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**EXPORT ENTREPRENEURIAL-ORIENTED BEHAVIOUR  
AND EXPORT PERFORMANCE**

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## **ABSTRACT**

Predicting export performance remains an important issue at the heart of export research and management. This is because of the primary role of exporting to ensuring the profitability, growth and survival of firms. Given these and other benefits that firms stand to gain (and the challenges that firms face) for their active engagement in exporting, scholars have exerted efforts into explaining the causes of export success. Export marketing strategy, firm characteristics, capabilities and firms' orientations towards export markets are some of the variables studied. Firms' entrepreneurial orientation towards export markets has been one important variable that has captured the attention of researchers. This study is an attempt to introduce an export context-specific entrepreneurial-oriented behaviour (or export EOB) to the study of antecedents of export performance. A theoretical model involving the relationship between export EOB (and its dimensions) and export performance is, therefore, developed and empirically tested using data from 212 exporting organisations.

Findings suggest that firms' overall level of export EOB is a major driver of export success. The study further establishes that a high level of market-oriented behaviour in exporting organisations can help firms to derive stronger benefits from their entrepreneurial activities. At the specific level of the export EOB components, results suggest that development of novel product innovations, high export risk-taking, and strong proactive and competitively aggressive behaviours can help exporting organisations to improve their performance. However, product innovation intensity and autonomy are negatively related to export performance, suggesting that high levels of these two behaviours might lead to poor export performance. Nevertheless, further analysis shows that the negative association between product innovation intensity and export performance becomes positive when moderated by product innovation novelty. In addition, the study shows that autonomy has indirect positive association with export performance through interaction with proactiveness and competitive aggressiveness. In other words, autonomy facilitates the effectiveness of proactive and competitive aggressive behaviours.

Further analyses of moderating effect relationships reveal mixed results. Specifically, the study finds that export market orientation positively moderates the link between production innovation intensity and export performance. In addition, export customer dynamism positively moderates the association of product innovation novelty and risk-taking with export performance. On the contrary, export customer dynamism negatively moderates the link between product innovation intensity and export performance. Theoretical, export managerial and policy implications of these findings are discussed and useful areas for future research are proposed.

### **Keywords:**

Export entrepreneurial-oriented behaviour, export performance, export market orientation, export customer dynamism, exporting firms

## **Definition of Key Constructs**

### **Export performance**

Export performance is defined as the extent to which firms are satisfied with their sales and market share performance in export markets.

### **Export Entrepreneurship**

Export entrepreneurship refers to an export function-wide philosophy that is focused on export new product-market identification/creation and exploitation by existing or by start-up firms.

### **Export entrepreneurial-oriented behaviour (or Export EOB)**

An export EOB is defined as the practices, methods and decision-making styles that exporters use to act entrepreneurially. The key dimensions that characterise an export EOB include a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities.

### **Export Innovative behaviour**

Export product innovativeness relates to the proclivity to pursue the implementation of intensive product innovativeness and a tendency to develop novel product innovations relative to competitors' product innovation output.

### **Export risk-taking behaviour**

Export risk-taking describes the extent to which an export organisation commits its resources to export operations that have a greater chance of failure.

### **Export proactive behaviour**

Export proactiveness conveys the tendency of export organisations to recognise market opportunities and to initiate relevant actions to exploit those opportunities ahead of competitors.

### **Export competitive aggressive behaviour**

Export competitive aggressiveness encapsulates the intensity of an export organisation's tendency and efforts to outperform and undermine its industry competitors.

### **Export autonomous behaviour**

Export autonomy refers to the independent actions of export personnel within export units in bringing forth new export ideas or visions and carrying them through to fruition.

### **Export market orientation (or EMO)**

EMO is defined as the generation, dissemination and responsiveness to export market intelligence.

### **Export customer dynamism**

*Export customer dynamism* refers to the perceived degree of change and diversity in export customers' needs and preferences.

## **Dedication**

I dedicate this thesis to my family for their love and support.

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# CHAPTER 1

## INTRODUCTION

### 1. 1 INTRODUCTION TO RESEARCH BACKGROUND

Predicting export performance is an important issue to export researchers and managers (Morgan, Kaleka, and Katsikeas 2004). Recent reviews of the literature reveal that different internal firm specific and external export environment factors drive export performance (Sousa, Martínez-López and Coelho 2008; Leonidou, Katsikeas and Samiee 2002). Scholarly work argue that export success is dependent on firms' structure, strategy, orientations, capabilities and export environment conditions (e.g. Hultman, Robson, and Katsikeas 2009; Katsikeas, Samiee and Theodosiou 2006; Balabanis and Katsikea 2003; Cavusgil and Nevin 1981; Cooper and Kleinschmidt 1985; Morgan, Kaleka, and Katsikeas 2004; Piercy, Kaleka and Katsikeas 1998; Cadogan et al. 2001; Zhou, Yim, and Tse 2005). For example, Piercy, Kaleka and Katsikeas (1998) argue that key firm resources and skills, such as informational resources and customer relationship skills, are important determinants of export success. Morgan, Kaleka, and Katsikeas (2004) argue that the capabilities (e.g. access to export information) and resources (e.g. experience) available to export ventures enable them to develop positional advantage in export markets and, depending on the competitive intensity of the export markets, such capabilities and resources foster export venture performance. Similarly, Zhou, Yim, and Tse (2005) contend that firms' marketing capabilities are significant drivers of export performance. Furthermore, Cadogan, Diamantopoulos and Siguaw (2002) establish that the market orientation of exporting firms is related to export performance. More recently, Hultman, Robson, and Katsikeas (2009) argue that the nature of product strategy fit and its performance outcomes is dependent on several environmental factors. Balabanis and Katsikea (2003) examine the notion of entrepreneurship and suggest that firms' level of entrepreneurial proclivity might drive performance in export markets under differing levels of export environment conditions. Thus, an emerging field of export research is export entrepreneurship (Yeoh and Jeong 1995; Ibeh 2003).



Export entrepreneurship refers to an export function-wide philosophy that is focused on export new product-market identification/creation and exploitation by existing or by start-up firms. Underlying the export entrepreneurship concept is the notion of export market new entry, which is defined as the act of identifying and exploring new opportunities in export markets (Lumpkin and Dess 1996; Ibeh 2003). Research work in this area tend to study entrepreneurial orientation (or EO) and its relationship with export performance (e.g. Balabanis and Katsikea 2003; Robertson and Chetty 2000). EO refers to the “processes, practices, and decision-making activities that lead to new entry” (Lumpkin and Dess 1996; p. 136). Indeed, research into export context EO is in its nascent stage. However, in drawing on earlier works of Miller (1983) and Covin and Slevin (1989), Yeoh and Jeong (1995) propose that there is a critical need to examine EO in firms’ export operations. A major proposition in this area is that EO in general can be a major source of competitive advantage (Knight and Kim 2009), and as such, it can be a key driver of export success (Yeoh and Jeong 1995). In fact, Lumpkin and Dess (1996) have drawn on extensive research to describe EO as being the product of five dimensions—risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy, and research efforts have since been directed to prove that EO carries valuable rewards in terms of business success.

Indeed, export entrepreneurship is said to enable firms to identify and explore new export market opportunities (Yeoh and Jeong 1995). Thus, firms that are better at taking risk to introduce innovative products ahead of market competitors, firms that are competitively aggressive in relation to their competitors and firms that encourage autonomous behaviour are all able to take advantage of export market opportunities to enhance their export performance (Kropp, Lindsay, and Shoham 2006; 2008; Robertson and Chetty 2000).

Early export context EO studies also examine the extent to which organisational and environmental variables influence the EO – export performance relationship. For example, Yeoh and Jeong (1995) suggest that export environment hostility and organisational structure might moderate the relationship between EO and export performance. Robertson and Chetty (2000) further search for direct and

moderating effects between EO and export performance and find a weak direct link between EO and export performance. However, EO's effect on export performance becomes stronger when the external environment is more hostile. Similarly, in a study of corporate ventures actively involved in international operations, Zahra and Garvis (2000) observe a weak direct association between international corporate entrepreneurship and international performance, but the relationship becomes stronger when it is moderated by international environment hostility. Other studies have also examined the degree to which the environment influences firms' entrepreneurial posture and export performance (e.g., Balabanis and Katsikea 2003).

In addition to linking firms' overall levels of EO to export performance, other researchers have focused on examining the influence of EO dimensions on export performance. For example, Shoham, Evangelista, and Albaum (2002) examine the impact of new product development activities on export performance. Their results reveal that for prospectors, an emphasis on new technological advances generates positive export performance outcomes. However, "new product development and a continuous search for new technologies affected analyser's export sales performance negatively" (p.254). Moreover, Samiee, Walters, and Dubois (1993) argue that export innovative behaviour positively influences export profit margin, however, the difference is not significantly different from non-innovative exporting firms. Additionally, Walters and Samiee (1990) demonstrate that marketing high technology product lines and a willingness to modify export product lines are strong predictors of export profitability; further lending support to the notion that export product innovative behaviours are key export success factors (Cavusgil and Nevin 1981). Moreover, Kuivalainen, Sundqvist and Servais (2007) examine the effects of the EO dimensions and report that while proactiveness has no effect on performance, risk-taking has a negative effect. Kuivalainen and colleagues also find that competitive aggressiveness has a positive effect on the performance of true global firms.

Despite these early scholarly efforts aimed at enhancing understanding of EO in export operations, the existing export literature is nonetheless limited in several respects. First, the export context EO – export performance studies are limited to examining bivariate relationships. Second, the possibilities of moderating effects

on the relationship by important contextual factors remain under-researched (Yeoh and Jeong 1995, p. 96). Third, these early export EO studies tend to model the impact of a firm-wide EO on export performance, meaning that EO activity specifically relevant at export operational (or functional) level is overlooked. Research would therefore benefit from an export context specific conceptualisation of EO (export EO for short) since export EO may involve qualitatively different issues from firm-wide EO. Moreover, export EO may shape export success differently from firm-wide EO. Fourth, an implementation of EO in export operations requires that firms behave in export entrepreneurial-oriented ways (Covin and Slevin 1991), thus, what is needed is an EO behaviour (or EOB) measure that captures export operations only. In the sections that follow next, the study provides some detailed discussions on the gaps in the export literature.

## **1.2 DISCUSSION OF GAPS IN THE LITERATURE**

### **1.2.1 The Relationship between EO and Export Performance**

Several export studies have associated EO with various aspects of export performance (e.g., Kropp, Lindsay, and Shoham 2006; Robertson and Chetty 2000; Yeoh and Jeong 1995). A few others have also reported on the association between aspects of EO and some export performance outcomes (e.g. Knight and Kim 2009; Knight and Cavusgil 2004; Samiee, Walters, and Dubois 1993). In combination, firms' overall level of EO is seen as a useful driver of export success. However, some scholars argue that uniform efforts of all EO dimensions do not lead to consistent performance outcomes (Frishammar and Horte 2007; Hughes and Morgan 2007). It is, therefore, suggested that researchers should model the influence of EO dimensions on performance so as to reveal the grand contribution of, and the unique value of, each dimension to firm success (Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010).

There are some advantages in examining the joint and individual effects of the EO dimensions. Scholars examining EO as some kind of aggregate variable argue that all the "sub-dimensions make equal contributions to the overall level of a firm's entrepreneurial orientation" (Kreiser, Marino, and Weaver 2002, p. 74). An important advantage for the aggregation approach is that researchers can determine how EO, in totality, is related to performance. On the other hand, a major utility of the disaggregate approach is that important information on the

unique consequences of the EO dimensions is provided and this might contribute to richer theory development. Lumpkin and Dess (1996) suggest that empirical studies should address the extent to which the individual EO dimensions vary independently in relation to performance. Moreover, Kreiser, Marino, and Weaver (2002) find that three aspects of EO vary independently in relation to performance. Thus, it is important to note that aggregate and disaggregate treatments of the EOBs are non-antithetical in the sense that researchers can choose to look at how the EOB dimensions, as separate constructs, or as a totality, are related to export performance. However, theoretical and empirical information on these relationships are limited in the export literature.

### **1.2.2 Consideration of Key Contingencies**

In the broader international business literature, scholars argue that EO (and its individual parts) might not always be beneficial to business success, and that the relationship between EO and export performance might be moderated by several organisational and environment variables (e.g. Zahra and Garvis 2000; Robertson and Chetty 2000; Ibeh and Young 2001; Yeoh and Jeong 1995). For example, Zahra and Garvis (2000) find that a weak direct association exists between international EO and international performance. They argue, however, that when international environment hostility is high, international EO can enhance company performance in overseas markets. Moreover, several firm-wide EO researchers have argued that the impact of EO on firm performance would depend on the firm's operating environment and overall business orientation (e.g. Lumpkin and Dess 2001; Wiklund and Shepherd 2003; Zahra and Covin 1995).

However, this contingency model is strangely missing from empirical studies involving export level EO. Yet, Lumpkin and Dess (1996, p. 151) explain that "industry and environmental variables, or the structural and managerial characteristics of an existing firm, influence how an [EO] will be configured to achieve high performance". Accordingly, Kreiser and colleagues suggest that future "studies assessing the interaction between the three sub-dimensions of EO and firm performance in various environmental settings would be useful" (p.89). However, these contingencies have not been examined in export operations, yet, they are required in order to provide a richer understanding of export level EO. Without a more complete understanding of when EO positively or negatively

influences export success, researchers' ability to make recommendations to management about how much EO they should develop is hampered.

### **1.2.3 Dimensionality and Conceptualisation of EO**

Scholars now accept the view that EO is a multidimensional construct (Lumpkin and Dess 1996; Miller 1983; Covin, Green, and Slevin 2006; Covin and Slevin 1989; Jambulingam, Kathuria and Doucette 2005; Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010). However, there is still a lack of consensus regarding the exact number of dimensions that underlie the construct (Hughes and Morgan 2007). While some researchers focus on a three dimensional EO construct (e.g. Miller 1983), others argue for a broader, more encompassing five dimensional model (Lumpkin and Dess 1996). As a result, the literature contains studies that look at different subsets of EO's dimensions and their performance outcomes, either at domestic (see Lumpkin and Dess 2001; Wang 2008; Jambulingam, Kathuria, and Doucette 2005), broader international business (e.g., Knight and Kim 2009) or at export operational levels (e.g. Robertson and Chetty 2000; Balabanis and Katsikea 2003; Kropp, Lindsay, and Shoham 2006). Unsurprisingly, results of these past EO studies are mixed (e.g., compare Frishammar and Horte 2007; Morgan and Strong 2003; and Hughes and Morgan 2007) having only partially measured EO.

Earlier conceptual models of EO argue that EO has three dimensions: product innovation, risk-taking and proactiveness (Covin and Slevin 1989; Khandwalla 1977; Miller 1983). However, Guth and Ginsberg (1990) suggest that the dimensions may extend beyond the three factors described by Miller (1983). In building on Guth and Ginsberg's suggestion, Lumpkin and Dess (1996) argue that a five dimensional model of EO seems most comprehensive (Lumpkin and Dess 1996). Consequently, Lumpkin and Dess (1996, p. 137) suggest that "the key dimensions that characterize an EO include a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities, [and] all of these factors...may be present when a firm engages in new entry".

Despite Lumpkin and Dess' (1996) seminal work on a five dimensional model of EO, unfortunately, researchers are yet to successfully develop reliable and valid

measures of EO's five dimensions, and so, many researchers have resorted to empirical examination of EO's nomological network with other constructs using only subsets of EO's components. In firm-wide EO research, Lumpkin and Dess (2001) examine only two dimensions: proactiveness and competitive aggressiveness; and more recently, Wang (2008) studies four of the five dimensions: innovativeness, risk-taking, proactiveness and competitive aggressiveness. Two exceptions are the works by Hughes and Morgan (2007) and Pearce II, Fritz and Davis (2010). However, the reliability and validity of these two recent measures of the five EO dimensions has not yet been verified in other empirical studies. It is interesting to note that Hughes and Morgan's (2007) measures are designed for young high-technology firms at an embryonic stage of development and Pearce II and colleagues' measures are developed in a not-for-profit religious context; leaving their relevance to exporting firms in doubt

This situation is rather worrying because the current state of the literature means that there is no single reliable measure of the five-dimensional EO construct. Yet, in order to fully explore EO's relationship with export success, the development of measures that fully capture the five dimensions of export context specific EO is required. Export EO researchers have unfortunately followed the examples of domestic oriented studies by also predicting export success using only subsets of the EO dimensions. For example, Kropp, Lindsay, and Shoham (2006) examine the impacts of the export innovativeness dimension plus an additional dimension (export communication) on export performance. Similarly, Knight and Kim (2009), in a recent study, observe the impact of the innovativeness component of EO on international performance. Thus, we currently do not know the extent to which a more encompassing EO measure might predict export success. In terms of making managerial recommendations, not having full information on how export EO shapes export performance would mean that scholarly recommendations regarding EO development lack breadth.

In addition to the EO dimensionality gaps in the literature, another major conceptual issue that besets the EO literature in general is the manner in which EO is conceptualised. Current conceptualisation of the EO construct can be categorized into three cultural facets: EO values and artefacts (Jantunen et al. 2005; Lee and Peterson 2000), EO attitudes (Miller 1983), and EO behaviours (Covin and Slevin 1991). According to Dess and Lumpkin (2005), entrepreneurial

values underscore the philosophical mindsets of top managers and as such they determine the basis for which decisions are taken to act entrepreneurially. EO attitudes refer to the extent to which a firm is willing to undertake actual entrepreneurial action (Covin and Slevin 1989). Finally, EO behaviour is defined as organisational behavioural patterns with an instrumental function (Covin and Slevin 1991). According to Covin and Slevin (1991), EO behaviour overtly reflects a firm's commitment to entrepreneurial actions. Indeed, several studies in the organisational behaviour literature (e.g. the theory of reasoned action; Ajzen and Fishbein 1980) have argued that values and attitudes are determinants of behaviours (see also Ajzen and Madden 1986). Moreover, market orientation research shows that there is a causal link between these cultural layers, and that behaviours often tend to be the outcome variable. Some researchers (e.g. Homburg and Pflesser 2000; Cadogan, Cui and Li 2003; Ajzen and Fishbein 1980) argue that behaviours are probably more closely linked to performance than values, artefacts and attitudes. For example, in building on the works of Katz and Kahn (1978) and Ajzen and Fishbein (1980), Homburg and Pflesser (2000) contend that there is a causal link between values, norms, artefacts and behaviours, and that "only behaviors have a direct performance impact" (p. 452) and are, therefore, the variable that can reliably be linked to performance. Unfortunately, a summary of existing work on EO shows that firm performance has been predicted by different conceptual understandings of EO, with empirical work focusing on EO behaviours underrepresented in the literature.

Indeed, Covin and Slevin (1991) argue that EO's implementation involves firms behaving in entrepreneurial-oriented ways. Thus, EO's consequences are better understood if its behavioural characteristics are explored and measured (Lumpkin and Dess 1996). In fact, Lumpkin and Dess (1996) define EO as the "act" of undertaking new entry, suggesting its behavioural pattern. Despite these observations, very few studies explicitly differentiate between EO behaviours and other aspects of EO, such as EO values and attitudes. Yet, it is important that export EO studies focus on linking export level EO behaviours (or export EOBs) to export performance.

### **1.2.4 Firm-wide Versus Export Context-Specific EO Measure**

In predicting export performance, a major concern that needs addressing is whether researchers should conceptualise and assess EO entirely as a firm-wide, invariant, phenomenon, or whether it would be more appropriate to examine EO at the level of the firm's export operations. In previous export context EO research, there is a practice of relying on a firm-wide EO conceptualisation and assessment to explain export success. The existing literature shows that it is common for export researchers to study the EO construct at the firm-wide level (e.g. Balabanis and Katsikea 2003; Robertson and Chetty 2000; Kuivalainen, Sundqvist, and Servais 2007; Calantone et al. 2006). As such, in both firm-wide and export level studies, EO is conceptualised and operationalised as a firm-wide strategic posture, with researchers tending to draw on measures provided by Miller (1983) and later refined by Covin and Slevin (1989), which were developed and validated with domestic and broader firm operations in mind. Whilst, there is no question about the validity of these classical measures of EO (Kreiser, Marino, and Weaver 2002), what is also true is that these earlier seminal works conceptualised and measured EO in a non-export context and the conclusions they drew were meant to explain domestic oriented and firm-wide dispositions.. This study argues that it would be conceptually cleaner to predict export success using export context-specific measures of EOB. There are several reasons to support this argument.

First, firms operating at an export level are exposed to several environmental and managerial forces which may differ remarkably from firms operating in domestic markets. For example, overseas market regulations, political and legal frameworks, socio-cultural factors and technological advances required in overseas markets may be different from those faced by domestic-oriented firms. In fact, Walters and Samiee (1990) observe that international industrial contexts are likely to be considerably more demanding than non-export industrial contexts because of economic and political context, protectionism, competitive forces, the stage of the product life cycle, and the larger administrative requirements often needed in export operations. Similarly, Leonidou, Katsikeas, and Samiee (2002) contend that export operations are fundamentally more complex and are riskier than domestic operations. As such, the behaviour of firms operating in both contexts might not be the same (Styles and Gray 2006).



Second, McDougall, Oviatt and Shrader (2003) argue that there are significant differences between international level entrepreneurial behaviour and domestic level entrepreneurial activity, suggesting that although some similarities may exist between the two levels of business operation their differences can be significant and can certainly not be ignored if researchers are to advance scholarly knowledge of the EO construct (see similar arguments in Styles and Gray 2006). For example, an international level EO practice might entail handling multiple governmental regulations, several national laws, and numerous cultures. Such challenges might not be apparent to a domestic focused entrepreneurial firm. Consequently, it can be argue that in studying EO in export operations the dimensions might remain the same, however, the importance given to the measurement of each constituent may have to be modified so as to adequately reflect export operations.

The market orientation literature might help to illustrate the above two points further. For example, Cadogan and Diamantopoulos (1995) argue that a number of macro environment forces influence exporting firms in unfamiliar ways and as a result affect the way firms implement their market orientation in international markets. They observe that while the conceptual dimensions of market orientation might remain the same, “the emphasis placed on the operationalisation of particular elements of these components in an international setting may have to change” (p. 51). Furthermore, Ellis (2007) establishes that market orientation has a stronger effect on performance among domestic oriented firms than it does among export oriented firms. Clearly, not all strategic orientations necessarily shape business outcomes in an identical fashion at the firm-wide level and at the export operational level. Consequently, it is possible that EO may have different performance outcomes at the domestic and export level. This has some important implication for how EO is conceptualised and measured; it is conceivable that items that are relevant within domestic or broader business settings may turn out to be of no relevance in an export operational context. Thus, this study believes that in order to study the export performance outcomes of an export level EO, valid measures of export EO activities are required, and this is missing in the literature as existing measures are not designed to assess firms’ EO in export operations. The purpose of the current study is to theoretically and empirically redress these gaps in the literature.

### **1.3 RESEARCH OBJECTIVES**

Having identified and categorised the major research gaps in the export literature, it is important that the objectives of the study are formally stated. The objectives of this study are three-fold. Specifically, this study seeks to determine the degree to which export EOB and its component elements predict export performance. In studying the relationships between export EOBs and export performance, measures of the specific export EOBs are developed and validated. Additionally, the moderating effects of export market orientation (henceforth EMO) and export customer dynamism (henceforth ECD) on the influence of export EOB and its dimensions on export performance are identified and studied. Stated formally, the three objectives of this study are to:

1. Develop and validate measures of the export EOBs.
2. Examine the association between firms' overall levels of export EOB and export performance while at the same time examining the potential moderating effects of EMO and ECD on the relationship.
3. Examine the relationship between the component elements of export EOBs and export performance, and to explore the potential moderating effects of EMO and ECD on the relationships.

To execute this research agenda, Lumpkin and Dess' (1996) five-dimensional model of EO and Miller and Friesen's (1982) views on entrepreneurial posture are integrated and used as guiding frameworks. The choice of these frameworks lies in their acceptance as useful models for assessing the dimensions of the EOB construct and their relevance to this study's conceptualisation of EOB (Hughes and Morgan 2007; Jambulingam, Kathuria, and Doucette 2005). In other words, this study is verifying the five-dimensional EO model in terms of behaviours, in an export specific context. This integration of the literature itself represents a significant contribution to export EO knowledge because existing research on EO is limited in depth and is predominantly focused on firms' domestic operations. Thus, the achievement of these objectives should enable the study to make four contributions to the literature, and these are addressed next.

## **1.4 CONTRIBUTIONS FROM THE STUDY**

In addressing the major gaps in the firm-wide EO and export EO literature this study seeks to contribute in four important ways.

### **1.4.1 Aggregate and Disaggregate Study of Export EOBs**

In the first place, this study examines the association between aggregate export EOB and export performance. In this respect, the study argues that an overall level of EOB in export operations may lead to improvement in export performance. The study draws on the resource-based view of the firm to argue that firms' overall level of EOB is an organisational resource that enables firms to identify and exploit overseas market opportunities to generate superior export performance (McDougall and Oviatt 2000). Yeoh and Jeong (1995) suggest that a suitable export performance variable, from an entrepreneurship perspective, is export sales growth. Moreover, Balabanis and Katsikea (2003, p. 242) believe that "export sales growth, export profits; return on investment from exports and overall export performance" can be reliable outcomes of export entrepreneurship. Thus, this study argues that firms' overall level of export entrepreneurship can help to generate superior economic performance in export markets.

Secondly, this study contributes to the export literature by examining the direct association between specific EOB dimensions and export performance. Indeed, to the best knowledge of this researcher, this study is the first to examine the relationship between all EOB dimensions and export performance. This research effort helps to explain the value of each dimension to export performance.

### **1.4.2 Consideration of Moderating Effects**

A second contribution from this research is the emphasis that is put on identifying moderators of the link between export EOB (and its components) and export performance. By exploring moderators of these relationships, this study explicates the organisational and export environment conditions that may alter the strength and direction of the linkages between export EOB and export performance. This is important because research shows that "EO sometimes, but not always, contributes to improved business performance" (Hughes and Morgan 2007, p. 651). One strategic orientation variable and one environment factor are examined in this study.

Firstly, in studying the moderating roles of export market orientation in shaping the influence of export EOB (and its parts) on export performance, this study adds to previous studies that argue that a firm's overseas market intelligence processes might help to improve the benefits that firms derive from their adoption of entrepreneurial activities in export operations (Knight 2000). Secondly, the literature suggests that the external environment may shape the influence that a firm's strategic posture towards export markets has on export performance (Knight and Kim 2009; Zahra and Garvis 2000). This study adds to this body of literature by studying the moderating effects of export customer dynamism on the association between export EOB (and its parts) and export performance. In a nutshell, examination of the organisational and environment moderators helps to enrich knowledge of the export performance outcomes of the export EOBs. Moreover, an examination of the two moderators helps to offer export managers with clear recommendation regarding situations when adoption of export EOB (and its components) positively (or negatively) drive export success.

### **1.4.3 Dimensionality and Conceptualisation of EO**

With respect to the dimensionality and conceptualisation of the EO construct, this study argues that a consistent and singular behavioural measurement of EO has not been used in either domestic or export literature. The implication of this is that we do not know what the outcomes of EO behaviours are, especially in an export setting. Given the discussions above, this study argues that an examination of export level EO behaviours (hereafter export EOB) is required in order to further advance knowledge about the determinants of export success, and to provide more fine-grained insights to help export managers make strategic decisions. In addressing these voids in the export literature, this study contributes to the export literature by developing valid export context-specific measures of the major dimensions of EOB.

### **1.4.4 Firm-wide versus Export Context-Specific EO Measure**

Building on from the above contribution, this and future export EO studies are in a stronger position to argue that extraneous factors are ruled out when predicting export performance with export context-specific EOB measures. Specifically, this study argues that it is conceptually appealing to predict export success using export context-specific measures of EOBs. In this context, and in building on the

work of Lumpkin and Dess (1996) and Miller and Friesen (1982), this research suggests that a six dimensional model of export EOB is more comprehensive and is required to fully capture export EOB. Lumpkin and Dess (1996) suggest five salient components of EO including innovative behaviour, but several innovation scholars (e.g. Shilling 2008; Veryzer 1998; Jansen, Van Den Bosch and Volberda 2006; Miller and Friesen 1982; Zahra and Neubaum 1998) argue that innovative behaviour is itself a multidimensional construct and might entail behaviours involving intensive product innovation and novel product innovation (Miller and Friesen 1982; Zahra and Neubaum 1998). Consequently, this study argues that export EOB involves undertaking intensive product innovation, novel product innovation, risk-taking, competitively aggressive, being proactive and behaving autonomously in firm's export operations.

#### **1.4.5 Contribution to Export Management and Policy Making**

From an export managerial point of view, there are a number of benefits to be derived from this study. First, this study suggests that export EO is a major driver of superior export performance. However, export managers need to be made aware that placing strong emphasis on product innovation intensity and novelty, risk-taking, proactive, competitive aggressive and autonomy in their export operations might not always lead to improvements in their export performance. This is because a sizeable body of research points to the possibility that some of the export EOB dimensions might not generate positive financial returns in all situations. In fact, some of the dimensions might work against export success and others might foster export success when certain other orientations are in place, or when certain environment conditions are more pronounced. For export managers, the results of this study to examine how the EOB dimensions jointly, and individually, operates on export performance mean that specific recommendations can be provided regarding when exporters can be more or less entrepreneurially-oriented, and how they can manipulate EOBs to enhance export success.

Second, this research indicates that export EOB is more or less beneficial for export success provided some organisational and environment factors are in place. For example, export EOB may consume many firm resources by taking resources away from other equally important orientations (e.g. technology orientation), and hence, export managers need to consider the costs and benefits

of implementing the export EOBs, jointly or individually, under different circumstances. Specifically, it is reasonable to assume that export market orientation may be needed to leverage the impact of export EOB on export performance. Consequently, this study helps export managers to make the right strategic decisions regarding when export EOB (and its dimensions) should be developed and when they should be discouraged.

Third, the study provides a reliable and valid instrument that export managers might use to assess the level of entrepreneurial orientation in their export operations. For example, exporters interested in assessing the extent to which their products and service are novel improvements on existing product ranges can draw on the product innovation novelty scale developed in this study. Similarly, an assessment of exporters' proactive, risk-seeking, competitively aggressive and autonomous behaviour levels can be undertaken using the measures developed in this study.

Finally, for policy makers, the study suggests that there is a pressing need to boost global competitiveness of exporters. As such, the study recommends that one way to achieve this global competitiveness is for exporters to build their competitive edge using their entrepreneurial behaviours. For example, the nature of contemporary global marketplace demands that exporters develop competitive advantage in the production and distribution of novel product innovations, which requires investments by governments and corporate policy makers in modern technology and skills development. The study also shows that the external environment has important implications for the success of firms' export operations. This means that deteriorating economic conditions, high political instability, changing socio-cultural conditions and other environmental adversities abroad can present enormous challenges to exporters. Accordingly, this study suggests that development of export marketing intelligence systems should be a top priority for exporters as it can help exporters to better gather, analyse, and evaluate data on global marketplace opportunities and challenges.

## **1.5 THESIS OUTLINE**

To achieve the research objectives outlined above, this study follows the research layout provided in Table 1.1. First, a review of the extant literature is provided

with the view of aiding export EOB conceptualisation. Relevant literatures that have linked EO and its components to export performance are therefore evaluated. The goal of the literature review is to determine how much research has been conducted on EO in an export context. Accordingly, specific areas focused on include the EO dimensions used, how the EO dimensions were conceptualised, unit of analysis used, types of independent and dependent variables studied, and an indication of whether moderators were used or not. In the end, the literature review provides a justification for studying EOBs in export operations, for studying the association between export EOB (and its parts) and export performance, and for studying the impact of moderators.

Table 1.1: The Thesis Layout

<b>CHAPTERS</b>	<b>RESEARCH ACTIVITIES</b>
Chapter One	Introduction to the study
Chapter Two	Entrepreneurial orientation and its relationship with export performance: a literature-based assessment
Chapter Three	Conceptual framework and hypotheses
Chapter Four	Research methodology
Chapter Five	Descriptive Statistics and measure development strategy
Chapter Six	Results of measurement model assessment
Chapter Seven	Hypothesis testing procedures and study results
Chapter Eight	Discussion and conclusion

In drawing on the results of the literature review (i.e. chapter two), and consistent with the study research objectives, chapter three of the thesis develops the study's conceptual framework and discusses its hypotheses. With respect to the major theoretical lenses that underpin the study, the chapter also explores the resource-based and the contingency views of the firm. It is argued that these two theoretical perspectives are complementary and can both help to better explain the link between export entrepreneurial behaviour and export performance. Regarding the hypotheses, four components are identified: (1) the direct association of firms' overall levels of export EOB with export performance; (2) the moderating effects of EMO and ECD on the link between overall level of export EOB and export performance; (3) the direct association between specific EOB components and export performance; and (4) the moderating effect of EMO and ECD on the relationship between the component elements of export EOB and export performance.

Chapter four discusses the study's research methodology. The chapter provides information on the choice of cross-sectional research design, the study's sampling procedures, survey data collection method, questionnaire administration activities, and assessments of survey bias.

Chapter five focuses on providing information on the descriptive statistics of the firms that are studied and the measure development strategies that are used in the study. First, the descriptive statistics provide an account of the general characteristics of the respondents and their export organisations. This account is important because it helps to develop a fundamental understanding of the subjects that are studied. Second, the chapter discusses the measure development strategies that are utilised in this study for undertaking assessment of unidimensionality, reliability and validity of the measurement items and scales.

Chapter six focuses on the results of the item and scale assessments of the key constructs used in the study. Thus, the psychometric properties of the scales are assessed following the standard procedures outlined in the methodology literature. Here, reports are presented on the results of the scale reliability, unidimensionality and validity assessments.

The analytical strategy and techniques that are adopted to test the study's system of hypotheses are described in chapter seven. Like the measurement model assessment, the hypotheses in this study are tested with the aid of structural equation modelling technique implemented in LISREL 8.7 using a maximum likelihood estimation method. In using Anderson and Gerbing's (1988) two-way model assessment approach, this chapter builds on the measure development procedures described in chapters five and six.

Finally, chapter eight of the thesis focuses on the discussion of, and conclusions drawn from, the study results. Specifically, summaries of key findings relating to the study's objectives are provided. Moreover, the chapter presents the theoretical, managerial and policy implications of the study results. The chapter concludes with a discussion of the limitations of the study, and highlights several useful areas for future research.



## CHAPTER 2

### ENTREPRENEURIAL ORIENTATION AND ITS RELATIONSHIP WITH EXPORT PERFORMANCE: A LITERATURE-BASED ASSESSMENT

#### 2.1 INTRODUCTION

Export performance is of paramount importance to business organisations as it helps firms to safeguard their market position and increase their likelihood of survival (Leonidou, Katsikeas and Samiee 2002). Given the increasing level of global competitiveness, export operations have become a major model of international market entry (Leonidou, Katsikeas and Samiee 2002; Morgan, Kaleka, and Katsikeas 2004). Consequently, export researchers have focused on understanding the export performance construct (e.g., Katsikeas, Leonidou and Morgan 2000; Sousa, Martínez-López and Coelho 2008; Zou and Stan 1998) and its determinants (e.g., Cavusgil and Zou 1994; Morgan et al. 2003; Morgan, Kaleka, and Katsikeas 2004; Robson, Leonidou and Katsikeas 2002; Cadogan, Diamantopoulos and Siguaw 2002; Katsikeas, Samiee and Theodosiou 2006). Although the export performance construct per se has remained one of the most researched areas, it is nevertheless, the “least understood and most contentious areas of international marketing” (Katsikeas, Leonidou and Morgan 2000, p.493). Notwithstanding this difficulty, the steady rise in globalisation and the increasing emergence of global competition has necessitated the need to seek an understanding of the drivers of export performance (Sousa, Martínez-López and Coelho 2008). In line with this, several studies have focused on reviewing the key variables that affect the export performance construct. In fact, Madsen (1987), Aaby and Slater (1989), Zou and Stan (1998), Mattysens and Pauwels (1996) and Katsikeas, Leonidou and Morgan (2000), and more recently Sousa, Martínez-López and Coelho (2008) represent remarkable attempts to summarise and assess the export performance literature.

Focusing on the determinants of export performance, the last five decades have witnessed a rise in the number of variables that have been studied (Leonidou, Katsikeas and Coudounaris 2010). Some of the major antecedent factors include

export marketing strategy (Hultman, Robson and Katsikeas 2009; Cavusgil and Zou 1994; Katsikeas, Leonidou and Morgan 2002), export strategy development (Bilkey and Tesar 1977), export resources and competitive advantage (Piercy, Kaleka and Katsikeas 1998), export market orientation (Cadogan, Diamantopoulos and Siguaw 2002), and firm-wide entrepreneurial orientation (Balabanis and Katsikea 2003; Robertson and Chetty 2000). These antecedent variables have all been shown to explain some degree of variance in export performance.

The extension of entrepreneurial orientation (or EO) into export level research is certainly important for the advancement of an EO theory. This is because many export operations are initiated with the hope of exploring and/or exploiting new foreign market opportunities (Yeoh and Jeong 1996; Zahra and Garvis 2000), including introducing new products to untapped overseas markets, and 'attacking' lucrative markets currently occupied by rival companies. As Zahra and Garvis (2000) indicate, to guarantee success in foreign markets export organisations require experimentation, risk taking, creativity and proactive orientations toward export markets. In this sense, firms' entrepreneurial behaviour is part and parcel of their overseas operations (Dean et al 1993). As such, Yeoh and Jeong (1995, p. 107) assert that "the entrepreneurship literature seems to have significant potential for further theory building in exporting research". Surprisingly, however, very few studies have utilised inputs from the entrepreneurship discipline to explain variations in export performance.

The scarcity of academic efforts in incorporating EO ideas into the framework of export performance research is rather unfortunate given the many benefits that highly entrepreneurial-oriented firms might enjoy over and above their less entrepreneurial-oriented counterparts. In terms of export managerial practice, the apparent lack of integration of the two research fields means that there are no solid and dependable bases for the benefits of developing EO activities in export operations. Moreover, assuming that export managers recognise the beneficial consequences of EO, it is still not clear how these benefits can change in different external environment and internal organisational contexts. Theoretically, it can be argued that a void exists in the existing export literature with respect to the consequences of an export context-specific EO. It can further be argued from a

theoretical point of view that a gap exists in terms of the conditions that might render entrepreneurial-oriented behaviour more or less beneficial to export success. It also stands to reason that the literature is lacking with regard to the extent to which the individual entrepreneurial-oriented behaviours (or EOBs) drive export success.

These gaps in both the EO and export research literatures offer excellent opportunity for future research. As such, this study is positioned around the objective of examining the export performance consequences of an export context-specific EOB, and the moderating effects of exporters' market orientation and export customer dynamism on the export EOB – export performance linkage. Given these research gaps, carefully collected empirical evidence can help researchers to advance both export entrepreneurship theory and practice.

## **2.2 CHAPTER ORGANISATION**

This chapter is organised into five major parts, focusing on integrating two major bodies of literature: firm-wide entrepreneurship studies and export focused entrepreneurship studies. Part one recaps the research gaps that need to be addressed in this study (see chapter one for detailed discussion on research gaps). Part two of the chapter focuses on classifying the two bodies of literature into meaningful categories to aid synthesis. The third part examines the benefits and challenges associated with export activities in contemporary business management. The fourth part examines the determinants of export performance. Variables included in this discussion are categorised into internal organisational characteristics and external environment forces. Specific attention is given to explicating how these variables have helped researchers to explain variations in export success. The final part of the chapter focuses on discussing what has so far been done with respect to EO, both at the firm-wide level and at the level of export operations. This latter part comprises of six sections. These include (1) an overview of the emergence of the EO construct; (2) an examination of the differing perspectives on its conceptualisation; (3) discussion of the level issues in EO studies; (4) a review of the potential benefits of being entrepreneurial-oriented; (5) an examination of the implications of these earlier studies for the current research; and finally (6) a summary is provided to end the chapter.

## **2.3 CLASSIFICATION OF THE LITERATURE**

A major lesson this study draws from an examination of the two streams of EO literature is that export level EO has received only limited research attention compared to firm-wide and domestic focused EO research. Thus, it can be argued that export level EO study is only at its nascent stage and needs developing further. In this sense, the existing EO research can be organised according to the interplay between a firm-wide and an export level measure of EO. This interaction gives rise to three important bodies of literature. First and the largest body of work are those studies that have sought to explain the relationship between firm-wide EO and firm economic performance (e.g. Miller 1983; Covin and Slevin 1989; 1991; Covin, Slevin, Green 2006; Lumpkin and Dess 1996; 2001; Zahra and Covin 1993; Wang 2008; Wiklund and Shepherd 2005). The second, and a much smaller group, are those scholars who have focused on modelling the impact of firm-wide EO on export (or international) performance (e.g. Balabanis and Katsikea 2003; Jantunen et al. 2008; Kuivalainen, Sundqvist, Servais 2007; Robertson and Chetty 2000). Finally, a third group of researchers are those who, like the current study, have contemplated on the need to develop a separate line of enquiry that is aimed at examining firms' EO towards export markets, hoping that a high degree of export level EO might lead to increased export performance (e.g. Ibeh 2003; Yeoh and Jeong 1995). Unfortunately, studies belonging to this last group have so far been largely conceptual.

In classifying the EO literature this way, this study reveals some more important voids that also need addressing. First, an important issue that is under-developed is that EO, either at a firm-wide level or at an export level, is a multidimensional and a behavioural construct. While some researchers have argued for a three-dimensional model (Miller 1983; Covin and Slevin 1989; Yeoh and Jeong 1995) others (e.g. Guth and Ginsberg 1990; Lumpkin and Dess 1996) contend that the dimensions may extend beyond the three factors originally described by Miller (1983). In fact, several scholars are beginning to study the EO construct using the five-dimensional model originally advocated by Lumpkin and Dess (1996). Notable among these studies are Hughes and Morgan (2007) and Pearce II, Fritz and Davis (2010).

Second, several researchers have suggested that EO's design and implementation, either at the level of the firm as a whole or at a narrower level of export operations, require firms to *behave* in EO ways (Covin and Slevin 1991; Yeoh and Jeong 1995), yet none of the earlier studies have been concerned with the need to develop measures that tap EOBs, including all five dimensions (an exception is Hughes and Morgan 2007). Third, scholars in the first group (i.e. those that study firm-wide EO – firm performance relationship) have not offered any provision for studying EO activities in overseas operations. Fourth, the second group of researchers focusing on firm-wide EO – export performance relationship have not developed export level measure of these EOBs. Yet, some conceptual works have pointed to this line of enquiry (e.g. Yeoh and Jeong 1995). The result is that export level measures of EO behaviours are lacking. Fifth, although firm-wide EO – performance studies have identified some moderators of the relationship (e.g. Lumpkin and Dess 2001) export level studies often fail to include moderators when examining the EO – export performance relationship. Thus, it seems that what remains unknown is the export performance impact of export level EOBs in different external environment and internal organisational environment contexts.

## **2.4 EXPORT PERFORMANCE: A LITERATURE-BASED REVIEW**

### **2.4.1 The Benefits and Challenges of Export Activities**

International trade has expanded rapidly within the past five decades (World Trade Organisation 2009). It is estimated that the value of worldwide export activity has grown in excess of US \$5 trillion annually (World Bank 2009), accounting for more than 10% of global economic activity (e.g., International Monetary Fund 2009). For national governments, this provides a significant basis for national economic development and growth. For individual firms, this provides an avenue for overseas expansion. Export scholars believe that “The most common mode of business involvement in the international marketplace is exporting, because it involves minimum business risks, requires low commitment of resources and offers high flexibility of movements” (Leonidou 1995, p.4).

The benefits that accrue to exporting organisations are therefore numerous: export activity boosts corporate growth and ensures company survival in the long term (Sousa, Martínez-López and Coelho 2008; Samiee and Walters 1990); it “is also a means of foreign market entry and sales expansion for firms” (Morgan, Kaleka, Katsikeas 2004, p. 90); and it is an important route that firms use to increase their revenue (Morgan, Vorhies, Schlegelmilch 2006). Given these benefits that can accrue to firms for engaging in export operations, and given the rising forces of globalisation (Leonidou, Katsikeas, Samiee 2002), firms in both developed and developing economies are increasingly compelled to be outward looking in their business orientations (Yeoh and Jeong 1995).

Despite the importance of export activities to the success of many firms, Leonidou (1995) observes that exporting is not without its challenges. The plethora of challenges can be enormous, including regulatory, attitudinal, structural, procedural and operational difficulties. Export scholars observe that these challenges (or barriers) can place significant impediments on firms’ engagement and progression along the internationalisation path (Leonidou 1995; Cavusgil 1984). Other barriers have been identified at the level of the decision maker, the organisation and the environment, and it is argued that these barriers can be operative and effective in limiting the benefits that can be earned from export activities (Bilkey and Tassar 1977; Simmons and Smith 1968; Cavusgil 1982).

Given the above and other benefits and challenges associated with exporting, researchers consider exporting as a challenging and at the same time, a promising field of academic enquiry (Zou and Stan 1998; Leonidou, Katsikeas, Samiee 2002), and several efforts have been expended into exploring a variety of export related themes including how firms could boost export success (Leonidou, Katsikeas, Coudounaris 2010).

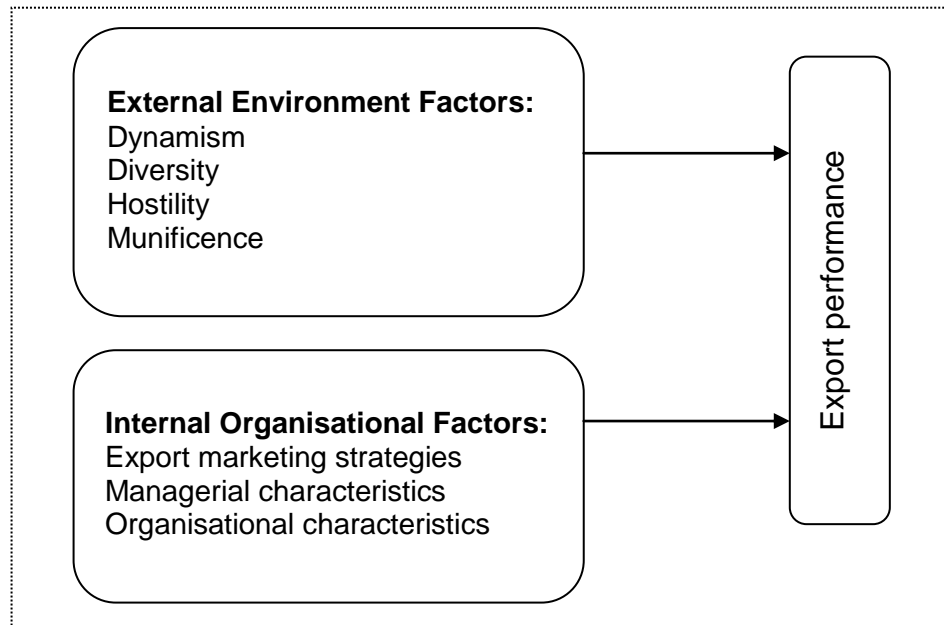
Regarding ways of improving firms’ export success levels, researchers have examined several important variables including export marketing strategies (e.g., Leonidou, Katsikeas, Samiee 2002; Cooper and Kleinschmidt 1985; Hultman, Robson and Katsikeas 2009; Katsikeas, Samiee and Theodosiou 2006), export firm characteristics (e.g., Burton and Schlegelmilch 1987; Cavusgil and Kirpalani 1993; Katsikeas and Morgan 1994), strategic orientations towards export markets

(e.g., Cadogan, Kuivalainen, and Sundqvist 2009; Cadogan, Diamantopoulos, and Siguaw 2002; Rose and Shoham 2002), marketing capabilities (e.g., Morgan, Kaleka, Katsikeas 2004; Zou, Fang, Zhao 2003; Morgan et al. 2003), export attitudes and commitment (e.g., Cicic, Patterson, Shoham 2002; Evangelista 1994), key informational resources and skills (e.g., Piercy, Kaleka and Katsikeas 1998; Morgan et al. 2003), firms' degree of internationalisation (Cadogan, Kuivalainen, and Sundqvist 2009; Kuivalainen, Sundqvist, Servais 2007) and firm-wide entrepreneurial orientation (e.g., Yeoh and Jeong 1995; Robertson and Chetty 2000; Balabanis and Katsikea 2003). It can, therefore, be said that these studies have played key roles in advancing knowledge on the determinants of export success (Leonidou, Katsikeas and Coudounaris 2010). Nonetheless, the quest for better a understanding of the determinants of export performance is still underway as many issues have been left unattended. Consequently, the sections that follow next collectively paint a picture of the determinants of export performance from a literature-based assessment of the export performance and related literatures.

#### **2.4.2 Determinants of Export Performance**

The purpose of this section is to produce an in-depth description of the major determinants of export performance. Despite the fragmentation of the export performance literature (Sousa, Martínez-López and Coelho 2008), it is still possible to categorise the determinants of export performance into two major groups: external environmental versus internal organisational factors. This classification follows the approach used in earlier literature reviews (e.g., Sousa, Martínez-López and Coelho 2008; Aaby and Slater 1989; Zou and Stan 1998) and meta-analyses (e.g., Leonidou, Katsikeas, Samiee 2002) and helps “to balance the danger of having too many specific factors which are specific but lack parsimony, with that of having too few factors which are parsimonious but may lack meaning” (Sousa, Martínez-López and Coelho 2008, p. 351). In figure 2.1, a diagram is provided to highlight the two groups of factors that prior research shows might influence export performance. As such, the analyses in subsequent sections follow this diagram.

Figure 2.1: Determinants of Export Performance



#### 2.4.2.1 External Export Environment Factors

The external export environment factors comprise factors that present possible opportunities and threats to firms that are engaged in foreign operations. Often, these environment factors are beyond the control of the firm and tend to vary depending on the politico-legal, economic, socio-cultural and technological characteristics of overseas markets (Aaby and Slater 1989). In the current review, four environment factors are broadly identified, consistent with the organisational behaviour literature (Dess and Beard 1984). These factors are: the degree of dynamism, diversity, hostility, and munificence of foreign markets. Over the years, export scholars have exerted much effort into examining how these factors alone, or in combination, influence firms' export strategies and export performance.

*Environment dynamism* has been defined as market conditions that are associated with high unpredictability of customers and competitors and high rates of change in market trends and industry innovation (e.g., Wiklund and Shepherd 2005; Balabanis and Katsikeas 2003; Dess and Beard 1984).

*Environment diversity* (or heterogeneity) reflects the extent to which the export environment is complex (Dess and Beard 1984). Scholars argue that "managers facing a more complex (i.e., heterogeneous) environment will perceive greater



uncertainty and have greater information-processing requirements than managers facing a simple environment” (Dess and Beard 1984, p.56).

*Environment hostility* indicates the degree to which the external environment is highly unfavorable for a firm’s business. Unfavorable environmental conditions stem from radical industry changes, intense regulatory burdens placed on an industry, or fierce rivalry among competing firms in an industry (Zahra and Garvis 2000). The perceived environment hostility also emanates from perceived competitive-, market-, and product-related uncertainties (Dess and Beard 1984), changing demand conditions and radical innovations that render the basic technology of firms obsolete (Zahra and Garvis 2000), intense rivalry among industry competitors, and the number of competitors competing in an industry. Zahra (1993) reasons that in hostile and highly intensive competitive environments firms must devote scarce resources in order to effectively manage the unfavorable environments to ensure the achievement of their organisational goals.

*Environment munificence* reflects the extent to which the environment can support sustained growth (Dess and Beard 1984; Castrogiovanni 1991; McArthur and Nystrom 1991). According to Dess and Beard, a munificent environment is reflective of Aldrich's (1979) notion of environmental capacity. Several scholars agree that the growth and stability in munificent environments allow firms to generate slack resources, which can in turn provide the firms with a buffer during periods of relative resource scarcity (e.g., Wiklund and Shepherd 2005; Dess and Beard 1984).

Scholars have observed that the environment can affect export performance directly (e.g., Balabanis and Katsikea 2003; Yeoh and Jeong 1995; Zahra and Garvis 2000). For example, Yeoh and Jeong (1995, p. 102) observe that “firms may view uncertainty arising in their environment as opportunities and, hence, may proactively take advantage of changes in the environment through innovative and aggressive marketing activities such as development of new products and/or markets” to enhance their performance. Moreover, Zahra and Garvis (2000) estimate that environmental hostility can have significant influence on firms’ ability to succeed in international markets. Similarly, many export marketing studies (e.g.

Bonaccorsi 1992; Chetty and Hamilton 1993; Kaynak and Kuan 1993; Naidu and Prasad 1994) have revealed that a firm's market environment including its degree of hostility, dynamism, diversity and munificence are associated directly with export performance. In fact, researchers believe that the competitive intensity of foreign markets might have a strong impact on firm performance (McGahan and Porter 1997; Scherer and Ross 1990).

However, a review of the literature shows mixed results with regards to the link between competitive intensity and export performance. While researchers as such O'Cass and Julian (2003) have reported that low market competitiveness leads to high export performance, Morgan, Kaleka and Katsikeas (2004) have argued that high degree of competitive intensity is not significantly associated with export performance. In contrast, Lages and Montgomery (2005) have established that high competitive intensity is positively associated with export success. It has also been argued that firms perform better in more hostile and competitive environments than in more stable and generous environments because firms tend to relax excessively in markets that are easier to operate in (Sousa, Martínez-López and Coelho 2008).

Some other studies have also mentioned cultural similarity as an important aspect of the external overseas market environment, and as a significant determinant of export performance. Scholars interested in this subject mention that there is a logical reason to explain why cultural similarity is positively related to export performance (e.g., Lee 1998; Shoham, Rose and Albaum 1995). Their logic is that similarities (between firms' home culture and that of foreign market culture) are easier for firms to manage than dissimilarities are; as such it is more likely for firms to succeed in culturally similar markets. This notion of cultural similarity is consistent with the findings of Lado, Martinez-Ros and Valenzuela (2004), who report that culturally similar markets reduce the perceived risk of failure and provide incentives to companies with a limited exposure to foreign markets to start trading in those markets. On the contrary, cultural dissimilarity can increase the complexity of obtaining and interpreting information on foreign market conditions, thereby increasing the chances of managers making wrong foreign market decisions, and consequently decreasing the prospect of generating 'good' export performance (Boyacigiller 1990).

### **2.4.2.2 Internal Organisational Factors**

Consistent with the approach used by Sousa, Martínez-López and Coelho (2008), the literature review shows that there are as many as 20 internal organisational factors that can be identified as determinants of export performance. This study focuses on three major categories of these factors: export marketing strategies, managerial characteristics and organisational characteristics. Similar past reviews have found that these three categories cover the major internal factors that determine whether firms are successful or not in their foreign markets (Zou and Stan 1998).

#### **2.4.2.2.1 Export Marketing Strategy**

Export marketing strategy appears to be a major determinant of export performance (Cavusgil and Zou, 1994; Leonidou, Katsikeas and Samiee 2002; Hultman, Robson and Katsikeas 2009; Katsikeas, Samiee and Theodosiou 2006). Export marketing strategy researchers interested in explaining export performance outcome often investigate export marketing mix variables such as pricing, promotion, distribution, product design, adaptation and standardisation, and export market segmentation and targeting strategies (e.g. Hultman, Robson and Katsikeas 2009; Katsikeas, Samiee and Theodosiou 2006; Cooper and Kleinschmidt 1985; Leonidou, Katsikeas and Samiee 2002; Cavusgil and Zou 1994).

For example, in a recent study of Swedish exporters, Hultman, Robson and Katsikeas (2009, p.1) find that an “array of forces from the macro-, micro-, and internal environments drives product adaptation, which affects the nature of product strategy fit and its performance outcomes”. Katsikeas, Samiee and Theodosiou (2006) also study subsidiaries of United States, Japanese, and German multinational corporations (MNCs) operating in the U.K and find that strategy standardization level drives export performance when there is a coalignment between MNCs’ environmental context and their international marketing strategy choice. Similarly, Cooper and Kleinschmidt (1985, p.37), in a study of high technology electronics firms, find that “segmentation strategies and product strategies all have a pronounced impact on export sales and export growth”. Moreover, Cavusgil and Zou (1994) find evidence to support the notion that export marketing strategy and export performance are related. Additionally,

Cavusgil, Zou and Naidu (1993) observe that product and promotion adaptation activities of exporting ventures are associated with export performance. Finally, Leonidou, Katsikeas and Samiee (2002), in a meta-analysis, find that export marketing strategy variables (including export market targeting and the traditional four marketing mix variables) are associated with export success. Thus, export marketing strategy, focusing specifically on the adaptation and standardisation of the key export marketing programmes are positively associated with export success.

However, results of these empirical studies are mixed and can be explained in two ways. First, many export marketing strategy researchers have drawn on different units of analysis and this may have had some impacts on the kind of results that are reported. For example, whereas Cooper and Kleinschmidt (1985) use the firm as their unit of analysis, Cavusgil and Zou (1994) use export product-market as their unit of analysis, and Cavusgil, Zou and Naidu (1993) rely on the export venture as their unit of analysis (see also Morgan, Kaleka and Katsikeas 2004). Second, Sousa, Martínez-López and Coelho (2008) refer to a number of contextual issues that might explain the differences in the results on export marketing strategy – export performance relationship. Specifically, Sousa and colleagues cite O’Cass and Julian’s (2003) view on contextual influences and argue that the extent to which export marketing programme adaptation influence export performance may depend on industry contexts. Moreover, as cited earlier, Katsikeas, Samiee and Theodosiou (2006) argue that the benefits of strategy standardisation depends on the environment context and strategy choices firms make. This means that the impact of export marketing strategy on export performance may be a contingency issue, dependent upon the operating factors in the broader external export market environment and within the firm.

#### **2.4.2.2 Managerial Characteristics**

The literature also suggests that export management characteristics significantly influence a firm’s export success. As such, variations in export performance have been explained, to a significant extent, by differences in management characteristics (Cavusgil 1984; Sousa, Martínez-López and Coelho 2008; Zou and Stan 1998). Scholars have suggested that “empirical investigation should focus on the management styles (e.g., authoritarian versus democratic), personality traits

(e.g., extrovert versus introvert), and decision-making control (e.g., centralized versus decentralized) of managers, and examine how these affect export decisions, strategies, and performance outcomes” (Leonidou, Katsikeas and Coudounaris 2010, p.88). Moreover, Axinn (1988) suggests that managers’ perception of the relative advantage of exporting is a significant indicator of firm export performance. Other studies have shown that management commitment to export operations, managers’ export orientation, the international experience of managers, managers’ confidence and attitude towards export risks, and managers’ export specific skills such as knowledge of foreign languages, international financial expertise and knowledge of export procedures are significant predictors of export performance (e.g. Cadogan, Diamantopoulos, and Siguaw 2002; Cadogan et al. 2005).

The literature review shows that management commitment to export operations appears to be a necessary organisational ingredient that determines export success. The rationale behind this reasoning is that, when managers are committed to exporting, they carefully plan the entry and allocate sufficient managerial and financial resources to export operations (Cavusgil and Zou 1994; O’Cass and Julian 2003). As a result, uncertainty about export opportunities is reduced and marketing strategies are implemented effectively to boost performance (Aaby and Slater 1989; Sousa, Martínez-López and Coelho 2008). A literature review by Louter, Oouwerkirk and Bakker (1991) reveals that management commitment is instrumental to successful exporting.

Both Aaby and Slater (1989) and Sousa, Martínez-López and Coelho (2008) show in previous literature reviews that the confidence of management and managers’ positive attitude toward export risk are important determinants of export performance. Moreover, research establishes that specific export skills such as knowledge of foreign languages (Louter, Oouwerkirk and Bakker 1991), international financial expertise (De Wilde and Simpson 1988), and knowledge of export procedures (Bilkey 1978) and overseas working and living experiences (Axinn 1988) of managers drive export success. Additionally, some studies have reported that the educational background and innovative and professional experience of managers positively determine export performance (e.g., Brooks and Rosson 1982; da Rocha, Christensen and da Cunha 1990; Dean, Menguç

and Myers 2000; Leonidou 1998; Lages and Montgomery 2005). However, Contractor, Hsu and Kundu (2005) demonstrate that there is no support for the hypothesis that managers with greater international business experience will have stronger export performance in their companies. Thus, results with respect to international experience of managers are also mixed. However, it can be said that management characteristics are determinants of the performance of exporting organisations.

#### **2.4.2.2.3 Organisational Characteristics**

Concerning internal organisational characteristics, many variables have been studied (e.g. Sousa, Martínez-López and Coelho 2008; Zou and Stan 1998). The literature indicates that firm-specific variables are widely used as determinants of export performance. For example, firm size, firm structure, the international experience of the firm, the firm's capabilities and competencies (e.g. resource commitment, customer relationship, product uniqueness, product quality, quickness and flexibility to respond to market change), and firms' strategic orientation are some of the major determinants that are most cited in this category.

##### ***Firm Size***

The surfacing of firm size as a key determinant of export performance should not be a surprise, because its association with export performance has been one of the most extensively studied in the export marketing literature (Sousa, Martínez-López and Coelho 2008). Past empirical studies have consistently cited relationship between firm size variable and export performance (e.g., Czinkota and Johnston 1985; Bonaccorsi 1992; Katsikeas, Deng and Wortzel 1997). Some other researchers have also modelled the impact of firm size on export intensity (e.g., Cavusgil 1984). Typical measures of firm size have been annual total turnover and number of employees. Indeed, some researchers have pointed to firm size as an indication of resource stock available to the firm (Katsikeas and Morgan 1994; Katsikeas, Deng and Wortzel 1997; Katsikeas, Piercy and Ioannidis 1996; Kuivalainen, Sundqvist, and Servais 2007). For example, Katsikeas, Deng and Wortzel (1997, p. 56) argue that "larger companies possess more financial and human resources as well as production capacity, attain higher levels of

economies of scale, and tend to perceive lower levels of risk about overseas markets and operations”.

In drawing on the above reasoning, Bonaccorsi (1992) and other researchers (e.g. Cavusgil 1984; Katsikeas and Morgan 1994) argue that firm size-related perceptions are key catalysts for increasing export activity and eventual firm success. Balabanis and Katsikea (2003) model the impact of firm size on export performance and find a strong positive relationship. Yet, in a more recent study, firm size is reported to have no relationship with export performance (Contractor, Hsu and Kundu 2005). Sousa, Martínez-López and Coelho (2008) recently suggest that two important reasons may explain the mixed results in the literature: use of different measures of firm size; and differences in country perception of size. Thus, this study agrees with Sousa and colleagues and Hoang (1998) that type of measurement scale and the notion of size can shape the firm-size – export performance linkage.

### ***Firm structure***

Firm structure is an important characteristic of firms that has been found to drive export performance (e.g. Robertson and Chetty 2000). A major form of firm structure that is widely studied is export channel structure, defined as the “various structural characteristics that are inherent in carrying out export marketing activities, such as alternative channel modes and administrative arrangements, as well as the associated relationships which arise from these channel arrangements” (Yeoh and Jeong 1995, p.105). Anchored mainly on the contingency perspective of the firm, researchers argue that the effective management of channel structures appears to be one of the major factors for achieving superior export performance (e.g., Yeoh and Jeong 1995; Munro and Beamish 1987; Bello, Urban, and Verhage 1991).

Moreover, some researchers take a functionalist or a behaviourist perspective to study firm structure among exporting organisations. The functionalist perspective focuses on identifying channel modes and their impact on export performance whereas the behaviourist gives priority to the nature of channel structures (Yeoh and Jeong, 1995). In drawing on these two perspectives, Robertson and Chetty (2000) model the impact of channel structure on export performance. These

authors find that organic or mechanistic export channel structures have important performance implication for exporting organisations (Robertson and Chetty 2000).

### ***International Experience***

A firm's international experience also emerges as an important determinant of export success (Kuivalainen, Sundqvist, and Servais 2007; Forsgren and Johanson 1992). Although exporting is largely seen as a major route to firm growth, despite the fact that it is less risky and entails less commitment from firm resources relative to other modes of internationalisation (e.g. foreign direct investment), and notwithstanding its continued attractiveness as a way of tapping into new foreign market opportunities (Cavusgil 1984b; Katsikeas, Leonidou, and Morgan 2000.), decisions about export activities continued to be characterised by considerable amount of uncertainty (Leonidou, Katsikeas and Samiee 2002). The uncertainty is often a function of lack of foreign market knowledge (Johanson and Vahlne 1977; Cavusgil and Zou 1994). The knowledge gap reduces as firms increase their international involvement and knowledge (Forsgren and Johanson 1992). It therefore stands to reason that international experience is a key ingredient that enables firms to learn more about their foreign markets, aids better strategy planning and implementation of export market strategies, and therefore improves the chances of export success.

Like many other organisational determinants of export performance, empirical results linking international experience to export performance are mixed. While several empirical studies report a significant positive relationship between international experience and performance (Dean, Menguç and Myers 2000; Lado, Martinez-Ros and Valenzuela 2004), others have established a negative linkage between international experience and performance (e.g., Baldauf, Cravens, and Wagner 2000; Brouthers and Nakos 2005). Indeed, Cavusgil (1984a) observes that firms differ depending on their degree of internationalisation, and that active and committed exporters tend to record greater percentage of export sales. In a more recent study, Kuivalainen, Sundqvist, and Servais (2007) find that firms with high scope and degree of international operation tend to be more successful firms than their less internationally-experienced counterparts.



Notwithstanding the mixed empirical results, it can be said that firms have different reasons for operating in overseas markets, while some may see international operation as a way of seeking resource and cost advantage, others may do so as a way of seeking long-term growth. In line with this reasoning, it is possible that differences may exist with regard to the value of international experience to export success.

### ***Firm capabilities and competences***

Researchers are also exerting efforts into studying the association of firms' capabilities and competences with export performance (e.g., Prasad, Ramamurthy and Naidu 2001; Morgan, Kaleka and Katsikeas 2004; Piercy, Kaleka, Katsikeas 1998; Zou, Fan and Zhao 2003). For example, Prasad, Ramamurthy and Naidu (2001), report that the possession of competences such as product development skills, product quality, technical support/after-sales service, product line breadth, cost/price (competitiveness) and customer relationship skills offers firms with the opportunity to enjoy superior export success. Similarly, Morgan, Kaleka and Katsikeas (2004) report that positional advantage in export markets and the availability of key capabilities enable firms to enjoy above average export performance. Moreover, Piercy, Kaleka, Katsikeas (1998) find that important differences exist between low and high performing export ventures in terms of their capabilities such as informational skills, customer relationship skills, supply chain skills, and experience, physical, scale and financial resources. Additionally, in a cross national study, Morgan et al (2003) indicate that export ventures' organisational-level experiential and informational knowledge has a significant positive influence on export ventures' performance. Finally, in drawing on the resource-based view, Zou, Fang and Zhao (2003) find that exporters' product development, distribution, pricing, and communication capabilities are positively associated with export performance.

It can, therefore, be said that the findings reported above lend support to the view expressed by Nonaka (1991) and corroborated by Cavusgil and Zou (1994). According to Nonaka (1991), in a globalising modern economy where the only certainty that a firm might have is the uncertainty, possession of market knowledge seems to be a key driver of competitive advantage. The possession of such capabilities and competences, it can be argued, can enable firms to identify

the idiosyncrasies in foreign markets, and develop and implement the necessary marketing strategies to achieve superior export performance (Sousa, Martínez-López and Coelho 2008).

### **Market Orientation**

Cadogan, Diamantopoulos and Siguaw (2002) observe that research into market orientation among exporting organisations is still in its early stage. However, a review of the literature reveals that this construct has emerged as one of the key determinants of export success. The literature in this area is split along two important lines of inquiry: namely, those researchers interested in modelling the association between firm-wide market orientation on export performance (e.g. Rose and Shoham 2002; Shoham, Rose and Kropp 2005; Cicic, Patterson and Shoham 2002; Racela, Chaikittisilpa and Thoumrungroje 2007), and those that have focused on studying an export market-oriented behaviour construct with the hope of addressing, explicitly, the impact of a firm's market orientation on its export operations. This later group of market orientation researchers (e.g., Cadogan, Diamantopoulos and Mortanges 1999; Cadogan, Diamantopoulos and Siguaw 2002; Akyol and Akehurst 2003) believe that the conceptualisation of export market orientation implies that the basic nature of the market orientation construct should not change because the setting in which it is studied is altered, but that additional export market situational factors might alter its usefulness to exporting firms. In general, market orientation researchers argue that firms that are highly market oriented are better disposed to recognise and respond to global challenges and opportunities (Cadogan, Diamantopoulos and Siguaw 2002).

In the market orientation literature, researchers focus on establishing the positive association between an export market-oriented behaviour and export performance. For example, Cadogan, Kuivalainen and Sundqvist (2009) argue that export market-oriented behaviour offers exporters the capability to create superior value for export customers. More specifically, "If a firm consistently identifies and responds to customers' current needs and preferences and is able to anticipate future needs and preferences, it will be in a better position to satisfy customers and perform well against competitors" (Cadogan, Diamantopoulos and Siguaw 2002, p. 618). As such, firms that are more market-oriented in their export markets should perform better than their less export market-oriented counterparts

(Akyol and Akehurst 2003). It comes as no surprise, then, that in recent years much scholarly effort has been expended into further advancing research on the market orientation → export performance relationship. In this respect, scholars have begun to focus attention on exploring environmental and organisational conditions that may alter market orientation's supposed positive influence on export performance (e.g., Cadogan, Kuivalainen and Sundqvist 2009; Ellis 2007; Cadogan, Cui and Li 2003). For example, Cadogan, Cui and Li (2003, p.506) report that "under conditions of low competitive intensity, [export market-oriented] behavior was negatively related to export sales efficiency performance, but positively associated with export sales efficiency performance under conditions of high competitive intensity".

### **2.4.3 Summary and Comments**

The review above has attempted to draw on a selected number of studies to produce a succinct account of the key determinants of export performance. The review reveals two major angles from which debates on the determinants of export performance have progressed: namely, the external environment and internal organisational factors.

With respect to the external environment factors, export researchers draw largely on the organisational behaviour literature by using environment framing method to conceptualise the external environment (e.g., Dess and Beard 1984). This approach looks at the environment from a contingency perspective focusing on its abstract qualities and dimensions. Specific environment dimensions that are studied therefore include dynamism, hostility, heterogeneity and munificence. The empirical evidence has shown that these environment variables have some degrees of influence on export performance.

From the perspective of the internal organisational factors, three important variables are widely studied: export marketing strategies, export management characteristics and organisational characteristics. Regarding export marketing strategies, researchers focus on linking export target market strategies and marketing mix variables to export success. With respect to export management characteristics, researchers study issues such as management commitment and orientation to exporting, perceived importance of exporting to managers,

international experience and export specific skills of managers, and managers' confidence and attitude towards export risk. In terms of organisational characteristics, researchers exerts efforts into researching the links between export performance and such variables as firm size, firm structure (including export channel structure), firms' international experience, capabilities and competences of firms, and market orientation.

Despite these efforts by researchers into understanding the association of environment and organisational variables with export performance, it is rather interesting to note that results from these studies are mixed. Scholars believe that the current state of the field is rather problematic and needs to be addressed (e.g., Leonidou, Katsikeas and Coudounaris 2010; Sousa, Martínez-López and Coelho 2008). The problem is perhaps better illustrated by Leonidou, Katsikeas and Coudounaris (2010, p.78), who argue that research into exporting is "too fragmented, uncoordinated, and repetitive to offer any useful insights". They also suggest that the injection of ideas from other disciplines such as innovation and entrepreneurship to the context of exporting would help improve understanding of the exporting phenomenon. It is suggested that the injection of these new ideas would advance the field when they are "adapted to the idiosyncrasies of customers, market, and competition prevailing in various overseas markets" (Leonidou, Katsikeas and Coudounaris 2010, p.89). It is also noted that as the trend toward globalisation of markets continues to gather momentum, export activities would become increasingly important to firms (Sousa and Bradley 2009). As such, it is important for academics and practitioners alike to begin to examine new ideas that might help to better understand export success.

One promising opportunity for addressing these gaps in the export performance literature is to introduce the idea of entrepreneurial orientation (or EO) to the context of export operation (Ibeh 2003; Yeoh and Jeong 1995). Building on the premises of opportunity identification and exploitation (Shane and Venkatraman 2000), researchers argue that EO enables firms to be successful in contemporary business environments (e.g., Covin and Slevin 1989; Alvarez and Barney 2004; Ketchen, Ireland and Snow 2007). Exploitable opportunities offer avenues for firms to grow (Penrose 1959). In fact, Ketchen, Ireland and Snow (2007, p. 371) have argued that "...entrepreneurship refers to firms' pursuit of superior

performance via simultaneous opportunity-seeking and advantage-seeking activities". As such, developing entrepreneurial behaviours is instrumental to identifying and exploiting new opportunities to boost performance.

Despite EO's promise of increasing knowledge about the determinants of export performance (Yeoh and Jeong 1995), it is rather surprising that empirical research on EO in an export context is so limited. The current situation means that export managers are deprived of information on how their entrepreneurial behaviour can help them to improve their performance. From a theoretical point of view, it means that a promising research opportunity has been left unattended to.

Having reviewed the determinants of export performance, and having discussed an opportunity to research EO among exporting organisations, it is now time to take a closer look at the EO construct *per se*. This is important because the confusion over what constitutes EO has yet to be resolved and the debate is still present in the literature.

## **2.5 EXPORT ENTREPRENEURIAL-ORIENTED BEHAVIOUR: A LITERATURE-BASED REVIEW**

This section of the chapter focuses on providing a definition for an export entrepreneurial-oriented behaviour (or export EOB) that is theoretically rich and empirically robust. Accordingly, both the non-export EO and emerging export EO literatures are integrated. In fact, the firm-wide non-export EO literature has considerably influenced discussions on EO in the export literature and, as such, greater value can be derived by combining the two streams of research. A major advantage that is derived from integrating the two bodies of literature is that a comprehensive definition of EO that is specific to exporters can be provided. An export specific definition of EO will also enable this study to then define EOBs for exporters. Thus, in the sections that follow an evaluation of both the non-export EO and export EO literatures is undertaken.

### 2.5.1 Entrepreneurial Orientation: A General Overview

The inquiry into the entrepreneurship concept and its importance to business success and to the well-being of the larger society is still being debated (Alvarez and Barney 2004; Ireland, Hitt and Sirmon 2003; Alvarez and Barney 2007). Focusing on the firm, scholars contend that “The field of entrepreneurship continues to struggle with a theory of the firm” (Alvarez and Barney 2004, p. 621). In this sense, although the entrepreneurship concept has been with us for more than a century, relatively little is known about it and about its related concepts (Alvarez and Barney 2007; Baumol and Strom 2007; Cunningham and Lischeron 1991). Classical works on the concept tend to view it from economic perspective (Schumpeter 1934, Baumol 1968; Kirzner 1973; 1979). In this context, a central thesis is that the entrepreneurial firm<sup>1</sup> is an economic actor that controls necessary resources to generate economic rents associated with a product-market opportunity (Alvarez and Barney 2007).

Despite earlier efforts to advance an entrepreneurship theory of the firm, the field is plagued by lack of precise definition (Ireland, Hitt and Sirmon 2003; Sharma and Chrisman 1999). Nevertheless, most authors subscribe to the notion that the entrepreneurship concept is concerned with organisational innovation, creativity and risk tolerance, which requires significant changes in the manner in which a firm’s resources are arranged, deployed, and aligned. In that sense, it is contended that superior competitive position could be created and new wealth generated from entrepreneurial processes (Shane and Venkatraman 2000; Covin and Miles 1999; Burgelman and Hitt 2007; Casson and Wadeson 2007; Schendel 2007).

Given the benefits that organisations can derive from the entrepreneurship concept, three views dominate debates in the literature: process, trait, and strategic (or corporate) entrepreneurship perspectives (see Drucker 1985; Kao 1989; Lyon 2000; Ireland et al. 2001; Covin and Miles 1999). The process view focuses on exploring the domain of value creation, with specific attention exerted to understanding how corporate ventures are founded and managed (Zahra, Neubaum and El-Hagrassey 2002; Burgelman 1983; McDougall and Robinson

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<sup>1</sup>The entrepreneurial firm is said to be owned and/or managed by an entrepreneur, the latter is often described as a factor input whose effort should be rewarded (Kirzner 1973).

1990; Stevenson, Roberts and Grousbck 1985). For example, Stevenson, Roberts and Grousbck (1985) refer to entrepreneurship as a process of creating value by bringing together a unique package of resources to exploit new opportunities.

On the other hand, the trait theory focuses on the impact of different personality factors (e.g. leadership, flexibility, and commitment) on the propensity of individuals to engage in entrepreneurial activities (e.g. Carland, Hoy and Carland, 1984; Kets de Vries 1997). In this domain, the entrepreneur is viewed as an enterprising person that translates 'what is impossible' into reality (Kao 1989). In this regard, an entrepreneur is defined as someone who identifies and bears the risk to exploit new product-market opportunities ahead of others in the society (Brockhaus and Nord 1979).

A third approach is the notion of corporate or strategic entrepreneurship (i.e. entrepreneurial efforts within established organisations; Vesper 1990). In this context, different typologies and definitions have been proposed (see Sharma and Chrisman 1999 for an overview). Whichever the label used, researchers refer to the phenomenon as firm-level entrepreneurship (Covin and Slevin 1991; Ireland, Hitt and Sirmon 2003) and the idea is to focus on entrepreneurship as it pertains to business organisations rather than the characteristics of the individual entrepreneur. In this sense, attention is directed to understanding how a firm's opportunity and advantage seeking behaviours lead to organisational success (Ireland et al. 2001; Ireland, Hitt and Sirmon 2003). Hence, Khandwalla (1977) defines corporate entrepreneurship by describing firms that are willing to take on high risk projects for the opportunity of very high returns; firms that are bold and aggressive in pursuing opportunities; that often initiate action to which competitors respond; and are frequently the first to market new products or services. Khandwalla's definition subsequently provides the foundation for future conceptualisation of the firm-level entrepreneurship concept.

For example, Miller's (1983) three-dimensional model of entrepreneurship is based on Khandwalla's earlier definition. In fact, Miller (1983, p.771) refers to an entrepreneurial firm as one that "engages in product-market innovation, undertakes somewhat risky ventures and is first to come up with proactive innovations, beating competitors to the punch". In drawing on these earlier

corporate entrepreneurship theories, Covin and Slevin (1989) suggest the notion of entrepreneurial posture<sup>2</sup> and argue that it reflects firms' strategic orientation. These authors further emphasise that the entrepreneurial posture of a firm is reflective of the firm's tendency to be innovative, risk-seeking and proactive in relation to new market opportunities. Thus, entrepreneurship is modelled as a firm's strategic decision-making style (Covin and Slevin 1991).

In drawing on these classical works, scholars continue to debate the idea of firm-level entrepreneurship and its role in organisational success (e.g. Ketchen, Ireland and Snow 2007; Baumol and Strom 2007; Alvarez and Barney 2004). Indeed, Guth and Ginsberg's (1990) editorial comment commences a renewed interest in the firm-level entrepreneurship concept. These two scholars reason that the salient dimensions that describe an entrepreneurial orientation (or EO) may be more than the trio originally suggested by Khandwalla (1977) and later studied by Miller (1983) and Covin and Slevin (1989). In fact, it can be said that Lumpkin and Dess's (1996) conceptual piece revives the central debate on EO when they propose their well-known five-dimensional model. They define EO as "the processes, practices, and decision-making activities that lead to new entry" (Lumpkin and Dess 1996, p. 136). They further focus on highlighting the purposeful enactment of innovative, risk-taking, proactive, competitively aggressive and autonomous behaviours as the key components of EO. More recently, Covin and Kuratko (2008) suggest that the entrepreneurial behaviour concept may lead to the generation of new businesses within an organisation as new opportunities are identified or created. Kuratko and Audretsch (2009) argue that firms may also seek strategic renewal, sustained regeneration, organisational rejuvenation or business model reconstruction goals as part of their overall EO (see also Covin and Miles 1999). Hence, it can be argued that the central thesis of EO research is based on the concepts of newness and opportunity exploitation as a way of seeking competitive advantage and eventual organisational success (Ireland, Hitt and Sirmon 2003).

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<sup>2</sup> Researchers have used many terms to talk about entrepreneurship, and common among these are references to entrepreneurial proclivity (Matsuno, Mentzer and Ozsomer. 2002), entrepreneurial posture (Covin and Slevin 1989; 1991), entrepreneurial behaviour (Covin and Kuratko 2008) and entrepreneurial orientation (Lumpkin and Dess 1996), for example. Often, when researchers use these terms, they are referring to the same phenomenon. Accordingly, this study views these terms as being synonymous and interchangeable.



Given the expositions above, a valid question that often gets asked is how a firm's level entrepreneurship can be implemented and valued so that it can be meaningful to practicing managers. This question is critical because oftentimes managers wonder about the relevance of entrepreneurship theory to their business processes (Lumpkin and Dess 2001). The extant literature provides some guidelines that can help to answer this question. For example, Covin and Slevin (1991) argue that firms can implement their entrepreneurship concept by emphasising innovativeness, risk-taking, and proactiveness in their business processes (see also Miller 1983). However, Guth and Ginsberg (1990) argue that the implementation of the entrepreneurship concept requires activities that may extend beyond those three activities. Consequently, Lumpkin and Dess (1996) add competitive aggressiveness and autonomy to the list. Hence, Lumpkin and Dess argue for EO as an umbrella term that describes how entrepreneurship is implemented in organisations. Thus, the contention has often been the case that EO is about how entrepreneurial firms implement the entrepreneurship theory. Put differently, EO is considered as the manner in which entrepreneurial firms engage in new entry and opportunity seeking activities (Lumpkin and Dess 1996), and it is conceptualised as the implementation of the entrepreneurship concept (Covin and Slevin 1991; Dess and Lumpkin 2005). Accordingly, researchers focus on predicting business success using the EO construct (e.g. Lumpkin and Dess 2001; Wang 2008; Covin, Green and Slevin 2006).

This development in the literature has some important implications for export researchers interested in predicting export performance. In this context, researchers identify the international entrepreneurship concept as an emerging field of study that is positioned at the intersection of broader international business and entrepreneurship disciplines (e.g. Buckley 2002; McDougall and Oviatt 2000; McDougall, Shane and Oviatt 1994; Coviello and Jones 2004; Jones and Coviello 2005; Zahra, Neubaum and Huse 2000). As a result, researchers have examined the export performance impacts of a firm-wide EO construct (e.g. Balabanis and Chetty 2003; Robertson and Chetty 2000).

Table 2.1 describes a number of non-export EO studies that link firm-wide EO to firm performance. In addition, table 2.2 provides information on export specific studies that examine the association between firm-wide EO and export

performance. The studies from the two research streams are discussed next by focusing on how they conceptualised the EO construct, the kind of EO dimensions that were studied, how the dimensions were operationalised, the level at which EO was examined, the kind of relationships that were studied and the findings that were reported.

## 2.5.2 Conceptualisation of EO

The extant EO research conceptualises the EO construct in many different ways. The conceptual lenses adopted in the literature can be explained using the organisational culture concept (Homburg and Pflesser 2000; Ajzen and Fishbein 1980). The literature suggests different definitions of organisational culture (e.g. Trice and Beyer 1993; Schein 1992). However, one of the widely accepted definitions and one that is often used by export researchers is Deshpande and Webster's (1989) view of organisational culture. According to Deshpande and Webster (1989, p. 4), organisational culture defines "the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them norms for behavior in the organization." Research shows that organisational culture consists of conceptually distinct but causally linked layers: values, norms, artefacts, attitudes and behaviours (Homburg and Pflesser 2000; Trice and Beyer 1993). When conceptualising EO, researchers often adopt one (or more) of these organisational culture components by viewing EO as: (1) an organisation-wide set of shared basic values, norms and artefacts (e.g. Lee and Peterson 1990); (2) organisation-wide attitudes (e.g., Knight 1997; Miller 1983); and (3) EO as observable organisation-wide behaviours (e.g., Covin and Slevin 1991; Morgan and Strong 2003).

First, an organisational-wide EO value is defined as the fundamental principles that legitimise any future EO action. According to Dess and Lumpkin (2005), entrepreneurial values underscore the philosophical mindsets of top managers and as such it determines the basis for which decision is taken to act entrepreneurially. Consequently, some EO researchers argue that EO's cultural values should be the focus of EO research (e.g. Lee and Peterson 2000). These researchers also believe that EO's cultural artefacts should be considered in EO research.

Table 2.1: Non-export EO Studies that Linked Firm-wide EO with Firm Performance

Author (s)	How EO is conceptualised	EO dimensions used	Aggregate versus independent approach	Level of Study	EO – Firm Performance Relationships	Key Findings
Aragon-Correa 1998	Attitudes	Proactiveness	independent	Firm-wide	Proactiveness → Performance	Proactiveness is positively associated with overall firm performance.
Becherer-Maurer 1997	Attitudes	Innovativeness, risk-taking, proactiveness	Aggregate	Firm-wide	EO → Performance	EO is responsible for positive changes in profits.
Deeds et al. 1998	Behaviours	Innovativeness	independent	Firm-wide	Innovativeness → Performance	Innovativeness is positively associated with performance satisfaction and overall performance
Dess et al. 1997	Attitudes	Innovativeness, risk-taking, proactiveness	Aggregate	Firm-wide	EO → Performance	EO positively drives Sales, profit and growth
Hundler et al. 1996	Behaviours	Innovativeness	Independent	Firm-wide	Innovativeness → Performance	Organisational innovativeness is negatively related to Profitability in both samples.
Knight 1997	Attitudes	Innovativeness, proactiveness	Aggregate	Firm-wide	EO → Performance	EO drives overall performance positively.
Lerner et al (1997)	Attitudes	Autonomy	Independent	Individual Manager	Autonomy → Performance	The autonomous behaviour of owner managers negatively affects sales revenue.
Sapeinza and Grimm 1997	Attitudes	Innovativeness, risk-taking, proactiveness	Aggregate	Firm-wide	EO → Performance	No significant relationship exists between EO and overall firm performance.
Smith et al. 1997	Attitudes	Competitive aggressiveness, proactiveness	Independent	Firm-wide	Competitive aggressiveness → performance Proactiveness → performance	Both competitive aggressiveness and proactiveness positively drive firm Competitiveness.
Zahra and Covin 1995	Attitudes	Innovativeness, competitive aggressiveness, risk-taking	aggregate	Firm-wide	EO → Performance	EO is reported to positively affect organisational effectiveness.

Table 2.1: Non-export EO Studies that Linked Firm-wide EO with Firm Performance (*continued*)

<b>Author (s)</b>	<b>How EO is conceptualised</b>	<b>EO dimensions used</b>	<b>Aggregate versus independent approach</b>	<b>Level of Study</b>	<b>EO – Firm Performance Relationships</b>	<b>Key Findings</b>
Miller and Friesen 1982	Attitudes	Risk taking, prospecting and product innovation	aggregate	Firm-wide	EO → Performance	EO is positively related to overall firm performance.
Miller and Friesen 1983	Attitudes	Risk taking, prospecting and innovativeness	Aggregate	Firm-wide	EO → Performance	EO – overall firm performance relationship is positive
Lumpkin and Dess 2001	Attitudes	Proactiveness and competitive aggressiveness	Independent	Firm-wide	Proactiveness → Performance Competitive aggressiveness → Performance	Proactiveness positively affects performance among firms in early stage of industry development while competitive aggressiveness affects performance positively in mature stage of industry development.
Covin and Slevin 1989	Attitudes	Risk taking, prospecting and innovativeness	aggregate	Firm-wide	EO → Performance	EO is positively associated with satisfaction with performance.
Morris and Sexton 1996	Mix of attitudes and behaviors	Innovativeness, proactiveness and risk-taking	aggregate	Firm-wide	EO → Performance	EO positively drives revenues, profits, employee satisfaction, the size of customer base, and Growth.
Covin et al. 1999	Attitudes	proactiveness	Independent	Firm-wide	Proactiveness → Performance	Proactiveness is positively related to Sales growth.
Hult et al. 2004	Attitudes	Innovation	independent	Firm-wide	Product Innovation → Performance	Product innovation is positively association with overall business performance.
Zahra 1995	Attitudes	Innovation, risk-taking and proactiveness	aggregate	Firm-wide	EO → Performance	EO drives firm growth positively.
Miller 1987	Attitudes	Innovation, risk-taking, proactiveness	aggregate	Firm-wide	EO → Performance	EO drives changes in profitability positively.

Table 2.1: Non-export EO Studies that Linked Firm-wide EO with Firm Performance (*continued*)

<b>Author (s)</b>	<b>How EO is conceptualised</b>	<b>EO dimensions used</b>	<b>Aggregate versus independent approach</b>	<b>Level of Study</b>	<b>EO – Firm Performance Relationships</b>	<b>Key Findings</b>
Naman and Slevin 1993	Attitudes	Innovation, risk-taking, proactiveness	aggregate	Firm-wide	EO → Performance	EO is positively associated with satisfaction with financial performance.
Matsuno et al. 2002	Attitudes	Innovation, risk-taking, proactiveness	aggregate	Firm-wide	EO → Performance	EO is positively related to satisfaction with financial performance.
Kreiser et al. 2002	Attitudes	Innovativeness, risk-taking, Proactiveness,	Independent	Firm-wide	innovativeness → Performance risk-taking → Performance proactiveness → Performance	Each of the three EO dimensions individually drives overall performance positively.
Miller 1983	Attitudes	Risk taking, proactiveness and innovativeness	aggregate	Firm-wide	EO → Performance	EO positively influences firm success.
Stetz et al. 2000	Attitudes	Risk-taking, innovativeness, proactiveness	Independent	Firm-wide	Risk-taking → Performance innovativeness → Performance proactiveness → Performance	Each EO dimension is positively related to overall performance.
Wiklund and Shepherd 2005	Attitudes	Risk-taking, innovativeness, proactiveness	Aggregate	Firm-wide	EO → Performance	EO positively affects gross margin, sales, profits compared with competitors.
Venkatraman 1989	Attitudes	Risk-taking, proactiveness, competitive aggressiveness	Independent	Firm-wide	Risk-taking → Performance proactiveness → Performance competitive aggressiveness → Performance	Risk-taking, proactiveness and competitive aggressiveness positively drive profitability but only proactiveness is positively associated with growth.

Table 2.1: Non-export EO Studies that Linked Firm-wide EO with Firm Performance (*Continued*)

<b>Author (s)</b>	<b>How EO is conceptualised</b>	<b>EO dimensions used</b>	<b>Aggregate versus independent approach</b>	<b>Level of Study</b>	<b>EO – Firm Performance Relationships</b>	<b>Key Findings</b>
Keh et al. 2007	Attitudes	Risk-taking, innovativeness, proactiveness	Aggregate	Firm-wide	EO → Performance	EO is positively related to satisfaction with performance.
Covin and Covin 1990	Attitudes	Competitive aggressiveness	Independent	Firm-wide	Competitive aggressiveness → Performance	Competitive aggressiveness drives profitability positively.
Wang 2008	Attitudes	Proactiveness, risk-taking, aggressiveness, innovativeness	Aggregate	Firm-wide	EO → Performance	EO is moderately related to firm performance (mediated by learning orientation).
Jambulingam et al. 2005	Mix of attitudes and behaviours	Innovativeness, risk-taking, proactiveness, autonomy, competitive aggressiveness, and motivation	Aggregate	Firm-wide	EO → Performance	Firms with high level of EO (i.e. true entrepreneurs) are more customer-oriented and more effective than those with less EO attitudes and behaviours.
Renko et al. 2009	Attitudes	Innovativeness, risk-taking, proactiveness	Aggregation	Firm-wide	EO → Performance	While EO is related negatively with capital investment, no relationship is found for EO's association with product innovation success.
Song and Montoya-Weiss 1998	Behaviours	Product innovativeness	Independent	Product-market	Product innovativeness → Performance	Productiveness is positively related to successful new product commercialisation.
Tellis et al. 2007	Attitudes	Radical innovation	Independent	Firm-wide	Radical innovativeness v → Performance	Radical (or novel) product innovation drives financial performance positively.
Augusto and Coelho 2009	Attitude	Innovativeness	Independent	Firm-wide	innovativeness → Performance	Organizational innovativeness is found to be weakly (but positively) associated with new product success.

