	1.744	2.013
CRED1	.394	-.414	.523	-.415	.318	.318	.998	.303	.918	.034	.219	.419	-.710	.921
CRED2	.689	-.073	1.204	.401	-.931	.693	.893	-.001	.630	-.867	-.731	.515	-.959	.312
CRED3	.238	-.986	.778	-.166	.129	-.472	-.201	-.279	.065	.317	.340	1.206	.400	.463
CRED5	-.564	-1.147	.987	.094	1.023	-.139	.368	.799	1.275	.277	-.580	1.136	.233	1.208
CRED6	-.837	-.698	.993	-.728	1.191	.314	.504	-.121	1.630	.045	-.332	1.462	.840	.800
CRED7	.853	-.065	1.042	.348	.020	710	.486	.132	.942	.347	-.518	.732	.159	.068
REIN1	.701	.452	1.605	.481	-.337	.090	1.397	-.444	-.356	.539	1.487	2.491	1.091	1.999
REIN2	1.093	.480	1.344	.209	-.676	.037	1.410	-.917	-.509	-.483	.574	2.178	1.531	2.030
REIN3	2.080	.883	2.395	1.324	-.250	.392	1.582	-.232	.515	-.089	1.317	1.933	1.427	1.562
REIN4	1.801	1.126	1.752	1.117	-.189	.164	1.195	-.805	.089	.183	.219	2.086	1.335	1.708

Appendix G1: Standardised Residuals of the Theoretical (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	.004	.000											
PROD3	.252	-.078	.000										
CRED1	.030	-.488	-.184	.206									
CRED2	-.156	.803	-.745	-.016	.185								
CRED3	.614	.933	.752	-.302	1.323	.195							
CRED5	-.183	.334	-.966	.632	-.341	-.077	.208						
CRED6	.292	.565	-.760	.399	-.435	-.642	1.281	.194					
CRED7	.471	.169	.094	.124	.593	.862	-.014	.504	.243				
REIN1	.572	.526	1.619	1.082	.312	-.957	.661	-.504	-.560	151			
REIN2	.536	.849	1.036	.562	.461	.181	-.134	-.023	-.360	.175	.157		
REIN3	.895	.705	1.622	.982	.304	-.210	.031	-.092	.043	.502	-.017	.159	
REIN4	1.019	1.653	.947	1.121	.973	.626	.386	.026	-.626	-.106	.452	.052	.154

Appendix G2: Standardised Residuals of the Less Restrictive Competing Model

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.149	.000												
CLAR3	.141	-.445	.000											
CLAR4	.060	.278	-.187	.000										
CONS1	-.743	.089	.208	-.361	.000									
CONS2	-.352	.399	.620	-.260	.015	.000								
CONS3	.936	1.533	1.571	1.008	-.395	.254	.000							
CONS4	-.271	-.372	.924	-.467	.382	.200	-.245	.000						
DELI1	.110	.154	1.352	.146	.594	-.359	-.035	-.025	.000					
DELI2	-.212	.262	.412	-.442	.564	-.683	-.781	-.353	-.181	.000				
DELI3	-.783	-.313	.188	-.938	-.260	-.733	.456	-.806	-.181	.524	.000			
PRI1	.080	.568	.440	-.571	-.828	-.345	.566	-.854	.290	1.134	1.122	.000		
PRI2	-.479	-.531	.036	-1.056	-.587	-.366	.407	-.696	-.158	.345	1.820	.175	.000	
PRI3	.795	.236	.922	-.378	-.287	-.142	.689	-.230	.782	1.305	2.552	-.157	.010	.000
PROD1	.036	-.647	.685	-.690	-.196	-.470	-.094	-.197	1.399	1.011	.760	1.593	1.270	1.946
PROD2	-.003	323	1.601	-.532	-.724	.085	.072	-.243	1.593	1.092	.322	2.263	1.320	2.384
PROD3	.562	-.357	.910	-.545	-.732	-.474	.800	-.294	1.331	1.041	1.004	2.418	1.780	2.050
CRED1	.154	-.639	.306	-.652	-.051	-.051	.649	-.068	1.010	.097	.276	.356	-.774	.850
CRED2	.457	-.291	.992	.169	-1.274	.335	.560	-.355	.717	-.806	-.677	.454	-1.020	.245
CRED3	.018	-1.189	.577	-.385	-.216	-.811	-.519	-.622	.167	.391	.407	1.154	.346	.408
CRED5	-.797	-1.366	.768	-.146	.647	-.504	.024	.423	1.369	.342	-.521	1.072	.167	1.138
CRED6	-1.056	-.909	.785	-.951	.830	-.039	.174	-.473	1.726	.113	-.270	1.403	.779	.737
CRED7	.594	-.307	.807	.091	-.370	.313	.119	-.261	1.042	.416	-.454	.664	.089	-.004
REIN1	.498	.259	1.419	.277	-.648	-.223	1.099	-.756	-.268	.602	1.543	2.438	1.039	1.942
REIN2	.884	.284	1.155	.003	-.989	-.281	1.105	-1.230	-.419	-.417	.632	2.126	1.476	1.973
REIN3	1.865	.682	2.200	1.110	-.568	.069	1.275	-.553	.605	-.024	1.374	1.880	1.372	1.505
REIN4	1.591	.928	1.564	.908	-.503	-.153	.895	-1.116	.179	.248	.277	2.034	1.281	1.652

Appendix G2: Standardised Residuals of the Less Restrictive Competing Model (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	-.039	.000											
PROD3	.210	-.114	.000										
CRED1	.034	-.477	-.178	.137									
CRED2	-.152	.811	-.739	-.106	.124								
CRED3	.632	.956	.769	-.375	1.244	.130							
CRED5	-.176	.346	-.956	.537	-.428	-.149	.139						
CRED6	.303	.582	-.747	.314	-.513	-.703	1.193	.129					
CRED7	.477	.181	.101	.027	.495	.781	-.108	.415	.162				
REIN1	.584	.544	1.630	1.005	.241	-1.008	.588	-.564	-.632	.101			
REIN2	.549	.867	1.048	.486	.388	.124	-.204	-.087	-.434	.116	.105		
REIN3	.907	.722	1.633	.903	.231	-.266	-.041	-.157	-.034	.442	-.076	.106	
REIN4	1.032	1.670	.960	1.043	.898	.568	.314	-.036	-.698	-.162	.393	-.007	.103