Table 2.1: Non-export EO Studies that Linked Firm-wide EO with Firm Performance (*Continued*)

Author (s)	How EO is conceptualised	EO dimensions used	Aggregate versus independent approach	Level of Study	EO – Firm Performance Relationships	Key Findings
Frishammar and Horte 2007	Attitude	Innovativeness, risk-taking, proactiveness	Independent	Firm-wide	innovativeness → Performance risk-taking → Performance proactiveness → Performance	Innovativeness is positively related to performance in new product development, while proactiveness and risk taking show no such relationship.
Hughes and Morgan 2007	Mix of attitudes and behaviours	Innovativeness, risk-taking, proactiveness, competitive aggressiveness, autonomy	independent	Firm-wide	innovativeness → Performance Risk-taking → Performance proactiveness → Performance Competitive aggressiveness → Performance autonomy → Performance	Innovativeness and proactiveness positively influence business performance while risk-taking negatively drives business performance. Competitive aggressiveness and autonomy have no association with business performance.
Morgan and Strong 2003	Behaviours	Competitive aggressiveness, proactiveness, risk-taking	Independent	Firm-wide	Competitive aggressiveness → Performance Proactiveness → Performance Risk-taking → Performance	Competitive aggressiveness, proactiveness and risk-taking are not related to business performance
Smart and Conant 1994	Attitudes	Innovativeness, risk-taking, and proactiveness	aggregate	Firm-wide	EO → Performance	EO is positively and significantly related to distinctive marketing competencies and to organisational performance.
Bhuiyan et al. 2005	Attitudes	Risk-taking, innovativeness, proactiveness	aggregate	Firm-wide	EO → Performance	EO is a key driver of satisfaction with performance.
Covin et al. 2006	Attitudes	Risk-taking, innovativeness, proactiveness	aggregate	Firm-wide	EO → Performance	EO is a major determinant of sales growth.

Table 2.2: Export EO Studies that Linked EO to Export Performance

<b>Author (s)</b>	<b>How EO is Conceptualised</b>	<b>EO Dimensions used</b>	<b>Aggregate versus Independent Approach</b>	<b>Level at Which EO was Studied</b>	<b>EO – Export Performance Relationships</b>	<b>Key Findings</b>
Knight & Kim 2009	Behaviour	International innovativeness	Independent	Firm-wide	International innovativeness → Export performance	International innovativeness is positively related to international business performance.
Clercq et al. 2005	Attitudes	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	EO → internationalization intention	EO is moderately related to internationalization intention
Jantunen et al. 2008	Mix of attitudes and behaviours	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	EO → International performance	EO has significant positive impact on international financial performance
Knight and Cavusgil 2004	Mix of values, attitudes and behaviours	Innovativeness, risk-taking and proactiveness	Aggregate	Export venture	Unique product development → International performance	Unique product development has positive effect on international business performance.
Knight 2000	Values	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	International EO → International performance	Entrepreneurial value is positively related to globalization responses and quality leadership.
Knight 2001	Attitudes	Risk-taking and innovativeness	Aggregate	Firm-wide	International EO → International performance	International EO is found to be positively associated with international financial performance.
Balabanis and Katsikea 2003	Attitudes	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	EO → Export performance	EO has a positive effect on export performance.
Walters and Samiee 1990	Behaviour	Product innovation	Independent	Firm-wide	Product Innovativeness → Export performance	High export product line technology and export product modification strategies predict export profit margin positively.
Jantunen et al. 2005	Attitudes	Innovativeness, proactiveness, risk-taking	Aggregate	Firm-wide	EO → Export performance	EO is positively related international financial performance.



Table 2.2: Export EO Studies that Linked EO to Export Performance (*Continued*)

<b>Author (s)</b>	<b>How EO is Conceptualised</b>	<b>EO Dimensions used</b>	<b>Aggregate versus Independent Approach</b>	<b>Level at Which EO was Studied</b>	<b>EO – Export Performance Relationships</b>	<b>Key Findings</b>
Cooper and Kleinschmidt 1985	Behaviour	Product innovativeness	Independent	Firm –wide	Product innovativeness → Export performance	Product strategies have positive impact on export sales and export growth.
Beamish et al 1993	Behaviours	Product innovativeness	Independent	Firm-wide	Product innovativeness → Export performance	Products with unique characteristics positively drive export intensity in UK firms but not in Canadian firms.
Robertson and Chetty 2000	Attitudes	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	EO → Export performance	EO and export performance have only moderate positive relationship.
Cavusgil 1984	Attitudes	Risk-taking	Independent	Firm-wide	Risk-taking → Export market entry	A willingness to commit large firm resources to export operations (i.e. export risk-taking) is positively related to successful export market entry.
Zahra and Garvis 2000	Attitudes	Innovativeness, risk-taking and proactiveness	Aggregate	Firm – wide	International EO → International performance	International EO has a weak positive relationship with international financial performance.
Shoham et al 2002	Attitudes	Product innovation strategy	Independent	Export venture	Export product innovation strategy → Export performance	For prospectors, product innovativeness positively drives export success, but for analyzers, it drives export success negatively.
Ibeh 2003	Attitudes	Innovativeness, risk-taking and proactiveness	Aggregate	Firm-wide	Export EO → Export intensity	Export EO positively drives a firm's propensity to export.
Kuivalainen et al. 2007	Attitudes	Proactiveness, risk taking and competitive aggressiveness	Independent	Export venture	Proactiveness, risk-taking and competitive aggressiveness → True global performance	While proactiveness has no effect, risk-taking has negative effect, and competitive aggressiveness has positive effect on the performance of true global firms.

Second, EO attitude refers to the extent to which a firm is willing to undertake actual entrepreneurial actions (Covin and Slevin 1989). Researchers examining EO attitudes argue, for example, that entrepreneurial organisations are characterised by their *willingness* to "innovate boldly and regularly while taking considerable risks in their product-market strategies" (Miller and Friesen 1982, p. 5). Thus, the focus is on attitudinal dispositions to act in entrepreneurial ways.

Third, EO behaviours can be defined as actual organisational behavioural patterns with an instrumental function. According to Covin and Slevin (1991), EO behavioural patterns are reflective of firms' commitment to entrepreneurial acts. Researchers in the behavioural stream maintain that EO is the sum total of the radical innovative, proactive and risk-taking activities as manifested in firm's support for projects with uncertain outcomes (Zahra and Neubaum 1998). Indeed, Covin and Slevin (1991, p.8) maintains that "the fact that organizational-level behavior is a predictor of the key entrepreneurial effectiveness criterion of firm performance would seem an independently noteworthy reason for adopting an organizational-level perspective on the entrepreneurial process". These authors believe that behaviours, therefore, give meaning to the entrepreneurial process. Hence, in this context, specific attention is given to actual and observable EO behaviours (or EOBs). Existing measures of the EO construct have reflected these different conceptual lenses. The result is that a consistent and generally accepted measure of EO does not exist.

However, some researchers (e.g. Homburg and Pflesser 2000; Cadogan et al. 2001; Ajzen and Fishbein 1980) argue that behaviours are more closely linked to performance than values and attitudes. For example, in building on the works of Katz and Kahn (1978) and Ajzen and Fishbein (1980) in the market orientation literature, Homburg and Pflesser (2000) contend that there is a causal link between values, norms, artefacts and behaviours, and that "only behaviors have a direct performance impact" (p. 452). Entrepreneurship scholars believe that entrepreneurial-oriented firms undertake organisational-wide behaviours that are directed towards the identification and exploitation of new market opportunities (Covin and Slevin 1991; Lumpkin and Dess 1996; Shane and Venkatraman 2000). Therefore, in developing a theory of EO's

relationship with export performance it is important to consider EO's behavioural dimensions.

For example, in export operations, it can be argued that an export entrepreneurially-oriented firm is one that focuses on identifying and exploiting new export market opportunities to create superior value propositions for export customers. Such export function entrepreneurial efforts could begin from the stimulation of positive entrepreneurial values and attitudes among export employees so that, ultimately, those positive values and attitudes might influence observable entrepreneurial behaviours in export operations. In this sense, entrepreneurial values and attitudes can be theorised as antecedents to entrepreneurial behaviour, and entrepreneurial behaviour can be viewed as the variable that should be linked to performance. Yet, the export performance impact of a comprehensive entrepreneurial-oriented behaviour (or EOB) construct is currently unknown. Unfortunately, export researchers have relied on mixtures of values, attitudes and behaviours, often borrowed from non-export firm-wide studies, to measure EO.

In short, it can be argued that export context specific EO research is sparse. On top of this, no study has examined the potential impacts of all five dimensions of EOB, as defined by Lumpkin and Dess (1996), on export success. Indeed, research in the export literature tends to focus on a limited set of EOB dimensions, usually measured at non-export functional level, and mainly examining attitudes or managerial values and beliefs. By studying the export performance impact of EOB as measured in export functional level, researchers can ensure that confounds from non-export functional activities are minimised.

### **2.5.3 The EOB dimensions studied**

Most EO scholars adopt a three dimensional-model of EO (e.g. Miller 1983; Covin and Slevin 1989; Covin, Slevin and Green, 2006). Consequently, researchers focus on modelling organisational innovativeness, risk-taking and proactiveness as definitive description of firm-wide EO. The conceptual validity of this model is also demonstrated in several studies (e.g. Baker and Sinkula, 2009; Kreiser, Marino, and Weaver 2002; Matsuno, Mentzer and Ozsomer 2002); hence, it is accepted within the firm-wide EO research community that

these factors are salient underlying constituents of the EO phenomenon. Consequently, several conceptual and empirical studies have focused on studying the relationship between a three-dimensional EO construct and firm performance (e.g. Covin and Slevin 1991; Dess, Lumpkin and Covin 1997; Becherer and Maurer 1997; Zahra and Covin 1995; Atuahene-Gima and Ko 2001).

Consistent with, but different to, the three-dimensional model, other researchers (e.g. Guth and Ginsberg 1990; Lumpkin and Dess 1996) have argued that EO's dimensions may extend beyond the three factors described by Miller (1983). As a result, Lumpkin and Dess (1996) propose a five dimensional model of EO that includes organisational innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy. These authors further argue that all the dimensions may be present when a firm undertakes a new entry activity. Following on from Lumpkin and Dess' seminal work, some researchers suggest additional dimensions, i.e. motivation (Jambulingam, Kathuria, and Doucette 2005) and communication (Kropp, Lindsay, and Shoham 2006). However, it could be argued that motivation is an antecedent to entrepreneurial behaviour (Cooper 2007; Sarasvathy 2001), and communication can also occur in non-entrepreneurial firms (Zahra 1996; Holcomb et al. 2009). Thus, it seems that the Lumpkin and Dess five-dimensional model provides a more holistic and comprehensive description of EO (Hughes and Morgan 2007).

Despite Lumpkin and Dess' (1996) seminal work on a five-dimensional model of EO, unfortunately, only a few EO studies have examined all five dimensions empirically (e.g. Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010), and so, most researchers have resorted to empirical examination of EO's nomological network with other constructs using only subsets of EO's components (see tables 2.1 and 2.2). For example, Hughes and Morgan (2007) study the five dimensions among young high-technology firms at an emerging stage of development. Pearce II, Fritz and Davis (2010) examine the five EO dimensions among non-governmental religious organisations. Moreover, Wang (2008) predicts firm performance using four out of the five EO dimensions: product innovativeness, risk-taking, proactiveness and aggressiveness. In a recent study, Baker and Sinkula (2009) predict product innovation success

using three EO components: innovativeness, risk-taking and proactiveness. Moreover, Lumpkin and Dess (2001) examine two of the five components of EO: proactiveness and competitive aggressiveness, and Covin and Covin (1990) study only one component of the construct: competitive aggressiveness. As a result, knowledge on all five EO dimensions is lacking from the existing literature. The same can also be said about export research involving export EO activities (e.g., Balabanis and Katsikea 2003; Robertson and Chetty 2000).

With respect to the operationalisation of the EO's dimensions, the extant literature has very little to offer. Measures that were developed by Miller and Friesen (1982) and Miller (1983), and later refined by Covin and Slevin (1989), seem to be the predominant measures that are often used to measure EO (e.g. Zahra and Covin 1996; Lumpkin and Dess 2001). The problem with these earlier measures is that they do not capture all five EO components as proposed by Lumpkin and Dess (1996). However, more recent studies have attempted to develop new measures that tap more dimensions (e.g. Wang 2008; Zahra 1996; Jambulingam, Kathuria, and Doucette 2005; Jantunen et al. 2005), yet these are very context specific. Therefore, this study focuses on the core five dimensions.

Prior studies that have measured aspects of EO have adopted two major approaches: disaggregate treatment versus aggregate treatment. Researchers that focus on the disaggregate treatment argue that EO's dimensions vary independently in relation to each other and other constructs in their nomological network (Lumpkin and Dess 1996; Kreiser, Marino, and Weaver 2002). A major utility of this approach is that important information on the unique consequences of the dimensions is provided and this can contribute to richer theory development. On the other hand, scholars viewing EO as some kind of aggregate variable argue that all the "sub-dimensions make equal contributions to the overall level of a firm's entrepreneurial orientation" (Kreiser, Marino, and Weaver 2002, p. 74). An important advantage for the aggregation approach is that researchers can determine how EO, in totality, is related to performance. Thus, it is important to note that disaggregate and the aggregate treatments of the EOBs are non antithetical in that researchers can choose to look at how the

EOBs, as separate constructs, or as a totality, are related to export performance.

Scholars focusing on disaggregate (independent) treatment of the dimensions are able to observe individual effects of EO's dimensions on important outcomes (e.g. Hughes and Morgan 2007; Morgan and Strong 2003; Frishammar and Horte 2007). Aggregation is a coarser theory development and testing approach, however, it might obscure individual effects as researchers using this approach instead see only aggregate affects. Yet, both approaches have value from a managerial perspective. In totality, the issue of whether firms should be pushing to be more or less entrepreneurially-oriented can be argued. In treating the dimensions as separate constructs, managers can determine which dimensions need to be manipulated to enhance performance. Thus, it is important that researchers focus on examining the performance outcomes of the EO construct from both disaggregate and aggregate perspectives as each has value for managerial practice.

Indeed, recent studies hint at the idea that not all five EOBs positively influence performance in the same way (e.g. Kreiser, Marino, and Weaver 2002; Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010), and that some dimensions might not have positive influence on performance (Hughes and Morgan 2007; Morgan and Strong 2003). Hence, it could be that the EO dimensions jointly operate on performance, and that examination of individual dimensions to the exclusion of the aggregate would overlook this possibility. Thus, it is paramount that the importance of overall EOB and individual EOBs is highlighted and explained.

#### **2.5.4 Explaining Export Entrepreneurial-oriented Behaviours**

International entrepreneurship has been identified as an emergent field of research that is positioned at the intersection of the international business and entrepreneurship disciplines (Buckley 2002; McDougall and Oviatt 2000). Consequently, researchers have examined the characteristics of firms that exhibit entrepreneurial behaviours in their overseas markets (e.g. Jones and Coviello 2005; Zahra, Neubaum and Huse 2000a; Ibeh 2003; Robertson and Chetty 2000). Ideally, entrepreneurial firms want to reduce risks. As such, for

entrepreneurial firms exploring or intending to explore overseas market opportunities, it is suggested that the exporting mode should be the best option because it involves lower risks compared to other internationalisation modes (Cavusgil, 1984). Thus, several scholars have focused on predicting export success as it is critical for firm survival and profitability (e.g. Zhou, Yim, and Tse 2005; Morgan, Kaleka, and Katsikeas 2004; Katsikeas, Leonidou and Morgan 2000).

It is evident that most entrepreneurial organisations that are involved in overseas activities do so via exporting (Kropp, Lindsay and Shoham 2006). Namiki (1988) adds that “exporting as a means to corporate growth is particularly appropriate for manufacturers of industrial goods or products with innovative advantages, and for smaller firms without the financial and managerial resources necessary for more extensive international operations...” (p. 32). Hence, focusing on understanding export entrepreneurial behaviour is novel in that relevant theories can be developed for export researchers, and useful prescriptions for management practice for exporters can be advanced.

This study defines the export entrepreneurship phenomenon as an export function-wide philosophy that is focused on export new product-market identification/creation and exploitation by existing or by start-up firms (adapted from Lumpkin and Dess 1996; Covin and Miles 1999). Specific activities of export entrepreneurs involve adopting new ways of doing export business that disrupt existing export competitive rules. It also involves implementation of new export ideas and creative solutions, the ability to take calculated risks, formation of strong visionary export venture teams, the recombination of key resources to support export activities, building of solid export business unit plans, and the ability to recognise and exploit export opportunities better than competitors (Balabanis and Katsikea 2003; Ibeh 2003).

Although the literature sheds useful light on the ideals of entrepreneurship (e.g. Alvarez 2007), little is known by way of specific activities that translate the entrepreneurship concept into export practice. This study is not denying that useful steps have been taken to “practicalise” the entrepreneurship concept in export operations (e.g. Balabanis and Katsikea 2003; Robertson and Chetty

2000; Ibeh 2003). It is, however, noticeable that research into EOB and its specific dimensions is limited.

A critical question that needs answering is this: what does it mean to be entrepreneurially-oriented in export markets, what do the individual EOBs mean to exporters, and how are these implemented? In drawing on earlier studies (e.g. Ibeh 2003; Lumpkin and Dess 1996; Yeoh and Jeong 1995), this study argues that the export entrepreneurship concept can be implemented through the adoption of an export EO. What then is an export EO? Based on existing works (e.g. Covin and Slevin 1991; Lumpkin and Dess 1996), this study argues that the nature of an export EO can be known by explicating its underlying behavioural dimensions. In the sections that follow, a definition of export EO behaviour (or export EOB) is provided and its underlying dimensions are explained.

***Export entrepreneurial-oriented behaviour.*** An export entrepreneurial-oriented behaviour (or export EOB) is defined in this study as the tendency of exporting firms to undertake innovative, risk-taking, proactive, competitively aggressive and autonomous activities in their export operations. Thus, a highly export entrepreneurial-oriented firm is one that is likely to exhibit some or all of these behaviours (Lumpkin and Dess 1996). On the contrary, a less export entrepreneurial-oriented firm undertakes less innovative activities in export markets, is risk-averse with respect to export opportunities, is reactive to export customer needs and market trends, is passive with respect to its relationship with export competitors, and does less to encourage autonomous behaviours among export personnel. Consequently, in drawing on Lumpkin and Dess (1996), this study argues that the nature of an export EOB can be evaluated by examining the profile of the construct's underlying dimensions.

***Export innovative behaviour.*** An important aspect of export EOB is the degree to which an exporting firm is innovative in its foreign markets (Samiee, Walters, and Dubois 1993). Being innovative in export markets encompasses a high degree of creativity and inventiveness of new product development efforts (Adapted from Amabile 1996). On one hand, the EO literature argues that innovative firms can focus on marketing lots of innovative products that are not



really different from their own existing products and product offerings from competitors (Atuahene-Gima and Ko 2001, Christensen and Bower 1996). On the other, it is also true that some firms focus on developing and marketing novel products that are fundamentally new to the firm and to the marketplace (Augusto and Coelho 2009; Veryzer 1998). Miller and Friesen (1978; p. 923) explicitly attribute innovativeness with two dimensions, arguing that it is both “the number and novelty of new products and services” introduced. Moreover, Miller and Friesen (1982, p. 5) state that innovativeness entails firms’ willingness to “innovate boldly and regularly”. These classical views suggest that innovative behaviour is a multidimensional construct, and can be theorised to encompass the tendency to engage in *intensive* and *novel* product innovation activities.

In the case of export organisations, research also shows that many firms focus on developing and marketing innovative products that are mere adaptations or adjustments to existing product lines (Samiee, Walters, and Dubois 1993; Buatsi 1986). Additionally, some scholars have argued that export organisations can focus on marketing novel product innovations in overseas markets (Knight and Cavusgil 2004). In many respects, both streams of EO research agree that product innovative behaviour may entail undertaking two important innovation activities: undertaking intensive product innovations; and developing novel innovative products that are dramatically different from own existing products or competitors’ existing products. As Szymanski, Kroff and Troy (2007) put it, “Instead of concentrating on a few bold ideas that could revolutionize companies, most firms put their resources in too many places, often creating product enhancements that don’t actually enhance the bottom line”. Scholars have also highlighted the need to compare the level of newness of a firm’s product innovations to the marketplace and/or to the firm (Danneels and Kleinschmidt 2001; Gatignon and Xuereb 1997). Thus, at a conceptual level, a point can be made that an export organisation may engage in two types of innovative activities: behaviours associated with (1) intensive new product development (or NPD), and (2) doing an NPD that results in novel new products that are quite ‘different’ from competitors’ NPD output.

Indeed, the literature, in general, has captured the innovativeness construct from many different perspectives (e.g. Hundler, Jacobson and Park 1996; Schlegelmilch, Diamantopoulos and Kreuz 2003). There is the product innovation versus process innovation category (Johne 1999; Shilling 2007). In this context, the literature shows that product innovation is a major surrogate for organizational innovativeness. The number of new product/service lines a firm introduces (Covin and Slevin 1986; Miller 1983; Naman and Slevin 1993); the degree of change in a firm's new product lines (Covin and Slevin 1986; 1989); and a firm's propensity to introduce new products or services ahead of the competition (Naman and Slevin 1993) are some common indicators. In addition, the arithmetic average of R&D spending relative to total sales (Zahra and Covin 1995; Miller 1983) is often used as an indication that an organisation is innovative. Thus, a common argument is that product innovation is probably the most important form of entrepreneurial behaviour (Casson 1982; John 1999).

Some researchers, however, maintain that process innovation is equally important because it involves an orientation toward improving the efficiency of production or manufacturing (Shilling 2007; Veryzer 1998). But some scholars claim that process and product innovations often occur in tandem because efficient production processes may enable effective new product innovations and the vice versa (Shilling 2007; Jansen, Van Den Bosch and Volberda 2006). The above claim has often been the target of fierce debates among researchers. Despite the disagreement, it can be argued that successful commercialisation of innovative products is of critical importance to many firms (Covin and Slevin 1989). For example, John (1999) has argued that firms are most concerned with the identification of new products or service opportunities. Burgelman (1983) stresses that innovative product ideas are significantly more critical to successful organisations. Moreover, Gopalakrishnan, Bierly and Kessler (1999) examine the distinction between product and process innovations and argue that process innovations are typically about improving the efficiency of creating new products but firms are more concerned about the success of their new products or services.

Another classification of firm innovation is competence-enhancing innovation versus competence destroying innovation (Christensen 1997). An innovation is

competence enhancing if it builds on a firm's existing knowledge and skills base. However, an innovation is considered competence destroying if the innovation or the technology does not build on the firm's existing technologies or renders existing technologies obsolete (Shilling 2007). Thus, an innovation can be competence enhancing to some firms, while competence destroying to others. Additionally, the idea of architectural innovation versus component innovation has been studied (Henderson and Clark 1990). Moreover, the notion of management innovation has also been suggested (Birkinshaw, Hamel and Mol 2008), and it is viewed as the invention and implementation of new management practices, structures and techniques. In another dimension, it is argued that an innovating firm may choose to market incremental versus radical innovative products (Veryzer 1998; Jansen, Van Den Bosch and Volberda 2006). Incremental innovative products are ones that have relatively minor changes (or adjustments) to existing products (Sood and Tellis 2005). On the other hand, radical innovative products are very different from prior products (Veryzer 1998). In this context, product innovations are modelled based on their degree of newness to existing market offerings (Robinson 1990; Schmidt and Calantone 1998), and their proximity to existing technologies, products or services (Jansen, Van Den Bosch and Volberda 2006; Benner and Tushman 2003).

In summary, it can be argued that past EO research, especially those that focus on EO as a multidimensional construct view innovativeness as being unidimensional when, in fact, it is multi-dimensional. This study draws on Lumpkin and Dess (1996) to define export innovative behaviour as a firm's tendency to engage in and support new ideas, novelty, experimentation and creative processes with the aim of developing new products for existing and/or new export markets. This definition can be interpreted mean to two things: the intensity of innovative products a firm develops for its export markets, and the novelty of a firm's innovative products relative to competitors' innovation outputs. The two-dimensional innovativeness construct can vary independently, such that they can on take any value. Indeed, it is may be that the two dimensions are related in different ways to business success, particularly in the presence of other aspects of EOB. Consequently, there is a clear and important research gap emerging from the literature that needs further investigation.

**Export risk-taking behaviour.** A key aspect of export EOB is export risk-taking behaviour. It is argued that export risk-taking distinguishes firms that are willing to commit a large portion of their resources to untried new export markets from firms that adopt a “wait and see” attitude towards new export opportunities. It also underscores the extent to which exporting firms are willing to commence export activities although the returns from such activities may look doubtful.

The conceptual domain of the risk-taking construct continues to be debated among organisational researchers. Nonetheless, it is also true that scholars have made progress in delineating the domain of the risk-taking construct (e.g. Lumpkin and Dess 1996). From the perspective of EO research, Covin and Miles (1999) argue that risk-taking activity explains why some firms see opportunity while others see disaster and chaos in new markets. Moreover, Schoemaker (1982) states that risk-taking activity may be used to describe the behaviour of rational decision makers. From a utility theory perspective, risk-taking describes “overall pain and benefit derived from a particular choice” (Fiegenbaum, 1990, p. 189), and the central argument here is that the managerial decision maker is risk averse as oppose to entrepreneurial decision maker and that the manager would only depart from risk aversion under unusual circumstances (Schendel 2007). Based on this conceptualisation, empirical research has found a linkage between risk-taking behaviour and organisational success (e.g. Cootner and Holland 1970; Neuman et al. (1979)). However, behavioural decision theorists have questioned the assumption underlying the utility theory while proposing the prospect theory of organisational risk-taking (e.g. Kahneman and Tversky 1979; Laughhunn, Payne and Crum 1980). Drawing on the prospect theory it has been contended that managers tend to increase risk-taking behaviour when returns are below target, but decrease risk-taking activities when returns are above target (Laughhunn, Payne and Crum 1980; Fiegenbaum and Thomas 1988; Payne, Laughhunn and Crum 1981).

Despite these encouraging works on risk-taking in organisational behaviour literature, EO research has little to offer by way of conceptualising export context-specific risk-taking behaviour. Researchers have the tendency of firm-

wide EO definitions and applying them in an export context. Indeed, in the firm-wide EO literature, Lumpkin and Dess (1996) refer to risk-taking behaviour as the extent to which managers make large resource commitments that have reasonable chance of costly failure. Similarly, Miller and Friesen (1978, p. 923) argue that risk-taking is about “the degree to which managers are willing to make large and risky resource commitments – i.e., those which have a reasonable chance of costly failure”. The two definitions above are consistent with Baird and Thomas’ (1985) notion of risk propensity, which explains firm’s tendency to avoid or to take reasonable risk.

In learning from the EO literature, this study defines exporting risk-taking behaviour as the degree to which a firm commits resources to export operations that have a reasonable chance of failure. Thus, when a firm commits large resources (e.g. large percentage of company stocks, key technical and managerial personnel, and technology secrets) to an untried export market, for example, such an exporter is said to be assuming high risk. This is because there is a real chance of failure just as there is a real chance of “big” success. Firms with a high degree of export risk-taking behaviour tend to invest in high-risk export projects; they often make large resource commitments to new export markets; and normally do not have a “play it safe” export strategy. Finally, in high export risk-taking firms, taking chances form part of export business strategy (Kuivalainen, Sundqvist, and Servais 2007).

**Export proactive behaviour.** Scholars argue that entrepreneurial firms compete with each other with the hope of better satisfying market needs (Kirzner 1973). We also know that successful entrepreneurial firms are those that act more rapidly and accurately in anticipation of customers’ expressed and future needs (Narver, Slater, and MacLachlan 2004; Atuahene-Gima, Slater, and Olson 2005). In addition, we are told that entrepreneurial firms often tend to exhibit high perseverance, adaptability and the ability to see order and opportunity while others see only problems and chaos (Covin and Miles 1999). Moreover, research shows that most entrepreneurial firms adopt a futuristic approach to decision-making (Venkatraman 1989). Thus, it is often noted that entrepreneurial firms are proactive in relation to market opportunities (Short et

al. 2010). Proactive firms do not often want to be followers, rather they taken on leadership position in the marketplace.

Both the firm-wide EO and export EO literatures have studied proactive behaviour. Within the firm-wide EO literature, it has been argued that the recognition of market opportunities and the initiation of relevant actions to exploit those opportunities before competitors is a basic act of proactivity (Shane and Venkatraman, 2000; Lumpkin and Dess 1996; Short et al. 2010). Hence, being proactive in spotting market opportunities has been viewed as a function of EOB (Lumpkin and Dess, 1996). Firms that demonstrate proactive behavior normally monitor trends in their environments for opportunities that could be explored and exploited to their advantage (Shane and Venkatraman 2000; Brown, Davidsson and Wiklund 2001). In addition, proactive firms are those that visualise market opportunities by taking the lead to introduce new products, technologies and procedures to the market ahead of the competition (Eckhardt and Shane 2003).

Export EO researchers have also studied proactive behaviour in export operations (e.g. Balabanis and Katsikea 2003; Eshghi 1992; Robertson and Chetty 2000; Yeoh and Jeong 1995). A major theme that is often explored in export EO research with regard to proactive behaviour has to do with the initiation of exporting as a deliberate management activity versus initiation of exporting as a result of unsolicited export order receipt (Samiee, Walters and Dubois 1993; Yeoh and Jeong 1995). Eshghi (1992), for example, argues that proactive exporting firms have positive attitudes towards exporting; and very often, they have strong commitment to export markets because their participation is more of a deliberate decision process than accidental. In a related study, Ganitsky (1989) argue that proactive exporters often look beyond their domestic markets by searching for unmet overseas market needs to satisfy ahead of rivals.

In building on these earlier studies, Yeoh and Jeong (1995) contend that proactive exporters are action-oriented, and are often actively anticipating and preparing for change in their export markets. Moreover, proactive firms possess foresights that make them emerge as leaders in their export markets

(Kuivalainen, Sundqvist, and Servais 2007). As such proactive exporters are better in position to seize market share and customers quickly when change occurs in overseas markets (Kropp, Lindsay and Shoham 2006; Balabanis and Katsikea 2003). The underlying proposition therefore is that being proactive is concerned with being quick in seizing new export product market opportunities ahead of competitors. In conclusion, it is argued here that export proactive behaviour is about seizing export market opportunities ahead of export competitors.

***Export competitively aggressive behaviour.*** The entrepreneurial process is often seen as an inherently competitive activity. Kirzner (1973) argues that market competition is inseparable from the idea of entrepreneurship. In a recent exposition, Ireland, Covin, and Kuratko (2009) argue that entrepreneurship thrives in competitive settings. A popular axiom is that market resources are scarce, that firms need to compete with each other for these limited resources, and that successful firms are those that are aggressive in shifting resources from points of low productivity to the points of high productivity (Mises 1963; Kuratko and Audretsch 2009). Thus, aggressiveness in the competitive arena is a critical entrepreneurial activity (Lumpkin and Dess 1996). In other words, entrepreneurial firms need to be aggressive in the competitive market if they are to survive and grow.

Research shows that a major problem facing entrepreneurial firms is their ability to manage complexities in the global marketplace, and there is often the need for these firms to establish their legitimacy relative to their bigger and more matured competitors (Wiklund and Shepherd 2005; McDougall, Oviatt and Shrader 2003; McDougall and Oviatt 2000). Within export literature, it is argued that to succeed in export markets is a difficult task because of the multiple and challenging nature of export operations (Leonidou, Katsikeas and Samiee 2002). Leonidou (1995) establishes that the barriers to export initiation are enormous, and Yeoh and Jeong (1995) suggest that the barriers may be particularly demanding for entrepreneurial exporting organisations. As a result, it is often suggested that exporting firms should adopt combative posture in their relationship with export competitors (Yeoh and Jeong 1995; Ibeh and Young

2001). The idea is that an aggressive posture would enable a firm to intensely challenge export competitors to achieve its export competitive goals.

Given the importance of competitive aggressiveness construct to the understanding of the EO phenomenon, the firm-wide EO literature has given considerable attention to understanding this construct. For example, Venkatraman (1989) outlines 'aggressiveness' as a key strategic orientation dimension; Porter (1980) suggests offensive strategies for achieving and maintaining competitive advantage; Miles and Snow (1978) outline a 'defensive posture' for fighting for competitive position; MacMillan (1983) talks about 'pre-emptive strategies', and MacMillan and McCaffery (1982) discuss 'aggressive innovation' strategy. Similarly, Kotler and Singh (1981) examine the prevalence of 'marketing warfare tactics'; and Rothschild (1984) describes offensive competitive edge as a key strategy for winning in the competitive arena. More recently, Covin and Covin (1990); Lumpkin and Dess (1996; 2001); and Dess and Lumpkin (2005) have all examined entrepreneurial competitive aggressiveness as a major aspect of EO. The general agreement is that competitive aggressive strategies may be useful if a firm is to improve its competitive position.

In export EO research, it is argued that aggressive exporters may share the following generic characteristics: an adoption of an aggressive competitive stance in export markets (e.g. entering into strategic alliances, acquiring small overseas competitors, slashing prices to undercut competitors); an acceptance of some sort of "undo-the-competitor" posturing in export markets; and a tendency to target export competitors' weaknesses (e.g. Ganitsky 1989; da Rocha 1990). In sum, competitive aggressive behaviour can be defined as an exporter's efforts to directly and intensely challenge its competitors to achieve entry or improve position (adapted from Covin and Covin 1990). It is specifically about the intensity of a firm's efforts to outperform its export market rivals.

***Autonomous Export behaviour.*** General EO research maintains that entrepreneurial-related autonomy is a critical aspect of organisational processes (Burgelman 1983), and that it explains the extent to which organisational members are encouraged to initiate and lead new ideas, processes, products or



markets to logical fruition (Lumpkin, Cogliser, Schneider 2009). Without entrepreneurial autonomy, it is argued that organisational creativity and innovation are stifled, and the result is often poor organisational effectiveness (Lumpkin and Dess 1996). Thus, it is strongly suggested that entrepreneurial firms promote autonomous entrepreneurial actions (Maidique 1980; Lee and Peterson 2000). Indeed, Lumpkin, Cogliser, Schneider (2009) argue that autonomous behaviour is as important to entrepreneurial success as other dimensions of EO because the independent minded organisational members are often the 'champions' of novel product innovations.

Although Lumpkin and Dess (1996) have suggested the inclusion of autonomy as an important dimension of EO, only a few studies have examined the autonomy dimension along side other EO dimensions (e.g. Jambulingam et al. 2005; Hughes and Morgan 2007). In export EO research, researchers are yet to study the autonomy concept. Lumpkin, Cogliser and Schneider (2009) identify two reasons for this gap: that some researchers believe that autonomy is rather an antecedent to EO than a salient component; and that the much used Miller (1983) and Covin and Slevin (1989) measures of EO do not include the autonomy dimension. However, Lumpkin and colleagues argue that autonomous behaviour is an important aspect of entrepreneurship in that it encourages rapid and free maverick-like behaviour in the marketplace, which then allows the generation of creative ideas, quick responses to competitive actions and exploitation of market opportunities.

Despite its importance to understanding of the entrepreneurship phenomenon, the autonomy dimension is ignored in the export literature. Oftentimes, autonomy is viewed in organisational structural terms rather than as a strategic decision-making tool. Nevertheless, this study agrees with Lumpkin, Cogliser and Schneider (2009) that export autonomous behaviour is an important dimension that needed to be considered in any conceptualisation of export EOB.

In summary, from EO perspective, export autonomous behaviour is about strategic export decision-making (Lumpkin and Dess 1996; Lumpkin, Cogliser, Schneider 2009). It involves having the independence to initiate and implement

export decisions, and it encompasses how export personnel may not only solve export related problems but also how such problems are framed and defined to exploit market opportunities (Quinn 1979; Maidique 1980; Howell and Higgins 1990). Consequently, export autonomy is defined as the independent actions of export personnel within export units in bringing forth new export ideas or visions and carrying them through to fruition (adapted from Lumpkin and Dess 1996). Given that the export entrepreneurial process is a strategic issue, it is therefore important that export autonomous behaviour is viewed as a strategic export activity that is reflective of export EOB.

### **Summary and Comments**

To recap, export EOB defines the tendency of exporting firms to develop export innovative products, take constructive risks in export markets, act proactively in relation to export market opportunities, operate aggressively in relation to export competitors, and to encourage autonomous behaviour among export unit personnel. All of these five elements of export EOB may or may not be present when a firm engages in export operations, and they may shape performance in export markets. Thus, it is pertinent for export researchers to link the totality of EOB and its constituents to export performance in empirical study (Yeoh and Jeong 1995). By examining how the EO dimensions jointly, and individually, operates on export performance researchers can offer specific recommendations regarding when exporters can be more or less entrepreneurially-oriented, and how they can manipulate specific EOBs to enhance export success.

Having defined export EO and its salient behavioural dimensions it is important to review the existing literature for evidence linking EOB and its constituents to firm-wide performance and to export success. This effort would help to uncover areas where past research has contributed to advancing knowledge on the EOB – performance relationship, and also unearth areas that have remained unattended to. Before reviewing the literature on the EOB – performance linkage, it is important that level issues in EO research are first reviewed. This is because the level at which constructs are studied can have significant impact on the relationships that are observed.

### 2.5.5 Level Issues in EO Research

It is noticeable from table 2.1 and table 2.2 that researchers have conceptualised and studied the EO construct at different levels. In particular, it is evident that two important levels have been attempted: firm-wide non-export versus export context-specific studies. Other levels of analysis have also been used by researchers including firm-level, individual entrepreneur-manager level and project level. In the paragraphs that follow, the level issue in EO research is addressed in some detail.

Level issues have been a source of continuing debate within the entrepreneurship literature (e.g., Chandler and Lyon 2001; Lyon, Lumpkin and Dess 2000). Several scholars have argued that the entrepreneurship phenomenon exists at multiple levels of the firm, including internal corporate venture (or project) level (Guth and Ginsberg 1990; Vesper 1980; Burgelman 1983); the individual entrepreneur level (Webster 1977; Mintzberg and Waters 1985; Jennings and Lumpkin 1989); and at the level of the entire organisational entity (Covin and Slevin 1991).

With respect to internal corporate venture or project level entrepreneurial research, Burgelman (1983, p.223) shows that “new businesses enable the firm to diversify into new areas that involve competencies not readily available in the operating system of the mainstream businesses of the corporation”. Moreover, “High-technology ventures are initiated because entrepreneurially inclined technologists, usually at the [*group-leader level*], engage in strategic initiatives that fall outside the current concept of corporate strategy” (Burgelman 1983, p.241). As such, it is argued that the entrepreneurial behaviours of internal corporate ventures should be researched.

Regarding researchers focusing on the traits of the individual entrepreneur, it is argued that certain desirable traits of these individuals might help to explain the performance of the ventures they form and manage. For example, the quest for independence, leadership and self-motivation have been cited as critical entrepreneurial characteristics that could explain the success of entrepreneurial organisations (e.g. Lerner, Brush and Hisrich 1997; Becherer and Maurer 1997).

For scholars interested in entrepreneurship at the firm-wide level, their rationale is that the firm's activity broadly can influence performance, and not just the stance of the leaders (Covin and Slevin 1991). In this context, it is argued that entrepreneurship exists across multiple people within the organisation and not just the 'leader'. Within this same context of firm-wide study, there are studies that have focused on large organisations (Atuahene-Gima and Ko 2001; Miller 1983; Zahra and Covin 1993; Lumpkin and Dess 2001; Matsuno, Mentzer, and Ozsomer 2002) and those that have exclusively focused on examining small businesses (e.g. Wiklund and Shepherd 2005; Baker and Sinkula 2009; Naman and Slevin 1993). Moreover, in recent years researchers have been turning attention to studying the entrepreneurial behaviours of not-for-profit organisations (e.g. Bhuian, Menguc and Bell 2005; Pearce II, Fritz and Davis 2010; Voss, Voss and Moorman 2005) by arguing that these organisations rely on their entrepreneurial behaviours to boost performance.

Despite the different levels at which entrepreneurship might exist within a single organisation, Chandler and Lyon (2001, p. 107), however, find that "there was a lack of specification in the level of analysis for entrepreneurship research", suggesting that researchers have been unconcerned about level issues that might affect how study results are interpreted. Yet, it is true that because individuals work in many different levels and layers within the organisation involving different types of activities researchers need to be more explicit about the level at which they draw their generalisation (Rousseau 1985).

This is important because the level of analysis inherent in theory is important for the purposes of generalisations (Rousseau 1985). It is also recommended that researchers should be explicit about the measurement level of their study as this helps to explain where the actual source of data is described. Thus, it is important that researchers specify the theoretical and measurement levels used in their study, such as whether it is at the organisational, group or individual level. Furthermore, to arrive at solid and meaningful conclusions, theory and measurement need to be congruent and assessed at the same level of analysis.

Considering the importance of level issues in theory development and knowledge accumulation, it is surprising that the issue of analysis level has received very little attention in the export EO literature. It is evident from the export EO literature that researchers tend to rely heavily on firm-level EO conceptualisations and measurement of EO. As a consequence, the field is replete with studies that link firm-wide EO to export performance, creating incidences of mismatch. For example, Balabanis and Katsikea (2003, p. 241) have predicted export performance by using a “scale developed by Covin and Slevin (1986, 1988) [...] to assess the company’s entrepreneurial posture”. Yet, the Covin and Slevin scale, which is a refinement of Miller (1983) scale, is developed at the firm-wide level with no specific consideration of export operations. Another case is the work of Robertson and Chetty (2000). In their study, Robertson and Chetty have export performance as their dependent variable, yet their key independent variable, strategic orientation (defined as an aggregation of innovativeness, risk-taking and proactiveness), is measured at the firm-wide level. In fact, an inspection of their strategic orientation measures (see Robertson and Chetty 2000, p. 218) indicates that there are no specific references to export operations. Several other export EO studies share similar mismatch features.

The mismatch is a problem in the sense that firms do not need to have similar levels of EOB at the broader organisational level and at the specific export functional level. For example, it can be argued that a firm might be highly entrepreneurially-oriented in its home market but less or moderately entrepreneurial in its export markets. Thus, if the purpose of a study is to provide guidance to export managers on how they should behave (i.e. more or less entrepreneurially-oriented), then it would make sense to examine entrepreneurial behaviours of export managers (i.e. EOB at export functional level) and search for its relationship with export success. Indeed, findings (e.g. Balabanis and Katsikea 2003) that show that firm-wide EOB is related to export success say nothing, necessarily, about how export functions should behave to achieve success.

The implication for export EO research is therefore clear: attention should be expended to understanding EO activities in firms’ export operations. In that way,

researchers can capture qualitative and unique aspects of export context-specific EOBs. The benefit is that researchers can understand more clearly what the benefit is of being entrepreneurially-oriented for exporters.

### **2.5.6 The Export EOB and Export Performance Linkage: An Assessment of the Empirical Evidence**

In this section, attention is directed to a discussion of the empirical evidence that has been gathered over the years to establish or refute the notion that EOB (and its components) is related to performance, both at firms' domestic and export markets.

Within the broad management literature, EO is recognised as being a potential determinant of business success (e.g., Lumpkin and Dess 1996; Covin and Slevin 1991; Baker and Sinkula 2009; Covin and Miles 1999). Researchers interested in the more narrowly defined field of export performance are also starting to pay attention to the entrepreneurship notion, with several studies reporting investigations into the relationship between firms' entrepreneurship levels and export success (e.g., Robertson and Chetty 2000; Balabanis and Katsikea 2003; Kropp, Lindsay and Shoham 2006; Kuivalainen, Sundqvist and Servais 2007).

There are several reasons to believe that an export level EOB as an overarching construct can have universal positive performance implications for exporting organisations. For example, the general tendency in contemporary world business environment is the shortening of product and business model life cycles. As a result, the future profit streams from existing domestic and export operations are uncertain and as such businesses are encouraged to constantly seek out new overseas opportunities (McDougall and Oviatt 2000). An export level EOB can assist companies in such a process.

Specifically, export entrepreneurial-oriented organisations engage in activities that are often highly innovative (Yeoh and Jeong 1995), and it is true that innovation brings novelty to firms and to the marketplace (Ireland et al. 2001). For exporting organisations that innovate boldly and regularly by creating and introducing new products and technologies to their export markets, they can

generate extraordinary economic performance (Samiee, Walters, and Dubois 1993; Miller and Friesen 1982). Export entrepreneurship also entails behaving proactively, and this behaviour can offer firms the avenue to control their export markets by dominating distribution channels and establishing brand recognition ahead of export competitors (Atuahene-Gima, Slater, and Olson 2005; Balabanis and Katsikea 2003; Eshghi 1992; Robertson and Chetty 2000). Proactiveness hinges on the firm taking the initiative in venturing out to seek opportunities and in investigating alternative responses to a changing export environment (Hughes and Morgan 2007), as such exporting organisations with proactive behaviour are much more aware of the internal and external market situations, thus giving them export market informational advantage that can boost export performance (Yeoh and Jeong 1995).

Entrepreneurial-oriented firms are also risk-seekers (Lumpkin and Dess 1996) and as such a constructive risk-taking in overseas markets, such as introducing new and untried products to untapped markets, can lead to exceptional high economic return (Kuivalainen, Sundqvist, and Servais 2007). Competitive aggressiveness is also an important aspect of export entrepreneurship, and this behaviour enables firms to make efforts to outperform industry rivals (Yeoh and Jeong 1995; Ibeh and Young 2001). Autonomous behaviour should enable firms to increase creativity and rapid exploitation of market opportunities (Lumpkin, Cogliser, Schneider 2009), and creativity is linked to success (Im and Workman 2004). In fact, Ireland et al (2001, 49) assert that entrepreneurship enables firms to use “entrepreneurial and strategic tools, techniques, and concepts in ways that help the firms to create increasing amounts of wealth”. Thus, a high degree of EOB should enable exporting firms to perform better in export markets than their less entrepreneurial-oriented counterparts.

### **2.5.6. 1 Aggregate EOB and Export Performance**

Given the potential benefit of entrepreneurship to firm success, export researchers are beginning to show great interest in the firms’ overall level of entrepreneurship and its relationship with export performance. The relationship has been examined in different countries including Africa (Ibeh 2003; Kropp, Lindsay and Shoham 2006), Australia-New Zealand (e.g. Robertson and Chetty 2000); Europe (e.g. Kuivalainen, Sundqvist, Servais 2007; Balabanis and

Katsikea 2003) and North-America (e.g., Knight and Cavusgil 2004; Knight and Kim 2009; Knight 2000; Zahra and Garvis 2000). The literature, therefore, reveals that the importance of export entrepreneurship is gradually taking global shape.

However, empirical results on the relationship between aggregate EOB and firm performance is mixed both at firm-wide and export level. For example, while studies such as Naman and Slevin (1993), Wiklund and Shepherd (2005) and Keh, Nguyen, and Ng (2007) find positive association, researchers such as Wang (2008) find only moderate direct association between EOB and firm performance. It is interesting to note that some researchers report a negative relationship between EOB and firm performance (e.g. Renko, Carsrud, and Brännback 2009). In addition, some studies also find no relationship between EOB and firm performance (e.g. Sapienza and Grimm 1997). Within the export literature, evidence shows that firm-wide EOB has a strong positive association with export performance (e.g. Knight 2000; Balabanis and Katsikea 2003). However, Robertson and Chetty (2000) find only a weak relationship. Thus, like the firm-wide EO research, the export literature also reveals mixed findings on the relationship between EOB and export performance. These mixed results call for further examination of the relationship between aggregate EOB and export performance.

#### **2.5.6. 2 Specific EOBs and Export Performance**

In addition to the study of the relationship between aggregate EOB and performance, researchers also study the links between specific EOBs and performance and results are also mixed. Within the firm-wide EO literature, Hughes and Morgan (2007) find that innovativeness and proactiveness dimensions are positively related to firm performance. Frishammar and Horte (2007) also report that innovativeness dimension is positively related to performance. However, Augusto and Coelho (2009) find weak association between product innovativeness and firm performance. However, Frishammar and Horte (2007) and Morgan and Strong (2003) argue that risk-taking and proactiveness dimensions are not related to performance. Moreover, both Hughes and Morgan (2007) and Morgan and Strong (2003) find that competitive aggressiveness is not related to performance. Although Lumpkin, Cogliser,



Schneider (2009) highlights the importance of autonomous behaviour for business success, Lerner, BRUSH, and HISRICH (1997) show that autonomy is negatively associated with entrepreneurial business success. Hughes and Morgan (2007) argue that autonomy has no association with business success. Yet, in a not-for-profit sector, Pearce II, Fritz and Davis (2010, p.238) reports that “autonomy was found to be positively associated with performance”. They also show that proactiveness, risk seeking and competitive aggressiveness do not have significant association with performance. They however, find a strong positive relationship between innovativeness and performance.

### **Summary and Comments**

Table 2.3 displays a summary of the literature on EO. In sum, the literature shows that findings on the association between an aggregate EOB (and its components) with performance is mixed. Specifically, the literature indicates that it is possible that an aggregate EOB might not always be beneficial for export success. The literature also seems to suggest that that some of the EO dimensions might not always be valuable for export performance. While some of the dimensions might predict export performance positively, others might work against export performance all together. Interestingly, these possibilities have not been explored properly in the export literature. Indeed, it is evident from the literature that some EO activities, specifically export autonomous behaviour, have not been linked to export performance at all. Thus, full knowledge on linkages between the EOBs and export performance is lacking.

There is, however, some indication that the relationships might be moderated by organisational and environment variables. Indeed, some scholars have explored potential moderators of the link between EO and export performance and it is informative to survey this body of literature as their findings may indicate some new research gaps. Section 2.5.7 discusses findings on moderator effects on the relationship between EO and export performance.

Table 2.3: Summary of the Firm-wide Non-export EO and Export EO Studies

Author (s)	Firm-wide Disaggregate Approach					Firm –wide aggregate approach	Non-export specific measures of EO	Export specific measures of EO	Values	Attitudes	Behaviours	Non-export specific outcome	Export specific outcome	Moderators looked for
	Innovativeness	Risk-taking	Proactiveness	Competitive aggressiveness	Autonomy									
Aragon-Correa 1998			√				√			√		√		
Becherer-Maurer 1997	√	√	√			√	√			√		√		
Deeds et al. 1998	√						√				√	√		
Dess et al. 1997	√	√	√			√	√			√		√		
Hundler et al. 1996	√						√				√	√		
Knight 1997	√		√			√	√			√		√		
Lerner et al (1997)					√		√			√		√		
Sapeinza and Grimm 1997	√	√	√			√	√			√		√		
Smith et al. 1997			√	√			√			√		√		
Zahra and Covin 1995	√		√	√		√	√			√		√		
Miller and Friesen 1982	√	√	√			√	√			√		√		√
Miller and Friesen 1983	√	√	√			√	√			√		√		√
Lumpkin and Dess 2001			√	√			√			√		√		√
Covin and Slevin 1989	√	√	√			√	√			√		√		
Morris and Sexton 1996	√	√	√			√	√			√	√	√		
Covin et al. 1999			√				√			√		√		
Hult et al. 2004	√						√			√		√		√
Zahra 1995	√	√	√			√	√			√		√		
Miller 1987	√	√	√			√	√			√		√		√
Naman and Slevin 1993	√	√	√			√	√			√		√		√
Matsuno et al. 2002	√	√	√			√	√			√		√		
Kreiser et al. 2002	√	√	√				√			√		√		
Miller 1983	√	√	√			√	√			√		√		√
Stetz et al. 2000	√	√	√				√			√		√		
Wiklund and Shepherd 2005	√	√	√			√	√			√		√		√
Venkatraman 1989		√	√	√			√			√		√		
Barret et al. 2000	√	√	√			√	√			√		√		√

Table 2.3: Summary of the Firm-wide Non-export EO and Export EO Studies (*continued*)

Author (s)	Firm-wide Disaggregate Approach					Firm –wide aggregate approach	Non-export specific measures of EO	Export specific measures of EO	Values	Attitudes	Behaviours	Non-export specific outcome	Export specific outcome	Moderators looked for
	Innovativeness	Risk-taking	Proactiveness	Competitive aggressiveness	Autonomy									
Keh et al. 2007	√	√	√			√	√			√		√		
Covin and Covin 1990				√			√			√		√		
Wang 2008	√	√	√	√		√	√			√		√		
Jambulingam et al. 2005	√	√	√	√	√	√	√			√	√	√		
Renko et al. 2009	√	√	√			√	√			√		√		
Song and Montoya-Weiss 1998	√						√				√	√		
Tellis et al. 2007	√						√				√	√		
Augusto and Coelho 2009	√						√			√		√		
Frishammar and Horte 2007	√	√	√				√			√		√		
Hughes and Morgan 2007	√	√	√	√	√		√			√	√	√		
Morgan and Strong 2003		√	√	√			√				√	√		
Smart and Conant 1994	√	√	√			√	√			√	√	√		
Bhuian et al. 2005	√	√	√			√	√			√		√		
Covin et al. 2006	√	√	√			√	√			√		√		√
Frishammar and Horte 2007	√	√	√				√			√		√		
Knight & Kim 2009	√							√			√		√	
Clercq et al. 2005	√	√	√			√	√			√			√	
Jantunen et al. 2008	√	√	√				√			√			√	√
Knight and Cavusgil 2004	√	√	√			√		√	√	√	√		√	
Knight 2000	√	√	√			√		√		√			√	
Knight 2001	√	√	√			√		√	√				√	
Balabanis and Katsikea 2003	√	√	√			√	√			√			√	
Walters and Samiee 1990	√							√			√		√	

Table 2.3: Summary of the Firm-wide Non-export EO and Export EO Studies (*continued*)

Author (s)	Firm-wide Disaggregate Approach					Firm -wide aggregate approach	Non-export specific measures of EO	Export specific measures of EO	Values	Attitudes	Behaviours	Non-export specific outcome	Export specific outcome	Moderators looked for
	Innovativeness	Risk- taking	Proactiveness	Competitive aggressiveness	Autonomy									
Jantunen et al 2005	√	√	√			√		√		√			√	√
Cooper and Kleinschmidt 1985	√							√			√		√	
Beamish et al 1993	√							√			√		√	
Robertson and Chetty 2000	√	√	√			√	√			√			√	√
Cavusgil 1984		√						√		√			√	
Zahra and Garvis 2000	√	√	√			√		√		√			√	√
Shoham et al 2002	√							√		√			√	
Kuivalainen et al. 2007		√	√		√	√		√		√			√	

## **2.5.7 Moderators of the Export EOB and Export Performance**

### **Linkage**

In addition to attempts to demonstrate the direct effect of EOB (and its components) on business performance, and export success in particular, many scholars have also examined whether these direct linkages are universal across different organisational conditions and environmental contexts. As a result, in the broader marketing and entrepreneurship literatures a number of moderator variables have been modelled on the relationship between EOB and performance in both domestic-focused and export level EO studies.

With respect to firm-wide EO studies, researchers have examined the moderating role of firms' task environment such as market turbulence (e.g. Hult, Hurley, and Knight 2004), hostility (e.g., Lumpkin and Dess 2001; Naman and Slevin 1993; Miller 1983; Miller and Friesen 1982; Miller 1987; Zahra 1996; Zahra and Covin 1995; Dess Lumpkin and Covin 1997; Becherer-Maurer 1997) and dynamism (Wiklund and Shepherd 2005; Lumpkin and Dess 2001). Others have tested such moderators as organisational structure (e.g. Miller 1987; Miller and Friesen 1982), organisational decision-making style (e.g. Covin, Slevin and Green 2006), financial resources (e.g., Wiklund and Shepherd 2005), and marketing mix factors (e.g. Barret, Balloun and Weinstein 2000). Some qualitative studies have proposed the likely moderating effect of structure and learning orientation on the relationship between EOB and performance (Kocak and Abimbola 2009; Miles and Arnold 1991; Morris and Paul 1987). A number of seminal works have also suggested the potential moderating effect of market orientation on the link between EO and firm performance (e.g. Miles and Covin 1999; Schindehutte, Morris and Kuratko 2000; Morris, Schindehutte, and LaForge 2002).

These earlier firm-wide EO studies have drawn largely on contingency theory to model the moderator relationships. For instance, Lumpkin and Dess (1996, p.151) argue that "in order to effectively model the EO – performance relationship, the role of contingent variables will be considered". Contingency theory suggests that fit between a firm's strategic orientation and other key variables, such as environment, structure, and strategy, are important for

obtaining optimal performance. In drawing on the contingency perspective, Covin and Slevin (1991) contend that EO's relationship with performance may depend on managerial style, firm structure and the nature of the external environment.

Lumpkin and Dess (1996, p. 152) suggest that "environmental factors, such as dynamism and munificence, or structural factors, such as the decentralization of decision making, may influence the performance of firms with an entrepreneurial orientation". Covin and Slevin (1991) are more specific about the moderating roles of environment factors. These authors argue that in "highly competitive, unforgiving, "hostile" environments, for example, entrepreneurial postures appear to promote high levels of firm performance [...] On the other hand, the relationship between entrepreneurial posture and performance may be much less positive or even negative in nonhostile or "benign" environments" (Covin and Slevin 1991, p. 12). Miller and Friesen (1982, p. 6) further echo the moderating role of the environment when they argue that "Entrepreneurial firms are often found in dynamic and hostile environments because their venturesome managers prefer rapidly growing and opportuneful settings; settings which may have high risks as well as high rewards. Such firms may even be partly responsible for making the environment dynamic by contributing challenging product innovations [...] because innovation prompts imitation, the more innovative the firms, the more dynamic and competitive (hostile) their environments can become".

Among the organisational variables, scholars suggest that market orientation might be a moderator in the associating between EO and performance (Schindehutte, Morris and Kuratko 2000; Morris, Schindehutte, and LaForge 2002). For example, Schindehutte, Morris and Kuratko (2000) suggest that firms with strong entrepreneurial posture need market information activities to be successful in their chosen markets. Maidique and Zirger (1984) find that product innovations, for instance, are more likely to be successful if the developing organisation excels in its marketing mix activities and is willing to commit a significant amount of its resources to marketing-related activities associated with the new product. Moreover, Bhuian, Menguc and Bell (2005, p.11) argue that "entrepreneurship provides a filter through which organisations view and

direct market intelligence processes. That is, entrepreneurship will influence the way in which what are essentially quantitative market orientation processes are performed”.

Although the literature seems to suggest a potential interactive effect of market orientation and external environment on the association between EO and firm performance, empirical study of these moderating effects is lacking. Indeed, in export level EO studies, researchers have rarely tested moderator moderating effects on the relationship between EOB and export performance. In fact, information on potential moderators of the relationship between EOBs component elements and export performance is missing from the literature. In other words, most export level EO studies have focused on studying only the main effect of aggregate EO on export performance. An exception is the work of Jantunen et al. (2008). In a study of the strategic orientations of born-global firms, Jantunen et al (2008) focus on moderating the link between EO and international performance with international growth strategy. They find that EO does matter to born-global businesses as it is related positively to performance. However, EO is more beneficial for non-born global firms when those firms choose to internationalise gradually. It is, therefore, unfortunate that export research have not considered moderators of the EO – export performance relationship given the assertion that the export environment is more complex, dynamic and uncertain compare to domestic markets. As an antecedent to performance, it can be argued that the environment may moderate the link between EO and export performance.

Despite the silence in testing moderators of the relationship between EOB and export performance, however, in view of the importance of the organisational characteristics and the external environment factors in driving performance in export markets, some export researchers (e.g. Yeoh and Jeong 1995, p. 102) argue that “the positive or negative influence of an [EO] on export performance may be greater for organisations that are characterised by certain internal and external characteristics”. As such, the field would be well served if key organisational and environmental moderators are included in any test of the association between export EOB (and its component elements) and export performance.

An important benefit to be derived from moderator models is that they can help both researchers and export managers to determine situations where export EOB is most beneficial, and situations where export EOB may be harmful for export success. In addition, Lumpkin and Dess (1996) suggest that future researchers should also identify moderators of the individual EO dimensions. Although researchers have not yet captured this in their modelling of export EOB – export performance relationship, it is possible that the direction and the strength of the effects of the individual export EOBs on export performance might change upon the introduction of moderator variables. Hence, it can be argued that recommendations to managers can become more fine-grained and specific as a result of examining relevant moderators. Rather than simply saying that more or less EO is needed when markets are more or less dynamic, for instance, recommendations can be made at the individual EO dimension levels, as well. Consider the export product innovativeness – export performance relationship, for example, Samiee, Walter and Dubois (1993) note that the export performance impact of product innovation may depend, to a large extent, on the nature of the export environment. Furthermore, it can be said that the extent to which product innovation influences performance may be contingent on the willingness of customers to accept the new product. Thus, identifying and exploring moderators of the export EOBs – performance relationship would help improve our understanding of the export EO phenomenon.

In summary, the existing literature on export EO – export performance relationship reveals evidence of incomplete and inconsistent empirical results regarding the moderating effects of different organisational and environment factors. As shown in table 2.4, out of the 14 selected studies listed only four have bothered to test for any moderator influences on the relationship between EO and performance. Interestingly, no study has attempted to moderate the link between the specific EOBs and export performance. Thus, it appears that more research attention is warranted to probe more comprehensively into the benefits of adopting EOB (and its components) in export operations. One way of doing this is to theorise and test the association of EOB (and its components) with export performance in different organisational and environmental contexts.



Table 2.4: Empirical Link of Entrepreneurial Orientation (EO) and Firm Performance in EO Studies with Consideration of Moderators

Author (s)	Export Contexts? (Yes or NO)	EO – Performance Link (Main Effects)	Moderators Studied	Moderator Effects	Key Findings
Zahra and Garvis 2000	Yes	IEO → IP	HOS	+ +	There is a weak direct association between IEO and performance. However, when hostility is high, IEO greatly enhances company performance
Robertson and Chetty 2000	Yes	Firm-wide EO → EP	STR HOS	+	The firm-wide EO → EP becomes stronger and more positive when moderated by organic STR and environment hostility.
Jantunen et al. 2008	Yes	Firm-wide EO → IP	IGS	+	The firm-wide EO → EP becomes stronger and more positive when firms adopt IGS.
Covin et al. 2006	No	Firm-wide EO → FP	Autocratic	+	The firm-wide EO → FP is stronger and more positive when autocratic decision-making style is employed.
Wiklund and Shepherd 2005	No	Firm-wide EO → FP	DYN RES	+ +	Firm-wide EO → FP becomes stronger and more positive when moderated by RES and DYN.
Naman and Slevin 1993	No	Firm-wide EO → FP	DYN TUR	+ +	Firm satisfaction with performance becomes stronger and more positive when fit is created between EO, DYN and TUR environments.
Miller 1987	No	Firm-wide EO → FP	STR	+	Firm profitability becomes stronger when entrepreneurial style is practiced within organic STR.
Miller and Friesen 1983	No	Firm-wide EO → FP	HOS DYN HET	- + +	EO negatively influences performance in hostile environment but positively related to performance in dynamic and heterogeneous market environments.
Hult et al. 2004	No	Innovativeness → FP	TUR	+	The positive effect of organisational innovativeness on firm performance becomes stronger and more positive when the environment highly turbulent.

Table 2.4: Empirical Link of Entrepreneurial Orientation (EO) and Firm Performance in Selected EO Studies with Consideration of Moderators (Continued)

Author (s)	Export Contexts? (Yes or NO)	EO – Performance Link (Main Effects)	Moderators Studied	Moderator Effects	Key Findings
Lumpkin and Dess 2001	No	Competitive aggressiveness → FP Proactiveness → FP	HOS DYN	+ +	Competitive aggressive style is more appropriate in hostile environment while proactiveness is an appropriate mode for firms in dynamic environments.
Zahra and Covin 1995	No	Firm-wide EO → FP	HOS	+	Firm effectiveness is stronger and more positive when entrepreneurial firms operate in hostile market environments.
Barret et al. 2000	No	Firm-wide EO → FP	MIX	+	The individual marketing mix factors positively moderate the link between EO and business performance

**Keys:**

INN = Innovativeness  
 RSK = Risk-taking  
 PRO = Proactiveness  
 AGG = Competitive Aggressiveness  
 AUT = Autonomy  
 DYN = Market Dynamism  
 IEO = International Entrepreneurial Orientation  
 HOS = Market Hostility  
 TUR = Market Turbulence  
 HET = Market Heterogeneity  
 COM = Competitive Intensity  
 RES = Financial Resources  
 EP = Export Performance  
 IP = International Performance  
 STR = Organisational Structure  
 CUL = Culture  
 IGS = International Growth Strategy  
 MIX = Marketing Mix  
 FP = Firm Performance

## **2.6 CHAPTER SUMMARY**

This chapter has provided a concise assessment of the various factors that have been studied as major determinants of export performance in the existing export marketing and related literatures. The assessment shows that a host of many different factors, both external and internal to the firm, have been examined. Among these are the degree of external export environment dynamism, diversity, hostility and munificence, and internal organisational characteristics such as export marketing strategy, management characteristics and firm characteristics. A major conclusion from the literature assessment is that the role of export level EOB has rarely been conceived as a significant determinant of export performance. However, given the many benefits that exporting organisations can derive from being entrepreneurially-oriented, it is concluded here that the significance of EOB in the operational context of exporting organisations is yet to be determined, theoretically and empirically. Hence, there is a clear void in the export literature with respect to export level EO and this needs addressing.

On the basis of the gaps that have been identified, the literature assessment turned to a discussion of export level EOB and its relation to export performance. Drawing on the existing firm-wide EO and export performance literatures, two important facts consequently emerged. First, being entrepreneurially-oriented in export markets is beneficial to firms because it enables them to identify/create and exploit existing and new export market opportunities. Second, identification and exploitation of existing and new export market opportunities enable firms to create new wealth and to grow. Thus, academic research should be directed to examining the nature and the export performance consequences of export level EOB and its components in different environment and organisational contexts.

In the chapter that follows next, a conceptual model is presented with the objective of addressing the gaps that have been identified in the current chapter and in chapter one. In the first place, a theoretical relationship between an export level EOB and export performance is discussed. Secondly, two sets of hypotheses relating to moderators of the export EOB – export performance association is explored with the view to locate situations that render EOB more or less beneficial to export success. Thirdly, conceptual associations of the

individual EOBs with export performance are examined with the aim of uncovering the extent to which the individual components of EOB more or less drive export success. Finally, a number of hypotheses relating to the moderators of the individual EOBs – export performance relationships are also explored. In the moderating effect hypotheses, export market orientation and export customer dynamism are argued as moderators of the relationship between an aggregate export EOB and export performance, and export market orientation is argued as the key moderator of the link between the individual export EOBs and export performance.

## CHAPTER 3

# CONCEPTUAL FRAMEWORK AND HYPOTHESIS

### 3.1 INTRODUCTION

This chapter focuses on the development of a conceptual model to describe the central role of export EOB and its components in driving export success. To achieve this objective, the chapter is organised into five components. The first part introduces the *resource-based* and *contingency theories* of the firm as the key theories that underpin the current study. In the second place, the theoretical connection between export EOB and export performance is presented. Thirdly, hypotheses pertaining to the moderating effects of export market orientation (EMO) and export customer dynamism (ECD) on the hypothesised association of EOB with export performance are discussed. The fourth part presents the conceptual association of the specific EOBs with export performance. In the fifth part, the moderating effects of EMO and ECD on the proposed relationships between the specific EOBs and export performance are also described. Finally, summary of the chapter is presented.

### 3.2 THEORETICAL UNDERPINNINGS

A review of the export performance literature suggests that an overriding theoretical paradigm that is often adopted by researchers interested in examining the determinants of export performance is the structure-conduct-performance (SCP) model of industrial organisation (e.g., Cavusgil and Zou 1994). This microeconomic theory assumes that firms create 'fit' that link their strategies with the external environment (Hofer and Schendel 1978). The summary frameworks that have been developed by export researchers (e.g., Chetty and Hamilton 1993; Matthyssens and Pauwels 1996; Zou and Stan 1998; Sousa Martínez-López and Coelho 2008) are primarily drawn on the SCP model enabling researchers to divide the determinants of export performance into controllable and uncontrollable variables. There is no doubt that this theoretical perspective has largely influenced the kind of predictor variables, and to some extent, the sort of methodological approaches, adopted in past studies of export performance determinants.

Despite the dominance of the SCP model in advancing theories of export performance, five other theories have received considerable attention in the export literature. The second is the behavioural theory proposed by Leonidou, Katsikeas and Samiee (2002) to study the association between export marketing strategy and different export performance variables in a meta-analysis. The third is the relational theory proposed in the seminal work of Styles and Ambler (2000). Zhang, Cavusgil and Roath (2003), for example, have drawn on a mixture of the behavioural and relational theories to model the effect of organisational behaviours on export performance focusing more on the producer-distributor relationship.

The fourth body of work emanates from the International Marketing and Purchasing (IMP) group, which focuses on network theory with particular reference to the communication between buyers and sellers operating in international markets (e.g. Blankenburg-Holm, Eriksson and Johanson 1996). A major contribution from the network theory is its clarification of the interaction and network of relationships that exist between buyers and sellers as they engage in international operations. Johanson and Vahlne's (1977) internationalisation theory is a major framework in this area, which argues for a gradual incremental knowledge acquisition as a path to international engagement (Blankenburg-Holm, Eriksson and Johanson 1996). The fifth is the industrial organisation theory (Collis 1991), which holds that the external environment imposes pressures to which firms must adapt in order to survive and prosper.

The sixth theoretical perspective is the resource-based view (henceforth RBV) of the firm (Barney 1991; Barney and Clark 2007). RBV scholars argue that the basis for sustainable competitive advantage and eventual economic prosperity of firms hinges primarily on the possession and application of superior internal resources (Barney 1991; Rumelt 1984; Barney and Clark 2007). A major offspring of the RBV is the resource advantage theory (henceforth R-A theory) of competition (Hunt and Morgan 1995; 1996; Hunt 1997). The R-A model emphasises the importance of market segments and comparative resources as the basis of competitive advantage and subsequent financial performance. This study draws on the notions of the RBV and R-A theories to model the

association of export EOB and its dimensions with export performance for two reasons. On one hand, unlike the other theoretical lenses, the RBV and the R-A theories link firm resources and capabilities directly to competitive advantage, which is consistent with the position taken by the current study that EOB enables firms to earn marketplace advantage. On the other hand, the RBV and the R-A theories recognises the centrality of organisational socio-cultural embedded processes as sources of competitive advantage. In a similar function, this study argues that EOB and its components have complex social and cultural elements that are interconnected with significant tacit dimensions making them difficult to duplicate by competitors.

Finally, some researchers have argued that the benefits that exporters derive from export behaviours are contingent on a selected number of external environment forces and organisational characteristics. In this respect, researchers have drawn largely on the contingency theory of the firm (Donaldson 2001). The contingency theory argues that “the effect of one variable on another depends upon some third variable” (Donaldson 2001, p. 5). As such, a contingency is defined as a variable that moderates the effect of an organisational behaviour on performance. Thus, any positive relationship between export EOB (and its dimensions) and export performance might change, positively or negatively, in different external environment and internal organisational contexts. Accordingly, the contingency theory is used to model the moderating effects of EMO behaviour and ECD variables on the EOB – export performance linkage.

In the sections that follow, effort is made to define the two theories that underpin the study’s relationships. The discussion begins with the RBV of the firm.

### **3.2.1 The Resource-Based View of the Firm**

Scholars of the RBV propose the idea of firm ‘diversity’ (Barney 1991) and also the notion that firms are ‘combiners’ of valuable, heterogeneous, imperfect and mobile resources (Penrose 1959; Nelson and Winter 1982; Barney 1991; 1986; 2001; Peteraf 1993; Wernerfelt 1984; Barney and Clark 2007; Lippman and Rumelt 1982). As such, the RBV “aspires to explain the internal sources of a firm’s sustained competitive advantage” (Kraaijenbrink, Spenser and Groen

2010, p. 349). Its central tenet is that a firm can achieve sustainable competitive advantage and eventual superior financial performance if it acquires and controls valuable, rare, inimitable, and nonsubstitutable resources and capabilities, plus the organisation (VRINO) to absorb and apply them (Barney 1991; 2002). Several related views share this logic: core competences (Hamel and Prahalad 1994), dynamic capabilities (Helfat and Peteraf 2003; Teece, Pisano and Shuen 1997), the knowledge-based view (Grant 1996), and the R-A theory (Hunt and Morgan 1995; 1996; Hunt 1997).

Indeed, the RBV is based on four prior classical theoretical works: distinctive competences (Hitt and Ireland 1985), Ricardo's analysis of land rents (see Barney and Clark 2007, p. 8 for a review), the theory of the growth of the firm (Penrose, 1959), and antitrust implications of economics (Demsetz 1973). The proponents of the distinctive competence theory argue that a firm's distinctive competences are those attributes that enable the firm to pursue its strategies more efficiently and/or effectively than rivals (Hrebiniak and Snow 1982). Ricardo's analysis of land rents has focused on the economic consequences of owning a land – a tangible resource (Richardo 1817). Penrose's theory of the growth of the firm seeks to understand the processes through which firms grow, and the limit to their growth. A key assumption in Penrose's growth theory is that firms are relatively productive units that are concerned about the demand and supply of their factor markets, and how this market condition is converted into production levels to maximise profit (Penrose 1959). Another antecedent theory to the RBV is the antitrust regulation, which is based on the notion that social welfare is maximised if markets are perfectly competitive (Demsetz 1973; Scherer 1980). Barney (1991) argues that these aforementioned theoretical perspectives provide backgrounds to the RBV of the firm because these earlier views about the firm fundamentally attempt to explain the key sources of a firm's competitive advantage (Rumelt 1984). A major conclusion, therefore, is that the resources that a firm owns and controls can be the source of its continued economic success (Barney 1991). What then do the tenets of the RBV mean?

Basically, the RBV is based on the notion that a theory explaining firm performance may be based on the resources a firm owns and controls, and how



such resources are used by the firm (Wernerfelt 1984; Barney 1991). It is argued that resources are not restricted to firms' tangible assets such as production plants, raw materials, equipments and buildings, but can also entail "anything available to the firm that has an enabling capacity" (Hunt 1997, p.64). In this respect, resources can include intangible assets as such financial (e.g., cash at the bank, access to credits in the financial market), legal (e.g., trademarks, licenses, copyrights, patents), human (e.g., skills, experiences, and knowledge of individual employees and managers), organisational (e.g., competencies, controls, routines, cultures, and behaviours), relational (e.g., relationships with customers, suppliers, competitors, distributors, and regulators), and informational (e.g., intelligence about customers, competitors, technology and other exogenous environmental forces) resources. Hunt and Morgan (1995) argue that all these resources have enabling capacities for organisation to achieve competitive advantage.

A major suggestion from the RBV is that the performance outcomes of these resources depend on the extent to which they are applied. As such, it is argued that firm performance is based on the attributes of the resources a firm controls (Barney 1986; 1991). Specifically, Barney (1991) argues that resources must be heterogeneous across firms and imperfectly mobile. In other words, "many firm resources, to varying degrees, are not commonly, easily, or readily bought and sold in the marketplace" (Hunt 1997, p.64). A firm with rare resource relative to rivals is able to enjoy comparative advantage in that it is able to produce market offerings that are perceived to offer superior value, and/or are produced at a lower cost. In drawing on the resource heterogeneity and immobility argument, four basic principles of the resource-based theory are, therefore, proposed: valuability, rarity, inimitability, and non-substitutability (Barney, 1991) or what is often referred to as the VRIN model (Priem and Butler 2001). It is suggested that these dimensions are the key indicants of the degree of heterogeneity and immobility of firm resources (Barney and Clark 2007).

Resources are valuable when they enable a firm to implement its strategies to improve performance (Barney 1991). Valuable resources are linked to firm performance because they enable firms to identify or create and exploit new opportunities (Shane and Venkatraman, 2000; Alvarez and Barney 2007). Indeed, economic value generating opportunities exists because of competitive

imperfections in product markets (Barney, 1986; Shane and Venkatraman 2000), and this may be the results of changing technology, governmental regulations, or market demands. This can also be the result of competitive imperfections, which can themselves be the result of purposeful acts of participating firms to 'disrupt' the existing basis of competition (Schumpeter 1934; Alvarez and Barney 2006). Thus, within the traditional strength, weaknesses, opportunities and threats (or SWOT) framework (Porter 1980), a firm may use its resource possession advantage (or strength) to identify (or create) and exploit new opportunities to generate superior financial performance. However, it is hard to believe that a firm can obtain sustainable superior performance if many firms in its industry (or even related industries) possess the same valuable resources (Barney 1991). In other words, where valuable resources are distributed homogeneously among competing firms in an industry there is rarely an opportunity for one firm to command long-term superior advantage (Kirzner 1973). The best that can be expected is competitive parity (Porter 1980). As a result, Barney (1991) argue that sustainable competitive advantage accrues to a firm that possesses valuable resources that are greater and above those possessed by average firms in an industry. Thus, for valuable resources to be sources of sustainable competitive advantage they must also be rare, and owned by only a limited number of industry players (Barney and Clark 2007).

Resources may be valuable and rare and not the source of sustained competitive advantage if they can easily be imitated and duplicated by rival firms. In other words, if valuable and rare resources can be duplicated by competitors then a firm's ability to obtain competitive advantage from those resources is threatened. As such, Lippman and Rumelt (1982) argue that inimitability of resources is critical for gaining sustained competitive advantage. Moreover, Rumelt (1984) maintains that an isolating mechanism is required to 'protect' resources from competitive imitation. Causal ambiguity is one such isolating mechanism, and is indicative of the extent to which the source of a firm's resource superiority is unknown (Lippman and Rumelt 1982). If the ambiguity associated with resources is linked to the social complexity, the cultural beliefs and personal experiences of resource owners, then they may become difficult to imitate (Hunt and Morgan 1995). This is because, in such a

situation, the resource tends to be idiosyncratic to the firm that initially owns it. Research shows that such unusual cultural and historically derived resources may explain their long-term economic usefulness (Barney 1986; Conner and Prahalad 1996). Indeed, because of the causal ambiguity, social complexity and the unique cultural and historical conditions that is often associated with some resources, it becomes too costly for competing firms to try to imitate them, hence their source of sustainable competitive advantage (Barney and Clark 2007).

Finally, a firm's resources must meet the requirement of non-substitutability (Dierickx and Cool 1989). Thus, if substitutes for valuable, rare and inimitable resources exist, and if these substitutes are less costly to duplicate then it is possible that competing firms will rely on the economic effects of the substitute resources to generate superior performance. Hence, a resource may lose its superior marketplace position if rival firms can depend on equivalent resources to gain competitive advantage (Barney 1991; Hunt and Morgan 1995).

The RBV has come under extensive criticism on several fronts. The criticisms can be grouped into eight categories: (a) the RBV has no managerial implications (Priem and Butler, 2001), (b) the RBV implies a endless search for ever higher-order capabilities (Collis 1994; Priem and Butler 2001; Argyris and Schön, 1978; Lado et al., 2006), (c) the RBV's applicability is too limited (Gibbert 2006; Connor 2002), (d) sustainable competitive advantage is not achievable (Fiol 1991), (e) the RBV is not a theory of the firm (Barney, 1996; Conner and Prahalad, 1996; Foss, 1996; Kogut and Zander 1992), (f) VRINO model is neither necessary nor sufficient for sustainable competitive advantage, as recent evidence shows only modest support (Armstrong and Shimizu 2007; Newbert 2007), (g) the value of a resource is too indeterminate to provide for useful theory (Priem and Butler 2001), and (h) the definition of resource is unworkable as it is overly inclusive (Priem and Butler 2001). For a complete review of the RBV literature, refer to recent reviews and exchanges by Kraaijenbrink, Spender and Groen (2010); Barreto (2010), Foss and Knudsen (2003) and Peteraf and Barney (2003). Despite the criticisms, several scholars agree that the RBV is an important theoretical foundation for explaining firm performance (e.g., Piercy, Kaleka and Katsikeas 1998; Morgan et al. 2003).

Given the above discussion, does EOB meet the requirement of the VRINO argument? This study draws on the existing literature to answer this question. Barney (1986) argues that firms' internal social and cultural processes are unique organisational resources. Barney further explains that these internal processes can be linked to competitive advantage. Like Barney (1986), Hansen and Wernerfelt (1989) show that the attributes of organisational culture have significantly stronger impacts on firm performance than the characteristics of the industry within which a firm competes. Accordingly, there is a surge among entrepreneurship researchers to draw on the resource-based theory to model the impact of organisational attributes on performance. For example, Lau et al (2008) model the impact of organisational resources (e.g. R&D infrastructure) on a firm's strategic orientation drawing on the resource-based theory. Similarly, Gatignon and Xuereb (1997) provide a resource-based model of innovation performance. More recently, in a study of 354 technology SMEs, Knight and Kim (2009) draw on the resource-based theory to model the association between international business competence (including some EO dimensions) and international performance.

Thus, the performance of export organisations can be argued to be a function of firms' internally generated organisational resources (Yeoh and Jeong 1995; Zahra and Garvis 2000; Ibeh and Young 2001; Knight and Kim 2009). These internal resources include unique organisational innovation and creativity that enable firms to remain entrepreneurially oriented. It can then be argued that a firm's export success may be an outcome of the extent to which the firm develops its internal entrepreneurial behaviours or processes (Covin and Slevin 1991). The creation of value enhancing, rare, imperfectly imitable and non-substitutable entrepreneurial behaviour is itself the result of the firm's superiority in developing new and strong entrepreneurial culture (Dess and Lumpkin 2005). Firms with entrepreneurial cultures have the capacity to modify their existing cultures to improve their performance (Peters and Waterman 1982). Ireland et al (2001) argue that firms with entrepreneurial mindsets often have processes that ensure that they are continuously innovative and successful. Thus, major antecedents to entrepreneurial behaviour are idiosyncratic and culturally embedded entrepreneurial mindsets and philosophies of the firms (Dess and Lumpkin 2005). As such, it can be argued that the notion of export EOB may

exist within a continuum whereby at a more abstract level there is an entrepreneurial culture that gives birth to more observable entrepreneurial behaviours that subsequently lead to sustained competitive advantage.

An export EOB can generate sustainable competitive advantage because it is rooted in a complex social and cultural process that is often learned and shared by organisational members and is not likely to be present for sale at the marketplace. Social-cognition theory of entrepreneurial cognition holds that entrepreneurial behaviours that have developed among social groups over years and that have become taken for granted norms may be difficult to imitate, and at the same time, they may be difficult to transfer to different settings (Busenitz and Barney 1997). This is because entrepreneurial behaviours are the function of managerial heuristics and experiences that are often stitched together into a complete set of routines (Zahra 2005; Busenitz and Barney 1997). Researchers interested in the relationship between firm-wide entrepreneurial behaviour and firm performance have studied the entrepreneurial phenomenon across time and find that it has been difficult for firms with bureaucratic organisational structures to act entrepreneurially (e.g. Miller and Friesen 1982; Covin and Slevin 1986; 1989). A major argument then is that organisations with appropriate cultures that stimulate creative and entrepreneurial behaviours might act more entrepreneurially than those that do not have entrepreneurial cultures (Schollhammer 1982).

Given the advantages that firms can derive from the display of entrepreneurial behaviour, some of the world's best-known companies are beginning to transform themselves to be more entrepreneurial (Covin and Miles 1999). These transformational processes have taken some companies years to reorganise and redeploy their resources, and to restructure their operations. Many of them have instituted processes and routines that ensure a culture of creativity and entrepreneurship. These changes have given some firms new identities and cultures that have led to the infusion of "new entrepreneurial spirits throughout their operations" (Zahra, Jennings and Kuratko 1999, p. 5), and change, innovation, and entrepreneurship have become highly regarded words that describe what successful companies must do to survive (Zahra, Jennings and Kuratko 1999; Alvarez and Barney 2004; Holcomb et al 2009; Kuratko and Audretsch 2009).

For many firms, their entrepreneurial outlook is the result of many years of practice, including years of failures and successes, and purposeful investment (Covin and Miles 1999). As such, it would be difficult for any firm that did not go through these culturally induced entrepreneurial processes and experiences to imitate this behaviour. Although many firms are joining the entrepreneurship bandwagon in recent years, there are only a few that are highly and continuously entrepreneurial; hence, the rarity of successful entrepreneurial behaviour. It is, therefore, not surprising that entrepreneurial behaviour continues to be viewed as an important source of competitive advantage for firms in different industries (e.g. Covin, Slevin and Green 2006; Dess, Lumpkin and Covin 1997; Lumpkin and Dess 1996; Ireland, Hitt and Sirmon 2003).

Indeed, there are some researchers (e.g. Antonic and Hisrich 2001; Ireland, Hitt and Sirmon 2003; Zahra, Jennings and Kuratko 1999; Covin and Miles 1999; Kuratko and Audrestch 2009) who believe that firms that fail to effectively use their entrepreneurial resources should expect poor performance in their chosen markets. Export researchers are also beginning to notice the importance of entrepreneurship in international business success (McDougall and Oviatt 2000) and are now beginning to model the impact of EO on international performance (e.g. Knight and Kim 2009; Balabanis and Katsikea 2003; Zahra and Garvis 2000). A major assumption is that the entrepreneurial behaviour of an exporting firm is a product of a firm's cultural beliefs and orientations towards export markets, and as such EO may take place within the context of the firm's full range of export EOBs (Yeoh and Jeong 1995; Balabanis and Katsikea 2003), and a possession of any combination of these behaviours should earn a firm superior financial performance in its export market.

### **3.2.2 Contingency Theory**

Contingency theory of the firm is derived from the concept of coalignment and is often termed as configuration, fit, or consistency approaches to organisational analysis (Venkatraman and Prescott 1990). Organisational behaviour scholars have strongly recommended contingency theory to researchers interested in studying relationships between two or more organisational and environment variables (e.g., Aldrich 1979; Covin and Slevin 1991; Lumpkin and Dess 1995). As a result, several entrepreneurship (Wiklund and Shepherd 2005; Robertson

and Chetty 2000; Balabanis and Katsikea 2003) and export marketing researchers (e.g., Cadogan, Diamantopoulos and Siguaw 2002; Cadogan, Kuivalainen and Sundqvist 2009) have adopted this theory to provide better understanding of the relationships they study.

The contingency perspective to organisational analysis argues that the 'fit' between an organisational behaviour and its context, whether it is the external environment or internal organisational situation, has significant performance implications (Venkatraman and Prescott 1990). Harvey (1982, p. 81) observes that, "the *contingency approach* to strategy suggests that, for a certain set of *organisational* and *environmental* conditions, an optimal strategy exists". Moreover, Schoonhoven (1981, p. 351) argues that "when contingency theorists assert that there is a relationship between two variables [...] which predicts a third variable [...] they are stating that an interaction exists between the first two variables". Furthermore, Ginsberg and Venkatraman (1985, p.421) conclude that "It is perhaps a truism that any theory of corporate or business strategy must be, by definition, contingency-based". Thus, a fundamental assumption underlying the contingency theory is that there is no one way of organising, and that any one way of organising is not equally effective under all situations or contexts. It is also argued that the contingency theory is useful because it helps to explain how firms match resources with the corresponding environment context (Ginsberg and Venkatraman 1985). There is also the notion that there is no universal set of strategy that is optimal for all organisations irrespective of their resource advantages and environment conditions. As such, researchers have focused on examining the extent to which organisational characteristics and the broader external environment forces influence the link between organisational strategy and performance.

According to contingency scholars, knowledge of organisational constructs would be advanced if researchers focus on identifying commonality among a distinct set of firm characteristics rather than trying to seek to describe only universal and direct relationships (Miller 1996). As a result, consideration of contingencies in empirical organisational research is highly recommended (Covin and Slevin 1991; Lumpkin and Dess 1996).

In the last two decades, the contingency logic has taken centre stage in both firm-wide and export context EO research. For example, researchers have argued that internationally active firms that align certain aspects of their behaviour with the attributes of other organisational features and the export environment may perform better than their counterparts that do not create such 'fits' (see Zahra and Garvis 2000). This contingency thinking is probably best illustrated by Lumpkin and Dess (1996, p. 152): "environmental factors, such as dynamism and munificence [...] may influence the performance of firms with an [EO]". Moreover, several EO researchers have also examined the firm-wide EO - firm performance relationship (e.g., Covin and Slevin 1989; Karagozoglu and Brown 1988; Zahra and Covin 1995) and firm-wide EO – export performance linkage (e.g. Zahra and Garvis 2000; Robertson and Chetty 2000) from a contingency perspective. Besides, some other researchers have also tested the relationship between contingency variables and individual dimensions of EO, and have found significant associations with performance (e.g. Covin and Covin 1990; Frishammar and Horte 2007). Given the centrality of the EO construct in explaining performance, this study considers it necessary to examine the role of environment and organisational contingencies in furthering understanding of how EOB contributes to export performance outcome.

### **3.3 CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT**

The current section discusses the development of a conceptual model that relates export EOB to export performance under differing levels of two organisational and environmental conditions. In studying the EOB's relationship with firm performance, previous research has looked at the relationship from two perspectives: aggregate (e.g. Covin, Slevin, Green 2006; Baker and Sinkula 2009) versus disaggregate (e.g. Hughes and Morgan 2007; Kropp et al. 2008) angles. However, it is important to note that both perspectives have some important advantages and disadvantages in terms of theory development (Covin, Slevin and Green 2006).

First, the aggregate approach to looking at EOB is a coarser theory development and testing approach and a key advantage is that it offers researchers the opportunity to achieve greater parsimony and be able to look at a bigger picture about EOB's contribution to performance. On the down side,



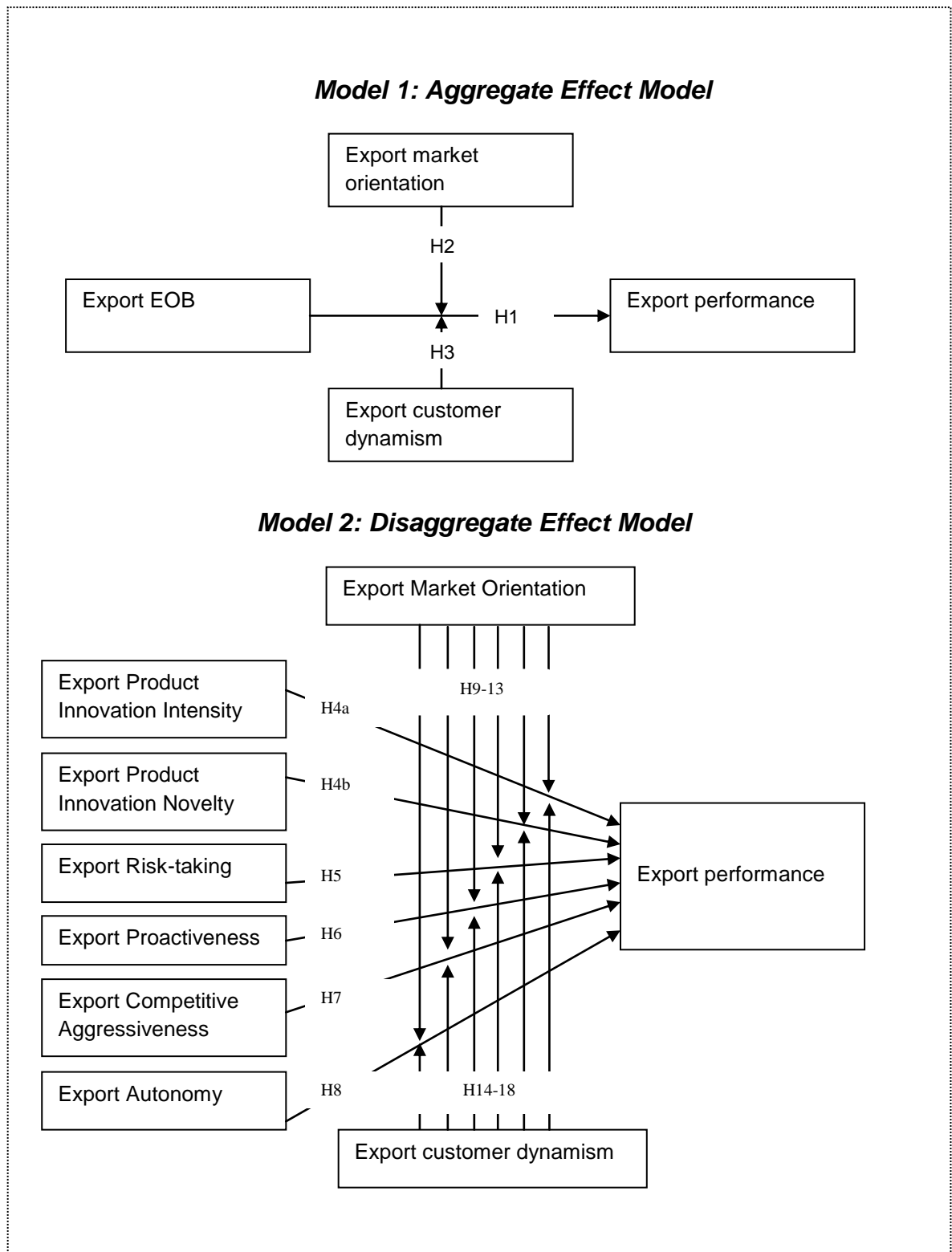
researchers are able to see only aggregate effects and thus will end up obscuring the individual contributions from the specific dimensions. For example, Kropp et al (2008) and Swierczek (2003) have reported conflicting results on the influence of proactiveness and innovativeness components of EO on performance (see also Hughes and Morgan 2007; Frishammar and Horte 2007; Morgan and Strong 2003). These are just few aggregation problems associated with the EO construct and scholars are beginning to call for a critical viewpoint on EO's association with performance (Andersen 2010).