Appendix G3: Standardised Residuals of the More Restrictive Competing Model

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.142	.000												
CLAR3	.169	-.442	.000											
CLAR4	.050	.241	-.201	.000										
CONS1	-.835	-.023	.119	-.490	.000									
CONS2	-.457	.273	.518	-.403	.109	.000								
CONS3	.776	1.355	1.422	.812	-.372	.263	.000							
CONS4	-.362	-.483	.835	-.596	.497	.299	-.220	.000						
DELI1	.116	.140	1.355	.117	.518	-.446	-.173	-.100	.000					
DELI2	-.174	.278	.443	-.438	.521	-.738	-.886	-.393	-.153	.000				
DELI3	-.757	-.305	.209	-.942	-.306	-.789	.352	-.849	-.164	.576	.000			
PRI1	1.252	1.698	1.497	.571	-.994	-.524	.349	-1.021	.393	1.263	1.231	.000		
PRI2	.687	.581	1.093	.081	-.792	-.582	.153	-.902	-.080	.448	1.909	.153	.000	
PRI3	2.060	1.431	2.059	.841	-.450	-.318	.472	-.394	.902	1.452	2.680	-.121	.004	.000
PROD1	.073	-.632	.715	-.688	-.301	-.587	-.260	-.302	1.276	.919	.671	1.709	1.360	2.080
PROD2	.027	.332	1.626	-.536	-.835	-.041	-.101	-.355	1.464	.994	.229	2.374	1.405	2.514
PROD3	.590	-.347	.933	-.547	-.826	-.579	.651	-.388	1.223	.959	.925	2.514	1.854	2.161
CRED1	.608	-.224	.714	-.230	.259	.248	.883	.249	.919	.032	.212	.545	-.611	1.063
CRED2	.896	.112	1.389	.582	-.985	.626	.784	-.052	.632	-.868	-.737	.636	-.864	.447
CRED3	.447	-.802	.965	.016	.072	-.540	-.311	-.332	.065	.315	.334	1.331	.499	.601
CRED5	-.354	-.959	1.180	.281	.963	-.210	.253	.743	1.276	.274	-.588	1.264	.334	1.351
CRED6	-.634	-.515	1.180	-.550	1.132	.244	.392	-.175	1.630	.042	-.339	1.586	.939	.937
CRED7	1.085	.141	1.250	.550	-.043	.635	.365	.075	.943	.345	-.524	.869	.268	.218
REIN1	.891	.622	1.776	.648	-.387	.030	1.298	-.490	-.355	.538	1.482	2.605	1.182	2.126
REIN2	1.287	.654	1.516	.377	-.727	-.024	1.308	-.964	-.508	-.483	569	2.294	1.624	2.160
REIN3	2.280	1.058	2.572	1.497	-.301	.330	1.480	-.280	.517	-.089	1.313	2.049	1.521	1.691
REIN4	1.997	1.301	1.925	1.287	-.239	.103	1.095	-.851	.091	.183	.215	2.201	1.427	1.836

Appendix G3: Standardised Residuals of the More Restrictive Competing Model (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	.007	.000											
PROD3	.253	-.078	.000										
CRED1	.033	-.486	-.183	.220									
CRED2	-.152	.807	-.744	.002	.199								
CRED3	.617	.936	.753	-.286	1 342	.209							
CRED5	-.181	.336	-.966	.649	-.324	-.061	.223						
CRED6	.293	.567	-.761	.414	-.420	-.627	1.296	.208					
CRED7	.475	.172	.095	.143	.613	.882	.004	.521	.261				
REIN1	.575	.529	1.621	1.100	.329	-.942	.678	-.489	-.542	.162			
REIN2	.540	.853	1.038	.580	.479	.198	-.118	-.008	-.342	.187	.168		
REIN3	.899	.709	1.625	1.000	.322	-.193	.048	-.077	.062	.515	-.005	.170	
REIN4	1.023	1.657	.950	1.139	.991	.644	.403	.042	-.608	-.094	.465	.065	.165

Appendix H1: Variances of Exogenous Constructs, Errors and Disturbances of the Theoretical Model

	Estimate	S.E.	C.R.	P
CONS	1.201	.107	11.269	.000
Drein	.449	.049	9.111	.000
Dcred	.363	.040	9.086	.000
Dpro	.299	.043	7.011	.000
Dpri	.665	.068	9.777	.000
Ddeli	.287	.041	6.942	.000
Dclar	.582	.056	10.469	.000
Erein1	.407	.036	11.429	.000
Erein2	.345	.032	10.935	.000
Erein3	.352	.033	10.772	.000
Erein4	.416	.037	11.196	.000
Ecred1	.572	.045	12.611	.000
Ecred2	.664	.051	13.010	.000
Ecred3	.690	.054	12.837	.000
Ecred5	.592	.047	12.550	.000
Ecred6	.599	.047	12.848	.000
Ecred7	.380	.033	11.428	.000
Eprod1	.433	.045	9.524	.000
Eprod2	.367	.039	9.492	.000
Eprod3	.851	.067	12.735	.000
Epri1	.477	.044	10.840	000
Epri2	.412	.042	9.780	.000
Epri3	.390	.045	8.774	.000
Edeli1	.406	.042	9.748	.000
Edeli2	.418	.042	9.893	.000
Edeli3	.771	.063	12.274	.000
Econs1	.333	.029	11.346	.000
Econs2	.360	.032	11.413	.000
Econs3	.614	.048	12 784	.000
Econs4	.346	.032	10.775	.000
Eclar1	.259	.025	10.183	.000
Eclar2	.313	.027	11.586	.000
Eclar3	.502	.039	12.914	.000
Eclar4	.236	.025	9.448	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix H2: Variances of Exogenous Constructs, Errors and Disturbances of the Less Restrictive Competing Model