Second, scholars focusing on the disaggregate perspective are able to observe individual effects of EOB's dimensions on important outcome variables, and a major utility of this latter approach is that important information on the unique consequences of the dimensions is provided and this can contribute to richer theory development. However, unlike the aggregate approach the disaggregate effect models tend to be overly complex and might lack parsimony (Kreiser, Marino, and Weaver 2002).

A major implication then is that results for aggregate treatment versus disaggregate treatment models may produce substantively different conclusions (see Pearce II, Fritz and Davis 2010 for not-for-profit study results).

Consequently, this study adds to the literature by integrating both perspectives. As such, the subsequent sections focus on linking (1) an overall export EOB to export performance, and (2) the specific export EOBs to export performance.

Figure 3.1: Conceptual Framework and Hypotheses



### 3.3.1 Export EOB – Export Performance Relationship

This section describes the relationship between an overall export EOB and export performance. It begins by recognising that the export performance outcome of EOB lies in implementing a combination of generic export activities of export

product innovative, risk-taking, proactive, competitively aggressive and autonomous behaviours (Balabanis and Katsikea 2003). Thus, an export EOB is defined as the practices, methods and decision-making styles that exporters use to act entrepreneurially. As such, it captures how firms compete in overseas markets, and the key dimensions that characterise an export EOB include a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities. All of these entrepreneurial behaviours may be present when a firm engages in new export opportunity exploration and exploitation, and they might in combination predict firms' performance in export markets (Lumpkin and Dess 1996; Zahra and Garvis 2000; Balabanis and Katsikea 2003). Export performance is defined as the extent to which firms are satisfied with their sales and market share performance in export markets (Cadogan, Kuivalainen, and Sundqvist 2009; Racela, Chaikittisilpa and Thourungroje 2007).

There are several reasons why a high level of export EOB might positively drive export success outcome. First, the thrust of the argument for a positive influence of EOB on firm performance is related to the idea of pioneering and first-mover advantages and the tendency to take advantage of emerging new opportunities. In fact, Shane and Venkatraman (2000) argue that identification and exploitation of new opportunities ahead of market rivals is a central force behind entrepreneurship. Second, Zahra and Covin (1995) hold that firms with high EOB can target premium market segments, charge high prices and "skim" the market ahead of their competitors. These firms monitor export market changes and trends, and respond quickly ahead of rivals, thus capitalising on emerging new opportunities. Innovativeness keeps entrepreneurial-oriented firms ahead of their competitors, enabling them to gain a competitive advantage that leads to superior economic performance. Third, proactiveness gives firms the ability to offer new products/services to the market ahead of competitors, which also gives them a competitive advantage. Fourth, competitively aggressive behaviour offers entrepreneurial-oriented firms the tendency to launch offensive and preemptive export strategies and competitive initiatives to earn marketplace competitive advantage. In fact, Covin and Covin (1990, p.36) mention that "The identification of the types of aggressive strategies and tactics a firm might use to achieve or maintain a strong market position is certainly a useful endeavour" that can

generate superior performance. Finally, there is a reason to believe that the relationship between EO and performance may be particularly strong among exporting organisations with strong autonomous behaviour as such a behaviour enables export personnel to identify and exploit commercially viable market opportunities without the usual rubrics of central management edicts. Thus, export EOB might be positively related to export performance.

Several firm-wide EO (e.g. Covin and Slevin 1989; Covin, Slevin and Green 2006; Wiklund and Shepherd 2005) and export context EO (e.g. Balabanis and Katsikea 2003; Robertson and Chetty 2000) studies provide evidence to support the positive EOB – export performance linkage. For example, Robertson and Chetty (2000, p.224) find that “An exporting firm with an entrepreneurial strategic posture will continue to operate successfully”. Moreover, Balabanis and Katsikea (2003, p.246) conclude that “The most important finding of their study is that there is a direct relationship between entrepreneurial posture and export performance”. Similarly, Zahra and Garvis (2000) argue that “Firms that engage in [international corporate entrepreneurship] can realize important financial benefits from their innovation, risk taking, and new business creation”. These results are consistent with earlier and recent research examining domestic entrepreneurial activities and firm performance (e.g., Covin and Slevin 1989; Covin, Slevin and Green 2006). Thus, the following hypothesis is suggested:

**H1:** Export EOB is positively related to export performance.

### **3.3.2 Moderators of Export EOB – Export Performance Relationship**

Scholars argue that the notion of EOB being universally beneficial for export success may be overly simplistic and misleading (e.g., Yeoh and Jeong 1995; Lumpkin and Dess 1996; Wiklund and Shepherd 2005). Accordingly, it is suggested that contextual factors can affect the success of the firm’s entrepreneurial activities (Covin and Slevin 1991; Zahra 1993). For example, several domestic-focused studies (e.g. Wiklund and Shepherd 2005; Miller 1983) and a few export context findings (e.g. Zahra and Garvis 2000) show that EOB may be beneficial for firms operating in turbulent and dynamic export markets but not for firms competing in benign and less challenging markets. As such, several scholars recommend that researchers should explore relevant contingencies of

the link between EOB and export performance (Yeoh and Jeong 1995). In this study, two export relevant contingencies are argued: export market orientation (henceforth EMO) and export customer dynamism (henceforth ECD).

EMO is defined as the generation, dissemination and responsiveness to export market intelligence (Cadogan, Diamantopoulos and De Mortanges 1999). It is argued that “EMO behavior is [focused] towards export customers' current and future needs, competition within the firm's export markets, and other exogenous factors... influencing the firm's export performance” (Cadogan et al. 2001, p.263). In highly market-oriented exporting firms, there is high regard for export market information generation; managers periodically review likely changes in the export environment; and there is a greater tendency to respond quickly to competitive threats with respect to changes in prices and promotions targeted at the firm's export customers.

In the general marketing literature, researchers have emphasised the interface between the entrepreneurial orientation (EO) and market orientation (MO) constructs (e.g., Matsuno, Mentzer, Ozsomer 2002; Bhuian, Menguc and Bell 2005; Atuahene-Gima and Ko 2001). Scholars in the entrepreneurship discipline have also shown interest in the EO and MO relations (e.g., Miles and Arnold 1991; Morris and Paul 1987; Frishammar and Horte 2007; Baker and Sinkula 2009). A major proposition is that both orientations are highly correlated and represent a firm's strategic responses to environmental jolts (Morris and Paul 1987; Baker and Sinkula 2009). As such, scholars believe that EO and MO might interact to prop up firm performance (Bhuian, Menguc and Bell 2005; Atuahene-Gima and Ko 2001). In fact, Miles and Arnold (1991, p. 60) have reasoned that “As financial performance expectations continue to increase, management may be forced by environmental dynamics to become more innovative, proactive and risk accepting, while retaining a marketing orientation”.

The export literature has rarely examined the EO and MO interface. However, a notable exception is Kropp, Lindsay and Shoham (2006). These authors have modelled the direct and independent effects of the two orientations on international entrepreneurial business venture performance. They report that both EO and MO are positively related to international performance. A key message

from their finding is that the adoption of EO or MO “to the exclusion of the other may lead to lower performance...” (Kropp, Lindsay and Shoham 2006, p. 515). Nevertheless, there are some other important reasons why the two orientations might interact to boost export performance.

First, Atuahene-Gima and Ko (2001) examine an interactive relationship between entrepreneurship and MO by viewing the two constructs as complementary organisational resources that need to be ‘aligned’ for optimum firm performance. In this regard, firms are encouraged to align their opportunity seeking behaviours with their opportunity exploitation behaviours to boost performance. In other words, firms should balance their market altering behaviour (i.e. EOB) with their market responsiveness activities (Bhuan, Menguc and Bell 2005). Thus, the coexistence of both orientations is ideal for organisations seeking competitive advantage in export market through both adaptability and management of their export market environment. Based on this logic, Atuahene-Gima and Ko (2001) argue for the existence of linear moderating effect of EO on a MO – performance relationship.

Unlike Atuahene-Gima and Ko (2001) and Bhuan, Menguc and Bell (2005), this study argues that entrepreneurial-oriented exporters can earn stronger performance if they rely on their market intelligence processing activities (i.e. EMO) to tailor their entrepreneurial agenda to export customer needs and preferences. This is because market intelligence processes can provide entrepreneurial exporters with a “solid understanding of customers and markets, identify and validate the right opportunity, and determine how best to capitalize on that opportunity” (Crane 2010, p.5). Moreover, the information processing role of EMO means that entrepreneurial inventions and innovations are better targeted to meet the needs and preferences of export consumers.

Second, EMO makes firms cleverer and wiser about their target export markets (Cadogan et al 2009) and as such a high degree of EMO would mean that risks are taken in an environment with better knowledge of markets and how markets would respond to the firm’s market offerings. Thus, EMO helps to lower the chance of costly failure. Furthermore, EOB involves being competitively aggressive in terms of intensely challenging competitors’ market activities. EMO

helps firms to stay closer to their markets and to be competitively-oriented (Narver and Slater 1990). As a result, entrepreneurial-oriented firms that have EMO would do a better job in designing and implementing competitively aggressive strategies that outwit their competitors relative to their market intelligence poor and less export market-oriented counterparts. Autonomy enables export function employees to rapidly exploit new market opportunities without worrying about central management dictates, and as such EMO informs the autonomous decision-maker about potential opportunities in other markets. Thus, EMO can ensure that the focus of autonomous behaviour is most effectively directed at appropriate opportunities. Consequently, EMO can ensure that exporters are able to better target their EOB to customer needs and preferences to achieve greater export success. Formally stated:

**Hypothesis 2:** The positive relationship between EOB and export performance is greater, the higher the exporters' EMO.

There are also some strong arguments to suggest that aspects of the external environment may moderate the EOB - export performance relationship. The organisational behaviour literature suggests an environment framing method to conceptualising the external environment (e.g., Miller 1983; Naman & Slevin 1993). This approach looks at the environment from a contingency perspective focusing on its abstract qualities and dimensions (Robertson and Chetty 2000). As such, dimensions such as hostility, heterogeneity, and dynamism (Miller, 1983; Miller and Friesen 1982), turbulence (Khandwalla 1977; Naman & Slevin 1993), and volatility (McKee, Varadarajan, Pride 1989) have been used.

In the EO literature some dimensions of the external environment (e.g. dynamism, turbulence and hostility) have been modelled as moderators of the EO – firm performance relationship (e.g., Miller and Friesen 1982; Covin and Slevin 1991; Lumpkin and Dess 2001; Wiklund and Shepherd 2005). Export research also suggests that aspects of the export environment can have significant influences on the EO – export performance relationship (Zahra and Garvis 2000; Robertson and Chetty 2000). In the context of this study, export customer dynamism is proposed for several reasons. First, it is important that user needs and preferences are regularly and precisely determined and satisfied (Gruner and

Homburg 2000). Second, it is also imperative that customers' needs and preferences are monitored throughout the life of product innovations since customer needs and preferences are rarely static (Szymanski, Kroff and Troy 2007; Rothwell et al. 1974). Third, previous analyses show that regular interaction with customers is necessary throughout the course of new product development due to regular changes in customer behaviours (Gruner and Homburg 2000). Szymanski and colleagues believe that the possibility of consumers resisting new products because of the necessity for them to adapt to new behaviours, the risk of social and financial loss as well as loyalty to rival products, for example, mean that firms should continuously monitor trends in consumer markets. Hence, entrepreneurial exporters need to know how changes in consumer environments affect their export performance.

*Export customer dynamism* refers to the perceived degree of change and diversity in export customers' needs and preferences. Dynamic customer environments are associated with increasing variations in export customers' buying behaviour and diversity in product requirements. Moreover, the nature of the competition often varies widely from one product line to another, and thus increasing the need for entrepreneurial-type strategies (Miller 1990). Customers in dynamic export markets place a premium on the extensiveness and novelty of product innovations and so such markets are typically associated with greater customer unpredictability and high degree of change in industry trends and innovations (Wiklund and Shepherd 2005). Prior analysis suggests that such customer environments offer new opportunities for generating greater dividends (Zahra 1993). Miller (1990) suggests that entrepreneurial-type strategies are most suitable in dynamic customer environments because when changes are more common and varieties are highly eminent, successful risk-taking, intensive and novel product innovations, and competitively aggressive first-mover activities can bring bigger financial rewards.

Jaworski and Kohli (1993) argue that when the degree of technological change is high, it is more useful for firms to engage in innovative activities. In addition, Covin and Slevin (1991, p. 11) state that "Entrepreneurial firms are often found in dynamic and hostile environments because their venturesome managers prefer rapidly growing and opportuneful settings; settings which may have high risks as



well as high rewards". Consequently, this study argues that implementation of strategic EOB in dynamic customer environment should enable firms to improve their export success.

**H3:** The positive relationship between EOB and export performance is greater, the higher the dynamism of export customers served by exporters.

Despite the preceding hypotheses, it is still reasonable to argue that some of the individual export EOBs might predict export performance more strongly than others. Some non-export EO researchers are beginning to show interest in this issue (e.g. Hughes and Morgan 2007; Morgan and Strong 2003; Frishammar and Horte 2007), and this study explores the issue in export context. That is, while some of the dimensions might predict export performance positively, others might work against export performance all together. Additionally, Lumpkin and Dess (1996) contend that the degree to which the individual dimensions predicts firm performance might be dependent on factors external and internal to the firm. Given these reasoning, the next section of the chapter develops hypotheses about the association between the individual EOBs and export performance. The purpose is to provide information on the unique consequences of the individual EOBs to aid richer theory development and to help export managers in their cost-benefit analysis of the EOBs.

### **3.4 THE ASSOCIATION OF THE SPECIFIC EOBS WITH EXPORT PERFORMANCE**

This section develops hypotheses regarding the association between the individual EOBs and export economic performance.

***Export product innovativeness*** relates to an export organisation's tendency to engage in and support new ideas, novelty, experimentation and creative processes that engender new product or service offerings. It is associated with a firm's new product development strategy and is predicated on an organisation's tendency to pursue the implementation of intensive product innovativeness and/or a tendency to develop novel product innovations relative to competitors' product innovation output (Covin and Slevin 1991).

A strong emphasis on product innovativeness provides a firm with the opportunity to generate early market share, cash flows, external visibility and legitimacy, and an increased likelihood of survival in overseas markets (Samiee, Walters, Dubois 1993; Schoonhoven, Eisenhardt, Lymman 1999). Some researchers believe that innovative products that offer relative advantage over competitive offerings and that significantly reduce customer perceived risks are often associated with healthy financial performance (e.g. Henard and Szymanski 2001). Hughes and Morgan (2007) identify innovativeness as a major means to differentiating and undermining offerings from competitors. Exporters can, therefore, achieve competitive advantage with their innovation outputs, and this can be done in two ways.

First, with lots of innovations a firm needs only a fraction to succeed. Constant innovation can help exporters to raise barriers to entry because competitors will need to compete on the innovation front. As such, intensive product innovation might help an exporter to earn competitive advantage (Covin and Slevin 1991). Second, novel innovations offer opportunity for dramatic product advantage and differentiation (Kleinschmidt and Cooper 1991). As such, firms with novel innovations may act to alter the nature of the competition, allowing the firm to compete on areas which are relatively competition-free. Moreover, novel product innovation can help the firm to build strong reputation for innovativeness, enabling the firm to build strong brand image and subsequently strong reputation assets in export markets. The RBV of the firm argues that a reputational asset can be a strong source of sustainable competitive advantage (Barney 1991; Hunt and Morgan 1995). Moreover, Kleinschmidt and Cooper (1991) find that new-to-the-world products can help firms to fare well in terms of market share and meeting sales and profit objectives. Accordingly, this study hypothesises the following:

**H4a:** Export product innovation intensity is positively related to export performance

**H4b:** Export product innovation novelty is positively related to export performance

**Export risk-taking** describes the extent to which an export organisation commits its resources to export operations that have a greater chance of failure. It involves

allocation of resources to high risk export projects that contain an inherently high degree of uncertainty about likely outcomes. Exporting itself is an intrinsically risky business activity as it can result in significant losses, but it can also bring considerable positive returns (Samiee, Walters, Dubois 1993). Because of this, export oriented organisations are encouraged to assume high risks in export markets if they are to be more successful (Samiee, Walters, Dubois 1993). High export risk-taking (e.g. developing novel product innovations; venturing into far distance geographical regions; competing in markets with completely different national cultures) is expected to generate greater export sales returns than safety-seeking (e.g. competing in regional markets; exporting to neighbouring countries; and undertaking line or brand extensions). This is notwithstanding the fact that reckless risk-taking can be counter productive (Lumpkin and Dess 1996; Werner, Brouthers and Brouthers 1996). Thus, high export risk-taking and increased export performance should be strong correlates (Yeoh and Jeong 1995). Although some scholars have argued that tried and true export strategies may have significant positive effect on the performance of export ventures, however, it can also be argued that taking risks to create new products or services, or to pioneer new export processes may be more profitable in the long-run. This is because, while some may fail, some may succeed and the successful ones can bring greater dividends (McDermott and O'Connor 2002). Thus, it is argued here that,

**H5:** Export risk-taking is positively related to export performance

**Export proactiveness** conveys the tendency of export organisations to recognise market opportunities and to initiate relevant actions to exploit those opportunities ahead of competitors to gain first mover advantages and to assume market leadership. By anticipating future export market needs and acting to exploit them ahead of competitors, proactive exporters enjoy significant advantage of first export market entry over and above late entrants. Moreover, being proactive about export customer needs might enable an exporter to enjoy stronger export sales returns through market dominance and premium pricing because consumers often associate high quality to products offered by market leaders. However, export research shows that export customers may be reluctant to adopt new products (Balabanis and Katsikea 2003). Yet, it is also true that an export organisation can earn above average export sales return by taking the lead

to surprise export customers with new products ahead of competitors (Henard and Szymanski 2001). If successful the firm would have the luxury to alter the basis of the competition to its favor by erecting entry barriers through higher switching costs and domination of export distribution networks. In fact, Morgan and Strong (2003, p. 167) have argued that proactive behaviour predicated on an action orientation is “associated with competitive superiority due to the ‘steppahead’ tactics pursued and market leadership characteristics exhibited by firms with this strategic behavior”.

Against this background, several export studies establish that proactive behaviour is associated positively with export success (e.g., Kropp, Lindsay and Shoham 2006; Zahra and Garvis 2000). This study adds to these earlier works by offering a test of the link between proactive behaviour and export performance. Thus, this study hypothesises the following:

**H6:** Export proactiveness is positively related to export performance

**Export competitive aggressiveness** encapsulates the intensity of an export organisation’s tendency and efforts to outperform and undermine its industry competitors (Lumpkin and Dess 2001). It takes the form of targeting rivals’ weaknesses and the ability to undermine competitors. It can take the shape of trying to undo competitors in the bid to achieve competitive goals. According to Hughes and Morgan (2007, p. 654), “competitive aggressiveness mobilizes continuous competitor assessment above environmental assessment so that opportunities to exploit the firm's strengths and competitors' weaknesses are sought and taken advantage of”. Thus, as opposed to being passive towards competitors’ efforts, competitively aggressive exporters see value in using their adaptive strengths to undermine competitors’ market activities. As an offensive competitor, a competitively aggressive exporter can earn competitive advantage “because the emphasis on out-doing and out-manoeuvring competitors strengthens the firm's competitiveness at the expense of rivals” (adapted from Hughes and Morgan 2007, p. 654). It can therefore be argued that competitive aggressive behaviour is an important determinant of export success (Yeoh and Jeong 1995).

Although some researchers have reported no relationship between competitive aggressiveness and performance in domestic business context (e.g. Hughes and Morgan 2007; Morgan and Strong 2003), others such as Lumpkin and Dess (2001) have found that competitive aggressiveness has a significant positive effect on sales growth (see also Covin and Covin 1990). Given these mixed results, this study sheds more light on this relationship by hypothesising that:

**H7:** Export competitive aggressiveness is positively related to export performance

**Export autonomy** refers to the independent actions of export personnel within export units in bringing forth new export ideas or visions and carrying them through to fruition (adapted from Lumpkin and Dess 1996). It is argued that firms that have their strategies decided by people within relevant functional units, and encourage personnel to act independently to carry their ideas and visions through to completion should perform better than their counterparts that do not encourage autonomous activities (Lumpkin and Dess 1996). Hughes and Morgan (2007, p.654) have argued that “by establishing autonomy, managers demonstrate to employees their faith in their ability to perform effectively outside the rubric of firm constraints”. With this encouragement, export organisations can expect export unit employees to embrace change and become increasingly involved in bold and creative activities, which can be a key success factor in contemporary export markets. Moreover, autonomy gives export employees freedom to rapidly exploit new opportunities, do things without worrying about central management edicts and to be happy with product ideas that they strongly believe can be commercially viable. Lumpkin, Cogliser and Schneider (2009, p.50) have argued that, autonomous behaviour is “positively related to effective knowledge management, such that higher levels of autonomy facilitate knowledge creation, transfer, and application”. As such, exporters with high autonomous behaviour should be faster at exploiting emerging market opportunities than their counterparts with less autonomous behaviours in export operations. With greater market knowledge, exporters with high autonomous behaviour understand trends in customer needs and preferences and how such customer edicts can be satisfied at a profit.

Despite the logic linking autonomous behaviour to positive performance outcomes, however, some domestic for-profit business context research (e.g.

Hughes and Morgan 2007) and not-for-profit studies (e.g. Pearce II, Fritz & Davis 2010) have shown that autonomy either does not predict performance or only has a weak positive influence. Moreover, in a study of 220 women entrepreneurs (an individual level study), Lerner, Brush and Hisrich (1997) find that autonomous behavior has a negative impact on sales performance. Thus, it is noticeable from the literature that only little empirical evidence and consensus exist regarding the direction of effect of autonomous behaviour on firm performance. Indeed, the export literature has not examined this dimension at all, yet as was argued in the preceding paragraph, autonomous behaviour predicated on employee creativity and receptiveness to emerging export opportunities as well as market knowledge advantage might be a significant driver of export success. Moreover, many anecdotal and qualitative based studies have speculated about a likely positive influence of autonomous behavior on firm performance (e.g. Burgelman, 1983; Howell and Higgins, 1990). Accordingly, this study hypothesises that:

**H8:** Export autonomy is positively related to export performance

### **3.5 MODERATING EFFECTS OF EMO ON THE RELATIONSHIP BETWEEN SPECIFIC EOBs AND EXPORT PERFORMANCE**

In terms of the specific export EOBs, this study hypothesises that the influence of each EOB factor on export performance might depend on the level of EMO and ECD in the export organisations. In the following subsections the moderating effects of EMO on the relationships between the specific EOBs and export performance are described in detail.

#### **3.5.1 EMO and Innovative Behaviour**

Export innovative behaviour is said to be present when exporters pursue active implementation of new ideas, products, processes or technologies in overseas markets. For innovating exporters to benefit most from their innovations, they need to stay closer to their customers (Atuahene-Gima and Ko 2001). Staying close to customers means generating and responding to intelligence on customers' present and future needs (Kohli and Jaworski 1990), and this helps innovating exporters to develop greater knowledge about customers, and therefore be able to better target customers needs and preferences with their

tailored innovative products. In this respect, innovating exporters need EMO's market knowledge (or intelligence) activities to better serve export customers than less market oriented innovating counterparts.

As firms develop better knowledge about the market and where success is most likely to come from, innovating exporters can do lots of innovations (i.e. intensity) to win. In using their novel and superior innovative product advantage, firms are better disposed to satisfying export customers' latent needs better because they understand customers better via their EMO (Robinson 1990; Hult and Ketchen 2001). A better understanding of customers' latent needs and preferences offers innovating exporters an opportunity to use customers' current needs as a basis to project into customers' future need requirement and be able to build reputation for being always a step-ahead of both customers and competitors in customer value creation (Baker and Sinkula 2009). As such, it can be argued that, EMO's market knowledge processes will enable innovating exporters to create better market offerings than their market knowledge deprived rivals. Thus, this study hypothesises that:

**H9a:** The positive relationship between export product innovation intensity and export performance is stronger, the higher the exporter's EMO

**H9b:** The positive relationship between export product innovation novelty and export performance is stronger, the higher the exporter's EMO

### **3.5.2 EMO and Risk-taking Behaviour**

Risk-taking entails a propensity to commit resources to export projects that contain increasingly high level of uncertainty regarding their likely outcomes (Balabanis and Katsikea 2003). Successful high risk export projects bring greater financial returns than successful safe export projects. Export managers want to reduce the uncertainty associated with risky export projects. EMO can help exporters in this respect because EMO makes firms wiser and more knowledgeable about export markets (Cadogan, Kuivalainen, and Sundqvist 2009). EMO means that risks are taken in environments of better intelligence of markets and greater understanding of how markets are likely to respond to a

firm's offerings. This means that firms with high EMO are better able to target their markets and therefore reduce the likelihood of failure. Thus,

**H10:** The positive relationship between export risk-taking behaviour and export performance is stronger, the higher the exporter's EMO

### **3.5.3 EMO and Proactive Behaviour**

Export proactive behaviour "represents a forward-looking perspective where firms actively seek to anticipate opportunities to develop and introduce new or improved products, instigate changes to current strategies and tactics, and detect future trends in the market" (Hughes and Morgan 2007, p. 653). Thus, the thrust of the argument of the positive association of proactive behaviour with export performance is that proactiveness brings to exporters the advantage of pioneering, the benefit of being first to market, the luxury of charging premium prices and the weight of erecting entry barriers to lucrative markets. EMO should help firms manage these market activities better. This is because EMO ensures that a "firm consistently identifies and responds to customers' current needs and preferences and is able to anticipate future needs and preferences, it will be in a better position to satisfy customers and perform well against competitors" (Cadogan, Diamantopoulos, and Siguaw 2002, p. 618). Hence, EMO should enable proactive exporters to earn superior export performance. Thus,

**H11:** The positive relationship between export proactive behaviour and export performance is stronger, the higher the exporter's EMO

### **3.5.4 EMO and Competitively Aggressive Behaviour**

In turbulent and competitively intensive product-markets, a competitively aggressive behaviour is recommended as the winnable strategic approach (Morgan and Strong 2003; Covin and Slevin 1991). This is because aggressive behaviour urges firms to exploit and develop their key resources more rapidly than competitors (Morgan and Strong 2003). Moreover, competitive aggressiveness usually requires a clear sales orientation (Lumpkin and Dess (2001) and this entails strong market share development for success. As a result, aggressive firms typically adopt competitive posture that enables them to intensely challenge



competitors' market activities. EMO helps firms to be both customer and competitor oriented (Narver and Slater 1990). As a result, exporters that are simultaneously competitively aggressive and highly market-oriented have two important advantages: they know better about customer needs and preferences, and they are better prepared to expand and defend their export market share from competitive erosion than their passive and less market-oriented counterparts. Accordingly, EMO should help competitively aggressive exporters to be more successful. Thus,

**H12:** The positive relationship between export competitively aggressive behaviour and export performance is stronger, the higher the exporter's EMO

### **3.5.5 EMO and Autonomous Behaviour**

Autonomous behaviour enables firms to achieve both opportunity- and advantage-seeking goals (Lumpkin, Cogniser and Schneider 2009; Ireland, Hitt and Sirmon 2003). In this respect, autonomous behaviour makes it possible for individuals and teams within the export unit to operate outside the firms' existing norms and strategies to exploit emerging new opportunities in export markets. For example, because of the presence of autonomy within the firm, export managers do not have to wait for central management directives before they act on emerging market opportunities. Prior analysis show that EMO makes it possible for firms to respond more effectively to existing and future customer needs and preferences (Jaworski and Kohli 1993). Moreover, EMO enables firms to develop greater knowledge about export markets (Cadogan, Kuivalainen, and Sundqvist 2009). Accordingly, EMO should help firms with autonomous behaviour to be more accurate in acting on emerging market opportunities. Because export managers have accurate and up-to-date market intelligence, new initiatives from independent-minded managers and employees are targeted at the right export markets, and the result is normally a stronger export performance. Thus, this study argues that:

**H13:** The positive relationship between export autonomous behaviour and export performance is stronger, the higher the exporter's EMO

## **3.6 MODERATING EFFECTS OF ECD ON THE RELATIONSHIP BETWEEN SPECIFIC EOBS AND EXPORT PERFORMANCE**

### **3.6.1 Innovation intensity and export customer dynamism**

Innovation intensity's impact on export performance might be moderated by ECD. Firms need lots of new products to satisfy changes in consumers' needs and wants, and to ensure that the firm does not lose ground to competitive actions (Szymanski, Kroff and Troy 2007; Rothwell et al. 1974). Hence, intensive product innovation is required in dynamic customer market environments to improve performance. Previous analysis shows that regular interaction with customers is necessary throughout the course of new product development due to regular changes in customer behaviours (Gruner and Homburg 2000). Szymanski and colleagues also believe that the possibility of consumers resisting new products because of the requirement to adapt to new behaviours, the risk of social and financial loss as well as loyalty to rival products mean that firms should pursue intensive and largely continuous innovation strategy in dynamic customer environments to remain competitive. Hence, the more dynamic customer's needs and preferences are the more valuable regular and intensive innovation activities would be for exporters.

**H14a:** *The positive association between intensive product innovation and export performance will be stronger when customer dynamism is high.*

### **3.6.2 Innovation Novelty and export customer dynamism**

The effect of innovation novelty on export performance might be moderated by customer dynamism. Firms need new kinds of products to meet the new needs and wants that are evolving in the market, and to avoid competing on territories where competitors have strength (i.e., compete in new product market niches where the firm can be proactive and aggressive). In this context, dynamic customer environments might help highly innovative products to generate required economic return. Additionally, although novel product innovations can involve higher order learning and different ways of looking at the world for consumers (Sethi 2000), however, when the environment is in a state of flux novel innovations can lead to high product trials, consumer variety-seeking tendencies and repeat purchases due to its novelty (Szymanski et al. 2007). Accordingly, this

study agrees with previous studies that have argued that novel product innovation predicts firm performance in dynamic and uncertain customer environments (e.g. Langerak et al. 2004; Im and Workman 2004; Roberts 1999). Thus,

**H14b:** *The positive association between novel product innovation and export performance will be stronger when customer dynamism is high.*

### **3.6.3 Risk-taking behaviour and export customer dynamism**

Risk taking may be most beneficial when there are changes taking place in the environment: these changes in consumer tastes and needs provide opportunities that are new and are yet underexploited by competitors, and as a result, large returns may be obtained by risk taking. When the environment is stable and entirely predictable, there are fewer underexploited market opportunities, and the returns available from taking risks may not be so attractive. Hughes and Morgan (2007) believe that risk-taking orientation prevents firms from inertia and inaction. Although risk-taking can entail cost and increase the danger of failure for exporters, this study agrees with Hughes and Morgan (2007, p.653) that “*where customer demands change incessantly [...] firms need to demonstrate a willingness to take risks and challenge the existing order of business to secure performance*”. Accordingly this study proposes that:

**H15:** *The positive association between export risk-taking behaviour and export performance will be stronger when customer dynamism is high.*

### **3.6.4 Proactive behaviour and export customer dynamism**

Proactive behaviour might be most effective when the environment is in flux: the opportunities afforded by the changing environment provide the setting for the firm to be first and to exploit new market niches and new geographic markets ahead of competitors. If the environment is entirely predictable and static, there are fewer opportunities for the proactive firm to be proactive. Exporters can achieve competitive advantage by aligning the firm to be receptive to market signals and trends in customers' changing needs and preferences (Atuahene-Gima et al. 2005; Narver et al. 2005). Previous studies show that proactive behaviour can secure firms performance improvement (Narver et al. 2005; Wright et al. 1995). For example, Narver et al. (2005) find that by being attuned to changes and diversities in the marketplace proactive firms are better able to satisfy customers'

expressed and latent needs and preferences than competitors. Therefore, it is hypothesised that:

**H16:** *The positive association between export proactive behaviour and export performance will be stronger when customer dynamism is high.*

### **3.6.5 Competitive aggressive behaviour and export customer dynamism**

Competitive aggressiveness is also likely to be most needed when there is substantial competition for customer loyalty. Being aggressive may be less beneficial if the competition is few and far between. This is because competitive aggressiveness is focused more on growing existing markets better than competitors rather being the first to open up a new market. Hence, aggressive market share expansion, increasing existing customers' loyalty level, outsmarting competitors by mobilising resources to launch attack on competitors and establish advantage by launching offensive attack on competitors' customer base is requirements for business success in dynamic market environments (Lumpkin and Dess 1996). It can be said that "*such an emphasis on acquiring market share and customers by aggressively targeting rivals' weaknesses should improve performance*" in dynamic customer environments because "*it undermines competitors' ability to compete and restricts the ability of competitors to anticipate and respond*" (Hughes and Morgan 2007, p 654) to customer demands. Hence, this study hypothesises that:

**H17:** *The positive association between export competitive aggressive behaviour and export performance will be stronger when customer dynamism is high.*

### **3.6.6 Autonomous behaviour and export customer dynamism**

Autonomy allows for rapid and free maverick-like behaviour in the export marketplace (Lumpkin and Dess 1996). It allows for quick response to competitive actions and changes in consumer behaviour, and drives immediate exploitation of market opportunities. Accordingly, autonomy may be most critical when environments are in a state of fluctuation, and are changing rapidly. Thus,

**H18:** *The positive association between export autonomous behaviour and export performance will be stronger when customer dynamism is high.*

### **3.7 CHAPTER SUMMARY**

This chapter presents a discussion of the study's formal conceptual model and hypotheses development. Accordingly, a framework relating aggregate export EOB to export performance, moderators of the export EOB – export performance relationship, association of the individual EOBs with export performance, and the moderators of the individual EOBs – export performance relationships has been introduced. The RBV and the contingency theories of the firm are used as key theoretical underpinnings for the conceptual model. In drawing on the RBV, the model argues that export EOB, overall, is an intangible internal organisational resource that exporters use to generate superior competitive advantage in their export markets, and ultimately export EOB is argued to be a major determinant of export performance. Fundamentally, export EOB might predict export performance positively, however, the export EOB – export performance relationship might not always be positive. Drawing on the contingency theory, exporters' market orientation and the dynamism of export customers' needs and preferences are modelled as key contingencies that might moderate the relationship. Moreover, although an exporter's overall EOB might enable the firm to perform well in export markets, it is also true that some of the EOBs component elements might contribute very little or even work against export success. To address this issue, the model explores the conceptual link between each individual export EOB and export performance. The EOBs' association with export performance are also argued to be moderated by EMO and ECD. In the next chapter, the research methodology that is used for data collection is presented.

## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

#### **4.1 INTRODUCTION**

This chapter describes the research design that is employed to collect data for the study. Research design is an important issue because it ensures that the evidence that is collected is suitable for theory testing (Rindfleisch et al. 2008; de Vaus 2001). Given the study's research objectives and the system of hypotheses that have been developed earlier, it is important that a detailed research plan is outlined to explain how the research objectives and hypotheses are going to be tested. Accordingly, this chapter is organised into five parts meant to address the research design issues. The first part describes general data collection matters with a detailed explanation of the choice of cross-sectional research design for this study. The second section provides justification for the chosen survey administration methods. The third part of the chapter presents the questionnaire design activities. In the fourth part, an account is given on the pre-test design and process, and the fifth section reports on issues relating to the main survey study. Finally, a summary is provided to conclude the chapter.

#### **4.2 DATA COLLECTION MATTERS**

##### **4.2.1 Choice of a Cross-Sectional Research Design**

Survey design usage is prevalent among marketing researchers and practitioners as research questions are often asked to “understand, explain, and predict marketplace behaviors” (Rindfleisch et al. 2008, p. 261). Bryman (2004) defines a research design as a detailed blueprint that guides a research study towards achievement of its objectives. Kerlinger (1973) has identified a number of research designs (e.g. experimental, factorial, cross-sectional, longitudinal designs) that researchers could depend on when examining relationships between organisational variables. Churchill (2005) notes that cross-sectional and longitudinal (also referred to as panel) research designs are the principal forms of research design often used in marketing research. Combined, the two principal research designs should help researchers to address such critical research issues

as item construction, reliability assessment, response bias, nonresponse bias, informant qualification and construct validation (Rindfleisch et al. 2008).

A cross-sectional design refers to the collection of data on more than one case at a single point in time in order to assemble a body of data (both quantitative and qualitative) about two or more variables so that patterns of associations could be observed (Bryman 2004). In contrast, longitudinal research design spans over a longer period of time. Essentially, a longitudinal design is an extension of cross-sectional design in terms of time, and is able to deal better with such issues as common method variance (henceforth CMV) and causal inferences (henceforth CI) than cross-sectional design (Rindfleisch et al. 2008). Thus, in order for researchers to minimise the threat of CMV bias and to enhance CI, survey based researchers are encouraged to use three data collection strategies, “(1) employing multiple respondents, (2) obtaining multiple types of data, or (3) gathering data over multiple periods” (Rindfleisch et al. 2008, p.262). Longitudinal research design helps to address these issues.

However, the extra demand for expenditure in terms of cost and time in longitudinal designs means that it is practically prohibitive to implement it in academic research faced with limited budgets and time restrictions. In the particular case of a doctoral study that often demands three to four-year completion with limited budgets the longitudinal design is a less desirable option.

In addition, the problem of attrition and the lack of clear guidelines regarding when to conduct further waves of data collection have made longitudinal design less frequently implemented (Bryman 2004). Moreover, there have been criticisms regarding panel conditioning effect, whereby informants' continued participation in a study affects the way they respond to subsequent questions (Bryman 2004). As a result, “longitudinal survey research is easier to advocate than to implement...” (Rindfleisch et al. 2008, p.262).

In view of the limitations associated with longitudinal research design, especially its demand for enormous commitment of financial cost and time, this study chose to use a cross-sectional research design to examine the relationships reported earlier in the conceptual model. In fact, it is evident that the majority of EO

studies, both at firm-wide and export levels have opted for cross-sectional research designs. Key exceptions are Zahra and Covin (1995) and Wiklund (1999). These studies have addressed the timing issue in EO research. Yet, Lyon, Lumpkin and Dess (2000) recommend that the timing issue in cross-sectional EO research can be addressed by incorporating three-year lagged data in cross-sectional survey studies.

Additionally, the problems of data collection and the sophisticated statistical techniques required to analyse longitudinal data can also explain why cross-sectional research continues to dominate the EO literature (Chandler and Lyon 2001). For example, Lyon, Lumpkin and Dess (2000) concede that the risk of attrition of informants due to departure from the firm, job changes within a firm and loss of interest in the research increase when the study period gets longer. Rindfleisch et al. (2008) suggest that the benefits of longitudinal research designs (e.g. reducing CMV bias and increasing CI) can be achieved in cross-sectional research designs through the use of multiple respondents, multiple data sources, or multiple periods.

Consistent with the above recommendations, a retrospective questionnaire was developed for this study, and multiple informants were contacted in each exporting organisation. Managers' faulty memory and the depiction of the past in a positive manner by managers have been cited as major problems associated with retrospective questionnaires (Golden 1992). However, this study followed Golden's (1992) strategies for reducing errors in retrospective accounts. Firstly, Golden (1992) suggests that managers are more likely to provide accurate information on behavioural accounts than accounts of their beliefs and intentions. In the case of the current study, respondents were explicitly asked to focus on their firms' actual behaviours rather than their personal beliefs. Secondly, Golden (1992, p. 856) recommends that "managers should be adequately motivated not only to participate in a study, but also to provide accurate information ". In this study, respondents were continuously reminded about the need to provide honest and accurate responses to the questions asked. Moreover, this study conducted vigorous validity and reliability assessments (see chapter six), which could attenuate the perceived advantages associated with longitudinal design (Rindfleisch et al. 2008; Golden 1997; Miller et al. 1997).



As indicated earlier, existing EO research has largely followed a cross-sectional research design for data collection (e.g. Wiklund and Shepherd 2005; Covin and Slevin 1989; Balabanis and Katsikea 2003). As such, cross-sectional designs can serve as a satisfactory alternative to longitudinal designs if they are well designed and implemented. In many respects, they are powerful tools for survey data collection (Rindfleisch et al. 2008). According to de Vaus (2001), cross-sectional dataset is a useful means of evaluating and modifying theoretically derived *a priori* models. In this regard, the patterns of association between constructs of interest can be compared by evaluating the logic of the *a priori* theoretical arguments (Cadogan, Cui and Li 2003). As such, examining the associations of EOB and its components with export performance using cross-sectional data should help to provide invaluable additions to knowledge. Thus, a cross-sectional research design was adopted for the current study.

#### **4.2.2 Survey Administration Method**

Having described and chosen a cross-sectional research design as the most plausible approach to collecting data to accomplish the research objectives of this study, it is also imperative to choose a feasible data collection method. Several survey-based data collection methods are available including face-to-face interviews, telephone interviews, online questionnaires and mail questionnaires (Churchill 1995). In the paragraphs that follow, each survey administration method is evaluated in relation to this study's research objectives.

Firstly, given the large number of exporting firms that needed to be contacted and given the number of questions that had to be asked, face-to-face interview method was not a preferred method for the current study because it was not convenient in terms cost and time. Moreover, this study requires collecting information from exporters located across the entire United Kingdom and Northern Ireland, it would be too costly to contact the firms for face-to-face interviews (Churchill 2005). This is notwithstanding the fact that face-to-face interview method generally ensures high response rates (Bryman 2004).

Secondly, a telephone interview was also not chosen for this study because it was an inconvenient and uncomfortable method given the sensitive nature of the data that needed to be collected. For example, managers may well have needed longer time to search for information on sales and profit figures, which practically could not be done over the phone, especially when the questionnaire was lengthy. In addition, given the sensitivity of information that were collected and the need to guarantee respondents complete confidentiality, it could make respondents feel uneasy to complete the questionnaires over the telephone. Given these limitations, it is, therefore, not surprising to find that export researchers rarely use this method for the collection of survey data.

Thirdly, online/email questionnaire method is another alternative data collection method that could be used (McDaniel and Gate 2001). This method usually involves either emailing the questionnaires or sending a web link containing the questionnaire to the respondents to complete and return to the researcher (Dillman 2000). A number of benefits associated with this method have been cited. Among these are: ease of reaching large numbers of potential respondents who are geographically spread, less paper work, ease of administering to a sample selected online, and ease of transferring data onto a spreadsheet for analysis (Tse et al. 1995). Unfortunately, research also shows that the online/email method can be a less efficient method of data collection because they typically take a considerable amount of time and financial resources to create, distribute and collect (Weible and Wallace 1998). Also, in some companies, there are strict policies against accepting email attachments due to the risk of virus infection. As a result, the online/email method was not deemed as the best data collection method for the current study.

Given the problems associated with the face-to-face interview, telephone interview and online/email methods, the mail questionnaire method was chosen for the current study with the consideration of its advantages and disadvantages. With respect to its advantages, first, compared to the other survey data collection methods, the mail questionnaire method is relatively cheap (Dillman 2000). Second, the mail questionnaire method was chosen given that the targeted firms were geographically widely dispersed across the United Kingdom and Northern

Ireland (Bryman 2004). Third, the mail questionnaire technique allowed the respondents to work at their own pace (Churchill 2005). Fourth, the method offered an opportunity to a dispatch large quantity of questionnaires at the same time (Dillman 2000). Fifth, the mail questionnaire method made it possible for the study to control for interviewer effect and interview variability (Churchill 1995). Overall, it was a more convenient method for collecting data for the current study compared to the other methods as respondents were able to search for information and schedule the whole questionnaire completion process around other commitments.

However, there are some shortcomings associated with the mail survey method. First, a major drawback associated with the mail survey method is low response rates and non-response bias (Rindfleisch et al. 2008; Churchill 2005). A low response rate can compromise the choice of statistical techniques that can be used. It also gives the appearance of a poor quality study (Magnione 1995). Where there are significant differences between responding and non-responding informants, non-response bias is introduced and this can render generalisations beyond the sample inappropriate (Armstrong and Overton 1977; Blair and Zinkhan 2002).

Despite these setbacks, the mail survey technique is a useful data collection method as a well designed and administered survey can help to reduce the adverse effect of the technique (Churchill 2005). A number of methodological and statistical procedures have been recommended for reducing the pitfalls associated with the mail questionnaire method. For example, Dillman (2000) and Churchill (2005) suggest that one way of increasing response rate is to write a good covering letter explaining the reason for the research. In addition, it is recommended that questionnaires should be accompanied by self-addressed return envelopes. Furthermore, following up on non-respondents, clear instructions and an attractive questionnaire layout, starting the questionnaire with more interesting questions and reserving sensitive personal information the end of questionnaire, and providing incentives for successful participation in the research are some other procedural measures that could increase response rate (Blair and Zinkhan 2002).

The drawbacks associated with non-response bias can be estimated through statistical procedures and appropriate adjustments can be made accordingly (Armstrong and Overton 1977). Moreover, it can be argued that non-response error is not unique to mail questionnaire method alone as it is acknowledged as a major problem in survey research in general (Rindfleisch et al. 2008; Churchill 2005; Magnione 1995). The low response rate and non-response bias issues are further discussed in section 4.5.6. It is important to state that in the current study a few questionnaires were completed on the telephone when requested by a respondent. Additionally, upon the request of respondents some questionnaires were also delivered via email.

### **4.2.3 Choice of Export Organisations**

In chapter three, it was hypothesised that export performance could be determined by firm's export entrepreneurial orientation level. To test this hypothesis, the sampled organisations should show some variations with respect to their export activities. Accordingly, organisations with significant export operations were deemed suitable for the current study. This choice is consistent with prior studies on export context EO (e.g. Balabanis and Katsikea 2003). As a result, an effort was made in the current study to locate a sampling frame that contained a large number of active exporting organisations (see details in sections 4.4.5 and 4.5.2).

### **4.2.4 Choice of Respondents**

The source of information for a study is important for the accuracy of the study results, without which, the results and conclusions drawn cannot be generalised to the intended population. As outlined in the objectives and the system of hypotheses of the current study, it is important that detailed information on the export operations of all organisations studied is provided. From this perspective, the most effective way to generate information on the export organisations is directly from key decision makers in the organisations. In the case of the current study, key decision-makers directly responsible for the firms' export operations were most suitable informants. This is because these groups of informants are most likely to be knowledgeable about the firm's export activities and therefore should be able to provide accurate information on the key constructs of interest to the current study.

Previous firm-wide EO studies have used various respondents including owners, Chief Executive Officers (henceforth CEOs), presidents, managing directors, general managers, marketing managers, and sales managers (e.g. Baker and Sinkula 2009; Renko, Carsrud and Brännback 2009; Matsuno, Mentzer and Ozsomer 2002; Covin, Slevin and Green 2006; Wang 2008). Indeed, the majority of firm-wide EO studies have used single informants in the target organisations, often managers who occupy senior management positions (e.g. Atuahene-Gima et al, 2005; Covin and Slevin 1989; Zahra 1996; Zahra and Covin 1995). Similarly, in export context EO studies researchers have used CEOs, presidents, export directors and export managers as key informants (e.g. Zahra and Garvis 2000; Robertson and Chetty 2003; Robertson and Chetty 2000). It is argued that because of their extensive involvement in their firms' export operations, export managers are practical and reliable sources for generating data on export activities and export performance. However, due to renewed calls on researchers to enhance CMV biases, contacting multiple informants is highly recommended (Rindfleisch et al. 2008; Chang, van Witteloostuijn and Eden 2010).

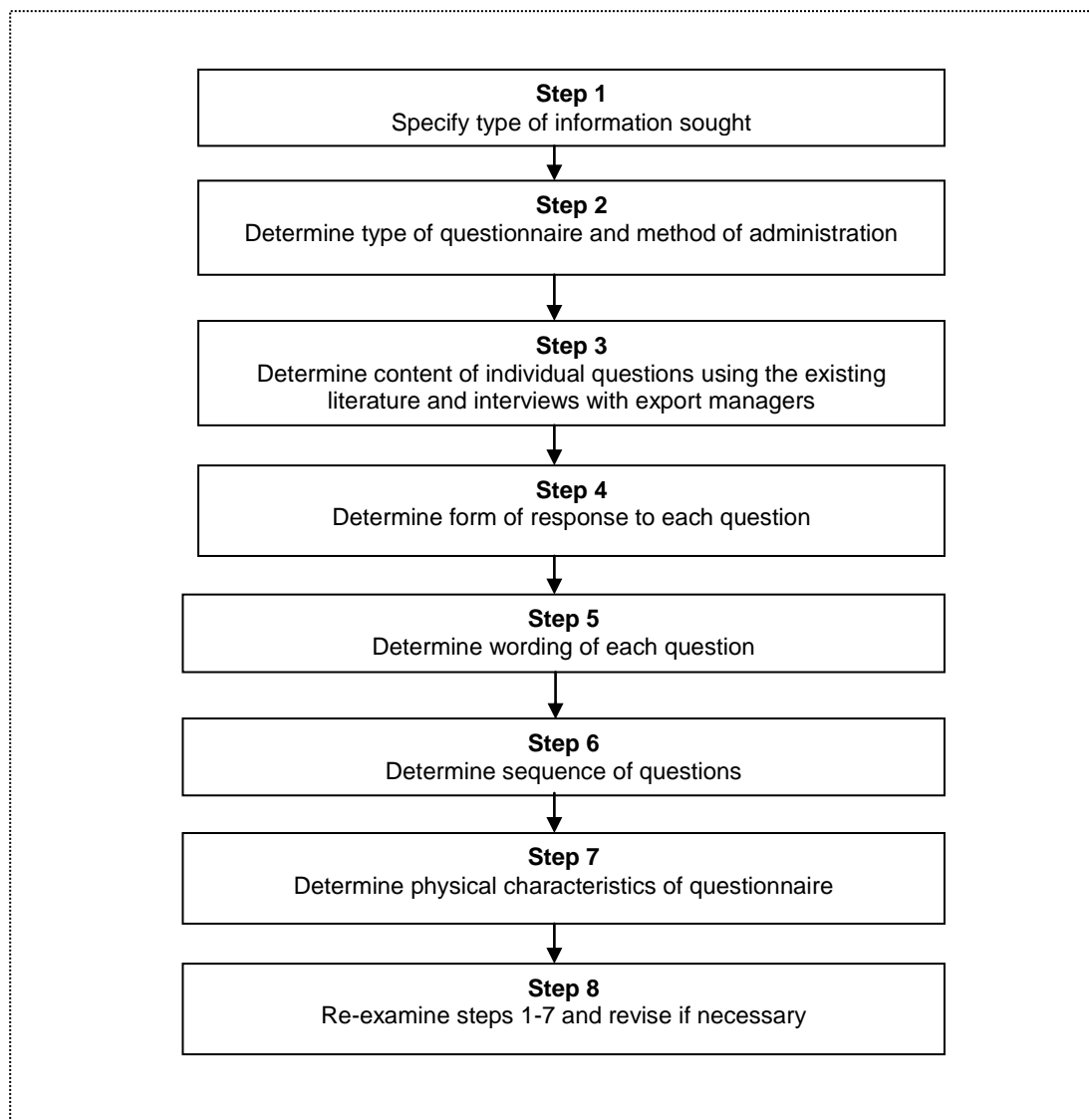
Consequently, in line with the existing literature, managers at senior management level of the exporting organisations were chosen as key informants for the current study. In fact, previous export EO studies (e.g. Zahra and Garvis, 2000; Knight and Kim, 2009; Knight and Cavusgil, 2004) have shown confidence in the use of such managers. Consistent with emerging research practice (e.g. Chang, van Witteloostuijn and Eden 2010), additional export performance data was collected from finance directors and accountants within the responding firms (see section 4.5.6.2 for a detailed discussion).

### **4.3 QUESTIONNAIRE DESIGN**

Having proposed a plan for data collection, this section provides a detailed description of the questionnaire design process. That is, issues surrounding the questions and statements that were included in the questionnaire. Indeed, the psychometric procedures suggested by the literature were followed in designing the questionnaire (Churchill 1979; DeVellis 2003). Figure 4.1 is a representation of the specific procedures that were followed to design questionnaires for the current study. The development of the questionnaire and the types of information

sought in the questionnaire were reflective of the study's conceptualisations and hypotheses.

Figure 4.1: Questionnaire Development Procedure



*Adapted from Churchill (1979)*

### 4.3.1 Type of Information Sought

In line with the objectives of the current study, the existing literature was studied to locate suitable scales to measure the key constructs of interest. In order to find the information outlined in figure 4.2, the scale-search task began by looking at existing scales that measured the dimensions of EOB, particularly with export operation in mind. Where these were found in the literature, they were adapted to fit the definitions developed in chapters two and three. The same task was undertaken with respect to the other constructs of interest to the current study. In

addition to the literature search, 11 face-to-face interviews were held with export managers with the intention of incorporating their views into the wording of the questions in the questionnaire.

In the sections that follow, detailed information on the proposed measures of these constructs is presented. Following various recommended purification and refinement procedures (Anderson and Gerbing 1998; Churchill 1979; DeVellis 2003; Netemeyer, Bearden and Sharma 2003; Spector 1992), the proposed measures were purified, refined and validated as presented later in chapters five and six. In these two chapters, this study showed that the original measures capturing these constructs were adjusted to meet recommended measurement requirements.

Figure 4.2: Information Sought from Respondents

<p><b>The export EOBs</b></p> <ol style="list-style-type: none"> <li>1. Export product innovation intensity</li> <li>2. Export product innovation novelty</li> <li>3. Export risk-taking</li> <li>4. Export proactiveness</li> <li>5. Export competitive aggressiveness</li> <li>6. Export autonomy</li> </ol>
<p><b>Export performance</b> Perceived satisfaction with export performance</p>
<p><b>Export environment</b></p> <ol style="list-style-type: none"> <li>1. Export customer dynamism</li> </ol>
<p><b>Export market orientation</b></p> <ol style="list-style-type: none"> <li>1. Export market intelligence generation</li> <li>2. Export market intelligence dissemination</li> <li>3. Export market intelligence responsiveness</li> </ol>
<p><b>Firm Profile Information</b></p> <ol style="list-style-type: none"> <li>1. Total Employee number</li> <li>2. Business experience</li> <li>3. International experience</li> <li>4. Total annual turnover</li> <li>5. Export destinations</li> <li>6. Industry characteristics</li> <li>7. Size of export sales</li> <li>8. Business type</li> <li>9. Customer groups</li> <li>10. Regions served</li> </ol>

### **4.3.2 Export EOB**

A key objective of this study was to examine the association between export EOB (and its constituents) with export performance. In order to properly model these relationships, export context specific measures of the EOBs are required. These measures are currently not available in the existing literature; hence it was important that these were developed. To develop new measures of the export EOBs, this study followed the entire questionnaire development procedure outlined in figure 4.1 and information sought as presented in figure 4.2. This study used Lumpkin and Dess's (1996) conceptual piece and Miller and Friesen's (1982) work on EO as guiding conceptual frameworks to define and to specify EOB and its dimensions. Accordingly, an export EOB was defined in the current study as the tendency of firms to undertake intensive and novel product innovation, risk-taking, proactive, competitively aggressive and autonomous behaviours in their export operations.

There are several scales for measuring EOB in the literature (e.g., Miller 1983; Covin and Slevin 1989; Wang 2008; Hughes and Morgan 2007; Jambulingam, Kathuria, and Doucette 2005). However, many of these existing scales measure the construct at firm-wide level without consideration of specific export activities. Unfortunately, the few export studies that have studied aspects of EOB construct among exporting organisations have not developed new measures to tap only export-market relevant entrepreneurial activities (see measures used by Balabanis and Katsikea 2003, p.241; Robertson and Chetty 2000, p.231). Moreover, the literature shows that many of the existing scales tend to measure EO either as firm value, attitude or behaviour (e.g. Lee and Peterson 2000). However, the purpose of this study is to understand EOB as it pertains to export operations only. As such, it is necessary that new scales of export EOBs are developed. In this respect, the Lumpkin and Dess (1996), Covin and Slevin (1991) and Yeoh and Jeong (1995) conceptual pieces, and Jambulingam, Kathuria, and Doucette (2005), Wang (2008), Covin and Slevin (1989) and Miller and Friesen's (1982) empirical works provided useful guidelines.

In line with the existing literature as illustrated above, the six first-order dimensions of product innovation intensity, product innovation novelty, risk-taking, proactiveness, competitive aggressiveness and autonomy comprise the EOB



scale (see figure 4.2). Note that Lumpkin and Dess (1996) describe five dimensions of EO, however, product innovative behaviour was conceptualised in this study to comprise innovation intensity and innovation novelty following the argument of Miller and Friesen (1982). According to these scholars, the “entrepreneurial model [...] applies to firms that innovate *boldly* and *regularly* while taking considerable risks in their product-market strategies” (Miller and Friesen 1982, p.5). It is also in line with Miller and Friesen’s (1978; p. 923) view that innovative behaviour relates to “the number and novelty of new products and services which are introduced” by firms. This, therefore, brings the dimensions measured in the current study to six.

All items comprising the export product innovation intensity scale were measured on a 7-point Likert scale, with anchors at 1 = “strongly disagree” and 7 = “strongly agree”. A 7-point general rating scale, with anchors 1 = “less than” and 7 = “more than”, was used to measure the items tapping the export product innovation novelty scale. All items measuring export risk-taking, proactiveness, competitive aggressiveness and autonomy were measured by a general rating scale, with anchors 1 = “not at all” and 7 = “to an extreme extent”.

Accordingly, the product innovation intensity scale pertained to the number of new products a firm introduced to its export markets relative to its competitors’ product innovation outputs. As can be seen in figure 4.3, there were four items in this scale which were newly developed based on Lumpkin and Dess (1996), with adaptation from Jambulingam, Kathuria, and Doucette (2005) and Wang and Ahmed (2004). The product innovation novelty scale relates to the degree to which a firm’s new products are really different from its own existing products and/or its competitors’ new products. Five items measured this scale, which were newly developed largely based on Lumpkin and Dess’ (1996) conceptual piece.

The risk-taking scale captured the extent to which an exporting organisation commits its resources to export operations that have a great chance of failure. It also includes firm’s overseas market resource allocation decisions. This dimension was measured by six items. As can be seen in figure 3.4, items 1 to 4 were adapted from Venkatraman (1989) and Miller (1983) while item 5 and 6 were adapted from Jambulingam, Kathuria, and Doucette (2005).

The proactiveness scale captured the degree to which the exporting organisations recognised market opportunities and initiated relevant actions to exploit those opportunities ahead of competitors. It also relates to the extent to which the export organisations used their foresight to gain market leadership and to take advantage of emerging market opportunities. The scale was measured by six items as is reported in figure 4.3.

Based on the works of Lumpkin and Dess (1996) and Venkatraman (1989) competitive aggressiveness was measured by nine items (see figure 4.3). It involved all export activities relating to the intensity of an export organisation's tendency and efforts to outperform and undermine its industry competitors. It also comprised of export activities relating to targeting rivals' weaknesses, and efforts to undo competitors in the bid to achieve competitive goals.

Finally, in drawing on the work of Lumpkin and Dess (1996) and Jambulingam, Kathuria, and Doucette (2005), autonomous behaviour was used in this study to describe export activities relating to independent actions of export personnel within export units in bringing forth new export ideas or visions and carrying them through to fruition. Seven items measured the autonomy scale (see figure 4.3).

Figure 4.3: Scale Items for Export EOB

<b>Constructs</b>	<b>Measurement items</b>	<b>Item sources</b>
Product innovation intensity  1 = "strongly disagree" ; 7 = "strongly agree"	To what extent do you agree or disagree with the following statements?  1. Our company has produced more new products/services for our export markets than our key export market competitors during the past five years  2. On average, each year we introduce more new products /services in our export markets than our key export market competitors  3. Industry experts would say that we are more prolific when it comes to introducing new products/services in our export markets  4. Our key export market competitors cannot keep up with the rate at which we introduce new products/services in our export markets	Item 1 was adapted from Wang and Ahmed (2004). Items 2 to 4 were newly developed based on Lumpkin and Dess (1996) with adaptations from Jambulingam et al (2007).

Figure 4.3: Scale Items for Export EOB (*continued*)

Constructs	Measurement items	Item sources
Product innovation novelty  1 = "less than"; 7 = "more than"	Please rate the following statements in relation to your key export market competitors.  Relative to our main export competitors, <b>the products/services</b> we offer in our export market(s) are: <ol style="list-style-type: none"> <li>1. Radical</li> <li>2. Revolutionary</li> <li>3. Inventive</li> <li>4. Novel</li> <li>5. Creative</li> </ol>	All items were newly developed based on Lumpkin and Dess (1996)
Risk-taking  1 = "not at all"; 7 = "to an extreme extent"	To what extent do the following statements apply to the situation in your company? <ol style="list-style-type: none"> <li>1. Top export managers of our company, in general, tend to invest in high-risk export projects</li> <li>2. We make risky resource commitments in export projects</li> <li>3. Top export managers do not normally like to "play it safe" in this company</li> <li>4. This company shows a great deal of tolerance for high risk export projects</li> <li>5. Our export strategy is characterised by a strong tendency to take risks</li> <li>6. Taking chances is part of our export business strategy</li> </ol>	Items 1 to 4 were adapted from Venkatraman (1989) and Miller's (1983) "risk-taking" scales. However, 5 and 6 were adapted from Jambulingam et al (2005)
Proactiveness  1 = "not at all"; 7 = "to an extreme extent"	Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the number of your choice in the boxes provided. <ol style="list-style-type: none"> <li>1. We seek to exploit anticipated changes in our export market ahead of our rivals.</li> <li>2. We seize initiatives whenever possible in our export market operations.</li> <li>3. We act opportunistically to shape the export environment in which we operate.</li> <li>4. We are constantly seeking new opportunities to shape the export environment to our own advantage.</li> <li>5. Our foresight makes us a leader in our export market.</li> <li>6. We consistently try to position ourselves to meet emerging export market demands.</li> </ol>	All items were newly developed based on Lumpkin and Dess (1996) with information from Jambulingam et al (2007).

Figure 4.3: Scale Items for Export EOB (*continued*)

Constructs	Measurement items	Item sources
<p>Competitive aggressiveness</p> <p>1 = "not at all"; 7 = "to an extreme extent"</p>	<p>Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the number of your choice in the boxes provided.</p> <ol style="list-style-type: none"> <li>1. We intensely challenge export competitors to achieve competitive goals.</li> <li>2. We adopt an aggressive competitive stand in our export markets.</li> <li>3. We typically adopt an "undo-the-competitor posture.</li> <li>4. We tend to target our export competitors' weaknesses.</li> <li>5. We set ambitious export competitive targets</li> <li>6. We take hostile steps to achieve export competitive goals.</li> <li>7. Our actions towards export competitors can be termed as aggressive.</li> <li>8. We are responsive to the manoeuvres of our main export competitors.</li> <li>9. In dealing with our main export competitors, our company typically adopts a very competitive posture aiming at overtaking the competitors.</li> </ol>	<p>Items 1, 2, 7 and 8 were adapted from Jambulingam et al (2005).</p> <p>Items 3, 4, 5 and 6 were newly developed based on Lumpkin and Dess (1996). Item 9 was adapted from Wang (2008)</p>
<p>Autonomy</p> <p>1 = "not at all"; 7 = "to an extreme extent"</p>	<p>Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the number of your choice in the boxes provided.</p> <ol style="list-style-type: none"> <li>1. Key export strategies are decided by people within the export unit.</li> <li>2. In our export operations, export personnel behave autonomously.</li> <li>3. Export personnel act independently to carry out their ideas through to completion.</li> <li>4. Export personnel are self-directed in pursuit of export opportunities.</li> <li>5. Management approves of independent activities by export personnel to develop new export opportunities.</li> <li>6. Identifying new export business opportunities is the concern of all export personnel.</li> <li>7. New export business opportunities suggested by export personnel are acted upon by export decision makers.</li> </ol>	<p>Items 1-4 were newly developed items based on Lumpkin and Dess (1996). Items 5 -7 were adapted from Jambulingam et al (2005).</p>

### 4.3.3 Export Performance

The literature shows that export performance is a multi-dimensional construct comprising of economic and non-economic dimensions (Katsikeas, Leonidou and Morgan 2000; Sousa, Martínez-López and Coelho 2008; Zou and Stan 1998; Aaby and Slater 1989). Using the guidelines provided by Katsikeas, Leonidou and Morgan (2000), this study measured aspects of the firm's export economic performance. The literature suggests that objective or subjective measures could be used to assess export performance (e.g. Zou and Stan 1998).

However, Katsikeas, Leonidou and Morgan (2000) argue that although objective measures of export performance can be reliable indicators of performance, nonetheless, their operationalization can pose considerable problems such as the difficulty of distinguishing domestic and export business operations in reported data, concerns about comparability of financial data (i.e. differences in internal accounting practices), difficulty of obtaining objective data from small exporting ventures, and the problem of objective sources containing data that are not updated. Accordingly, Katsikeas, Leonidou and Morgan (2000) recommend the use of subjective primary measures as this form of export performance assessment has been proven to be more valid in tapping "the long-term aspects of export performance...and in determining the mode of performance most likely to influence strategic managerial decision making and actions" (p. 505). Additionally, Woodcock et al. (1994) suggest that it is appropriate to use subjective measures when: (a) informants are unable or unwilling to provide objective financial indicators; (b) major differences in financial reporting exist in the firms' home and host countries; and (c) major differences in accounting practices across difference countries hamper reconciliation of variations. Moreover, several other studies have reported strong correlation between subjective and objective measures of performance (e.g. Morgan, Kaleka, and Katsikeas 2004; Dess and Robinson, 1984; Hart and Banbury 1994; Naman and Slevin 1993; Pearce and Robbins 1987). For example, Morgan, Kaleka, and Katsikeas (2004) find correlations between objective and subjective measures as high as 0.81, and in an operations management study, Ketokivi and Schroeder (2004) find that subjective measures satisfactorily tap firm performance.

In using primary subjective measures of export performance, scholars recommend the adoption of a multi-item scale (e.g., Katsikeas, Leonidou and Morgan 2000; Martínez-López and Coelho 2008; Zou and Stan 1998; Matthyssens and Pauwels 1996). Accordingly, the export performance scale used in the current study comprised of variables that captured managers' perceived satisfaction with (a) export market share, (b) the export sales volume, (c) export sales growth, (d) new export market entry, and (e) export profitability. Past export studies have particularly found these subjective items to be reliable and valid measures of export performance (e.g., Racela, Chaikittisilpa and Thoumrungroje 2007; Cadogan, Diamantopoulos and Siguaw 2002; Kuivalainen, Sundqvist and Servais 2007). Thus, export performance was measured by a five-item scale asking respondents to indicate how satisfied they were with the performance of their export operations (see figure 4.4). All items used in the export performance scale were sourced from Cadogan, Diamantopoulos and Siguaw (2002), and were anchored at 1 = "very dissatisfied"; 7 = "very satisfied".

Katsikeas, Leonidou and Morgan (2000, p. 504) caution that subjective primary performance measures are often "prone to method bias and disfavor easy replication, particularly if limited to a single key informant" in exporting organisations. One way of removing this bias is by "comparing firm executives performance evaluations to those of industry experts and whenever possible to direct competitors in export markets" (Katsikeas, Leonidou and Morgan 2000, p. 505). However, as stated earlier, objective secondary sources of data can also suffer from severe errors and this can raise concern over the quality of such data.

Nevertheless, this study drew on Luo et al (2007) to collect additional performance data from two independent sources approximately eight months after the main survey. This additional study involved sending a separate questionnaire to 50 finance directors or accountants of the responding firms for information on the subjective performance measures. A total of 20 responses were received. Additional fact-based data (i.e. total annual turnover, export turnover, and annual pre-tax profit, number of employees and export destinations) were also collected from the firms' annual reports and websites. The additional performance data was subsequently compared with those provided by the export managers in the main study survey. As is discussed later in section 4.5.6.2, no substantial differences

were found between the two sources of performance data. Accordingly, this study is confident that the subjective performance measures used here are acceptable measures of export performance (Racela, Chaikittisilpa and Thoumrungroje 2007; Kuivalainen, Sundqvist and Servais 2007).

Figure 4.4: Scale Items for Export Performance

Constructs	Measurement items	Item sources
Export performance 1 = "very dissatisfied"; 7 = "very satisfied"	Over the past three years, how satisfied have you been with the overall performance of your company along the following dimensions?  1. Export market share 2. Export sales volume 3. Export sales growth rate 4. New export market entry 5. Export profitability	All items were sourced from Cadogan et al. (2002) "export performance" scale

#### 4.3.4 Export Customer Dynamism

Export customer dynamism indicates the perceived degree of change and diversity in export customers' needs and preferences. Dynamic export customer environments are also associated with increasing variations in export customers' buying behaviour and diversity in product requirements. To capture the customer dynamism construct, the environment scale developed by Miller and Friesen (1982) was adapted for the current study. All items were measured on a 7-point rating scale, whereby respondents were asked to indicate the extent to which a series of statements applied to their export customer's consumption activities, with anchors at 1 = "not at all" and 7 = "to an extreme extent". The export customer dynamism scale items are presented in figure 4.5.

Figure 4.5: Scale Items for Export customer dynamism

Constructs	Measurement items	Item sources
Export customer dynamism  1 = "not at all" and 7 = "to an extreme extent"	Please answer the following questions by circling the number that best describes the actual condition across your company's export market environments.  In our export market environments...  1. The nature of the competition in our export markets varies from one product line to another  2. Our export customers' buying habits are different for all our products  3. Our export customers have very different product requirements  4. The challenges/risks in our export market vary from one product line to another.  5. Our export operations are very diverse	All items were adapted from Miller and Friesen's (1982) environment scale.

### 4.3.5 Export Market Orientation

EMO refers to the generation, dissemination and responsiveness to export market intelligence (Cadogan, Diamantopoulos and Mortanges 1999). The degree of firms' EMO behaviour was measured using Cadogan et al.'s, (2001) shortened version of the Cadogan, Diamantopoulos and de Mortanges (1999) export market-oriented behaviour scale, which captured the three dimensions of export market intelligence generation, dissemination, and responsiveness respectively. One extra item was sourced from Cadogan et al. (2006) to tap aspects of responsiveness. The scale has been found to have cross cultural validity and high internal reliability (e.g., Murray et al. 2007). All items tapping the three components of EMO were directed towards the firms' export market operations. In this context, respondents were asked to indicate the extent to which they agreed with a series of statements relating to EMO activities. Seven-point Likert scales were used and were anchored at 1 = "very strongly disagree" to 7 = "very strongly agree". A complete list of the items used to assess the EMO construct is presented in Figure 4.6.



Figure 4.6: Scale Items for Export Market Orientation

Constructs	Measurement items	Item sources
Export Intelligence Generation 1 = "strongly disagree"; 4 = "neutral"; 7 = "strongly agree"	Using the scale below, please indicate the extent to which you agree or disagree with the following statements by putting the number of your choice in the boxes provided. <ol style="list-style-type: none"> <li>1. In this company, we generate a lot of information concerning trends (e.g., regulations, technological developments, political, economic) in our export markets.</li> <li>2. We constantly monitor our level of commitment and orientation to serving export customer needs.</li> <li>3. We are fast to detect fundamental shifts in our export environment (e.g., regulation, technology, economy).</li> <li>4. We periodically review the likely effect of changes in our export environment (e.g., regulation, Technology).</li> <li>5. We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.</li> </ol>	All items used here were sourced from Cadogan et al.'s, (2001) "export market-oriented behavior" scale.
Export Intelligence Dissemination 1 = "strongly disagree"; 4 = "neutral"; 7 = "strongly agree"	Using the scale below, please indicate the extent to which you agree or disagree with the following statements by putting the number of your choice in the boxes provided. <ol style="list-style-type: none"> <li>1. Too much information concerning our export competitors is discarded before it reaches decision makers. R</li> <li>2. Information that can influence the way we serve our export customers takes forever to reach export personnel. R</li> <li>3. Important information about our export customers is often 'lost in the system'. R</li> <li>4. Information about our export competitors' activities often reaches relevant personnel too late to be of any use. R</li> <li>5. Important information concerning export market trends (e.g. regulation, technology) is often discarded as it makes its way along the communication chain. R</li> </ol>	All items used here were sourced from Cadogan et al.'s, (2001) "export market-oriented behavior" scale.
Export Intelligence Responsiveness 1 = "strongly disagree"; 4 = "neutral"; 7 = "strongly agree"	<ol style="list-style-type: none"> <li>1. If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.</li> <li>2. We are quick to respond to significant changes in our competitors' price structures in foreign markets.</li> <li>3. We rapidly respond to competitive actions that threaten us in our export markets.</li> <li>4. We are quick to respond to important changes in our export business environment (e.g., regulation, technology, economy).</li> </ol>	Items 1 to 3 were sourced from Cadogan et al.'s, (2001) "export market-oriented behavior" scale. Item 4 was sourced from Cadogan et al. (2006).

R = Reversed items

### 4.3.6 Profiling Variables

There were a total of 10 questions used to profile the exporting organisations that were sampled for the study. In fact, one of the profile variables (i.e. firm size) was used as a control variable in the conceptual model in accordance with prior research. Many of the profile variables were sourced from Cadogan's (1997) PhD study. The 10 profile questions are provided in figure 4.7.

In line with previous research, firm size was measured by total employee number and total annual turnover. Specifically, prior entrepreneurship (e.g. Wang 2008) and export studies (e.g. Balabanis and Katsikea 2003; Cavusgil and Nevin 1981; Cavusgil & Naor 1987) have measured firm size in this way.

Figure 4.7: Profiling Variables

1.	Approximately how many full-time staff does your company currently employ?	
2.	On average, what has been the total sales turnover of your company over the past three years?	
3.	On average over the past three years, approximately what percentage of your total sales turnover has been generated by exports?	
4.	Approximately how long has your company been in business?	
5.	Approximately how long has your company been exporting?	
6.	In which industry does your company operate?	
7.	Approximately what percentage of your company's export sales is generated by...	
	Physical product? <input type="checkbox"/>	Services? <input type="checkbox"/>
8.	Approximately what percentage of your company's export sales is generated by...	
	B2C? <input type="checkbox"/>	B2B? <input type="checkbox"/>
9.	Which of the following destinations does your company export to?	
	EU <input type="checkbox"/>	Eastern Europe <input type="checkbox"/>
	North America <input type="checkbox"/>	Mainland China <input type="checkbox"/>
	Other Asian Countries <input type="checkbox"/>	South & Central America <input type="checkbox"/>
	Middle East <input type="checkbox"/>	Australia/New Zealand <input type="checkbox"/>
	Africa <input type="checkbox"/>	
10.	Approximately how many countries does your company export to?	

Given that this study was interested in active exporting organisations, the firms were asked to indicate the percentage of annual sales that was accounted for by export sales (Knight 2001). This measure, therefore, helped to establish whether export operation was a major aspect of the firm's business activity.

Moreover, the questionnaire assessed the business experience (measured by the number of years the firms have been in business) and international experience (measured by the number of years the firms have been exporting). To ascertain the industries that the firms operated in, and given the large number of industries that could be thought of, it was important to ask the respondents to indicate the industry within which their firms operated (Wang 2008). This way of collecting industry information is consistent with the literature (e.g. Wang 2008; Wiklund and Shepherd 2005; Robertson and Chetty 2000). Additionally, respondents were asked to indicate the percentage of export sales that they derived from physical goods and from services. The questionnaire also measured the kind of business the firms were operating in, namely whether business-to-consumer and/or business-to-business operations. Finally, to evaluate the scope of the firm's international operations, respondents were asked to choose from a list of nine regions that served as their dominant export destination (Kuivalainen, Sundqvist, and Servais 2007). To further evaluate the scope of the firm's export operations, the respondents were asked to state the number of countries that their firms exported to (Kuivalainen, Sundqvist, and Servais 2007). These profile variables helped to develop an initial impression about the characteristics of the firms that participated in the study.

#### **4.3.7. Other Variables**

For the purposes of future research that lies outside the objectives of this study, a number of additional variables were included in the questionnaire. Specifically, three sets of questions were included to tap the export resource coordination strategy of the firms (Johnson, Lee and Saini 2003; Sanchez 1995). Additionally, in drawing on the works of Miller (1983) and Zahra and Garvis (2000), questions measuring export market environment hostility and competitive intensity were also included. Moreover, questions capturing the intensity and the novelty of innovative ideas and processes were also added to the questionnaire. Furthermore, questions measuring industry life cycle (Covin and Slevin 1990; Lumpkin and

Dess 2001), and business life cycle (Kazanjian and Drazin 1989) were also included. Finally, several additional export performance measures were also included. In particular, variables were included to capture export product innovation success (Atuahene-Gima, Slater, and Olson 2005), new export market performance (Atuahene-Gima 1995), export sales and profitability growth, and overall performance (Cadogan, Cui and Li 2003). Details of all these additional variables are provided in appendix A 4.1.

#### **4.3.8 Response Format**

Various response formats have been recommended in questionnaire based survey research. These include open-ended answers, multidichotomous answers, dichotomous answers, and close-ended answers (Churchill 1995). A closed-ended answer format was selected for a number of reasons. Firstly, the closed-ended answer format reduced the possibility that questions would be misinterpreted. Secondly, closed-ended answers were especially appropriate when responses must be compared across multiple respondents and when the questionnaire was to be administered by mail (Churchill 1995). Thirdly, a closed-ended response format could help to minimise respondent fatigue because it reduces the time taken to complete the questionnaire. Lastly, it is a faster and less expensive data collection procedure over other response formats (DeVellis 1991). To avoid repetitiveness, for some questions, respondents were asked to fill in boxes with appropriate values provided for each corresponding questions, while other questions required respondents to circle the number that best reflected their opinions. In some instances, respondents were asked to tick appropriate boxes.

Another important issue considered when developing the questionnaires was the type of measurement scale. Interval and ratio scale are predominant among export EO researchers. This is because it enables researchers to perform parametric statistical analysis that is not possible with ordinal and nominal scales (Churchill 2005). This study also used interval or ratio scales because the constructs of interest in this study were conceptualised as continuous and were viewed as normally distributed in the population. Thus, a bell-shaped curve model was expected, thus allowing for the use of parametric statistics for analysis (Hair et al. 2006). Following on from this, multiple rating scales were used to rate

respondents' responses. These included Likert type and general rating scales with different anchors appropriate to each question asked.

#### **4.3.9 Physical Characteristics of the Questionnaire**

According to Churchill (1995), the physical characteristics of the questionnaire can have a significant impact on respondents' cooperation and willingness to participate in a study. This is particularly critical in mail surveys where a poor questionnaire may cause respondents to assume that the research is unimportant, leading to low responses (DeVellis 2003). It was, therefore, important to ensure that the questionnaire looked physically presentable and professionally delivered (DeVellis 2003). In order to determine the physical format of the questionnaire, good quality office paper was used for the questionnaires and the questionnaires were clearly printed. Furthermore, the questionnaires were accompanied with cover letters that were printed on Loughborough University letterheads. The advantage of including a professionally written cover letter was that it helped to increase the credibility of the study.

Again, DeVellis (2003) suggests that long questionnaires may place an increased burden on respondents and this may result in a low response rate. However, in considering the length of the questionnaire in this study, the cost of collecting data and the comprehensiveness of information needed were considered. On that note, initially a 14-page questionnaire was developed as this ensured the information collected was comprehensive. The questionnaire was made into a booklet rather than stapled paper; a key advantage was that it facilitated easy handling and as a result portrayed an image of high quality. In addition to the above precautionary measures, the questions were carefully and properly numbered and consistently spaced. This helped to increase the clarity and credibility of the study to the respondents.

The length of a questionnaire can have also significant impact on response rate (Netemeyer, Bearden and Sharma 2003; DeVellis 2003). Moreover, DeVellis (2003) suggests that researchers should have a questionnaire length that is capable of demonstrating acceptable reliability. Shorter questionnaire length could reduce reliability but can tend to yield higher response rates. Respondents may be reluctant to complete longer questionnaires because of the amount of time it

may take to complete them (DeVellis 2003; Churchill 2005). Thus, longer questionnaires may result in lower response rates. Furthermore, to be able to undertake advanced statistical analyses researchers need the majority of their questionnaires returned fully completed. As a result, DeVellis (2003) recommends that researchers should optimise the length of their questionnaires by making a trade-off between a low response rate and high reliability. This thesis opted for high reliability and designed longer questionnaire that adequately captured the constructs in the conceptual framework. However, as discussed earlier, recommended procedures were followed to ensure that a reasonable response rate was achieved.

## **4.4 PRE-TESTING**

### **4.4.1 Expert Judgment on the Questionnaire**

A useful research assessment activity is the evaluation of face validity (Netemeyer, Bearden and Sharma 2003). According to Hair et al. (2006), face validity must be established prior to any theory assessment. This is because an understanding of the content and meaning of a measure is critical if any measurement model is to be expressed and correctly specified (Hardesty and Bearden 2004). Face validity assessment is particularly important when items in a questionnaire are borrowed from previous studies (Hair et al. 2006). Moreover, face validity assessment is important when new measures are developed and when existing measures are adapted to new contexts (Hair et al. 2006). The content of a scale should be both relevant and representative of the theoretical constructs if face validity is to be established (Ping 2004). Thus, face validity refers to the degree to which a scale's items represent a proper sample of the theoretical content domain of a construct (Nunnally and Bernstein 1994). That is, face validity reflects the extent to which a scale mirrors what it is expected to measure. This study followed exemplary prior studies to develop all measures used in this study (e.g. Covin and Slevin 1989; 1990; Zou, Taylor, and Osland 1998; Cadogan et al. 1999; Lumpkin and Dess 2001; Miller 1983; Miller and Friesen 1982).

Nunnally and Bernstein (1994) suggest that the item pools for all constructs must be subjected to an expert review. In this study all measures of the constructs were

subjected to a thorough review by (1) academics doing research in entrepreneurship, strategy, marketing and/or exporting, and (2) experts in questionnaire design and scaling. Specific areas of review by academic experts were the definition of the constructs and the extent to which the scale items tapped the constructs' definition. The focus was on improving the wording and physical look of the questionnaire. The two principal research advisors (i.e. supervisors) in this study continuously commented on the scale items until an agreement was reached on their face validity. These were then subject to external review, with many of the reviews taking place at national and international conferences and doctoral colloquia. The questionnaire was also given to a professor at the psychology department who specialises in survey design for her comments on the final questionnaire.

#### **4.4.2 Personal Interview Pre-tests**

In addition to the comments from academic experts and external reviewers on the questionnaire quality, the final questionnaire was further pre-tested with a selected number of export managers for further item refinement. At this stage, personal face-to-face interviews were held with 11 export managers in nine export organisations. The export managers had previously participated in a series of interviews with the researcher as part of the item development process. As a result of this review, a few overlapping and confusing items were removed from the initial questionnaire (appendix A4.2). Some items were also reworded upon the suggestion of the managers (Hardesty and Bearden 2004).

Despite the above efforts to improve the questionnaire structure, a major issue that could hardly be resolved at this stage was the length of the questionnaire. Although all the interviewees at this stage of the study expressed interest in participating in the study, they were equally concerned about length of the questionnaire and how it could affect response rate. However, it was obvious that a further reduction in the length of the questionnaire might compromise the quality of data that was collected. Consequently, some adjustments were made on some of the instructions at the beginning of the sections to make them more concise.

Additionally, a number of changes were made to the layout of the questionnaire. For example, adjustments were made on the spacing at the top and bottom of the

questionnaire. Moreover, spelling errors, double-barreled and leading questions were also corrected. Given that the questionnaire was in a booklet format, the alignment between the two facing pages was also made to enhance the professional look of the questionnaire.

#### **4.4.3 Mail Survey Pre-Test**

According to Churchill (1995), a mail survey pre-test can serve two purposes. Firstly, it can help to identify possible faults in mail administration method, which otherwise would have surfaced in the main mail survey. Mail survey pre-test can also provide the researcher with a base to estimate the main mail survey response rate. In the current study, the mail pre-test was undertaken for these two purposes.

In the first place, the mail survey pre-test helped to single out possible faults with the survey administration method in advance, and as a result remedial actions such as pre-qualification of respondents (i.e. whether the prospective respondent was the appropriate person to complete the questionnaire) and confirmation of postal addresses and names of respondents were undertaken to correct them prior to the main mail survey administration.

Secondly, because the mail pre-test and the main mail survey were to be drawn from the same sampling frame, it was possible to use the mail pre-test to estimate in advance the likely response rate of the main mail survey. In other words, the response rate obtained in the mail pre-test provided a valuable clue to the response pattern in the main mail survey (Malhotra and Birks 2000). Furthermore, it was possible for the study to know in advance reasons for possible non-response so that efforts could be made to enhance the study's response rate. To implement the mail pre-test, 200 exporting organisations were drawn from a sampling frame (see section 4.4.5). The questionnaire used in the mail pre-test is provided in appendix A 4.2.

#### **4.4.4 Response Rate Enhancement**

Since almost all managers who participated in the pre-test personal interview expressed worry about the length of the questionnaire, it became necessary that some response enhancement activities were undertaken. In this instance, the



literature was consulted for guidance (e.g. Churchill 2005; DeVellis 2003). Two objectives guided this activity: enhancement of questionnaire effectiveness and anticipation of any problems that might occur in the real setting.

Accordingly, the questionnaire had Loughborough University logo on the cover page. Moreover, the cover letter that accompanied each questionnaire was written on original Loughborough university letterhead (Bruvold and Comer 1988). This cover letter was personalised, addressing the respondents by title, name and position occupied in the organisation (Diamantopoulos and Schlegelmilch 1996). The cover letter also highlighted the importance of the respondents' answers to the validity of the research and for the ability of the researcher to earn his doctoral degree. Additionally, the cover letter guaranteed complete confidentiality throughout the entire data collection and processing activities. Finally, respondents who returned their completed questionnaire were promised a summary of the research report, and an opportunity to participate in a prize draw. While a few respondents did not want to receive the research report, none declined to participate in the prize draw. Accordingly, all respondents who returned their questionnaire fully completed were included in the prize draw. While this practice is common in the literature, in many ways, it helped to increase respondents' interest in the study and thus boosted response rate.

Although past research shows that use of foreign name on questionnaire might reduce response rate (Chawla and Natarajan 1994), in this study this was not seen as a major problem as the researcher's name is not unfamiliar to the British population. As such, only the researcher signed the letters that accompanied the questionnaires. However, to give the study a greater credibility, the office addresses, telephone numbers and email addresses of the two thesis supervisors were provided and respondents were directed to contact them in case they had any queries about the study. Indeed, a few respondents did contact the thesis supervisors on a range of issues such as the appropriate individual to be contacted in the firm for responses to the questionnaire. A copy of the pre-test cover letter is available in Appendix A 4.3.

#### 4.4.5 Sampling Frame Selection

The population of interest for this study was exporting organisations located in the United Kingdom. Several criteria were used to select the sample for this study. Firstly, to achieve a good response rate, it was desirable to personalise each letter to suit each exporting organisation. Secondly, the database needed to contain current and up to date information so that each questionnaire could be sent to the right individual in the firms. Thirdly, in drawing on the work of Oviatt and McDougall (1994), this study selected exporting organisations with least 5 employees for study. This means that the firms that were studied included small, medium and large exporting organisations. This is consistent with prior export and broader international entrepreneurship studies (e.g. Knight and Cavusgil 2004; Knight and Kim 2009; Kuivalainen, Sundqvist, and Servais 2007; Jantunen et al. 2008).

Finally, given the sample size that was required in this type of research, a computerised database allowing printing of personalised names, and address labels on letters and on envelopes was essential. Considering the length of the questionnaire and job roles of the respondents, it was reasonable to expect that a response rate of about 20% could be achieved given a targeted sample size of 200 firms. Thus, to achieve a minimum of 200 useable responses for the purpose of structural equation modelling, a minimum sample of 1000 exporting organisations was needed.

Several business directories and companies that provide company lists were available and could have been used for the study. Among these were Fame export lists, British Export directory from institute of export, Dun & Bradstreet, Financial Times Business List, Kompass Register CD database, Kompass British Exports and many others. However, the final choice was between Kompass Register CD database, Fame export lists and British export directory, all of which met the entire requirements listed above. However, for practical reasons, Fame export lists and British export directory were selected. The Fame database was made available by the Pilkington library of Loughborough University for free, and the British export directory was made available for this study at a price that was reasonable.

The Fame database contained more than 100,000 companies along with the names of senior management (including chairmen and chairpersons, CEOs, directors, marketing managers, export managers and export sales accounts managers). Moreover, the data is updated every week and users have the opportunity to receive email alert on a weekly basis on new updates to the database. This means that researchers have access to current information from the database.

There were about 11,000 exporting organisations on the list, however only 1,500 firms were classified as active exporters (Knight and Cavusgil 2004). To supplement the list from the Fame database, another list was also sourced from the British export directory. The British export directory is the official mailing list from the UK-based Institute of Export and contains list of active UK exporting organisation. The Institute of Export is the official association that promote industry and commerce particularly international trade in the UK. In all, about 86,000 active exporting organisations were on this list. However, many of these were no longer exporting or were longer in business. Moreover, many of the firms were also found on the list provided by the Fame database, creating overlaps. In the end, the British export directory provided an additional 400 export organisations. The two databases were subsequently combined. Further cleaning was undertaken resulting in 619 firms being removed due to wrong addresses, acquisition, and relocation (some relocated to continental Europe as a result of mergers). Thus, in combining the two lists, a total of 1,281 firms were left and these were used for both the mail pre-test and main survey studies.

#### **4.4.6 Mail Pre-Test Response Analysis**

To implement the mail pre-test, a randomly selected sample of 200 exporters were selected from the combined list. The questionnaire was personally addressed to the export manager, the CEO, or the marketing director/manager in each firm.

Fourteen days after this initial mailing, 20 questionnaires were returned undelivered due to wrong addresses (or respondents could not be reached), 35 were returned unanswered with letter indicating that the firms no longer engaged

in export operations. An additional 10 questionnaires were returned unanswered with letter indicating that company policy did not allow managers to participate in surveys. A total of 114 eligible firms did not respond to the questionnaire although three waves of reminder notices were sent. In all, 31 useable responses were received, constituting approximately 21 per cent response rate (i.e.  $31 / (200 - 20 - 35 - 10)$ ), which was satisfactory given a lengthy questionnaire. The 21 per cent response rate was acceptable because if it were to be extended to the main survey study of 1,081 firms, it would mean that approximately 227 responses would be received, more than the minimum of 200 responses needed for the study. Table 4.1 provides information on the response pattern of the mail survey pre-test.

Table 4.1: Response Pattern of Pre-Test Mail Survey

<b>Response Pattern</b>	<b>Subtotal</b>	<b>Total</b>
<b>Ineligibles:</b>		65
1. Wrong addresses	20	
2. No longer engage in exporting	35	
<b>Eligible Exporters:</b>		145
1. Non-response	114	
2. Completed questionnaires	31	
Total Contacts		200

#### 4.4.7 Further Checks on Non-Responses

Despite the acceptable response rate, however, it was deemed necessary to explore key reasons for the large number of non-responses. To probe the reasons for the 114 non-responses, 20 non-responding firms were randomly selected for a follow-up study, and contacted by telephone. Some of the firms could not be contacted due to inaccurate telephone details. For some exporting organisations with inaccurate contact details, the correct details were found on the organisations' website. The websites of these organisations were located using Applegate business directory and Google search engine where necessary. The managers contacted were asked a number of questions regarding their participation in the study. Results showed that 10 organisations were no longer exporting, and five managers had refused to complete the questionnaire for reasons such as company policy, time constraints, no questionnaire received or had misplaced the questionnaire.

The telephone calls did prove useful in the sense that it helped to determine potential difficulties in subsequent administration of the main mail survey. It also helped to get some picture about the likely minimum response rate if the same administrative method were to be repeated in the main survey. The telephone interview process also helped to determine the potential number of ineligible firms that should be included in the database. Analysis of these calls and also from the questionnaire returns revealed areas that needed to be changed. For example, there were some cases where the individual managers to whom the questionnaire was addressed were no longer working in the export unit, and such it was necessary to readdress the questionnaire to a particular position in the firm such as "Export Director" rather than to a named individual as the names of the new managers were not available.

Given the large number of returns with "no longer exporting" reason, all the firms on the database had to be pre-qualified before the main survey was conducted. In this regard, all the firms were contacted on the telephone to determine whether they were actually engaging in export operations and how much export sales they derived annually. As the world economic recession was at its peak at the time of the data collection, respondents were asked to indicate how likely the recession could cause them to cease export operation within the following three years to obtain an indication of that the firms were likely to continue export operations. This activity brought the total sample to 1,081 export organisations for the main survey study. At least, this final list could be described as active and committed exporting organisations (Samiee, Walters, and Dubois1993).

#### **4.5 THE MAIN SURVEY**

The design of the main survey was done with full acknowledgement of the efforts made at the pre-test stage of the study. Given the detailed revisions that were made to the questionnaire at the pre-test stage, only minor corrections needed to be made at the main survey stage. Thus, lessons learnt at the pre-test stage and insights gathered from colleagues and supervisors helped to greatly improve the questionnaire quality. In the sections that follow next, issues relating to final questionnaire revision, final sampling frame selection and sample administration, final response rate enhancement, and final response analysis are discussed.

### **4.5.1 Final Questionnaire Revision**

Given that only minor modifications were required for the questionnaire after the pre-test survey was completed, a further attempt was made to revise the questionnaire. First, the questions were well spaced to aid easy reading. Second, the instruction for each section of the questionnaire was reworded and shortened to make them concise. For example, long instructions such as “Given below are some general statements made by some managers about various innovation activities in their companies. By filling in the blank spaces provided in each statement, please indicate the situation as it applies in your company. Please put the numbers of your choice in the boxes provided at the end of each statement” were shortened to “Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the numbers of your choice in the boxes provided”. These final questionnaire revision activities reduced the questionnaire length from 14 to 11 pages without having a detrimental effect on the readability.

### **4.5.2 Final Sample Frame Selection and Sample Administration**

The sampling framework for the main survey was the same as for the pre-test survey. Spector (1992) argues that between 100 to 200 cases are needed in order to adequately evaluate the reliability and validity of measures. Accordingly, a number of steps were taken to ensure that a minimum of 200 responses were received. In this regard, it was critical that responding firms were identified due to a high level of ineligibility and also to request their cooperation and commitment. In this instance, pre-notification is highly recommended (DeVellis 2003).

As a way of keeping responses high, all initially pre-qualified firms were contacted with a pre-notification letter to seek their cooperation and commitment in the main survey study (see Appendix A 4.4 for a copy of the pre-notification letter). Some of the pre-notification letters were returned undelivered, and as a result, these firms were contacted on the telephone or email (where these were available) to request their cooperation and commitment, and to also collect their correct postal addresses.

### 4.5.3 Characteristics of Respondents Contacted

The credibility of the source of information is pertinent to the validity of the study (DeVellis 2003). This is because a questionable source can cast doubts over the integrity of the results of the study (Dillman 2000). Thus, to test the study's theoretical model, a survey of randomly selected exporting organisations was implemented. As this was an export study, it was important that the respondent was a senior company executive who had considerable experience and knowledge about the strategic export decisions of the company. Thus, a pre-screening telephone interview was carried out to determine the appropriateness and competence of the person nominated to complete the questionnaire on behalf of the export organisation. In all cases, the respondent was a chief executive officer (15 per cent), managing director (10 per cent), export director (30 per cent), marketing director (30 per cent) and export sales manager (15 per cent). Moreover, the finance directors or accountants in the responding firms were also contacted for information on the firms' performance as was recently recommended in the literature (e.g. Chang, van Witteloostuijn and Eden 2010). Overall, the respondents were actively involved in their company's long-term export decision-making activities.

As is indicated in table 4.2, each respondent was asked to indicate his/her employment role in the organisation. Results show that majority of respondents that completed the questionnaire were managers with senior management positions (1 = CEO/Director; 2 = senior manager, 3 = middle manager, etc.). This is consistent with past firm-wide and export level EO studies (e.g. Wang 2008; Miller and Friesen 1982; Miller 1983; Covin and Slevin 1989; Balabanis and Katsikea 2003).

Table 4.2: Characteristics of respondents

Variables	Minimum	Maximum	Mean
Position of respondent	1	3	-
Manager's experience (in years)	1	45	16.28
Knowledge of issues (seven-point scale)	2	7	6.40
Accuracy of information (seven-point scale)	2	7	6.55

Furthermore, managers with more years of management experience within their organisations are more likely to have a wider knowledge on strategic issues that affect their companies than managers with limited experiences. In line with this assertion, this study ensured that managers who completed the questionnaires had many years of managerial experience. Accordingly, results of the study showed that the managers that completed the questionnaire had an average of 16 years managerial experience (std. = 8 years). In addition, the managers were asked to indicate on a scale of one to seven the extent to which they were knowledgeable about the questions asked in the questionnaire. Results showed that majority strongly agreed that they had considerable knowledge about the questions that were asked (mean = 6.40; std. = 0.91). The accuracy of the information that was provided by the respondents was also assessed. On a scale of one to seven, respondents were asked to indicate the extent to which the information they provided about their organisation was accurate. The majority indicated that the information they provided was accurate (mean = 6.55; standard deviation = 0.83).

Given these favourable results about the characteristics of the respondents and the accuracy of information they provided, confidence in the data used in this study was high.

#### **4.5.4 Final Response Rate Enhancement**

Having secured the agreement of the respondents to participate in the study, the final questionnaire was sent using first class mail to the respondents whose firms qualified for participation in the study. Each questionnaire pack contained a cover letter, the final questionnaire (see the final questionnaire in Appendix A 4.5), and a first-class self-addressed envelope. Additionally, each pack included the contact telephone numbers of the thesis supervisors Dr Vicky Story and Prof. John Cadogan, thus lending credibility to the research.

Similar to the pre-test survey (see section 4.4.4 for detailed discussion), several steps were taken to maximise the response rate at this final stage of the study. As discussed earlier in section 4.5.1, at this crucial stage, three additional steps were taken to improve the study's response rate (i.e., telephone pre-notification and follow-up postcard). First, all respondents who returned their questionnaires were



guaranteed participation in a lottery with a chance to win a £200 voucher for a favourite charity. Additionally, each responding firm was promised a summary report of the research results. These incentives were provided to boost respondents' interests in the study (Dillman 2000).

Second, seven days after the first questionnaire mailing, a first round of reminder postcards was sent to all non-respondents. The reminder postcard can be seen in Appendix A 4.6. Like the pre-test survey, the cover letter that accompanied the final questionnaire was signed by the researcher only (see appendix A 4.7).

Fourteen days after the initial questionnaire mailing and seven days after the first reminder postcards were sent to respondents, a second round of mailing was implemented. In this instance, all non-responding firms were sent another questionnaire pack with a reminder card reminding them of the need to complete and return the questionnaire to the researcher. Telephone calls were also made to non-responding firms as part of additional efforts to enhance response rate.

#### 4.5.5 Response Analysis

As was stated earlier (see section 4.4.7), at the end of the mail pre-testing there were 1,081 export organisations left for study. This sample was subsequently included in a pre-notification study. By the end of the pre-notification study, the sample frame dropped from 1,081 to 830 exporting organisations for the reason that 251 respondents were removed from the sample frame because they no longer engaged in export operations. Table 4.3 provides analysis of response pattern of the sample frame that was finally used for the main study.

Table 4.3: Response Pattern Analysis

Sampling Issues	Subtotal	Total
Total sample frame		1,081
<b>Less Ineligibles:</b>		
No longer exporting	251	
<b>Eligible exporters</b>		830
Eligible Non-responses	618	
<b>Total usable responses:</b>		
First wave		181
Second wave		28
Further reminders		3
<b>Grand total</b>		<b>212</b>

Out of the total 830 exporters that were sent a questionnaire, 618 did not return their questionnaire despite their agreement to participate in the study. There were several reasons for non-response. Firstly, 63 respondents sent an email to indicate that export activity accounts for less than one per cent of their total business activity and did not think they could be of any meaningful help to the study. It could be the case that the managers did not actually want to participate in the study and this could be a polite way to decline participation. It is also possible that the individuals who participated in the pre-qualification interview on the telephone did not have up to date information on the firms' export operations. In addition, 20 respondents sent letters or emails to the researcher saying that their company policy prohibited participation in surveys. Finally, 15 eligible respondents stated that the named respondent no longer worked with the targeted company. In this last instance, a telephone call was made to each organisation for the name of someone in comparable position and another questionnaire was sent. Finally, 12 emails were received indicating that the firms simply wished to decline participation.

After approximately 10 weeks of questionnaire distribution, approximately 10 per cent (or 64 firms) of the 618 non-respondents were contacted on the telephone and email to ascertain their reason for not returning their questionnaires. Reasons for non-response are presented in table 4.4.

Table 4.4: Reasons for Non-response

<b>Reason</b>	<b>Number of Firms</b>
No time to fill in questionnaire/questionnaire too long	28
Passed on to someone else and lost in the system	8
Company policy not to fill in questionnaires	12
No questionnaire received	2
Felt company was too small for the survey to be applicable	5
Not interested	3
Ineligible to participate	4
Did not believe in academic research	2
<b>Total</b>	<b>64</b>

In the end, 229 sets of completed questionnaires were returned. This included 212 useable and 17 poorly completed and non-useable responses. Of the latter, 15 managers returned the questionnaire with excessive missing data. Two responses were from managers who chose to not only refuse to participate in the study but also to argue that they did not believe in academic research.

Accordingly, the 830 eligible exporters and 212 useable responses were used to calculate the total response rate for the study.

The effective response rate achieved in this study was 26 per cent ( $[212/830]*100$ ). This calculation was based on exporting organisations that were eligible, that agreed to participate in the main study at the pre-notification phase, and that were actually contacted, which is in line with other studies (e.g. Zahra and Garvis 2000; Ibeh and Young 2001). Thus, the 26 per cent response rate achieved in this study was satisfactory. In fact, Ibeh et al. (2004) show that there is generally high apathy towards mail surveys among UK managers because of the number of surveys received. This might well explain why some companies have a policy not to participate in surveys. It can also be argued that the lengthy questionnaire and the estimated 45 minutes completion time might have looked unfavorable to some respondents. Yet, this response rate compares well to recent studies in the entrepreneurship and export research disciplines (e.g. Fernhaber and McDougall-Covin 2009; Zahra and Garvis 2000; Ibeh and Young 2001; Julian 2003; Balabanis and Katsikea 2003). For example, in a similar study, Balabanis and Katsikea (2003) used a sample of 82 firms with a response rate of 18.5 per cent. Similarly, Robertson and Chetty (2000) relied on 70 small and medium sized firms in their study although they had higher response rate of 42.4 per cent. Moreover, Zahra and Garvis (2000) studied 149 companies and achieved a response rate of approximately 25 per cent. Thus, compared to the relevant literature, it can be said that this study did not suffer significantly from low response bias.

#### **4.5.6 Survey Bias Assessment**

##### **4.5.6.1 Response Bias Assessment**

Generalisability is an important issue in academic research and as such there are “great concerns regarding the extent to which data used in a research project reflects a broader population, including the possibility of non-response bias” (Blair and Zinkhan 2002, p.4). Non-response bias occurs “if failure to respond (or be observed) is disproportionate across groups” (Blair and Zinkhan 2002, p.4). Accordingly, non-response is seen as one major source of sample bias. Hence, it is suggested that the role of non-response in sample quality should be addressed (Hair et al. 2006; Blair and Zinkhan 2002). Blair and Zinkhan (2002) suggest that

best practices should be followed to control non-response bias. It is, therefore, recommended that the ideal way to handle non-response bias is to reduce the non-response itself (Hair et al. 2006).

However, it is still possible that the impact of non-response bias on sample quality can be estimated after the full-study is completed (Rindfleisch et al. 2008). To provide further test for non-response bias, it was necessary to locate early and late respondents. Several strategies were adopted to distinguish the early respondents from late respondents. As indicated earlier, each respondent was sent a questionnaire immediately after securing an agreement to participate in the study. In all cases, first class stamps were used for the out-going mails and for incoming mails. This ensures uniformity of delivery time.

Using the procedures suggested by Armstrong and Overton (1977) and Churchill (1979), late respondents were defined as those respondents who replied after receiving at least the first reminder postcards. This means that all responses received after the first 15<sup>th</sup> day of the study were considered as late respondents. Early respondents were defined as those firms that responded within the first 15<sup>th</sup> day of receiving the questionnaire. Overall, there were 181 early responses and 31 late responses. These two sets of data were subsequently used in assessing non-response bias (see table 4.5).

Following on from the above, Armstrong and Overton's (1977) non-response bias test was applied. Consequently, t- tests were performed for early and late respondents on several variables. By this, total responses were divided into two groups based on whether they responded to the first mailing or after receiving reminder postcard (i.e. first, second, and/or the second follow-up). It was assumed that those that responded after first follow-up were no different from non-respondents (Churchill 1995). The notion is that firms that "respond less readily are more like non-respondents (Armstrong and Overton 1977, p.397).

Table 4.5: Response Bias Assessment

Variables	Mean of early respondents (N = 181)	Mean of late respondents (N = 31)	Sig. of t-values
Product innovation intensity	4.50	4.44	P = 0.36
Product innovation novelty	4.80	4.85	P = 0.42
Export risk-taking	3.97	3.82	P = 0.11
Export proactiveness	4.85	4.81	P = 0.89
Export competitive aggressiveness	4.39	4.47	P = 0.32
Export autonomy	5.01	4.84	P = 0.52
Export market orientation	5.37	5.21	P = 0.52
Export customer dynamism	4.38	3.77	P = 0.44
Export performance	4.80	4.81	P = 0.14

Results, as shown in table 4.5, indicate that the differences between the means for early respondents and that of late respondents were not significant at five per cent significant level. This suggests that the mean difference observed in the two samples was due to chance (Churchill 2005). Thus, it can be said that there were no significant differences between responding and non-responding participants in the study. Accordingly, it is considered that non-response bias did not create any major impact on the host of variables used in this study.

#### 4.5.6.2 Common Method Bias Assessment

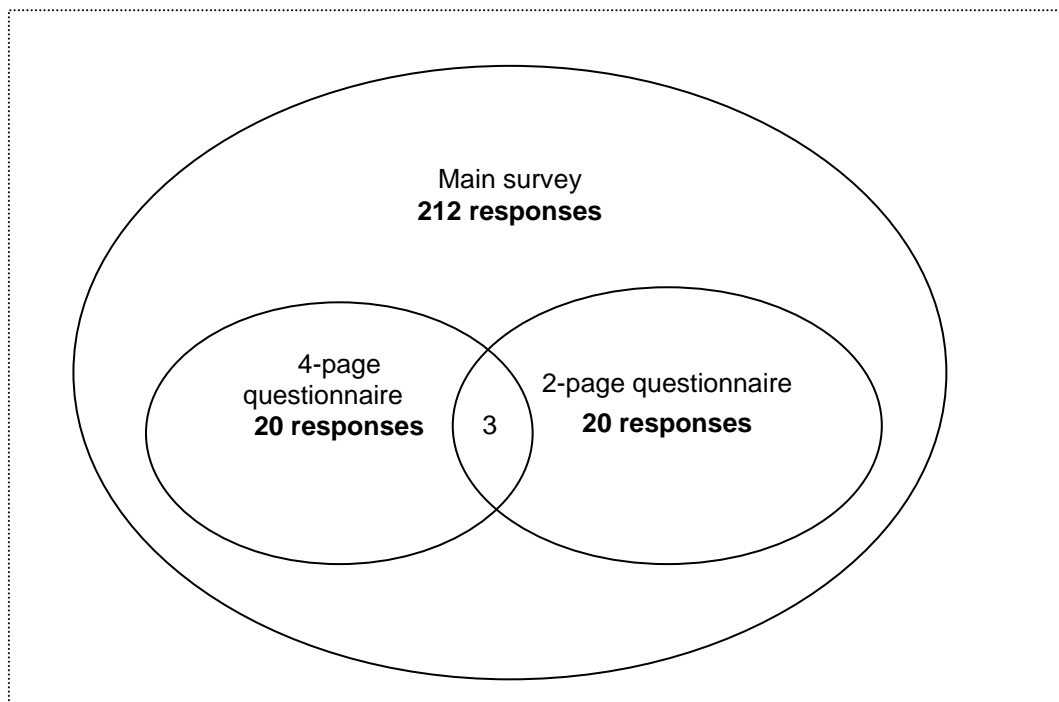
Responses on both the independent and dependent variables were sourced from the same informants in the main study, thus raising concerns regarding common method variance as false internal consistency might be present in the data (Podsakoff and Organ 1986; Chang, van Witteloostuijn, and Eden 2010; Podsakoff et al. 2003; Rindfleisch et al. 2008). To ensure that this was not the case the possible threat of common method variance bias was assessed using several procedures, both ex ante and ex post (Rindfleisch et al. 2008; Podsakoff et al. 2003).

Ex ante, the order of questions was mixed, different rating scales were used (see Appendix A 4.5), breaks and reverse-coded items were included in the questionnaire, and respondents were assured of complete confidentiality of information they provided (Lindell and Whitney 2001; Chang, van Witteloostuijn, and Eden 2010). Moreover, respondents were explicitly reminded that there were

no right and wrong answers to the questions asked, and informant honesty and accuracy was clearly requested from all respondents (Podsakoff et al. 2003).

Furthermore, a follow-up study approximately eight months after the initial main survey study was conducted using a randomly selected set of 20 informants that participated in the initial study. The process started by reminding respondents that they had participated in a mail survey study sponsored by Loughborough University; that the purpose of the current telephone interview was to clarify a few answers that were provided. Since the researcher did not want to take too much of the respondents' time, questions relating to five export performance variables (i.e. Managers' satisfaction with export market share, sales volume, sales growth rate, export market entry and profitability) and all export EOB variables were asked. The telephone interviews were held with 15 respondents and five respondents requested that the questionnaire should be emailed to them. Hence, a new four page questionnaire (see Appendix A 4.8) was designed out of the original 11-page questionnaire used in the main mail survey. Figure 4.8 is a representation of the three survey activities.

Figure 4.8: Main Study Survey and Follow-up Studies



The 20 responses from the follow-up study were subsequently compared to 212 responses from the main study. Before the comparisons were undertaken, new

latent variable scores were computed from the items measuring the six export EOBs and export performance. A correlation analysis of these seven constructs revealed that there were high degrees of association between the two samples for the seven constructs (correlations ranged from  $r = 0.710$  to  $0.850$ ;  $p < 0.001$ ).

Lastly, a second set of 2-page questionnaire consisting of only the export performance variables (see Appendix A 4.9) was sent to 50 randomly selected finance directors/accountants for their opinion (part of the same firms in the initial survey), and was accompanied by a letter written on a Loughborough University letterhead (see Appendix A 4.10). As is reported in figure 4.8, 20 valid responses were received (including three firms that participated in the 4-page survey), representing a 40 per cent response rate. It can be said this high response rate might be due to the shorter two-page questionnaire length. Responses from the finance directors/accountants were compared to the responses from the export managers that participated in the initial survey. An ANOVA test of difference reveals that there were no significant differences between responses from the two groups of informants. In table 4.6 the variances between the two samples are not statistically different since the p-value of Levene's test is 0.355. Moreover, the t-test for equality of means is also non-significant. This indicates that there is no significant difference in mean export performance between the two samples. Thus, it was concluded that CMV did not have any major influence on the variables examined in this study. Further test for CMV will be discussed in section 7.2.2.4 of chapter seven (see table 7.1).

Table 4.6: ANOVA Test of Difference for the Main Survey and Follow-up 2-page Export Performance Survey

Variable compared	Levene's Test for Equality of Variances		T-test for Equality of Means	
	F-Statistics	p-value	t-value	p-value
Export Performance	1.253	0.335	0.016	0.899

## **4.6 CHAPTER SUMMARY**

Four objectives guided this chapter: justification for the choice of cross-sectional research design; discussion of the survey administration method that was used in the study; description of the study's sample frame; and explanation of how survey biases were controlled in the study. It was argued that a cross-sectional design was appropriate for this study given that it is a relatively more efficient approach in terms of cost and time compared to longitudinal design. Rather than face-to-face, telephone, and email/online survey administration methods, this study chose a questionnaire-based mail survey method as it ensured faster and more reliable responses. Regarding the study's sample, 830 eligible exporting organisations were contacted for this study and 212 responses were received representing 26 per cent response rate. Respondents were mainly managers with significant knowledge and experience on the firm's export operations. Finally, efforts were expended to control for possible non-response and CMV contaminations. With respect to non-response bias, comparison of early and late respondents showed no concern for non-response bias. Results of CMV assessment showed no significant influence of CMV bias on the variables examined in this study. Thus, these research design activities ensured that the data that was analysed in this study was valid. In the next chapter, descriptive profile of the firms that participated in this study and the measurement development strategy that would be used to develop the various scales are delineated.



## **CHAPTER 5**

# **DESCRIPTIVE ANALYSIS AND SCALE DEVELOPMENT STRATEGY**

### **5.1 INTRODUCTION**

The purpose of this chapter is twofold: to present a descriptive analysis of the sample; and to describe the scale development strategy that is to be used to develop the scales that will be used for the hypothesis testing. While the descriptive analysis helps to provide a profile of the sample, the scale development strategy helps to set out the plans that the study will follow to describe response patterns relating to the measures that have been used in this study. As such, this latter part of the chapter helps to explain the assumptions underlying the planned multivariate technique (i.e., structural equation modelling) and analytical method (i.e., maximum likelihood) that will be used to identify and analyse patterns and characteristics of the variables whose relationships will be tested in this study. In the first place, an account of the sampled firms' profiles is provided in section 5.2. Next, a description of the scale development strategy adopted by the study to implement the scale development task is furnished in section 5.3.

### **5.2 PROFILE OF THE FIRMS**

#### **5.2.1 An Overview**

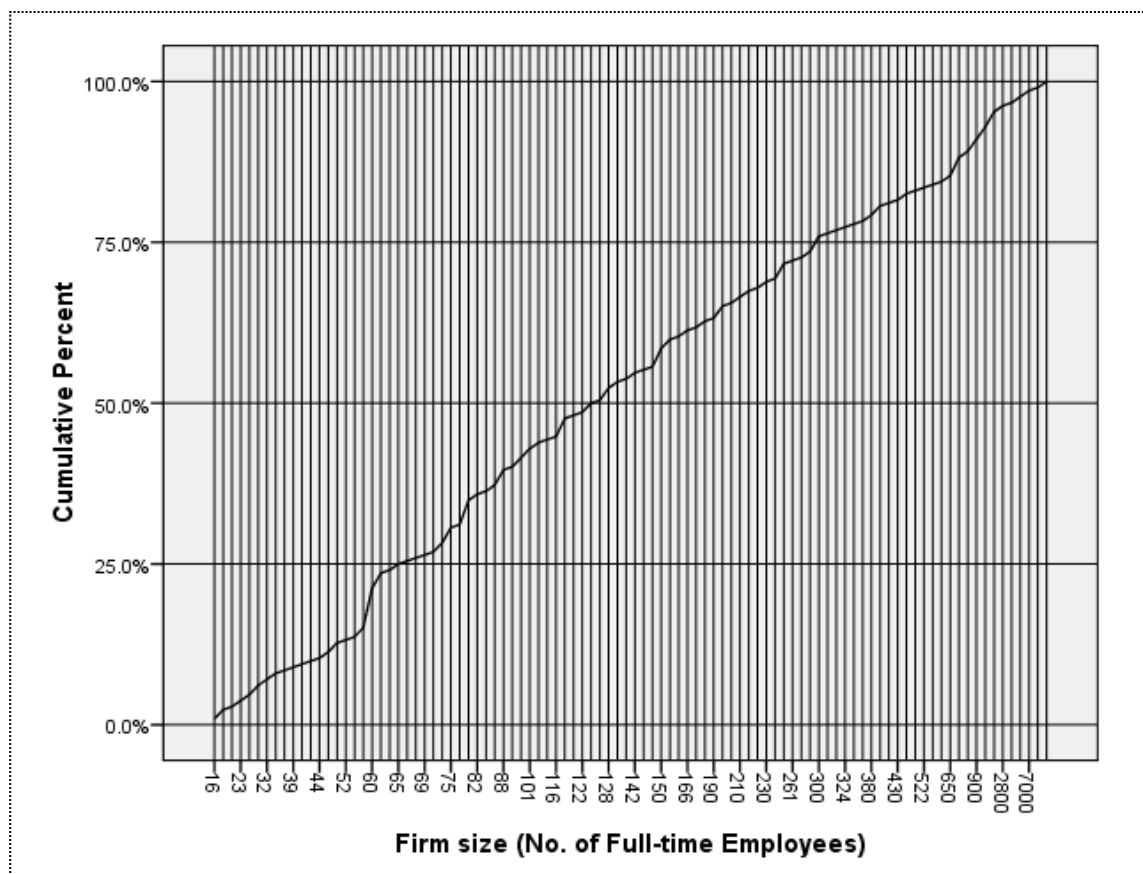
The purpose of this section is to provide an account of the general characteristics of the exporting organisations that provided information for the study. This account is important because it helps to develop a fundamental understanding of the subjects that were studied. Accordingly, this section should be understood as an opportunity to generate an early impression of the characteristics of the sample. This is because the export organisations under study vary in different dimensions including their sizes, scale of international operation, business experience and international experience. Moreover, the firms operated in different industries by offering diverse products and services, and served different

customer groups. Additionally, a profile analysis of the sample reveals that the firms under study had different scopes of international operation in that many exported to diverse export destinations. Finally, the analysis in this section shows the characteristics of the key informants that provided the information on the export organisations under study. Essentially, many of the variables that are evaluated here are taken from the profile variables provided in section 4.3.6.

### 5.2.2 Firm Size

Researchers have examined firm size by assessing two key variables: number of full-time employees and total annual revenue (Cooper and Kleinschmidt 1985; Cavusgil and Nevin 1981). In drawing on these prior examples, this study assessed firm size by examining the distribution of the firms' total number of full-time employees and total annual revenue (or sales turnover).

Figure 5.1: Firm Size (Number of Full-time Employees) as Cumulative Percentage

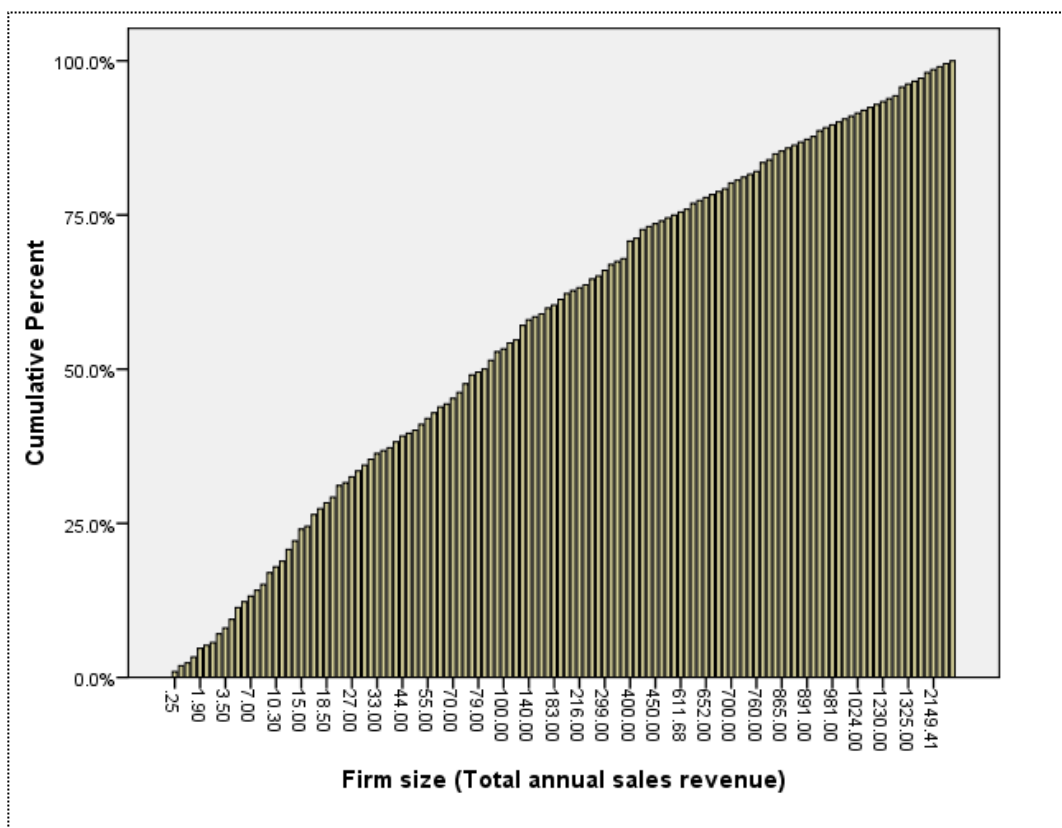


The distribution of firm size in terms of total number of full-time employees was positively skewed. The distribution covered a wide range from 16 to 7000 full-time employees with a median of 124 and a mean of 868 full-time employees. As can

be seen in the cumulative percentage distribution in figure 5.1, 25 per cent (i.e. first quartile) of the export organisations employed fewer than 66 employees with 75 per cent (third quartile) employing fewer than 300 employees.

The distribution of firm size in terms of total annual revenue is also positively skewed. Specifically, the distribution ranged from 0.25 to 2,149.41 million British Pounds. Of this distribution, 25 per cent (i.e. the first quartile) of the export organisations reported revenue of less than 17 million British Pounds and 75 per cent (that is the third quartile) reported revenue of less than 601.50 million British Pounds. Average revenue was 499 million British Pounds and the median value was 85 million British Pounds. See figure 5.2 for detailed information on the firms' total annual revenue distribution as a cumulative percentage.

Figure 5.2: Firm Size (Total Annual Revenue) as a Cumulative Percentage

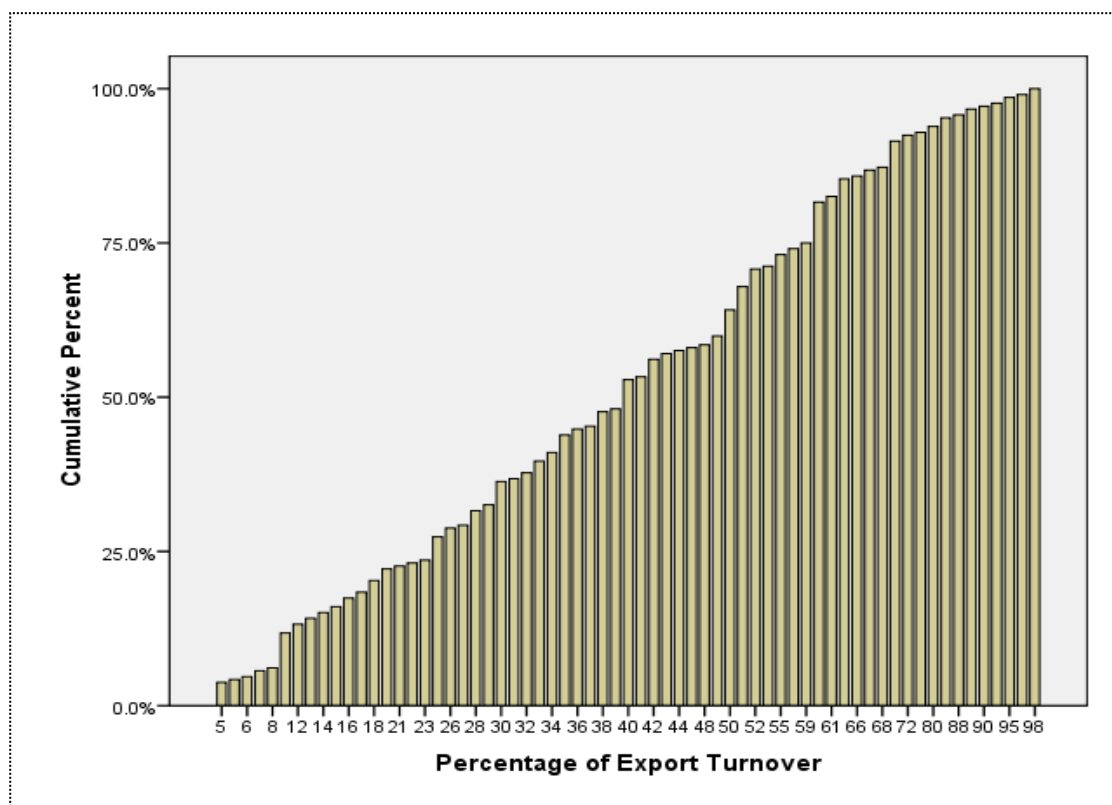


### 5.2.3 Scale of International Operation

Kuivalainen, Sundqvist and Servais (2007) have argued that firms' scale of international operation can be examined by assessing their export turnover. In following the examples from Kuivalainen and colleagues, the level (or scale) of the firms' international operation was studied by collecting information on the firm's

percentage of total turnover derived from export markets and categorising them according to their scale of international operation. As can be seen in figure 5.3, percentage of export turnover ranged from 5 per cent to 98 per cent. However, 25 per cent (i.e. the first quartile) of the firms reported that export sales accounted for less than 25 per cent of their total annual turnover and 75 per cent reported that export turnover represented 60 per cent of total annual turnover. Fifty per cent of the firms said export sales accounted for less than 40 per cent of total annual turnover. In accordance with Kuivalainen, Sundqvist and Servais' (2007) classification, it can be said that 25 per cent of the firms in the sample were modest exporters and 75 per cent were heavy exporters.

Figure 5.3: Scale of International Operation (Percentage of Export Turnover) as a Cumulative Percentage



### 5.2.4 Market Offerings

Over 60 per cent of the firms in the sample offered physical products in their export markets while 37 focused on exporting services to overseas markets. Like most other profile variables, this variable produced a high response rate with 212 total valid responses. Table 5.1 is the cumulative frequency distribution of the market offering responses.

Table 5.1: Main Market Offerings

<b>Product Type</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
Physical products	133	62.7	62.7
Services	79	37.3	100
<b>Total</b>	<b>212</b>	<b>100</b>	

### 5.2.5 Targeted Customer Group

In terms of the targeted customer groups served by the firms, over 70 per cent (148 firms) of the firms reported that they dealt directly with other business organisations (mainly importing firms in their host countries) and 30 per cent (64 firms) reported that they sold directly to consumers in overseas markets. As can be seen in table 5.2 this variable also achieved a high response rate: 212 total valid responses.

Table 5.2: Main Target Customer Groups Served

<b>Customer Groups</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Businesses	148	70	70
Consumers	64	30	100
<b>Total</b>	<b>212</b>	<b>100</b>	

### 5.2.6 Market/Country Distance

Like Kuivalainen and colleagues, this study uses Hofstede's cultural-distance scores to calculate market/country distance from the United Kingdom for each export country reported by the respondent. As is reported in table 5.3, over 95 per cent (201 cases) of the firms reported that they exported to the European Union (or EU) market, which means that the firms exported largely to culturally close markets. Note that the United Kingdom is part of the EU market. In addition to the EU market, 88 per cent of the firms reported that they also exported to Eastern Europe, 84.9 per cent exported to North America and 59.6 per cent served mainland China. Other Asian countries (other than Mainland China) were served by 72.2 per cent of the firms in the sample, while South and Central America were served by 67.8 per cent of the firms. Middle East, Australia/New Zealand, and Africa were served by 74.5 per cent, 81.1 per cent and 79.3 per cent of the firms respectively. Moreover, 45.8 per cent of the firms also indicated that they served a worldwide market.

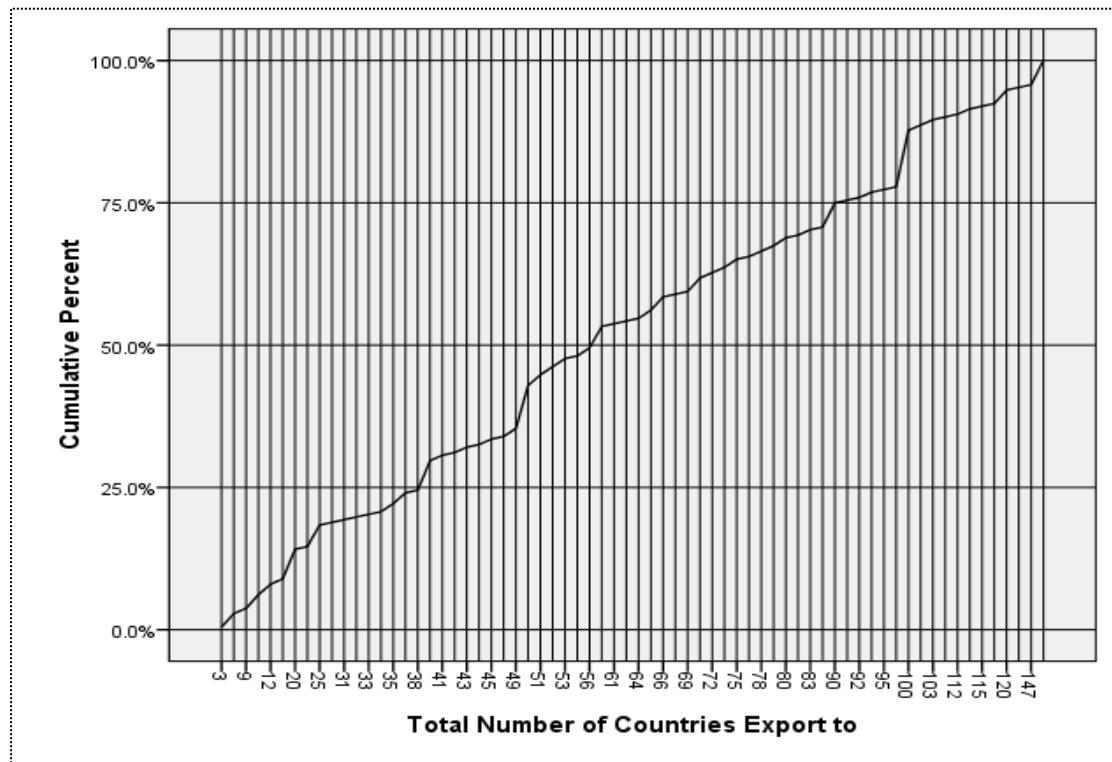
Table 5.3: Main Export Destinations

Regions	EU	Eastern Europe	North America	Mainland China	Other Asia Countries	South & Central America	Middle East	ANZ†	Africa
Frequency	201	188	180	125	153	142	158	172	168
Percentage	95.1	88	84.9	59.6	72.2	67.8	74.5	81.1	79.3

† = Australia/New Zealand

To further explore the scope of the firms’ international activities, the study also asked respondents to provide information on the number of countries their firms exported to. From figure 5.4 the number of countries the firms exported to ranged from three to 150 countries. Over all, 25 per cent of the firms exported to fewer than 40 countries while 75 per cent exported to fewer than 91 countries. Average number of countries served by the firms was 60 countries.

Figure 5.4: Number of Countries Firms Exported to as a Cumulative Percent



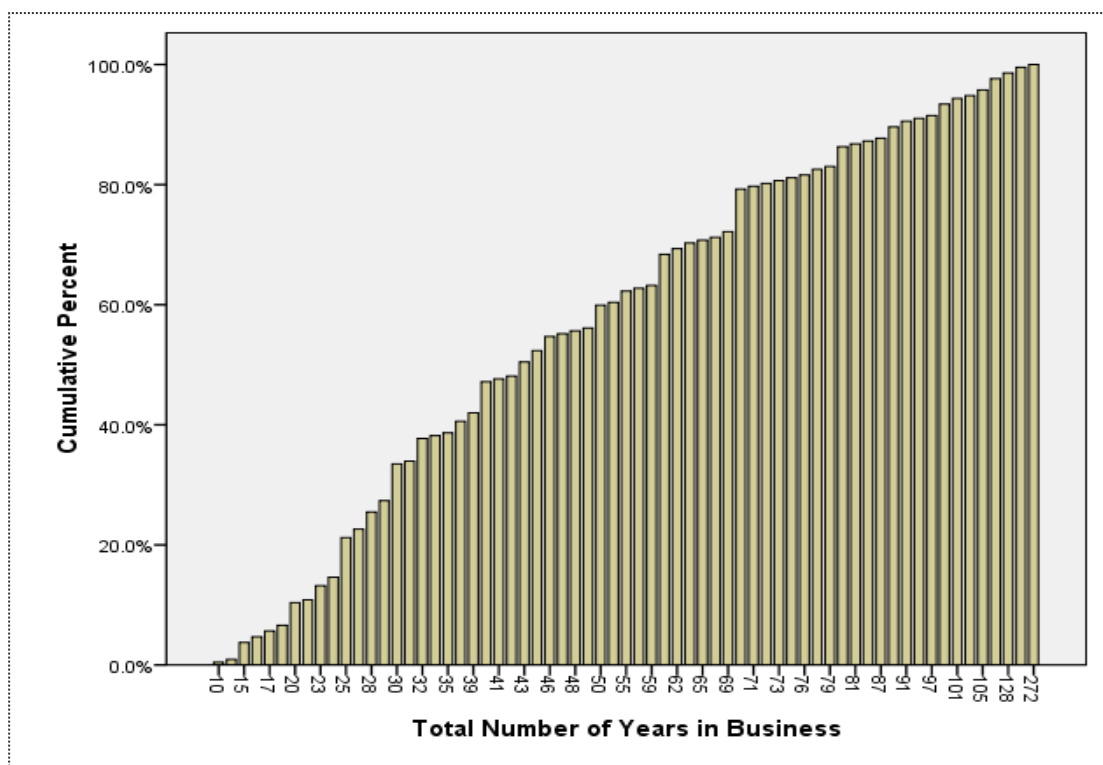
### 5.2.7 Business Experiences

The sample contains a reasonably good spread of exporting firms that were in business for a considerable number of years. As is reported in figure 5.5 the minimum number of years the firms have been in business was 10 years and the

maximum was 272 years. On average, the firms have been in business for 52 years. However, 25 per cent of the firm had been in business for less than 28 years (first quartile) and 75 per cent (third quartile) had less than 70 years business experience.

Regarding the firms' overseas experiences (in terms of number of years in export operation), this study found that average overseas experience was 41 years but some firms had as little as 2 years international experience.<sup>1</sup> However, there were some firms that reported as many as 272 years of international experience. Moreover, 25 per cent of the firms had less than 21 years international experience while 75 per cent reported that they had 55 years of international exposure.

Figure 5.5: Total Number of Years in Business



### 5.2.9 Respondents' Status

In addition to providing information on the firms that participated in this study, it is also important that a profile of the individual respondents is also discussed. As

<sup>1</sup> Oviatt and McDougall (1994) and Zahra (2005) classified such firms (i.e. those with less than 6 years of international experience) as new international ventures.

such, this section gives an account on the characteristics of the actual informants that represented the firms in the sample.

Accessing the top management tier of any organisation is usually a challenging task for researchers due to their busy work schedules (Golden 1997). However, as can be seen from table 5.4, this study managed to access the most senior level managers in approximately 42 per cent of the firms. This means that nearly a half of the data used in this study came from managers who occupied the most senior most positions (e.g., Chief Executive Officers, Owners, Managing Directors) in their organisations. The highest percentage, about 53 per cent of the informants, were senior managers with positions such as marketing directors, export directors, sales directors, and business development directors. Together, both the most senior level managers and senior level managers accounted for about 94 per cent of informants. The lowest proportion of the informants was those working in middle or functional management level roles (e.g., marketing managers, export sales managers, and export account managers). This group of informants accounted for approximately 6 per cent of the respondents that provided data for this study.

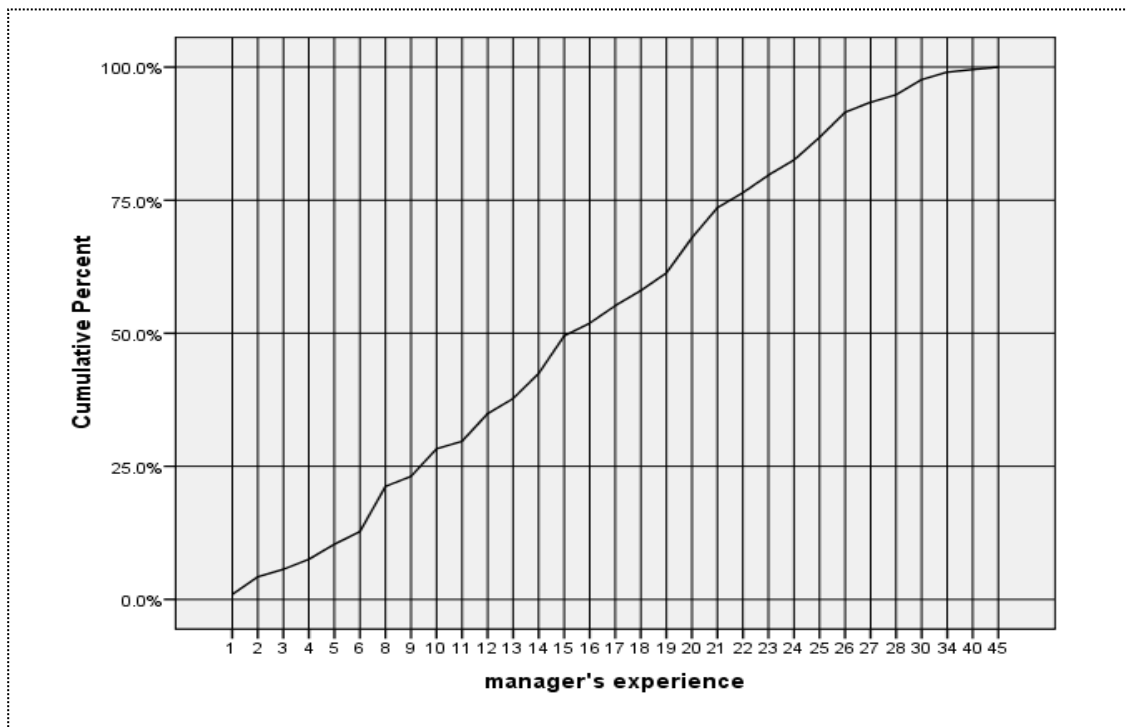
Table 5.4: Positions of Informants

Position	Frequency	Percent	Cumulative percent
Chief Executive Officer/Owner/Managing director	88	41.51	41.51
Senior Manager	112	52.83	94.34
Middle Manager	12	5.66	100
<b>Total</b>	<b>212</b>	<b>100</b>	

The final information on the respondents has to do with their management experience. As is reported in figure 5.6, the average management experience of the informants was about 16 years (with standard deviation of about 8 years). Moreover, 25 per cent (first quartile) of informants indicated that they had less than 10 years management experience while 75 per cent (third quartile) reported management experience of less than 22 years. The minimum management experience was one year while the maximum management experience of informants was 45 years.



Figure 5.6: Management Experience of Informants



### 5.2.10 Section Summary

This section of the chapter has provided information on the sample's profile. The analysis of the descriptive statistics revealed that most of the firms that participated in this study were small, medium and large exporting organisations with extensive international experience. The firms exported to wide range of overseas markets and had several years of business and international experience. With respect to the individual respondents that answered the questions, most held senior management positions and had significant experience and knowledge of the firms' export operations.

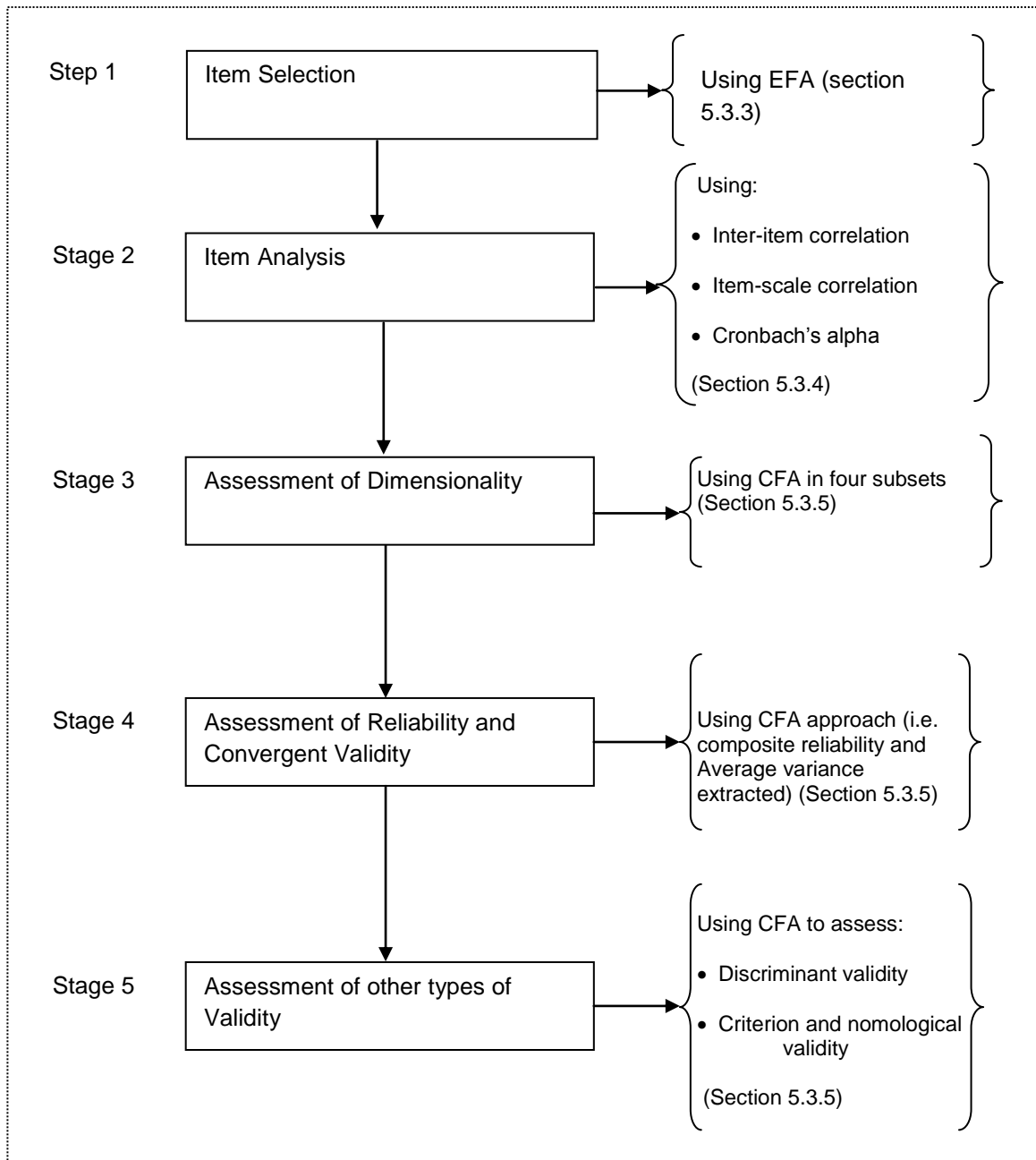
## 5.3 MEASURE DEVELOPMENT STRATEGY

### 5.3.1 An Overview

Obtaining valid measures is a fundamental task before any attempt to test hypothesised relationships. To this end, it is important that some rigorous statistical analyses are undertaken by way of assessing the viability and validity of the measures used in this study. The importance of this stage of the study is well illustrated by Siguaw, Simpson and Baker (1998, p.104): “[t]he purpose of this stage of analysis was to identify and eliminate poorly performing items for the reflective measures”. Consequently, reliable and valid measures were developed for the purposes of hypothesis testing. As such, the chapter describes the recommended psychometric procedures that could be used in developing measures for this study following the guidelines from the measure development literature (e.g., Anderson and Gerbing 1988; Churchill, 1979; DeVellis 2003; Peter, Churchill and Brown 1993; Spector 1992; Netemeyer, Bearden and Sharma 2003; Jöreskog and Sörbom 1996; and Nunnally and Bernstein 1994). Specific analytical techniques that used in the assessment include: exploratory factor analysis (henceforth EFA), item analysis (i.e. the analysis of inter-item correlations and item-scale correlations), and confirmatory factor analysis (henceforth CFA).

In this study, the measurement development procedure described in figure 5.7 is specifically followed to implement the measure development strategy. From figure 5.7, a five stage procedure is proposed. The goal is to address the major issues of establishing unidimensionality, reliability and validity of the scales used in the study. As such, the strategy can be thought to comprise of two broad aspects. Part one describes the item selection and analyses strategies with the aim of identifying poorly performing items in the scales. Part two describes the final measure development process with the view of finalising the scales and establishing their dimensionality, reliability and validity (Netemeyer, Bearden and Sharma 2003).

Figure 5.7: Measure Development Procedure to be Followed



### 5.3.2 Use of Subset Analysis

This study chooses to assess the dimensionality, reliability and validity of all scales by using EFA and CFA. Accordingly, there is a need to establish that the minimum sample size to variable/parameter ratios meet the recommended criteria (Hair et al 2006). It is recommended that the minimum sample size to variable ratio should be five-to-one (Hair et al. 2006; Tacbanik and Fidell 2007). This requirement places a restriction on the number of scale items that could be entered in to a single EFA and CFA. For example, to undertake EFA at the initial stage of scale purification the total number of variables was 61 which mean that

671 sample size was required. Similarly, in CFA the requirement is that the recommended minimum sample size to parameter ratio should be five-to-one (Hair et al. 2006; Tacbanik and Fidell 2007). Again, it was estimated that entering all 11 constructs and 61 indicators into a single CFA would mean that a huge number of parameters would have to be estimated. Moreover, it was possible that entering all indicators in to a single CFA could result in a poor model fit or even non-converged solution (Sharma 1996). Accordingly, in following conventional practice (e.g., Baker and Sinkula 1999; Cadogan et al. 2006), and in order to avoid violating minimum sample size to parameter ratios, the scales were initially analysed in sub-sets.

While this study relies on the analysis of the smaller item sets to provide parameter estimates (as can be seen in actual analyses in Chapter six), however, in accordance with conventional practice (e.g., Cadogan et al. 2006) and in order to show support for the robustness of the measurement items used in this study, a full measurement model is also planned.

To execute the sub-scale analysis strategy, this study ensures that sets of variables that are maximally similar conceptually are analysed together in sub-sets (Baker and Sinkula 1999). Table 5.8 presents the subsets for the EFA and CFA respectively. This study also takes notice of the view that EFA and CFA imposes different demands on sample size, and as such, fewer subsets will be used in EFA relative to CFA procedures where necessary (Hair et al. 2006).

Figure 5.8: Planned Subsets in EFA and CFA

<b>Subsets</b>	<b>EFA Subsets</b>	<b>Subsets</b>	<b>CFA subsets</b>
1	Six export EOB scales	1	Six export EOB scales
2	Three EMO scales	2	Three EMO scales
3	One export performance scale One export customer dynamism scale	3	One export performance scale One export customer dynamism scale
4	Full scale assessment: <ul style="list-style-type: none"> <li>• Six export EOB scales</li> <li>• Three EMO scales</li> <li>• One export performance scale</li> <li>• One export customer dynamism scale</li> </ul>	4	Full scale assessment: <ul style="list-style-type: none"> <li>• Six export EOB scales</li> <li>• Three EMO scales</li> <li>• One export performance scale</li> <li>• One export customer dynamism scale</li> </ul>

### **5.3.3 Item Selection using EFA**

Clark and Watson (1995) have noted that the EFA procedure is the most appropriate analytical approach for initial item selection. Stewart (1981) explains that factor analysis is a multivariate statistical test that enables researchers to identify structure within a set of observed measures. Moreover, factor analysis makes it possible to determine the interrelationships among a set of variables in an effort to find a few set to define a construct (Hair et al. 2006). In other words, factor analysis enables researchers to establish dimensions within a data and thus serves as a data reduction and summarization technique. In this study, EFA procedure is adopted for the purposes of item selection.

As a data reduction technique, large sets of variables may be reduced to few underlying dimensions (Hair et al. 2006). These underlying dimensions are often referred to as 'factors'. In other words, a factor may consist of an interdependent set of related items. Kerlinger (1964) defines a factor as a construct or a hypothetical entity that is assumed to underlie a set of items. The related items load on factors in a manner that maximises the variance within the data explained by that factor. The unique factor that emerges from the data may subsequently represent a construct (Kerlinger 1973; Hair et al. 2006).

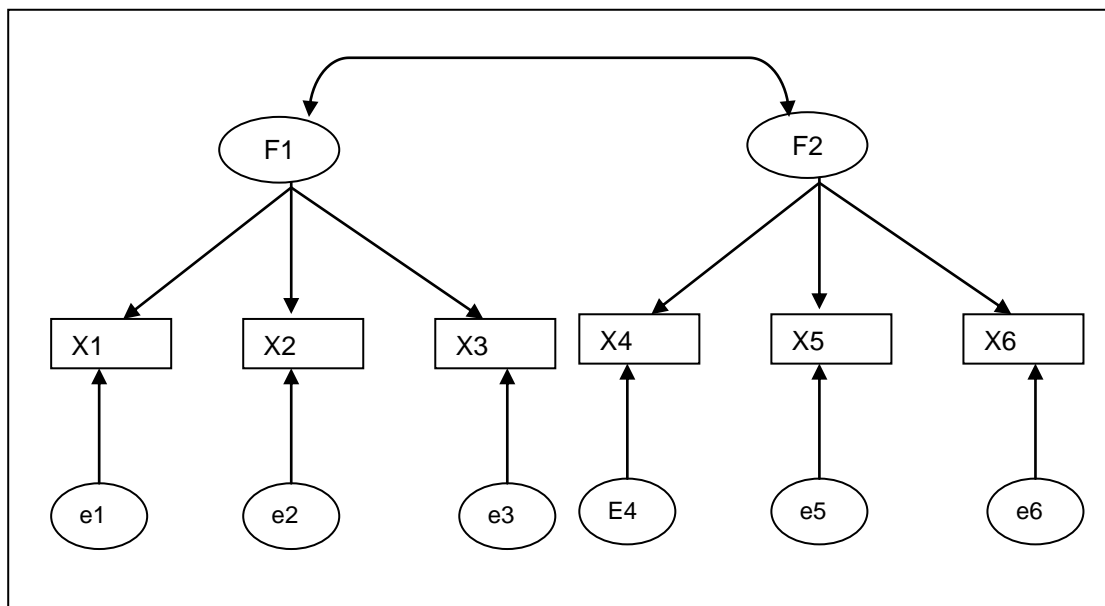
In a related observation, Cattell (1966) argues that factor analysis may be used to determine the kind of latent constructs that may be of importance within a set of variables. Additionally, it is often argued that factor analysis can be employed to examine underlying patterns and relationships that may exist between a large set of variables. Consequently, it can be considered as a process of condensing information into a smaller set without necessarily losing vital information (DeVellis 2003).

For research purposes, two major factor analysis methods are often utilized, namely, principal component analysis and common factor analysis (Hair et al. 2006). Other methods that are quickly gaining acceptance within the research include maximum likelihood analysis and alpha analysis (Stewart 1981). However, for the purposes of scale development, it is recommended that common factor analysis using principal axis factoring with an Oblimin rotation as is provided

SPSS 16.0 is ideal. Accordingly, this study plans to use common factor analysis technique for the EFA.

In common factor analysis, the correlation between the observed items in a scale is assumed to be purely the outcome of a common underlying factor. Figure 5.9 presents the logic behind the reflective scale development process that is proposed for this study. The “ $F_i$ ” is the common underlying latent construct,  $x_i$  is the observed items and  $e_i$  is the error term. In other words,  $x_i$  is a function of  $F_i$  and  $e_i$ . For Oblimin oblique rotation, the latent constructs (i.e. F1 and F2 in figure 5.8) are allowed to correlate (Hair et al. 2006). Given a sample size of 212, in this study factor loading of 0.4 is chosen as a critical value (Hair et al. 2006).

Figure 5.9: Reflective Scale Development Logic



The reflective model in Figure 5.8 corresponds to the assumptions underlying domain sampling theory (Sharma 1996). A major assumption in the domain sampling model is that “all items, if they belong to the domain of the concept, have an equal amount of common core” (Churchill 1979, p.68). In other words, if all the items are sourced from a single construct, then it is logical to expect that responses to these items should correlate highly. A key requirement in reflective scale development is the need to establish that a set of items are unidimensional. A unidimensional set of items measure one and only one construct. Churchill

explains that any item that is not drawn from an appropriate domain may introduce error and may thus be unreliable. In other words, if the correlation among a set of items cannot be accounted for by a single construct or latent factor as is shown in figure 5.8, then the set of items is not unidimensional (Netemeyer, Bearden and Sharma 2003). In domain sampling theory, such items may not be summed up or averaged to form a single construct (DeVellis 2003).

### **5.3.4 Item Analysis**

Item analysis is undertaken with the goal of producing a tentative description of the scale for a later validation (DeVellis 2003; Spector 1992). This helps to establish that all items and scales exhibit high level of internal consistency and reliability. Thus, item analysis helps to assess the homogeneity of the items within a scale (DeVellis 2003). Accordingly, it is important to show that items measuring the same construct demonstrate high level of inter-item correlations, item-scale correlation and reliability. To this end, each item and scale are analysed using Cronbach's alpha technique provided in SPSS 16.0. In the process, the coefficient alpha for each scale, inter-item correlation (i.e. each item with every other item) and item-scale correlation (i.e. each item with the sum of the remaining item) are calculated (Netemeyer, Bearden and Sharma 2003; Spector 1992). At this stage, items with low and negative correlations and those that contribute poorly to reliability are considered for elimination from the scales.

#### **5.3.4.1. Inter-Item Correlation**

The validity of a construct can be established by using inter-item correlation (DeVellis 2003). Scholars have argued that a strong inter-item correlation can be taken to mean that the items in question share a common cause, which in essence could also mean that the items are measuring the same thing (Clark and Watson 1995). It is suggested that inter-item correlations in a range of 0.4 to 0.5 can be taken to mean a valid measure of a construct with a narrow focus. Moreover, some researchers may take correlations as low as 0.20 as evidence of valid measure of a construct (Robinson, Shaver and Wrightsman 1991). In the case of this study, inter-item correlation, item-scale correlation and alpha reliability are jointly evaluated in SPSS 16.0 as part of item analysis (Hair et al. 2006).

### **5.3.4.2. Inter-Scale Correlation**

De Vaus (2002) has argued that item-scale correlation can be used to establish unidimensionality of scales in that items that do not correlate well with the rest of the items in the scale probably do not belong to the same scale. Although a full scale dimensionality assessment will be conducted in CFA in a later stage of this study (see section 5.3.5), it is nonetheless necessary to undertake an item-scale correlation assessment as a way of providing initial evidence of scale dimensionality. This is because the item-scale assessment (especially corrected item-total correlation) helps to examine the degree to which any one item is correlated with the scale itself. Accordingly, items with low item-scale correlations become candidates for deletion. Different recommendations exist regarding the thresholds for item deletion, however, items with item-scale correlation less than a critical value of 0.5 will be considered for deletion (Tabanick and Fidell 2007).

### **5.3.4.3 Scale Reliability Assessment**

Scale reliability is defined as the degree to which scale items are free from random error (McDaniel and Gates, 2007). It expresses the “ratio of the variance of the true score to the variance of the observed score” (Netemeyer et al, 2003, p. 42). Kerlinger (1973) argues that concepts that may be synonymous to reliability often demonstrate characteristics of “dependability, stability, consistency, predictability, and accuracy” (p. 442). Thus, reliable scales are those that can be depended on and that show consistency over time.

According to Netemeyer, Bearden and Sharma (2003, p. 47), “the concept of internal consistency can be used to estimate reliability”. The internal consistency concept is ultimately concerned with the homogeneity of the items within a scale (DeVellis, 2003). In other words, a reliable scale is “internally consistent to the extent that its items are highly intercorrelated” (DeVellis 2003, p. 28). What often accounts for the correlation among the items is the sharing of a common cause. Thus, the items correlate because they are all measuring the same thing, which is consistent with the domain sampling theory (Kerlinger 1973). The domain sampling theory is concerned about the extent to which measures are free from possible measurement errors. Two types of measurement errors are often identified: random and systematic errors (Nunnally and Bernstein, 1994). Reliability of a scale concerns random error. Thus, whether existing items or



newly developed items are used in a research study, the extent to which they are free from random error must be established if reliability is to be demonstrated (Kline 1998). Although the internal consistency theory assumes that observable items are administered to respondents once, it nonetheless suggests that there should be multiple items before reliability can be assessed.

There are different methods for assessing the reliability of a construct. Examples are the split-half reliability, test-retest reliability, and coefficient alpha reliability (see Nunnally and Bernstein 1994; Peter 1981; DeVellis 2003; and Kerlinger 1973 for a detailed review of reliability types). However, it is a common practice among researchers to assess reliability by using Cronbach's alpha. Thus, Cronbach's alpha (or coefficient alpha) is used in this study to assess the reliability of the scales for several reasons. First, it is a widely used measure of reliability in marketing research (e.g. Covin and Slevin 1989; Knight and Kim 2009), and second, the computation aids partitioning of total variance in scale items into true and error scores (Nunnally and Bernstein 1994).

A common research practice is to report coefficient alpha of all multi-item scales, whether these scales are borrowed from existing batteries or are newly developed or both (e.g. Jambulingam, Kathuria and Doucette 2005; Jantunen et al. 2008). In drawing on exemplary prior studies, the coefficient alpha for all the multi-item scales were estimated with the view of demonstrating their reliability. Kline (1998) suggests that reliability coefficient around 0.90 is excellent, values near 0.80 are very good, and values close to 0.70 are adequate. Values below 0.50 should be avoided (Kline 1998). However, scholars generally agree that coefficient alphas should exceed threshold criteria of 0.70 (Nunnally and Bernstein 1994). In this study, it is expected that the coefficient alpha values for all scales exceed the recommended 0.70 threshold. Further reliability assessment (using construct reliability) is undertaken in CFA (see section 5.3.5.4).

### **5.3.5 Dimensionality Assessment using CFA**

The purpose of the CFA model was to provide a final empirical validation of each item and scale used in this study. Ping (2004) argues that CFA provides the researcher with the tool to ensure that the constructs that comprise a theoretical framework are sufficiently validated (see also Netemeyer, Bearden and Sharma 2003). In the context of this study, a CFA is an appropriate analytical technique to

use to ensure that the reliability and validity of the constructs are well established (Ping 2004; Gerbing and Anderson 1988). Following on from these recommendations, all constructs used in this study are subjected to CFA for unidimensionality, reliability and validity evaluations.

Regarding dimensionality assessment, the CFA model offers this study the opportunity to assess all items not only by their relations to other items within the same scale, but also their relation with all other items in the measurement model (Gerbing and Anderson 1981; Hair et al. 2006). Although dimensionality has traditionally been assessed via inter-item correlations, item-scale correlation and even in EFA, however, Gerbing and Anderson (1988) have argued that these techniques do no account for external consistency, and as such they fail to discriminate between set of items that present distinct but correlated factors. Hence, the traditional approaches to assessing dimensionality do not adequately evaluate the unidimensionality of the scales (Gerbing and Anderson 1988).

Additionally, CFA offers “a stricter interpretation of unidimensionality than can be provided by more traditional method” (Gerbing and Anderson 1988, p. 186). As a result, unidimensionality provided in CFA tend to produce different conclusions regarding the acceptability of the scales. According to Sharma (1996), CFA hypothesises *a priori* about the exact nature of the multiple-factor model. As such each factor in a CFA model is viewed as an antecedent to a mutually exclusive subset of the items making it possible to assess the dimensionality of the different factors.

In assessing CFA models, researchers often use different evaluative criteria. Among these are examination of the significance of the parameter estimates and the variance captured by a set of items in a scale relative to measurement error (i.e. average variance extracted). Moreover, fit indices, standardised residuals and modification indices are often evaluated to determine the extent to which an implied model fits an empirical dataset. A discussion of the CFA procedures is provided in the following sections.

### 5.3.5.1 Model Specifications

In operationalising the CFA model, it is necessary to specify the exact relationships the model proposes to test. It is required that this specification is done a priori (Anderson and Gerbing 1988). CFA examines the unique error terms associated with the items included in the model and their inter-correlations and impacts on the observed item scores. Moreover, CFA makes it possible to satisfy the assumption of unidimensionality that each observed item reflects on the posited latent constructs. Figure 5.10 displays details of a simplified version of a three-factor CFA model specification developed by Cadogan et al (2001). In fact, the composition of the three-factor model was specified a priori based on theory (e.g. Cadogan, Diamantopoulos and De Mortanges 1999; Jaworski and Kohli 1993). Thus, the purpose of the CFA model was to confirm the factor structure of the three-factor model.

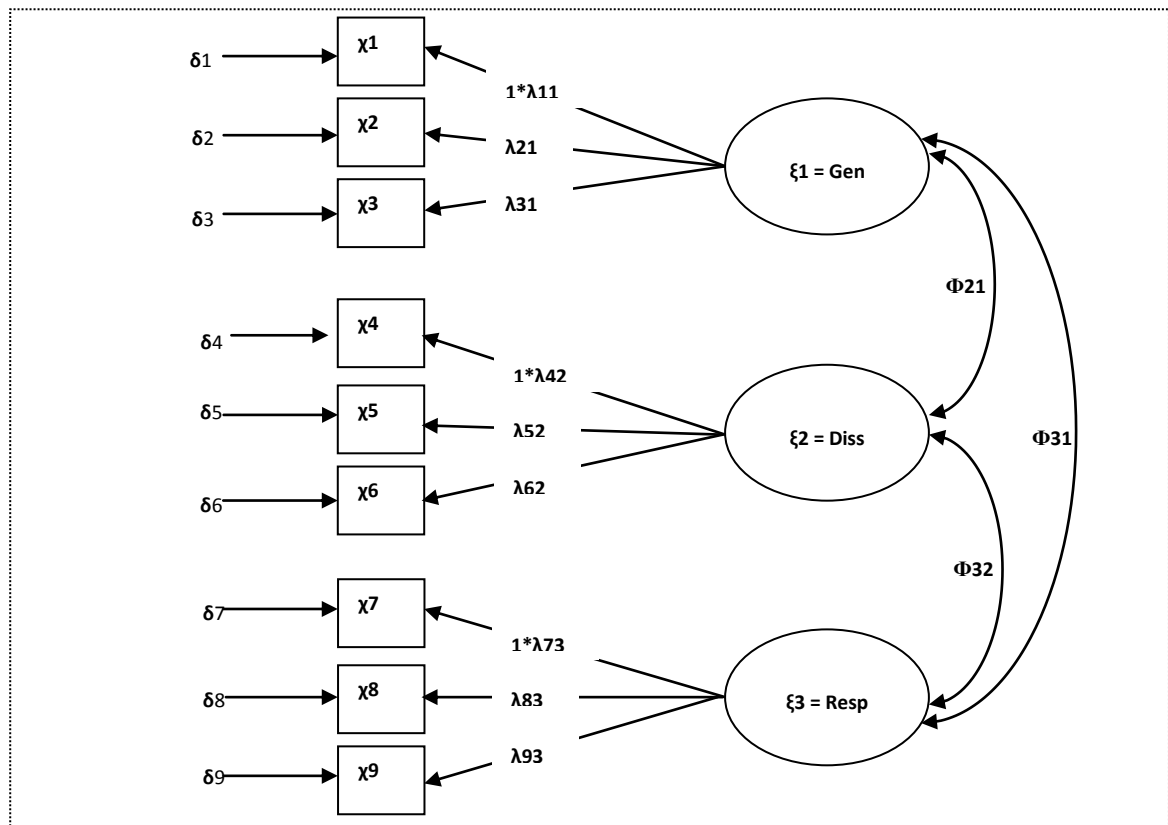
The CFA model as presented in figure 5.10 has five components that need explaining. There are three correlations between the three latent constructs (i.e. export intelligence generation, export intelligence dissemination, and export intelligence responsiveness). The three correlations are represented by  $\Phi$ . Specifically, the correlation between export intelligence generation and export intelligence dissemination is represented by  $\Phi_{21}$ , the correlation between export intelligence dissemination and export intelligence responsiveness is represented by  $\Phi_{32}$ , and the correlation between export intelligence generation and export intelligence responsiveness is represented by  $\Phi_{31}$ .

Several researchers have argued that differences in item variances are lost in the analysis of correlations because all variables are standardised to a common variance (Hair et al, 2006; Byrne, 1998). This is particularly useful because this research seeks to introduce method variance from different wordings and scorings of the key study constructs to overcome common method bias problem.

Moreover,  $\chi_1$ ,  $\chi_2$  and  $\chi_3$  are the observed indicators of  $\xi_1$  (i.e. export intelligence generation);  $\chi_4$ ,  $\chi_5$  and  $\chi_6$  are observed indicators of  $\xi_2$  (i.e. export intelligence dissemination); and  $\chi_7$ ,  $\chi_8$  and  $\chi_9$  are observed indicator of  $\xi_3$  (i.e. export intelligence responsiveness). Furthermore,  $\lambda$  represents the factor loadings of each  $\chi$  on each latent construct (i.e.  $\xi$ ) while  $\delta$  explains the unique error term for each observed indicator in the CFA model. It can be seen that the first loadings of

each set of  $\lambda$  was fixed to unity (i.e. 1) as they are not to be estimated. The rationale is that this constraint helps to achieve statistical model identification (Byrne, 1998). The measurement logic displayed in figure 5.8 is therefore used to specify the CFA model for all constructs in the conceptual framework (see figure 3.1 in chapter 3).

Figure 5.10: A Three-Factor CFA Model of Export Market Orientation



Model was adapted from Cadogan et al (2001) and with insights from Byrne (1998, p. 27)

### 5.3.5.2 Measurement Model Assessment

In assessing the measurement model, this study relies on *LISREL 8.7* software packages, and in following accepted research practice, maximum likelihood estimation method is used (Jöreskog & Sörbom 2004). The maximum likelihood (ML) estimation is pretty robust in terms of reasonable violation of normality and is based on the assumption that data is metric (Chou and Bentler 1995). As such the method allows for reliable parametric statistical results (Hair et al. 2006).

Moreover, the ML method minimises the fitness function of the CFA model by

deriving parameter estimates that yield predicted covariances that are as close as possible to the observed values in a particular sample (Chou and Bentler 1995).

The purpose of undertaking the measurement model assessment, therefore, is to determine the overall fit of the theoretical model to the data generated from the study. Several fit indices have been suggested in the psychometric literature, and a selected number of these have been used widely in the marketing research literature. In order to assess the fit of the study's measurement model, a number of recommended indices for assessing overall fit are proposed (Hu and Bentler 1995; Hoyle and Panter 1995). These include chi-square statistic (with associated degrees of freedom), goodness of fit index (GFI), non-normed fit index (NNFI), comparative fit index (CFI), incremental fit index (IFI), goodness of fit index (GFI) and root mean square error of approximation (RMSEA). These fit indices are further explained below.

A popular approach for assessing model fit is the use of chi-square (or  $\chi^2$ ) and its associated degrees of freedom (Diamantopoulos and Siguaaw 2000; Hoyle and Panter 1995). The  $\chi^2$  evaluation is popular among researchers because it provides a test of perfect fit in which the null hypothesis is that the model fits the population data perfectly (Cudeck and Browne 1983). In other words,  $\chi^2$  provides test of the residual differences between theoretical model and sample covariance matrix, and the ideal thing is that the difference should approach zero (or non-significant value) for good fit to be established (Marsh, Balla and MacDonald 1988). As such, a statistically significant chi-square may cause a rejection of the null hypothesis, implying that there is an imperfect model fit (Jaccard and Wan 1996, p. 18). The degrees of freedom (or *df*) determines the difference between the number of observations and the number of parameters the CFA model must estimate. It is ideal that a model is over-identified (Byrne 1998). In this sense, a just-identified model is one with no degrees of freedom. An over-identified model is one with positive degrees of freedom. The  $\chi^2$  compares whether the over-identified model provides a worse fit than if it was just identified (Hoyler and Panter 1995).

Psychometricians have indicated that  $\chi^2$  is overly sensitive to sample size and to deviations from the null model. Moreover, it can also be susceptible to model complexity to the extent that in large and complex models with many variables and large degrees of freedom, the observed  $\chi^2$  would nearly always be statistically

significant, even when there is a reasonably good fit to the data (Hair et al. 2006; Marsh and Hocevar 1985). However, when  $\chi^2$  values are reported, a recommended criterion is that  $\chi^2/df$  should be less than 3.0 or 2.0 in more restrictive models (Premkumar and King 1994; Bentler and Chou 1987; Bollen 1989).

Given the sample size and model complexity problem associated with  $\chi^2$  statistics, it is highly recommended that researchers combine other fit indices with the  $\chi^2$  statistics when assessing model fit (Bollen 1989; Bentler 1987; Jöreskog and Sörbom 1996). GFI is one of these (Jöreskog and Sörbom, 1996). The GFI is analogous to a squared multiple correlation ( $R^2$ ) in regression analysis and as such it indicates the proportion of the observed covariance explained by the model covariance. Like  $R^2$ , GFI value varies between 0 and 1 with 1 being a perfect fit. Hence, it is recommended that for a good model, GFI should be 0.90 at a minimum (Jöreskog and Sörbom 1996). Some scholars have recommended adjusted GFI (AGFI) to take account of model complexity as GFI tends to increase when more variables are added to the model. The AGFI takes this into account by correcting downward the value of the GFI as the number of parameters increases (Steward 1981). In other words, AGFI adjusts the GFI for extra degrees of freedom in the measurement model. Like GFI, the AGFI also ranges from 0 to 1 with values above 0.90 indicating a good fit to the data (Kelloway 1998).

Bentler (1987) has recommended NNFI and CFI indices as further measures of model fit. Normed Fit index (or NFI) indicates the proportion in the improvement of the overall fit of the CFA model relative to a null model, typically the “independence” model. The independence model is one in which all variables are assumed to be uncorrelated. To account for model complexity, NNFI (also known as the Tucker-Lewis index) is preferred as it corrects for model complexity (Bentler 1987). The CFI and IFI can be interpreted as the NNFI only that CFI and IFI are not affected by small size (Bentler 1992). To demonstrate good fit, the threshold for these indices should be 0.90 or larger (Bentler 1992). Thus, NNFI, IFI and CFI of 0.90 or greater suggest that the overall fit of the tested model is 90% better than the independence model.

RMSEA is another important fit index that is often reported in CFA and SEM models. It is an indication of a standardised summary of the average covariance

residuals. Covariance residuals explain the differences between the observed and implied model covariances (Bollen 1989). As the average discrepancy between the observed and predicted covariances increases, so does the value of the RMSEA. As such, when a model is perfect, RMSEA should be close to zero; hence, it is recommended that the values of RMSEA should be 0.1 or less (Hair et al. 2006). Some scholars suggest a value less than 0.08, while others recommends a value that is 0.05 or less for excellent model fit (Browne and Cudeck 1993; Kelloway 1998).

### **5.3.5.3 Model Fit Improvement**

In CFA model assessment, it is often the case that the implied model does not fit the observed data well on first estimation (Kelloway 1998). As a result, it is recommended that some form of iteration is undertaken to remove poor items. Once this is done, it can be argued that one has strayed away from a purely confirmatory assessment (or a priori model testing) of the CFA model. However, Anderson and Gerbing (1988) argue that “Because initially specified measurement models almost invariably fail to provide acceptable fit, the necessary respecification and re-estimation using the same data mean that the analysis is not exclusively confirmatory” (Anderson and Gerbing 1988, p. 412). Nonetheless, it is important to recognise that the ultimate goal of model respecification is to achieve two things: improvement to achieve parsimony or improvement to model fit (Kelloway 1998).

One way to accomplish the model improvement objective is to delete non-significant paths from the model (Pedhazur 1982). Another way is to inspect model modification indices and the expected improvement that could be achieved if non-significant paths are deleted. Scholars advise that any modifications made must be substantively meaningful and theoretically justified (Kelloway 1998; MacCallum, Roznowski and Necowitz 1992). Moreover, Sharma (1996) argues that large residual matrices may provide hints on model misfit as large residual values suggest the model is unable to adequately explain the relationships posited in the model. Furthermore, Anderson and Gerbing (1988) recommend that observed items with large correlated errors should be considered for deletion. Thus, to achieve satisfactory model fit, series of iterative procedures were undertaken following the guidelines provided by Kelloway (1998) and

Diamantopoulos and Siguaw (2000). In all cases, the respecifications were undertaken while being mindful of the theoretical underpinning of the CFA model.

### 5.3. 5.4 Assessment of Construct Reliability (CR)

Scholars have argued that alpha reliability assessment although useful (Nunnally and Bernstein 1994) may lack the rigor that is needed to establish the reliability of scales (Gerbing and Hamilton 1996; Gerbing and Anderson 1988). This is because coefficient alpha assumes that scale items are perfectly correlated or without measurement error (Bollen 1989) and as a result it is argued that coefficient alpha underestimates reliability (Ping 2004). As such, in using the results from the CFA, all scales are further assessed additional reliability index. In fact, Gerbing and Anderson (1996, p. 190) argue that “[u]nidimensionality alone is not sufficient to ensure the usefulness of a scale... the reliability of the [scale] should be assessed after unidimensionality has been established”. The literature suggests the assessment of construct (or composite) reliability as a basic research practice (e.g. Fornell and Larcker, 1981; Gerbing and Anderson (1988). Netemeyer, Bearden and Sharma (2003) assert that CR “is a measure of the internal consistency of items in a scale” (p. 153). Subsequently, in following conventions in the literature, CR is used to further assess scale reliability in this study. There is no known statistical package that is able to calculate composite reliability (CR). As a result, this value has to be calculated manually. DeVellis (2003) and Netemeyer et al (2003) provide a simplified formula for calculating the CR. The formula is presented in equation 5.1.

#### Equation 5.1: Formulation for Calculating Composite Reliability

$$\rho_x = \frac{(\sum \lambda_i)^2 \text{Var}(X)}{(\sum \lambda_i)^2 \text{Var}(X) + \sum \text{Var}(e_i)}$$

As is shown in equation 5.1,  $e_i$  denotes the measurement error for  $x_i$  indicators.  $\lambda_i$  is the loading of  $x_i$  on  $X$ ,  $\text{Var}(X)$  is the disattenuated (measurement error free) variance of  $X$ , and  $\sum$  is the notation for summation. It is recommended that a minimum of 0.60 should be achieved for CR to be satisfactorily established (Bagozzi and Yi 1988; Fornell and Larcker 1981). By establishing adequate CR



for all scales, scholars agree that a researcher can claim that convergent validity is demonstrated (e.g. Fornell and Larcker 1981).

### 5.3. 5.5 Assessment of Average Variance Extracted (AVE)

Another internal consistency diagnostic is average variance extracted (AVE). According to Netemeyer, Bearden and Sharma (2003, p. 153), an AVE “assesses the amount of variance captured by a set of items in a scale relative to measurement error”. As such, to further demonstrate construct convergence, AVE was computed for all constructs included in the conceptual model (Bagozzi and Yi 1991). This practice is consistent with tradition in both general EO and export EO literatures (e.g. Covin, Slevin and Green 2006; Balabanis and Katsikea 2003). The AVE was computed as a function of all squared standard factor loadings divided by the number of items (see Netemeyer, Bearden and Sharma 2003, p. 153; Fornell and Larcker 1981; Hair et al. 2006; Ping, 2004). Scholars such as Fornell and Larcker (1981) recommend that AVEs of 0.50 or above is adequate to demonstrate convergent validity. Netemeyer, Bearden and Sharma (2003, p. 154) advocate that values near the 0.50 threshold (>0.45) are reasonable demonstration of convergence. Equation 6.2 displays the formula that was used to calculate the AVEs for each construct.

**Equation 5.2:** Formula for Calculating Average Variance Extracted

$$AVE_x = \frac{(\sum \lambda_i^2)\text{Var}(X)}{(\sum \lambda_i^2)\text{Var}(X) + \sum \text{Var}(e_i)}$$

### 5.3. 5.6 Assessment of Discriminant Validity

The degree to which a construct is truly distinct from other constructs is known as discriminant validity. Thus, high discriminant validity demonstrates that a construct is distinct and captures a phenomenon that other constructs do not (Peter 1981). This analysis is important because some of the constructs used in this study are multidimensional (e.g. export innovativeness and export market orientation) and as such it was necessary to demonstrate discriminant validity among them. The evidence that the measurement scales discriminate between the constructs they are purported to be measuring is provided for by the low to moderate correlations

among the measures (Anderson and Gerbing 1988). There are two major ways of assessing discriminant validity in CFA.

First, discriminant validity may be established by comparing the chi-square difference between two nested models (Anderson and Gerbing 1988). In the first model, the correlations between any two sets of constructs are constrained, i.e. fixed to 1 (Hair et al. 2006). This is similar to stating that the items making up the two constructs could just as well be conceived as reflecting one construct. In the second model, the parameter is freely estimated (Ping 2004). The notion is that fixing the correlations between any two sets of constructs to 1 should decrease fit (that is  $\chi^2$  should get bigger); hence the constrained model should have bigger  $\chi^2$  and degree of freedom compared to the unconstrained model (freely estimated model). The hope is that the unconstrained model should have a significantly lower  $\chi^2$  than the constrained model (Bagozzi and Phillips 1982).

However, it has been argued that in practice this test does not always provide strong evidence of discriminant validity because of likely incidence of high correlations, which can be as high as 0.90 although that is unlikely if constructs discriminate (Anderson and Gerbing 1988; Bagozzi and Phillips 1982). As a result, it has been recommended that researchers should compare the AVE for each construct with the square of the correlation estimates between each pair of constructs (Hair et al. 2006). The rule of thumb is that the AVE estimates should be greater than the squared correlation estimates for discriminant validity to be achieved (Anderson and Gerbing 1988; Fornell and Larcker 1981). This approach seems to be prevalent among marketing researchers (e.g. Balabanis and Katsikea 2003). Thus, in accordance with the existing literature, discriminant validity of all constructs is established by undertaking both analyses.

### **5.3.5.7 Assessment of Nomological Validity**

Nomological or criterion validity is defined as the degree to which predictions from a formal theoretical network consisting of the construct under study are confirmed (Netemeyer Bearden and Sharma 2003). It explains the extent to which theoretically related constructs are empirically confirmed to be related. It can be argued that criterion and nomological validity for the constructs could be evaluated through the presence of association between variables of interest.

Several procedures and guidelines for demonstrating nomological validity are provided in the literature (e.g. Bagozzi, Yi and Phillips 1991; Bentler and Chou 1987; Bollen 1989). In drawing on these procedures and guidelines, correlation analysis is undertaken for all the constructs included in the conceptual framework presented in figure 1 in chapter three. From figure 1, this study demonstrates that theoretical evidence points to the existence of association between these constructs.

For example, theoretical evidence establishes that export product innovative novelty is positively associated with export performance (Samiee, Walters, and Dubois 1993). Moreover, it has been demonstrated that the export EOBs do correlate among themselves (e.g. Kreiser, Marino, and Weaver 2002; Hughes and Morgan 2007). Thus, to demonstrate nomological validity, this study needs to show that some degree of associations exist among the constructs in the conceptual framework. These relationships are demonstrated in detail in chapters six and seven of this study.

## **5.4 CHAPTER SUMMARY**

This chapter has served two purposes: delineation of a descriptive profile of the sample; and a description of the scale development strategy that is used to develop the scales that will be used for formal hypothesis testing. The descriptive analysis helped to provide an account of the general characteristics of the respondents and their export organisations. With respect to the descriptive analysis the chapter specifically focus on sizes, export sales, business and international experiences, industry type, market offerings, targeted customer group, scale and scope of international operation. This profile helped to development an initial impression about the characteristics of the firms that participated in this study.

Having described the firms that participated in the study, it was necessary that a strategy is put forward regarding how the responses from the firms would be assessed. Thus, the scale development strategy helped to set out the statistical analyses that will be undertaken in chapter 6 to assess the viability and validity of the measures used in this study. Specific analyses that are proposed include item

selection in EFA; item analysis using inter-item correlation, item-scale correlation and alpha reliability. Additional reliability assessment using CR and AVE, and validity assessment focusing on convergent, discriminant and nomological validities are also proposed. In the chapter that follow next, results of the scale development strategy are presented.

## **CHAPTER 6**

### **RESULTS OF MEASUREMENT MODEL ASSESSMENT**

#### **6.1 INTRODUCTION**

This chapter presents the results of the implementation of the measure development strategy outlined in chapter five. It specifically focuses on presenting the results of the development and purification of all items and scales used in this study. Two important procedures were followed: item selection and item analysis using EFA, and dimensionality and validity assessment using CFA (DeVellis, 2003). In the sections that follow next, accounts is given of the two measure development procedures starting with item selection using EFA.

#### **6.2 TREATMENT OF MISSING VALUES**

Before any attempt was made to purify the measures used in this study, all reverse coded items were recoded accordingly. In addition, given the lengthy questionnaire that was used for this study, it was expected that some questions would be left unanswered by respondents. As such, efforts were expended to identify missing values in the data although the rate of missing values per variable was low in the current study.

In general, missing observations pose major challenge to researchers in the social science discipline (Hair et al. 2006), and most often they are prompted by factors that are beyond the control of researchers (Kline 1998). Some of these factors include the failure of some respondents to respond to all questions. Missing observation can also be caused by respondent attrition from a study. However, Tabachnick and Fidell (2007) note that the most important thing for researchers to think about is how they can establish the pattern of missing data, why data is missing and how much is missing (see also Schafer and Graham 2002 for a review). In fact, Schafer and Graham (2002) recommend that researchers should examine whether data is missing intentionally or unintentionally. In the context of this study, it was estimated

that missing data was caused primarily by inability and unwillingness of respondents to respond to specific questions. Accordingly, it is argued that majority of the data in this study were missing unintentionally.

Craig and McCann (1978) suggest that it is critical for researchers to examine the rate of missing data in their studies. In some studies, it has been reported that as much as 50 per cent of the data might be missing (Kamakura and Wedel, 2000). To determine the amount of data that was missing in the current study, a missing value analysis (MVA) was undertaken using expectation maximization (EM) algorithm (available in SPSS 16.0) as recommended in the literature (e.g. Little 1988; Little and Rubin 1987; 1989; little and Schenker 1995). The EM algorithm was preferred to other available imputation methods because it is readily available in the SPSS programme and more importantly, it has been shown that the EM algorithm introduces minimal bias in structural models when the rates of missingness are low (Olinsky, Chen, Harlow 2003).

Results of the MVA showed that the largest missing value was 4.5 per cent for export profit and 2.2 per cent for export turnover. For all other variables, the percentage of missing values was less than 1 per cent. Tabachnick and Fidell (2007) and Hair et al (2003) suggest that 5 per cent or less values missing randomly in a large dataset pose less serious problem to the study validity. The two variables with the largest missing values (i.e. export profit and export turnover) were not included in the conceptual model of this study although they provided vital information on the profiles of the firms that participated in the study. In summary, missing value did not pose any threat to the validity of the current study.

## **6.3 MEASURE CONSTRUCTION AND PURIFICATION: ITEM SELECTION AND ITEM ANALYSIS**

### **6.3.1 Item Selection Using EFA**

As explained earlier in chapter five, exploratory factor analysis was used to select items that loaded on a factor so that preliminary scales could be provided for further

validation. Given sample size restriction, a subset analysis was proposed (see section 5.3.2). As such, three subsets have been developed. For completeness and in order to show support for the robustness of the items used in this study, a full measurement model (involving all good items) was also planned. To implement the subset strategy in EFA, the first set contained all items measuring the proposed six dimensions of export EOB. It was reasonable to analyse these items together as they are proximally similar conceptually (Hughes and Morgan 2007; Kreiser, Marino, and Weaver 2002).

The second set comprised of items measuring the three export market orientation subscales. Again, prior research shows that these three subscales are conceptually similar (Cadogan, Diamantopoulos and Mortanges 1999; Murray et al. 2007). The third set consisted of items measuring export performance and export customer dynamism. Although it can be argued that these two constructs are conceptually distinct, research shows that they are related to some extent (e.g. Balabanis and Katsikea 2003; Robertson and Chetty 2000). The fourth set contained all items that had loaded well ( $>0.4$ ) on their respective factors in the subset analysis. In other words, items that did not perform well in terms of their loadings were not included in the full measurement analysis. In the sections that follow next, results for subsets analyses are provided.