	Estimate	S.E.	C.R.	P
CONS	1.200	.107	11.262	.000
Drein	.450	.049	9.124	.000
Dcred	.367	.040	9.188	.000
Dpro	.307	.044	7.046	.000
Dpri	.667	.068	9.786	.000
Ddeli	.294	.042	6.988	.000
Dclar	.582	.056	10.468	000
Erein1	.407	.036	11.430	.000
Erein2	.345	.032	10.936	.000
Erein3	.352	.033	10.770	.000
Erein4	.416	.037	11.198	000
Ecred1	.571	.045	12.611	.000
Ecred2	.663	.051	13.010	.000
Ecred3	.692	.054	12.850	.000
Ecred5	.591	.047	12.553	.000
Ecred6	.599	.047	12.855	.000
Ecred7	.379	.033	11.429	.000
Eprod1	.428	.046	9.376	.000
Eprod2	.364	.039	9.367	.000
Eprod3	.847	.067	12.705	.000
Epri1	.477	.044	10.838	.000
Epri2	.411	.042	9.767	.000
Epri3	.390	.045	8.752	.000
Edeli1	.408	.042	9.726	.000
Edeli2	.412	.042	9.761	.000
Edeli3	.767	.063	12.230	.000
Econs1	.333	.029	11.358	.000
Econs2	.360	.032	11.422	.000
Econs3	.614	.048	12.788	.000
Econs4	.347	.032	10.802	.000
Eclar1	.259	.025	10.181	.000
Eclar2	.313	.027	11.594	.000
Eclar3	.502	.039	12.914	.000
Eclar4	.236	.025	9.447	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix H3: Variances of Exogenous Constructs, Errors and Disturbances of the More Restrictive Competing Model

	Estimate	S.E.	C.R.	p
CONS	1.189	.106	11.182	.000
Drein	.450	.049	9.111	.000
Dcred	.363	.040	9.079	.000
Dpro	.295	.042	6.978	.000
Dpri	.667	.069	9.620	.000
Ddeli	.285	.041	6.915	.000
Dclar	.559	.054	10.421	.000
Erein1	.407	.036	11.429	.000
Erein2	.345	.032	10.934	.000
Erein3	.352	.033	10.772	.000
Erein4	.416	.037	11.196	.000
Ecred1	.572	.045	12.610	.000
Ecred2	.664	.051	13.010	.000
Ecred3	.690	.054	12.837	.000
Ecred5	.591	.047	12.549	.000
Ecred6	.599	.047	12.847	.000
Ecred7	.380	.033	11.428	.000
Eprod1	.433	.045	9.542	.000
Eprod2	.367	.039	9.509	.000
Eprod3	.850	.067	12.739	.000
Epri1	.479	.044	10.835	.000
Epri2	.405	.042	9.637	.000
Epri3	.395	.045	8.815	.000
Edeli1	.407	.042	9.767	.000
Edeli2	.418	.042	9.902	.000
Edeli3	.770	.063	12.272	.000
Econs1	.342	.030	11.530	.000
Econs2	.367	.032	11.561	.000
Econs3	.609	.048	12.798	.000
Econs4	.358	.032	11.028	.000
Eclar1	.262	.026	10.237	.000
Eclar2	.312	.027	11.569	.000
Eclar3	.504	.039	12.921	.000
Eclar4	.230	.025	9.291	.000

S.E.: Standard Error; C. R.: Critical Ratio

Appendix I1: Standardised Residual Covariance of the Unconstrained Model – State-Owned Sector

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.080	.000												
CLAR3	.198	-.282	.000											
CLAR4	-.114	.415	-.130	.000										
CONS1	- 654	-.709	-.569	-.236	.000									
CONS2	.029	.634	-.210	-.066	-.538	.000								
CONS3	1.303	1.195	.874	1.209	-.200	-.075	.000							
CONS4	-.161	-.462	-.358	-.187	.303	.373	-.360	.000						
DELI1	.635	.285	.718	1.113	.620	-.502	-.044	-.369	.000					
DELI2	-.587	-.399	.287	-.243	.368	-.062	-.289	.131	-.052	.000				
DELI3	-.146	.527	-.429	.315	-.186	.038	1.038	-.949	-.099	.751	.000			
PRI1	-.394	-.020	-.652	-.674	-.841	.201	.413	-.602	-1.818	-.736	.466	.000		
PRI2	-.552	-.280	-.632	-.432	.104	.560	.449	-.628	-.529	-.245	.572	.433	.000	
PRI3	.564	-.093	.441	.120	-.162	.473	.819	-.052	-.562	-.292	.568	-.044	-.139	.000
PROD1	-.014	-.889	.477	-.384	-.078	.302	-.478	.628	.392	-.479	-.836	.310	.099	1.265
PROD2	.410	.150	.289	-.134	-.583	.757	- 187	.259	.241	-.904	-.881	1.367	.836	2.195
PROD3	1.256	.096	1.319	.652	-.053	-.804	.525	- 296	.248	-.416	-.166	1.318	.694	1.742
CRED1	.444	-.894	-.439	-.385	.290	1.749	.178	1.013	.375	.448	.143	-.646	-1.507	.421
CRED2	.442	.115	.273	.332	-1.283	.845	-.185	.100	-.262	-.991	-.146	.646	-.593	.718
CRED3	.199	-.906	.014	-.238	.084	.645	-.654	.055	-.164	-.858	-.067	-.207	-.497	.544
CRED5	-.183	-1.549	-.452	-.659	.879	.429	.116	1.004	.311	-.568	-1.172	.111	.591	1.282
CRED6	-1.051	-1.905	-.987	-1.166	.815	.117	-.497	.642	.601	-1.059	-1.389	-.052	.205	.886
CRED7	-.180	-.802	-.306	-.029	-.217	.740	-.351	.248	.475	-.624	-1.255	-.521	-.464	-.484
REIN1	-.477	.169	.293	.326	-.638	.971	.628	.000	-1.605	-.165	1.060	1.463	.621	1.756
REIN2	.121	.102	-.427	.146	-1.106	.947	.278	-.700	-1.331	-1.491	.004	1.657	1.736	2.080
REIN3	.437	.048	.240	.410	-.916	.820	.541	-.960	-.583	-1.181	-.039	1.022	.131	.806
REIN4	.953	.411	-.146	1.050	-1.043	1.532	.241	-.128	-1.139	-1.582	-.388	.607	.437	2.104

Appendix I1: Standardised Residual Covariance of the Unconstrained Model – State-Owned Sector (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	-.017	.000											
PROD3	.090	-.236	.000										
CRED1	-.055	-.533	-.312	.017									
CRED2	.078	.391	-1.087	-.263	.014								
CRED3	.229	.626	-.162	-.097	.656	.019							
CRED5	.040	.330	-.763	-.161	-.152	-.115	.018						
CRED6	.120	.378	-1.258	-.114	-.744	-.089	.634	.013					
CRED7	-.381	-.548	-.634	.468	.145	-.289	-.103	.963	.018				
REIN1	.382	.494	.455	-.421	.129	-.807	.056	-1.151	-.066	.010			
REIN2	.510	1.634	.009	-.318	-.085	.174	-.153	-.541	-.310	.213	.012		
REIN3	.221	.738	.844	.353	.259	.701	-.073	-1.187	.654	.228	-.203	.010	
REIN4	1.012	2.305	.380	.247	.897	.880	.417	-1.502	-.619	-.238	.102	-.008	.011

Appendix I2: Standardised Residual Covariance of the Unconstrained Model – Privately Owned Sector

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.113	.000												
CLAR3	-.083	-.330	.000											
CLAR4	.135	.118	-.117	.000										
CONS1	-.441	.491	.724	-.280	.000									
CONS2	-.356	.160	1.021	-.124	.105	.000								
CONS3	.160	.872	1.071	.405	-.348	.295	.000							
CONS4	-.322	-.177	1.432	-.391	.256	.090	-.154	.000						
DELI1	-.322	-.080	1.161	-.618	-.047	-.274	-.272	.068	.000					
DELI2	.415	.775	.690	-.237	-.009	-.833	-.774	-.367	-.040	.000				
DELI3	-.427	-.429	1.056	-1.023	-.471	-.932	.226	-.084	-.016	.313	.000			
PRI1	.241	.685	.758	-.252	-.205	-.295	.502	-.363	1.796	2.127	1.598	.000		
PRI2	-.360	-.432	.604	-.827	-.756	-.721	.250	-.427	.622	1.119	2.755	.033	.000	
PRI3	.334	.196	.845	-.565	-.346	-.554	.524	-.193	1.191	1.609	2.667	-.133	.072	.000
PROD1	-.020	-.007	.580	-.473	.229	-.369	.065	-.350	1.403	1.575	1.732	1.830	1.535	1.368
PROD2	-.476	.378	1.663	-.482	-.257	-.229	.010	-.332	1.527	1.944	1.088	1.818	1.157	1.270
PROD3	-.073	-.167	.672	-.750	-.939	-.416	.174	-.121	1.351	1.467	1.242	2.460	1.698	1.174
CRED1	.042	.172	1.111	-.316	.556	-.040	.916	.014	1.056	-.380	.602	.724	.251	1.042
CRED2	.441	-.103	1.477	.210	.158	.759	1.076	.146	.962	-.345	-.453	-.015	-.657	036
CRED3	.162	-.419	1.258	-.125	-.009	-.906	.013	-.072	-.015	.368	.306	1.446	.991	.112
CRED5	-.837	-.621	1.354	.257	.199	-.474	-.042	.124	.694	-.142	-.336	.994	-.139	.735
CRED6	-.340	.051	1.836	-.349	.800	352	.380	-.400	1.223	.273	.482	1.326	.966	.508
CRED7	.873	.364	1.355	.249	.166	.463	.478	.042	.650	.635	.423	1.042	.568	.362
REIN1	.727	.287	1.596	.168	.110	-.177	.944	-.446	.342	.579	1.206	1.844	.934	1.266
REIN2	1.178	.615	1.830	.128	.294	-.139	1.416	-.192	.669	.624	1.245	1.084	.955	1.230
REIN3	1.762	.691	2.228	.932	.271	.011	.959	.207	.663	.484	1.686	1.371	1.686	1.427
REIN4	1.263	1.007	2.099	.578	.594	-.369	.796	-.695	.944	1.207	1.022	1.527	1.120	.796

Appendix I2: Standardised Residual Covariance of the Unconstrained Model –Privately Owned Sector (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	.002	.000											
PROD3	.084	.043	.000										
CRED1	-.032	-.083	.240	.282									
CRED2	-.221	.859	.077	.059	.266								
CRED3	.477	.867	.863	-.413	.990	.254							
CRED5	-.394	.086	-.222	.864	-.083	.087	.280						
CRED6	.507	.701	.238	.616	.076	-.483	.997	.296					
CRED7	.764	.668	.834	.134	.690	1.346	.234	.143	.356				
REIN1	.533	.298	1.732	1.400	.291	-.481	.890	.221	-.312	.224			
REIN2	.398	.039	1.521	.821	.681	.113	.345	.600	-.055	.148	.229		
REIN3	.912	.183	1.612	.898	.248	-.481	.138	.714	-.332	.500	.128	.243	
REIN4	.659	.577	1.097	.790	.457	.010	.134	.792	-.184	.017	.519	.210	.222

Appendix I3: Standardised Residual Covariance of the Constrained Model – State-Owned Sector