### **6.3.1.1 Scales for Export EOB**

This subsection contained items tapping the six components of export EOB. Included in the subset were the exporters' intensive product innovative, novel product innovative, risk-taking, proactive, competitively aggressive and autonomous behaviours. As has been argued in the entrepreneurship literature, these six factors are the essential building blocks that define an entrepreneurial behaviour (Lumpkin and Dess 1996; Miller and Friesen 1982). Accordingly, these six factors are assessed in a single set.

All 37 items comprising the six dimensions of export EOB were, therefore, run in a single EFA. In running the EFA, principal axis factoring extraction method and Direct Oblimin rotation approach were employed. Instead of the six hypothesised

dimensions, seven factors were returned. The seventh factor was formed by two autonomy items (i.e. AUT6 and AUT7). Moreover, one item each from proactiveness (i.e. PRO4), competitive aggressiveness (COM\_AGG5) and autonomy (AUT1) loaded poorly (less than 0.4) on their respective factors. As such, five problem items were removed and the remaining 32 items were subsequently estimated in another EFA. Having run the second EFA, a six-factor solution was obtained representing each of the six export EOB scales. All in all, a total of 67.35 per cent cumulative extracted variance was obtained. The factor pattern matrix is reproduced in table 6.1. For a full list of item descriptions, refer to appendix B 6.1.

Table 6.1: Factor Matrix of the Scale for Export EOBs

Items	Factor Loadings					
	INN1	INN2	RKT	PRO	AUT	AGG
NUM_PD1	-.802					
NUM_PD2	-.918					
NUM_PD3	-.861					
NUM_PD4	-.630					
INVD_PD1		.606				
INVD_PD2		.766				
INVD_PD3		.863				
INVD_PD4		.790				
INVD_PD5		.836				
RISK_TK1			-.701			
RISK_TK2			-.748			
RISK_TK3			-.636			
RISK_TK4			-.867			
RISK_TK5			-.907			
RISK_TK6			-.849			
PROACT1				-.619		
PROACT2				-.829		
PROACT3				-.532		
PROACT5				-.471		
PROACT6				-.585		
AUT2					.693	
AUT3					.854	
AUT4					.862	
AUT5					.697	



Table 6.1: Factor Matrix of the Scale for Export EOBs (*Continued*)

Items	Factor Loadings					
	INN1	INN2	RKT	PRO	AUT	AGG
COM_AGG1						.655
COM_AGG2						.781
COM_AGG3						.796
COM_AGG4						.500
COM_AGG6						.816
COM_AGG7						.876
COM_AGG8						.586
COM_AGG9						.643
KMO: 0.910						
Barlett's Test: 5445.382 (sig. 0.000)						
Percentage of Variance Extracted: 67.348						

### 6.3.1.2 Scales for Export Market Orientation

The three dimensions of EMO were measured by a total of 14 items. While five items each tapped export intelligence generation and dissemination, four items captured export intelligence responsiveness. All the dissemination items were recoded before the analysis began as they were negatively worded in the original questionnaire. All 14 items were entered into a single EFA and results showed that a three-factor solution was returned. However, one item measuring responsiveness (RESP\_4) was dropped because of poor loading ( $< 0.4$ ). Having eliminated RESP\_4, a second EFA was run and the results are reported in table 6.2. From table 6.2 a three-factor solution representing the three dimensions of export intelligence generation, dissemination and responsiveness was obtained with a cumulative extracted variance of 57.43 per cent.

Table 6.2: Factor Matrix of the Scale for Export Market Orientation

Items	Item Descriptions	Factor Loading		
		GEN	DISS	RESP
GEN_1	In this company, we generate a lot of information concerning trends (e.g., regulations, technological developments, political, economic) in our export markets.	.788		
GEN_2	We constantly monitor our level of commitment and orientation to serving export customer needs.	.549		
GEN_3	We are fast to detect fundamental shifts in our export environment (e.g., regulation, technology, economy).	.587		
GEN_4	We periodically review the likely effect of changes in our export environment (e.g., regulation, Technology).	.723		
GEN_5	We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.	.763		
RESP_1	If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.			.765
RESP_2	We are quick to respond to significant changes in our competitors' price structures in foreign markets.			.721
RESP_3	We rapidly respond to competitive actions that threaten us in our export markets.			.814
RDISS_1	Too much information concerning our export competitors is discarded before it reaches decision makers.		.641	
RDISS_2	Information that can influence the way we serve our export customers takes forever to reach export personnel.		.837	
RDISS_3	Important information about our export customers is often 'lost in the system'.		.850	
RDISS_4	Information about our export competitors' activities often reaches relevant personnel too late to be of any use.		.719	
RDISS_5	Important information concerning export market trends (e.g. regulation, technology) is often discarded as it makes its way along the communication chain.		.800	
KMO: 0.868				
Barlett's Test: 1522.76 (sig. 0.000)				
Percentage of Variance Extracted: 57.42				

### 6.3.1.3 Scale for Export Performance

The scale items for export performance and export customer dynamism were analysed together in a single EFA. The EFA results represented in table 6.3 showed that all the five items for the export performance scale loaded strongly on a single factor. This is notwithstanding the fact that the fifth item (i.e. SAT\_PERF5) loaded moderately at 0.445. Accordingly, this scale was taken through to the next stage of analysis, which is the simultaneously analysis of all items in a single full measurement model.

Table 6.3: Factor Matrix of the Scale for Export Performance

<b>Items</b>	<b>Description</b>	<b>Factor Loadings</b>
		PERF
SAT_PERF1	Export market share	.828
SAT_PERF2	Export sales volume	.949
SAT_PERF3	Export sales growth rate	.861
SAT_PERF4	New export market entry	.737
SAT_PERF5	Export profitability	.445
KMO: 0.787		
Barlett's Test: 695.353(sig. 0.000)		
Percentage of Variance Extracted: 61.36		

#### 6.3.1.4 Scale for Export Customer Dynamism

Regarding the export customer dynamism items, all five items loaded strongly on a single factor as can be seen in table 6.4. As such, this scale was put forward to the next stage of analysis.

Table 6.4: Factor Matrix of the Scale for Export Customer Dynamism

<b>Items</b>	<b>Description</b>	<b>Factor Loadings</b>
		DYN
HETERO_1	The nature of the competition in our export markets varies from one product line to another	.700
HETERO_2	Our export customers' buying habits are different for all our products	.823
HETERO_3	Our export customers have very different product requirements	.834
HETERO_4	The challenges/risks in our export market vary from one product line to another.	.785
HETERO_5	Our export operations are very diverse	.776
KMO: 0.768		
Barlett's Test: 700.787 (sig. 0.000)		
Percentage of Variance Extracted: 61.62		

### **6.3.1.5 Simultaneous Analysis of all Scales**

Having assessed the individual scales and having selected items that have loaded strongly on their respective factors, it is now time to evaluate the extent to which each item performed in relation to other items tapping other constructs. Thus, in this section an account is given on a simultaneous analysis of all items in a single EFA.

The initial EFA solution returned 12 factors instead of 11 as predicted. However, the results of several iterations including deletion of poorly loading items and cross-loading items produced a solution that is reported in table 6.5. Specific items that were finally dropped from the item bank included the following: competitive aggressiveness scale (items COM\_AGG1, COM\_AGG4, COM\_AGG8, COM\_AGG9); generation (item GEN5); export performance (item SAT\_PERF5) and export customer dynamism (HETERO\_1). The retained items returned a neat 11-factor pattern as is reported in table 6.5. All in all, the retained items explained 60.10 per cent of the total variances. Consequently, the retained items were put forward for further item analysis.

### **6.3.2 Item Analysis**

Having obtained EFA solutions for the scales, the next step of the measure development process was to perform item analysis for each scale in order to further establish their measurement properties. At this juncture, attention was paid to inter-item correlations (see Appendix B 6.2) and the corrected item-scale correlations (see Appendix B 6.3). The purpose of these extra item analyses was to further identify items that needed to be removed from the scales. Additionally, the Cronbach's alpha for each scale was examined as it helped to inform any decision to retain or remove items from the scales. In the sections that follow next, item analysis for each of the 11 constructs are presented.

Table 6.5: Pattern Matrix for the Full Measurement EFA Model

Items	Factor Loadings										
	PRO	DISS	AUT	DYN	INT	NOV	RESP	RISK	PERF	AGG	GEN
NUM_PD1					.772						
NUM_PD2					.882						
NUM_PD3					.832						
NUM_PD4					.627						
INVD_PD1						.659					
INVD_PD2						.797					
INVD_PD3						.858					
INVD_PD4						.768					
INVD_PD5						.819					
RISK_TK1								.661			
RISK_TK2								.713			
RISK_TK3								.640			
RISK_TK4								.829			
RISK_TK5								.856			
RISK_TK6								.834			
AUT2			.663								
AUT3			.850								
AUT4			.880								
AUT5			.723								

Table 6.5: Pattern Matrix for the Full Measurement EFA Model (*Continued*)

Items	Factor Loadings										
	PRO	DISS	AUT	DYN	INT	NOV	RESP	RISK	PERF	AGG	GEN
COM_AGG2										.661	
COM_AGG3										.716	
COM_AGG6										.795	
COM_AGG7										.855	
GEN_1											-.632
GEN_2											-.428
GEN_3											-.591
GEN_4											-.632
RESP_1							.639				
RESP_2							.711				
RESP_3							.714				
RDIS1		.601									
RDIS2		.804									
RDIS3		.815									
RDIS4		.724									
DIS_5		.813									
SAT_PERF1									.735		
SAT_PERF2									.819		
SAT_PERF3									.779		
SAT_PERF4									.692		

Table 6.5: Pattern Matrix for the Full Measurement EFA Model (*Continued*)

Items	Factor Loadings										
	PRO	DISS	AUT	DYN	INT	NOV	RESP	RISK	PERF	AGG	GEN
HETERO_2				.800							
HETERO_3				.813							
HETERO_4				.797							
HETERO_5				.797							
PROACT1	.473										
PROACT2	.594										
PROACT3	.470										
PROACT5	.464										
PROACT6	.513										
KMO: 0.876											
Bartlett's Test: 8036.148 (sig. 0.000)											
Percentage of Variance Extracted: 60.10											

**Note:**

PRO = Export Proactiveness; DISS = Export Intelligence Dissemination; AUT = Export Autonomy; DYN = Export Customer Dynamism; INT = Export Product Innovation Intensity; NOV = Export Product Innovation Novelty; RESP = Export Intelligence Responsiveness; RISK = Export Risk-Taking; PERF = Export Performance; AGG = Export Competitive Aggressiveness; GEN = Export Intelligence Generation.

### 6.3.2.1 Scales for Export EOBs

Having selected the good items for the export EOBs scales in EFA, a further item analysis was conducted. In this instance, all the six subscales were analysed separately to determine how their individual items performed in terms of inter-item correlation, item-scale correlation and Cronbach's alpha reliability.

The inter-items correlations were first generated to provide information on the internal consistency of the export EOB scales. As can be seen from Appendix B-6.2 all the items correlated strongly meeting the minimum recommended threshold value of 0.4 (Hair et al. 2006). Moreover, an inspection of table 6.6 shows that all the retained scale items had acceptable profiles. Specifically, fairly normally distributed scale can be argued given the mean and standard deviation results of the items. Furthermore, as can be seen in table 6.6 the Cronbach's alpha for each scale was greater than the minimum threshold value of 0.70 (Nunnally and Bernstein 1994). Finally, from Appendix B-6.3, it is indicative that all scale items capturing the six export EOB factors demonstrated strong item-scale correlations. This was taken to further suggest that none of the export EOB scale items showed any sign of problems. In other words, all the items showed strong association with their respective scales with the lowest being 0.661 (i.e. RISK\_TK3 to the scale of Export risk-taking behaviour). As such, all the items were put forward for CFA.



Table 6.6: Profile of the Six Scales for Export EOB

<b>Latent variables (number of Items)</b>	<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Alpha</b>
Export Product Innovation Intensity (4)	NUM_PD1	4.50	1.433	0.914
	NUM_PD2	4.52	1.402	
	NUM_PD3	4.45	1.445	
	NUM_PD4	4.22	1.464	
Export Product Innovation Novelty (5)	INVD_PD1	4.59	1.163	0.911
	INVD_PD2	4.68	1.119	
	INVD_PD3	4.90	1.039	
	INVD_PD4	4.70	1.197	
	INVD_PD5	4.92	1.120	
Export Risk-Taking Behaviour (6)	RISK_TK1	3.84	1.490	0.925
	RISK_TK2	3.80	1.570	
	RISK_TK3	4.07	1.396	
	RISK_TK4	3.74	1.528	
	RISK_TK5	3.63	1.631	
	RISK_TK6	3.93	1.668	
Export Proactive Behaviour (5)	PROACT1	4.90	1.254	0.875
	PROACT2	5.09	1.130	
	PROACT3	4.94	1.307	
	PROACT5	4.75	1.287	
	PROACT6	4.88	1.218	
Export Competitively Aggressive Behaviour (4)	COM_AGG2	4.57	1.328	0.898
	COM_AGG3	4.28	1.595	
	COM_AGG6	4.13	1.818	
	COM_AGG7	4.05	1.785	
Export Autonomous Behaviour (4)	AUT2	4.95	1.325	0.883
	AUT3	4.90	1.320	
	AUT4	5.06	1.323	
	AUT5	5.05	1.181	

### 6.3.2.2 Scales for Export Market Orientation

The three scales of EMO produced inter-item correlations and item-scale correlations that were strong and above the critical values of 0.35 and 0.50 respectively. With respect to inter-item correlations, results showed that there were strong correlations among the individual items, demonstrating that the scales had strong internal consistency. Regarding the item-scale correlations, the minimum value was 0.608, which was taken to mean strong associations of the items to their respective scales.

To complement the results of the inter-item correlations and item-scale correlations, the Cronbach's Alpha for each of the three scales was also evaluated. This analysis helped to determine the optimal length of the scales. An examination of the coefficient alphas revealed that the subscale achieved reasonably high alphas as can be seen in table 6.7. A further inspection of table 6.7 showed that the items achieved decent spread around their respective mean values. Hence, all the EMO items were retained for further analysis in CFA.

Table 6.7: Profile of the Scales for Export Market Orientation

<b>Latent variables (number of Items)</b>	<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Alpha</b>
Export Intelligence Generation (4)	GEN_1	4.86	1.334	0.805
	GEN_2	5.18	1.180	
	GEN_3	5.13	1.098	
	GEN_4	5.00	1.268	
Export Intelligence Dissemination (5)	RDIS1	5.74	1.238	0.885
	RDIS2	5.89	1.146	
	RDIS3	5.80	1.118	
	RDIS4	5.86	1.142	
	RDIS5	5.74	1.162	
Export Intelligence Responsiveness (3)	RESP_1	5.17	1.295	0.827
	RESP_2	5.07	1.273	
	RESP_3	5.27	1.140	

### 6.3.2.3 Scale for Export Performance

Four items were initially retained in EFA to assess export performance. As such, an item analysis was performed to determine the performance of each item in terms of their inter-item correlations, item-scale correlations and alpha. As it was in the case of export EOB and EMO scales, inter-item correlations was examined to evaluate the extent to which each item performed in relation to other items in the same export performance scale, while item-scale correlations evaluated the performance of each item in relation to the scale as a whole. Alpha coefficient helped to determine whether the scale achieved acceptable reliability or not.

Results of the item analysis revealed that the four export performance scale items were highly correlated with each other with the lowest correlation being 0.576 (i.e. correlation between SAT\_PERF4 and SAT\_PERF1). In addition, a look at the results of item-scale correlations showed that each item correlated strongly with the scale with the smallest association being 0.681 for SAT\_PERF4 (see Appendix B-6.3). These results were taken to mean that the scale achieved strong internal consistency. Finally, as is reported in table 6.8, the export performance scale returned an impressive alpha value of 0.907 which is well above the critical value of 0.70. Consequently, all the items in this scale were retained for further analysis in CFA.

Table 6.8: Profile of the Scale for Export Performance

<b>Latent variables (number of Items)</b>	<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Alpha</b>
Export Performance (4)	SAT_PERF1	4.76	1.333	0.907
	SAT_PERF2	4.82	1.305	
	SAT_PERF3	4.86	1.326	
	SAT_PERF4	4.75	1.334	

### 6.3.2.4 Scale for Export Customer Dynamism

The final scale items that were analysed were those that measured export customer dynamism. Like all other multi-item scales used in this study, the four items comprising the customer dynamism scale were also analysed for their

internal consistency and reliability using inter-item correlations, item-scale correlations and alpha coefficients. Results of the analyses reported in table 6.9 showed that the four items were highly inter-correlated with the lowest association being 0.529 (between HETERO\_5 and HETERO\_2). Additionally, item-scale correlations were strong and well above the critical value of 0.50. The smallest corrected item-total correlation was 0.684 for HETERO\_2. These results provided evidence for sufficient internal consistency of the scale. Moreover, the scale produced a strong alpha coefficient of 0.880 further demonstrating the reliability of the scale. As a result, all four items in the export customer dynamism scale were returned for further examination in CFA.

Table 6.9: Profile of the Scale for Export Customer Dynamism

<b>Latent variables (number of Items)</b>	<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Alpha</b>
Export Customer Dynamism (4)	HETERO_2	4.83	1.416	0.880
	HETERO_3	4.90	1.372	
	HETERO_4	4.95	1.463	
	HETERO_5	5.02	1.459	

## **6.4 MEASURE CONSTRUCTION AND PURIFICATION: DIMENSIONALITY AND VALIDITY ASSESSMENT IN CFA**

### **6.4.1 An Overview**

As was discussed earlier in section 5.3.5 (chapter 5), the issue of dimensionality is central to scale development, and a vigorous approach to assessing scale dimensionality is by using CFA (DeVellis 2003). In addition to helping this study to assess scale dimensionality, CFA can also aid the study's efforts to further trim scale items (Netemeyer, Bearden and Sharma 2003; DeVellis 2003). Through CFA, further scale reliability can be evaluated in the form of composite reliability (CR) and average variance extracted (AVE). Furthermore, scale validities including convergent validity and discriminant validity can be assessed in CFA (Ping 2004; Gerbing and Anderson 1988). Thus, all scales that passed through EFA were subsequently evaluated by means of CFA models.

Several model testing and estimation approaches are available to researchers. Among these are maximum likelihood (ML), generalised least square (GLS), partial least square (PLS) and asymptotic distribution free (ADF) methods. In the case of the current study, a decision was made to use ML method for model testing and estimation. Two important reasons informed this decision. First, Chou and Bentler (1995) suggest that both ML and GLS perform quite well in generating reliable statistical results. Second, it has been found that the ML method is quite robust under reasonable violation of normality (Chou and Bentler 1995). This is notwithstanding the view that multivariate assumption that underpins the ML method is often violated in practice. In this study, no major violation of the normality assumption was anticipated, and as such the ML was used to estimate the CFA models and the structural equation models (see section 7.2.1 in chapter seven).

Again, as was proposed in section 5.3.5.1 (chapter 5) model specification involving variables (or indicators) capturing each construct (or factor) was done *a priori*. Thus, the conceptual linkage between the measurement items and their respective latent constructs were specified beforehand (see figure 5.1 in chapter five for an illustrative model). With respect to model assessment, a typical research practice is to examine chi-square ( $\chi^2$ ) statistic and five other fit heuristics including RMSEA, NNFI, CFI, IFI and GFI (Byrne 1998; Hu and Bentler 1995; Jaccard and Wan 1996; Cudeck and Browne 1983; Hoyler and Panter 1995). These fit indices are recommended in the literature as acceptable ways to evaluate the overall fit of measurement models (Byrne 1998). Based on theoretical justification, model respecification was undertaken to further remove poor items from the scales (Hair et al. 2006; MacCallum, Roznowski and Necowitz 1992). Finally, scale reliability and validity were assessed as earlier proposed in sections 5.3.5.4 to 5.3.5.7 of chapter five.

### **6.4.2 Constructing the Measures**

Using LISREL 8.7 (Jöreskog and Sörbom 2004) and in following the measurement development plan in figure 5.6 (chapter five), all the multi-item scales that had passed the EFA evaluation were entered into CFA models for further analysis. As

planned, ML estimation method was used and each relationship was specified *a priori*. Three sub models plus one full measurement model were run. This was in recognition of the restrictions of sample size to parameter ratio. Thus, the sample size to parameter ratio of 5:1 was observed. As it was in the case of EFA, the first CFA subset comprised of the items measuring the six export EOB scales. The second set contained the items that captured the three EMO scales. The third set consisted of the export performance and export customer dynamism scales. Finally, a full measurement model was estimated with all items that performed well at subset analysis stage included. Thus, problematic items were removed from the individual scales before the full measurement model was estimated. In this process, the modification index for each item was examined and items with large standardised residuals were eliminated from their respective scales.

### **6.4.3 Subset Analysis Using CFA**

The following sections focus on the subset analysis of the measures using CFA.

#### **6.4.3.1 CFA Model Set One: Scales for Export EOB**

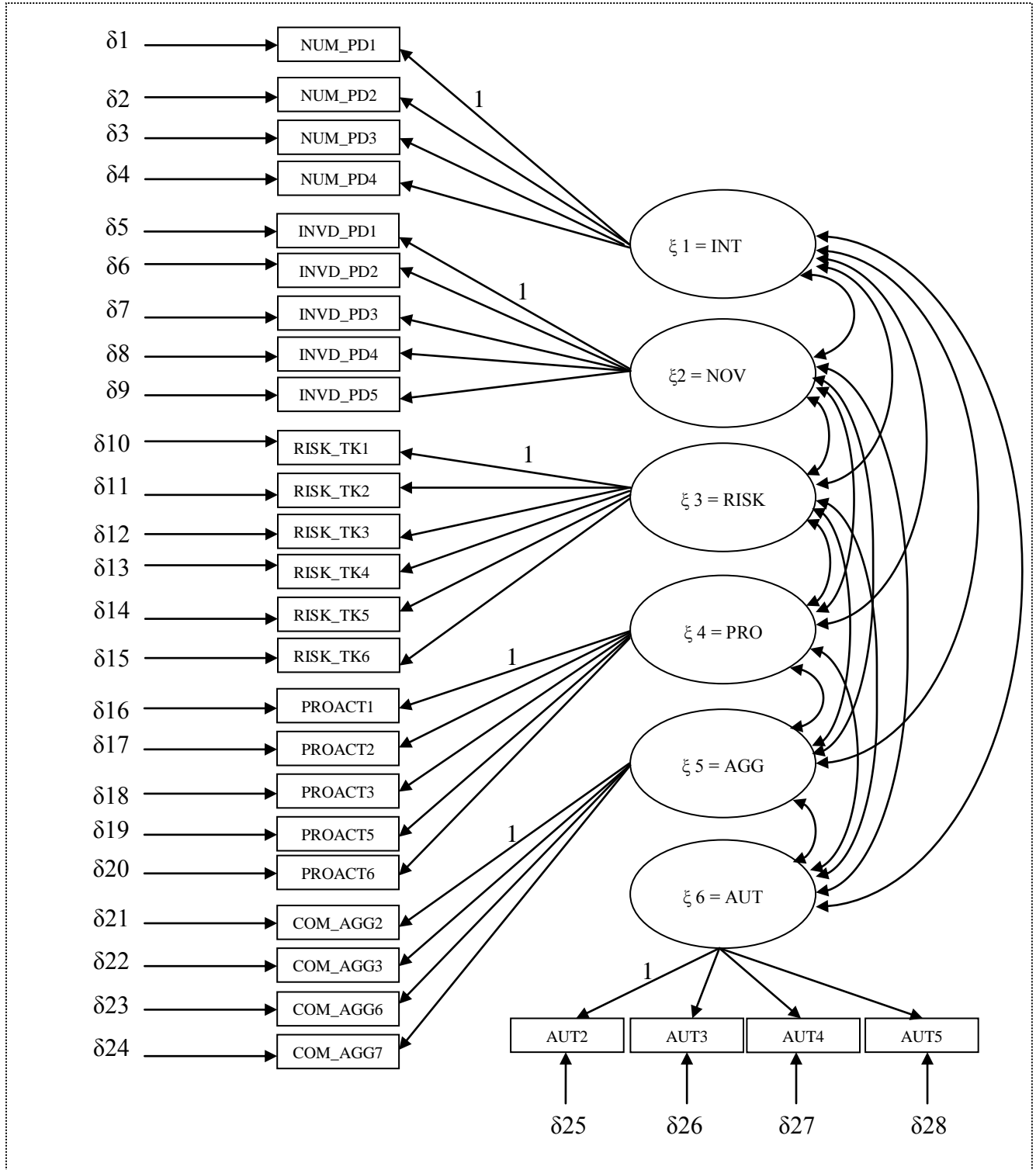
Similar to the EFA procedure, the six scales for export EOB were first analysed. The factor structure of the multi-factor CFA model for the six export EOBs was specified and is reproduced in figure 6.1.

The CFA model in figure 6.1 returned a converged solution with acceptable fit (i.e.  $\chi^2 = 790.175$ ;  $df = 335$ ; RMSEA = 0.080; NNFI = 0.960; CFI = 0.965; IFI = 0.965 and GFI = 0.789). Given the above statistics it was evident that the model achieved acceptable fit with respect to absolute and comparative fit models. The only exception was GFI value of 0.789 which was relatively low and this might be due to the presence of large number of items in the model (Gerbing, Hamilton and Freeman 1994). However, an inspection of the modification indices showed that several items had large standardised residuals. Consequently, items that were identified to have large standardised residuals were deleted from the model. Having deleted problem items from the model, the export EOB CFA model was respecified and then re-estimated. The respecified CFA model is reproduced in figure 6.2.

Having respecified the CFA model for the export EOB scales, a far better converged solution was obtained with excellent fit and significant factor loadings. The fit indices and the factor loadings (with their respective t-values) are reported in table 6.10. It is evident that all fit indices for the CFA model of export EOB scales were well above the recommended threshold. Moreover, each item loaded strongly on respective factor at the significance level of 0.05 or better.

In addition to assessing the fit and dimensionality of the scales, reliability and validity of the scales were also assessed. With respect to reliability of the scales, each scale obtained composite reliability (CR) value that was well above the critical value of 0.60 as can be seen in table 6.10 (Bagozzi and Yi 1988). Additionally, average variance extracted (AVE) for each scale was greater than the critical value of 0.50 (Fornell and Larcker 1981). All in all, convergent validity was adequately established. This also means that adequate unidimensionality of the export EOB scales was achieved and as such the scales could be used in formal hypotheses testing.

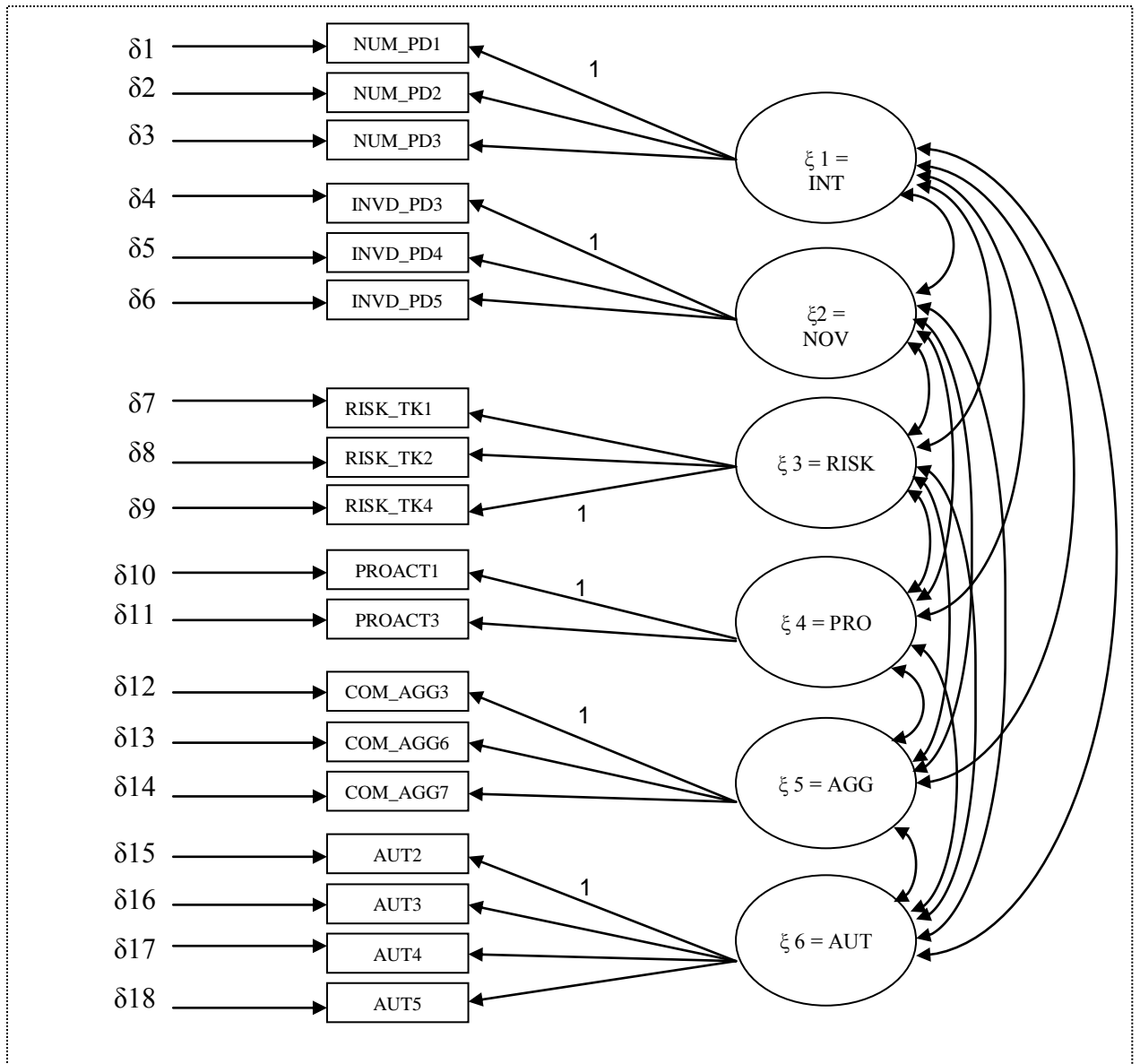
Figure 6.1: The First CFA Model for the Export EOB Scales



**Note:**  
 INT = Export Product Innovation Intensity; NOV = Export Product Innovation Novelty; RISK = Export Risk-Taking; PRO = Export Proactiveness; AGG = Export Competitive Aggressiveness; and AUT = Export Autonomy.



Figure 6.2: The Respecified CFA Model for Export EOB Scales



**Note:**

INT = Export Product Innovation Intensity; NOV = Export Product Innovation Novelty; RISK = Export Risk-Taking; PRO = Export Proactiveness; AGG = Export Competitive Aggressiveness; and AUT = Export Autonomy.

Table 6.10: CFA Results for the Measurement Model of Export EOB Scales

Items	Export product innovation intensity	Export product innovation Novelty	Export risk-taking	Export proactiveness	Export competitive aggressiveness	Export autonomy
NUM_PD1	0.867 (fixed)					
NUM_PD2	0.883(16.51)					
NUM_PD3	0.872 (16.23)					
INVD_PD3		0.841 (fixed)				
INVD_PD4		0.798 (13.51)				
INVD_PD5		0.916 (15.51)				
RISK_TK1			0.806 (12.92)			
RISK_TK2			0.857 (13.77)			
RISK_TK4			0.832 (fixed)			
PROACT1				0.780 (fixed)		
PROACT3				0.733 (9.69)		
COM_AGG3					0.802 (fixed)	
COM_AGG6					0.874 (14.17)	
COM_AGG7					0.885 (14.34)	
AUT2						0.729 (fixed)
AUT3						0.898 (12.63)
AUT4						0.883 (12.48)
AUT5						0.734 (10.38)
AVE	0.764	0.728	0.692	0.572	0.731	0.664
CR	0.907	0.889	0.871	0.728	0.890	0.887
Fit Indices	$\chi^2 = 156.069$ ; $df = 120$ ; $p\text{-value} = 0.015$ ; $RMSEA = 0.038$ ; $NNFI = 0.989$ ; $IFI = 0.991$ ; $CFI = 0.991$ ; $GFI = 0.924$					

#### 6.4.3.2 Competing Export EOB CFA Model Assessment

Given that export EOB is the focal construct for the current study, it was necessary that additional model assessment is undertaken to ensure that its fit to the data is well established. Accordingly, in addition to the above model assessment activities this study also compared the export EOB measurement model to other theoretically plausible model specifications. One could argue, for instance, that export EOB comprises of three dimensions (i.e. innovativeness, risk-taking and proactiveness) as was long proposed by Khandwalla (1978) and Miller (1983) and later studied in export context by Balabanis and Katsikea (2003) and Robertson and Chetty (2000). Alternatively, Wang's (2008) four dimensional model could be argued. Furthermore, Lumpkin and Dess's five-dimensional model could also be a plausible alternative to the hypothesised six-factor model tested in this study

(Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010). Thus, in addition to the six-factor model three additional models were tested and their results compared with the six-factor model. Detail information on the specific measures and constructs included in the three alternative export EOB CFA models are provided in Appendix B 6.4. Since product innovativeness comprised of two dimensions in the current study as opposed to prior studies, the two dimensions were merged into one dimension to tap overall product innovativeness construct. Fit measures for the three alternative models are presented along with the fit measures of the current study's hypothesised model in table 6.11.

A comparison of the four models clearly reveals that the six-factor model is in many ways the best of the four competing models in terms of fit. This is particularly corroborated by the Akaike Information Criterion (AIC), and normal theory weighted least square chi-square ( $\chi^2$ ) and degrees of freedom. Schermelleh-Engel, Moosbrugger, and Müller (2003) recommend that when comparing a set of competing models for the same dataset, it is best to select the model with the lowest AIC value (see also Kelloway 1998, p.32-33). Indeed, Kelloway (1998) argues that smaller values support a more parsimonious model. Although the alternative three-dimensional model seems to produce the smallest AIC value, however, a comparison of  $\chi^2/df$  values for all four models indicates that the hypothesised model has the smallest value (i.e.  $156.069/120 = 1.301$ ), suggesting best model fit. Furthermore, all other fit heuristics showed that the proposed six-factor model has the best fit to the data. In fact, it can be argued in a conceptual terms that the six-dimensional model provides a more comprehensive depiction of an EOB than the three-dimensional model in the sense that the former goes further to explore wider spectrum of issues that international businesses need to consider when they seek to become entrepreneurially oriented in their export operations.

Table 6.11: Results of Comparative Export EOB Measurement Model Assessment

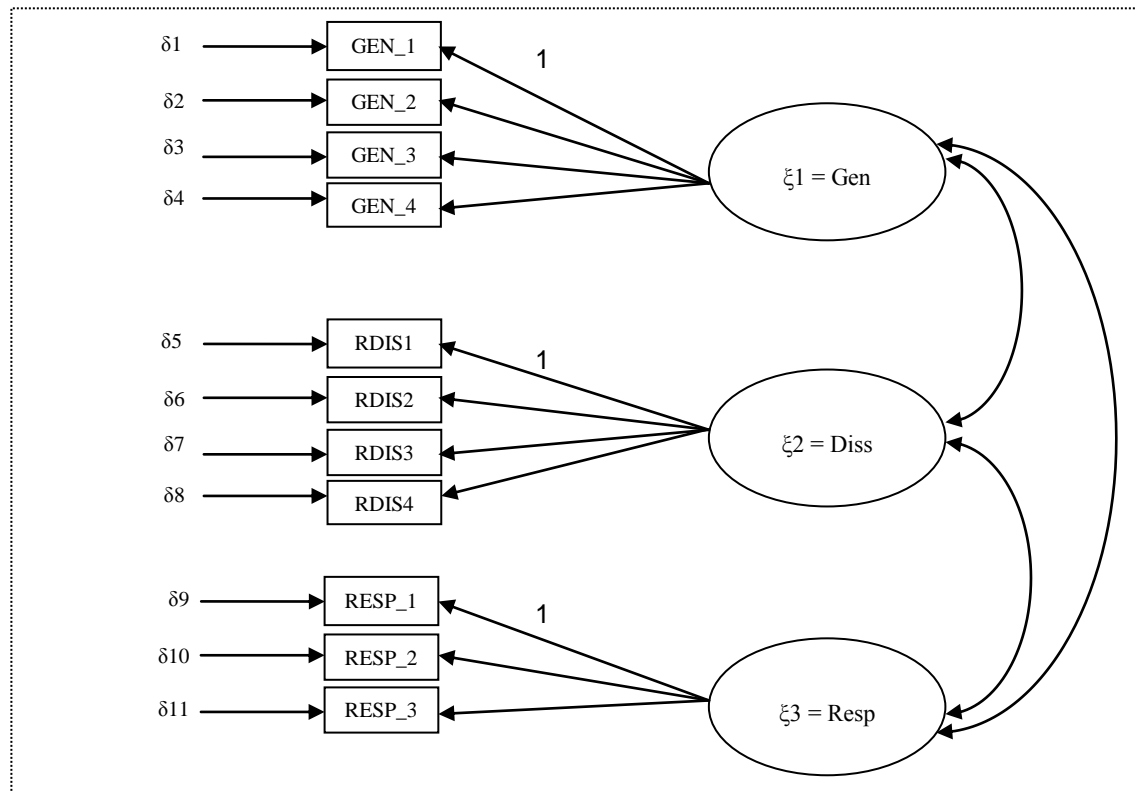
Fit Measure	Proposed Six-Dimensional Model	Alternative Model 1	Alternative Model 2	Alternative Model 3
$\chi^2$	156.069	192.510	195.319	104.048
<i>p</i> - values	0.015	0.000	0.0.000	0.000
<i>df</i>	120	109	85	41
RMSEA	0.038	0.060	0.078	0.085
NNFI	0.989	0.955	0.937	0.943
CFI	0.991	0.964	0.949	0.958
SRMR	0.043	0.059	0.071	0.064
GFI	0.924	0.903	0.890	0.918
AIC	258.069	280.510	265.319	154.048

**NOTE:** Alternative Model 1 = Five Dimensional Model; Alternative Model 2 = Four Dimensional Model; Alternative Model 3 = Three dimensional Model; RMSEA = Root Mean Square Error of Approximation; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; SRMR = Standardised Root Mean Square Residual; GFI = Goodness of Fit Index; AIC = Akaike Information Criterion

#### 6.4.3.3 CFA Model Set Two: Scales for Export Market Orientation

The second subset in the CFA analysis contained items for the three scales that measured EMO. The items for the three scales were specified as indicators of their respective latent construct and subsequently analysed in CFA measurement model (see figure 6.3). A converged solution with good fit was returned. However, an inspection of modification indices showed that RDIS5 (for dissemination construct) had extremely large standardised residual. As such, this item was deleted from the model. Subsequently, a new model was specified and estimated. A converged solution with a much better fit was returned (see table 6.12). The fit indices suggest that an acceptable level of fit was achieved. Specifically, RMSEA was less than 0.08 and NNFI, IFI, CFI and GFI were all greater than 0.90 critical value. In addition, all the parameter estimates were statistically significant at a level of 0.05 or better. Furthermore, all the three scales achieved acceptable level of CR and AVE as can be seen in table 6.12. This statistical evidence collectively suggests that the three scales of EMO achieved convergent validity and unidimensionality. Thus, the three scales were deemed to be suitable for hypotheses testing.

Figure 6.3: CFA Model for Export Market Orientation Scales



**Note:** Gen = Export Intelligence Generation; Diss = Export Intelligence Dissemination; Resp = Export Intelligence Responsiveness

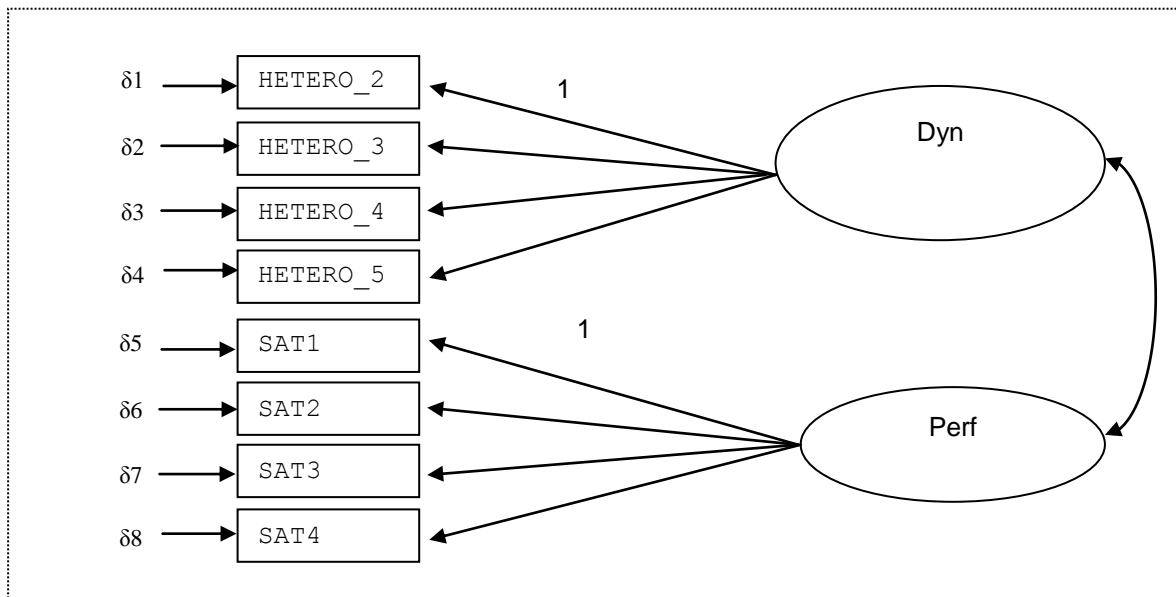
Table 6.12: CFA Results for the Measurement Model Export Market Orientation

Variables	Export intelligence generation	Export intelligence dissemination	Export intelligence responsiveness
GEN_1	0.691 (fixed)		
GEN_2	0.745 (9.202)		
GEN_3	0.734 (8.393)		
GEN_4	0.675 (7.995)		
RESP_1		0.707 (fixed)	
RESP_2		0.815 (8.755)	
RESP_3		0.826 (8.647)	
RDISS_1			0.713 (fixed)
RDISS_2			0.875 (12.265)
RDISS_3			0.800 (10.730)
RDISS_4			0.704 (11.579)
AVE	0.508	0.602	0.615
CR	0.805	0.757	0.827
Fit Indices	$\chi^2 = 70.427$ ; $df = 41$ ; $p\text{-value} = 0.003$ ; $RMSEA = 0.058$ ; $NNFI = 0.978$ ; $IFI = 0.983$ ; $CFI = 0.983$ ; $GFI = 0.943$		

#### 6.4.3.4 CFA Model Set Three: Scales for Export Performance and Export Customer Dynamism

The two scales, each measuring export performance and export customer dynamism, were analysed together in a single measurement model. Unlike EFA where the two scales were initially analysed separately, in this instance the two scales and their associated items were specified in a single measurement model while taking notice of their theoretical structure (see figure 6.4). The results showed that the model did not fit the data very well. HETERO\_5 (measuring export customer dynamism) was a problem item as it had extremely high standardised residual. As such, this item was removed from the model. The model was subsequently respecified and analysed. Results of the new model showed that the model fitted the data very well (see table 6.13 for details). Specifically, the RMSEA value of 0.076 was slightly below the 0.08 cutoff, but fit values for NNFI, CFI, IFI and GFI were greater than the critical value of 0.90.

Figure 6.4: CFA Model for Export Performance and Export Customer Dynamism Scales



**Note:**

Dyn = Export Customer Dynamism; Perf = Export Performance

In addition, the factors loaded significantly on their respective latent constructs at a level of 0.05 or better (see table 6.13). Moreover, the respective CR and AVE for all two scales were greater than the critical values of 0.60 and 0.50 respectively. In view of this statistical evidence, it was concluded that the two scales achieved adequate convergent validity, reliability and unidimensionality.

Table 6.13: CFA Results for the Measurement Model for Export Performance and Export Customer Dynamism

Items	Export financial performance	Export customer dynamism
SAT1	0.871 (fixed)	
SAT2	0.979 (18.989)	
SAT3	0.833 (14.362)	
SAT4	0.666 (9.993)	
HETERO_2		0.801 (fixed)
HETERO_3		0.947 (9.028)
HETERO_4		0.669 (8.358)
AVE	0.711	0.663
CR	0.906	0.853
Fit Indices	$\chi^2 = 37.086$ ; $df = 13$ ; $p\text{-value} = 0.000$ ; $RMSEA = 0.076$ ; $NNFI = 0.960$ ; $IFI = 0.975$ ; $CFI = 0.975$ ; $GFI = 0.952$	

#### 6.4.3.5 CFA Model Set Four: Simultaneous Analysis of all Scales

For completeness and to further establish the robustness and stability of the measures a full measurement model was estimated, in which case all the remaining items were simultaneously entered in to a single CFA model. This practice is in line with previous research (e.g., Baker and Sinkula 1999; Cadogan et al. 2006). As a result, the final CFA model included all 11 scales tapping different constructs and subconstructs and 36 items.

Table 6.14: Results of CFA Model for the Simultaneous Analysis of all Scales

<b>Constructs</b>	<b>Variables</b>	<b>Factor loadings (with t-values)</b>	<b>Standard Errors</b>
Export product innovation intensity	NUM_PD1	0.869 (fixed)	-
	NUM_PD2	0.880 (16.492)	0.060
	NUM_PD3	0.874 (16.341)	0.062
Export product innovation novelty	INVD_PD3	0.842 (fixed)	-
	INVD_PD4	0.799 (13.558)	0.081
	INVD_PD5	0.915 (15.685)	0.075
Export risk-taking	RISK_TK1	0.807(13.889)	0.076
	RISK_TK2	0.854(15.051)	0.072
	RISK_TK4	0.834(fixed)	-
Export proactiveness	PROACT1	0.767 (fixed)	-
	PROACT5	0.746 (10.107)	0.100
Export competitive aggressiveness	COM_AGG2	0.806 (fixed)	-
	COM_AGG3	0.867(14.191)	0.086
	COM_AGG4	0.889 (14.567)	0.085
Export autonomy	AUT2	0.731(fixed)	-
	AUT3	0.900 (12.741)	0.096
	AUT4	0.880 (12.529)	0.096
	AUT5	0.731 (10.374)	0.086
Export intelligence generation	GEN_1	0.699 (fixed)	-
	GEN_2	0.735 (9.272)	0.100
	GEN_3	0.735 (9.267)	0.093
	GEN_4	0.679 (8.661)	0.107
Export intelligence dissemination	RDISS_1	0.721(fixed)	-
	RDISS_2	0.885 (11.680)	0.097
	RDISS_3	0.790 (10.747)	0.092
	RDISS_4	0.693 (9.473)	0.094
Export intelligence responsiveness	RESP_1	0.706 (fixed)	-
	RESP_2	0.806 (10.171)	0.110
	RESP_3	0.835 (10.351)	0.101
Export customer dynamism	HETERO_2	0.802 (fixed)	-
	HETERO_3	0.945 (12.513)	0.091
	HETERO_4	0.672 (10.330)	0.084
Export performance	SAT1	0.867 (fixed)	-
	SAT2	0.985 (22.088)	0.050
	SAT3	0.829 (16.184)	0.059
	SAT4	0.660 (11.240)	0.068
Fit Indices: $\chi^2 = 744.460$ ; $df = 536$ ; p-value = 0.000; RMSEA = 0.043; NNFI = 0.971; CFI = 0.975; IFI = 0.976; GFI = 0.836			



Given the large number of items ( $N = 36$ ) and the relatively small sample size ( $N = 212$ ), one might expect that the full measurement model would produce unreliable parameter estimates and poor model fit. This was, however, not the case in this study. As can be seen in table 6.14, the model did return proper solution and all factor loadings were positive and significant at 0.05 level or better. Moreover, the fit indices obtained were surprisingly good. Specifically, although the  $\chi^2$  of 744.460 ( $df = 536$ ;  $p = 0.000$ ) was significant at five per cent level, however, all other fit indices met their recommended cutoff limits. The only exception is GFI = 0.836; however, scholars generally agree that this index often decreases when the number of items included in a model increases (e.g., Marsh, Balla and MacDonald 1988; Anderson and Gerbing 1988; Ping 2004). Finally, the standard errors for the items were reasonably low. Consequently, the result for the full measurement model is taken to provide support for the robustness of the measurement items used. As such, this study relies on the parameters from the full measurement model for further analysis.

## **6.5 CREATING MEASUREMENT INDEX**

### **6.5.1 Export EOB**

For the purposes of subsequent measurement model evaluation and hypotheses testing, a single export EOB score was created in the following ways. In constructing the export EOB measure, established guidelines in the psychometric literature were followed to create composite scores for each export EOB component (e.g. Churchill 1979; Ping 2004). That is, average scores for each of the items that measured each first-order factor was computed to generate single indicant measures for export product innovation intensity (INT), export product innovation novelty (NOV), export risk-taking (RISK), export proactiveness (PRO), export competitive aggressiveness (AGG) and export autonomy (AUT). Subsequently, the six indicants were specified as reflective indicators of an overall export EOB factor, and this was used in the assessment of the structural relationship between an overall export EOB and export performance (see figure 7.1 in chapter seven).

One objective of this study was to test the moderating effects of EMO and export customer dynamism on the association of an aggregate export EOB with export performance. As such, an aggregate export EOB score was required. This summation helped to achieve greater model parsimony (Ping 1995). To obtain this aggregate export EOB score, an average was taken across the six EOB indicators. With these measurement indexes this study was, therefore, ready to test for the aggregate effect and the moderator effect hypotheses in the conceptual framework. Note that the analysis of the independent effect model involved the specification of the six EOBs as first-order latent constructs that tapped their respective observed indicators (see figure 7.6 in chapter seven).

### **6.5.2 Export Market Orientation**

The CFA model of EMO views the construct as formative, comprising of three first-order correlated factors (i.e. export market intelligence generation, dissemination and responsiveness) (Cadogan, Diamantopoulos and de Mortanges, 1999). In fact, the EMO construct was included in the conceptual model as a moderator variable as was reported in figure 3.1 in chapter three. Hence, it was necessary to create a composite measure of the EMO construct (Cadogan et al. 2006) as it is easier to model moderators with single indicants (Ping 1995).

To create the single EMO score, this study first averaged across the four export intelligence generation observed items, to create a single item measure (GEN). Likewise, a single score for export intelligence dissemination (DISS) was created by averaging the scale's four items and a single score for export intelligence responsiveness (RESP) was created by averaging the scale's three indicators. Finally, GEN, DISS and RESP scores were averaged to create a single score for EMO (Cadogan, Kuivalainen, and Sundqvist 2009). Given this EMO score, this study was able to test the seven moderator effect relationships in the conceptual framework as was presented in figure 3.1 in chapter three.

### **6.5.3 Export Performance**

The export performance scale consists of four indicators: managers' satisfaction with the firms' export market share, export sales volume, export sales growth rate and new export market entry. The export performance (PERF) construct was eventually modeled as a first-order latent construct with four indicators (Cadogan, Diamantopoulos, and Siguaw 2002; Racela, Chaikittisilpa and Thoumrungroje 2007). The first-order latent PERF construct (with the four indicators) was subsequently used in the hypotheses analysis as the main dependent variable (see figure 7.1 in chapter seven).

### **6.5.4 Export Customer Dynamism**

Three items measured the export customer dynamism construct. The export customer dynamism construct was included in the conceptual model as a moderator variable (see figure 3.1 in chapter three). Ping (1995) suggests that it is easier to model moderators as a single indicant. Accordingly, the three items that captured this construct were averaged and a composite score was obtained. This composite score (CUST) was later used to test the only environment moderator effect model in the conceptual framework.

### **6.5.5 Other Measures**

In addition to the nine major constructs discussed above, firm size was also included in the conceptual model as a control variable. In fact, firm size was measured by a single item using total number of employees as a proxy. The use of number of employees as a measure of firm size is consistent with prior export research in the area (Wiklund and Shepherd 2005).

## **6.6 VALIDITY OF MEASURES**

Anderson and Gerbing (1988) suggest that CFA procedures can be used to assess aspects of validity. Specifically, measure validity can be assessed using techniques such as AVE and CR. This study has demonstrated that all scales achieved satisfactory AVE and CR in CFA. Accordingly, it can be said that the AVE and CR values have helped to establish reliability of the scales. In addition, it can be

argued that convergent validity of the scales were also established since all items loaded significantly on their posited latent constructs without any evidence of cross loadings and correlated errors. Furthermore, all scales appeared to have coefficient alpha greater than 0.7, which also implies good convergent validity (Ping 2004; Grewal, Cote, and Baumgartner 2004). In the two sections that follow, all scales used in the previous CFA models are assessed for discriminant validity and nomological validity.

### **6.6.1 Discriminant Validity Assessment**

Discriminant validity was assessed to demonstrate that each construct was distinct and captured a phenomenon that other constructs did not (Peter 1981; Larcker and Fornell 1981). Two procedures were followed to demonstrate discriminant validity. First, as can be seen in table 6.15, none of the 95 per cent confidence intervals of the individual elements of the latent factor correlation matrix contained a value of 1.0 (see Anderson and Gerbing, 1988). Second, inter-construct correlation among the constructs was not significantly above 0.70 (Ping 2004; Grewal, Cote, and Baumgartner 2004). The largest inter-construct correlations were the correlations between proactiveness and competitive aggressiveness ( $r = 0.685$ ) and between generation and responsiveness ( $r = 0.671$ ). However, these results are not surprising since both pairs were measuring the same underlying construct. Specifically, proactiveness and competitive aggressiveness measured export EOB, and for generation and responsiveness, they both measured EMO. In that sense, it can be argued that these constructs shared a lot in common.

To statistically address the two high correlations and to further demonstrate discriminant validity, the AVE for each construct was compared with the square of the correlation estimates (i.e. the shared variances) between each pair of constructs (Hair et al. 2006). Following the rule of thumb from the literature (e.g. Ping, 2004; Anderson and Gerbing, 1988), it can be argued that discriminant validity for each construct was achieved because the AVE estimate for each construct was greater than the squared correlation estimate for each pair of construct. This can be seen in table 6.15.

Table 6.15: Summary Statistics, Correlation Matrix and Discriminant Validity of the Constructs

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
<b>Export EOBs</b>														
1. Export product innovation intensity	4.42	1.280	<b>0.764</b>	0.212‡	0.260	0.101	0.280	0.085	0.076	0.079	0.038	0.001	0.087	0.083
2. Export product innovation novelty	4.80	0.981	0.460†	<b>0.728</b>	0.101	0.114	0.311	0.063	0.048	0.037	0.036	0.000	0.213	0.080
3. Risk-taking	3.77	1.508	0.510	0.318	<b>0.692</b>	0.342	0.305	0.091	0.134	0.085	0.023	0.052	0.225	0.054
4. Proactiveness	4.92	0.972	0.318	0.338	0.585	<b>0.572</b>	0.469	0.060	0.156	0.055	0.101	0.015	0.295	0.074
5. Competitive aggressiveness	4.23	1.437	0.529	0.558	0.552	0.685	<b>0.731</b>	0.263	0.291	0.103	0.223	0.055	0.334	0.125
6. Autonomy	4.99	1.109	0.291	0.250	0.301	0.244	0.513	<b>0.664</b>	0.136	0.014	0.059	0.046	0.028	0.032
<b>Export market-oriented behaviour</b>														
7. Generation	5.04	0.969	0.276	0.219	0.366	0.395	0.539	0.369	<b>0.508</b>	0.280	0.450	0.082	0.201	0.021
8. Dissemination	5.82	0.967	0.281	0.193	0.293	0.235	0.321	0.120	0.529	<b>0.602</b>	0.106	0.012	0.216	0.012
9. Responsiveness	5.17	1.065	0.196	0.191	0.152	0.318	0.472	0.242	0.671	0.325	<b>0.615</b>	0.052	0.153	0.000
<b>Export customer dynamism</b>														
10. Export customer dynamism	4.90	1.234	0.080	0.065	0.228	0.123	0.234	0.215	0.287	0.111	0.227	<b>0.663</b>	0.055	0.014
<b>Export Performance</b>														
11. Export Performance	4.80	1.170	0.295	0.461	0.474	0.543	0.578	0.168	0.448	0.465	0.391	0.234	<b>0.711</b>	0.004
<b>Firm size</b>														
12. Firm size	0.460	1.286	0.288	0.282	0.233	0.272	0.354	0.179	0.145	0.109	0.003	0.116	0.067	-

**Note:**

AVEs are reported on the diagonal and are in bold.

† = Correlations coefficients are reported below the diagonal<sup>1</sup>.

‡ = The squared correlations (or shared variances) between the constructs are reported above the diagonal.

SD = Standard deviation

<sup>1</sup> Because the correlations between some constructs were above 0.50 (e.g. proactiveness and competitive aggressiveness = 0.685), a further latent variable discriminant validity assessment was undertaken. A two-group measurement model suggested by Ping (1995) was used. In all cases, the unrestricted models returned a better fit than the restricted models.

Regarding the problematic high correlation between proactiveness and competitive aggressiveness, it is evident from table 6.15 that the smallest AVE was 0.572 and largest squared correlation was 0.469. This, therefore, demonstrates discriminant validity for the two constructs. With respect of the high correlation between generation and responsiveness, it can be argued that discriminant validity was established because the smallest AVE was 0.508 and the largest squared correlation was 0.450. With these results, it was concluded that each construct had achieved satisfactory discriminant validity and were therefore ready for substantive hypotheses testing. In the section that follow nomological validity test for the constructs is described.

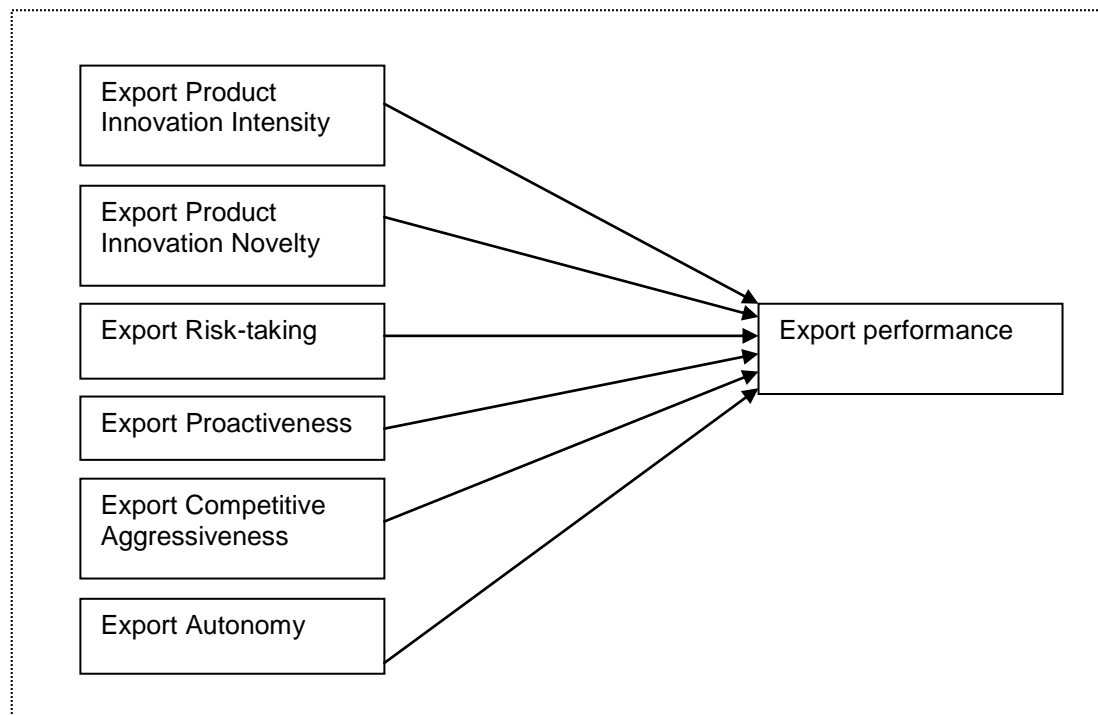
### **6.6.2 Nomological Validity Assessment**

It was earlier stated that criterion related or nomological validity of the measures would be established by drawing on key relationships of interest to this study. Nomological validity relates to the ability of a new measure to perform as expected in a network of known causal relations. Confidence in a measure cannot be ascertained if it does not behave in an acceptable manner in relation to other accepted constructs. As such, an assessment of nomological validity would help this study to demonstrate the extent to which theoretically related constructs are empirically confirmed to be related. In the case of export EOB, a relevant demonstration of nomological validity would be the extent to which the construct and its sub-dimensions are related to firm performance. The conceptual framework of this study, as was presented in figure 3.1 of chapter three, posits that there is a theoretical association between the export EOB (and its components) and export performance. These relationships have been examined in both firm-wide and domestic focused EO studies (e.g. Hughes and Morgan 2007). In addition, previous studies demonstrate that the export EOB is associated with environment dynamism (e.g. Balabanis and Katsikea, 2003; Wiklund and Shepherd, 2005). In the case of EMO, its nomological validity has been assessed in past studies (Cadogan et al.; 2002; 2009) and is therefore not repeated here.

Although nomological validity is often assessed by ways of a correlation or regression analysis, however, these techniques do not allow for formal testing of

the nomological net (or theory). Moreover, they do not incorporate measurement errors for the latent constructs of the nomological net (Steenkamp and Trijp 1991). On the contrary, structural equation modeling with latent variables technique allows for measurement error and it does perform formal test of the nomological net. For these two reasons, this study uses structural equation modeling technique to assess nomological validity of the constructs. The nomological validity assessment of the constructs was based on empirical evidence from prior studies as was stated in preceding paragraph and theoretical arguments provided by theorists (e.g., Lumpkin and Dess 1996; Covin and Slevin 1991). Consequently, a six-factor export EOB model and the one-factor export customer dynamism model were subjected to a final empirical assessment to assess their nomological validity. For export EOB, the theoretical model in figure 6.5 was used to assess its nomological validity. This model is similar to the one proposed by Lumpkin and Dess (1996) and recently tested by Hughes and Morgan (2007). The LISREL 8.7 package and ML method were therefore used to fit the full latent variable structural model in figure 6.5 to the data (Jöreskog and Sörbom 2004; Anderson and Gerbing 1988).

Figure 6.5: The Nomological Net for the Export EOBs



Results of latent variable structural analysis of the relationships between the constructs are presented in table 6.16. The fit indices showed that the six-factor export EOB model achieved adequate nomological validity. These indices suggest that a close fit to the data was achieved for the six-factor export EOB model and provide strong support for the nomological validity. Analysis of the estimates of the path coefficients are displayed in table 6.17. Although the specific relationships between the constructs was not the intention of the measurement model analysis, it must be noted that all the relationships in the nomological net were significant at least at 10 per cent level, and export product innovation novelty and export proactiveness emerged as the two strongest predictors of export performance.

Table 6.16: Nomological Validity Assessment: Comparative Fit Indices

CFA Model	$\chi^2$	df	P = VALUE	RMSEA	NNFI	CFI	GFI
Six-factor Model	240.378	168	0.000	0.045	0.970	0.976	0.902

Table 6.17: Nomological Validity Assessment: Parameter Estimates for the Six Factor Export EOB Model in Figure 6.5

Paths	Parameter Estimates (T-values)
Export Product Innovation Intensity → export performance	-0.117 (-1.49)*
Export Product Innovation Intensity → export performance	0.243 (3.03)***
Export Risk-Taking → export performance	0.172 (2.37)***
Export Proactiveness → export performance	0.348 (2.08)**
Export Competitive Aggressiveness → export performance	0.189 (1.76)**
Export Autonomy → export performance	-0.138 (-1.74)**

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$   
a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

A bivariate structural analysis of the association between export customer dynamism (as an antecedent) and export EOB (as a dependent variable) showed that a significant relationship exists between the two variables. This result is consistent with prior findings on the subject (e.g. Miller 1983). Thus, the nomological validity of export customer dynamism was also established. As will be



seen in section 7.3.3.3 (chapter seven), the nomological validity of the aggregate export EOB construct was further established given its strong association with export performance.

## **6.7 DESCRIPTIVE ANALYSIS OF THE INDIVIDUAL SCALES**

Finally, a descriptive analysis of each scale was performed. This analysis was undertaken in order to be sure that each scale was truly ready for hypotheses testing. In this context, each descriptive analysis was undertaken to test the assumption that the observed distribution of the measures differed significantly from normal distribution. The Kolmogorov-Smirnov (KS) test was therefore used and a non-significant KS result would mean that the distribution approximated to normality (Hair et al. 2006).

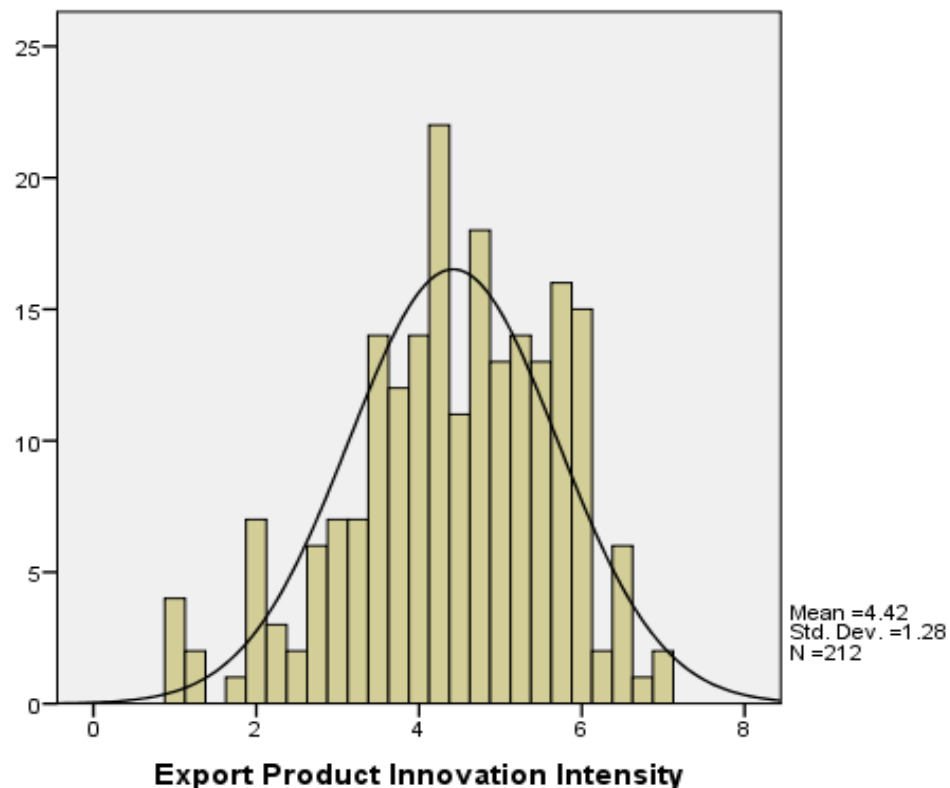
However, Sharma (1996) has argued that the KS test can be extremely sensitive to any small deviation from normality. As such, it is recommended that the Z-values of the skewness and kurtosis of the scale should be computed (Sharma 1996). Normal distribution of the scales can be inferred if their Z-values are less than the critical value of 1.96 for an alpha level of 0.05. Moreover, some scholars have proposed that the structural equation modelling technique with maximum likelihood approach can produce robust model testing results if there is no evidence of extreme skewness and kurtosis of the data (Sharma, 1996; Hair et al, 2006; Chou and Bentler, 1995). However, West et al (1995) suggest that skewness of above three and kurtosis greater than 21 are extreme departures from normality.

Following on from the above discussions and recommendations, the scores for each scale was subjected to descriptive analysis focusing on KS, Skewness and Kurtosis analyses. Results of the descriptive analyses are presented in figures 6.6 to 6.15. Results revealed that none of the scale scores deviated significantly from normality. Hence, the scales can be used in hypotheses testing.

### 6.7.1 Export Product Innovation Intensity

Figure 6.6 presents the histogram for the final export product innovation intensity scale, which did not show any incidence of missing value. The scale's mean value was 4.420, with a standard deviation of 1.280. The response ranged from a minimum of 1 to a maximum of 7. As can be seen from figure 6.6, the distribution was slightly skewed to the right but appeared normally distributed. However, a KS test returned a significant result suggesting that further insights were needed to further evaluate the normality of the scale. A further analysis showed that the variable returned skewness and kurtosis values of -0.511 and -0.032 respectively. The Z-score for kurtosis was 0.333, which therefore provide support for the view that the variable was normally distributed (Sharma 1996). As such, the scale was retained in its present form.

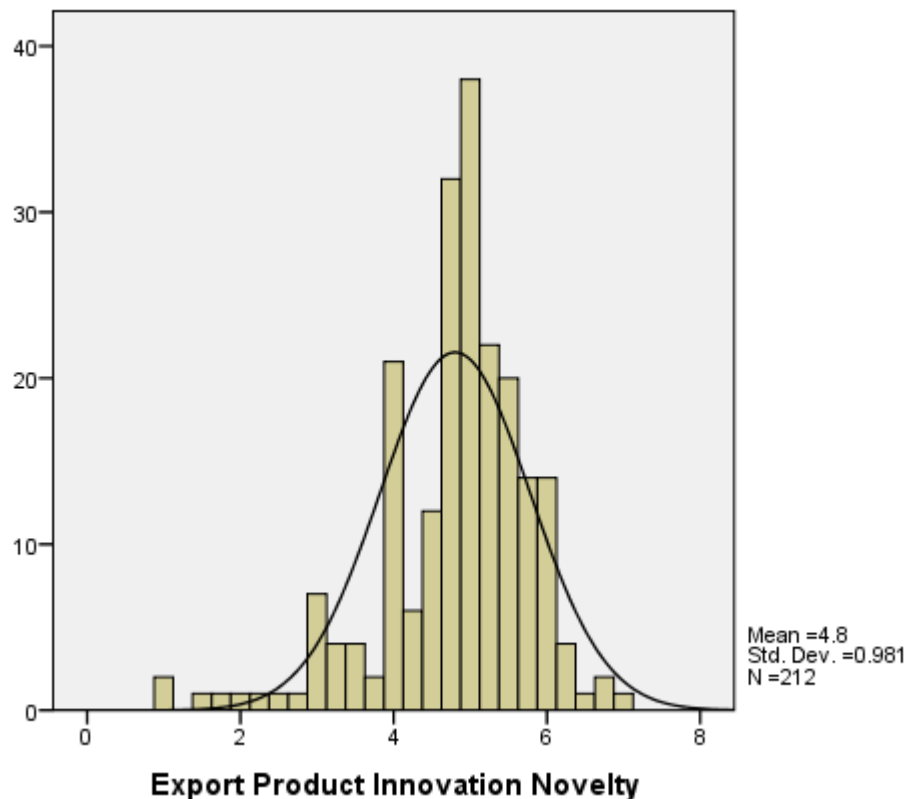
Figure 6.6: Export Product Innovation Intensity Frequency Distribution



### 6.7.2 Export Product Innovation Novelty

Figure 6.7 reproduces the histogram for the final export product innovation novelty, which shows no case of missing value. The mean value for the scale was 4.801 and its standard deviation was 0.986. The response ranged from a minimum of 1 to a maximum of 7. As can be seen from figure 6.7, the scale was negatively skewed but not dramatically to be of any serious concern. However, a KS test was performed and a nonsignificant result was returned, which was taken to mean that the scale was fairly normally distributed and could therefore be used in formal model testing.

Figure 6.7: Export Product Innovation Novelty Frequency Distribution

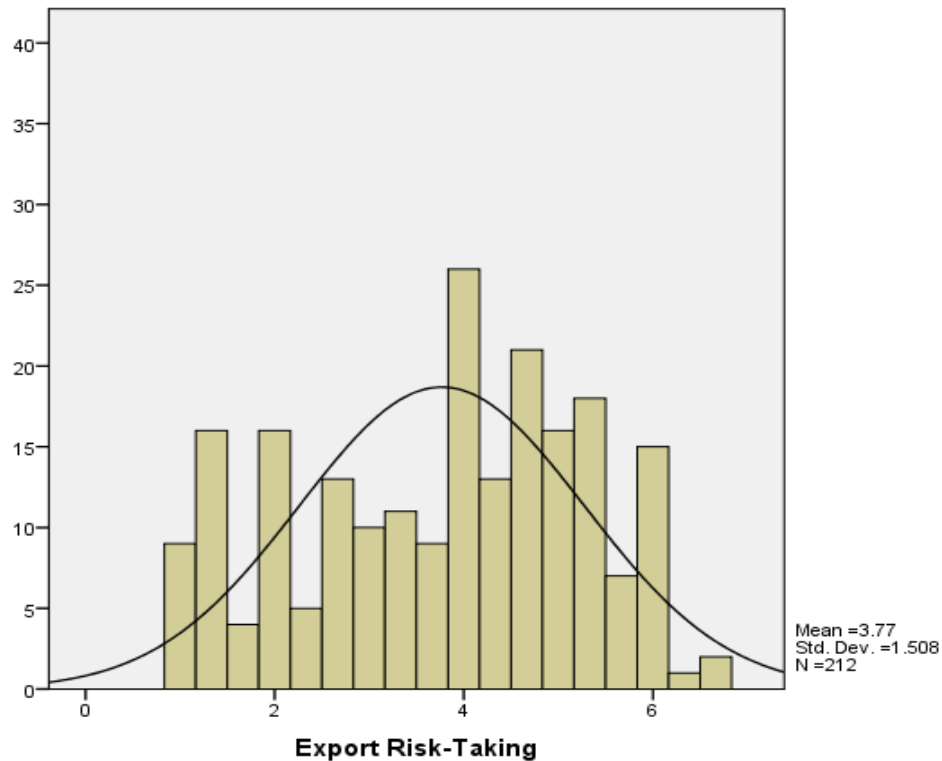


### 6.7.3 Export Risk-Taking

Figure 6.8 displays the frequency distribution of the export risk-taking scale, and no missing value was observed for this scale. The mean value of 3.77, was slightly higher than the natural mean of 3.5, while the standard deviation was 1.508. The the minimum and maximum were 1 and 7 respectively. A KS test was performed

and it returned a nonsignificant result suggesting no significant deviation from normality. Consequently, the export risk-taking measure is argued to display sufficient robustness. Accordingly, it was deemed to be ready for model testing.

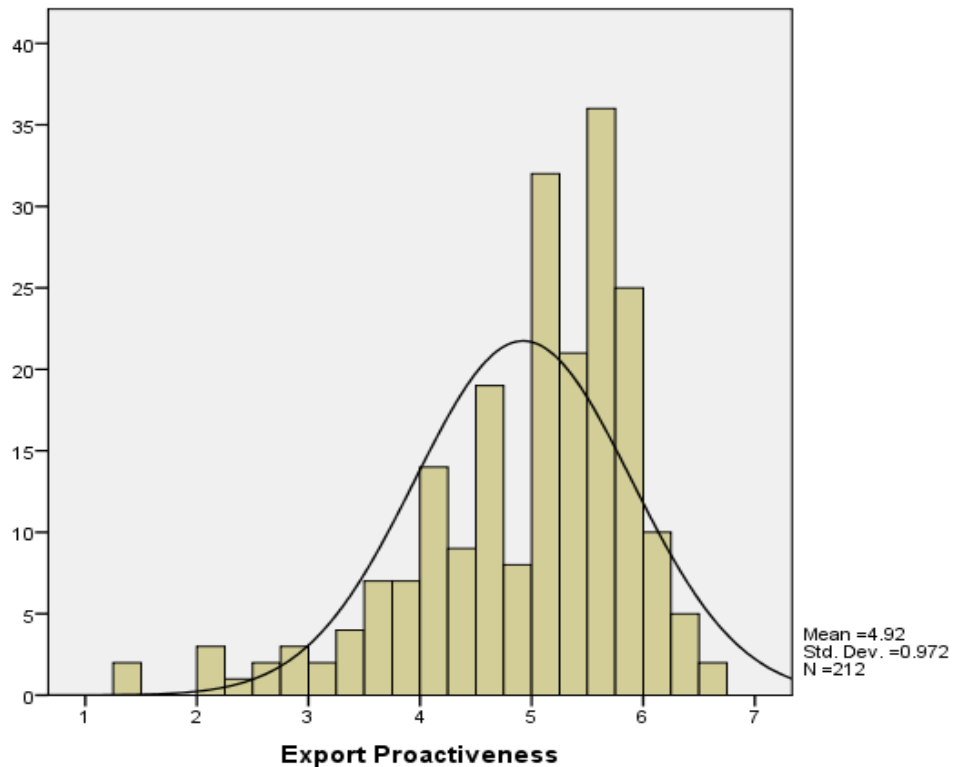
Figure 6.8: Export Risk-Taking Frequency Distribution



#### 6.7.4 Export Proactiveness

Figure 6.9 reproduces the frequency distribution of the export proactiveness scale, and like other export EOB scale, no missing value was observed for this scale. The mean value was 4.92 while the standard deviation was 0.972. The minimum and maximum were 1 and 7 respectively. A KS test was performed and it returned a nonsignificant result suggesting no significant deviation from normality. As a result, the export proactiveness scale was taken to display sufficient robustness and as such it was deemed to be suitable for model testing.

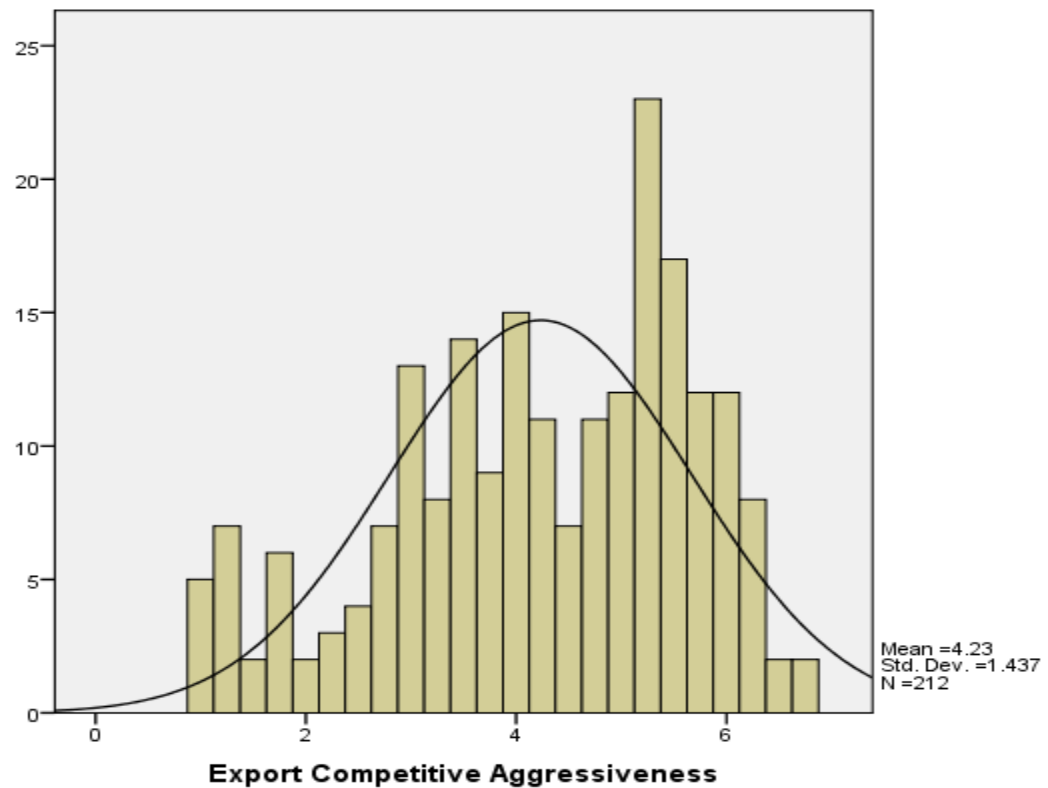
Figure 6.9: Export Proactiveness Frequency Distribution



### 6.7.5 Export Competitive Aggressiveness

Figure 6.10 provides information on the frequency distribution of the export competitive aggressiveness scale, and like other export EOB scale, no missing value was observed for this scale. The mean value was 4.23 while the standard deviation was 1.437. The minimum and maximum were 1 and 7 respectively. A KS test was performed and it returned a nonsignificant result suggesting no significant deviation from normality. As a result, it is argued that sufficient robustness was established for the export competitive aggressiveness scale, and as such it was deemed to be suitable for model testing.

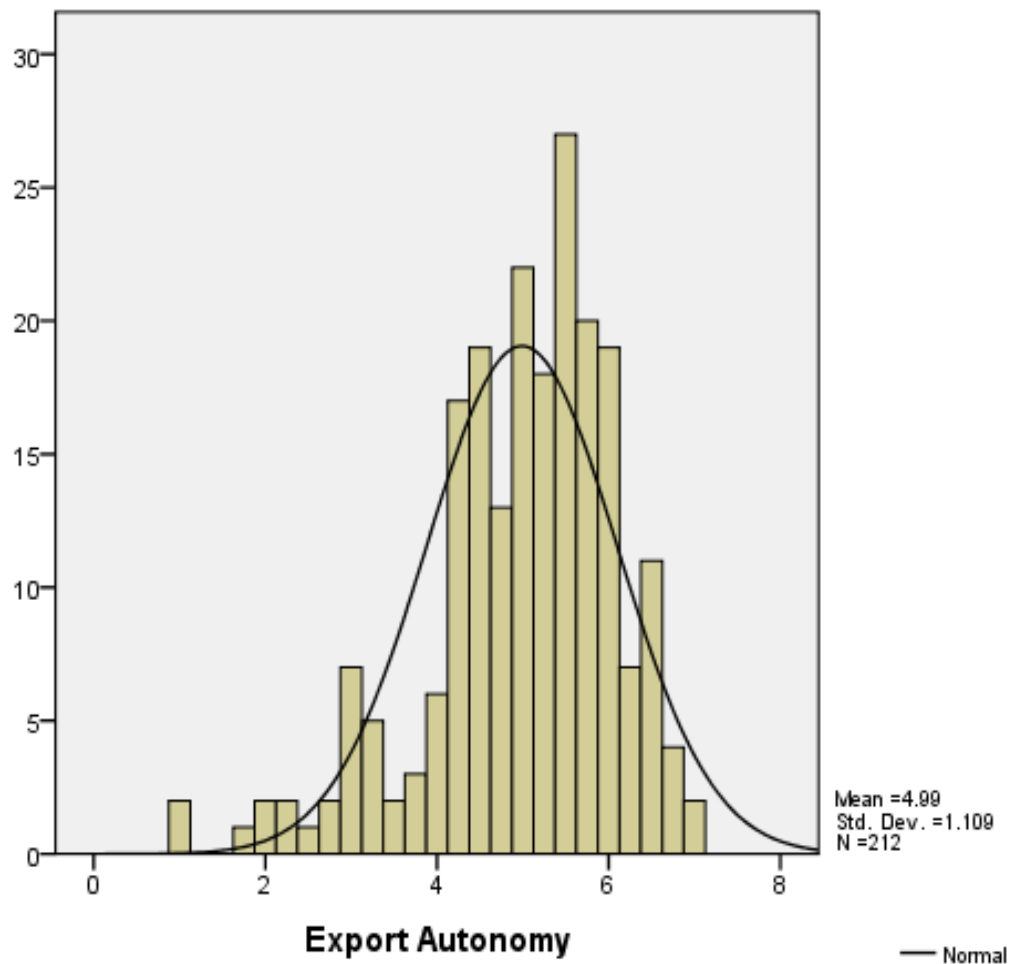
Figure 6.10: Export Competitive Aggressiveness Frequency Distribution



### 6.7.6 Export Autonomy

Figure 6.11 reproduces the histogram for the final export autonomy scale, which shows no case of missing value. The mean value for the scale was 4.99 and its standard deviation was 1.109. The response ranged from a minimum of 1 to a maximum of 7. As can be seen from figure 6.11, the scale was negatively skewed but not dramatically to cause any alarm. However, a KS test was performed and a nonsignificant result was returned, which was taken to mean that the scale was fairly normally distributed and could therefore be used in formal model testing.

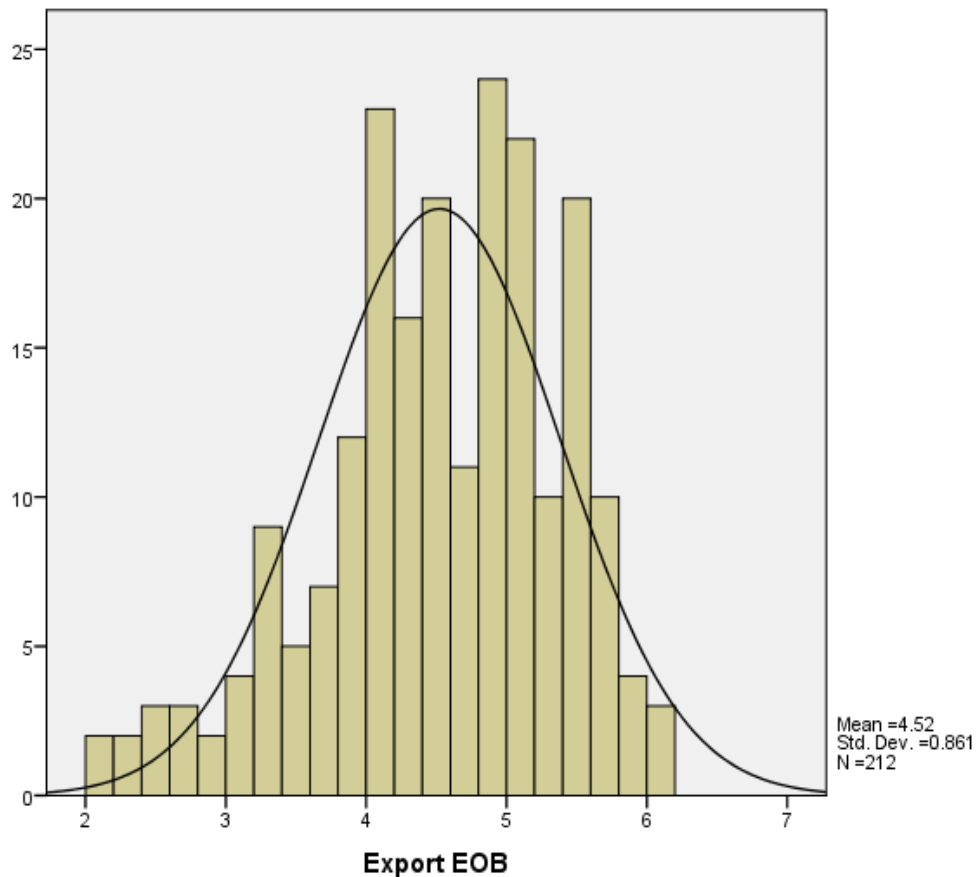
Figure 6.11: Export Autonomy Frequency Distribution



### 6.7.7 Export EOB

Like its dimensions, no missing value was evident in the distribution of the export EOB scale, which is graphically displayed in Figure 6.12. The KS test also showed a significant result with the mean (4.52) above the mid-point scale (standard deviation was 0.861). However, since the distribution appeared to be normal, with kurtosis of -0.48 and skewness of -0.32, the distribution is taken to be within an acceptable range, and as such the scale appeared suitable for use for the next stage of analysis.

Figure 6.12: Export EOB Frequency Distribution

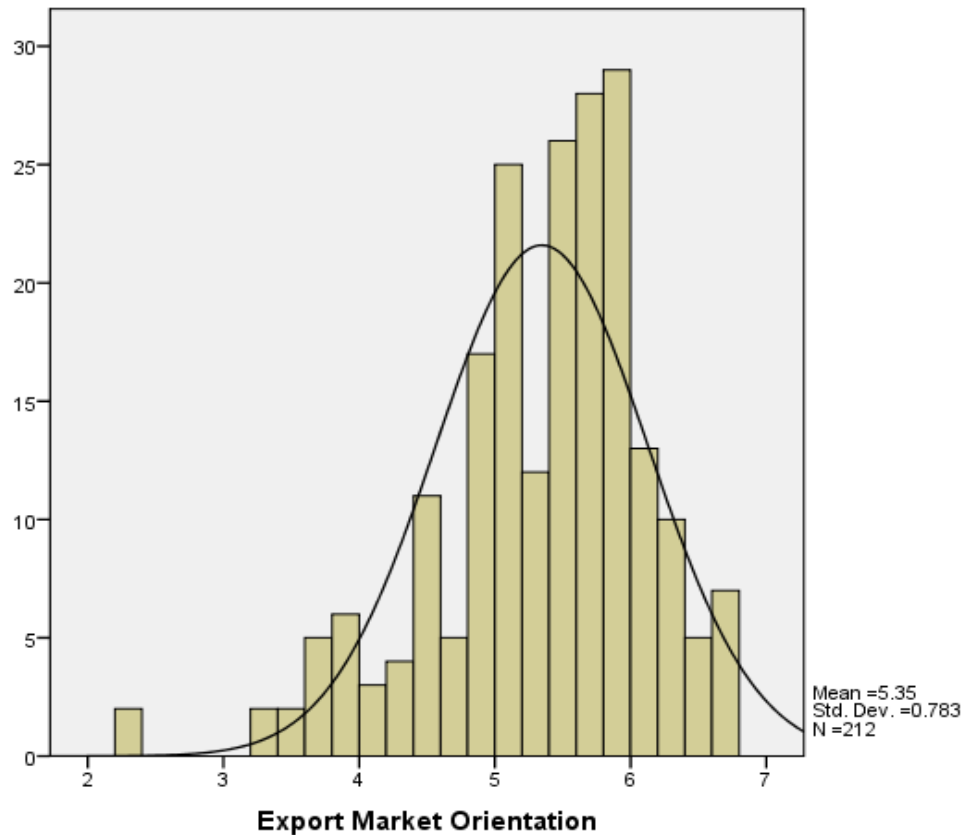


### 6.7.8 Export Market Orientation

Figure 6.13 displays the frequency distribution of the EMO scale, and no missing value was observed for this scale. The mean value of 5.35 was higher than the neutral mean of 3.5, while the standard deviation was 0.783. The minimum and maximum were 2 and 7 respectively. Given this distribution, extra insights were needed on the EMO scale. As a result, a KS test was performed. However, it returned a nonsignificant result suggesting no significant deviation from normality. As a result, the EMO measure is argued to display sufficient robustness and as such it was deemed to be ready for hypotheses testing.



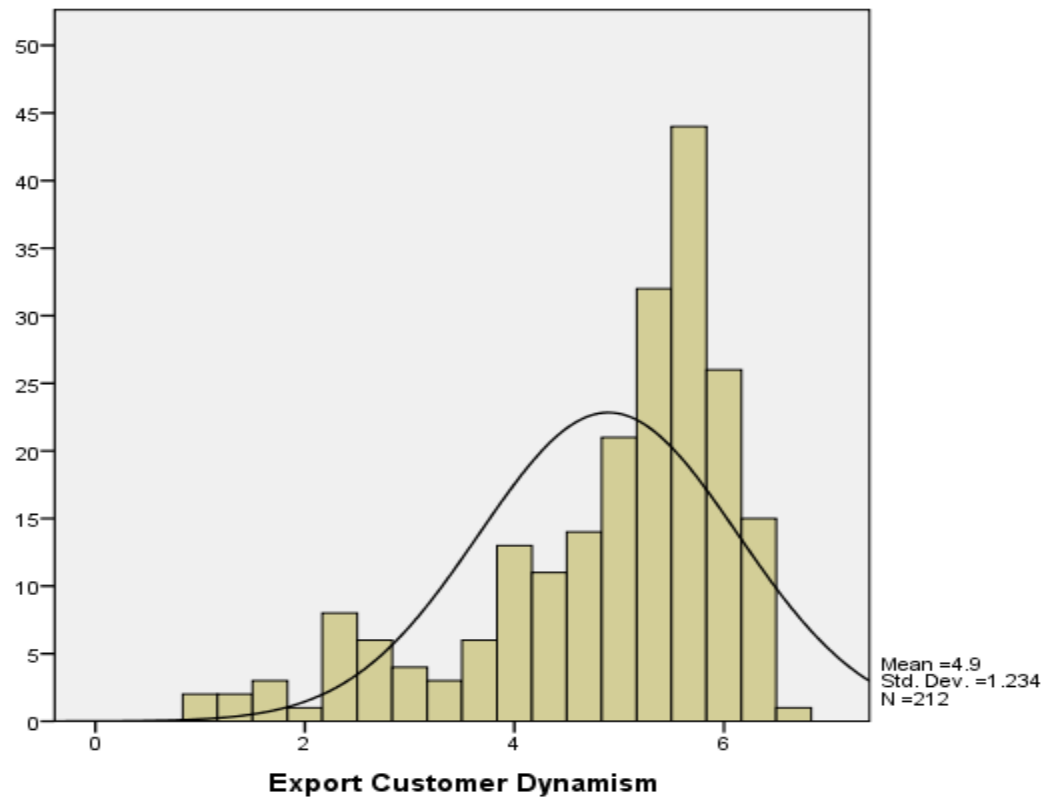
Figure 6.13: Export Market Orientation Frequency Distribution



### 6.7.9 Export Customer Dynamism

Figure 6.14 displays the frequency distribution of the export customer dynamism scale, and no missing value was observed for this scale. The mean value of 4.9, was slightly higher than the neutral mean of 3.5, while the standard deviation was 1.234. The the minimum and maximum were 1 and 7 respectively. A KS test was performed and it returned a nonsignificant result suggesting no significant deviation from normality. As a result, the export customer dynamism measure displays sufficient robustness and as such it was deemed to be ready for model testing.