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	-.228													
CLAR2	-.300	-.195												
CLAR3	-.010	-.505	-.198											
CLAR4	-.422	.065	-.443	-.339										
CONS1	-.725	-.805	-.652	-.406	.000									
CONS2	-.057	.517	-.303	-.240	-.557	.000								
CONS3	1.276	1.142	.838	1.083	-.132	-.025	.000							
CONS4	-.434	-.740	-.626	-.549	.056	.125	-.509	-.217						
DELI1	.051	-.281	.150	.426	.808	-.351	.187	-.397	.047					
DELI2	-1.063	-.882	-.202	-.814	.703	.230	.080	.228	-.138	.055				
DELI3	.132	.792	-.194	.523	.936	1.081	2.241	-.104	.583	1.675	1.035			
PRI1	-.269	.074	-.547	-.625	-.672	.361	.639	-.593	-1.707	-.503	1.310	.185		
PRI2	-.423	-.183	-.522	-.378	.289	.725	.673	-.611	-.396	-.004	1.394	.627	.166	
PRI3	.806	.097	.654	.263	.131	.749	1.173	.052	-.339	.063	1.597	.273	.177	.380
PROD1	-.107	-.981	.358	-.559	-.577	-.188	-.865	-.102	-.064	-.829	-.480	.214	.017	1.248
PROD2	.345	.068	.217	-.271	-.990	.331	-.519	-.355	-.138	-1.183	-.543	1.297	.779	2.216
PROD3	.808	-.283	.879	.165	-.743	-1.406	-.093	-1.110	-.369	-.962	-.129	.980	.398	1.441
CRED1	.311	-1.020	-.561	-.579	.407	1.845	.341	.925	.362	.541	.889	-.847	-1.690	.287
CRED2	.280	-.054	.112	.095	-1.214	.895	-.071	-.008	-.309	-.945	.492	.428	-.794	.561
CRED3	.035	-1.063	-.150	-.473	.172	.713	-.515	-.052	-.205	-.795	.666	-.442	-.713	.376
CRED5	-.331	-1.687	-.599	-.874	.971	.503	.259	.888	.273	-.500	-.520	-.116	.380	1.128
CRED6	-1.151	-2.007	-1.094	-1.327	.914	.197	-.357	.560	.582	-.984	-.825	-.239	.033	.764
CRED7	-.191	-.836	-.328	-.124	.022	.963	-.077	.297	.579	-.421	-.508	-.637	-.566	-.531
REIN1	-.748	-.124	.004	-.036	-.734	.849	.567	-.256	-1.767	-.281	1.537	1.129	.318	1.470
REIN2	-.190	-.210	-.713	-.233	-1.205	.812	.213	-.952	-1.511	-1.599	.446	1.295	1.394	1.767
REIN3	.128	-.249	-.054	.036	-1.015	.693	.476	-1.194	-.769	-1.290	.382	.685	-.173	.514
REIN4	.521	.009	-.514	.542	-1.220	1.285	.090	-.484	-1.387	-1.756	-.044	.186	.046	1.692

Appendix I3: Standardised Residual Covariance of the Constrained Model – State-Owned Sector (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	-.377												
PROD2	-.368	-.291											
PROD3	-.661	-.866	-.714										
CRED1	-.271	-.687	-.757	-.065									
CRED2	-.171	.187	-1.491	-.344	-.055								
CRED3	-.038	.405	-.661	-.174	.526	-.072							
CRED5	-.212	.125	-1.216	-.230	-.264	-.224	-.069						
CRED6	-.090	.210	-1.616	-.158	-.822	-.169	.554	-.052					
CRED7	-.465	-.593	-.978	.571	.192	-.226	-.032	1.052	.169				
REIN1	-.030	.145	-.110	-.674	-.159	-1.090	-.240	-1.371	-.218	-.236			
REIN2	.064	1.215	-.562	-.594	-.388	-.158	-.466	-.793	-.474	-.077	-.266		
REIN3	-.194	.371	.244	.071	-.042	.367	-.376	-1.414	.487	-.053	-.490	-.241	
REIN4	.438	1.749	-.286	-.149	.461	.411	-.020	-1.803	-.875	-.636	-.338	-.428	-.454

Appendix I4: Standardised Residual Covariance of the Constrained Model – Privately Owned Sector

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.168													
CLAR2	.065	.159												
CLAR3	.096	-.157	.123											
CLAR4	.336	.318	.078	.237										
CONS1	-.345	.595	.831	-.169	.000									
CONS2	-.241	.279	1.148	.008	.150	.000								
CONS3	.253	.970	1.172	.515	-.329	.334	.000							
CONS4	-.152	-.006	1.621	-.208	.367	.221	-.056	.134						
DELI1	.111	.348	1.563	-.170	-.564	-.777	-.763	-.393	-.335					
DELI2	.890	1.244	1.120	.250	-.449	-1.246	-1.178	-.743	-.343	-.293				
DELI3	-.458	-.458	.997	-1.032	-1.296	-1.734	-.598	-.893	-.847	-.446	-.838			
PRI1	.216	.662	.745	-.268	-.416	-.496	.291	-.522	1.413	1.799	.948	-.153		
PRI2	-.387	-.457	.589	-.845	-.973	-.928	.028	-.594	.249	.796	2.003	-.141	-.176	
PRI3	.221	.088	.751	-.663	-.646	-.842	.218	-.445	.725	1.196	1.851	-.412	-.225	-.324
PROD1	.099	.112	.707	-.348	.443	-.144	.262	-.071	1.261	1.491	1.205	1.776	1.474	1.226
PROD2	-.366	.502	1.807	-.359	-.049	-.001	.207	-.050	1.375	1.852	.565	1.758	1.091	1.120
PROD3	.228	.126	.971	-.457	-.568	-.007	.554	.350	1.408	1.571	.918	2.582	1.812	1.202
CRED1	.243	.372	1.305	-.105	.454	-.128	.814	-.029	.728	-.615	-.022	.870	.408	1.113
CRED2	.631	.079	1.660	.412	.049	.658	.965	.093	.633	-.586	-1.021	.121	-.510	.108
CRED3	.349	-.240	1.439	.072	-.112	-.994	-.088	-.120	-.314	.121	-.284	1.575	1.130	.185
CRED5	-.647	-.432	1.548	.473	.097	-.562	-.142	.079	.373	-.383	-.915	1.136	.017	.808
CRED6	-.140	.252	2.039	-.135	.694	.259	.278	-.445	.884	.019	-.150	1.472	1.121	.587
CRED7	1.034	.521	1.507	.421	-.010	.295	.303	-.072	.232	.290	-.311	1.142	.678	.391
REIN1	1.031	.577	1.883	.476	.132	-.144	.967	-.375	.174	.460	.714	2.075	1.176	1.431
REIN2	1.495	.916	2.125	.440	.319	-.103	1.442	-.116	.497	.506	.748	1.316	1.201	1.399
REIN3	2.097	.999	2.536	1.269	.294	.046	.982	.288	.485	.361	1.158	1.610	1.940	1.599
REIN4	1.644	1.374	2.459	.958	.684	-.278	.881	-.570	.836	1.149	.595	1.816	1.422	1.021