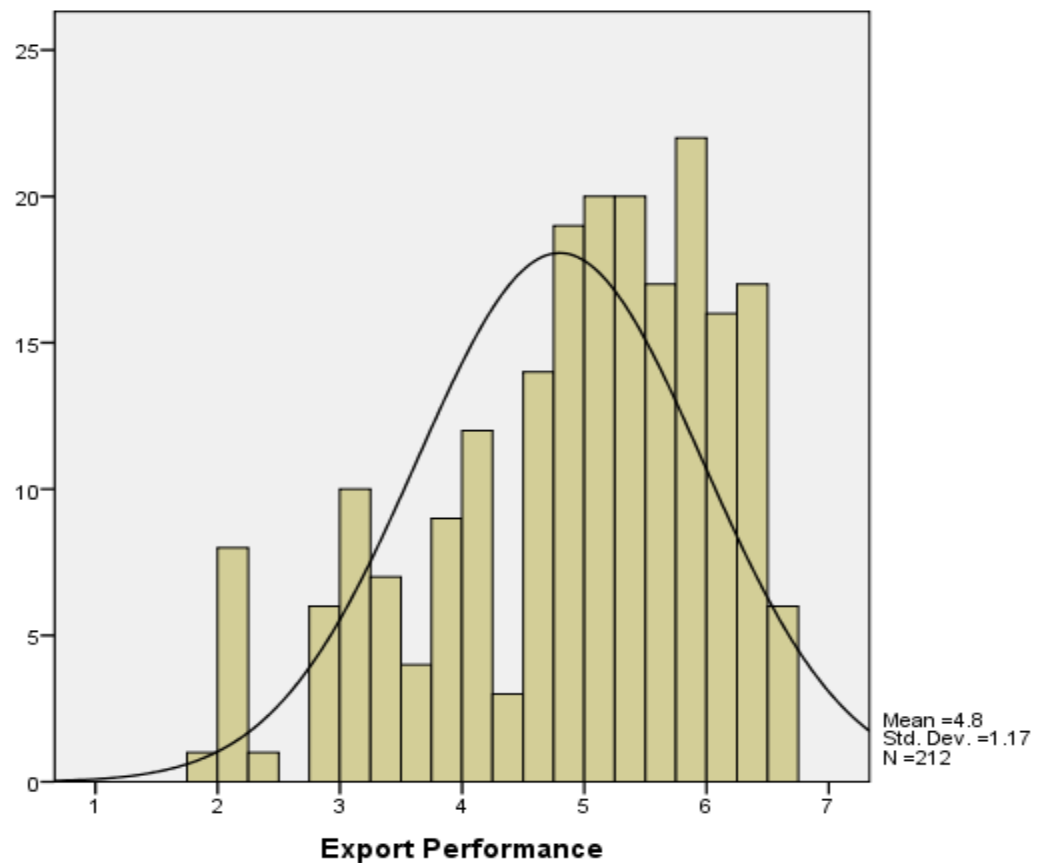
Figure 6.14: Export Customer Dynamism



### 6.7.10 Export Performance

The export performance scale consists of four items: satisfaction with export market share, export sales volume, export sales growth rate and new export market entry. Procedures followed to create a single scale for the four items were presented in Section 6.5.3. Figure 6.15 presents the frequency distribution of the final scale of export performance. Observed values ranged from 1 to 6 with a mean of 4.80 (standard deviation = 1.17) and a nonsignificant KS result. This means that the scale was suitable for use in model testing.

Figure 6.15: Export Performance Frequency Distribution



## 6.8 CHAPTER SUMMARY

The purpose of this chapter was to construct and purify measures used in this study including developing the newly developed six export EOB scales, and export performance, EMO and export customer dynamism scales. In following recommended measure development procedures, all measurement items and scales were assessed for their reliability and validity. Specifically, unidimensionality, internal consistency, and construct validity of the scales were established using EFA and CFA procedures. Measures were also assessed for their discriminant validity and no problems were noted. In addition, the nomological validity of the all newly developed measures was assessed and results showed nomological validity was adequately established for the measures. Finally, frequency distribution of the scales was examined and results showed no major concerns. As such, the scales were taken to be suitable for formal model testing, which follows next in chapter seven.

## CHAPTER 7

# HYPOTHESIS TESTING PROCEDURES AND STUDY RESULTS

### 7.1 INTRODUCTION

This study had argued in chapter three that there is a theoretical association between Export EOB and export performance. In addition, it was argued that export EOB might become more or less beneficial for export success if export market orientation (EMO) and export customer dynamism (ECD) were high in an exporting organisation. Moreover, the study drew on Lumpkin and Dess' (1996) seminal work and recent empirical studies (e.g. Hughes and Morgan 2007; Pearce II, Fritz and Davis 2010) to argue that the export EOBs component elements might drive export success differently. Additionally, the current study contends that the influence of the individual export EOBs on export performance might depend more or less on the level of market orientation available in an exporting organisation and the degree of customer dynamism an exporting organisation faces. To test these hypotheses, this study argues that it would be conceptually cleaner to develop measures of export context-specific EOBs (see chapters five and six).

The purpose of this chapter, therefore, is to describe the structural equation modelling (SEM) techniques used to test the study's hypotheses, and to report and discuss the results of the hypotheses tests. Accordingly, the chapter is divided in to four sections. First, the SEM hypothesis testing technique and its underlying assumptions are discussed. By this, the SEM techniques that were used to analyse the a priori hypothesised relationships are explained. Second, specific hypotheses to be tested are highlighted including their corresponding model specifications. Third, presentation and discussion of the results as obtained from the structural models are discussed in relation to the respective hypotheses. Finally, a summary of the results are presented to conclude the chapter.

## 7.2 STRUCTURAL EQUATION MODELLING FOR HYPOTHESES TESTING

This study chose to adopt the structural equation modelling (or SEM) approach to analyse the relationships among the constructs in the conceptual model for a number of reasons. First, it is true that traditional multivariate modelling techniques such as linear regression, ANOVA, Poisson regression, logistic regression, proportional hazard modelling offer useful insights for examining direct relationships between sets of variables in an empirical research (Hair et al. 2006). However, it is also true that real life may not be so parsimonious, and as such relationships between various variables may look more complex and more “web-like” than traditional multivariate analysis techniques might suggest (Tabachnick and Fidell 2007). In many situations, it is necessary that researchers model webs of relationships simultaneously as it is the case in the current research (Anderson and Gerbing 1988). Consequently, it is recommended that researchers should rely on SEM techniques because it “provide[s] researchers with a comprehensive means for assessing and modifying theoretical models” (Anderson and Gerbing 1988, p. 411). In this sense, SEM models offer the opportunity for theory development and test, which suit the agenda for the current research.

In assessing hypothesised models in SEM, it is often suggested that the hypothesis testing procedures should focus on determining whether the overall web of relationships adequately describes a given dataset. As such, attention is given to examining the fit of a hypothesised model to an observed model. Hence, this study shifts its perspective from one that focuses on testing specific variable outcomes to one that looks at a more holistic picture. More specifically, the study focuses on the fit of the structural model to the data and the significance of the path coefficients and their associated t-values (Hair et al. 2006).

As was discussed in chapters five and six, the Maximum likelihood estimation method and the LISREL 8.7 programme are used to assess the structural model (Jöreskog and Sörbom 2004). The maximum likelihood method has several desirable statistical properties that make it a better choice in this context compared to alternative estimation approaches (Browne 1993; Chou and Bentler 1995; Ping 1995). For example, the maximum likelihood approach enables the

study to “obtain estimates of all the parameters in a model simultaneously from the observed correlation (or covariance) matrix” (Anderson and Gerbing 1982, p. 453). Moreover, it is an acceptable estimation approach often used by entrepreneurship (e.g. Wang 2008) and export researchers (e.g. Morgan, Kaleka and Katsikeas 2004; Knight and Kim 2009).

It was stated in chapter six (see section 6.7) that the measurement scores for all variables used in the current research were tested for departure from normality and it was concluded that the data was suitable for model testing. It was specifically concluded that the nature of the data means that ML method provided by LISREL 8.7 software could be used. Before proceeding any further, it is important to first explain a number of statistical assumptions that underpin the SEM technique.

### **7.2.1 Major Assumptions Underpinning the SEM Technique**

The literature suggests that five major assumptions underlie the SEM technique and these assumptions need to be satisfied if any valid conclusions were to be drawn from structural equation analyses (Ping 1995; Hair et al. 2006; Anderson and Gerbing 1988; Tabachnick and Fidell 2007). These assumptions include normality, continuity, linearity, Homoscedasticity and independence of observations. It is argued that a significant violation of these assumptions may undermine the validity of any conclusions that are drawn from the study results (Hair et al. 2006).

Normal and linear distribution are often assumed for variables in multivariate analysis. As a result, a non-normal and a non-linear data can seriously undermine any statistical inference (Hair et al. 2006). Two kinds of normality are common: univariate and multivariate normality (Kline 1998). Univariate normality concerns the distribution of a single variable. According to Hair et al. (2006), a sample can suffer from two kinds of non-normal distributions, i.e. skewness and kurtosis. A skewed distribution can be either positive or negative. A positive skewed distribution has scores concentrating below the mean, whereas negatively skewed distribution often has scores concentrating above the mean. Kurtosis refers to the proportion of score that congregate in the middle of a distribution. Thus, a distribution can be leptokurtic if too many scores are concentrated at the tails and

too few at the middle. The opposite is platykurtic, and it is a situation where too many scores are concentrated at middle than at the tails. Each of these non-normality situations can undermine statistical inferences, and it is recommended that such non-normalities should be corrected (e.g. Churchill 1995). However, many controversies exist regarding the transformation of non-normal scores. It was concluded in section 6.7 of chapter six that the descriptive statistics (mean and standard deviations), patterns, and histogram distributions for all constructs were within an acceptable range; hence there was no need for data transformation.

In the case of multivariate normality, linearity and Homoscedasticity are two important tests that have to be examined (Kline 1998). Accordingly, this study analysed the data characteristics through the inspection of bivariate scatterplots. An inspection of the bivariate scatterplots between a selected number of variables showed no serious violation of linearity and homoscedasticity rules. Details of the bivariate scatterplots for a selected number of variables are provided in Appendix C 7.1. Fortunately, Chou and Bentler (1995) argue that, in general, SEM approaches are relatively robust with regard to modest departures from normal distribution (see also Hoyle 1995; Ping 1995).

The SEM technique also assumes that the observed data is continuous. Given that general rating scales (in some cases Likert scales) were used to collect information on the constructs for this study, it is reasonable to assume that a continuous variable underlies each measurement scale (see section 4.3.1 in chapter 4 for the measurement scales). Further, linearity assumption underlies export EOB – export performance studies (e.g. Balabanis and Katsikea 2003). Again, it is reasonable to make linearity assumption in this study, and given that there is no evidence to suggest otherwise, the hypothesised relationships are examined under linearity assumption. In relation to the moderator variables in the study, the study relies on multiplicative terms (Ping 1995; 2004).

Finally, the assumption of independence was believed to have been established given the adoption of a mail survey method for data collection. This method ensured that all the participating exporting organisations answered only one questionnaire without any possible communication among the respondents. Additionally, it was the case in this study that a random sample was drawn from

the sampling frame, and as such the assumption of random sampling of respondents was believed to have been carefully addressed.

## 7.2.2 Other Issues Addressed

In addition to addressing the SEM assumptions above, there are some other analytical issues that have potential implications for inferences that could be drawn from the study's results. These include issues relating to multicollinearity, test power, influential observations and common method variance (CMV). These issues are addressed next.

### 7.2.2.1 Multicollinearity

Multicollinearity is a major issue in multivariate statistical analysis (Hair et al. 2006). Multicollinearity relates to a situation where there is high correlation between the independent variables in a model (Kline 1998). Ping (1995) indicates that the presence of multicollinearity may create instability in study results, hence it is imperative that researchers control for its influence. This is because when two or more independent variables have high correlation between them, there is a difficulty in separating the effects of each independent variable on the dependent variables (Tabachnick and Fidell 2007). To deal with the problem of multicollinearity, the literature suggests several strategies (see Cohen and Cohen 1995; Bollen 1989).

To ensure that multicollinearity did not pose a problem to the current study results, a correlation matrix (i.e. Pearson correlations, two-tailed test) containing all the bivariate correlations was examined. Correlations between any pair of constructs should not be greater than 0.80 (Hair et al. 1998; Grewal, Cote and Baumgartner 2004). However, this should be considered while taking AVE values of the constructs into account. According to Fornell and Larcker (1981) the AVEs of each correlated construct should be larger than their squared correlations (Farrell 2010). Indeed, Grewal, Cote and Baumgartner (2004) argue that if Fornell and Larcker's test of discriminant validity is satisfied then multicollinearity is unlikely.

As can be seen in table 6.14 (chapter six) the bivariate correlations among the constructs did not reveal any multicollinearity concern. In fact, the highest correlation was one between export proactiveness and export competitive aggressiveness (0.685) and the next correlation to watch was between export



intelligence dissemination and export intelligence responsiveness (0.671).

However, these correlations did not seem to be too high to warrant any further attention. In fact, these correlations are LISREL outputs, which often tend to be higher than SPSS outputs as LISREL takes measurement error into accounts. Again, from table 6.14 it is evident that AVE for each construct was greater than their respective squared correlations for each construct, which means that multicollinearity could be ruled out.

In the case of the moderator variables included in the conceptual model, Ping (1994, p.366) suggests “centering the observed variables at zero by subtracting the mean of a variable from each case value for that value”. Little, Bovaird and Widaman (2006) suggests orthogonising the variables that are involved in the multiplicative (or product) terms. Thus, in order to reduce the potential threat of multicollinearity arising from the introduction of multiplicative terms in the structural models, all variables included in the multiplicative interactions were orthogonised (Little, Bovaird and Widaman 2006). These orthogonised (or residual centred) variables were subsequently used in the SEM analyses.

### **7.2.2.2 Test Power**

Test power is an important issue that needs addressing if there is to be any confidence in the study results (Hair et al. 2006). Test power relates to the probability of rejecting the null hypothesis when the alternative hypothesis is true (Sharma 1996). It is recommended that the power of a test should be high enough to increase confidence in the interpretation of study results. Thus, test power is related to the probability of making a correct decision (Sharma 1996).

Test power (as well as stability of parameter estimates) is associated with sample size (Kline, 1998). Indeed, it is suggested that a minimum sample size of 200 is required for stable parameter estimation in SEM (Kelloway 1998; Jackson 2003). Moreover, others argue that small sample sizes may results in inaccurate parameter estimates (e.g. Marsh, Balla and MacDonald 1988). Yet, some suggest that too large sample sizes may lead to rejection of acceptable models because of increased model fit tests (e.g. Saris and Satorra 1993). Consequently, a more flexible approach to handling the sample size and test power issue has been suggested.

For example, Bentler and Chou (1987) suggest a ratio between 5:1 and 10:1 for an acceptable parameter estimates to be computed. Furthermore, Kline (1998) recommends a ratio that ranges between 10:1 and 20:1 as a suitable ratio. This study has a sample size of 212. This is within the range suggested by Hair et al (2006). In fact, Tabachnick and Fidell (2007) state that a sample above 150 is acceptably appropriate for parameter estimation. Based on these considerations, it was considered suitable to rely on the 212 sample for model testing using the ML estimation method.

### **7.2.2.3 Influential Observations**

Model results can be affected by influential observations in the data. A typical example of influential observations is outliers (Hair et al. 2006). Outliers are “extreme data points with a unique combination of characteristics identifiable as distinctly different from other observations” (Hair et al. 1998). Because outliers can affect the results of structural models it is recommended that they should be dropped from the data (West, Finch and Curran 1995). Alternatively, researchers are advised to redefine the population of interest or have their model respecified (West, Finch and Curran 1995).

In the case of the current study, analysis of influential observations revealed that the possible influence of outliers on the study results was minimal. In fact, all the observations used in the structural model were confined to a rating scale ranging from 1 to 7; this effectively precluded any possibility of observations falling outside these predefined ranges. In the case of the variables used to profile the firms, effort was made to check for outliers. This is because no rating scales were specified for these variables. As was reported in section 5.2 of chapter five no outliers were observed for the profile variables. In light of all these inspections, it was concluded that no further corrective measures needed to be taken to address outliers.

### **7.2.2.4 Common Method Variance**

Scholars have highlighted the potential problem of common method variance (CMV) in behavioural research (e.g., Chang, van Witteloostuijn and Eden 2010; Podsakoff et al. 2003). According to Podsakoff et al. (2003, p. 879), CMV is a “variance that is attributable to the measurement method rather than to the

constructs the measures represent". As such, CMV can create false internal consistency. It can results typically from measurement at different levels of abstraction including item content, type of scale, response format and study context (Fiske 1982).

As was indicated in chapter four, responses on both the independent and dependent variables were sourced from the same informants in the main study. That certainly raised CMV issue. Accordingly, efforts were made to address CMV threat both *ex ante* and *post ante* (see section 4.5.6.2 in chapter four). To further ascertain the fact that CMV did not pose a threat to the study results, Harman's single-factor approach was adopted. This approach involves the use of SEM technique, and is based on the notion that the relations between two or more variables are due to CMV (or are spurious) if a single factor is able to explain all the common variances shared by all set of observed variables. Accordingly, researchers typically evaluate the model fit for a multi-factor model and compare it with a constrained single-factor model. CMV bias becomes evident if the unconstrained model does not significantly fit the data better than the constrained model. As such, CMV was addressed in this study by specifying and testing corresponding constrained one-factor models for respective unconstrained multi-factor models. Table 7.1 displays the results of the CMV analysis. As can be seen in table 7.1, results show that in all three sub-models the unconstrained models performed significantly better than the constrained models. Hence, it was concluded that CMV was not substantial in this study.

In addition, to complement the Harman's single-factor approach a full CFA model was constructed whereby all scales and their respective items were estimated together with a single unmeasured latent method factor (Chang, van Witteloostuijn and Eden 2010; Podsakoff et al. 2003). An unidentified solution was returned and this could be due to model complexity. This was taken to suggest that CMV was not a problem.

Table 7.1: Summary Statistics of Unconstrained versus Constrained Models

<b>CFA Subjects</b>	<b>Models</b>	<b><math>\chi^2</math> (df)</b>	<b>RMSEA</b>	<b>NNFI</b>	<b>CFI</b>	<b>GFI</b>
Export EOB and export performance	Measurement model	106.720 (34)	0.069	0.937	0.951	0.907
	CMV (constrained) model	297.987 (35)	0.189	0.836	0.873	0.780
Export customer dynamism, export market orientation and export performance	Measurement model	76.031 (32)	0.081	0.957	0.969	0.933
	CMV (constrained) model	388.626 (35)	0.219	0.662	0.737	0.731
Export product innovation intensity, product innovation novelty, risk-taking, proactiveness, competitive aggressiveness, autonomy and export performance	Measurement model	292.380 (188)	0.051	0.978	0.982	0.888
	CMV (constrained) model	2489.308 (209)	0.227	0.661	0.693	0.483

## 7.3 THE OVERALL APPROACH TO PATH ANALYSIS

### 7.3.1 Overview of the Analysis

Having explained the major statistical assumptions underpinning the SEM technique adopted and the other issues relevant to model testing, the formal hypotheses testing for the current study was carried out in five steps. Firstly, hypothesis relating to the main effect of an aggregate export EOB on export performance was tested in a formal structural model. Secondly, the moderating effects of EMO and ECD on the export EOBs – export performance relationship was analysed using the multiplicative interaction effect procedure suggested by Ping (1995; 2004). The moderator effect analysis procedures used by Cadogan et al (2006) was specifically followed in this regard. In the third step, the direct

effects of the specific export EOBs were analysed simultaneously in a formal structural model. In the fourth step, the moderating effects of EMO and ECD on the individual export EOBs' relationship with export performance were tested following the same Ping's (1995; 2004) recommendations and the steps used by Cadogan et al. (2006). Finally, Ping's multiplicative procedure was followed to model the effects of the multiplicative interaction among the individual EOBs on export performance.

In the sections that follow next, the individual analyses and results of the structural models are reported. Specifically, section 7.3.2 describes the structural model for the export EOB direct effect while 7.3.3 reports the results of the main effect model. Section 7.3.4 specifies the structural model involving the EMO and ECD moderators. Section 7.3.5 specifies and reports on the main effects of the individual EOBs while section 7.3.6 provides an account on structural model on the EMO moderating effects on the individual EOBs – export performance relationship. Section 7.3.7 reports the moderating effects of ECD whereas section 7.3.8 focuses on the performance effects of the interaction among the export EOBs.

### **7.3.2 Analysis of the Hypothesised Structural Relationships**

To analyse the hypothesised structural relationships among the constructs as presented in figure 3.1 (chapter three), LISREL 8.7 was employed (Jöreskog and Sörbom 2004) with sample covariance matrix as input matrix. As was argued in section 7.2, maximum likelihood (ML) estimation method was used. As such, in analysing hypothesis 1 a complete model incorporating both measurement and structural considerations was tested (Kelloway 1998). This was done by specifying (1) a path between export EOB and export performance, and (2) sets of paths linking up export EOB with its six dimensions (see section 6.5 for information on how measurement indexes were created) and export performance with its four observed indicators. Moreover, a path was specified to link the firm size control variable to export performance.

Since all scales were measured with rating scales (with the exception of firm size), it was reasonable to assume that all variables were continuous. For the single-indicant measure (i.e. firm size) in the model, its respective error variance was at

$[(1-\alpha) \times \delta^2]$ , where  $\alpha$  is the composite reliability of each construct as was derived from the measurement model (this was assumed to be 0.60 for the single-indicant firm size control variable) and  $\delta^2$  is the sample variance of the construct (Cadogan et al. 2006). With this procedure, the variance in the indicators that come from sources other than the underlying concept itself was effectively constrained. Table 7.2 displays the composite reliability, variance, and error variance for each single indicant that was created.

Table 7.2: Composite Reliability, Standard Deviation, Variance and Error Variance of Each Single-Indicant Construct

<b>Constructs</b>	<b>Composite Reliability (<math>\alpha</math>)</b>	<b>SD (<math>\delta</math>)</b>	<b>Variance (<math>\delta^2</math>)</b>	<b>Error Variance <math>[(1-\alpha) \times \delta^2]</math></b>
Export product innovation intensity	0.907	1.280	1.638	0.152
Export product innovation novelty	0.889	0.981	0.962	0.107
Export Risk-taking	0.871	1.508	2.274	0.293
Export Proactiveness	0.728	0.972	0.945	0.257
Export Competitive aggressiveness	0.890	1.437	2.065	0.227
Export Autonomy	0.887	1.109	1.230	0.139
EMO	0.830	0.783	0.613	0.104
Export Customer Dynamism	0.853	1.234	1.523	0.224
Export Performance	0.906	1.170	1.613	0.152
Export EOB	0.862	0.861	0.741	0.102
Firm Size	0.600 <sup>†</sup>	1.286	1.654	0.662

<sup>†</sup>= Firm size was measured by a single item and as such its CR was assumed to be 0.600

### 7.3.3 Linking Export EOB with Export Performance

#### 7.3.3.1 Model Specification for the Aggregate Main Effect Model

The structural relationship between aggregate export EOB and export performance as hypothesised in figure 3.1(chapter three) was formally analysed in a structural model as specified in figure 7.1. The observed indicators of the exogenous (or independent) export EOB variable ( $\xi_1$ ) were the six single-indicant export EOBs (i.e. INT, NOV, RISK, PRO, AGG, AUT) and the corresponding error terms for the observed indicators are denoted by  $\delta_1$  to  $\delta_6$ . The observed indicators

for the endogenous (dependent) export performance variable are represented by SAT1 to SAT4 while the error terms for the observed indicators are denoted by  $\varepsilon_1$  to  $\varepsilon_4$ . For the firm size variable (i.e.  $\xi_2$ ), its error term is denoted by  $\delta_7$ . The hypothesised path linking the exogenous variable to the endogenous variable is represented by  $\gamma_{21}$  while their respective residual terms are denoted by  $\zeta_1$  and  $\zeta_2$ . Finally, the unhypothesised path relating firm size to export performance is represented by  $\gamma_{22}$ . Having specified the main effect relationship between export EOB and export performance, the structural model was finally estimated with LISREL 8.7 and ML method.

Table 7.3 reproduces the hypothesised relationship linking export EOB to export performance together with the control variable. For easy tracking of the relationships, the LISREL notations of the structural paths (see figure 7.1) are also provided.

Table 7.3: Aggregate Main Effect Hypothesis (H1) with LISREL Notations for the Paths

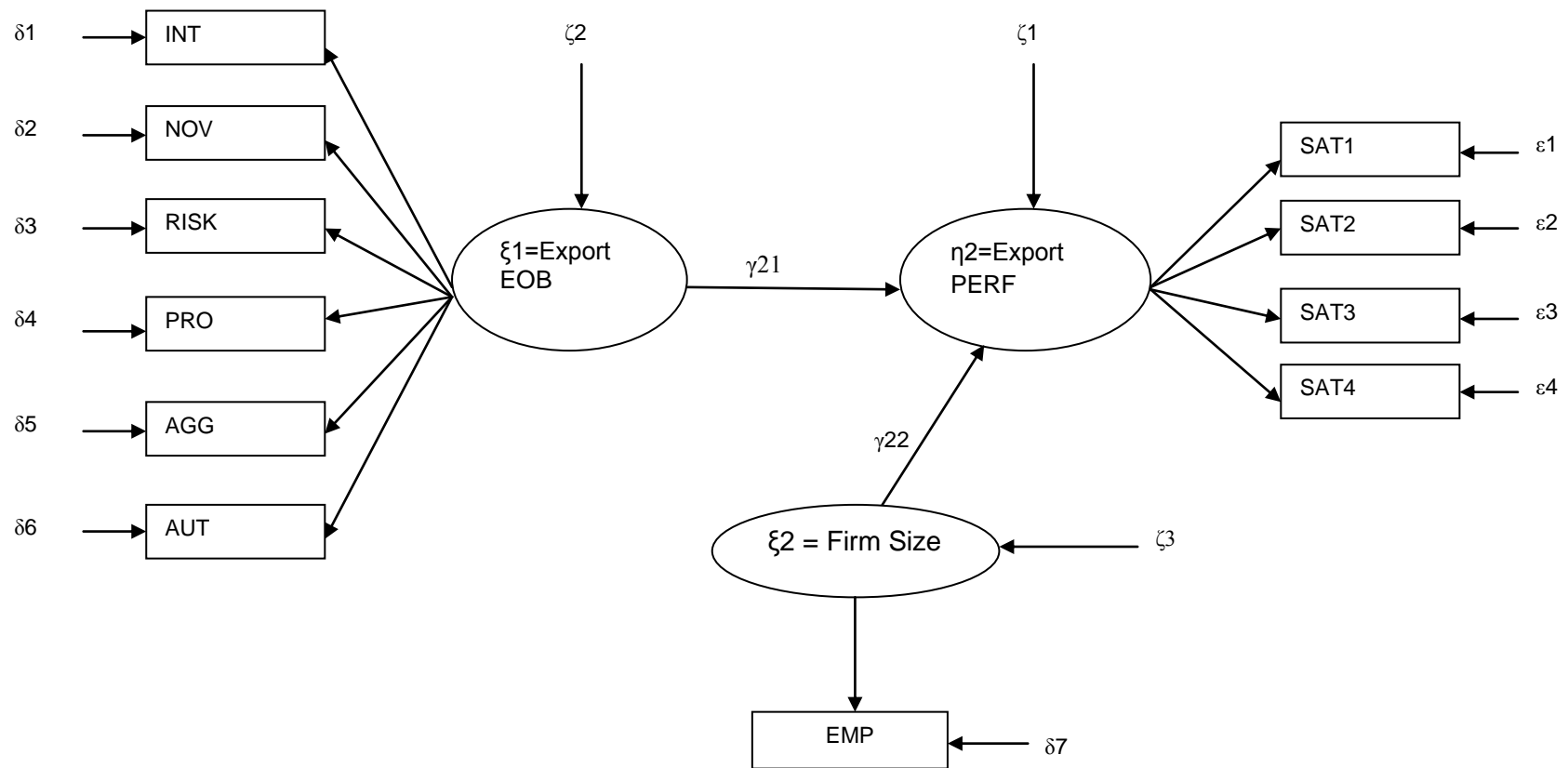
Hypothesis	Structural Paths	Relationships
H1	$\gamma_{21}$	Export EOB $\rightarrow$ Export Performance
H†	$\gamma_{22}$	Firm Size $\rightarrow$ Export Performance

H† = Unhypothesised path

### 7.3.3.2 Results of the Aggregate Main Effect Structural Model

As can be seen in table 7.4 results of the aggregate main effect structural model analysis showed excellent model fit. The chi-square ( $\chi^2$ ) test was non-significant at 1 per cent level while all other fit heuristics showed that the model fit the data very well. In addition, the  $R^2$  statistic (i.e. the reduced form of multiple square correlation as was produced in LISREL output) for the endogenous export performance variable showed that a high level of variance was explained in the dependent variable. Specifically, export EOB explained a satisfactory 46.7 per cent while firm size explained four per cent of the total variance in export performance.

Figure 7.1: Aggregate Main Effect Model Paths and Related Information on Parameters



**Note:** INT = export product innovation intensity; NOV = export product innovation novelty; RISK = export risk-taking; PRO = export proactiveness; AGG = export competitive aggressiveness; AUT = export autonomy; EMP = Total Employee Number; PERF = Performance



Table 7.4: Results of the Aggregate Main Effect Structural Model Analysis

<b>Model Fit Information</b>	<b>Statistics</b>
Chi-square with 12 degrees of freedom	12.208 ( $p = 0.429$ )
Root Mean Square Error of Approximation (RMSEA)	0.009
Non-Normed Fit Index (NNFI)	0.998
Comparative Fit Index (CFI)	0.999
Incremental Fit Index (IFI)	0.999
Goodness of Fit Index (GFI)	0.948
Adjusted Goodness of Fit Index (AGFI)	0.962
<b>R<sup>2</sup> for export performance:</b>	<b>Values</b>
Export EOB	0.467 (or 46.7%)
Firm Size	0.04 (or 4%)

It is also important to note that the minimum sample size to parameter ratio as is recommended in the literature was adequately met in this model (Bentler and Chou 1987; Hair et al. 2006). In particular, Hair et al's (2006) recommendation that minimum sample size should be at least greater than the number of covariances to be used as input data was sufficiently met. This was evident from the excellent fit of the model to the data. Accordingly, it was concluded that the aggregate main effect model was an acceptable depiction of the relationships as hypothesised by this study. Thus, this model was deemed to be suitable for hypothesis testing, which is presented next.

### 7.3.3.3 Results of Aggregate Main Effect Hypothesis Test

Having established that the aggregate main effect structural model was a feasible depiction of the hypothesised relationships, the path estimates (i.e.  $\gamma$ ) that represented the two specified relationships were estimated. Each path was assessed by looking at the path coefficients (i.e. standardised estimates) and the associated t-values. Given that all the hypothesised relationships in the model were one-directional, the conservative critical t-values of 1.282, 1.645 and 2.325 were used for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively. A summary of the hypothesised relationships and their corresponding path coefficients and associated t-values are provided in table 7.5. All in all, two paths were simultaneously estimated. The only hypothesised path was the one that linked export EOB to export performance. The unhypothesised path relating firm size to export performance was estimated as a control.

Table 7.5: Standardised Path Coefficients and t-values for the Aggregate Main Effect Model

Hypothesis	Paths	Relationships	Standardised coefficient	t-value <sup>a</sup>
H1	$\gamma_{21}$	Export EOB → Export Performance	0.75	6.60***
H†	$\gamma_{22}$	Firm Size → Export Performance	-0.02	-0.50

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

H† = Unhypothesised Path

### ***H1: Export EOB is positively related to export performance***

The first hypothesis of the study argued that export EOB would be positively related to export performance. The test for this hypothesis, while controlling for firm size, showed that export EOB at an aggregate level was positively related to export performance ( $\gamma = 0.75$ ;  $t = 6.60$ ;  $p < 0.01$ ). Thus, H1 of the study was supported. Firm size did not seem to have significant influence on export performance in this study. Thus, the study showed that a higher level of an overall export EOB would result in a greater level of export performance. This result lends support to the view expressed by Yeoh and Jeong (1995) that an entrepreneurial behaviour would increase firms' chances of success in export markets. The result also supports other export context EO studies that have argued for strong association between firm-wide entrepreneurial behaviour and export success (e.g. Kuivalainen, Sundqvist, and Servais 2007; Balabanis and Katsikea 2003). In addition, prior findings from firm-wide non-export EO research that have established that an entrepreneurial behaviour drives firm success is supported in the current study (Wang 2008; Baker and Sinkula 2009).

### **7.3.4 Moderating Effects of EMO and ECD on the Aggregate Export EOB - Export Performance Relationship**

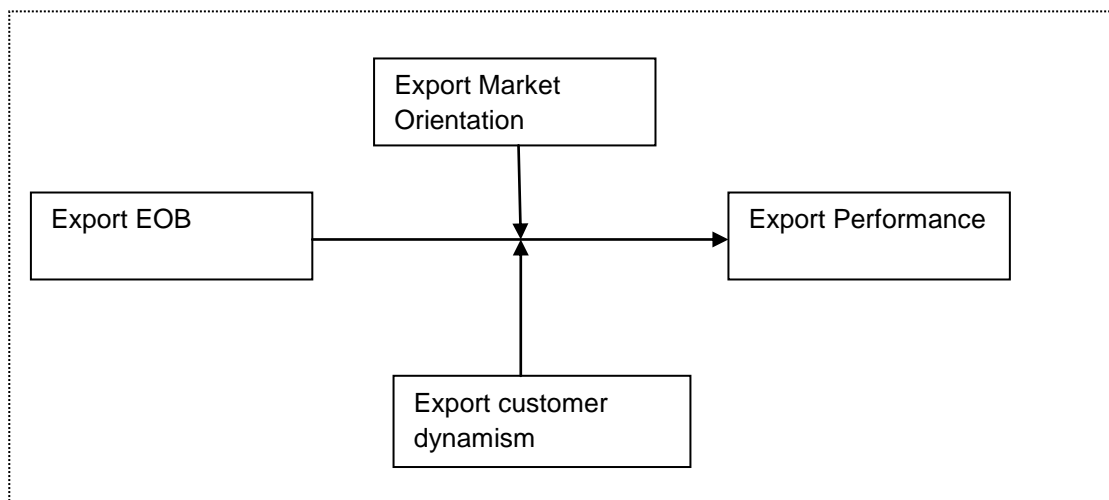
Having examined the direct main effect of export EOB on export performance, the study proceeded to explore the moderating effects of EMO and ECD on the aggregate export EOB – export performance relationship. The moderating effect

model proposed in this study was therefore nested in the aggregate main effect structural model. Ping's (1995) multiplicative interactive approach was used to estimate the moderator effect model.

### 7.3.4.1 Model Specification for the Moderating Effect Model

Figure 7.2 reproduces the conceptual framework that hypothesises the moderating effects of EMO and ECD on an aggregate export EOB - export performance relationship. The two moderating relationships correspond to H2 and H3 in figure 3.1 (chapter three).

Figure 7.2: Moderating Effects of EMO and ECD on Export EOB – Export Performance Relationship



The structural paths representing the EMO and ECD moderating effects models are presented in figure 7.3. Model specifications followed Ping's (1995) procedures for specifying structural model with interaction terms using the maximum likelihood estimation (ML) method. Like the aggregate main effect model, the moderator effect model also used covariance matrix for analysis. However, the moderator effect model has additional features that need highlighting. First, multicollinearity posed a high risk due to the inclusion of interactive terms (Ping 1995; Little, Bovaird, Widaman 2006). It is suggested that a failure to orthogonalise the exogenous and endogenous variables can lead to structural coefficient bias (Little, Bovaird, Widaman 2006). Accordingly, all variables involved in creating the interactive terms were orthogonalised (or residual centred) following the procedures recommended by Ping (1995) and Little, Bovaird, Widaman (2006). Second, the two moderator variables (i.e.

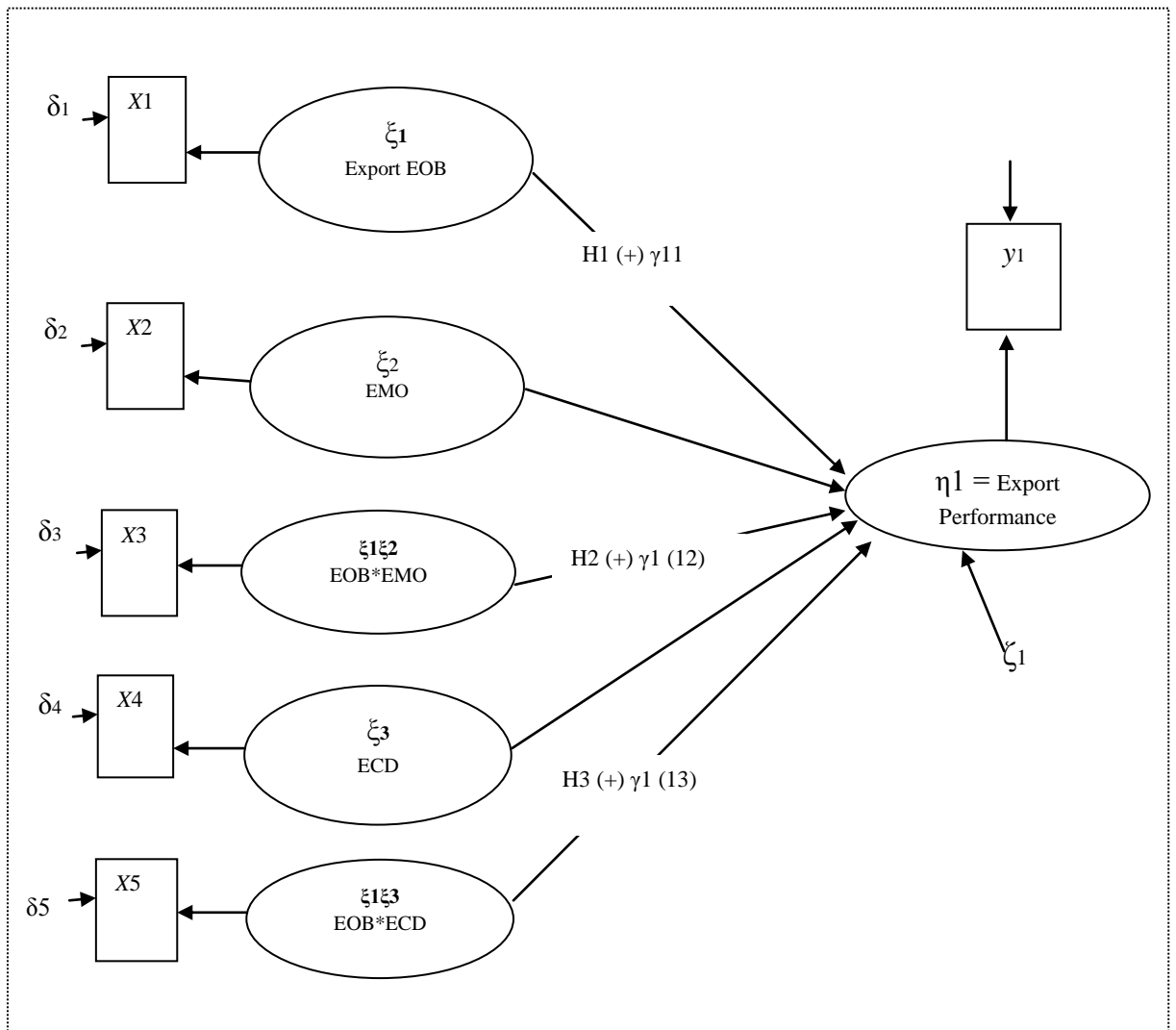
EMO and ECD) were specified and estimated simultaneously in a single SEM model nested in the main effect model as can be seen in figure 7.3.

### 7.3.4.2 Analytical Techniques

To test the moderator model, Ping's (1995; 2004) two-step procedures for the evaluation of structural models with interaction terms were followed. The first step of the process involved estimation of the main effect models. That is the direct association of export EOB, EMO and ECD with export performance. As is presented in figure 7.3, three equations were modelled for the main effects. Export EOB, EMO and ECD were modelled as direct predictors of export performance. Results of the main effect model showed excellent model fit as all fit indices exceeded their respective minimum critical values (see table 7.7). Specifically, the  $\chi^2$  value of 7.765 with six degrees of freedom was not significant at 0.05 level. Moreover, RMSEA value of 0.0373, NNFI of 0.992 and CFI of 0.997 were impressively better than their cut-off criteria.

Having obtained excellent model fit for the main effect models, the second step was to estimate the structural model with interactive terms nested in the main effect model. This step involved calculation of the error variances for the single indicants included in the model. Table 7.2 (section 7.3.1) displays the error variances for each single indicant that was created. In this respect, the error variance and factor loadings of the main effect models, together with Ping's (1995) equations (see Equation 7.1 and Equation 7.2) were used to estimate the error variance and factor loadings of the interaction terms. In addition, as per Ping's (1995) recommendation the intercorrelations among the latent variables of that form to the interaction terms were freed.

Figure 7.3: Hypothesised EMO and ECD Moderator Effects Structural Model



Note:  
EMO = Export Market Orientation; ECD = Export Customer Dynamism

**Equation 7.1:** The loading for x:z

$$\lambda_{x:z} = \Lambda X \Lambda Z$$

**Equation 7.2:** The error variance for x:z

$$\theta_{\epsilon x:z} = \Lambda x^2 \text{Var}(X) \theta z + \Lambda z^2 \text{Var}(Z) \theta x + \theta x \theta z$$

where  $\Lambda x = \lambda x_1 + \lambda x_2$ ,

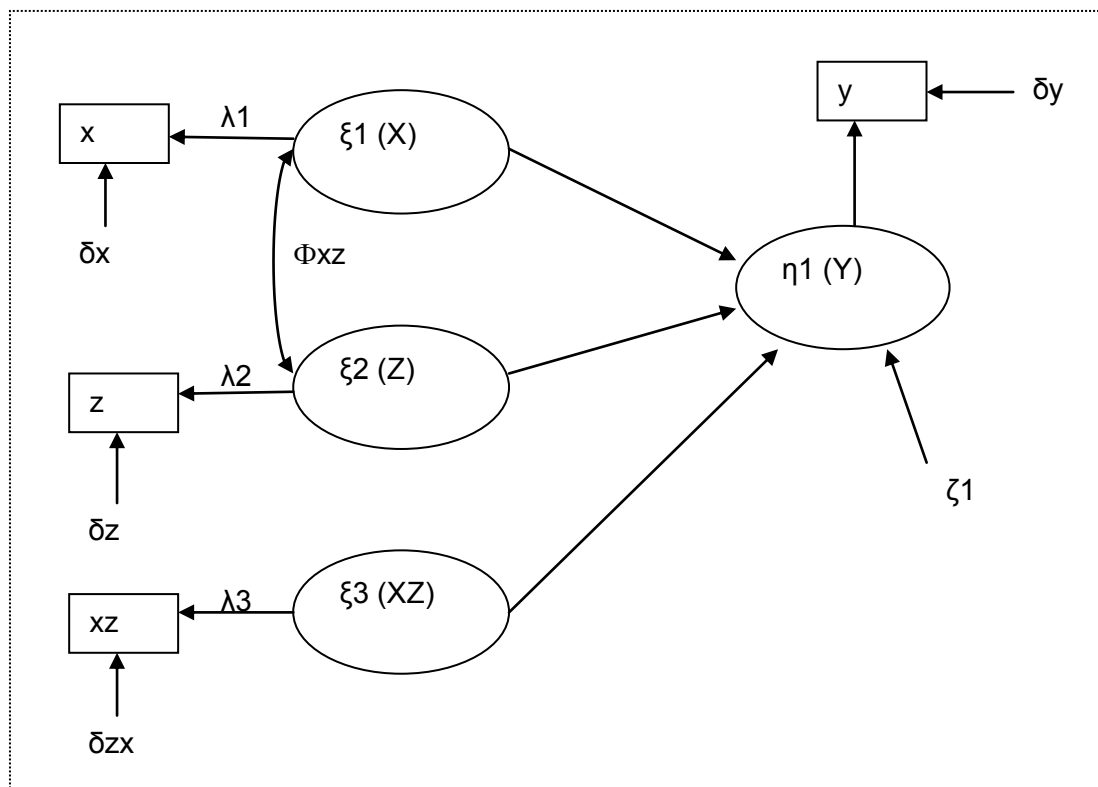
$$\theta X = \text{Var}(\epsilon x_1) + \text{Var}(\epsilon x_2),$$

$$\Lambda z = \lambda z_1 + \lambda z_2,$$

$$\theta z = \text{Var}(\epsilon z_1) + \text{Var}(\epsilon z_2).$$

To illustrate how the interactive effect model was estimated, Cadogan, Diamantopoulos and Siguaw's (2002) export market-oriented behaviour → export performance model was adopted and is presented in figure 7.4. In this model Cadogan, Diamantopoulos and Siguaw (2002) argued that the relationship between export market-oriented behaviour (X) and export performance (Y) was moderated by export environment turbulence (Z). To create the interactive term, these authors multiplied X by Z and their product was residual-centred. They subsequently followed Ping's formulae as displayed in Equation 7.1 and Equation 7.2 to create factor loading and error variance for indicator XZ.

Figure 7.4: Interaction Effect Model for Export-Market-Oriented Behaviour and Export Market Environment from Cadogan, Diamantopoulos and Siguaw (2002)



In using the same procedure as Cadogan, Diamantopoulos and Siguaw (2002), the two interactive terms were evaluated for the current study. The factor loadings and the error variance for the two interaction terms are presented in Table 7.6. Having calculated the factor loadings and error variances for the two interactive terms, the moderator effect model was then estimated.

Table 7.6: The Interaction Terms Operationalisation, Loadings and Error Variance

<b>Interactive Terms</b>	<b>Abbreviations</b>	<b>Factor Loadings</b>	<b>Error Variances</b>
Export EOB x EMO	EOB*EMO	0.832	0.192
Export EOB x ECD	EOB*ECD	0.837	0.512

In estimating the moderator effect model, two models were specified: one constrained and the other unconstrained. The underlying logic backing the constrained model is that the path estimates for the main effects hold true across different levels of the moderator variables. In the unconstrained model, no such assumption was made and as such the paths were estimated across different levels of the moderators. In other words, the moderator structural models were run in two steps while looking for significant improvements in  $\chi^2$  and degrees of freedom (Ping 1995).

In the unconstrained model, all the main effect and the moderator effect variables were included in a single model and all were freely estimated. Their fit indexes and loadings were then noted. Secondly, the moderator effect variables were fixed at zero, and again their fit indices and loadings were recorded. The two models (i.e. unconstrained versus constrained models) were subsequently compared for evidence of model improvement. Table 7.7 shows results of the fit indices for the moderating effect model.

Table 7.7: Fit of Moderating Effects of EMO and ECD

<b>Models</b>	<b><math>\chi^2</math> (df)</b>	<b>P-Value</b>	<b>RMSEA</b>	<b>NNFI</b>	<b>CFI</b>	<b>IFI</b>	<b>GFI</b>
Main effect	7.765 (6)	0.256	0.037	0.992	0.997	0.997	0.988
Constrained	14.773 (12)	0.319	0.026	0.991	0.996	0.996	0.984
Unconstrained	10.417 (10)	0.405	0.014	0.996	0.999	0.999	0.988

### 7. 3.4.3 Results of Moderating Effects on the Aggregate Export EOB – Export Performance Linkage

Results of the tests for H2 and H3 are presented in table 7.7. All three models (i.e. the main effect, constrained and unconstrained models) returned excellent fit to the data. A comparison of the constrained and the unconstrained models

revealed that across all fit indices the unconstrained model fit the data better than the constrained (or restricted) model. In fact, the  $\Delta\chi^2 = 4.356$  ( $\Delta df = 2$ ) is non-significant at 5 per cent level. In addition, the RMSEA for the unconstrained model (i.e. 0.014) was smaller than that of the constrained model (i.e. 0.026). The unconstrained model explained a satisfactory 49.3 per cent of the total variance (or squared multiple correlation in a reduced form) in export performance. Thus, the results from the unconstrained model were used to test the moderator hypotheses (i.e. H2 and H3). Results of the path coefficients involving the two moderator variables are presented in table 7.8.

**H2:** *The positive relationship between export EOB and export performance is greater, the higher the exporters' EMO.*

The overall results showed that EMO interactive term was significantly related to export performance ( $\gamma = 0.170$ ;  $t = 1.738$ ;  $p < 0.05$ ). Thus, it was concluded that H2 was supported. This finding shows that a greater level of EMO would enable export EOB to better predict export performance. However, the results also showed that EMO was an antecedent to export performance as per Sharma, Durand, and Gur-Arie's (1981) suggestion. This is because EMO has strong positive relationship with export performance ( $\gamma = 0.277$ ;  $t = 3.605$ ;  $p < 0.01$ ).

This finding goes to support the view that EMO enables exporters to tailor their entrepreneurial agenda (e.g. new product development) to export customer needs and preferences. It also lends support to the argument that EMO makes firms clever and wiser about their target export markets, giving them better knowledge about the risks, competitive activities and market opportunities that characterise overseas markets (Cadogan, Kuivalainen and Sundqvist 2009).



Table 7.8: Results of the Estimated EMO and ECD Moderator Effects within the Causal Model

Hypothesis	Structural Path	Relationship	Standardised coefficient	t-value <sup>a</sup>
H†	γ11	Export EOB → Export Performance	0.451	5.794***
H†	-	EMO → Export Performance	0.277	3.605***
	-	CUST → Export Performance	0.068	1.092
H2	γ12	EOB*EMO → Export Performance	0.170	1.738**
H3	γ13	EOB*CUST → Export Performance	-0.073	-0.748
<b>R<sup>2</sup></b>		<b>Value</b>		
Unconstrained Model		0.493		

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$   
a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)  
H† = Unhypothesised Paths

### 7. 3.4.4 Results of Moderating Effect of ECD on Export EOB – Export Performance Linkage

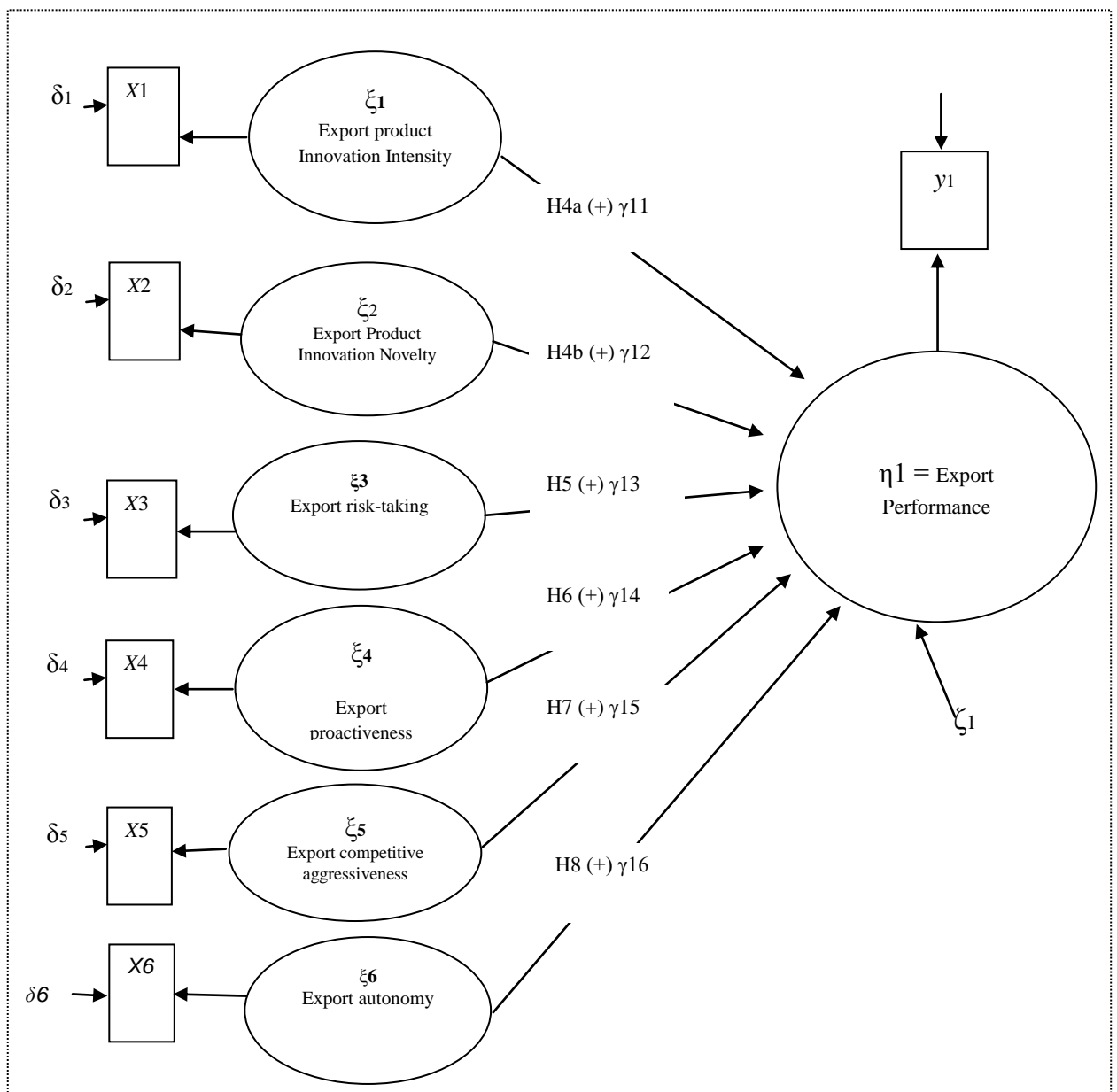
**H3:** *The positive relationship between EOB and export performance is greater, the higher the dynamism of export customers served by exporters.*

H3 states that the positive between export EOB and export performance is greater when ECD is high. Analysis of the unconstrained model returned two interesting coefficients. First, ECD is not significantly related to export performance; hence it is taken as a pure moderator (Sharma, Durand, and Gur-Arie 1981). Second, the ECD interactive term is also not related to export performance significantly. Hence, H3 was not supported in this study. Thus, contrary to expectation the positive export EOB – export performance relationship does not change significantly when export customers become increasingly dynamic. In other words, irrespective of the level of change and diversity in export customer preferences and needs, export EOB is needed to drive export success.

### 7.3.5 Test for the Association of the Individual Export EOBs with Export Performance

Figure 7.5 accounts for the possible direct association of the individual export EOBs with export performance. In this context, the independent variables were export product innovation intensity, product innovation novelty, risk-taking, proactiveness, competitive aggressiveness and autonomy, and the dependent variable was export performance.

Figure 7.5: Hypothesised Structural Equation Model Specifications for the Impacts of Export EOBs on Export Performance



Details of the hypothesised independent effect relationships and their corresponding structural paths are presented in table 7.9. The estimation of the independent effect model followed the same procedure as that outlined in section 7.3.1. Like the aggregate effect model, the independent effect model was estimated using LISREL 8.7 and the ML method.

Table 7.9: Hypothesised Independent Effect Structural Paths to be Tested

Hypotheses	Paths	Details of the relationships
H4a	$\gamma_{11}$	Export product innovation intensity $\rightarrow$ (+) Export performance
H4b	$\gamma_{12}$	Export product innovation novelty $\rightarrow$ (+) Export performance
H5	$\gamma_{13}$	Export risk-taking $\rightarrow$ (+) Export performance
H6	$\gamma_{14}$	Export proactiveness $\rightarrow$ (+) Export performance
H7	$\gamma_{15}$	Export aggressiveness $\rightarrow$ (+) Export performance
H8	$\gamma_{16}$	Export autonomy $\rightarrow$ (+) Export performance

Results of the fit indices are provided in table 7.10. The independent effect model returned as acceptable fit to the data. Specifically, although the model's  $\chi^2 (df) = 240.378 (168)$  was significant, however, other model fit statistics were very good (Hair et al, 2006): RMSEA of 0.045 was lower than the acceptable cut-off range of 0.08; and NNFI = 0.970, CFI = 0.976, IFI = 0.977, and GFI = 0.902 were all greater than the traditional minimum cut-off value of 0.90 (Marsh et al, 1988; Hair et al, 2006). Altogether, the export EOBs explained a total of 53 per cent of the variance in export performance. This is satisfactory and greater than the 46.7 per cent explained by the aggregate effect model. Given these acceptable fit statistics, the direct independent effect hypotheses of the study were subsequently analysed by examining their estimated structural path coefficients (see table 7.11).

Table 7.10: Fit Indexes for the Independent Effect structural model

Model Fit Information	Statistics
Chi-square with 168 degrees of freedom	240.378 (1.431)
Root Mean Square Error of Approximation (RMSEA)	0.045
Non-Normed Fit Index (NNFI)	0.970
Comparative Fit Index (CFI)	0.976
Incremental Fit Index (IFI)	0.977
Goodness of Fit Index (GFI)	0.902
Adjusted Goodness of Fit Index (AGFI)	0.985
<b>R<sup>2</sup> for export performance:</b>	<b>Values</b>
The Export EOBs	0.530 (or 53%)

### 7.3.5.1 Results of the Independent Effects Hypotheses Test

Altogether, six hypotheses were estimated corresponding to the direct association of the six proposed export EOBs with export performance. Each hypothesised association was therefore specified as a path in the structural model. Results of the analysis as displayed in table 7.11 are discussed in the paragraphs that follow next.

Table 7.11: Standardised Path Coefficients and T-values of the Independent Effect Model

Hypotheses	Relationships	Standardised parameters	t-values <sup>a</sup>	Comment
H4a	INT → EP (+)	-0.117	-1.49*	Not Supported
H4b	NOV → EP (+)	0.243	3.03***	Supported
H5	RISK → EP(+)	0.172	2.37***	Supported
H6	PRO →EP (+)	0.348	2.08**	Supported
H7	AGG → EP(+)	0.189	1.76**	Supported
H8	AUT →EP (+)	-0.138	-1.74**	Not Supported

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

INT = export product innovation intensity; NOV = export product innovation novelty; RISK = export risk-taking; PRO = export proactiveness; AGG = export competitive aggressiveness; AUT = export autonomy; EP = Performance

**H4a:** *Export product innovation intensity is positively related to export performance*

Support for H4a was not evident from the data. Contrary to expectation, export product innovation intensity was negatively related to export performance. The analysis produced a standardised coefficient of  $\gamma = -0.117$  supported by a t-value of -1.49 and was significant at 10 per cent level. This finding suggests that an exporter's high export product innovation intensity might work against export success. Thus, contrary to Miller and Friesen's (1982) admonition for firms to innovate regularly this study finds that innovating regularly might affect export performance negatively.

***H4b: Export product innovation intensity is positively related to export performance***

*H4b* hypothesises a positive association of export product innovation novelty with export performance. This relationship was supported because the standardised parameter estimates for *H4b* was significant and positive ( $\gamma = 0.243$ ;  $t = 3.03$ ;  $p < 0.01$ ). Thus, exporting firms with novel innovative products were more successful than their counterparts with less inventive products. This finding lends to support to Miller and Friesen's (1982) suggestion that innovating boldly would enable firms to be more successful. This result also confirms findings in the radical innovation literature that argue that competing with radically innovative products ensures greater firm performance (Tellis, Prabhu, and Chandy 2009; Frishammar and Horte 2007; Coelho and Augusto 2009). This result also confirms prior findings in the export literature that unique product development is positively associated with international performance (e.g., Knight and Cavusgil 2004).

***H5: Export risk-taking is positively related to export performance***

*H5* proposes a positive relationship between export risk-taking and export performance. This relationship was supported ( $\gamma = 0.243$ ;  $t = 2.37$ ;  $p < 0.01$ ). This finding suggests that a willingness to bear risks in export markets ensures increased export performance. This result is contrary to recent findings reported in the EO literature. For example, Hughes and Morgan (2007) report that risk-taking is negatively related to performance in their study of high-technology incubating firms. In addition, Frishammar and Horte (2007) find that risk-taking is not related to performance among mid-sized manufacturing firms. A similar non-significant result has been reported by Pearce, Fritz and Davis (2010) in their study of not-for-profit religious organisations. However, Cavusgil (1984) finds that a willingness to commit large firm resources to export operations (i.e. export risk-taking) is positively related to successful export market entry.

***H6: Export proactiveness is positively related to export performance***

*H6* argues that export proactiveness has positive association with export performance. Results strongly support this hypothesis ( $\gamma = 0.34$ ;  $t = 2.08$ ;  $p <$

0.05). This suggests that proactive exporting firms are more successful in export markets than their less proactive counterparts. Prior research corroborates this finding. For example, both Hughes and Morgan (2007) and Morgan and Strong (2003) assert that proactive behaviour is strongly associated with firm success. In addition, Covin, Slevin and Green (2006) report positive relationship between proactive behaviour and sales growth.

***H7: Export competitive aggressiveness is positively related to export performance***

It was argued in H7 that positive relationship exists between export competitively aggressive behaviour and export performance. This hypothesis was supported by the results ( $\gamma = 0.189$ ;  $t = 1.176$ ;  $p = 0.05$ ), meaning that competitively aggressive exporters generate superior export performance relative to their less competitively aggressive counterparts. This result lends support to what has been reported in the literature. For example, Covin and Covin (1990) report that a positive association exists between competitively aggressive behaviour and firm profitability. Similarly, Lumpkin and Dess (2001) report that competitive aggressiveness is associated with higher performance especially in more mature industries. However, Hughes and Morgan (2007) find that competitive aggressiveness appears to hold no firm performance value.

***H8: Export autonomy is positively related to export performance***

Finally, H8 of the independent effect model hypothesises that there is a positive relationship between export autonomous behaviour and export performance. Results did not support H5 ( $\gamma = -0.138$ ;  $t = -1.74$ ;  $p < 0.05$ ). The impact of export autonomy on export performance was significant at five per cent level but opposite to the direction predicted by the study. This is surprising because a number of recent studies have reported a strong positive association between autonomous behaviour and firm performance (e.g. Pearce II, Fritz and Davis 2010). However, this result can be likened to the results of Lerner, Brush and Hisrich's (1997) study. These authors conclude in their study that autonomous behaviour is negatively associated with sales revenue.

### **Summary and Comment**

Past research suggest that an overall EOB is universally beneficial to business success (e.g. Covin and Slevin 1989; Covin, Slevin and Green 2006; Wang 2008; Wiklund and Shepherd 2005; Zahra and Covin 1995). These findings have been confirmed in the current study. In responding to the concern raised by Lumpkin and Dess (1996) that EOB's association with performance might change in different organisational and environment contexts, this study explores the moderating effects of EMO and export customer dynamism on the export EOB –export performance relationship. Results show that EOB's influence on performance is strengthened when exporters are also highly export market-oriented. However, the study finds that irrespective of the level of change and diversity of export customers' needs and preferences export EOB remains beneficial to export success.

Lumpkin and Dess (1996) also indicate that the individual EOBs might drive firm success differently. In fact, Hughes and Morgan (2007) and more recently Pearce, Fritz and Davis (2010) find evidence to support Lumpkin and Dess' suggestion. To explore these possibilities among the exporting organisations this study also analysed the association of the individual export EOBs with export performance. Results show that while export product innovation novelty, risk-taking, proactiveness and competitive aggressiveness positively drive export performance, export product innovation intensity and export autonomous behaviour are negatively related to export performance. The negative association of export product innovation and export autonomy with export performance is rather surprising given that the literature points to positive relationships.

To explore the relationships between the individual EOBs and export performance further this study argues for the need to moderate each individual relationship by EMO. In other words, a further analysis would explore whether EMO would improve or decrease the direction and/or the strength of the association of the individual EOBs with export performance. The following sections specify and estimate a model that examines the moderating effects of EMO on the specific EOBs – export performance relationship.

### 7.3.6 Moderating Effects of Export Market Orientation on the Individual Export EOBs – Export Performance Relationship

#### 7.3.6.1 Analysis of the Structural Model with EMO Interactive Terms

Figure 7.5 provides an account of the structural model of the moderating effect of EMO on the individual export EOBs – export performance relationships. The logic is that the impacts of the specific export EOBs on export performance might become stronger and more positive when EMO increases. As indicated earlier, the overall EMO score is multiplied by the export EOBs scores. In order to avoid multicollinearity all the resulting product terms were residual-centred (Ping 1995). The residual-centred scores were subsequently used in analysing the independent effect moderator relationships. Table 7.12 is a restatement of the study's hypotheses as was presented in figure 3.1 (chapter 3). Analysis of the model follows the same procedure as that described in section 7.3.4 and the logic presented in figure 7.4.

Table 7.12: EMO Moderating Effect Hypotheses to be Tested

Hypotheses	Paths	EMO Moderator Relationships
H9a	$\gamma_1$	Export product Innovation Intensity x EMO $\rightarrow(+)$ export performance
H9b	$\gamma_2$	Export product Innovation Novelty x EMO $\rightarrow(+)$ export performance
H10	$\gamma_3$	Export risk-taking x EMO $\rightarrow(+)$ export performance
H11	$\gamma_4$	Export proactiveness x EMO $\rightarrow(+)$ export performance
H12	$\gamma_5$	Export aggressiveness x EMO $\rightarrow(+)$ export performance
H13	$\gamma_6$	Export autonomy x EMO $\rightarrow(+)$ export performance

As is shown in figure 7.6, a total of 13 parameters were estimated for the independent effect EMO moderator model. Of this number, seven parameters were for the main effects of the six export EOBs plus EMO whilst the remaining six parameters represented the hypothesised six interactive terms. As was earlier described in section 7.3.3, three nested models were estimated: main effect model, constrained model and unconstrained model. In the main effect model, the six export EOBs and EMO variables were entered into the structural equation. The unconstrained model involved the addition of the interactive variables to the main effect model. At this juncture, all 13 parameters were



freely estimated. To estimate the constrained model, all the six interactive terms were restricted to zero. Changes in  $\chi^2$  values, degrees of freedom and fit statistics were subsequently noted. Table 7.13 displays the results of the analysis.

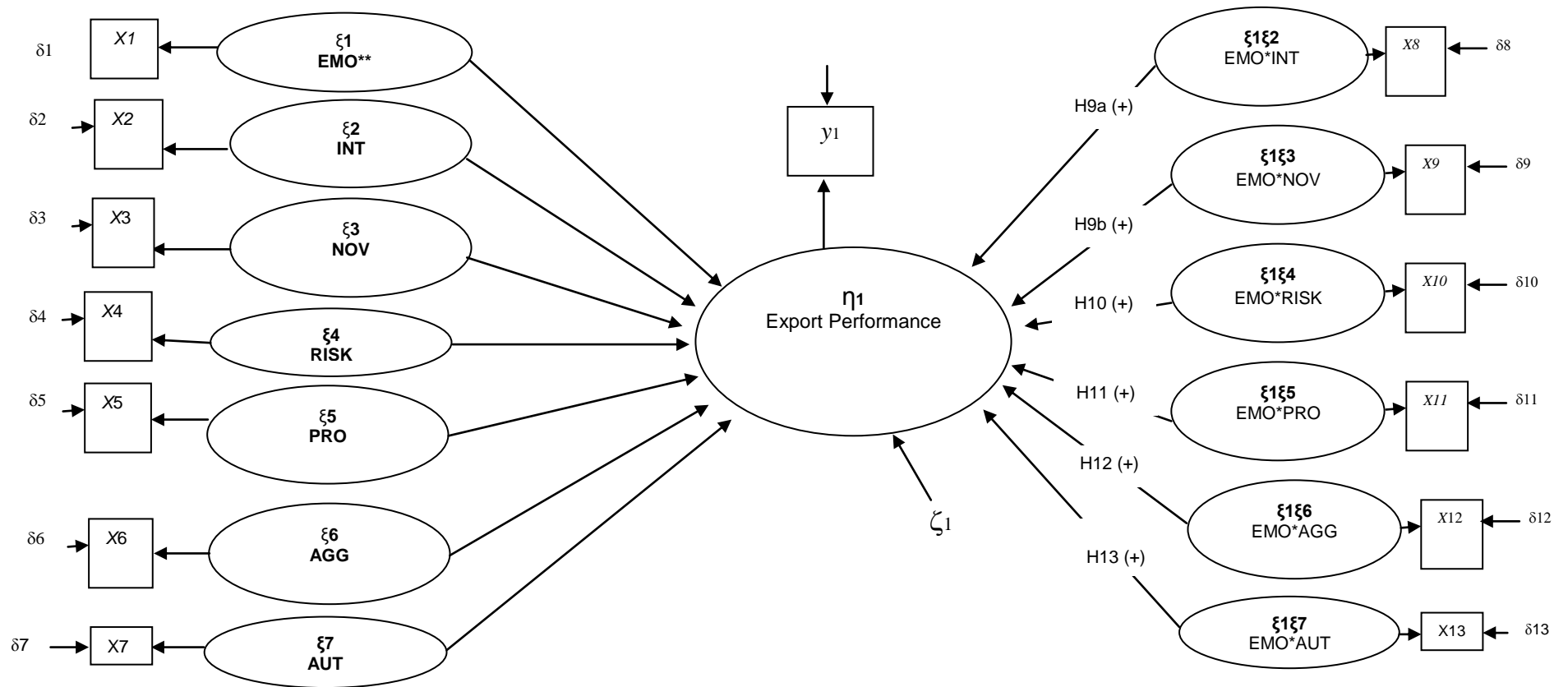
Table 7.13: Fit Indexes for the EMO Moderator Effect on structural model

<b>Models</b>	<b><math>\chi^2</math> (df)</b>	<b>RMSEA</b>	<b>NNFI</b>	<b>CFI</b>	<b>GFI</b>	<b>AGFI</b>
Main Effect	20.295 (14)	0.046	0.968	0.990	0.981	0.926
Constrained	38.993 (32)	0.032	0.972	0.993	0.977	0.904
Unconstrained	30.062 (26)	0.027	0.977	0.995	0.983	0.908

The main effect model returned excellent model fit. As can be seen from table 7.13,  $\chi^2$  (df) = 20.295 (14) was non-significant at five per cent level, RMSEA = 0.046 was substantially smaller than the 0.08 critical value, and NNFI, CFI, GFI and AGFI were all larger than their minimum critical values of 0.90. Next, the constrained model was estimated and results showed good fit to the data:  $\chi^2$  (df) = 38.993 (32) was also not significant at five per cent level and other fit indices were all impressive. Finally, the fixed interactive variables were freely estimated. Results indicated excellent model fit:  $\chi^2$  (df) = 30.062 (26) was not significant at five per cent level, RMSEA of 0.027 was far smaller than 0.08 threshold and NNFI = 0.977, CFI = 0.995, GFI = 0.983 and AGFI = 0.908 were all impressively higher than the critical value of 0.90.

A comparison of the constrained and unconstrained models showed that the unconstrained model did fit the data better than the constrained model. Indeed, a significant improvement in  $\chi^2$  and degrees of freedom was achieved for the unconstrained model (i.e.  $\Delta\chi^2 = 8.931$ ;  $\Delta df = 6$ ). Further, all fit statistics for the unconstrained model turned out to be better than those of the constrained model. Accordingly, the unconstrained model was chosen for hypothesis testing.

Figure 7.6: Hypothesised Structural Equation Model Specifications for the Moderating Effects of EMO on Specific Export EOBs - Export Performance Relationship



**Key:**

\*\* = Export Market Orientation;  $\xi_1$  = EMO;  $\xi_2$  = Export Product Innovation Intensity;  $\xi_1\xi_2$  = EMO\*INT;  $\xi_3$  = Export Product Innovation Novelty;  $\xi_1\xi_3$  = EMO\*NOV;  $\xi_4$  = Export Risk-taking;  $\xi_1\xi_4$  = EMO\*RISK;  $\xi_5$  = Export Proactiveness;  $\xi_1\xi_5$  = EMO\*PRO;  $\xi_6$  = Export Competitive Aggressiveness;  $\xi_1\xi_6$  = EMO\*AGG;  $\xi_7$  = Export Autonomy;  $\xi_1\xi_7$  = EMO\*ECD

### 7.3.6.2 Results of the EMO Moderator Effect Hypothesis Test

The results of the EMO moderator effect hypothesis test is displayed in table 7.14. These results are based on the unconstrained model presented in table 7.13.

Table 7.14: Standardised Path Coefficients and T-values of the EMO Moderator Effect Model

Hypotheses	Relationships	Standardised parameters	t-values <sup>a</sup>	Comment
	INT → EP	-0.041	-0.742	Unhypothesised
	NOV → EP	0.194	2.781***	Unhypothesised
	RISK → EP	0.125	2.130**	Unhypothesised
	PRO → EP	0.084	1.067	Unhypothesised
	AGG → EP	0.133	2.650***	Unhypothesised
	AUT → EP	0.027	0.420	Unhypothesised
	EMO → EP	0.425	4.802***	Unhypothesised
H9a	INT x EMO → EP (+)	0.145	1.741**	Supported
H9b	NOV x EMO → EP (+)	-0.021	-0.239	Not supported
H10	RISK x EMO → EP(+)	0.007	0.091	Not supported
H11	PRO x EMO → EP (+)	0.124	1.291*	Not Supported
H12	AGG x EMO → EP(+)	-0.030	-0.523	Not supported
H13	AUT x EMO → EP (+)	-0.105	-1.282*	Not supported

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

EMO = Export Market Orientation; INT = export product innovation intensity; NOV = export product innovation novelty; RISK = export risk-taking; PRO = export proactiveness; AGG = export competitive aggressiveness; AUT = export autonomy; EP = Performance

*H9a: The positive association between export product innovation intensity and export performance is stronger, the higher the exporter's EMO*

Hypothesis 9a postulates that the influence of export product innovation intensity on export success outcome will be enhanced if an exporter's EMO level is high. Results of the hypothesis analysis revealed that there was a significant positive association between the export product innovation intensity interactive variable and export performance ( $\gamma = 0.145$ ;  $t = 1.741$ ;  $p < 0.05$ ). Thus, H9a was supported. As such, it was concluded that EMO did moderate the association between export product innovation intensity and export performance. This means that exporters require EMO to ensure that regular product innovative activities generate the required export performance outcome. Thus, introducing new products on regular basis without good knowledge of

export customers' needs and preferences might not produce the positive export performance outcome.

*H9b: The positive association between export product innovation novelty and export performance is stronger, the higher the exporter's EMO*

Hypothesis 9b states that the higher the level of EMO the stronger the association between export product innovation novelty and export success. Results showed that H9b was not supported because the export product innovation novelty interactive term did not have significant association with export performance ( $\gamma = -0.021$ ;  $t = -0.239$ ). This means that EMO provides no value in enhancing the relationship between export product innovation novelty and export performance.

*H10: The positive association between export risk-taking and export performance is stronger, the higher the exporter's EMO*

It was postulated in hypothesis 10 that the positive association between export risk-taking behaviour and export performance becomes stronger when EMO is high in the exporting organisation. This hypothesis was not supported as the standardised parameter estimate for export risk-taking moderator variable was non-significant ( $\gamma = 0.007$ ;  $t = 0.091$ ). This result is rather surprising given that EMO makes firms wiser and more knowledgeable about their export markets and as such EMO should help risk-taking exporters to reduce their chances of failure and therefore increase their export success.

*H11: The positive association between export proactiveness and export performance is stronger, the higher the exporter's EMO*

Hypothesis 11, which posits a stronger positive association between export proactiveness and export performance at high level of EMO, was not supported albeit at 5 per cent significant level ( $\gamma = 0.124$ ;  $t = 1.291$ ,  $p < 0.10$ ). However, it could be argued that at 90 per cent confident level, EMO moderates the association of export proactiveness with export performance. That is, where EMO is high, the contribution of export proactive behaviour to export success is boosted. The non-significant association is, nonetheless, surprising given that

EMO should ideally help exporters to anticipate future needs and preferences of customers (Cadogan, Diamantopoulos, and Siguaw 2002).

*H12: The positive association between export competitive aggressiveness and export performance is stronger, the higher the exporter's EMO*

Hypothesis 12 posits that the positive relationship between export competitively aggressive behaviour and export performance gets stronger when EMO is high. This hypothesis was not supported by the data ( $\gamma = -0.030$ ;  $t = -0.523$ ). The *t-value* for this hypothesis was not significant.

*H13: The positive association between export autonomy and export performance is stronger, the higher the exporter's EMO*

The hypothesis on the moderating effect of EMO on export autonomous behaviour → export performance relationship was not supported. This is because the interactive term had negative association with export performance, which was contrary to what was predicted by H13 ( $\gamma = -0.105$ ;  $t = -1.282$ ;  $p < 0.10$ ). The finding, therefore, indicates that a strong market-oriented behaviour does not make the association between export autonomous behaviour and export performance more positive.

### **Summary and Comments**

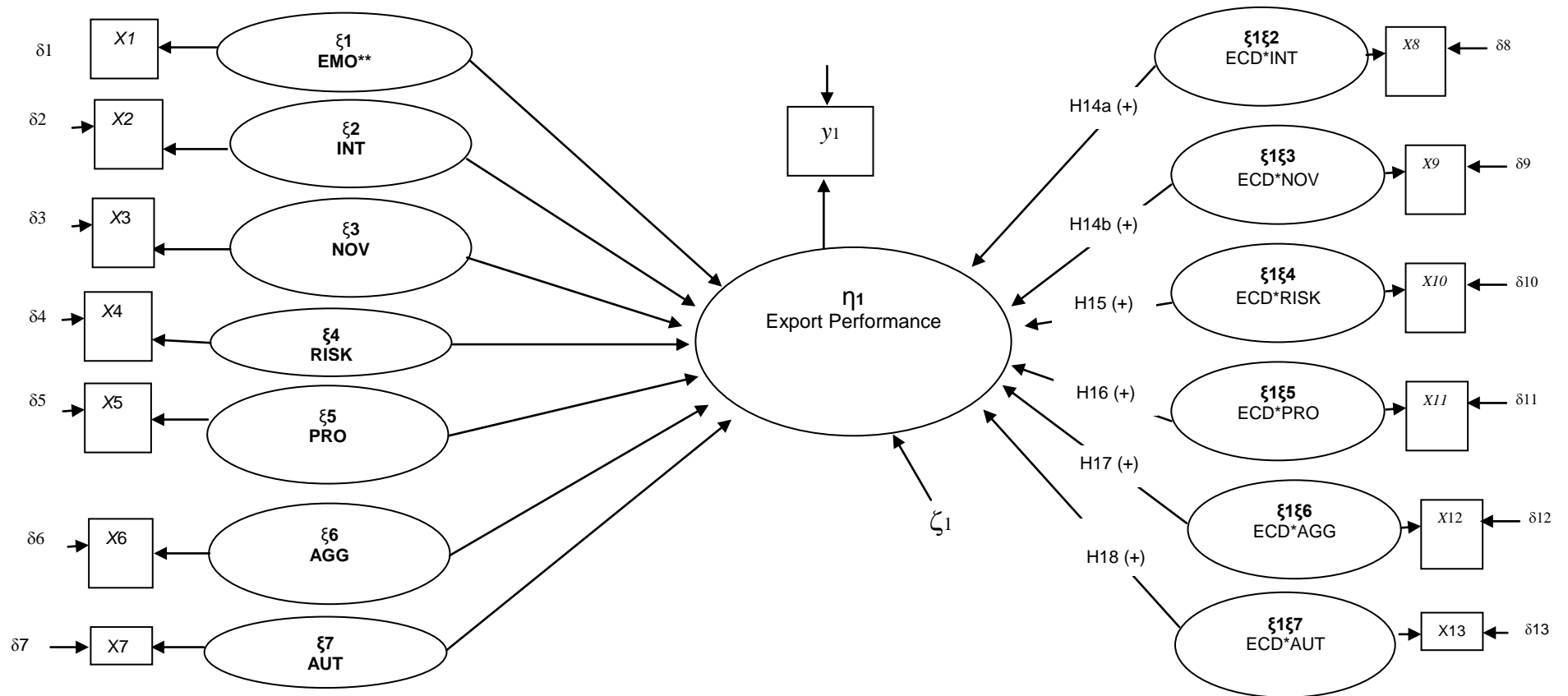
The purpose of hypotheses 9 to 13 was to explore the moderating effect of EMO on the association between the specific EOBs and export performance. The data provided mixed support to the six hypotheses. Specifically, results showed that EMO moderates the paths linking export product innovation intensity and export performance. This is interesting because research shows that strong market intelligence is required to target new products to customer needs and preferences (Matsuno, Mentzer and Ozsomer 2002; Baker and Sinkula 2009). Still, the association of some of the export EOBs with export performance continue to be non-significant or opposite to the direction hypothesised. For instance, EMO failed to moderate the association of product innovation novelty, risk-taking proactiveness and competitive aggressiveness with export performance. In the case of export innovation novelty and autonomy, however, the relationships were negative. To explore the

relationships further, a post hoc analysis was undertaken as a way of further exploring the characteristics of the relationships (see section 7.4.2.1 below).

### **7.3.7 Moderating Effects of Export Customer Dynamism on the Individual Export EOBs – Export Performance Relationship**

Figure 7.7 presents that an account of the structural model depicting the moderating effect of ECD on the association between the specific export EOBs and export performance. The premise is that the impact of the specific EOBs on export performance might vary across different degrees of ECD. The analysis began with the multiplication of the scores of the specific EOBs by ECD scores and subsequent orthogonisation of the product terms to reduce multicollinearity. Table 7.15 depicts a restatement of the research hypotheses (i.e. H14 to H18) as was earlier presented in figure 3.1 (chapter 3). To analyse this model, the same procedure outlined in section 7.3.4 and the corresponding logic presented in figure 7.4 were followed.

Figure 7.7: Hypothesised Structural Equation Model Specifications for the Moderating Effects of ECD on Specific Export EOBs - Export Performance Relationship



**Key:**

\*\* = Export Customer Dynamism;  $\xi_1$  = ECD;  $\xi_2$  = Export Product Innovation Intensity;  $\xi_1\xi_2$  = ECD\*INT;  $\xi_3$  = Export Product Innovation Novelty;  $\xi_1\xi_3$  = ECD\*NOV;  $\xi_4$  = Export Risk-taking;  $\xi_1\xi_4$  = ECD\*RISK;  $\xi_5$  = Export Proactiveness;  $\xi_1\xi_5$  = ECD\*PRO;  $\xi_6$  = Export Competitive Aggressiveness;  $\xi_1\xi_6$  = ECD\*AGG;  $\xi_7$  = Export Autonomy;  $\xi_1\xi_7$  = ECD\*AUT

Figure 7.7 shows that a total of 13 parameters were estimated for the independent effect ECD moderating effect model. Seven out of the 13 parameters were for the main effects of the six export EOBs plus ECD. The remaining six parameters represented the hypothesised interactive terms. Again, three nested models were estimated: main effect model, constrained model and unconstrained model. In the main effect model, the six export EOBs and ECD variables were entered into the structural equation. The unconstrained model involved the addition of the interactive variables to the main effect model. At this juncture, all 13 parameters were freely estimated. All the six interactive terms were then restricted to zero in the constrained model. Changes in  $\chi^2$  values, degrees of freedom and fit statistics were subsequently noted.

Table 7.15: ECD Moderating Effect Hypotheses to be Tested

Hypotheses	Paths	ECD Moderator Relationships
H14a	$\gamma_1$	Export product Innovation Intensity x ECD $\rightarrow(+)$ export performance
H14b	$\gamma_2$	Export product Innovation Novelty x ECD $\rightarrow(+)$ export performance
H15	$\gamma_3$	Export risk-taking x ECD $\rightarrow(+)$ export performance
H16	$\gamma_4$	Export proactiveness x ECD $\rightarrow(+)$ export performance
H17	$\gamma_5$	Export aggressiveness x ECD $\rightarrow(+)$ export performance
H18	$\gamma_6$	Export autonomy x ECD $\rightarrow(+)$ export performance

Model fits for the main effect, constrained and unconstrained models are reported in table 16 and it is evident that the unconstrained model better fit the data than the constrained model ( $\Delta\chi^2 = 12.314$ ;  $\Delta df = 8$ ). More importantly, the  $\chi^2$  value of 30.355 with 26 degrees of freedom was not significant at 5 per cent level.

Accordingly, this study proceeded to report the standardized parameter estimates of the unconstrained model.

Table 7.16: Fit Indexes for the ECD Moderator Effect on structural model

Models	$\chi^2$ (df)	RMSEA	NNFI	CFI	GFI	AGFI
Main Effect	20.194 (14)	0.046	0.977	0.993	0.981	0.926
Constrained	42.669 (34)	0.035	0.971	0.993	0.977	0.895
Unconstrained	30.355(26)	0.028	0.981	0.996	0.982	0.908



### 7.3.7.1 Results of the ECD Moderator Effect Hypothesis Test

Table 7.17 depicts the results of the ECD moderating effect structural model test. These results are based on the unconstrained model as it provided better fit to the data.

Table 7.17: Standardised Path Coefficients and T-values of the ECD Moderating Effect Model

Hypotheses	Relationships	Standardised parameters	t-values <sup>a</sup>	Comment
	INT → EP	-0.084	-1.305*	Unhypothesised
	NOV → EP	0.276	4.323***	Unhypothesised
	RISK → EP	0.178	2.593**	Unhypothesised
	PRO → EP	0.190	3.155***	Unhypothesised
	AGG → EP	0.247	2.624***	Unhypothesised
	AUT → EP	-0.125	-2.033**	Unhypothesised
	ECD → EP	0.125	2.297***	Unhypothesised
H14a	INT x ECD → EP (+)	0.131	-1.755**	Not Supported
H14b	NOV x ECD → EP (+)	0.120	1.790**	Supported
H15	RISK x ECD → EP (+)	0.156	2.057**	Supported
H16	PRO x ECD → EP (+)	-0.018	-0.221	Not Supported
H17	AGG x ECD → EP (+)	0.102	1.322*	Not Supported
H18	AUT x ECD → EP (+)	0.004	0.058	Not supported

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

a = critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

ECD = Export Customer Dynamism; INT = export product innovation intensity; NOV = export product innovation novelty; RISK = export risk-taking; PRO = export proactiveness; AGG = export competitive aggressiveness; AUT = export autonomy; EP = Performance

**H14a:** *The positive association between intensive product innovation and export performance will be stronger when customer dynamism is high.*

The study argues in H14a that intensive product innovation would be more beneficial to exporting firms in highly dynamic customer environments than in much less dynamic customer environments. This argument was not supported by the data ( $\gamma = -0.131$ ;  $t = -1.755$ ;  $p < 0.05$ ). Hence, it was concluded that doing more of the same product innovation in more dynamic customer environments can be detrimental for export performance. This suggests that exporters probably need greater breakthrough innovations in overseas markets where consumer needs and preferences are continually changing and becoming highly diverse rather than innovations that are more of the same (see the results of H14b).

**H14b:** *The positive association between novel product innovation and export performance will be stronger when customer dynamism is high.*

The study postulates in H14b that the relationship between product innovation novelty and export performance would become stronger in magnitude and more positive when the needs and preferences of export customers are rapidly changing and are becoming increasingly diverse. This research hypothesis was supported by the data ( $\gamma = 0.120$ ;  $t = 1.790$ ;  $p < 0.05$ ). Thus, when there is lots of dynamism in the environment, product innovation novelty has a substantial impact on export performance.

**H15:** *The positive association between export risk-taking behaviour and export performance will be stronger when customer dynamism is high.*

In Hypotheses 15, this study argues that the export performance consequence of risk-taking depends on the level of customer dynamism firms face. The study received support for this hypothesis ( $\gamma = 0.156$ ;  $t = 2.057$ ;  $p < 0.05$ ). This means that dynamic market environments are ideal for firms to take more risks to enhance export performance in that when the environment is in a state of flux, there are more underexploited market opportunities, and the returns available from taking risks can be attractive.

**H16:** *The positive association between export proactive behaviour and export performance will be stronger when customer dynamism is high.*

Regarding the impact of the ECD on proactive behaviour – export performance relationship, no moderator effects were observed ( $\gamma = -0.018$ ;  $t = -0.221$ ), thus H16 was not supported. This is surprising as it would be expected that management would be more proactive in dynamic environments in order to be attuned with changing customer needs and preferences, and not to be pre-empted by competitors. Perhaps, this may suggest that management recognizes that there is more benefit in focusing on customers' expressed needs and preferences and in paying attention to building stronger customer loyalty and market share.

**H17:** *The positive association between export competitive aggressive behaviour and export performance will be stronger when customer dynamism is high.*

The study did not find support for the hypothesis that ECD moderates the relationship between competitive aggressiveness and export performance ( $\gamma = 0.102$ ;  $t = 1.322$ ;  $p < 0.10$ ). This result indicates that exporters might not be able to outperform competitors by focusing more on aggressive expansion of market share and customer loyalty level in dynamic customer environments.

**H18:** *The positive association between export autonomous behaviour and export performance will be stronger when customer dynamism is high.*

The notion that ECD moderates the association between autonomy and export performance was not supported ( $\gamma = 0.004$ ;  $t = 0.058$ ). Perhaps management recognises that greater cross-functional interaction and leveraging of resources and capabilities are critical for success in dynamic export market environments than nonconformist independent and isolated departmental export activities.

## Summary and Comments

Hypotheses 14 to 18 was intended to shed light on the extent to which the specific export EOBs predict export performance at varying levels of export customer dynamism. Results revealed that the EOBs component elements predict export performance differently in dynamic export environments. Specifically, while product innovation novelty and risk-taking positively predict export performance, product innovation intensity is negatively related to export performance in dynamic customer environment. Proactive, competitively aggressive and autonomous behaviours are not associated with export performance in dynamic customer environments. In a post hoc analysis (see section 7.4.2.2 below), the moderating effect relationships are further examined for additional insights.

## 7.4 POST HOC ANALYSIS

### 7.4.1 Further Check for Multicollinearity and Suppression

Two export EOBs influenced export performance in a direction contrary to *a priori* hypotheses, and of these two behaviours one failed to receive strong statistical support. Specifically, export product innovation intensity was associated with export performance only at 10 per cent significant level and in opposite direction. Although autonomy influenced export performance strongly at five per cent

significant level, however, the direction of the influence was negative. Theory suggests that the specific export EOBs are distinguishable from each other, despite early research that finds them to be a unidimensional construct (Covin and Slevin 1989; Miller 1983; Morris and Paul 1987). Could it be the case that multicollinearity was still a problem despite researcher's efforts to minimize it?

Grewal, Cote, and Baumgartner (2004) state that signs of multicollinearity might include non-significant coefficients, "wrong" signs of the coefficients, and unstable parameter estimates. Standard error can also provide an indication of multicollinearity. The literature suggests that there are at least three major forces that can affect standard errors: (1) scale of the variables (not relevant in this study); (2) collinearity or redundancy; and (3)  $R^2$  or overall strength of the model. It is also contended that if a predictor is added to a model and the regression coefficients change substantially and standard errors inflate, then there is a problem of multicollinearity. However, if the regression coefficients change but the standard errors do not inflate, then there is a suppression issue (Tzelgov and Henik 1991; Cortina 1993). Suppression (or a suppressor variable) is defined as an independent variable that (1) has no correlation with the dependent variable, but (2) is correlated with the other independent variable (s), and (3) increases the variance explained (or  $R^2$ ) in the dependent variable (Friedman and Wall 2005).