Appendix I4: Standardised Residual Covariance of the Constrained Model – Privately Owned Sector (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.204												
PROD2	.233	.222											
PROD3	.534	.498	.485										
CRED1	-.019	-.075	.422	.237									
CRED2	-.221	.861	.241	.003	.225								
CRED3	.485	.873	1.043	-.462	.923	.214							
CRED5	-.386	.093	-.053	.814	-.141	.034	.236						
CRED6	.522	.713	.422	.567	.017	-.533	.945	.249					
CRED7	.712	.610	.978	.007	.545	1.200	.103	.013	.182				
REIN1	.665	.426	2.049	1.503	.373	-.400	.987	.317	-.280	.347			
REIN2	.530	.166	1.836	.924	.768	.199	.442	.702	-.021	.284	.355		
REIN3	1.054	.314	1.937	1.001	.333	-.398	.234	.817	-.300	.640	.267	.378	
REIN4	.858	.777	1.459	.969	.616	.164	.302	.973	-.073	.242	.759	.445	.494

Appendix J1: Standardised Residual Covariance of the Unconstrained Model – up to Five Years Group

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.063	.000												
CLAR3	-.022	-.438	.000											
CLAR4	.067	.146	.043	.000										
CONS1	-.294	.416	.155	-.103	.000									
CONS2	-.217	.511	1.064	.064	-.019	.000								
CONS3	.151	.750	.726	-.058	-.190	.233	.000							
CONS4	-.340	-.331	.857	-.439	.265	.086	-.209	.000						
DELI1	-.083	.077	1.085	-.200	.132	-.156	.015	.278	.000					
DELI2	.126	.350	.251	-.266	.063	-.870	-.379	-.222	-.163	.000				
DELI3	-.884	-.275	.277	-1.206	-.232	-.723	-.637	-.628	-.026	.494	.000			
PRI1	-.024	.045	.305	-.779	-.234	-.201	.458	-.785	1.173	2.184	1.413	.000		
PRI2	-.484	-.355	.526	-.781	-.121	-.154	.036	-.361	.643	1.270	2.328	.039	.000	
PRI3	.609	.210	.871	-.356	-.414	-.536	.352	-.244	.973	1.384	2.021	-.037	.015	.000
PROD1	-.007	.069	.260	-.557	-.278	-.248	.946	-.450	1.172	1.531	.756	1.660	1.227	1.173
PROD2	.191	.499	1.321	-.608	-.439	-.093	.166	-.043	1.664	1.765	1.011	2.063	1.587	1.661
PROD3	-.103	-.239	.271	-.854	-1.228	-.591	.163	-.510	1.035	1.343	1.106	2.187	1.241	1.135
CRED1	.133	-.257	.175	-.480	.368	.230	1.458	.114	.451	-.001	.417	.469	.159	.902
CRED2	.430	-.011	1.471	-.066	-.053	.029	1.132	.417	1.183	.167	-.103	.279	-.550	.183
CRED3	.216	-.713	.475	-.248	-.200	-1.081	.363	-.608	-.689	.373	-.155	1.117	.950	-.500
CRED5	-.323	-.967	1.063	.072	.853	-.103	.943	.957	1.273	.352	-.589	.985	.432	1.047
CRED6	-.859	-.325	.904	-1.085	.745	-.031	.775	-.557	1.096	145	-.199	1.307	1.110	.276
CRED7	.521	.075	.986	.292	.189	.697	1.003	.294	.421	.579	.022	1.096	.601	.093
REIN1	.512	.338	1.292	.360	-.139	-.027	1.700	-.665	.031	.484	1.290	2.068	1.045	1.547
REIN2	1.095	.673	1.463	.288	-.353	-.336	1.735	-.592	.227	-.079	.686	1.596	1.361	1.385
REIN3	1.814	1.311	2.212	1.462	.585	.748	2.078	.525	1.249	.680	1.326	1.316	1.609	1.217
REIN4	2.047	1.362	1.991	1.327	.011	.009	1.922	-.671	.604	.758	.420	1.327	1.335	1.183

Appendix J1: Standardised Residual Covariance of the Unconstrained Model – up to Five Years Group (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	-.061	.000											
PROD3	.169	.009	.000										
CRED1	.025	-.470	.661	.243									
CRED2	.480	.740	.514	-.027	.257								
CRED3	.253	.571	.727	-.298	1.042	.237							
CRED5	-.160	.290	-.096	.317	-.028	.075	.240						
CRED6	-.021	.838	-.468	.805	-.250	-.560	1.510	.212					
CRED7	.420	.435	.464	.297	.347	1.133	.269	.167	.293				
REIN1	.478	.541	2.157	1.172	.706	-.845	.273	-.082	-.481	.184			
REIN2	.653	1.058	1.568	.584	.728	.414	-.377	.370	-.367	.189	.181		
REIN3	.989	1.215	2.018	1.261	.334	-.391	-.062	.095	-.208	.437	.063	.197	
REIN4	1.168	1.874	1.901	.868	.750	.389	.024	.494	-.382	.023	.436	.138	.187

Appendix J2: Standardised Residual Covariance of the Unconstrained Model – more than Five Years Group