In this research, it could be argued that high correlations among the specific export EOB dimensions raised multicollinearity concern in the independent effect structural model, which could therefore limit the researcher's ability to interpret the results of the analysis. For example, the intercorrelations between export competitive aggressiveness and the other five EOBs were all above 0.50 (see table 6.14 in chapter six). It could be argued that this was close to the level that quantitatively defines multicollinearity. This is despite the view that "correlations in the 0.70 and 0.80 range are fairly common, and they will probably be distinct from one" (Grewal, Cote, and Baumgartner 2004, p.528).

However, where multicollinearity still remains a concern, the literature provides several methods for assessing the degree of multicollinearity including Fornell and Larcker's (1981) method of comparing AVEs with shared variances, examination of bivariate correlations, and variance inflation factor (VIF) (Grewal, Cote, and

Baumgartner 2004; Tzelgov and Henik 1991). Regarding Fornell and Larcker's approach, it was earlier shown in table 6.14 (chapter six) that discriminant validity was supported for each of the six EOB factors (i.e. the smallest AVE was 0.572 and the largest shared variance was 0.429).

In order to be certain that multicollinearity was not a major concern in the independent effect model, Neter, Wasserman, and Kutner (1985) approach for assessing multicollinearity, although not necessarily superior to Fornell and Larcker's approach, was used to further analyse the variables. VIF of less than 10 indicates multicollinearity is not a major concern (Neter, Wasserman, and Kutner 1985). In the case of this study, the VIF and the tolerance level (TOL) for the specific EOBs were calculated and reported in table 7.18. It is clear from table 7.18 that all predictors have VIF values that were significantly smaller than the 10 cut-off point. Focusing on the two "problem" variables, the VIF for export product innovation intensity was 1.626 and its TOL was 0.615. With respect to export autonomy, a VIF of 1.372 and a TOL of 0.729 was achieved. Given all these statistics, this study concluded that multicollinearity did not pose any serious threats to the study results already reported.

Table 7.18: Collinearity statistics for the Association of Specific Export EOBs with Export Performance

<b>Constructs</b>	<b>Collinearity Statistics</b>	
	<b>Tolerance</b>	<b>VIF</b>
Export product innovation intensity	0.615	1.626
Export product innovation novelty	0.632	1.581
Export risk-taking	0.649	1.542
Export proactiveness	0.433	2.309
Export competitive aggressiveness	0.580	1.723
Export autonomy	0.729	1.372
Dependent Variable: Export performance		

To address the potential influence of suppression in the study results, the correlation between competitive aggressiveness and other EOBs was further examined in line with Friedman and Wall (2005) and Tzelgov and Hanik (1991). This is because suppression is frequent under conditions of high correlation between predictors (Tzelgov and Hanik 1991). Tzelgov and Hanik (1991, p.535) discuss the implications of the existence of suppressor situations on the standard

error and stability of regression coefficients, and argue that “high intercorrelation between the predictors will usually result in an increase of the standard error of estimate for the  $\beta$  coefficients”, making *causal* relationships less stable. However, a further inspection for the predictor variables with high correlation revealed that standard error estimates of the study’s structural parameter coefficients were not too high, indicating that the results did not suffer from substantial suppression situations. Although suppression does not seem to influence this study’s results in any substantial way, however, if there were to be major suppression situation at all, Tzelgov and Hanik (1991, p.535) argue that “the instability of  $\beta$  coefficients is related to the correlation between the predictors and not specific to suppressor situations”. Consequently, this study is confident in the stability of the study results.

## **7.4.2 Additional Insights on the Moderating Effect Results**

The study has reported on several significant moderating effect relationships. Specifically, it was shown that EMO moderates the relationship between overall export EOB and export performance as well as the association of innovation intensity, proactiveness and autonomy with export performance. Additionally, the study revealed that ECD moderated the link between innovation intensity, innovation novelty, risk-taking and competitive aggressiveness, and export performance. In order to develop additional insights on these interactive relationships, partial derivative on regression equations of export performance was performed drawing insights from previous studies (Cadogan, Cui and Li 2003; Greenley 1995; Turrisi and Wan 1990). By using mean-centred variables and in taking the partial derivatives of the regression equations (Aiken and West 1991), it was possible to generate the slope of the export performance on the moderator variable changes for every one unit change in these variables (i.e. the moderators).

### **7.4.2.1 Export Market Orientation Interactive Terms**

Equations 7.3 to 7.10 correspond to the moderating effects of the EMO variable on the association between export performance and overall export EOB and three of EOB’s dimensions. In the paragraphs that follow, this study attempts to further

explore the inflexion points at which EMO's interactive effects become more or less positive or negative.

Equation 3 specifies the regression equation involving EMO interaction term on the effect of export EOB on export performance. Equation 7.4 provides information on the partial derivative of export performance on export EOB.

**Equation 7.3:** Regression Equation involving EMO and EOB Interaction

$$Y = \alpha + \beta_0 \text{EOB} + \beta_1 \text{EMO} + \beta_2 (\text{EOB} * \text{EMO}) + \varepsilon$$

Where:

$\alpha$  = Constant

Y = Export performance

EOB = Export entrepreneurial orientation

EMO = Export market orientation

EOB\*EMO = EMO interaction terms

$\varepsilon$  = Random error terms

**Equation 7.4:** Partial Derivative of Export Performance on Export EOB

$$\frac{\partial [\text{Export Performance}]}{\partial [\text{EOB}]} = \beta_0 + \beta_1 (\text{EMO}) + \beta_2 (\text{EMO})$$

Where:

$\beta_0$  = unstandardised regression coefficient for EOB = 0.577

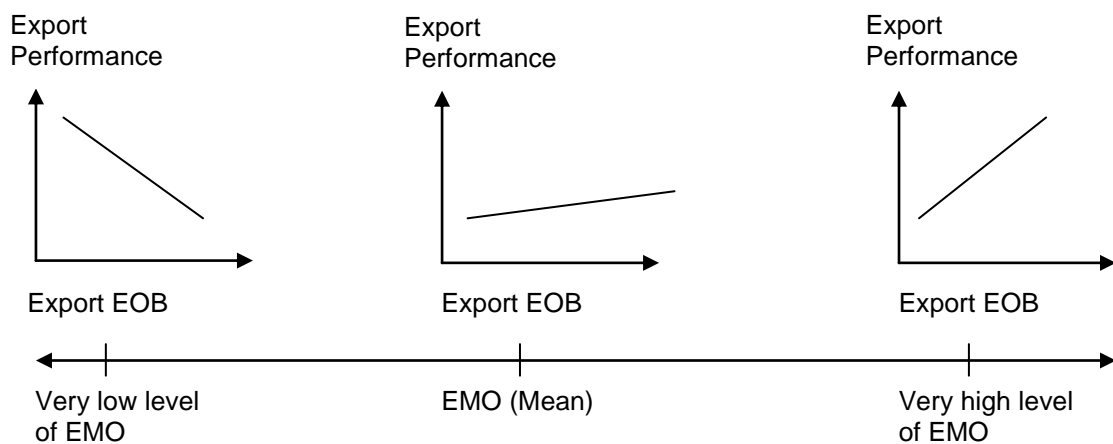
$\beta_1$  = unstandardised regression coefficient for EMO = 0.482

$\beta_2$  = unstandardised regression coefficient for EOB\*EMO = 0.139

By taking the partial derivative of equation 7.3 in equation 7.4, it was possible to compute the slope of export performance on EOB for any value of EMO. At the inflexion point Equation 7.4 was computed to be equal to zero, that is at the point where EOB has zero effect on export performance. A detailed inspection of EMO shows that for every one unit change in this variable the slope of the export performance variable changes at the point of inflexion. Specifically, the point of inflexion occurred at a mean-centred EMO value of -0.929. Consequently, the actual EMO point of inflexion was 4.421 (i.e. -0.929 plus the mean value of EMO =

5.350). Given that EMO was a continuous variable, it was then possible to probe changes in the inflexion point of EMO by using one standard deviation above and below the EMO mean score (Aiken and West 1991). From Equation 7.4, this study showed that at one standard deviation above the EMO inflexion point the slope of export performance on export EOB became steeper (i.e. more positive) but the slope became negative at one standard deviation below the inflexion point. Thus, the results revealed a complex set of relationship between overall export EOB and export performance at different levels of EMO. Since the EMO variable was measured on a seven-point scale, it can be said that at very low level of EMO (i.e. very little export intelligence gathering, sharing and responsiveness) EOB leads to lower level of export performance. However, at moderate to high levels of EMO, overall export EOB leads to high level of export performance. Indeed, the slope becomes steeper at very high level of EMO. Thus, this post hoc finding presented in figure 7.8 further supports hypothesis 2 of the study, which argues that at high level of EMO, the effect of overall export EOB on export performance becomes stronger and more positive.

Figure 7.8: Effect of Interaction between Overall EOB and EMO on Export Performance



EMO also moderated the relationship between product innovation intensity, proactiveness and autonomy, and export performance at different levels of significance.



First, focusing on the moderating effect of EMO on the relationship between product innovation intensity and export performance, as earlier reported in table 7.14, product innovation intensity predicts export performance negatively but not significantly (t-value = -0.742). On the contrary, EMO predicts export performance positively and significantly (t-value = 4.802;  $p < 0.01$ ). The EMO interaction term also returned a positive and significant results (t-value = 1.741). Accordingly, a partial derivative analysis of the regression for export performance was computed in order to gain additional insight. Thus, the regression equation of export performance on export product innovation intensity for any value of EMO is represented by Equation 7.5.

**Equation 7.5:** Regression Equation involving EMO and Product Innovation Intensity Interaction

$$Y = \alpha + \beta_0 \text{INT} + \beta_1 \text{EMO} + \beta_2 (\text{INT} * \text{EMO}) + \varepsilon$$

Where:

$\alpha$  = Constant

Y = Export performance

INT = Product Innovation Intensity

EMO = Export market orientation

INT\*EMO = EMO interaction terms

$\varepsilon$  = Random error terms

By taking the partial derivative of Equation 7.5, the slope of export performance on product innovation intensity for any value of EMO was determined. The partial derivative of Equation 7.5 is presented in Equation 7.6.

**Equation 7.6:** Partial Derivative of Export Performance on Product Innovation Intensity

$$\frac{\partial [\text{Export Performance}]}{\partial [\text{INT}]} = \beta_0 + \beta_1 (\text{EMO}) + \beta_2 (\text{EMO})$$

Where:

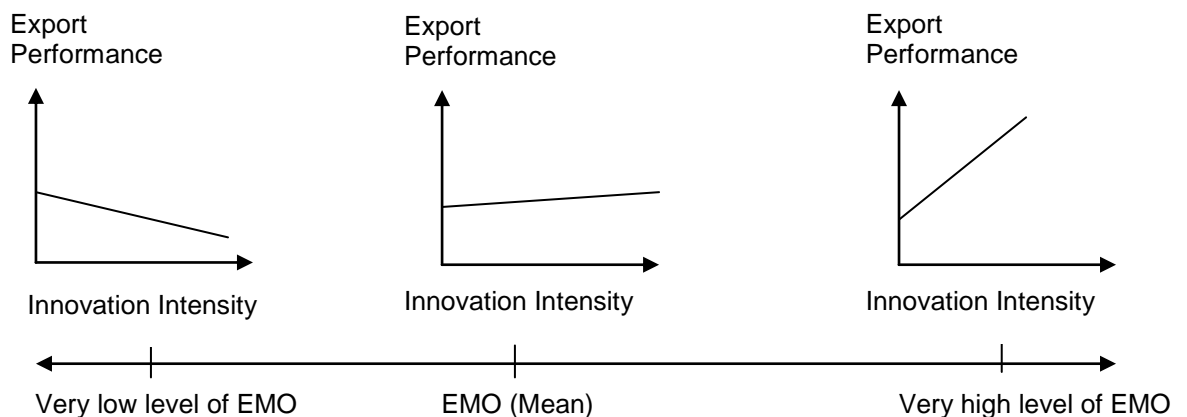
$\beta_0$  = unstandardised regression coefficient for INT = -0.086

$\beta_1$  = unstandardised regression coefficient for EMO = 0.467

$\beta_2$  = unstandardised regression coefficient for INT\*EMO = 0.113

The point of inflexion for EMO (i.e. the point where product innovation intensity has zero effect on export performance) is at 0.148 for the mean-centred value of EMO or 5.498 for the actual value of EMO. To compute the inflexion point, Equation 7.6 was set to zero. However, by setting Equation 7.6 to one standard deviation of EMO (i.e. 0.783) above 5.498, the slope of export performance on product innovation intensity became steeper and more positive at an inflexion point of 1.498. However, at one standard deviation of EMO (i.e. -0.783) below 5.489, the slope of export performance became negative at an inflexion point of -1.202. This means that product innovation intensity has positive effect on export performance at EMO values above 5.498. The relationship becomes less positive at values below 5.498. Since the midpoint for the EMO scale is 4 (using 7-point Likert scale), this result suggests that the point of inflexion occurs substantially above the midpoint (i.e.  $1.498 + 5.350 = 6.848$ ). As such, it could be concluded that product innovation intensity has positive effect on export performance only at very high values of EMO, but weak to negative effect at low to moderate values of EMO. This different level of association is represented in figure 7.9.

Figure 7.9: Effect of Interaction between Product Innovation Intensity and EMO on Export Performance



From figure 7.9, it is evident that at very high level of EMO, product innovation intensity has very strong influence on export performance. However, the strength of the relationship becomes weaker and negative at very low levels of EMO indicating support for the hypothesised positive moderating effect of EMO on the relationship between product innovation intensity and export performance.

Secondly, with respect to the moderating effect of EMO on the relationship between proactive behaviour and export performance, as earlier reported in table 7.14, the main effect of proactive behaviour on export performance was positive but not significant (t-value = 1.067). However, EMO predicts export performance positively and significantly (t-value = 4.802;  $p < 0.01$ ), but EMO interaction term returned a positive and non-significant results (t-value = 1.291;  $p < .10$ ). To gain additional insight, a partial derivative analysis of the regression for export performance was computed in order to gain additional insight (see Equation 7.7). The regression equation of export performance on export proactive behaviour for any value of EMO is represented by Equation 7.7.

**Equation 7.7:** Regression Equation involving EMO and Proactive Behaviour Interaction

$$Y = \alpha + \beta_0 \text{PRO} + \beta_1 \text{EMO} + \beta_2 (\text{PRO} * \text{EMO}) + \varepsilon$$

Where:

$\alpha$  = Constant

Y = Export performance

PRO = Proactive Behaviour

EMO = Export market orientation

PRO\*EMO = EMO interaction terms

$\varepsilon$  = Random error terms

By taking the partial derivative of Equation 7.7, the slope of export performance on proactive behaviour for any value of EMO was determined. The partial derivative of Equation 7.7 is outlined in Equation 7.8.

**Equation 7.8:** Partial Derivative of Export Performance on Proactive Behaviour

$$\frac{\partial [\text{Export Performance}]}{\partial [\text{PRO}]} = \beta_0 + \beta_1 (\text{EMO}) + \beta_2 (\text{EMO})$$

Where:

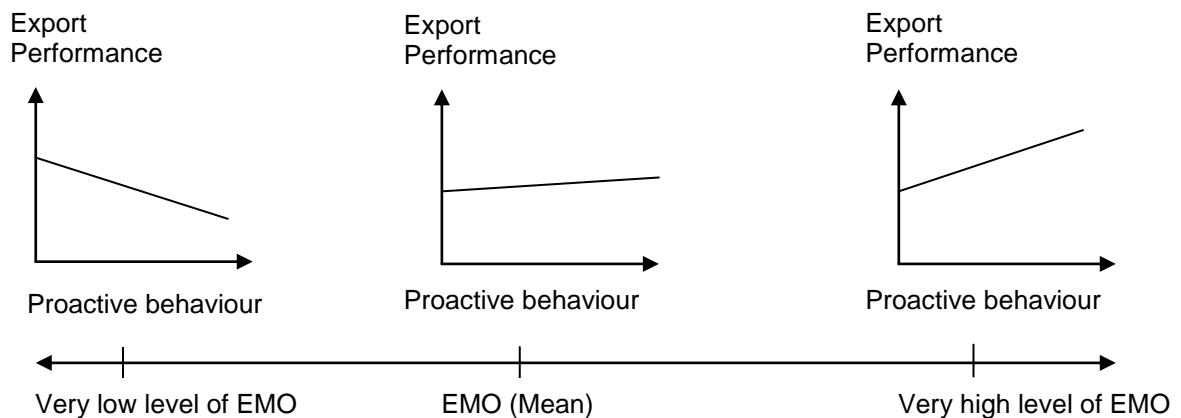
$\beta_0$  = unstandardised regression coefficient for PRO = 0.249

$\beta_1$  = unstandardised regression coefficient for EMO = 0.467

$\beta_2$  = unstandardised regression coefficient for PRO\*EMO = 0.176

The point of inflexion for EMO (i.e. the point where proactive behaviour has zero effect on export performance) is at 0.-0.353 for the mean-centred value of EMO or 4.997 for the actual value of EMO. However, when Equation 7.8 was subsequently set to one standard deviation of EMO (i.e. 0.783) above 4.997, the slope of export performance on proactiveness became steeper and more positive at an inflexion point of 0.865. Moreover, at one standard deviation of EMO (i.e. -0.783) below 4.997, the slope of export performance became negative at inflexion point of -1.57. This means that proactive behaviour has significant positive effect on export performance only at EMO values above 4.997. The relationship is not significant at EMO mean value. The relationship becomes negative at values below 4.997. Given that the midpoint for the EMO scale is 4 (using 7-point Likert scale), it could be argued that the point of inflexion occurs slightly above the midpoint. Accordingly, it is concluded that proactive behaviour has significant positive effect on export performance when EMO values are very high. On the contrary, the influence of proactive behaviour on export performance becomes negative at low values of EMO. This relationship is illustrated in figure 7.10.

Figure 7.10: Effect of Interaction between Proactive Behaviour and EMO on Export Performance



Finally, EMO negatively moderates the relationship between autonomous behaviour and export performance but not significantly, as earlier reported in table 7.14. This result is further explored to gain an additional insight. Accordingly, a partial derivative analysis of the regression for export performance was computed as can be seen in Equation 7.9.

**Equation 7.9:** Regression Equation involving EMO and Autonomous Behaviour Interaction

$$Y = \alpha + \beta_0 \text{AUT} + \beta_1 \text{EMO} + \beta_2 (\text{AUT} * \text{EMO}) + \varepsilon$$

Where:

$\alpha$  = Constant

Y = Export performance

AUT = Autonomous Behaviour

EMO = Export market orientation

AUT\*EMO = EMO interaction terms

$\varepsilon$  = Random error terms

By taking the partial derivative of Equation 7.9, the slope of export performance on autonomous behaviour for any value of EMO was derived. The partial derivative of Equation 7.9 is presented in Equation 7.10.

**Equation 7.10:** Partial Derivative of Export Performance on Autonomous Behaviour

$$\frac{\partial [\text{Export Performance}]}{\partial [\text{AUT}]} = \beta_0 + \beta_1 (\text{EMO}) + \beta_2 (\text{EMO})$$

Where:

$\beta_0$  = unstandardised regression coefficient for AUT = -0.045

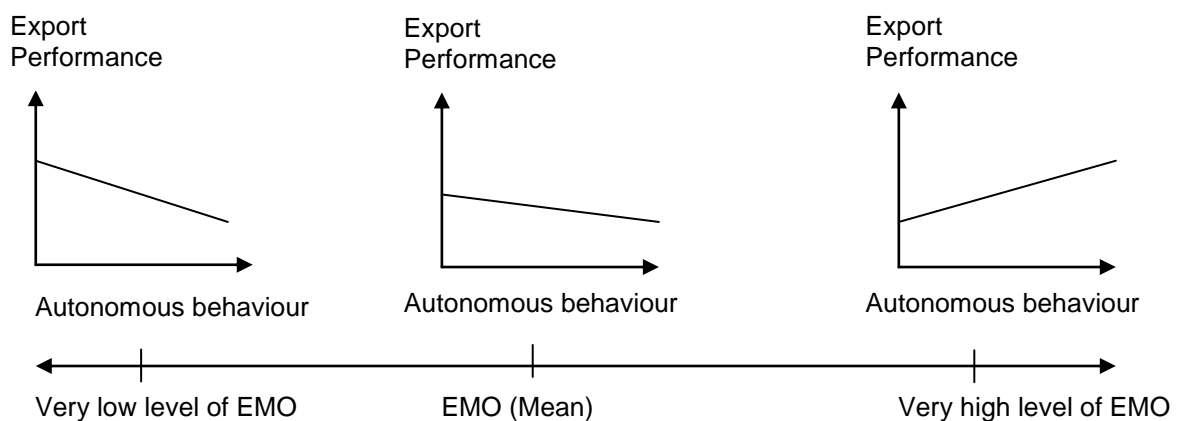
$\beta_1$  = unstandardised regression coefficient for EMO = 0.467

$\beta_2$  = unstandardised regression coefficient for AUT\*EMO = -0.068

The inflexion point for EMO, which is the point where autonomous behaviour has zero effect on export performance, is at 0.188 for the mean-centred value of EMO or 5.538 for the actual value of EMO. Subsequently, Equation 7.10 was set to one standard deviation above 5.538 and the slope of export performance on autonomous behaviour became steeper and more positive at an inflexion point of 2.150. However, at one standard deviation below 5.538, the slope of export performance became negative at an inflexion point of -1.774. This suggests that at EMO values above 5.538, autonomous behaviour has positive effect on export performance. However, at EMO values below 5.538, the relationship between autonomous behaviour and export performance becomes negative. Given that EMO was measured on a seven-point Likert scale with one indicating very low

level of EMO and seven corresponding to very high level of EMO, it could be concluded that autonomous behaviour has positive effect on export performance at very high values of EMO and negative effect at very low values of EMO. This relationship is represented in figure 7.11. It can be concluded from figure 7.11 that the negative association between autonomous behaviour and export performance seems to have occurred at very low level of EMO.

Figure 7.11: Effect of Interaction between Autonomy and EMO on Export Performance



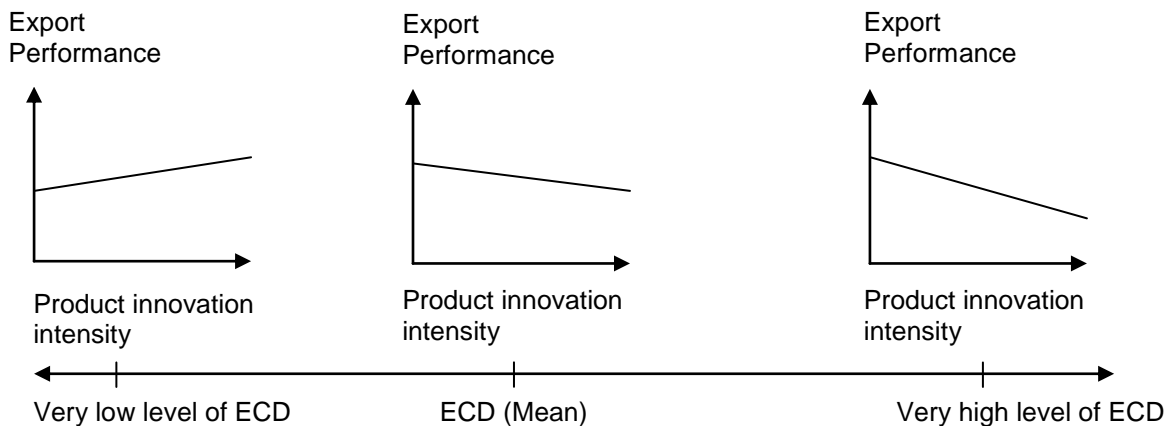
#### 7.4.2.2 Export Customer Dynamism Interactive Terms

Following the same partial derivative procedures in section 7.4.2.1 and in keeping with Aiken and West (1991), the moderating effect of ECD was further explored in the dataset for additional insights. In table 7.15, it was revealed that ECD moderated the relationship between product innovation intensity, product innovation novelty, risk-taking and competitive aggressiveness, and export performance. In this section, these moderating effect relationships are further explored by looking at the slope of export performance on the behaviours for one standard deviation above and below the mean value of ECD.

Firstly, the direct effect of product innovation intensity (t-value = -1.305;  $p < 0.10$ ) and of ECD (t-value = 2.297;  $p < 0.01$ ) on export performance were significant. Moreover, the interaction between product innovation intensity and ECD was significant but negative (t-value = -1.755;  $p < 0.05$ ). Simple slope results showed that product innovation intensity in low dynamic environments (one standard

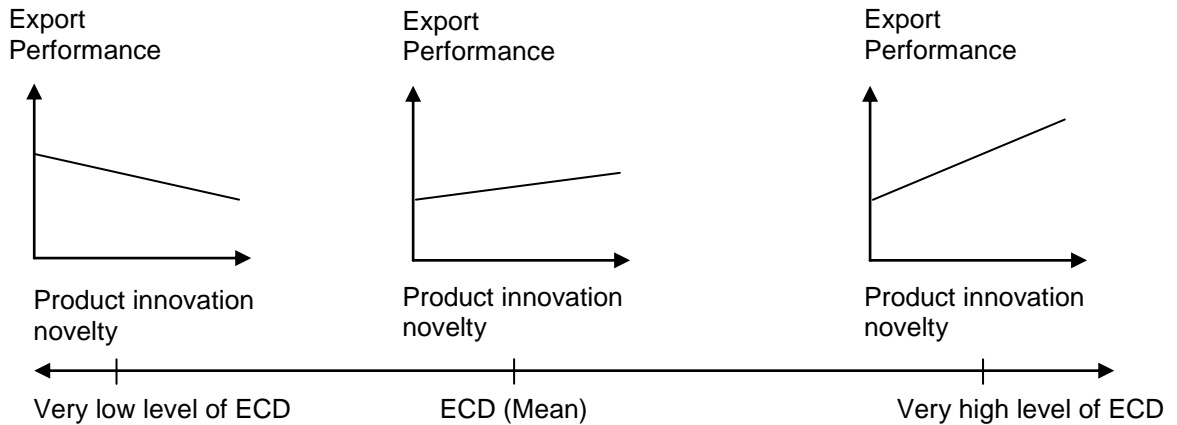
deviation below ECD mean value) was positively related to export performance, but in high dynamic environments (one standard deviation above ECD mean value) product innovation intensity has negative effect on export performance. Figure 7.12 provides a plot of the significant interaction.

Figure 7.12: Effect of Interaction between Product innovation Intensity and ECD on Export Performance



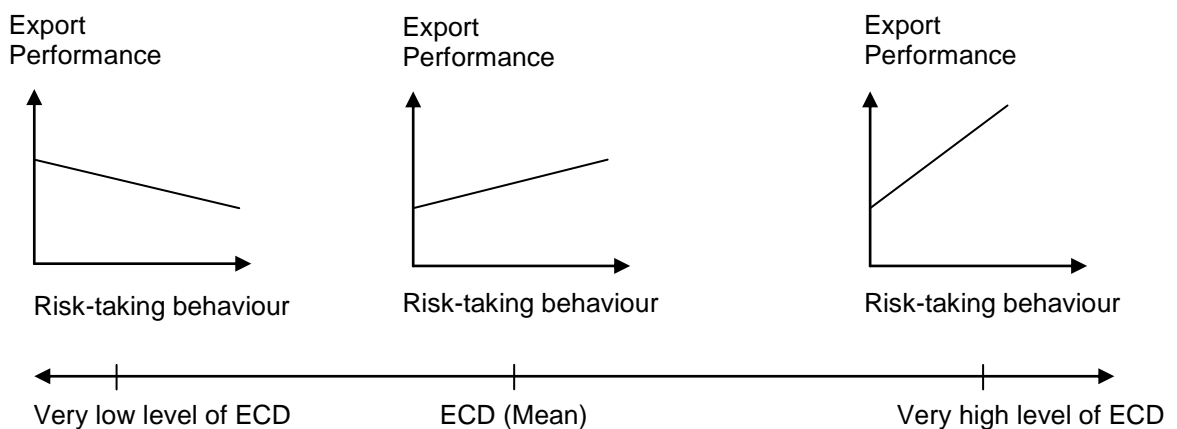
In the second place, results revealed that product innovation novelty has a significant direct effect on export performance ( $t$ -value = 4.323;  $p < 0.01$ ), and the interaction between product innovation novelty and ECD was significant and positive ( $t$ -value 1.790;  $p < 0.05$ ). Simple slope results indicated that in low customer dynamism environments (one standard deviation below the mean) product innovation novelty has negative effect on export performance, but in high customer dynamism environments (one standard deviation below the mean) product innovation novelty has positive influence on export performance. Figure 7.13 provides a plot to represent this significant interaction.

Figure 13: Effect of Interaction between Product innovation Novelty and ECD on Export Performance



Thirdly, the study showed that risk-taking has significant impact on export performance ( $t\text{-value} = 2.593$ ;  $p < 0.01$ ), and the interaction between risk-taking and ECD was significant and positive ( $t\text{-value} = 2.057$ ;  $p < 0.05$ ). Additionally, simple slope results revealed that risk-taking was negatively and significantly related to export performance when market dynamism was low (one standard deviation below the mean), but risk-taking influenced export performance positively and significantly when dynamism was high (one standard deviation above the mean). Figure 7.14 provides a plot of the significant interaction.

Figure 7.14: Effect of Interaction between Risk-taking Behaviour and ECD on Export Performance





### **7.4.3 Exploring Interactions between the Export EOBs**

Results of the disaggregate effect analysis show that product innovation intensity and autonomy have negative impacts on export performance, contrary to the study's hypotheses. However, it could be argued that, perhaps, product innovation intensity and autonomy might predict export performance indirectly (and positively) through their interactions with other EOBs component elements. Indeed, some entrepreneurship scholars suggest that some EOBs dimensions might interact among themselves to foster business success (e.g. Lumpkin and Dess 1996; Kreiser, Marino and Weaver 2002; Hughes and Morgan 2007). Specifically, Lumpkin and Dess (1996, p. 150) believe that although "all five dimensions are central to understanding the entrepreneurial process, they may occur in different combinations, depending on the type of entrepreneurial opportunity a firm pursues". These authors further recommend that researchers could explore different configurations of the EO dimensions and show how these different configurations help to better explain firm performance.

Accordingly, and in relation to issues that the study's analysis of the disaggregate effects raises, two arguments could be made. First, regarding the impact of product innovation intensity on export performance, it could be argued, for example, that innovation intensity will have stronger (and more positive) relationship with export performance if those innovations are also novel. In other words, firms that innovate intensively but also ensure that their innovations are radically different from their own existing innovations and competitors' offerings should be more successful than firms that pursue regular innovations that are more of the same. Second, with respect to the relationship between autonomy and export performance, it could be argued that autonomy's impact on export success may be indirect, for instance, via interactions with other EOB components. In addition, a case can also be made that autonomy may act to shape the effectiveness of other EOB components' impact on performance. For example, autonomy might not be ideal behaviour when firms are developing new products and when they are taking lots of risks. Firms need greater consensus and centralised planning (i.e. some top management direction) to ensure that new product activities and the risks that export managers are taking are affordable to the firm. Nonetheless, an argument can be made that autonomy is good for export

performance when firms are trying to be proactive (i.e. being fast, taking new initiatives, and being first to develop new markets ahead of competitors) and competitively aggressive (i.e. encouraging independent activities that can help to defend customer loyalty and market share).

To analyse the interactions among the individual EOBs, single indicants for all six EOBs were created. This was to ensure that sample size to number of parameter ratio was not violated. Subsequently, 15 separate interaction terms were generated involving multiplication of pairs of the EOB dimensions. In keeping with Aiken and West (1991), the multiplicative terms were subsequently mean-centred. Results of the SEM analyses are presented in table 7.19. The results provide interesting insights into the export performance consequences of the interaction among the EOB dimensions.

Specifically, the product innovation intensity and product innovation novelty interaction term in the model returned a significant positive relationship with export performance (t-value = 2.014;  $p < 0.05$ ). Accordingly, it can be said that innovation intensity has a stronger relationship with export performance when those innovations are also novel. A simple slope results indicated that at low levels of innovation novelty (i.e. one standard deviation below the mean) product innovation intensity was negatively related to export performance, however, at high levels of novelty (one standard deviation above the mean) innovation intensity was strongly (and more positively) related to export performance. It can then be argued that these findings are in line with Baker and Sinkula's (2009, p.449) suggestion that "*routine innovation, that is, brand and line extensions, particularly in response to competitor actions, occurs in most firms... [however, entrepreneurial] inspired innovation is more than adaptation or reaction to market trends*". Hence, firms can increase the effectiveness of product innovation intensity through its interaction with product innovation novelty.

Regarding the relationship between autonomy and export performance, results of the post hoc analysis revealed that proactiveness and autonomy interaction term (t-value = 2.226;  $p < 0.05$ ) and competitive aggressiveness and autonomy interaction term (t-value = 1.808;  $p < 0.05$ ) were positively associated with export performance. The two significant results involving autonomy can be explained in two ways. Firstly, autonomy allows quick response to competitive actions and

rapid exploitation of market opportunities, and proactiveness entails forward-looking behaviour that enables firms to detect emerging market opportunities ahead of competitors. Accordingly, autonomy becomes more valuable for export success through interaction with proactiveness in that when firms have the propensity to detect emerging and new opportunities ahead of competitors, they can then rapidly exploit such market opportunities to generate competitive advantage. Secondly, competitive aggressiveness encapsulates deliberate attempts by firms to directly attack competitors with the aim of overwhelming their market efforts and to erode their competitive strengths through continuous offensive tactics (Davidson 1987). On the other hand, autonomy enables managers to operate outside normal organisational constraints in addressing competitive actions (Lumpkin, Cogliser and Schneider 2009). Consequently, autonomous behaviour should be more effective when firms have high levels of competitive aggressiveness.

Inversely, the interaction terms for product innovation novelty and autonomy (t-value = -2.048;  $p < 0.05$ ), and risk-taking and autonomy (t-value = -2.704;  $p < 0.01$ ) were negatively associated with export performance. This means that high levels of autonomous behaviour are not ideal for export success when firms are undertaking innovations that are novel, and engaging in export operations that involve high risks. In both situations, greater level of management oversight and direction is required to ensure export success.

In sum, it can be concluded that some EOBs do not directly predict export success. Whilst product innovation intensity is indirectly related to export performance via interaction with innovation novelty, autonomy's association with performance is significant (and positive) only when channelled through interaction with proactiveness and competitive aggressiveness.

Table 7.19: Results of Post Hoc Structural Analysis of Interactions among the Specific EOBs

Variable	Model 1	Model 2
	Coefficients (t-values)	Coefficients (t-values)
Product innovation intensity	-0.117 (-1.49)	
Product innovation novelty	0.243 (3.03)	
Risk-taking	0.172 (2.37)	
proactiveness	0.348 (2.08)	
Competitive aggressiveness	0.189 (1.76)	
Autonomy	-0.138 (-1.74)	
<b>Product innovation intensity x product innovation novelty</b>		<b>0.136 (2.014)</b>
Product innovation intensity x risk-taking		0.028 (0.596)
Product innovation intensity x proactiveness		-0.086 (-0.1.204)
Product innovation intensity x competitive aggressiveness		0.039 (0.716)
Product innovation intensity x autonomy		0.054 (0.957)
Product innovation novelty x risk-taking		0.057 (0.853)
Product innovation novelty x proactiveness		0.253 (2.922)
Product innovation novelty x competitive aggressiveness		-0.032 (-0.598)
<b>Product innovation novelty x autonomy</b>		<b>-0.150 (-2.048)</b>
Risk-taking x proactiveness		0.078 (1.223)
Risk-taking x competitive aggressiveness		0.022 (0.428)
<b>Risk-taking x autonomy</b>		<b>-0.128 (-2.704)</b>
Proactiveness x competitive aggressiveness		-0.043 (-0.643)
<b>Proactiveness x autonomy</b>		<b>0.142 (2.226)</b>
<b>Competitive aggressiveness x autonomy</b>		<b>0.112 (1.808)</b>
<b>Model Fit Statistics:</b>		
$\chi^2$ (df)	13.035(12)	57.833 (42)
RMSEA	0.020	0.042
NNFI	0.994	0.945
CFI	0.998	0.992
GFI	.986	0.978
AGFI	0.949	0.840
R <sup>2</sup>	37%	48%

Note:

Statistically significant interaction terms are in bold

T-values in parenthesis

Model 1 = main effect model

Model 2 = interaction effect model

Critical t-values are 1.282, 1.645 and 2.325 for  $\alpha = 0.10$ ,  $\alpha = 0.05$  and  $\alpha = 0.01$  respectively (one-tailed test as all hypotheses are one-directional)

## 7.5 CHAPTER SUMMARY

This chapter focused on an analysis of a system of hypotheses that was developed in chapter three of the study. The conceptual framework that comprised the hypothesis was divided into two portions. The first portion focused on modelling export EOB's association with export performance at an aggregate level whereby a test was conducted to examine the extent to which firms' overall level of entrepreneurial behaviour drives export success. Still on the aggregate level model, two additional hypotheses were tested to examine the moderators of the export EOB – export performance relationship. The second part of the model focused more on the association of the individual export EOBs with export performance. The influence of each EOBs dimension on export performance was further explored by moderating each relationship by EMO and ECD. The proposed moderating effects were tested using Ping's (1995) multiplicative approach.

Results showed that export EOB at an aggregate level was positively related to export performance. This finding is in line with what has been reported in the firm-wide EO literature that has argued that a high level of entrepreneurial behaviour is beneficial to firm success (Lumpkin and Dess 1996; Covin and Slevin 1989; Wang 2008). It also lends support to the view in the export literature that export context-specific entrepreneurial behaviour might help exporters to be successful in export markets (e.g., Yeoh and Jeong 1995; Ibeh 2003). Results further revealed that market orientation enables entrepreneurial exporters to be more successful in export markets. Export customer dynamism was found not have significant influence on the association between export EOB and export performance.

Next, findings indicated that the individual EOBs influenced export performance differently, confirming the concern expressed by Lumpkin and Dess (1996) that the EOB dimensions might be related to performance differently depending on the entrepreneurial situations firms face. It was revealed in this study that export product innovation intensity and export autonomous behaviour were negatively related to export performance, confirming earlier findings in the area (e.g. Lerner, Brush and Hisrich 1997). A moderator effect analysis involving

EMO showed that the association of export product innovation intensity with export performance was more positive and stronger when EMO increased. This suggests then that EMO is required to ensure stronger positive association of regular product innovation with export success. However, in dynamic export environments, the relationship between product innovation intensity and export performance was negative indicating that intensive product innovations that are much of the same might not be ideal in dynamic consumer environments. On the other hand, being highly market-oriented does not help autonomous behaviour to become positive, rather it makes autonomy's influence on performance more negative. Finally, results of the study indicated that in dynamic consumer environments novel product innovation and risk-taking were significantly and positively related to export performance.

Post hoc analyses reveal interesting results on interactions among the export EOBs. For product innovation intensity to have maximum impact on export performance, firms need to develop innovation configuration involving interaction between innovation intensity and innovation novelty. Moreover, autonomy drives positive export performance outcome when it is allowed to interact with proactiveness and competitive aggressiveness. On the contrary, export performance is worse when autonomy is made to interact with product innovation novelty and risk-taking.

## **CHAPTER 8**

### **DISCUSSION AND CONCLUSION**

#### **8.1 INTRODUCTION**

The purpose of this chapter is to conclude the entire research by discussing major findings from the study, draw implications for theory development, and reflect on lessons for managers and export policy-making. Thus, this chapter is organised as follows. First, key findings from the study are discussed along with the review of the study objectives, contributions from the study and implications for theory. Second, an account is given on export managerial and policy lessons from the study. Third, limitations of the study are discussed and directions for future research agenda are provided. Finally, a conclusion is drawn from the study.

#### **8.2 DISCUSSIONS AND THEORETICAL IMPLICATIONS**

Predicting export performance remains an important issue at the heart of export research, export management and policy making. This is because of the primary role of exporting to the growth and survival of many firms. Despite the high risks often associated with exporting activity (Piercy, Kaleka and Katsikeas 1998) exporting still remains one of the most important business operations today for two main reasons. In terms of 'pull' reasons, overseas markets offer opportunities for growth as firms are able to expand their product range and market coverage simultaneously. For some firms, competing in export markets is important for profitability and survival. Regarding 'push' forces, continued saturation of domestic markets force firms to export their products and services overseas as export markets offer an opportunity to achieve critical mass.

Given these and other benefits that firms stand to gain (and the challenges that firms face) for their active engagement in exporting, scholars have exerted efforts into explaining the causes of export success (e.g., Leonidou, Katsikeas and Samiee 2002; Cavusgil and Zou 1994; Cadogan, Diamantopoulos and Siguaw 2002; Balabanis and Katsikea 2003). These causes can be internal and external to the exporting firm. Among the internal factors studied are export marketing strategy, firm characteristics, capabilities and orientations. In terms of the external forces, the degree of dynamism, turbulence and competitive intensity of export

market environments and other macro politico-legal, economic, socio-cultural and technological factors have also been studied. Focusing on the internal forces that influence export success, firms' orientation towards export markets has been one important variable that has captured the attention of researchers. Export entrepreneurship is one of these orientations (Yeoh and Jeong 1995; Ibeh 2003). This research is a novel attempt to introduce an export context-specific EOB to the study of export performance antecedents.

Significantly, this study has sought to integrate several bodies of literature, including firm-wide entrepreneurship, export entrepreneurship, export market orientation, organisational behaviour, international business and strategic management, to explain the association between export entrepreneurial posture and export success. The theoretical relationship between firm entrepreneurial posture and business success has largely been underpinned by the resource-based theory of the firm (Gatignon and Xuereb 1997; Knight and Kim 2009; Lau et al. 2008). To the best knowledge of the researcher, this is the first study that explicitly draws on the resource-based theory to examine the association between export EOB (and its components) and export performance. Specifically, insights were gained regarding the positional advantage that exporting firms can achieve from their possession of entrepreneurial behaviour. The positional advantage that is gained as a result of the possession of export EOB (and its dimensions) is sustainable because social cognition theory of entrepreneurship holds that entrepreneurial behaviour is a product of complex social and cultural processes (Busenitz and Barney 1997). The development of such behaviours demands extra efforts from firms in terms of decisions to implement innovative, risk-taking, proactive, competitively aggressive and autonomous behaviours in export operations.

In addition, this study also adds to the contingency view within the entrepreneurship and export marketing research (e.g. Yeoh and Jeong 1995; Lumpkin and Dess 1996) by examining key contingencies in the export EOBs – export performance network. The two contingencies studied in this research (i.e. export market orientation and export customer dynamism) foreground the importance of export customer centrality in entrepreneurial efforts and how this enables firms to target their overall entrepreneurship level to specific export customer needs and preferences to ensure better performance. By also



examining the contingency influences of these two variables in the association between specific EOBs and export performance, this study also sheds light on the situations where the individual EOB dimensions may become more valuable for exporters and the situations where their implementation may be harmful for export success. The following sections highlight key findings and implications from the study.

### **8.2.1 The Association of Aggregate Export EOB with Export Performance**

Within the broader management literature, and the more narrowly defined field of exporting research, entrepreneurial behaviour is recognised as being a potential determinant of business success (Lumpkin and Dess 1996). Focusing on a narrower field of export research, a few studies have reported on the association between firm's entrepreneurship level and export success (Robertson and Chetty 2000; Balabanis and Katsikea 2003; Yeoh and Jeong 1995). However, a major problem with prior research into export context EO is the practice of relying on a broader firm-wide EO to explain a narrowly defined export success. Given that firms operating at an export level are exposed to several environmental and managerial challenges often not apparent to non-export contexts, it makes sense to argue that the level of entrepreneurship at the broader organisational level might not be the same as in the export functional level. This study focuses on predicting export success using export context specific EOBs. Export EOBs are argued to be firm resources that might enable exporting organisations to gain positional advantage in their export markets, and eventually, deliver export success. Therefore, this study ensures that only export functional entrepreneurial behaviour (and its components) is linked to export success.

Results of this study are summarised in figure 8.1. It can be seen that an aggregate export entrepreneurship level is positively related to export performance. This research contributes to the export marketing literature by showing that an export functional level EOB is a key ingredient for export success. Thus, this study provides valuable insights into the determinants of export performance. In particular, prior research findings suggest that firm-wide EOB is a weak (or modest at best) direct predictor of export performance. Findings from this study suggest otherwise: an overall export EOB is a strong determinant of

export performance. This finding highlights the need to further explore the association between entrepreneurial behaviour and business success.

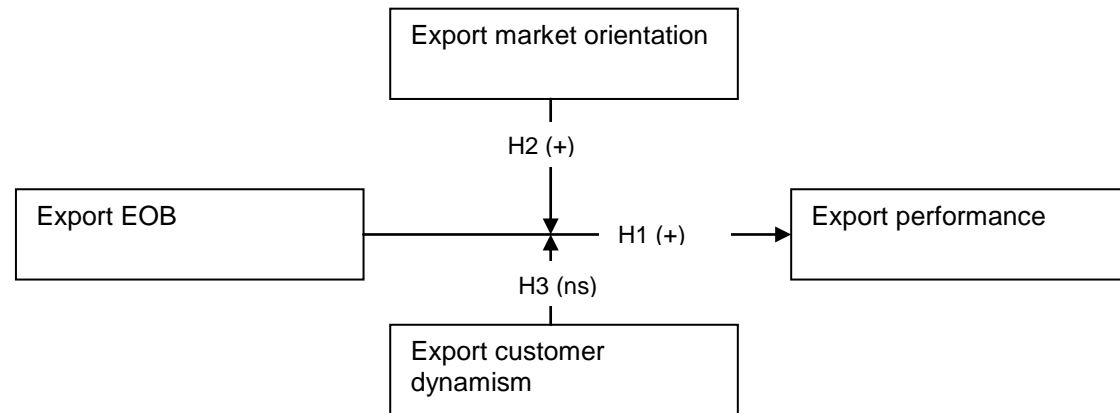
Is the level of analysis a major player as this study seems to suggest? This is an important question because many firm-wide EO studies suggest that firm-wide aggregate EOB is a strong predictor of firm success (e.g., Covin and Slevin 1989; Pearce II, Fritz and Davis 2010; Wang 2008), and this study is also suggesting that export-specific EOB is a strong predictor of export success. The results of this study when considered within a broader spectrum of entrepreneurship inquiry could be taken to mean that those studies that find negative and weak associations between firm-wide EOB and export performance may have suffered from level of analysis problems. Perhaps, what researchers need to do is to ensure that proper account is taken of the different levels of EOB's conceptualisation when linking the construct to its criterion variable. In other words, to better predict export performance researchers need to conceptualise firm's overall entrepreneurial posture at an export functional level so as to ensure that there is a uniform inter-firm comparison of their results.

### **8.2.2 Moderators of the Aggregate Export EOB – Export Performance Association**

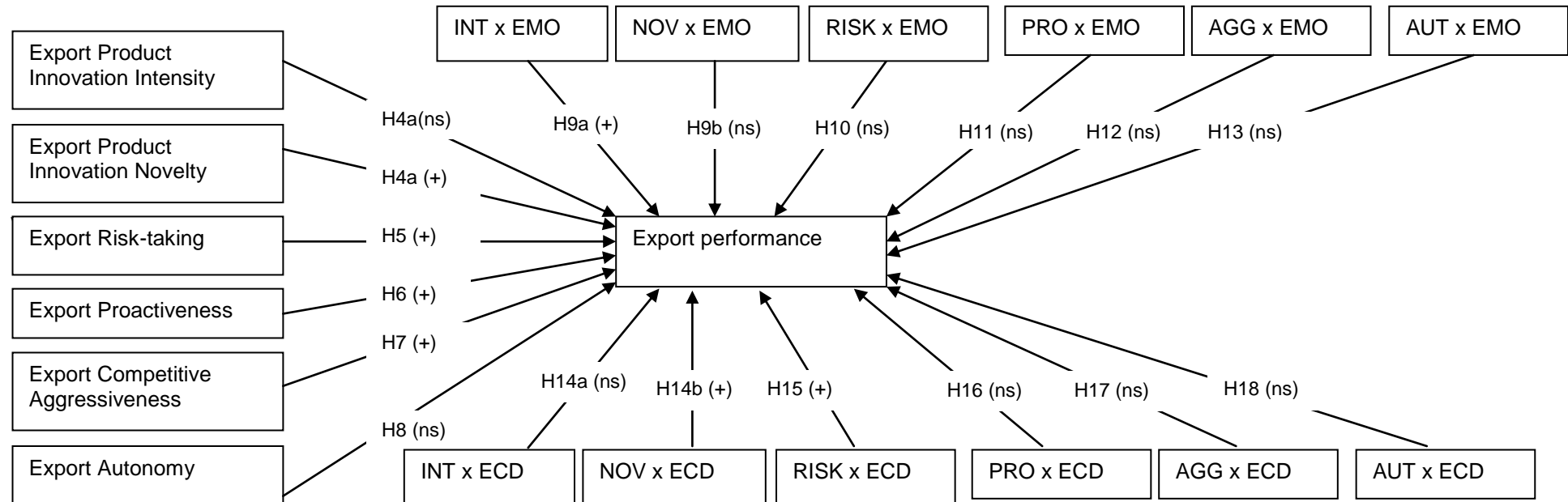
This study shed light on the view that exporting organisations that create 'good' alignments of their entrepreneurial behaviour with other strategic orientations and attributes of the external environment should perform better than their counterparts that do not create such alignments (Yeoh and Jeong 1995). This contingency thinking argues that knowledge of organisational behaviours would be advanced if researchers focus on identifying commonalities among distinct sets of organisational behaviours and the external environment (Miller 1996; Lumpkin and Dess 1996). Of particular interest here are the moderating effects of EMO and ECD.

Figure 8.1: Summary of Findings from the Study

**Aggregate Effect Model**



**Disaggregate Effects Model**



**Note:** INT = Export Product Innovation Intensity; NOV = Export Product Innovation Novelty; RISK = Export Risk-Taking; Pro = Export Proactiveness; AGG = Export Competitive Aggressiveness; AUT = Export Autonomy; EMO = Export Market Orientation; NS = Not Supported; ECD = Export Customer Dynamism

Focusing on EMO, Miles and Arnold (1991, p.60) argued that “as financial performance expectations continue to increase, management may be forced by environmental dynamics to become more innovative, proactive and risk accepting, while retaining marketing orientation”. This means that an interaction between export EOB and EMO might enable firms to perform better. Indeed, in domestic-focused studies it has been shown that when entrepreneurial behaviour and market-oriented behaviour are modelled simultaneously their individual effects on performance decreases (Baker and Sinkula 2009; Matsuno, Mentzer and Ozsomer 2002). Consequently, Baker and Sinkula (2009) conclude that a synergistic effect of the two constructs should be explored.

This study is the first attempt to explore the moderating effect of EMO on the export EOB – export performance linkage. The rationale for this moderator relationship is that EMO enables firms to stay closer to their target markets and as such market-oriented exporters are more knowledgeable about the needs and preferences of their export customers. Accordingly, EMO should enable entrepreneurial-oriented exporters to better target export customers’ needs and preferences with their entrepreneurial activities. Consequently, it was hypothesised that a high level of EMO would strengthen (more positively) the association between export EOB and export performance. Findings from this study confirmed this hypothesis. In particular, EMO positively moderates the relationship between aggregate export EOB and export performance. The implication here is that the commonly examined direct association between entrepreneurial posture and export performance might be overly simplistic. As the results of this study show, exporting organisations implement multiple orientations, and other strategic orientations (as such EMO) influence how export EOB helps firms to achieve greater success in export markets. Thus, by modelling EMO as a moderator of the link between EOB and export performance, this study sheds light on a key organisational contingency that shapes export EOB’s influence on export performance.

Findings from the study show that export customer dynamism seems to play no significant role in moderating the impact of aggregate export EOB on export performance. This result is another indication of the relationship problem that currently besets the EO literature that needs further investigation. The study’s

results are contrary to what has been reported in the firm-wide EO literature. For example, Covin and Slevin (1991) states that entrepreneurial firms are more successful when they operate in more dynamic customer environments. It can be argued that, perhaps, because the export environment in general is turbulent and highly competitively intensive; hence, firms do not derive any additional benefits (nor suffer any losses) from their customers being highly dynamic. Put differently, firms already expect their overseas customers to be more dynamic customers (relative to their domestic customers) as overseas customers are exposed to a greater range of competitive products and services. Thus, the expectation of dynamic customers in export markets is a basic requirement in export operation and therefore brings no added economic reward.

It could also be argued that, perhaps, customer dynamism is more relevant for the individual effects of the export EOB dimensions than for the joint effect of the EOBs. This is examined shortly and potentially offers further insight regarding the conflicting findings being reported.

### **8.2.3 Relationships between Specific Export EOBs and Export Performance**

This study has also sought to explore the influence of specific export EOBs on export performance. A summary of the exporting literature on export context EO reveals that only limited research has been done on the association between the specific export EOBs and export performance. Consequently, this study extends knowledge on export performance antecedents by predicting export performance with the specific export EOBs. In this way, this study addresses a central caveat in Lumpkin and Dess's (1996) work, that the dimensions of EO might predict performance differently as their implementation might bring different degrees of opportunities and challenges to organisations. Some recent firm-wide EO studies have actually shown that some of the EO dimensions are detrimental to performance while others are of no value to business success (e.g. Hughes and Morgan 2007; Morgan and Strong 2003; Frishammar and Horte 2007). Thus, the generally accepted norm that aggregate EO universally drives firm performance needed to be explored further (Hughes and Morgan 2007). Indeed, a recent study showed that "adopting a gestalt approach to the study of EO potentially masks weaknesses in its real value to firms. Moreover, firms need not necessarily pursue

all EO dimensions and cannot expect each dimension to be necessarily associated with improved performance” (Hughes and Morgan 2007, p.656). This study is a renewed effort to examine the disaggregate effect issue in the context of export operations.

As the results of this study show, not all the individual export EOBs positively drive export performance. Some of the dimensions including export product innovation novelty, risk-taking, proactiveness and competitive aggressiveness provide positive value to export success. However, product innovation intensity and autonomy work against export success. In many ways, these contradictory observations complement previous results in a firm-wide EO research that show a non-beneficial effect of some of the dimensions on business performance (e.g. Kreiser, Marino, and Weaver 2002; Hughes and Morgan 2007; Morgan and Strong 2003; Frishammar and Horte 2007).

In particular, Hughes and Morgan (2007) report that while innovativeness and proactiveness dimensions positively drive performance in domestic markets, risk-taking decreases performance improvement. According to these authors, competitive aggressiveness and autonomy do not have any value for domestic performance. Yet, Frishammar and Horte (2007) find that while innovativeness dimension drives performance positively, risk-taking and proactiveness dimensions do not have any significant relationship with performance in firms' domestic markets. Like these earlier studies, this study shows that an adoption of an aggregate approach to the study of export EOB can mask the fact that export performance improvements might be the product of only a few EOB dimensions and that “its remaining components are either of no value or even work against initiatives to improve [export] performance” (Hughes and Morgan 2007, p.656).

The negative association between export product innovation intensity and export performance is rather surprising given that several studies have pointed to the benefits of regular innovation to business success (Atuahene-Gima and Ko 2001; Miller and Friesen 1982). Nevertheless, this negative association can be explained in two important ways. First, it can be argued that the tendency of some exporting organisations to focus on introducing new products that might be new to their home markets but less new to overseas markets might explain this negative

association. Second, there is often the inclination of some firms to focus on regular line extensions and product adaptations as part of their innovation activities (Atuahene-Gima and Ko 2001; Narver, Slater and MacLachlan 2004), and this might lead to poor long-term performance outcomes (Christensen and Bower 1996). However, post hoc analysis indicates that product innovation intensity has a positive association with export performance through interaction with product innovation novelty. This significant interaction term could be taken to suggest that firms can increase the effectiveness of their product innovation intensity when their innovations are also novel.

Focusing on the link between export autonomous behaviour and export performance, prior export research and theory has little to offer on this relationship. However, the original hypothesis argues that there is a positive relationship between export autonomous behaviour and export performance. The negative association reported in this study suggests that encouraging independent and autonomous behaviour within the export functional unit might not lead directly to performance. The reason why firms encourage autonomous behaviour is that it helps export personnel to be more independent-minded and creative with respect to new product ideas and visions. Organisations with high levels of autonomous behaviour often have employees who are initiators and champions of breakthrough products (Burgelman 1983). Thus, autonomy is expected to allow for quick response to competitive actions and exploitation of market opportunities. However, it is hard to expect positive market share, sales growth and successful new market entry outcomes from this behaviour if export managers of creative products know little about the needs and preferences of the customers they intend to serve. Moreover, it could be argued that it would be hard for autonomous and maverick-like behaviours to generate major performance outcome without any form of top management control and direction (Jaworski and Kohli 1993). Indeed, post hoc analysis reveals that autonomous behaviour becomes more valuable for export success through interaction with proactive and competitive aggressive behaviours.

In sum, it can be concluded that the export EO – export performance relationship is more complex than normative theory suggests. The results of this research could also be taken to suggest that the benefit of firms' overall levels of export

entrepreneurship (i.e. aggregate EOB) is greater than the sum of its individual parts. This is because whereas export EOB has a strong aggregate effect on export performance, the performance impacts of some of EO's dimensions are non-significant. Thus, when exporters focus on being entrepreneurially-oriented overall is more valuable than when they pay attention to being either innovative, proactive, risk tolerant, competitively aggressive or autonomously oriented. This study has also addressed an important lapse in the export literature by showing that exporters needed to be selective with respect to which of the EO dimensions they manipulate to drive export success.

To explore the disaggregate effect model further the moderating effects of EMO and ECD on the relationship between the specific export EOBs and export performance are identified and examined.

#### **8.2.4 Moderators of the Relationship between Specific EOBs and Export performance**

Hypotheses 9 to 13 argue that the link between the specific export EOBs and export performance are moderated by the level of a firms' EMO. The study's results show support for one of these hypotheses. As can be seen from figure 8.1, hypotheses 9a was the only one supported. Thus, results of this study suggest that the negative association between product innovation intensity and export performance becomes more positive when EMO increases. This result lends support to the view that export market intelligence gathering, dissemination and responsiveness help to facilitate the impact of product innovation intensity on firm performance (Samiee, Walters, and Dubois 1993; Deshpande and Farley 2004). This result also endorses the notion that incrementally innovative products (such as line extensions, product upgrades and adaptations) are harder to sell because of the difficulty consumers might have in differentiating them from firms' other existing (and competitors') products (Augusto and Coelho 2009). Thus, for regular product adaptations and upgrades to generate strong returns in export markets they need to be supported with strong market intelligence activities (Knight and Kim 2009; Samiee, Walters, and Dubois 1993).

Another interesting result worth noting is the one significant association between export proactive behaviour and export performance (i.e. H11). Results showed



that at a 10 per cent level of significance the association between export proactiveness and export performance becomes stronger (and more positive) when EMO increases. Although not significant at 5 per cent significant level, this result can be taken as a cautious confirmation of the literature on proactive market orientation that argues for the need to lead customers rather than merely responds to their expressed needs (Narver, Slater and MacLachlan 2004). Scholars suggest that firm performance is improved when firms pursue market-oriented behaviour that has strong proactive elements (e.g. Atuahene-Gima, Slater and Olson 2005; Christensen and Bower 1996).

A more interesting finding from the study relates to hypothesis 13. This hypothesis proposes that the export autonomy – export performance relationship is moderated positively by EMO. Results showed that although the strength of the moderator effect was significant at 10 per cent level, however, the direction of the effect was negative. This is puzzling because a market-oriented behaviour is expected to help autonomous managers to be closer and more knowledgeable about their export markets, which should then help to enhance export success. This proposition is, however, refuted. Additionally, EMO does not seem to moderate the association of export product innovation novelty, risk-taking, and aggressive behaviours.

The above results have some implications for export theory development. The literature has long argued that firms should focus on entrepreneurial behaviours in their export operations to ensure export success (e.g. Yeoh and Jeong 1995; McDougall and Oviatt 2000; Robertson and Chetty 2000; Jantunen et al. 2005). However, as this study demonstrates, a wholesale adoption of export entrepreneurial behaviours might not, after all, be beneficial at all times, lending credence to the view held by Lumpkin and Dess (1996) and later supported by other scholars that the specific components may generate differential performance outcomes depending on other strategic orientations adopted by the firm. This study further establishes that firms need to be smart with respect to their investments in the individual entrepreneurial behaviours in export operations because the behaviours drive performance differently under different levels of market orientation. That is, there is a need to manipulate and fine-tune the individual EOBs to suit the requirements of other strategic orientations.

This research argues in hypotheses 14 to 18 that high levels of export customer dynamism positively moderate the impacts of the specific EOBs on export performance. With respect to export product innovation intensity and ECD interaction, mixed support was received. Specifically, although a significant relationship was identified, the direction of effect was contrary to what was hypothesised in H14a. Thus, in highly dynamic customer environments, product innovation intensity negatively affects export performance.

However, the results reveal that ECD positively moderates the impacts of product innovation novelty and risk-taking on export performance. Firstly, firms need new kind of products to be able to compete in export markets where consumers are evolving, and this is confirmed by the significant interaction between ECD and product innovation novelty. This means that firms need inventive new products to compete successfully in export markets. Secondly, the significant interaction between ECD and risk-taking supports the reasoning of this research that firms can earn large returns by taking risk in environments where consumer needs and preferences are changing as these environments provide opportunities that are new and underexploited by competitors.

Although only significant at 10 percent level, nevertheless, an argument can be made that ECD positively moderates the effect of competitive aggressiveness on export performance. Thus, where there is increased competition for customer loyalty, made possible by increasing changes in customer tastes and needs, firms need to be more competitively aggressive to be successful.

Although proactiveness might be most effective when the environment is in a state of flux, as argued in hypothesis 16, however, the interaction between ECD and proactiveness is insignificant. Similarly, one would expect that autonomy would be more critical in environments that are in state of fluctuation. However, the data produces a non-significant interaction between ECD and autonomy. These two non-significant interaction effects call for further research to determine the external environment conditions that are most conducive for proactive and autonomous behaviours to generate greater performance outcomes.

In post hoc analyses, the study reveals interesting results on interactions among the export EOBs. Firstly, further analysis of the data shows that for product innovation behaviour to have maximum impact on export performance, firms need to develop innovation capabilities that involve both innovation intensity and innovation novelty. This indicates that offering more innovative products on a regular basis in export markets is ideal for exporters to generate superior export performance.

Secondly, a further analysis of the link between autonomy and export performance revealed two interesting results that might help to explain the non-significant direct association between autonomy and export performance. On one hand, the results show that when the relationship between autonomy and export performance is moderated by proactiveness and competitive aggressiveness, the relationship becomes stronger and more positive. On the other hand, the link between autonomy and export performance becomes more negative when it is moderated by product innovation novelty and risk-taking. These results have two implications for theory development. Firstly, the results could be taken to mean that autonomy does not predict export performance directly, but indirectly through interactions with other dimensions. In the case of this study, four dimensions of EOB seem to moderate autonomy's association with export performance. Specifically, the relationship becomes stronger and more positive when it is moderated by proactiveness and competitive aggressiveness, suggesting that firms' efforts to improve performance are aided when their autonomous activities are combined with proactive behaviour with respect to market opportunities, and aggressiveness relative to competitive actions. The negative interactive effect of innovation novelty and risk-taking in the autonomy – performance relationship could be taken to mean that firms recognise the benefits of greater central planning and control in the pursuit of high risk and radically innovative product strategies. Interestingly, past research have reported non-significant or negative direct associations between autonomous behaviour and firm performance (e.g. Hughes and Morgan 2007; Lerner, Brush and Hisrich 1997). The implication of the results of the current study is that perhaps researchers need to explore the interactions among the EOBs in their hypothesis development.

### **8.3 METHODOLOGICAL IMPLICATIONS**

In addition to the theoretical implications of the study discussed above, methodologically, this study has introduced a novel approach to the study of entrepreneurial behaviours in exporting organisations. Unlike prior export context EO studies, throughout this study, respondents were continuously reminded to focus on the behaviours of their export functional units. This research practice has enabled this study to develop an export context-specific measures and structural models of export EOB. The measures that were developed and the structural relationships that were tested can be argued to apply specifically to exporting organisations behaviours. This is an important improvement on existing studies that tend to unknowingly (or knowingly) rely on firm-wide entrepreneurial attitudes to predict export performance.

Another methodological implication that can be drawn from the current research relates to how discriminant validity was tested. A close look at the literature revealed that discriminant validity assessment of the EOB construct and its components has been problematic. High profile EO studies such as Lumpkin and Dess (2001), Morgan and Strong (2003), Hughes and Morgan (2007), Covin, Green and Slevin (2006) and Pearce II, Fritz and Davis (2010) have not assessed discriminant validity of the EO construct using rigorous methods, such as Fornell and Larcker's (1981) discriminant validity test. For example, Pearce II, Fritz and Davis (2010) report inter-construct correlations as high as 0.84 (risk-taking and proactiveness), 0.75 (proactiveness and autonomy) and 0.73 (proactiveness and innovativeness) yet information on AVEs for the affected constructs were not reported. Similarly, Hughes and Morgan (2007) report inter-construct correlations among the EOB components that are significant at 0.01, yet no information is provided on how discriminant validity of the dimensions is achieved. In the case of Covin, Green and Slevin (2006), although they only identify modest correlations among their constructs, however, it is interesting to know that these authors fail to provide information on discriminant validity of the EO construct.

Given the above discriminant validity issues in EO research, it can be argued that the strength of the relationships involving EOB and its components could be overestimated, or a relationship may be supported when in fact there is no such relationship. This is critical because, "if discriminant validity is not established,

then conclusions made regarding relationships between constructs under investigation may be incorrect” (Farrell 2010, p.325). On the basis of this methodological lapse, this study is novel because discriminant validity was adequately supported for the export EOB construct and its components using one of the rigorous discriminant validity assessment methods (i.e. the Fornell and Larcker 1981 approach).

## **8.4 LESSONS FOR MANAGERS**

### **8.4.1 An Overview**

A theoretical model of the export EOB – export performance relationship has been developed and empirically tested in this study. Findings suggest that overall export EOB is a major driver of export success. The study further establishes that a high level of market-oriented behaviour in exporting organisations can help firms to derive stronger benefits from their entrepreneurial activities. At the specific level of the export EOB components, results suggest that the development of novel product innovations, high export risk-taking, and strong proactive and competitively aggressive behaviours can help exporting organisations to improve their performance in export markets. Furthermore, results show that a pursuit of regular new product innovation (i.e. largely incremental in nature) can produce poor performance in export markets unless such an effort is backed by strong export market-oriented activities. Findings from the study further suggest that an alignment of proactive behaviour with export market-oriented behaviour can help firms to improve performance in export markets. The study also reveals that ECD positively moderates the link between product innovation novelty and risk-taking, and export performance.

Overall, this study provides export managers with a comprehensive overview of export EOB, ways to measure its components, and how it can help to improve export success. In the subsequent sections, specific managerial implications from the study are discussed and useful recommendations are offered.

### **8.4.2 The Quality of Export EOB**

This study has established that, to a large extent, export EOB is desirable for achieving export success. In particular, this study believes that although a high

level of export product innovation, risk-taking, proactiveness, and competitive aggressiveness may enable an exporting firm to improve its performance, it is equally important to state that simply implementing export EOBs does not guarantee export success at all times. In other words, simply engaging in the export EOBs does not necessarily mean that firms will generate high performance outcomes. For example, choosing to develop incremental product innovation upgrades at a time when more radical and novel product innovation is required would not deliver the required benefits to an exporting firm (Zahra and Neubaum 1998). Additionally, a decision to invest in high risk export projects while in deed a moderate risk is required might lead to poor performance. In fact, it is possible that reasonable and calculated risk-taking that offers competitive advantage might be a better orientation to adopt.

In addition, an effort to pre-empt export market competitors in satisfying export customers' expressed needs while failing to anticipate export customers' latent needs might produce poor performance outcomes. In addition, as one export manager of a pharmaceutical company remarked in this study, "our overseas advertising has been modest and we focus more on our niche export markets because of the predatory activities of our major competitors" (personal interview, January, 2008). The above remark confirms McMillan and Day's (1987) view that although speed and stealth may be helpful in achieving competitive advantage; overly competitively aggressive behaviour in export markets can be counterproductive. What is required for competitive advantage in export markets as far as competitive aggressiveness is concerned is the tendency to be tactful in out-doing and out-maneuvring competitors' strengths and taking advantage of rivals' weaknesses.

#### **8.4.3 To be or not to be Entrepreneurially-Oriented**

Several studies have argued that entrepreneurial behaviour is a major driving force behind export success (Ibeh 2003). But, this study argues that context is critical. That is, some of the export EOBs may or may not be critical for export performance at all times. This study recommends that whilst it would be beneficial for an exporter in dynamic and changing customer environments to emphasise a high level of product innovation novelty, risk-taking and competitive aggressiveness, it is also noticeable from this study that an overly dynamic export

market can erode any benefits that accrue from intensive product innovation development, when these are similar to competitors' offerings. Against this background, although some previous studies have recommended a high level of entrepreneurial activity in dynamic market environments (e.g. Wiklund and Shepherd 2005; Balabanis and Katsikea 2003), this research recommends that cost intensive product development might not be justified if a firm's new products cannot be differentiated from competing products by consumers. Thus, in dynamic customer environments, exporters need to exercise caution in the way they manipulate the different EO dimensions to achieve export success.

In addition, a high level of export market-oriented behaviour is required to support entrepreneurial efforts to generate superior export performance. However, for exporting firms with a low level of export market-oriented behaviour, this study believes that it would be better in terms of an export performance outcome if they de-emphasize some aspects of export EOB. For example, this study finds no evidence to support the notion that export market-oriented behaviour will strengthen the influence of risk-taking, competitively aggressive and autonomous behaviours on export performance, as previous research suggests (e.g. Matsuno, Mentzer and Ozsomer 2002). Thus, careful matching of the EOBs with different degrees of export market-oriented behaviour might be required to boost export performance.

#### **8.4.4. Manipulation of the EOB Dimensions**

The results of the post hoc analysis also have important implications for export managers in the sense that new evidence is pointing to how exporting organisations can improve the benefits that can be derived from the adoption of product innovation intensity and autonomous behaviours. Firstly, doing more of the same product innovations on a regular basis is not ideal for export success. Results of this study suggest that exporters should focus on offering novel innovations on a regular basis. This is because product innovation intensity has greater value for performance when such innovations are more novel. The achievement of this combination demands that firms should invest in R&D and innovative processes to ensure efficient innovative product development.

Secondly, results suggest that firms can benefit from the adoption of autonomous behaviour in conjunction with proactive and competitive aggressiveness behaviours. In other words, firms can benefit more from the initiatives and creative ideas of their autonomous export personnel when such maverick-like behaviours are combined with the tendency to monitor and detect market trends ahead of competitors, and the inclination to be responsive to competitive actions. However, the mission to improve export performance can be derailed if managers allow highly autonomous activities while at the same time encouraging high risk-taking and the development of novel innovations. This study recommends that managers should support greater central planning, encourage cross-functional activities (e.g. involvement of R&D, marketing and sales, manufacturing, and finance) in export strategy development, and discourage nonconformist tendencies when engaging in high risk and expensive novel product development activities in foreign markets.

## **8.5 LESSONS FOR EXPORT POLICY-MAKERS**

Several implications for both corporate and public policy-makers, especially from advanced Western economies like the United Kingdom, can be derived from the study's conclusions. First, there is a pressing need to improve the competitiveness of exporters abroad, especially in view of the fact that competition in global markets is ever increasing. This study suggests that one way to achieve this global competitiveness is for exporters to build their competitive edge using their entrepreneurial behaviours. For example, the nature of contemporary global marketplace demands that exporters develop competitive advantage in the production and distribution of novel product innovations. To this end, exporters need to develop their innovation capabilities by investing in modern technology and skills to achieve such advantages. An important implication for policy makers is that investment is needed in key areas of the economy, especially areas that support high technology and related industries, and creativity and innovation skills development. Educational programmes are also needed to develop young people capable of performing modern innovation activities, as exporters need graduates with requisite skills to manage in modern globalised economy.



Furthermore, given the rising competition from Chinese and other emerging economy exporters, the competition positions currently held by British exporters is going to come under severe challenge. Accordingly, this study suggests that exporters from developed countries such as the United Kingdom should specialise more in serving specific niches in overseas markets that are not under immediate threat from emerging and developing economy competitors. More specifically, the study proposes that corporate policy makers should be more proactive in formulating export market niche strategies and also focused on process innovation, as developing and emerging economy exporters are now more efficient in the use of traditional production methods.

Deteriorating economic conditions, high political instability, changing socio-cultural conditions and other environmental adversities abroad, especially in developing economies, can present enormous challenges to exporters headquartered in developed countries. Accordingly, exporters and their home governments need to be more specific and selective in choosing their export destinations. This study suggests that development of export marketing intelligence systems should be a top priority for exporters as it can help exporters to better gather, analyse, and evaluate data on global marketplace opportunities and challenges. Leonidou (2000) suggests that successful exporters are those firms that prioritise effective location decisions and analysis and handling of foreign market opportunities and challenges. This study suggests that corporate policy makers should invest in the development of effective foreign market forecasting skills in their export units, as that would enable the export units to quickly identify global marketplace changes and be able to take precautionary measures to deal with them effectively.

Exporters need support from their home governments and other parastatal organisations to operate successfully in foreign markets. This is critical because exporters often tend to experience serious barriers in overseas markets. As such, this study suggests that for entrepreneurial-oriented exporters to be successful, financial, marketing, and educational supports should be provided to them. In terms of financial support, appropriate government ministries can take initiatives to identify overseas opportunities for exporters and sponsor trade delegations to profitable foreign markets on behalf of the exporters. Governments could also

make credit facilities available to exporters to support riskier, more venturesome and innovative operations abroad. This is because exporters often avoid greater risks abroad due to a lack of financial resources, but this can be mitigated if governments can provide guarantees for exporters to access required finances. With respect to marketing support, this study finds that strong export marketing programmes can help exporters to better target their export markets. Thus, government agencies (e.g. embassies, trade and foreign affairs ministries) can support exporters by (1) providing them with information on how to select foreign representatives, (2) representing them in trade negotiations with foreign government officials, and (3) providing them with local market intelligence. Educational support can be provided by organising sponsored seminars and conferences to educate exporters on practical export management skills and procedures as such skills can help many exporters (especially the small and medium-sized ones) to avoid obvious errors in export markets.

## **8.6 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

### **8.6.1 Methodological Issues**

Although firm performance outcomes of EOB have been studied in a number of other contexts, this study represents a fresh attempt to further extend the scope of EOB research. As such, the export context-specific development of EOB measures, the analysis of the aggregate and disaggregate effects of the EOB dimensions on export performance, and the exploration of the moderating effects of market orientation and environment dynamism have added both theoretical and empirical insights to the existing literature on EOB. However, it is important that the conceptual model is replicated in different samples before any generalisation is made. Indeed, the sample used in this study consists of active small, medium and large exporting firms located in the United Kingdom, an advanced western economy. Samples from other advanced economies (e.g. Japan) would be needed for further replication and refinement.

Furthermore, future studies are encouraged to examine how the EOB dimensions affect performance in other contexts such as emerging and developing economy markets (e.g. China). Studies in these emerging and developing market economies will provide useful insights of the nature of entrepreneurial behaviours

in other national market contexts. These markets may well be different in that they are largely export driven, with structural and institutional challenges that may influence how the EOBs are implemented in export operations. Many firms in such export driven economies rely heavily on export markets for survival and as such their implementation of the EOB may differ from practices in western advanced economies (Knight 2001). Additionally, a cross-national study of the relationships tested in the current study would provide additional insights to the extant literature.

The cross-sectional data used in the current study is certainly a major source of concern (Rindfleisch et al. 2008). This is because several studies have found that entrepreneurial activities can take a long time to develop in business organisations, although it is also true that some firms are entrepreneurial right from the start of their operations (Burgelman 1983; Stopford and Baden-Fuller 1994; McDougall, Shane and Oviatt 1994). Indeed, some scholars have called for research into firms' entrepreneurial behaviours over time in order to map out the level of intensity of entrepreneurship as firms grow (e.g. Hughes and Morgan 2007; Lyon, Lumpkin and Dess 2000). Hence future research is encouraged to consider longitudinal research designs to investigate the relationships across time.

This study acknowledges the limitations of its reliance on single informants for information on both the dependent and the independent variables. Reliance on single informants clearly raises concerns regarding common method variance (CMV), despite the researcher's efforts to control for its influence on the study results (Podsakoff et al. 2003). Although additional performance data was collected from finance managers as part of these efforts to minimise CMV, one way to further control for the influence of CMV is to collect performance data from multiple informants (Chandler and Lyon 2001; Chang, van Witteloostuijn and Eden 2010). Future studies might incorporate this into their research. In particular, future research might glean information on the EOBs from export managers or CEOs but contact finance directors or accountants and lower level employees of the same companies for data on the firm's export performance variables. In that way researchers can control for social desirability bias. Another option is to collect export performance data from secondary sources (e.g. annual reports, industry

association databases, or commercial databases) provided such sources are reliable and up to date (Chang, van Witteloostuijn and Eden 2010; Katsikeas, Leonidou and Morgan 2000).

### **8.6.2 Substantive Issues**

There are some substantive issues that also need addressing as part of future research agenda. First, this study examines export performance by focusing on export sales related measures as the main dependent variable. Future research is needed in the following areas. Export new product performance, export new market performance, export growth, return on assets and adaptiveness are potential dependent variables that can be studied. This is because entrepreneurial exporters might have multiple objectives for pursuing entrepreneurship (Covin and Miles 1999). For example, Hughes and Morgan (2007) and Frishammar and Horte (2007) examine the new product performance impact of some dimensions of EO at firm-wide level. This performance outcome has relevance because there is theory to support the notion that EOB and its components are focused on new entry success (Lumpkin and Dess 1996; Covin and Miles 1999), and there is empirical evidence to suggest that many exporting firms want to improve the performance of their new products (Oviatt and McDougall 1994; Zahra, Ireland, Hitt 2000b). Furthermore, Wiklund and Shepherd (2005) have argued that growth is a key performance indicator that entrepreneurial firms look for when assessing their performance. Accordingly, it would be worthwhile to study the EOB – export growth relationship in future studies. It can also be argued that EOB might be related to adaptive performance in export markets. Adaptive performance refers to firm's ability to respond to environmental changes (Morgan et al. 2003; Katsikeas, Leonidou and Morgan 2000). Moreover, export entrepreneurship can be construed as firms' propensity to renew their export strategies, tendency to change and to pursue new opportunities that often come about as a result of changes in the environment (Covin and Miles 1999). Hence, export entrepreneurial behaviour and adaptive performance can be associated, and it would be interesting to see future research exploring this issue. The export literature acknowledges the multi-dimensionality of the export performance construct and it is suggested that these multiple dimensions should be captured in measures of the construct (e.g. Sousa, Martínez-López and Coelho 2008; Leonidou, Katsikeas and Samiee 2002). Katsikeas et al. (2000) recommends that

export effectiveness, export efficiency and export adaptive performance measures should be captured, and Hultman, Robson, and Katsikeas (2009) measure these three dimensions in their study of Swedish exporters. Accordingly, future research could improve the strength of the EOB – export performance relationship by capturing all three dimensions of export performance.

Second, focusing on the EOBs themselves, it is possible that some of the dimensions might predict others (Lumpkin and Dess 1996; Kreiser, Marino, and Weaver 2002). For example, a case can be made that autonomous behaviour might foster the idea of creativity and innovation in organisations (Lumpkin, Cogliser and Schneider 2009; Burgelman 1983). It can also be said that proactive behaviour focusing on future market leadership might enable firms to be highly innovative (Tellis, Prahu and Chandy 2009). Similarly, evidence suggests that behaviours that tolerate risk-acceptance enable firms to try new product possibilities and new market entry strategies ahead of competitors (Wang and Ahmed 2004). Thus, it can be said that risk-taking behaviour might predict innovative and proactive behaviours. As was revealed in the post hoc analysis, different combinations of the EOBs might predict export performance differently and it would, therefore, be worthwhile for future research to look into exploring the interactions among the EOBs.

Thirdly, in considering the internationalisation theory and the idea of psychic distance (Johanson and Vahlne 1977), it is possible that some export markets may be more lucrative than others. For example, evidence show that most UK firms have the EU and North American markets as their preferred export market destinations partly due to their psychological and cultural similarities. On the contrary, some consider export markets such as China, Middle East, and Africa as psychologically and culturally remote, and are often labelled as high risk-markets (Gupta 1989). Against this background, it would be useful to compare and contrast performance perceptions of entrepreneurial-oriented firms across different overseas markets.

Fourth, it is said that EOB helps firms to become learning organisations (Baker and Sinkula 2009). As such it can be argued that a firm that has a strong export EO should have a strong learning orientation towards its export markets (Matsuno, Mentzer and Ozsomer 2002; Wang 2008). Indeed, Baker and Sinkula

(2009) highlight the possibility of a learning orientation mediating the link between EOB and firm performance. It would, therefore, be novel to verify this relationship among exporting organisations. Additionally, it can be argued that since a central idea at the heart of the export EO concept is the notion of opportunity exploration and exploitation (McDougall and Oviatt 2000); a firm's disposition towards export market opportunity may influence the firm's rate of export EOB adoption. As such a positive attitude towards export market opportunities exploration may foster export EOB adoption. This is one area that future research might explore.

Fifth, another contingency model that can shed further light on the export EOB – export performance relationship is the moderating effects of firm structure (i.e. mechanistic versus organic) and technology orientation (Zahra and Bogner 2000). Some of these relationships have been examined in domestic context studies (e.g. Wang 2008; Baker and Sinkula 2009), however, examining them in export context might help to further enrich understanding of the value of EOB to exporting organisations. An additional contingency model that can be explored in future research is the moderating effects of munificence and competitive intensity on the specific export EOBs – export performance relationship. In a domestic context EO study, Miller (1983) argues that the turbulence of the competitive environment might have a positive or negative influence on the performance of entrepreneurial-oriented firms. Thus, it would be worthwhile to investigate these environment moderators in future export context research given the uncertainty that often characterise export markets (Leonidou, Katsikeas and Samiee 2002).

Sixth, the study's results suggest that being entrepreneurially oriented is a desirable thing for exporting firms. As such, it is right that firms stimulate export EO's adoption in export operations. A theoretical implication is that determinants of an export EOB need to be developed and tested. The literature provides some directions in this regard: the external environment may be a major driver. That is the degree to which the export environment is dynamic, heterogeneous and turbulent may facilitate or impede export EOB implementation. Furthermore, export EO's implementation may incur costs to the firm over time, suggesting that a manager's perception about the benefit of international operation may influence the extent to which EOB is adopted in an exporting organisation.

Finally, throughout this study, it is assumed that export EOB and its dimensions have linear relationships with export performance. However, one can draw on the recent work by Cadogan, Kuivalainen, and Sundqvist (2009) and Tsai, Chou and Kuo (2008) to argue that a non-linear relationship might exist between export EOB (and its dimensions) and export performance. In other words, it could be argued that increases in the level of EOB may lead to increases in export performance up to a certain threshold point such that any further increases in entrepreneurial behaviours might lead to a decrease in export performance. This study therefore believes that it would be worthwhile to explore a non-linear U-shape relationship between the export EOBs and export performance.

## **8.7 CONCLUSION**

To conclude, this study has shed additional light on the theory of entrepreneurial behaviour. In the first place, the EOB – firm performance nexus has been extended to the context of exporting operations. Second, the study found that several factors, internal and external to exporting organisations, influence the benefit that is derived from the adoption of EOB and its dimensions in export operations. Thirdly, it was found that the specific EOB components influence performance differently and more so under different levels of EMO and ECD. It is hoped that findings from this study will stimulate further research in the area and the managerial recommendations provided above will be of interest to practising export managers.

## REFERENCES

- Aaby, N. E. & Slater, S. F. 1989. Management influences on export performance: a review of the empirical literature 1978-1988. *International Marketing Review*, 6, 4: 41- 57
- Aiken, L. S. & West, S. G. 1991. ***Multiple Regression: Testing and Interpreting Interactions***. Thousand Oaks, Sage.
- Ajzen, I. & Fishbein, M. 1980. ***Understanding Attitudes and Predicting Social Behavior***. Englewood Cliffs, NJ: Prentice Hall
- Ajzen, I., Timko, C. & White, J. B. 1982. Self-monitoring and the Attitude-Behavior relation. ***Journal of Personality and Social Psychology***, 42: 426-435
- Akyol, A. & Akehurst, G. 2003. An investigation of export performance variations related to corporate export market orientation. ***European Business Review***, 15, 5–19
- Albaum, G., Strandskov, J., & Duerr, E. 2002. ***International Marketing and Export Management***. Financial Times, Prentice-Hall
- Aldrich, H. 1979. ***Organizations and environments***. Englewood Cliffs, N. J.: Prentice-Hall.
- Altier, W.J. 1988. A perspective on Creativity. ***Journal of Product Innovation Management***. 5: 154-161
- Alvarez, S. & Barney, J. 2004. Organizing rent generation and appropriation: toward a theory of the entrepreneurial firm. ***Journal of Business Venturing***, 19 (5), 621– 635.
- Alvarez, S. & Barney, J. 2007. The Entrepreneurial Theory of the Firm. ***Journal of Management Studies***, November: 1057-1063
- Alvarez, S. A. & Barney, J. B. 2006. ***Discovery and Creation: Alternative Theories of Entrepreneurial Action***. Working Paper, Ohio State Fisher College Center for Entrepreneurship, Ohio State University, Columbus, OH.
- Alvarez, S.A. 2007. Entrepreneurial rents and the theory of the firm. ***Journal of Business Venturing***, 22, 427– 442
- Amabile, T. M. 1996. ***Creativity in Context: Update to the Social Psychology of Creativity***. Boulder, CO: Westview Press
- Ambler, T., Styles, C. & Ziucun, W. 1999. The effect of channel relationships and guanxi on the performance of inter-province export ventures in the People's Republic of China. ***International Journal of Research in Marketing***, 16, 75–87
- Anderson J. C, & Gerbing D. W. 1982. Some methods for respecifying measurement models to obtain unidimensional construct measurement. ***Journal Marketing Research***, 19:453– 60
- Anderson J. C, & Gerbing, D. W. 1988. Structural equation modeling in practice: a review and recommended two-step approach. ***Psychological Bulletin***, 103: 411– 23



- Anderson, Eugene W. & Mary W. Sullivan 1993. The Antecedents and Consequences of Customer Satisfaction for Firms. **Marketing Science**, 12 (2), 125-43.
- Anderson, J. C. 1987. An Approach for Confirmatory Measurement and Structural Equation Modeling of Organizational Properties. **Management Science**, 33, 4, 525-541
- Andrew, K.R. 1980. **The concept of corporate strategy**. 2<sup>nd</sup> Edn, Homewood., IL: Richard. Irwin
- Andriopoulos, C. 2001. Determinants of organisational creativity: A literature review. **Management Decision**, 39(10), 834-840
- Antoncic, B. & Hisrich, R. D. 2001. Intrapreneurship: Construct refinement and cross-cultural validation. **Journal of Business Venturing**, 16, 495-527
- Aragon-Correa, J.A. 1998. Strategic proactivity and firm approach to the natural environment. **Academy of Management Journal**, 41: 556-567
- Argyris, C., & Schön, D. A. 1978. Organizational learning: A theory of action perspective: Reading, MA: Addison-Wesley.
- Armstrong, C. E., & Shimizu, K. 2007. A review of approaches to empirical research on the resource-based view of the firm. *Journal of Management*, 33: 959-986.
- Armstrong, J.S. & Overton, T.S. (1977). Estimating nonresponse bias in mail surveys. **Journal of Marketing Research**, 14(3), 396-402.
- Arnold, H. 1982. Moderator variables: A classification on conceptual, analytic, and psychometric issues. **Organisation behaviour and Human performance**, 29, 143-174
- Atuahene-Gima, K. & Anthony, K. 2001. An Empirical Investigation of the Effect of Market Orientation and Entrepreneurship Orientation Alignment on Product Innovation. **Organization Science**, 12:54-74
- Atuahene-Gima, K. 1995. An exploratory analysis of the impact of market orientation on new product performance: A contingency approach. **Journal of Product Innovation Management**, 12:275-293
- Atuahene-Gima, K., Slater, S.F. & Olson, E.M. 2005. The contingent value of responsive and proactive market orientations for new product program performance. **Journal of Product Innovation Management**, 22: 464-482
- Augusto, M. & Coelho, F. 2009. Market orientation and new-to-the-world products: Exploring the moderating effects of innovativeness, competitive strength, and environment forces. **Industrial Marketing Management**, 38, 94-108
- Austin, J.E. 1990. *Managing in Developing Countries: Strategic Analysis and Operating Techniques*. New York: Free Press.
- Axinn, C.N. 1988. Export performance: do managerial perceptions make a difference. *International Marketing Review*, 5, 61-71.
- Azen, S.P., Van Guilder, M., Hill, M.A. 1989. Estimation of parameters and missing values under a

regression model with nonnormally distributed and non-randomly incomplete data. *Statistics in Medicine*, 8, 217–228.