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.000													
CLAR2	-.238	.000												
CLAR3	.290	-.152	.000											
CLAR4	.027	.275	-.303	.000										
CONS1	-.778	-.346	.177	-.421	.000									
CONS2	-.262	-.014	-.341	-.518	.024	.000								
CONS3	1.272	1.467	1.511	1.716	-.461	-.058	.000							
CONS4	.037	-.163	.409	-.155	.317	.184	-.272	.000						
DELI1	.203	.071	.684	.391	.755	-.344	-.081	-.332	.000					
DELI2	-.457	.018	.307	-.380	.818	.092	-.662	-.155	-.042	.000				
DELI3	-.223	-.221	-.176	-.074	-.096	-.201	1.449	-.439	-.224	.316	.000			
PRI1	.175	.995	.289	.273	-.931	-.202	.204	-.295	-1.035	-.788	.049	.000		
PRI2	-.177	-.470	-.718	-.693	-.770	-.419	.482	-.721	-1.107	-.958	-.007	.367	.000	
PRI3	.433	.009	.248	-.131	.165	.576	.486	-.081	-.002	.481	1.558	-.256	-.028	.000
PROD1	.066	-1.118	.712	-.466	-.144	-.518	-1.235	.159	.467	-.444	.034	.579	.435	1.634
PROD2	-.322	-.184	.792	-.065	-.506	.394	-.140	-.259	.372	-.401	-.815	.856	-.098	1.534
PROD3	1.002	-.404	1.087	.198	.485	.096	1.041	.274	.838	.138	.268	1.009	1.202	1.777
CRED1	.536	-.338	.600	.084	.200	.373	-.362	.465	.738	-.037	-.382	.084	-1.452	.297
CRED2	.692	.001	.230	.864	-1.274	1.157	.054	-.423	-.560	-1.604	-1.129	.730	-.699	.441
CRED3	.145	-.674	.653	.133	.484	.719	-.875	.372	.686	-.161	.463	.663	-.534	1.628
CRED5	-.493	-.584	.188	.182	.693	.022	-.716	.125	.244	-.128	-.425	.690	-.110	.663
CRED6	-.168	-.623	.445	.321	.957	.611	-.165	.533	.977	-.310	-.521	.986	.150	1.173
CRED7	.889	-.062	.553	.322	-.218	.274	-.457	-.114	.667	-.416	-1.058	.105	-.278	.284
REIN1	.553	.357	.983	.468	-.196	.367	-.011	.318	-.778	.222	.634	1.460	.475	1.309
REIN2	.337	-.137	.182	.042	-.530	.677	-.049	-.695	-1.300	-.767	-.139	1.590	.785	1.568
REIN3	1.123	-.247	1.064	.388	-.969	-.208	-.101	-.977	-.832	-1.002	.318	1.617	.325	1.027
REIN4	.156	-.036	175	.132	-.113	.489	-.758	-.305	-.816	-.736	-.340	1.880	.431	1.299

Appendix J2: Standardised Residual Covariance of the Unconstrained Model – more than Five Years Group (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	.000												
PROD2	.041	.000											
PROD3	.224	-.090	.000										
CRED1	.072	-.221	-1.051	.012									
CRED2	-.730	.495	-1.535	.030	.008								
CRED3	.508	.751	.422	-.171	.758	.011							
CRED5	-.126	.129	-1.344	.628	-.502	-.298	.012						
CRED6	.139	-.255	-.501	-.304	-.295	-.337	.219	.012					
CRED7	-.037	-.225	-.214	-.109	.476	-.121	-.330	.574	.014				
REIN1	.494	.256	-.032	.120	-.421	-.517	.781	-.610	-.194	.008			
REIN2	.094	-.061	-.246	.055	-.148	-.331	.248	-.472	-.030	.032	.009		
REIN3	.302	-.361	.246	-.089	.120	.141	.132	-.173	.428	.300	-.120	.008	
REIN4	.444	.362	-.909	.643	.656	.506	.660	-.491	-.418	-.278	164	-.068	.008

Appendix J3: Standardised Residual Covariance of the Constrained Model – up to Five Years Group

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	-.230													
CLAR2	-.302	-.216												
CLAR3	-.236	-.645	-.169											
CLAR4	-.248	-.171	-.240	-.323										
CONS1	-.509	.191	-.040	-.380	.000									
CONS2	-.436	.282	.857	-.219	.014	.000								
CONS3	-.087	.505	.511	-.350	-.184	.235	.000							
CONS4	-.381	-.375	.828	-.538	.531	.343	.007	.354						
DELI1	-.354	-.195	.819	-.523	-.195	-.479	-.321	.127	-.354					
DELI2	-.176	.045	-.017	-.611	-.289	-1.203	-.731	-.400	-.547	-.341				
DELI3	-1.413	-.824	- 239	-1.765	-.859	-1.328	-1.240	-1.096	-.757	-.290	-.749			
PRI1	.065	.128	.384	-.731	-.212	-.182	.460	-.623	1.040	2.018	1.020	.083		
PRI2	-.396	-.274	.603	-.738	-.104	-.141	.031	-.189	.507	1.104	1.882	.125	.092	
PRI3	.741	.335	.991	-.274	-.355	-.481	.392	-.021	871	1.256	1.618	.109	.157	.169
PROD1	.007	.078	.272	-.590	- 593	- 566	.603	-.596	.786	1.116	.117	1.624	1.184	1.171
PROD2	.186	.487	1.308	-.656	-.761	-.422	-.174	-.201	1.262	1 340	.366	2.015	1.533	1.648
PROD3	.120	-.026	.472	-.682	-1.312	-.675	.069	- 436	.887	1.171	.690	2.343	1.383	1.317
CRED1	-.098	-.475	-.027	-.738	.002	-.135	1.063	-.105	.385	-.078	.078	.577	.269	1.047
CRED2	.170	-.255	1.218	-.358	-.433	-.354	.720	.176	1.080	.069	-.436	.379	-.442	.322
CRED3	-.043	-.943	.243	-.539	-.579	-1.440	-.032	-.849	-.750	.259	-.487	1.195	1.028	-.374
CRED5	-.542	-1.166	.839	-.204	.476	-.459	.561	.733	1.184	.265	-.877	1.087	.539	1.189
CRED6	-1.053	-.530	.696	-1.311	.390	-.371	.416	-.761	1.016	.068	-.490	1.402	1.206	.415
CRED7	.010	-.403	.513	-.258	-.451	.031	.329	-.201	.099	.228	-.535	.976	.488	.034
REIN1	.456	.283	1.238	.264	-.299	-.190	1.519	-.705	.138	.560	1.099	2.307	1.285	1.831
REIN2	1.035	.617	1.410	.196	-.509	-.494	1.558	-.629	.332	.006	.519	1.831	1.602	1.667
REIN3	1.741	1.243	2.148	1.346	.416	.576	1.889	.496	1.343	.756	1.129	1.557	1.860	1.506
REIN4	2.087	1.399	2.032	1.321	-.055	-.060	1.851	-.622	.803	.931	.344	1.654	1.674	1.562

Appendix J3: Standardised Residual Covariance of the Constrained Model – up to Five Years Group (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	-.117												
PROD2	-.137	-.110											
PROD3	.380	.195	.262										
CRED1	-.786	-1.255	.094	-.138									
CRED2	-.382	-.125	-.077	-.469	-.146								
CRED3	-.590	-.275	.137	-.735	.524	-.136							
CRED5	-.961	-.520	-.648	-.111	-.469	-.376	-.136						
CRED6	-.788	.048	-.987	.379	-.665	-.968	1.060	-.121					
CRED7	-.725	-.698	-.382	-.470	-.457	278	-.494	-.558	-.652				
REIN1	-.094	- 028	1.811	.973	.495	-1.035	.091	-.249	-.925	.140			
REIN2	.085	486	1.227	.401	.521	.204	-.542	.200	-.810	.130	.137		
REIN3	.391	.617	1.661	1.055	.126	-.596	-.242	-.079	-.676	.371	.003	.150	
REIN4	.689	1.392	1.661	805	.669	.298	-.033	.436	-.710	.116	.535	.233	.380

Appendix J4: Standardised Residual Covariance of the Constrained Model – more than Five Years Group

	CLAR1	CLAR2	CLAR3	CLAR4	CONS1	CONS2	CONS3	CONS4	DELI1	DELI2	DELI3	PRI1	PRI2	PRI3
CLAR1	.211													
CLAR2	-.002	.190												
CLAR3	.483	.060	.182											
CLAR4	.344	.627	-.028	.345										
CONS1	-.583	-.121	.364	-.136	.000									
CONS2	-.031	.242	-.138	-.209	-.083	.000								
CONS3	1.601	1.814	1.811	2.150	-.453	-.026	.000							
CONS4	-.027	-.193	.328	-.134	-.120	-.223	-.516	-.506						
DELI1	.413	.298	.882	.695	.941	-.154	.183	-.420	.285					
DELI2	-.208	.302	.552	-.045	1.068	.351	-.357	-.190	.288	.294				
DELI3	.594	.589	.584	.845	.707	.618	2.362	.117	.726	1.391	.974			
PRI1	-.006	.845	.108	.159	-.959	-.214	.271	-.545	-.975	-.682	.610	-.094		
PRI2	-.313	-.577	-.857	-.768	-.754	-.384	.590	-.912	-1.007	-.811	.594	.247	-.095	
PRI3	.228	-.160	.045	-.265	.114	.542	.539	-.362	.060	.593	2.210	-.445	-.164	-.219
PROD1	.010	-1.159	.652	-.454	.188	-.168	-.850	.225	.868	-.015	.979	.729	.628	1.774
PROD2	-.394	-.224	.722	-.056	-.187	.757	.264	-.197	.767	.027	.068	1.002	.087	1.667
PROD3	.488	-.835	.589	-.239	.272	-.087	.925	-.148	.708	.056	.613	.740	.956	1.448
CRED1	.562	-.313	.615	.167	.492	.693	-.025	.522	.836	.083	.180	-.135	-1.648	.056
CRED2	.742	.053	.257	.984	-1.030	1.471	.372	-.344	-.491	-1.526	-.690	.566	-.840	.255
CRED3	.186	-.632	.695	.243	.802	1.064	-.540	.455	.806	-.022	1.095	.479	-.693	1.419
CRED5	-.504	-.574	.183	.261	.997	.329	-.389	.174	.319	-.017	.140	.463	-.308	.408
CRED6	-.148	-.594	.468	.428	1.291	.957	.197	.603	1.098	-.185	.053	.779	-.027	.939
CRED7	1.399	.381	.997	.872	.513	1.071	.266	.384	1.219	.101	-.187	.221	-.141	.401
REIN1	.347	.180	781	.321	-.174	.407	.091	.133	-.930	.114	.983	1.075	.135	.892
REIN2	.116	-.327	-.035	-.120	-.506	.718	.059	-.858	-1.465	-.890	.188	1.176	.416	1.116
REIN3	.914	-.428	.858	.237	-.947	-.170	.000	-1.123	-.987	-1.123	.650	1.225	-.017	.612
REIN4	-.169	-.325	-.140	-.139	-.205	.404	-.744	-.585	-1.067	-.953	-.132	1.360	-.014	.759

Appendix J4: Standardised Residual Covariance of the Constrained Model – more than Five Years Group (Continued)

	PROD1	PROD2	PROD3	CRED1	CRED2	CRED3	CRED5	CRED6	CRED7	REIN1	REIN2	REIN3	REIN4
CLAR1													
CLAR2													
CLAR3													
CLAR4													
CONS1													
CONS2													
CONS3													
CONS4													
DELI1													
DELI2													
DELI3													
PRI1													
PRI2													
PRI3													
PROD1	118												
PROD2	.106	.124											
PROD3	-.267	-.587	-.526										
CRED1	.825	.518	-.912	.388									
CRED2	-.088	1.191	-1.384	.428	.266								
CRED3	1.287	1.544	.571	.264	1.200	.352							
CRED5	.622	.892	-1.211	1.081	-.128	.129	.412						
CRED6	.924	.511	-.352	.128	.110	.112	.675	.408					
CRED7	1.258	1.058	.293	.849	1.398	.840	.612	1.640	1.249				
REIN1	.893	.649	-.104	.223	-.315	-.400	.889	-.506	345	-.046			
REIN2	.509	.349	-.317	.162	-.033	- 204	.351	-.359	.550	-.019	-.053		
REIN3	.698	021	.162	.009	.232	.267	.226	-.062	1.011	.247	-.173	-.046	
REIN4	.706	.620	-1 038	.606	.647	.498	.613	-.516	-.033	-.495	-.075	-.294	-.323