- Babakus, E., Yavas, U. & Hahti, A. 2006. Perceived uncertainty, networking and export performance: A study of Nordic SMEs. *European Business Review*, 18 (1), 4-13
- Bachmann, D., Elfrink, J. & Vazzana, G. 1996. Tracking the progress of emails vs. snail mails. *Marketing Research*, 8 (2), 30-36
- Bagozzi, R. P, Yi, Y. & Phillips, L.W. 1991. Assessing Construct Validity in Organizational Research. *Administrative Science Quarterly*, 36 (3), 421-458
- Bagozzi, R. P. & Phillips, L. W. 1982. Representing and Testing Organizational Theories: A Holistic Construal. *Administrative Science Quarterly*, 27(3): 459-489
- Bagozzi, R. P. & Y. Yi 1988. On the Evaluation of Structural Equation Models. *Journal of the Academy of Marketing Science* 16(1): 74-94.
- Bagozzi, R. P. & Yi, Y. 1990. Assessing method variance in multitrait-multimethod matrices: The case of self-reported affect and perceptions at work. *Journal of Applied Psychology*, 75: 547-560
- Bagozzi, R. P., Baumgartner, J., & Yi, Y. 1989. An investigation into the role of intentions as mediators of the Attitude-Behavior relationship. *Journal of Economic Psychology*, 10, 35-62
- Baird, I. S. & Thomas, H. 1985. Towards a Contingency Model of Strategic Risk-taking, *Academy of Management Review*, 10, 230-243
- Baker, W. E., & Sinkula, J. M. 1999. The synergistic effects of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27(4), 411–427
- Balabanis, G. I. & Katsikea, E. S. 2003. Being an entrepreneurial exporter: does it pay? *International Business Review*, 12 (2003) 233–252
- Baldauf, A., Cravens, D.W. & Wagner, U. 2000. Examining determinants of export performance in small open economies. *Journal of World Business*, 35, 61–79.
- Bantel, K. A. 1998. Technology-based, “adolescent” firm configurations strategy identification, context, and performance. *Journal of Business Venturing*, 13 (3), 205-230
- Barney, J. B. 1986. Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11 (3), 656–665.
- Barney, J. B. 1996. The resource-based theory of the firm. *Organization Science*, 7: 469.
- Barney, J. B. 2002. Gaining and sustaining competitive advantage. Upper Saddle River, NJ: Prentice Hall.
- Barney, J.B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, March 17:99–120.
- Barney, J.B. 2001. Resource-based theories of competitive advantage: A ten-year retrospective on the

- resource-based view. *Journal of Management*, 27, 643–650
- Barney, J.E. & Clark, B.N. 2007. **Resource-based theory: Creating and sustaining competitive advantage**. New York: Oxford University Press.
- Barret, H., Balloun, J.L. and Weinstein, A. (2000). Marketing mix factors as moderators of the corporate entrepreneurship – Business Performance Relationship: A Multistage, Multivariate Analysis. *Marketing Theory and Practice*, 8(2): 50-62
- Barreto, I. 2010. Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *Journal of Management*, 36/1: 256-280
- Barringer, B. P. & Bluedorn. A. C.1999. The Relationship between Corporate entrepreneurship and Strategic management. *Strategic Management Journal*, 20(5), 421-444
- Bates, F. L. & Harvey, C. C. (1975), **The Structure of Social Systems**, New York: Gardner Press
- Baumol, W. J. & Strom, R. J. 2007. Entrepreneurship and Economic Growth. *Strategic Entrepreneurship Journal*, 1: 233–237
- Baumol, W. J. 1986. Entrepreneurship and a century of growth. *Journal of Business Venturing*, 1, 141-145
- Beamish, P.W., Craig, R. & McLellan, K. 1993. The performance characteristics of Canadian versus UK exporters in small and medium sized firms. *Management International Review*, 33 (2), 121-37.
- Becherer, R.C., & Maurer, J.G. 1997. The moderating effect of environmental variables on the entrepreneurial and marketing orientation of entrepreneur-led firms. *Entrepreneurship Theory and Practice*, 22: 47–58
- Bello, D. C., Chelariub, C. & Zhang, L. 2003. The antecedents and performance consequences of relationalism in export distribution channels. *Journal of Business Research*, 56, 1– 16
- Bello, D.C., Urban, D.J., Verhage, B.J. 1991. Evaluating Export Middlemen in Alternative Channel Structures. *International Marketing Review*, 8/5: 49-64
- Benner, M. J., & Tushman, M. L. 2003. Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of Management Review*, 28 238–256
- Bentler, P. M. & Chou, C. P. 1987. Practical Issues in Structural Modeling. *Sociological Methods and Research* (16): 78-117.
- Berger, B. 1991. **The Culture of Entrepreneurship**, San Francisco, CA: ICS Press
- Bhuian, S. N., Menguc, B. & Bell, S. J. 2005. Just Entrepreneurial Enough: The Moderating Effect of Entrepreneurship on the Relationship between Market Orientation and Performance. *Journal of Business Research*, 58(1): 9-17
- Bilkey, W.J. & Tesar, G. 1977. The export behavior of smaller sized Wisconsin manufacturing firms. *Journal of International Business Studies*, 8 (1), 93-8
- Bilkey, W.J. 1978. An attempted integration of the literature on the export behavior of firms”, *Journal of*

- International Business Studies***, 9, Spring/Summer, 33-46
- Bird, B. 1988. Implementing entrepreneurial ideas: The case for intention. ***Academy of Management Review***, 13: 442-453
- Birkinshaw, J., Hamel, G. & Mol, M.J. 2008. Management Innovation. ***Academy of Management Review***, 33 (4), 825–845.
- Blackburn, R. S. & Cummings, L. L. 1982. Cognition of work unit structure. ***Academic of Management Journal***, 25, 836-854
- Blair, E. & Zinkhan, G. M. 2002. Nonresponse and Generalizability in Academic Research. ***Journal of the Academy of Marketing Science***, 34/1: 4-7.
- Blankenburg-Holm, D., Eriksson, K., & Johanson, J. 1996. Business networks and cooperation in international business relationships. ***Journal of International Business Studies***, 27(5): 1033–1053.
- Bollen, K. A. & Lennox, R. 1991. Conventional wisdom on measurement: A structural equation perspective. ***Psychological Bulletin*** 110, 305–314
- Bollen, K. A. 1989. ***Structural Equations with Latent Variables***, New York, John Wiley & Sons
- Bonaccorsi, A. 1992. On the relationship between firm size and export intensity. ***Journal of International Business Studies***, 23(4), 602–636.
- Booz-Allen & Hamilton. 1982. ***New Product Management for the 1980s***. New York: Booz-Allen & Hamilton Inc.
- Borghini, S. 2005. Organizational creativity: breaking equilibrium and order to innovate. ***Journal of Knowledge Management***, 9 (4), 19-33
- Bowman, E. H. 1982. Risk Seeking by Troubled Firms. ***Sloan Management Review***, Summer, 33-42
- Boyacigiller, N. 1990. The role of expatriates in the management of interdependence, complexity and risk in multinational corporations. ***Journal of International Business Studies***, 21, 357–381.
- Brockhaus, R. H. 1980. Risk taking propensity of entrepreneurs. ***Academy of Management Journal***, 23: 509-520
- Brockhaus, R.H. & Nord, W.R. 1979. An Exploratory of Factors Affecting the Entrepreneurial Decision: Personal Characteristics versus Environmental Condition. ***Proceedings of the Academy of Management Annual Meetings***, Atlanta, Georgia, USA.
- Brouthers, K. D. 2002. Institutional, Cultural and Transaction Cost Influences on Entry Mode Choice and Performance. ***Journal of International Business Studies***, 33 (2): 203-221.
- Brouthers, L.E. & Nakos, G. 2005. The role of systematic international market selection on small firms' export performance. ***Journal of Small Business Management***, 43, 363–381.
- Brouwer, M. T. 2002. Weber, Schumpeter, and Knight on entrepreneurship and economic development. ***Journal of Evolutionary Economics***, 12: 83-105

- Brown, T. E., Davidsson, P., & Wiklund, J. 2001. An operationalisation of Stevenson's conceptualisation of Entrepreneurship as opportunity-based firm behaviour. ***Strategic Management Journal***, 22: 953-968
- Brown, T. J., Mowen, J. C., Donavan, D. T. & Licata, J. W. 2002. The Customer Orientation of Service Workers: Personality Trait Effects on Self-and Supervisor Performance Ratings. ***Journal of Marketing Research***. 39 (February): 110-119.
- Browne, M. W. & Cudeck, R. 1993. Alternative Ways of Assessing Model Fit. In ***Testing Structural Equation Models***. K. A. Bollen and J. S. Long. Newbury Park, Sage: 445-455
- Bruvold, N. T. & Comer, J. M. 1988. A Model for Estimating the Response Rate to a Mailed Survey. ***Journal of Business Research***, 16(Mar): 101-116.
- Bryman, A. 2004. ***Social Research Methods***, Oxford University Press: Oxford
- Buckley, P.J. 2002. Is the international business research agenda running out of steam? ***Journal of International Business Studies***, 33(2): 365–374.
- Burgelman, R. A. & Hitt, M. A. 2007. Entrepreneurial Actions, Innovation, and Appropriability. ***Strategic Entrepreneurship Journal***, 1: 349–352
- Burgelman, R. A. 1983. A process model of internal corporate venturing in the Diversified major firm. ***Administrative Science Quarterly***, Vol. 28, No. 2, 223-244
- Burgelman, R. A. 1984. Designs for corporate entrepreneurship. ***California Management Review***, 26(2): 154- 166.
- Burt, R.S. 1976. Interpretational confounding of unobserved variables in structural equation models. ***Sociological Methods Research***, 5:3– 52
- Burton, F.N. & Schlegelmilch, B.B. 1987. Profile analyses of non-exporters versus exporters grouped by export involvement. ***Management International Review***, 27 (1),. 38-49.
- Busenitz, L. 1999. Entrepreneurial risks and strategic decision making. ***The Journal of Applied Behavioral Science***, 35(3), 325-340
- Busenitz, L., & Barney, J. 1997. Differences between entrepreneurs and managers in large organizations: biases and heuristics in strategic decision-making. ***Journal of Business Venturing*** 12, 9 – 30
- Buzzell, R. D., Gale, B. T. & Sultan, R. M. 1975. Market Share-A Key to Profitability. ***Harvard Business Review***, 53 (1), 97-106
- Byrne, B. M. 1998. ***Structural Equation Modeling with Lisrel, Prelis, and Simplis: Basic Concepts, Applications, and Programming***. Mahwah, N.J., Lawrence Erlbaum Associates
- Cadogan, J. W. & Diamantopoulos, A. 1995. Narver and Slater, Kohli and Jaworski and the market orientation construct: integration and internationalisation. ***Journal of Strategic Marketing***, 3, 41-60
- Cadogan, J. W. 1997. A Measure of Export Market Orientation, and an Examination of Its Antecedents

- and Performance Consequences, Unpublished Doctoral Dissertation, University of Wales, Swansea
- Cadogan, J. W., Cui, C. C. Morgan, R. E. & Story, V. M. 2006. Factors facilitating and impeding the development of export market-oriented behavior: A study of Hong Kong manufacturing exporters. *Industrial Marketing Management*, 35: 634–647
- Cadogan, J. W., Sundqvist, S., Salminen, R. & Puumalainen, K. 2005. Export Marketing's Interfunctional Interactions: Antecedents and Export Performance Consequences. *Journal of the Academy of Marketing Science*, 33(4): 520-535
- Cadogan, J.W., Cui, C.C., & Yeung, L. 2003. Export Market oriented behaviour and export performance: the moderating roles of competitive intensity and technological turbulence. *International marketing Review*, 20 (5), 493-513
- Cadogan, J.W., Diamantopoulos, A. & Pahud De Mortanges, C. 1999. A Measure of Export Market Orientation: Scale Development and cross-cultural validation. *Journal of international Business studies*, 30 (4), 689-707
- Cadogan, J.W., Diamantopoulos, A. & Siguaw, J. A. 2002. Export Market-oriented Activities: Their Antecedents and Performance Consequences. *Journal of International Business Studies*, 33, 3 615-626
- Cadogan, J.W., Paul, N.J., Salminen, R.T., Puumalainen, K., & Sundqvist, S. 2001. Key antecedents to “export” market-oriented behaviors: a cross-national empirical examination. *International Journal of Research in Marketing*, 18: 261-282
- Cadogan, J.W., Souchon, A.L. & Procter, A.B. 2008. The quality of market-oriented behaviors: Formative index construction. *Journal of Business Research*, 61 (12), 1263–1277
- Cadogan, J.W., Sundqvist, S., Salminen, R. T. & Puumalainen, K. (2005). Export Marketing, Interfunctional Interactions, and Performance Consequences. *Journal of the Academy of Marketing Science*, 33(4): 520-535
- Cahill, D. L. 1996. Pioneer advantage: is it real? Does it matter? *Marketing Intelligence and Planning*, 14 (4): 5-8
- Calantone, R.J., Kim, D., Schmidt, J.B. & Cavusgil, S.T. 2006. The influence of internal and external firm factors on international product adaptation strategy and export performance: A three-country comparison. *Journal of Business Research*, 59, 176 – 185
- Campbell, D. T. 1955. The informant in quantitative research. *American Journal of Sociology*, 60: 339-342
- Carland, J.W., Hoy, F, & Carland, J. C. 1984. Who is an entrepreneurship? Is it a question worth answering? *American Journal of Small Business*, 12: 33-39
- Carpenter, G. S. & Nakamoto, K. 1989. Consumer Preference formation and Pioneering Advantage. *Journal of Marketing Research*, 26 (3): 285-298

- Caruana, A., Morris, M. H., & Vella, A. J. 1998. The effect of centralization and formalization on entrepreneurship in export firms. *Journal of Small Business Management*, 31(1), 16–29.
- Carver, C.S. 1989. How should multi-faceted personality constructs be tested? Issues illustrated by self-monitoring, attributional style and hardiness. *Journal of Personality and Social Psychology*, 56(4), 577-585
- Casson, M. & Wadeson, N. 2007. Entrepreneurship and Macroeconomic Performance. *Strategic Entrepreneurship Journal*, 1: 239–262
- Casson, M. 1982, *The Entrepreneur*, Totowa, NJ: Barnes & Noble Books
- Casson, M. 2000. *Economics of International Business*, Edward Elgar: Cheltenham.
- Castrogiovanni, G. J. 1991. Environmental Munificence: A Theoretical Assessment. *Academy of Management Review*, 16 (3): 542-565
- Cattell, R.B. 1966. The meaning and strategic use of factor analysis. In R.B. Cattell (Ed.), *Handbook of multivariate experimental psychology*, 174-243, Chicago: Rand McNally
- Cavusgil S.T. & Kirpalani, V.H. 1993. Introducing Products into Export Markets: Success Factors. *Journal of Business Research*, 27, 1-15
- Cavusgil, S. T. & Nevin, J.N. 1981. Internal determinants of export marketing behavior: An empirical investigation. *Journal of Marketing Research*, 18 (1), 114-19.
- Cavusgil, S. T. & Zou, S. 1994. Marketing Strategy-performance relationship: an investigation of the empirical link in export market ventures. *Journal of Marketing*, 56, 1-21
- Cavusgil, S. T. 1984. Organizational characteristics associated with export activity. *Journal of Management Studies*, 21, 1, 3-22
- Cavusgil, S.T. & Naor, J. 1987. Firm and Management Characteristics as Discriminators of Export Marketing Activity. *Journal of Business Research*, 15: 221-235
- Cavusgil, S.T., Zou, S. and Naidu, G.M.1993. Product and promotion adaptation in export ventures: an empirical investigation. *Journal of International Business Studies*, 24, 3, 1993, 479-506.
- Certo, S. T., Covin, J. G., Daily, C. M., & Dalton, D. R. 2001. Wealth and the effects of founder management among IPO-stage new ventures. *Strategic Management Journal*, 22 (Special Issue): 641–658
- Chadee, D. D. & Mattsson, J. 1998. Do Service and Merchandise Exporters behave and perform differently? A New Zealand investigation. *European Journal of Marketing*, 32, 9/10, 830-842
- Chandler, G.N. & Lyon, D. 2001. Issues of Design and construct measurement in entrepreneurship research: the past decade. *Entrepreneurship Theory and Practice*, 25 (4), 101-113
- Chandler, G.N., & Hanks, S.H. 1993. Measuring the performance of emerging businesses: A validation study. *Journal of Business Venturing*, 8:391–408
- Chang, S., van Witteloostuijn, A. and Eden, L. 2010. Letter from the Editors: Common Method Variance

- in International Business Research. *Journal of International Business Studies*, 41/2:178-184
- Chawla, S. K. & Natarajan, R. 1994. Does the Name of the Sender Affect Industrial Mail Response? *Industrial Marketing Management*, 23(2): 111-115
- Chelariu, C, Bello, D.C, & Gilliland, D. I. 2006. Institutional antecedents and performance consequences of influence strategies in export channels to Eastern European transitional economies. *Journal of Business Research*, 59, 525 – 534
- Chen, C, Mai, C., & Yu, H. 2006. The effect of export tax rebates on export performance: Theory and evidence from China. *China Economic Review*, 17, 226– 235
- Chen, M. J.. & Hambrick, D. C. 1995. Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal*, 38: 453-482.
- Chetty, S.K. & Hamilton, R.T. 1993. Firm-level determinants of export performance: a meta-analysis. *International Marketing Review*, 10 (3), 26-34
- Chetty, S.K. and Hamilton, R.T. 1993. Firm-level determinants of export performance: a meta-analysis. *International Marketing Review*, 10, 26–34
- Chou, C.-P. & Bentler, P. M. 1995. Estimates and Tests in Structural Equation Modelling. *Structural Equation Modelling, Concepts, Issues, and Applications*. R. H. Hoyle. Thousand Oaks, California, Sage Publications: 37-55.
- Chow, G.C. 1960. Test of Equality Between Sets of Coefficients in Two Linear Regressions. *Econometrica*, 28 (July): 591-605
- Christensen, C. M. 1997. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston: Harvard Business School Publishing
- Christensen. C. H. da Rocha, A. & Certner, R. K. 1987. An Empirical Investigation of the Factors Influencing Export Success of Brazilian Firms. *Journal of International Business Studies*, 18 (Fall), 61-77
- Churchill, G. A. 1979. A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16: 64-73
- Churchill, G. A. 1995. *Marketing Research: Methodological Foundations*. 6<sup>th</sup> Edition, Fort Worth, Dryden Press.
- Churchill, G. A. 2005. *Marketing Research: Methodological Foundations*. 9th edition, Thomson Press
- Cicic, M., Patterson, P. & Shoham, A. 2002. Antecedents of international performance: A service firms' perspective. *European Journal of Marketing*; 36, 9/10; 1103-1118
- Clark, L. A. & Watson, D. 1995. Constructing validity: basic issues in scale development. *Psychological Assessment*, 7(3):309 – 19
- Cohen, J. & Cohen, P. 1995. *Applied Multiple Regression/Correlation Analysis for the Behavioural Sciences*. Hillsdale, NJ, Lawrence Erlbaum Associates



- Collis, D.J. 1991. A resource based analysis of global competition: The case of the bearings industry. ***Strategic Management Journal***, 12 (summer), 49-68
- Conner, K. R., & Prahalad, C. K. 1996. A resource-based theory of the firm: Knowledge versus opportunism. ***Organization Science***, 7: 477-501.
- Connor, T. 2002. The resource-based view of strategy and its value to practising managers. ***Strategic Change***, 11:307-316.
- Cook, T D. & Campbell, D. T. 1979. ***Quasi- Experimentation: Design and Analysis Issues for Field Settings***. Chicago: Rand-McNally
- Cooper, A. C. 2007. Behavioral Characteristics of Entrepreneurial Activity. ***Strategic Entrepreneurship Journal***, 1: 145–146
- Cooper, A.C., Gimeno-Gascon, F.J., Woo, C.Y., 1994. Initial human and financial capital as predictors of new venture performance. ***Journal of Business Venturing***, 9 (5), 371–395
- Cooper, R. G. & Kleinschmidt, E.J. 1985. Benchmarking the firm's critical success factors in new product development. ***Journal of Product Innovation Management***, 12: 374-391
- Cooper, R.G. & de Brentani, U. 1991. New Industrial Financial Services: What Distinguishes the Winners. ***Journal of Product Innovation Management***. 8: 75-90
- Cootner. P. H., & Holland. D. M. 1970. Rate of return and business risk. ***Bell Journal of Economics***, 1: 211-226.
- Cortina, J.M. 1993. Interaction, Nonlinearity and Multicollinearity: Implications for Multiple Regression. ***Journal of Management***, 19/4: 915-922
- Covin, J. G. & Covin, T. 1990. Competitive aggressiveness, environment context, and small firm performance. ***Entrepreneurship: Theory and Practice***, 14, 4: 35-50
- Covin, J. G. & Slevin, D. P. 1986. The development and testing of an organisational-level entrepreneurship scale. In R. Ronstadt, J. A. Hornaday, R. Peterson, and K. H. Vesper (Ed), ***Frontiers of Entrepreneurship Research***, 1986, Wellesley, MA: Babson College
- Covin, J. G. & Slevin, D. P. 1988. The influence of organisation structure on the utility of an entrepreneurial top management style. ***Journal of Management Studies***, 25 (3): 217-234
- Covin, J. G. & Slevin, D. P. 1989. Strategic Management of Small Firms in Hostile and Benign Environments. ***Entrepreneurship Theory and Practice***, 10 (1), 75-87
- Covin, J. G. & Slevin, D. P. 1990. New Venture Strategic Posture, Structure, and Performance: An Industry Life Cycle Analysis. ***Journal of Business Venturing***, 5, 123-135
- Covin, J. G., & Miles, M. P. 1999. Corporate entrepreneurship and the pursuit of competitive advantage. ***Entrepreneurship Theory and Practice***, 23(3): 47–63
- Covin, J. G., & Slevin, D. P. 1991. Conceptual Model of Entrepreneurship as Firm Behavior. ***Entrepreneurship Theory and Practice***, 16: 7-25
- Covin, J. G., Green, K. M. & Slevin, D. P. 2006. Strategic Process Effects on the Entrepreneurial

- Orientation-Sales Growth Rate Relationship. **Entrepreneurship Theory and Practice**, January: 57-81
- Covin, J.G. & Kuratko, D.F. 2008. The concept of corporate entrepreneurship. In V. Narayanan & G. O'Connor (Eds.), **The Blackwell encyclopaedia of technology and innovation management**, Oxford: Blackwell Publishers
- Craig, C. S. & McCann, J. M. 1978. Item Nonresponse in Mail Surveys: Extent and Correlates. **Journal of Marketing Research**, 15 (May), 285-89
- Creswell, J.W. 1998. **Research Design: Qualitative, Quantitative, and Mixed Methods Approaches**. Thousand Oaks, CA: Sage
- Crick, D. 2002. The Decision to Discontinue Exporting: SMEs in Two U.K Trade Sectors. **Journal of Small Business Management**, 40(1), pp. 66-77
- Crick, D., Chaudhry, S. & Bradshaw, R. 2003. The overseas marketing performance of successful small UK high technology firms: an exploratory study comparing indigenous and subsidiary firms' competitiveness. **Strategic Change**, 12: 421–433
- Cronbach, L.J. 1951. Coefficient Alpha and Internal Structure of Tests. **Psychological Bulletin**, 31, 93-96
- Crowne, D.P. & Marlowe, D. 1964. **The approval motive**. New York: John Willey & Sons
- Cunningham, J.B. & Lischeron, J. 1991. Defining Entrepreneurship. **Journal of Small Business Management**, 29: 48-61
- Da Rocha, A., Christensen, C.H. and da Cunha, C.E., 1990. Aggressive and passive exporters: a study in the Brazilian furniture industry. **International Marketing Review**, 7, 5, 6-15.
- Davidson, H. 1987. **Offensive marketing: How to make your competitors followers**. London: Penguin.
- Day, G.S. 1994. The capabilities of market-driven organizations. **Journal of Marketing**, 58, 4, 37-53
- De Brentani, U. 2001. Innovative versus incremental new business services: Different keys for achieving success. **The Journal of Product Innovation Management**, 18: 169-187
- De Vaus, D. 2001. **Research Design in Social Research**. Sage: London
- De Wilde, J., Simpson, D. 1988. Export strategies for innovative Canadian firms, finding niches and inventing competitive advantage. **Business Quarterly**, 53/1: 72–760
- Dean, C. C., Thibodeaux, M. S., Beyerlein, M., Ebrahimi, B. & Molina, D. 1993. Corporate entrepreneurship and competitive aggressiveness: A comparison of U.S. firms operating in Eastern Europe or the Commonwealth of Independent States with U.S. firms in other high-risk environments. In S. B. Prasad (Ed.). **Advances in international and comparative management**: 31-54. Greenwich, CT: JAI Press
- Deeds, D.L., DeCarolis, D., & Coombs, J.E. 1998. Firm-specific resources and wealth creation in high technology ventures: Evidence from newly public biotechnology firms. **Entrepreneurship**

***Theory and Practice***, 22: 55–73

- Demsetz, H. 1973. Industry Structure, Market Rivalry and public Policy. ***Journal of Law and Economics***, 16, 1-9
- Denis, J. and Depelteau, D. 1985. Market knowledge, diversification and export expansion. ***Journal of International Business Studies***, 16 (3), 77-89.
- Deshpande, R. and Webster, F. E. 1989. Organizational Culture and Marketing: Defining the Research Agenda. ***Journal of Marketing***, 53 (January), 3-15
- Deshpandé, R., and Farley, J. U. 2004. Organizational culture, market orientation, innovativeness, and firm performance: An international research odyssey. ***International Journal of Research in Marketing***, 21(1), 3–22
- Deshpande, R., Farley, J.U., Webster, F. E. Jr. 1993. Corporate culture, customer orientation, and innovativeness. ***Journal of Marketing***, 57 (1) 23-38
- Dess, G. G., Lumpkin, G. T., & McGee, J. E. 1999. Linking corporate entrepreneurship to strategy, structure, and process: Suggested research directions. ***Entrepreneurship Theory and Practice***, 23(3), 85-102
- Dess, G.; Lumpkin G. T. & Covin J. G. 1997. Entrepreneurial Strategy Making and Firm Performance: Tests of Contingency and Configurational Models. ***Strategic Management Journal***, 18 (9), 677-695
- Dess, G.G. & Beard D. W. 1984. Dimensions of Organizational Task Environments. ***Administrative Science Quarterly***, 29 (1): 52-73
- Dess, G.G. & Lumpkin, G.T. 2005. The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. ***Academy of Management Executive***, 19, 147–156
- Dess, G.G. & Robinson, R.B. Jr. 1984. Measuring organizational performance in the absence of objective measures: the case of the privately held firm and conglomerate business unit. ***Strategic Management Journal***, 5 (3), 265-73
- DeVellis, R. F. 2003. ***Scale Development: Theory and Applications***. London, Sage
- Diamantopoulos, A. & Cadogan, J. W. 1996. Internationalizing the market orientation construct: an in-depth interview approach. ***Journal of Strategic Marketing***, 4, 23-52
- Diamantopoulos, A. & Schlegelmilch, B. B. 1996. Determinants of Industrial Mail Survey Response: A Survey-on-Surveys Analysis of Researchers' and Managers' Views. ***Journal of Marketing Management***, 12(6): 505-531.
- Diamantopoulos, A. & Schlegelmilch, B.B. 1994. Linking export manpower to export performance: a canonical regression analysis of European and US data. In Cavusgil, S.T. and Axinn, C. (Eds), ***Advances in International Marketing***, JAI Press, Greenwich, CT, 6, 161-81
- Diamantopoulos, A. & Siguaaw. J. A. 2000. ***Introducing LISREL: a guide for the uninitiated***, London: Sage

- Diamantopoulos, A. & Souchon, A. 1999. Measuring Export Information Use: Scale Development and Validation. *Journal of Business Research*, 46, 1–14
- Diamantopoulos, A. & Winklhofer, H. 2001. Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, 37, 269–277
- Diamantopoulos, A. 1999. Export performance measurement: reflective versus formative indicators. *International Marketing Review*, 16 (6): 444-457
- Diamantopoulos, A. 2008. Formative indicators: Introduction to the special issue. *Journal of Business Research*, 61, 1201–1202
- Diamantopoulos, A. Siguaw, J.A. 2006. Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration. *British Journal of Management*, 17, 263–282
- Diamantopoulos, A., Riefler, P. & Roth, P.K. 2008. Advancing formative measurement models. *Journal of Business Research*, 61, 1203–1218
- Dierickx, I. & Cool, K. 1989. Asset Stock Accumulation and Sustainability of Competitive Advantage. *Management Science*, 35, 1504-1511
- Dillman, D. A. 2000. *Mail and Internet Surveys*, John Wiley and Sons: Canada
- DiPietro, W.R. & Anoruo, E. 2006. Creativity, innovation, and export performance, *Journal of Policy Modelling*, 28, 133–139
- Dollinger, M.J. 1999. *Entrepreneurship: Strategies and Resources*. Prentice-Hall, Upper Saddle River, NJ
- Donaldson, L. 2001. *The Contingency Theory of Organizations*. Sage Publications: Thousand Oaks
- Drazin, R. & Van de Ven, A.H. 1989. An examination of alternative forms of fit in contingency theory,” *Administrative Science Quarterly*, 30, 514-539
- Drucker, P. F. 1985. *Innovation and Entrepreneurship: practice and principles*. Harper and Row, New York
- Eckhardt, J. T. & Shane, S. A. 2003. Opportunities and Entrepreneurship. *Journal of Management*, 29; 333–349
- Edwards, J. R. & Bagozzi, R. P. 2000. On the nature and direction of relationships between constructs and measures. *Psychological Methods*, 5,155–174
- Ellis, P.D. 2007. Distance, dependence and diversity of markets: effects on market orientation. *Journal of International Business Studies*, 38, 374–386.
- Eshghi, A., 1992. Attitude-behavior inconsistency in exporting. *International Marketing Review*, 9 (3), 40-61.
- Evangelista, F. U. 1994. Export Performance and its Determinants: Some Empirical Evidence from Australian Manufacturing Firms. *Advances in International Marketing*, 6, 207-229
- Farrell, A.M. 2010. Insufficient discriminant validity: A comment on Bove, Pervan, Beatty, and Shiu

- (2009). *Journal of Business Research*, 63: 324–327
- Fernhaber, S.A. & McDougall-Covin, P.P. 2009. Venture Capitalists as Catalysts to New Venture Internationalization: The Impact of Their Knowledge and Reputation Resources. *Entrepreneurship Theory & Practice*, 33, 1, 277-295
- Fiegenbaum, A. & Thomas, H. 1988. Attitudes toward risk and the risk-return paradox: Prospect theory explanations. *Academy of Management Journal*, 31, 85–106.
- Fiegenbaum, A. 1990. Prospect theory and the risk- return association: An empirical examination in 85 industries. *Journal of Economic Behavior and Organization*, 14, 187–204.
- Fiol, C. M. 1991. Managing culture as a competitive resource: An identity-based view of sustainable competitive advantage. *Journal of Management*, 17: 191-211.
- Fishbein, M., & Ajzen, I. 1975. *Belief, attitude, intention and behavior: An introduction to theory and research*, Reading, MA: Addison-Wesley
- Fishbein, M., & Ajzen, I. 1976. Attitudes toward objects as predictors of single and multiple Behavioral criteria. *Psychological Review*, 81, 59-74
- Fiske, D. W 1982. Convergent-discriminant validation in measurements and research strategies. In D. Brinberg & L. Kidder (Eds.), *New directions for methodology of social and behavioral science: Forms of validity in research*, 12: 72-92. San Francisco: Jossey-Bass.
- Fornell, C. & Bookstein, F. L. 1982. Two structural equation models: LISREL and PLS applied to exit-voice theory. *Journal of Marketing Research*, 19:440 – 52
- Fornell, C. & Larcker, D. F. 1981. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3): 362-368
- Fornell, C. 1992. A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, 56 (January), 6-21.
- Forsgren, M. and Johanson, J. 1992. *Managing Networks in International Business*. Philadelphia, PA: Gordon & Breach.
- Foss, N. J. 1996. Knowledge-based approaches to the theory of the firm: Some critical comments. *Organization Science*, 7: 470-476.
- Foss, N. J., & Knudsen, T. 2003. The resource-based tangle: Towards a sustainable explanation of competitive advantage. *Managerial and Decision Economics*, 24: 291-307.
- Francis, J. and Collins-Dodd, C. 2000. The impact of firms' export orientation on the export performance of high-tech small and medium-sized enterprises. *Journal of International Marketing*, 8, 84–103.
- Fredrickson, J. W. 1986. The Strategic Decision Process and Organizational Structure. *Academy of Management Review*, 11(2), 280-297
- Friedman, L and Wall, L. 2005. Graphical Views of Suppression and Multicollinearity in Multiple Linear

- Regression. *The American Statistician*, 59/2: 127-136
- Fruhan, W. E. 1972. Psychic Victories in Fights for Market Share. *Harvard Business Review*, 50, 5: 100-107
- Ganitsky, J. 1989. Strategies for innate and adoptive exporters: lessons from Israel's case. *International Marketing Review*, 6 (5), 50-65
- Ganster, D.C. Hennessey, H.W. & Luthans, F. 1983. Social desirability response effects: Three different models. *Academy of Management Journal*, 26, 955-966
- Gatignon, H., & Xuereb, J. 1997. Strategic orientation of the firm new product performance. *Journal of Marketing Research*, 34, 1: 77-90
- Gerbing, D. W. & Hamilton, J. G. 1996. Viability of Exploratory Factor Analysis as a Precursor to Confirmatory Factor Analysis. *Structural Equation Modeling*, 3(1): 62-72
- Gerbing, D. W., Hamilton, J. G. & Freeman, E. B. 1994. A Large-Scale Second Order Structural Equation Model of the Influence of Management Participation on Organizational Planning Benefits. *Journal of Management* 20(4): 859-885
- Gerbing, D.W, & Anderson, J. C. 1988. An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25:186–92
- Gersick, C. J. G. 1988. Time and transition in work teams. Toward a new model of group development. *Academy of Management Journal*, 31: 9–4
- Gibbert, M. 2006. Generalizing about uniqueness: An essay on an apparent paradox in the resource-based view. *Journal of Management Inquiry*, 15: 124-134.
- Ginsberg, A; & Venkatraman, N. 1985. Contingency Perspectives of Organizational Strategy: A Critical Review of the Empirical Research. *Academy of Management Review*, 10 (3): 421-434
- Glaser, B., & Strauss, A. 1967. *The Discovery of Grounded Theory*, Aldine Publishing Company, Hawthorne, NY.
- Golden, B.R. 1992. The past is the past—or is it? The use of retrospective accounts as indicators of past strategy. *Academy of Management Journal*, 35: 848–860
- Golden, B.R. 1997. The Past Is the Past--Or Is It? The Use of Retrospective Accounts as Indicators of past Strategy. *Academy of Management Journal*, 35 (4): 848-860
- Golder, N. P. & Tellis, G. J. 1996. First to market, first to fail? Real causes of enduring market leadership. *Sloan management review*, 37 (2): 1405-1423
- Gopalakrishnan, S., Bierly, P. & Kessler, E.H. 1999. A reexamination of product and process innovations using a knowledge-based view. *The Journal of High Technology Management Research*, 10 (1), 147-166
- Graham, J.W., & Donaldson, S.I., 1993. Evaluating interventions with differential attrition: The importance of nonresponse mechanisms and use of follow-up data. *Journal of Applied Psychology*, 78, 119–128.

- Grewal, R. Cote, J.A., & Baumgartner, H. 2004. Multicollinearity and Measurement Error in Structural Equation Models: Implications for Theory Testing. *Marketing Science*, 23/4: 519-529
- Grinstein, A. 2008. The relationships between market orientation and alternative strategic orientation: A meta-analysis. *European Journal of Marketing*, 42, 1/2, 115-134
- Guan, J. & Ma, N. 2003. Innovative capability and export performance of Chinese firms. *Technovation* 23, 737–747
- Guba, E. G. and Lincoln, Y. S. 1994. *Competing paradigms of qualitative research*, in N. K. Denzin and Y.S. Lincoln (Eds) Handbook of Qualitative Research, London: Sage Publications: 105-117
- Gulowsen, J. 1972. *A measure of work-group autonomy*. In L.E. Davis & J.C. Taylor (Eds.), *Design of jobs* ( 374–390), First Edition, Harmondsworth: Penguin.
- Gupta, U. 1989. Small firms aren't waiting to grow up to go global. *Wall Street Journal*, December, 5, 1989, 132.
- Guth, W. D. & Ginsburg, A. 1990. Guest Editorial. *Strategic Management Journal*, 11: 5-55
- Hackman, J.R. & Oldham, G.R. 1975. Development of the job diagnostic survey. *Journal of Applied Psychology*, 60, 159–170.
- Hair, J. F. J., Anderson, R. E. Tatham, R. L & Black, W. C. 1998. *Multivariate Data Analysis*. New York: Macmillan
- Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. 2006. *Multivariate Data Analysis with Readings*, New York: Macmillan
- Hamel G. & Prahalad, C.K. 1994. *Competing for the future*. Boston, MA: Harvard Business School Press
- Han, J., Kim, N. & Srivastava, R. 1998. Market orientation and organizational performance: is innovation a missing link? *Journal of Marketing*, 62 (4), 30-45
- Hansen, G.S. & Wernerfelt, B. 1989. Determinants of Firm Performance: The Relative Importance of Economic and Organizational Factors. *Strategic Management Journal*, 10:399-411
- Hart, S. & Banbury, C. 1994. How strategy-marketing process can make a difference. *Strategic Management Journal*, 15, 5, 251-70
- Hart, S. L. 1991. Intentionality and autonomy in strategy-making process: Modes, archetypes, and firm performance. In P. Shrivastava, A. Huff, & J. Dutton (Eds.), *Advances in strategic management*, 7: 97-127. Greenwich, CT: JAI Press
- Haynes, S.N., Nelson, K. & Blaine D. 1999. Psychometric issues in assessment research. In: Kendall P.C, Butcher J.N, Holmbeck G. *Handbook of research methods in clinical psychology* (Ed.), New York: Wiley, pp.125– 54
- Heardesty, D. M. & Bearden, W. O. 2004. The Use of Expert Judges in Scale Development: Implications for Improving face Validity of Measures of Unobservable Construct. *Journal of*

***Business Research***, 57: 98-107

- Heide, J. B. 2003. Plural Governance in Industrial Purchasing. ***Journal of Marketing***, 67(4): 18-29
- Helfat, C. E., & Peteraf, M. A. 2003. The dynamic resource-based view: Capability lifecycles. ***Strategic Management Journal***, 24: 997-1010.
- Henderson, R. & Clark, K. 1990. Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. ***Administrative Science Quarterly***, 35, 9-30
- Hert, D. & Thomas, H. 1983. Risk Analysis Approaches and Strategic Management. In R. Lamb (Ed.), ***Advances in Strategic Management***, 1, JAI Press, 145-158
- Hisrich, R., & Brush, C.G. 1987. Women entrepreneurs: A longitudinal study. ***In Frontiers of Entrepreneurial Research, 1987***. Cambridge, MA: Babson College, pp. 187-199.
- Hitt, M.A, Dacin, M.T, Tyler, B.B, & Park, D. 1997. Understanding the differences in Korea and U.S. executives' strategic orientations. ***Strategic Management Journal***, 18(2):159–67.
- Hitt, M.A. & Reed, T.S. 2000. Entrepreneurship in the new competitive landscape. In G.D. Meyer & K.A. Heppard (Eds.), ***Entrepreneurship as strategy***, 23–47. Thousand Oaks, CA: Sage Publications
- Hitts, M.A. & Ireland, R.D. 1985. Corporate Distinctive Competence, Strategy, Industry and Performance. ***Strategic Management Journal***, 6 (3): 273-293
- Hoang, B.P. 1998. A causal study of relationships between firm characteristics, international marketing strategies, and export performance. ***Management International Review***, 38, 73–94
- Hofer, C. W., & Schendel, D. E. 1978. ***Strategy Formulation: Analytical Concepts***. West Publishing Co., New York
- Holcomb, T. R., Ireland, R. D., Holmes Jr. R. M, & Hitt M. A. 2009. Architecture of Entrepreneurial Learning: Exploring the Link among Heuristics, Knowledge, and Action. ***Entrepreneurship Theory and Practice***, January: 167-192
- Homburg, C. & Pflesser, C. 2000. A multi-layer model of market-oriented organisational culture: measurement issues and performance outcomes. ***Journal of Marketing Research***, 37 (4), 449-463
- Hooley, G. J., Lurch, J.E. & Jobber, D. 1992. Generic Marketing Strategies. ***International Journal of Research in Marketing***, 9, 75-69
- Howell, J.M. & Higgins, C.A. 1990. Champions of Technological Innovation. ***Administrative Science Quarterly***, 35 (2), 317-341
- Hoyle, R. H. & Panter, A. T. 1995. ***Writing About Structural Equation Models. Structural Equation Modeling***. R. H. Hoyle. Thousand Oaks, CA., Sage: 158-176
- Hrebiniak, L.G. & Snow, C.C. 1982. Top-Management Agreement and Organizational Performance. ***Human Relations***, 35(12): 1139-1157



- Hu, L. T. & Bentler, P. 1995. Evaluating Model Fit. **Structural Equation Modeling: Concepts, Issues, and Applications**. R. H. Hoyle. London, Sage: 76-99
- Hughes, M. & Morgan, R.E. 2007. Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. **Industrial Marketing Management**, 36, 651–661
- Hult, G. T. M., Hurley, R. F. & Knight, G. A. 2004. Innovativeness: Its antecedents and impact on business performance. **Industrial Marketing Management**, 33, 429-438.
- Hult, G. T., Ketchen, D. J., & Nichols, E. L. 2002. An examination of cultural competitiveness and order fulfilment cycle time within supply chains. **Academy of Management Journal**, 45(3), 577–585.
- Hultman, M., Robson, M. J. & Katsikeas, C. S. 2009. Export Product Strategy Fit and Performance: An Empirical Investigation. **Journal of International Marketing**, 17 (4):1–23
- Hundler, G., Jacobson, C.K., & Park, S.H. 1996. Effects of profitability and liquidity on R&D intensity: Japanese and U.S. companies compared. **Academy of Management Journal**, 39: 1659–1674
- Hunt, S. D 1997. The resource-advantage theory: An Evolutionary Theory of Competitive Firm Behavior. **Journal of Economic Issues**, 31/1: 59-77
- Hunt, S. D. and Morgan R. M. (1995), “The Comparative Advantage Theory of Competition,” **Journal of Marketing**, 59 (April), 1–15.
- Hunt, S. D; & Morgan, R. M. 1996. The resource-advantage theory of competition: Dynamics, path dependencies, and Evolutionary Dimensions. **Journal of Marketing**; 60, 4, 107-114
- Ibeh, K. I. N. 2003. Toward a contingency framework of export entrepreneurship: Conceptualisations and Empirical Evidence, *Small Business Economics*, 20, 1:49-68
- Ibeh, K. I.N., Brock, J. & Zhou, J. 2004. The drop and collect survey among industrial populations: theory and empirical evidence, **Industrial Marketing Management**, 33(2), pp. 155-165.
- Ibeh, K.I.N. & Young, S. 2001. Exporting as an entrepreneurial act: An empirical study of Nigerian firms. **European Journal of Marketing**, 35, 5/6: 566-586
- Im, S. and Workman Jr., J.P. (2004). Market Orientation, Creativity, and New Product Performance in High-Technology Firms. **Journal of Marketing**, 68 (April): 114–132
- informational knowledge, architectural marketing capabilities, and the adaptive
- International Monetary Fund 2009, **Directions of Trade Statistics Yearbook**. Washington, DC: International Monetary Fund Publication Services.
- Ireland, R. D. Covin, J. G. and Kuratko, D.F. 2009. Conceptualizing Corporate Entrepreneurship Strategy. **Entrepreneurship Theory and Practice**, January: 19 – 46
- Ireland, R.D., Hitt, M.A., & Sirmon, D.G. 2003. A model of strategic entrepreneurship. **Journal of Management**, 29, 963-989

- Ireland, R.D., Hitt, M.A., Camp, S.M., & Sexton, D.L. 2001. Integrating entrepreneurship actions and strategic management actions to create firm wealth. *Academy of Management Executive*, 15(1), 95-106.
- Ireland, R.D., Covin, J.G., & Kuratko, D.F. 2009. Conceptualizing Corporate Entrepreneurship Strategy. *Entrepreneurship Theory & Practice*. January, 2009: 19-46
- Jaccard, J. & Wan, C. K. 1996. LISREL *Approaches to Interaction Effects in Multiple Regression*. Thousand Oaks, CA, Sage
- Jackson, D. L. 2003. Revisiting Sample Size and Number of Parameter Estimates: Some Support for the N:Q Hypothesis. *Structural Equation Modeling*, 10(1):128-141
- Jambulingam, T., Kathuria, R. & Doucette, W. R. 2005. Entrepreneurial orientation as a basis for classification within a service industry: the case of retail pharmacy industry. *Journal of operations management*, 23: 23-42
- Jansen, J.J.P., Van Den Bosch, F.A.J. & Volberda, H.W. 2006. Exploratory Innovation, Exploitative Innovation, and Performance: Effects of Organisational Antecedents and Environmental Moderators. *Management Science*, 52 (11): 1661-1674
- Jantunen, A. Puumalainen, K. Saarenketo, S. & Heiko, K.K. 2005. Entrepreneurial Orientation, Dynamic Capabilities and International Performance. *Journal of International Entrepreneurship*, 3, 223–243
- Jantunen, A., Nummela, N., Puumalainen, K. & Saarenketo, S. 2008. Strategic orientations of born globals – do they really matter? *Journal of World Business*, 43: 158-170
- Jarillo, J. C. 1989. Entrepreneurship and growth: the strategic use of external resources. *Journal of Business Venturing*, 4, 133-147.
- Jarvis, C. B., MacKenzie, S. B. & Podsakoff, P. M. 2003. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30(2), 199–218
- Jennings, D., & Young, D. 1990. An empirical comparison between objective and subjective measures of the product innovation domain of corporate entrepreneurship. *Entrepreneurship Theory and Practice*, 15(1), 53-66
- Johanson, J. & Vahlne, J. E. 1977. The internationalization process of the firm: a model of knowledge development and increasing foreign market commitment. *Journal of International Business Studies*, 8 (1): 23-32.
- Johne, A. 1999. Using market vision to steer innovation. *Technovation*. 19, 203–207
- Johnson, J. L. Lee, R.P. & Saini, A. 2003. Market-Focused Strategic Flexibility: Conceptual Advances and an Integrative Model. *Journal of the Academy of Marketing Science*, 31(1):74-89.
- Johnston, W.J. & Czinkota, M.R. 1985. Export attitudes of industrial manufacturers. *Industrial Marketing Management*, 14: 123-32

- Jones, M.V. & Coviello, N.E. 2005. Internationalisation: conceptualising an entrepreneurial process of behaviour in time. *Journal of International Business Studies*, 36, 284–303
- Joreskog, K. G. and F. Yang 1996. Nonlinear Structural Equation Models: The Kenny-Judd Model with Interaction Effects. In *Advanced Structural Equation Modelling: Issues and Techniques*. R. E. Schumacker and G. A. Marcoulides. Mahwah, NJ, Lawrence Erlbaum Associates: 57-88.
- Jöreskog, K. G., & Sörbom, D. 1993. *LISREL 8: Structural equation modelling with the SIMPLIS command language*, Hillsdale, NJ: Lawrence Erlbaum Associates
- Jöreskog, K.G. & Sörbom, D. 1982. Recent developments in structural equation modeling. *Journal of Marketing Research*, 19,404-416
- Jöreskog, K.G. & Sörbom, D. 2004. *LISREL 8.7 for Windows*. Lincolnwood, IL: Scientific Software International, Inc.
- Julian, C.C. 2003. Export marketing performance: A study of Thailand firms. *Journal of Small Business Management*, 41, 2, 213, 222
- Kahneman, D., & Tversky, A. 1979. Prospect theory: An analysis of decision under risk. *Econometrica*, 47: 263-291.
- Kamara, W.A. & Wedel, M. 2000. Factor Analysis and Missing Data. *Journal of Marketing Research*, 37, 490-498
- Kanter, R. M. 1983. *The change masters: Innovation and entrepreneurship in the American corporation*, Simon and Schuster: New York
- Kao, J.J. 1989. *Entrepreneurship, Creativity and Organisation*. Englewood Cliffs, N.J.: Prentice-Hall
- Katsikea, E. & Skarmas, D. A. 2003. Organisational and managerial drivers of effective export sales organisations: An empirical investigation. *European Journal of Marketing*, 37, 11/12, 1723-1745
- Katsikeas, C. S. Piercy N. F. & Ioannidis, C. 1996. Determinants of export performance in a European context. *European Journal of Marketing*, 30 (6), 6-35
- Katsikeas, C. S. Samiee S. & Theodosiou, M. 2006. Strategy Fit and Performance Consequences of International Marketing Standardization. *Strategic Management Journal*, 27: 867–890
- Katsikeas, C., S., Robert E. Morgan, 1994. Differences in Perceptions of Exporting Problems Based on Firm Size and Export Market Experience, *European Journal of Marketing*, 28 (5):17 – 35
- Katsikeas, C.S. & Morgan R. E. 1994. Differences in Perceptions of Exporting Problems Based on Firm Size and Export Market Experience. *European Journal of Marketing*, 28 (5), 17-35.
- Katsikeas, C.S., Deng, S.L. and Wortzel, L.H. 1997. Perceived export success factors of small and medium-sized Canadian firms. *Journal of International Marketing*, 5, 53–72.
- Katsikeas, C.S., Leonidou, L.C. and Morgan, N.A. 2000. Firm-level export performance assessment: review, evaluation, and development. *Journal of the Academy of Marketing Science*, 28,

493–511.

- Katsikeas, C.S., Piercy, N.F. & Ioannidis, C. 1996. Determinants of export performance in a European context. ***European Journal of Marketing***, 30, 6, 6-35
- Katz, D. & Kahn, R. L. 1978. ***The Social Psychology of Organizations***. 2d Ed New York: John Wiley & Sons
- Katz, J., & Gartner, W.B. 1988. Properties of emerging organisations. ***Academy of management review***, 13, 429-441
- Kaynak, E. & Kuan, W.K. 1993. Environment, strategy, structure, and performance in the context of export activity: an empirical study of Taiwanese manufacturing firms. ***Journal of Business Research***, 27: 33–49.
- Kazanjian, R. K. & Drazin, R. 1989. An Empirical Test of a Stage of Growth Progression Model. ***Management Science***, 35/12: 1489-1503
- Keegan, W. J., & Schlegelmilch, B. B. 2001. ***Global marketing Management: European Perspective***. Prentice Hall, Financial Times
- Keh, H.T., Nguyen, T.T.M. & Ng, H.P. 2007. The effects of entrepreneurial orientation and marketing information on the performance of SMEs. ***Journal of Business Venturing***, 22, 592–611
- Kelloway, E. K. 1998. ***Using LISREL for Structural Equation Modelling***. Thousand Oaks, Sage Publications
- Kenny, D. & Charles M. J. 1984. Estimating the Nonlinear and Interactive Effects of Latent Variables. ***Psychological Bulletin***, 96 (July): 201-210.
- Kerlinger, F. N. 1964. ***Foundations of Behavioural Research***, Holt-Saunders and Winston: London
- Kerlinger, F. N. 1973. ***Foundations of Behavioral Research***. 2<sup>nd</sup> Edn. Holt Saunders International: London
- Ketchen Jr, D. J. Ireland, R. D. & Snow, C.C. 2007. Strategic Entrepreneurship, Collaborative Innovation, and Wealth Creation. ***Strategic Entrepreneurship Journal***, 1: 371–385
- Ketokivi, M., & Schroeder, R. 2004. Perceptual measures of performance: Facts or Fictions? ***Journal of Operations Management***, 22 (3): 247 – 264.
- Khandwalla, P. 1977, ***The design of organizations***, New York: Harcourt Brace Jovanovich.
- King, M.F. & Bruner, G. C. 2000. Social desirability bias: A neglected aspect of validity testing. ***Psychology and Marketing***, 17 (2), 79-103
- Kirzner, I. 1973. ***Competition and Entrepreneurship***, Chicago: University of Chicago Press.
- Kirzner, I. 1979. ***Perception, Opportunity, and Profit***. University of Chicago Press, Chicago.
- Kleinbaum, D. G., Kupper, L. L., Muller, K. E. & Nizam. A. 1998. ***Applied Regression Analysis and Other Multivariate Methods***. Boston, Duxbury Press
- Kline, R. B. 1998. ***Principles and Practices of Structural Equation Modelling***. New York, Guilford Press.

- Knight, G. & Kim, D. 2009. International business competence and the contemporary firm. ***Journal of International Business Studies***, 40 (2): 255-273
- Knight, G. 2000. The critical role of entrepreneurship and marketing strategy: the SME under globalization. ***Journal of International Marketing***, 8, 2, 12-32
- Knight, G. A. & Cavusgil, S. T. 2004. Innovativeness, organizational capabilities, and the born-global firm. ***Journal of International Business Studies***, 35, 124-141
- Knight, G. A., & Cavusgil, S. T. 1996. The born global firm: A challenge to traditional internationalization theory. ***Advances in International Marketing***, 8: 11–26
- Knight, G.A. 1997. Cross-Cultural Reliability and Validity of a Scale to Measure Firm Entrepreneurial Orientation. ***Journal of Business Venturing***, 12, 213-225
- Knight, G.A. 2001. Entrepreneurship and Strategy in the International SME. ***Journal of International Management***, 7, 155-171
- Koberg, C.S., Uhlenbruck, N., & Sarason, Y. 1996. Facilitators of organizational innovation: The role of life-cycle stage. ***Journal of Business Venturing***, 11: 133–149
- Kocak, A. and Abimbola, T. 2009. The effects of entrepreneurial marketing on born global performance. ***International Marketing Review***, 26, 4/5: 439-452
- Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. ***Organization Science***, 3: 383-397.
- Kohli, A.K. & Jaworski, B.J. 1990. Market orientation: the construct, research propositions, and managerial implications. ***Journal of Marketing***, 54, April: 1-18
- Kotabe, M., Srinivasan, S.S. & Aulakh, P.S. 2002. Multinationality and Firm Performance: The Moderating Role of R&D and Marketing Capabilities. ***Journal of International Business Studies***, 33, 1 (1): 79-97
- Kotler, P. 1991. ***Marketing Management: Analysis, planning, implementation and control***. 7<sup>th</sup> Edition, Englewood Cliffs, N.J. Prentice-Hall
- Kraaijenbrink, J. Spender, J.-C. & Groen, A. J. 2010. The Resource-Based View: A Review and Assessment of Its Critiques. ***Journal of Management***, 36: 349-372
- Kreiser, P.M., Marino, L.D., & Weaver, K.M. 2002. Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. ***Entrepreneurship Theory and Practice***, 26, 71–92
- Kropp, F., Lindsay, N.J. & Shoham, A. 2006. Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. ***International Marketing Review***, 23 (5), 504-523
- Krueger, N. F. Jnr., Reiley, M. D. & Carsrud, A.L. 2000. Competing Models of Entrepreneurial Intentions. ***Journal of Business venturing***, 15, pp. 411-432
- Kuivalainen, O., Sundqvist, S. & Servais, P. 2007. Firms' degree of born-globalness, international

- entrepreneurial orientation and export performance. *Journal of World Business*, 42: 253–267
- Kuratko, D. F. & Audretsch, D.B. 2009. Strategic Entrepreneurship: Exploring different perspectives of an emerging concept. *Entrepreneurship Theory and Practice*, 33, 1: 1-17
- La, V., Patterson, P., & Styles, C. 2009. Client-perceived performance and value in professional B2B services. *Journal of International Business Studies*, 40, 274-300
- Lado, A. A., Boyd, N. G., Wright, P., & Kroll, M. 2006. Paradox and theorizing within the resource-based view. *Academy of Management Review*, 31: 115-131.
- Lado, N., Martinez-Ros, E. and Valenzuela, A. 2004. Identifying successful marketing strategies by export regional destination. *International Marketing Review*, 21, 573–597.
- Lado, N., Martinez-Ros, E. and Valenzuela, A. 2004. Identifying successful marketing strategies by export regional destination. *International Marketing Review*, 21, 573–597.
- Lages, L.F. & Montgomery, D.B. 2005. The relationship between export assistance and performance improvement in Portuguese export ventures: an empirical test of the mediating role of pricing strategy adaptation. *European Journal of Marketing*, 39, 755–784.
- Lau, C., Yiu, D.W., Yeung, P. & Lu, Y. 2008. Strategic orientation of high-technology firms in a transitional economy. *Journal of Business Research*, 61, 765-777
- Laughunn, D.J. Payne. J.W. & Crum, R.L. 1980. Managerial Risk Preferences for Below Target Returns. *Management Science*, 26: 1238-1246
- Law, K. S. & Wong, C. 1999. Multidimensional constructs in structural equation analysis: An illustration using the job perception and job satisfaction constructs. *Journal of Management*, 25, 143–160
- Law, K. S., Wong, C. S. & Mobley, W. H. 1998. Toward a Taxonomy of Multidimensional Constructs. *Academy of Management Review*, 23(4): 741-755
- Lee, D.-J. 1998. The effect of cultural distance on the relational exchange between exporters and importers: the case of Australian exporters. *Journal of Global Marketing*, 11, 7–22.
- Lee, J. & Habte-Giorgis, B. 2002. Empirical approach to the sequential relationships between firm strategy, export activity, and performance in U.S. manufacturing firms. *International Business Review*, 13, 101–129
- Lee, N. & Cadogan, J.W. 2009. Sales force social exchange in problem resolution situations. *Industrial Marketing Management*, 38, 355–372
- Lee, S. M. & Peterson, S. J. (2000). Culture, Entrepreneurial Orientation, and Global Competitiveness. *Journal of World Business*, 35(4): 401-416
- Leonidou, C.L., Katsikeas, C.S. & Samiee, S. 2002. Marketing strategy determinants of export performance: a meta-analysis. *Journal of Business Research*, 55, 51-67
- Leonidou, L. C. 2000. Barriers to export management: An organizational and internationalization

- analysis. *Journal of International Management*, 6(2): 1–28.
- Leonidou, L.C, Katsikeas C.S, Piercy N.F. 1998. Identifying managerial influences on exporting: past research and future directions. *Journal of International Marketing*, 6(2): 81 – 111
- Leonidou, L.C. 1995. Export Barriers: non-exporters' perception. *International Marketing Review*, 12, 1, 4-25
- Leonidou, L.C. Katsikeas, C.S., & Coudounaris, D.N. 2010. Five decades of business research into exporting: A bibliographic analysis. *Journal of International Management*, 16, 78–91
- Leonidou, L.C., & Katsikea, C.S. 1996. The export development process: an integrative review of empirical models. *Journal of International Business Studies*, 27 (3), 517-551
- Lerner, M., Brush, C., & Hisrich, R. 1997. Israeli women entrepreneurs: An examination of factors affecting performance. *Journal of Business Venturing*, 12, 315–339
- Libby, R. & Fishburn, P.C. 1977. Behavioral Models of Risk Taking in Business Decisions: A Survey and Evaluation. *Journal of Accounting Research*, 15, 2, 272-292
- Lichtenthaler, U. 2009. Absorptive capacity, environmental turbulence, and the complementarity of organisational learning processes. *Academy of Management Journal*, 52 (4), 822-846.
- Lieberman, M.B, & Montgomery, D. B. 1988. First-mover advantages. *Strategic Management Journal*, (Special Issue) 9:41–58
- Lieberman, M.B. & Montgomery, D.B. 1998. First-Mover (Dis)Advantages: Retrospective and Link with the Resource-Based View. *Strategic Management Journal*, 19 (12): 1111-1125
- Lindell, M. K., & Whitney, D. J. 2001. Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1): 114–121
- Ling-ye, L. & Ogunmokun, G. O. 2001. The influence of interfirm relational capabilities on export advantage and performance: an empirical analysis. *International Business Review*, 10, pp. 399–420
- Lippman, S. & Rumelt, R. 1982. Uncertainty Imitability: An Analysis of Interfirm Differences in Efficiency under Competition. *Bell Journal of Economics*, 13:418-438
- Little, R.J.A. & Rubin, D., 1987. *Statistical Analysis with Missing Data*. Wiley, New York.
- Little, R.J.A. & Rubin, D., 1989. The analysis of social science data with missing values. *Sociological Methods and Research* 18, 292–326.
- Little, R.J.A. & Schenker, N. 1995. Missing data. In: Arminger, G., Clogg, C.C., Sobel, M.E. (Eds.), *Handbook of Statistical Modeling for the Social and Behavioral Sciences*. Plenum Press, New York.
- Little, R.J.A. 1988. Missing data adjustments in large surveys. *Journal of Business and Economic Statistics*, 6: 296–297.
- Little, T.D., Bovaird, J.A. & Widaman, K.F. 2006. On the Merits of Orthogonalizing Powered and Product Terms: Implications for Modeling Interactions Among Latent Variables. *Structural*

- Equation Modelling**, 13(4), 497–519
- Lo'pez-Navarro, M.A. & Camiso'n-Zornoza, C. 2003. The effect of group composition and autonomy on the performance of joint ventures (JVs): an analysis based on Spanish export JVs. **International Business Review**, 12, 17–39
- Louter, P. J. Ouwkerk, C. & Bakker, B.A. 1991. An Inquiry into Successful Exporting. Journal: **European Journal of Marketing**, 25/6: 7 – 23
- Lumpkin, G. T. & Dess, G. G. 2001. Linking two dimensions of Entrepreneurial orientation to firm Performance: the moderating role of environment and industry life cycle. **Journal of Business Venturing**, 16: 429-451
- Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. **The Academy of Management Review**, 21, 1:135-172
- Lumpkin, G.T., Cogliser, C.C., & Schneider, D.R. 2009. Understanding and measuring autonomy: an entrepreneurial orientation perspective. **Entrepreneurship Theory & Practice**, 33, 1, 47-69
- Luo, X., Rindfleisch, A. & Tse, D. K. (2007). Working with Rivals: The Impact of Competitor Alliances on Financial Performance. **Journal of Marketing Research**, 44 (February): 73–83
- Lyon, D. W., Lumpkin, G. T. & Dess, G. G. 2000. Enhancing entrepreneurial orientation research: operationalizing and measuring a key strategic decision making process. **Journal of Management**, 26, 1055-1085
- MacCallum, R. C. & Browne, M. W. 1993. The use of causal indicators in covariance structure models: Some practical issues. **Psychological Bulletin**, 114, pp. 533–541
- MacCallum, R. C., M. Roznowski & L. B. Necowitz (1992). "Model Modifications in Covariance Structural Analysis: The Problem of Capitalization on Chance." **Psychology & Marketing** 111: 490-504.
- MacMillan, I. C. 1982. Seizing competitive initiative. **Journal of Business Strategy**. 2: 43-57.
- MacMillan, I. C. 1983. Preemptive strategies. **Journal of Business Strategy**. 4: 16- 26
- MacMillan, I. C., & Day, D. L. 1987. Corporate ventures into industrial markets: Dynamics of aggressive entry. **Journal of Business Venturing**. 2(1): 29-39
- MacMillan, I.C. & McCarffery, M.L. 1982. Corporate Strategy: How aggressive innovation can help your business. **Journal of Business Strategy**, Spring, 2, 115-119
- MacMillan, I.C. 1983. Preemptive strategies. **Journal of Business Strategy**, 2: 16-26
- MacMillan, I.C., and Day, D.L. 1987. Corporate ventures into industrial markets: Dynamics of aggressive entry. **Journal of Business Venturing**, 2:29–39.
- Madsen, T. K. 1987. Empirical export performance Studies: a review of conceptualisation and findings. **Advances in International Marketing**, 2, 177-198
- Madsen, T. K., Rasmussen, E. S., & Servais, P. 2000. Differences and similarities between born globals and types of exporters. **Advances in International Marketing**, 10: 247–265.



- Madsen, T.K. 1989. Successful Export Marketing Management: Some Empirical Evidence. ***International Marketing Review***, 6 (4): 41-57.
- Maidique, M. A., & Zirger, B. J. 1984. A study of success and failure in product innovation: The case of the U.S. electronics industry. ***IEEE Transactions on Engineering Management***. 31(4), 192-203.
- Maidique, M.A. 1980. Entrepreneurs, Champions and Technological Innovation. ***Sloan Management Review***, Winter, 59-75
- Malhotra, N. & Birks, D. 2000. ***Marketing Research: An Applied Approach***. Harlow, Prentice Hal.
- Malhotra, N.K., 1987. Analyzing marketing research data with incomplete information on the dependent variable. ***Journal of Marketing Research***, 24, 74–84
- Mangione, T. W. (1995), ***Mail Surveys: Improving the Quality***, Thousand Oaks, California: Sages
- March, J.G. & Shapira Z. 1987. Managerial perspectives on risk and risk taking. ***Management Science***, 33: 1404–1418.
- March, J.G., 1991. Exploration and exploitation in organizational learning. ***Organisation Science***, 2, 71–87.
- Marsh, H. W. & Hocevar, D. 1985. Application of Confirmatory Factor Analysis to the Study of Self-Concept: First- and Higher Factor Models and Their Invariance across Groups. ***Psychological Bulletin***, 97(3): 562-582
- Marsh, H. W., Balla, J. R. & MacDonald, R. P. 1988. Goodness of Fit Indices in Confirmatory Factor Analysis: The Effect of Sample Size. ***Psychological Bulletin***, (107): 247-255
- Mascarenhas, B. 1992. First-mover effects in multiple dynamic markets. ***Strategic Management Journal*** 13(3):237–243.
- Matsuno, K. & Mentzer, J.T. 2000. The Effects of Strategy Type on the Market Orientation-Performance Relationship. ***Journal of Marketing***, 64, 1-16
- Matsuno, K., Mentzer, J. T., & Ozsomer, A. 2002. The effects of Entrepreneurial Proclivity and market orientation on business performance. ***Journal of Marketing***, 66, 3: 18-32
- Matthyssens, P. & Pauwels, P. 1996. Assessing export performance measurement. In Tamer Cavusgil, S. and Madsen, T.K. (Eds), ***Advances in International Marketing***, JAI Press, New York, NY, pp. 85-115.
- McArthur, A. W. & Nystrom, P.C. 1991. Environmental Dynamism, Complexity, and Munificence as Moderators of Strategy-Performance Relationships. ***Journal of Business Research***. 23:349-361
- McAuley, A. 1999. Entrepreneurial instant exporters in the Scottish arts and crafts sector. ***Journal of International Marketing***, 7(4), 67-82
- McClelland, D. C. 1960. ***The achieving society***. Princeton, NJ: Van Nostrand
- McDaniel C. & Gates, R. 2001. ***Marketing Research: the impact of the internet***, 5<sup>th</sup> Edition, South-

Western, Thompson learning

- McDaniel, C. & Gates, R. 2007. **Marketing Research**, 7<sup>th</sup> Edn, John Willey & Sons, Danvers: MA
- McDermott, C.M. & O'Connor. 2002. Managing radical innovation: an overview of emergent strategy issues. **The Journal of Product Innovation Management**, 19: 424–438
- McDougall, P. & Robinson, R.B. 1990. New Venture Strategies: An Empirical Identification of Eight 'Archetypes' of Competitive Strategies for Entry. **Strategic Management Journal**, 11 (6): 447-467
- McDougall, P. P., & Oviatt, B. M. 2000. International Entrepreneurship: The intersection of two Research Paths. **Academy of Management Journal**, 43, 5: 902-906
- McDougall, P.P. & Oviatt, B.M. 1996. New venture internationalization, follow-up study. **Journal of Business Venturing**, 11, 1: 770-791
- McDougall, P.P. 1989. International versus domestic entrepreneurship: new venture strategic behavior and industry structure. **Journal of Business Venturing**, 4: 387-400
- McDougall, P.P., Oviatt, B.M., and Shradder, R.C. (2003). A Comparison of International and Domestic New Ventures. **Journal of International Entrepreneurship**, 1: 59 – 82
- McDougall, P.P., Shane, S. & Oviatt, B.M. 1994. Explaining the formation of international new ventures: the limits of theories from international business research, **Journal of Business Venturing** 9: 469–487.
- McGahan, A.M. & Porter, M.E. 1997. How much does industry matter, really? **Strategic Management Journal**, 18, 15–30.
- McGrath, R.G., 2001. Exploratory learning, innovative capacity, and managerial oversight. **Academy of Management Journal**, 44, 118–131.
- McGuinness, N.W. and Little, B. 1981. The influence of product characteristics on the export performance of new industrial products, **Journal of Marketing**, 45,110-122.
- McKee, D.O., Varadarajan, P.R. and Pride, W.M. 1989. Strategic adaptability and firm performance: a market-contingent perspective. **Journal of Marketing**, 53, 3, 21-35.
- Menon, A. & Varadarajan, P. R. 1992. A Model of Marketing Knowledge Use Within Firms. **Journal of Marketing**, 56, 4, 53-71
- Menon, A., Jaworski, B.J. & Kohli. A. K. 1997. Product Quality: Impact of Interdepartmental Interactions. **Journal of the Academy of Marketing Science**, 25 (3): 187-200.
- Miles, M.P. & Arnold, D.R. 1991. The Relationship between Marketing Orientation and Entrepreneurial Orientation. **Entrepreneurship Theory and Practice**, summer, 49-65
- Miles, R., & Snow, C. 1978. **Organizational strategy, structure, and process**. New York: Mc-Graw-Hill
- Miller, C. C. Cardinal, L. B., & Glick W. H. (1997). Retrospective Reports in Organizational Research: A Reexamination of Recent Evidence. **Academy of Management Journal**, 40 (1): 189-204

- Miller, D. & Friesen, P. H. 1982. Innovation in conservative and entrepreneurial firms. ***Strategic Management Journal***, 3: 1-27
- Miller, D. 1983. The correlates of entrepreneurship of three types of firms. ***Management Science***, 29: 770-791
- Miller, D. 1987. Strategy Making and Structure: Analysis and Implication for Performance. ***Academy of Management Journal***, 30, 1, 7-32
- Miller, D. 1996. Configurations revisited. ***Strategic Management Journal***, 17, 505–512.
- Miller, D., & Friesen, P.H. 1983. Strategy-making and Environment: The Third link. ***Strategic Management Journal***, 4(3): 221-235
- Mintzberg, H. 1979. ***The structure of organizations***. Englewood Cliffs, N.J.: Prentice-Hall
- Mintzberg, H. 1994. ***The rise and fall of strategic planning***. New York, The Free Press
- Mintzberg, H., & Waters, J.A. 1973. Of Strategies, deliberate and Emergent. ***Strategic Management Journal***, 6, 257-272
- Mises, L.V. 1963. *Human Action*. Regnery
- Moen, O. 2002. The born globals—a new generation of small European exporters. ***International Marketing Review***, 19: 156–175.
- Monsen, E. & Boss, R.W. 2009. The Impact of Strategic Entrepreneurship inside the Organization: Examining Job Stress and Employee Retention. ***Entrepreneurship Theory and Practice***, 33, 1: 71-104
- Morgan, N.A, Vorhies, D.W. & Schlegelmilch, B.B. 2006. Resource–performance relationships in industrial export ventures: The role of resource inimitability and substitutability. ***Industrial Marketing Management***, 35, pp.621-633
- Morgan, N.A., Kaleka, A. and Katsikeas, C.S. 2004. Antecedents of export venture performance: a theoretical model and empirical assessment. ***Journal of Marketing***, 68, 90–108
- Morgan, N.A., Zou, S., Vorhies, D.W., & Katsikeas, C.S. 2003. Experiential and Informational Knowledge, Architectural Marketing Capability, and Adaptive Performance of Export Ventures: A Cross-National Study. *Decision Sciences*, 34 (2): 287 – 321.
- Morgan, R. E., & Strong, C. A. 2003. Business performance and dimensions of strategic orientation. ***Journal of Business Research***, 56(3), 163–176.
- Morris, M. H., & Paul, G. W. 1987. The relationship between entrepreneurship and marketing in established firms. ***Journal of Business Venturing***, 2, 247-259
- Morris, M. H., & Sexton, D.L. 1996. The Concept of Entrepreneurial Intensity: Implications for Company Performance. ***Journal of Business Research***, Vol.36, 5-13
- Morrison, A., & Roth, K., 1992. A taxonomy of business-level strategies in global industries. ***Strategic Management Journal***, 13 (6), 399–418
- Munro, H.J., Beamish, P.W. 1987. ***Distribution methods and export performance***, in Rosson, P.J.,

- Reid, S. (Eds), *Managing Export Entry and Expansion: Concepts and Practice*, Praeger, New York
- Murray, J. Y., Gao, G. Y., Kotabe, M., & Zhou, N. 2007. Assessing Measurement Invariance of Export Market Orientation: A Study of Chinese and Non-Chinese Firms in China. *Journal of International Marketing*, 15/4: 41-62
- Naidu, G.M. & Prasad, V.K. 1994. Predictors of export strategy on export sales performance. *Journal of Business Research*, 31, 107–115.
- Namiki, N. 1989. The impact of competitive strategy on export sales performance: an exploratory study. *The Mid-Atlantic Journal of Business*, 25, 6, 21-37
- Narver, J. C., & Slater, S. F. 1990. The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–35
- Narver, J. C., Slater, S. F., & MacLachlan, D. L. 2004. Responsive and Proactive Market Orientation and New-Product Success. *Journal of Product Innovation Management*, Vol. 21: 334-347
- Nelson, R. R., & Winter, S. G. 1982. *An evolutionary theory of economic behavior and capabilities*. Cambridge: Harvard University Press, 195–307.
- Nes, E. B., Solberg, C. A., & Silkoset, R. 2007. The impact of national culture and communication on exporter–distributor relations and on export performance. *International Business Review*, 16, 405–424
- Netemeyer, R. G., Bearden, W.O. & Sharma, S. 2003. *Scaling Procedures: Issues and Application*. Sage Publications: Thousand Oaks, California
- Netemeyer, R. G., Krishnan, B., Pullig, C., Wang, G., Yagci, M., Dean, D., Ricks, J., & Wirth, F. 2004. Developing and Validating Measures of Facets of Customer-based Brand Equity. *Journal of Business Research*, 57, 209-224
- Neter, J., Wasserman, W., & Kutner, M. 1985. *Applied linear statistical models: Regression, analysis of variance, and experimental design*. Homewood, IL: Richard D. Irwin.
- Neumann, M., Babel, I. & Haid, A. 1979. Profitability, risk, and market structure in West German industries, *Journal of Industrial Economics*, 27. 227-242.
- Newbert, S. L. 2007. Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal*, 28: 121-146.
- Nonaka, I. 1991. The knowledge-creating company. *Harvard Business Review*, 69, 96–104.
- Nunnally, J. C. 1978. *Psychometric Theory*. New York: McGraw-Hill
- Nunnally, J. C., & Bernstein, I. H. 1994. *Psychometric Theory*, 3<sup>rd</sup> Edition, New York: McGraw-Hill
- O’Cass, A. and Julian, C. 2003. Examining firm and environmental influences on export marketing mix strategy and export performance of Australian exporters. *European Journal of Marketing*, 37, 366–384.

- Olinsky, A., Chen, A. & Harlow, L. 2003. The comparative efficacy of imputation methods for missing data in structural equation modelling. *European Journal of Operational Research*, 151, 53–79
- Oppenheim, A. N. 1966. *Questionnaire Design and Attitude Measurement*. Heinemann: London
- Oppermann, M. 1995. Email Survey's Potential and Pitfalls. *Marketing Research*, 7, 29-33
- Oviatt, B.M. & McDougall, P.P. 1994. Toward a theory of international business studies, *Journal of International Business Studies* 25(1): 45–64.
- Oviatt, B.M. & McDougall, P.P. 1995. Global start-ups: entrepreneurs on a worldwide stage, *Academy of Management Executive*, 9(2): 30–44.
- Palich, L., & Bagby, D. 1995. Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom. *Journal of Business Venturing*, 10, 425-438
- Palmer, T.B. & Wiseman, R. M. 1999. Decoupling risk taking from income stream uncertainty: a holistic model of risk. *Strategic Management Journal*, 20: 1037–1062
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. 1985. A conceptual model of service quality and its implication for future research. *Journal of Marketing*, 49 (fall), 41-50
- Parker, L. 1992. Collecting Data the email way. *Training and Development*, July, 52-54
- Payne, J.W. Laughhunn, D.J., & Crum, R.L 1981. Further Tests of Aspiration Level Effects in Risk Choice Behavior. *Management Science*, 27: 953-958
- Pearce II, J. A., Fritz D.A. & Davis, P.S. 2010. Entrepreneurial Orientation and the Performance of Religious Congregations as Predicted by Rational Choice Theory. *Entrepreneurship Theory & Practice*, 34 (1), 219-248
- Pearce, J.A. & Robbins, R.B. 1987. The impact of grand strategy and planning formality on financial performance. *Strategic Management Journal*, 8 (2), 125-34
- Pedhazur, E. J. 1982. *Multiple Regression in Behavioural Research: Explanation and Prediction*. New York, Holt, Rinehart & Winston
- Penrose, E. T. 1959. *The theory of the growth of the firm*. New York: Wiley
- performance of export ventures: A cross-national study. *Decision Sciences*, 34
- Peter, J. P. 1981. Construct validity: a review of basic issues and marketing practices. *Journal of Marketing Research*, 18:133– 45
- Peter, J. P., G. A. Churchill & T. J. Brown 1993. Caution in the Use of Difference Scores in Consumer Research. *Journal of Consumer Research*, 19(4): 655-662.
- Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14, 179–192.
- Peteraf, M. A., & Barney, J. B. 2003. Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24: 309-323.
- Peterson, R. T. 1989. Small Business Adoption of the Marketing Concept vs. Other Business

- Strategies. *Journal of Small Business Management*, January, 38-46
- Pfeffer, J., & Salancik, G. R. 1978. *The external control of organizations*. New York: Harper & Row Publishers
- Piercy, N. F. 1982. *Export strategy: markets and competition*. Allen & Unwin: London
- Ping, R. A. 2004. On assuring valid measures for theoretical methods using survey data. *Journal of Business Research*, 57, 125-141
- Ping, R. A., Jr. 1994. Does Satisfaction Moderate the Association between Alternative Attractiveness and Exit Intention in a Marketing Channel? *Journal of the Academy of Marketing Science*, 22, 4, 364-371.
- Ping, R. A., Jr. 1995. A Parsimonious Estimation Technique for Interaction and Quadratic Latent Variables. *Journal of Marketing Research*, 32 (August): 336-47.
- Podsakoff, P. M., MacKenzie, S. B., & Lee, Jeong-Yeon, Podsakoff, N. P. 2003. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, Vol. 88, No. 5, 879–903
- Porter, M. 1985. *Competitive Advantage*. New York: The Free Press
- Porter, M. E. 1980. *Competitive Strategy: Techniques for Analysing Industries and Competitors*, New York: Free Press
- Prasad, V.K., Ramamurthy, K. and Naidu, G.M. 2001. The influence of internet-marketing integration on marketing competencies and export performance. *Journal of International Marketing*, 9, 82–110.
- Premkumar, G. & King, W.R. 1994. Organizational characteristics and information systems planning: An empirical study. *Information Systems Research*, 5 (2), 75–109
- Priem, R. & Butler, J.E. 2001. Is the Resource-Based “View” a Useful Perspective for Strategic Management Research? *Academy of Management Review*, 26(1): 22-40
- Priem, R. L., & Butler, J. E. 2001a. Is the resource-based “view” a useful perspective for strategic management research? *Academy of Management Review*, 26: 22-40.
- Quinn, J. B. 1979. Technological Innovation, Entrepreneurship and Strategy, *Sloan Management Review*, 20(3): 15-26
- Racela, O. C, Chaikittisilpa, C. & Thoumrungroje, A. 2007. Market orientation, international business relationships and perceived export performance. *International Marketing Review*, Vol. 24 No. 2, pp. 144-163
- Ragin, C.C. 1987. *The comparative method: Moving beyond qualitative and quantitative strategies*, Berkeley: University of California Press
- Rajagopalan, N. 1997. Strategic orientations, incentive plan adoptions, and firm performance: Evidence from electric utility firms. *Strategic Management Journal*, 18: 761–785
- Reekie, D. W. 1979. *Industry, Prices and Markets*. Phillip Allan, Oxford

- Renko, M. Carsrud, A. & Brännback, M. 2009. The effect of market orientation, entrepreneurial orientation and technological capability on innovativeness: A study of young biotechnology ventures in the United States and in Scandinavia. *Journal of Small Business Management*, 47 (3), 331-369.
- Richardo, D. 1817. *Principles of Political Economy and Taxation*. London: J. Murray
- Rindfleisch A., Malter, A.J. Ganesan, S. & Moorman, C. (2008). Cross-Sectional Versus Longitudinal Survey Research: Concepts, Findings, and Guidelines. *Journal of Marketing Research*, 45: 261–279
- Robertson, C., & Chetty, S. K. 2000. A contingency-based approach to understanding export performance. *International Business Review*, 9: 211–235
- Robinson, J.P., Shaver, P.R. & Wrightsman, L.S. 1991. Criteria for Scale Selection and Evaluation. In J.P. Robinson., P.R. Shaver, and L.S. Wrightsman (Eds.), *Measures of Personality and Social Psychological Attitudes: 1-15*, Academic Press: San Diego.
- Robinson, W. T. & C. Fornell. 1990. Product innovation and start-up business market share performance. *Management Science*, 36, October, 1279-1289
- Robinson, W. T., Fornell, C. & Sullivan, M. 1992. Are market pioneers intrinsically stronger than later entrants? *Strategic Management Journal*, 13(8), 609-624.
- Robinson, W. T. 1988. Sources of Market Pioneer Advantages: The Case of Industrial Goods Industries. *International Marketing Research*, 25, February, 87-94.
- Robson, M.J., Leonidou, L.C. and Katsikeas, C.S. 2002. Factors influencing international joint venture performance: theoretical perspectives, assessment, and future directions. *Management International Review*, 42(4): 385-418
- Rogers, E. M. 1983. *Diffusion of Innovations*, Free Press, New York.
- Ronstadt, R.C. (1984), *Entrepreneurship*. Dover, MA: Lord Publishing
- Roper, S. & Love, J. H. 2002. Innovation and export performance: evidence from the UK and German manufacturing plants. *Research Policy*, 31, 1087–1102
- Rose, G.M. & Shoham, A. 2002. Export performance and market orientation: establishing an empirical link. *Journal of Business Research*, 55, 3, 217-25.
- Rossiter, J. R. 2002. The C-OAR-SE procedure for scale development in marketing', *International Journal of Research in Marketing*, 19, 305–335.
- Rothschild, W.E. 1984. Surprise and Competitive Advantage. *Journal of Business Strategy*, Winter, 4: 10-41
- Rousseau, D. 1985. Issues of Level in Organizational Research: Multilevel and Cross-Level Perspectives. In *Research in Organizational Behavior*. L. L. Cummings and B. M. Staw (Eds.). Greenwich, CT, JAI Press
- Roux, E. 1987. Managers' attitudes toward risk among determinants of export entry of small and

- medium-sized firms. in Rosson, P.J. and Reid, S.D. (Eds), **Managing Export Entry and Expansion**, Praeger: New York.
- Rumelt, R. 1984. Towards a strategic theory of the firm. In R. Lamb (ed.), **competitive Strategic Management**, Englewood Cliffs, NJ: Prentice-Hall, 556-570
- Rust, Roland T. & Zahorik, A.J. 1993. Customer Satisfaction, Customer Retention, and Market Share," **Journal of Retailing**, 69 (2), 193-215.
- Samiee, S. & Walters, P.G.P. 1990. Influence of firm size on export planning and performance. **Journal of Business Research**, 29 (3), 235-48
- Samiee, S. & Walters, P.G.P., 1991. Segmenting corporate exporting activities: sporadic versus regular exporters. **Journal of the Academy of Marketing Science**, 19, 2, 93-104.
- Samiee, S., Walters, P. G. P., & Dubois, F. 1993. Exporting as an Innovative Behaviour: An Empirical Investigation. **International Marketing Review**, 10 (3): 5-25
- Sanchez, Ron. 1995. Strategic Flexibility in Product Competition. **Strategic Management Journal**, 16 (Summer): 135-159.
- Sapienza, H.J., & Grimm, C.M. 1997. Founder characteristics, start-up process, and strategy/structure variables as predictors of shortline railroad performance. **Entrepreneurship: Theory and Practice**, 22: 5–24
- Sarasvathy, S.D. 2001. Causation and effectuation: Toward a theoretical shift from economic inevitability entrepreneurial contingency. **Academy of Management Review**, 26(2): 243-263
- Saris, W. E. & Satorra, A. 1993. Power Evaluations in Structural Equation Models. In K. A. Bollen and J. S. Long. **Testing Structural Equation Models**. Newbery Park, CA, Sage: 181-204
- Saywer, A.G. & Ball, A.D. 1981. Statistical Power and Effect Size in Marketing Research. **Journal of Marketing Research**, 18, 275-90
- Schaefer, R. & Dillman, D.A. 1998. Development of a standard email methodology: results of an experiment. **Public Opinion Quarterly**, 62 (fall), 378-397
- Schafer, J.L. & Graham, J.W. 2002. Missing Data: Our View of the State of the Art. **Psychological Methods**, 7(2): 147-177
- Schendel, D. 2007. Moderator Comments Risk and Uncertainty. **Strategic Entrepreneurship Journal**, 1: 53–55
- Scherer, F.M. 1980. **Industrial Market Structure and Economic Performance**, 2<sup>nd</sup> Edn. Boston, MA:Houghton-Mifflin
- Scherer, F.M. and Ross, D. 1990. **Industrial Market Structure and Economic Performance**. Boston:Houghton Mifflin.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H 2003. Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. **Methods of**



- Psychological Research Online**, 8 (2), 23-74.
- Schindehutte, M, Morris, M, & Pitt, L. (2009). **Rethinking Marketing: The Entrepreneurial Imperative**. Pearson Education, Upper Saddle River.
- Schindehutte, M. Morris, M.H. & Kuratko, D.F. 2000. Triggering events, corporate entrepreneurship and the marketing function. **Journal of Marketing Theory and Practice**, 8, 2, 18-30
- Schlegelmilch, B. B. & Diamantopoulos, A. 1991. Prenotification and Mail Survey Response Rates - a Quantitative Integration of the Literature. **Journal of the Market Research Society**, 33(3): 243-255.
- Schlegelmilch, B.B., Diamantopoulos, D. & Kreuz, P. 2003. Strategic Innovation: the construct, its drivers and its strategic outcomes. **Journal of Strategic Marketing**, 11, 117-132
- Schmidt, J.B. & Calantone, R.J. 1998. Are Really New Product Development Projects Harder to Shut Down? **Journal of Product Innovation Management**, 15:111-123
- Schoemaker, P.J.H. 1982. The Utility Model: Its Variants, Purposes, Evidence and Limitations. **Journal of Economic Literature**, 20:529-563
- Schollhammer, H. 1982. Internal corporate entrepreneurship. In C. A. Kent, D. L. Sexton, and K. H. Vesper (Eds), **Encyclopaedia of Entrepreneurship**: 209-223. Englewood Cliffs, NJ: Prentice-Hall
- Schuldt, B.A. & Totten, J.W. 1994. Electronic mail versus mail survey response rates. **Marketing Research**, 6 (1), 36-39
- Schumacher R. E. & Lomax, R. G. 2004. **A Beginner's Guide to Structural Equation Modeling**. 2<sup>nd</sup> Edition, Lawrence Erlbaum Associates, New Jersey
- Schumpeter, J. A. 1934. **The Theory of Economic Development**. Cambridge, MA: Harvard University Press
- Sexton, D. L., & Bowman-Upton, N. B. 1991. **Entrepreneurship: Creativity and Growth**. Macmillan, New York.
- Shane, S. & Venkatraman, N. 2000. The Promise of Entrepreneurship as a Field of Research. **Academy of Management Review**, 25, 1: 217-226
- Sharma, P & Chrisman J. J. 1999. Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship. **Entrepreneurship: Theory and Practice**, 23, 3, 11-16.
- Sharma, S. 1996. **Applied Multivariate Techniques**. New York, John Wiley & Sons
- Sharma, S., Durand, R.M., & Gur-Arie, O. 1981. Identification and analysis of moderator variables. **Journal of Marketing Research**, 18, 291-300
- Sheppard, B. H., Harwick, J., & Warshaw, P. R. 1988. The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. **Journal of Consumer Research**, 15, 325-343
- Shilling, M.A. 2008. **Strategic Management of Technological Innovation**, 2<sup>nd</sup> Ed. McGraw-Hill/Erwin

- Shoham, A. & Kropp, F. 1998. Explaining international performance: marketing mix, planning, and their interaction. *Marketing Intelligence & Planning*, 16/2, 114–123
- Shoham, A. 1998. Export performance: a conceptualization and empirical assessment. *Journal of International Marketing*, 6 (3), 59-81
- Shoham, A. Evangelista, F., & Albaum, G. 2002. Strategic firm type and export performance. *International Marketing Review*, 19, 3, 236-258
- Shoham, A., Rose, G.M. & Albaum, G.S. 1995. Export motives, psychological distance, and the EPRG framework. *Journal of Global Marketing*, 8: 9–37.
- Short, J. C. Ketchen, Jr, D. J., Shook C.L. & Ireland, R. D. 2010. The Concept of "Opportunity" in Entrepreneurship Research: Past Accomplishments and Future Challenges. *Journal of Management*, 36, 1: 40-65
- Simmonds K. & Smith, H. 1968. The first export order: a marketing innovation. *British Journal of Marketing*, 2, 93-100
- Smart, D. T., & Conant, J. S. 1994. Entrepreneurial orientation, distinctive marketing competencies, and organizational performance. *Journal of Applied Business Research*, 10(3), 28–38.
- Smith, K.G., Grimm, C.M., Wally, S., & Young, G. 1997. Strategic groups and rivalrous firm behavior: Towards a reconciliation. *Strategic Management Journal*, 18: pp. 149–157
- Song, X.M. & Montoya-Weiss, M.M. 1998. Critical Development Activities for Really New versus Incremental Products. *Journal of Product Innovation Management*, 12: 124-135
- Sood, A. & Tellis, G.J. 2005. Technological evolution and radical innovation. *Journal of marketing*, 69 (3): 152-268
- Sousa, C. M.P. & Bradley, F. 2009. Effects of Export Assistance and Distributor Support on the Performance of SMEs: The Case of Portuguese Export Ventures, *International Small Business Journal*, 27: 681-701
- Sousa, C.M.P., Martinez-Lopez, F. & Coelho, F. 2008. The determinants of export performance: A review of the research in the literature between 1998 and 2005. *International Journal of Management Review*, 10, 4, 343-373
- Southwood, K. E. 1978. Substantive theory and statistical interaction: five models. *American Journal of Sociology*, 83, 1154-1203
- Spector, P. E. 1992. Summated Rating Scale Construction: An Introduction. Quantitative Application in Social Science. Newbury Park, CA., Sage.
- Sriram, V. & Manu, F.A. 1995. Country-of destination and export marketing strategy. *Journal of Global Marketing*, 8, 171–190.
- Steenkamp, J.-B. E. M. & van Trijp, H. C. M. 1991. The Use of LISREL in Validating Marketing Constructs. *International Journal of Research in Marketing*, 8(Nov): 283-299.
- Stevens, G., Burley, J. & Divine, R. 1999. Creativity + Business Discipline = Higher Profits Faster from

- New Product Development. *Journal of Product Innovation Management*, 16:455-468
- Stevenson, H. & Jarillo, J. C. 1990. A Paradigm of Entrepreneurship: Entrepreneurial Management. *Strategic Management Journal*, 11: 17-27
- Stevenson, H. H. 1983. *A perspective on entrepreneurship*. Harvard Business School working paper, 9-384-131
- Stevenson, H. H., & Gumpert, D. 1985. The heart of entrepreneurship. *Harvard Business Review*, 63, 2, 85-94
- Stevenson, H.H. Roberts, M.J. & Grousbck, H.I. 1985. *New Business Ventures and the Entrepreneur*. 2<sup>nd</sup> Edition, Homewood, IL: Richard D. Irwin
- Stewart, D. W. 1981. The Application and Misapplication of Factor Analysis in Marketing Research. *Journal of Marketing Research*, 18(Feb): 51-62
- Strahan, R. & Gerbasi, K. 1972. Short, homogenous version of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 28, 2, 367-391
- Styles, C. Patterson, P.G. & Ahmed, F. 2008. A relational model of export performance. *Journal of International Business Studies*, 39, 880–900
- Styles, C., & Ambler, T. 1994. Successful export practice: The UK experience. *International Marketing Review*, 11(6): 23–47.
- Styles, C., & Ambler, T. 2000. The future of relational research in international marketing: Constructs and conduits. *International Marketing Review*, 17(6): 492–508.
- Szymanski, D. M., Kroff, M. W. & Troy, L. C. (2007). Innovativeness and new product success: insights from the cumulative evidence. *Journal of Academic of Marketing Science*, 35:35–52
- Tabachnick, B.G. & Fidell, L.S. 2007. *Using multivariate statistics*. 6<sup>th</sup> Edition, Boston, Massachusetts: Pearson/Allyn & Bacon
- Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18 (7), 509–533.
- Tellis. G. J. 2008. Important research questions in technology and innovation. *Industrial Marketing Management*, 37, 629–632
- Tellis. G. J., Prahu, J. C. & Chandy, R.K. 2009. Radical Innovation Across Nations: The Preeminence of Corporate Culture. *Journal of Marketing*, 73(January): 3-23
- Tesar, G. & Tarleton, J.S. 1982. Comparison of Wisconsin and Virginia small and medium-sized exporters: aggressive and passive exporters. in Czinkota, M. and Tesar, G. (Eds), *Export Management: An International Context*, Praeger, New York, NY.
- Thirkell, P. C. & Dau, R. 1998. Export Performance: success determinants for New Zealand manufacturing exporters. *European Journal of Marketing*, 32, 9/10, 813-829
- Thomas, A. S. & Mueller, S. L. 2000. A Case for Comparative Entrepreneurship: Assessing the Relevance of Culture. *Journal of International Business Studies*, 31, 2, 287-301

- Thorelli, H.B. 1987. Entrepreneurship in international marketing: some research opportunities. In Hills, G.E. (Ed.), **Research at the Marketing/Entrepreneurship Interface**, United States Association of Small Business and Entrepreneurship (USASBE), Marietta, GA.
- Tomki, S. 2001. Enlightened Experimentation: The New Imperative for Innovation. In **Harvard Business Review on Innovation**, 179-205. Harvard Business School Press, Massachusetts: MA
- Tranfield, D., Denyer, D. & Smart, P. 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. **British Journal of Management**, 14, 207-222
- Tsai, K. Chou, C. & Kuo. J. 2008. The curvilinear relationships between responsive and proactive market orientations and new product performance: A contingent link. **Industrial Marketing Management**, 37, 884–894
- Tsai, W. M.-H., MacMillan, I. C., & Low, M. B. 1991. Effects of strategy and environment on corporate venture success in industrial markets. **Journal of Business Venturing**, 6 (1), 9-28
- Tse, A. C. B. 1998. Comparing the response rate, response speed, and response quality of two methods of sending questionnaires: email versus mail. **Journal of the market research society** 40, 4, 353-361
- Tse, A. C. B., Tse, K. C., Yin, C. H., Ting, C.B. Yi, K.W., Yee, K.P. & Hong. W.C. 1995. Comparing two methods of sending out questionnaire: email versus mail; **Journal of the market research society**, 37. 441-446
- Tushman, M.L., & Anderson, P. 1986. Technological discontinuities and organizational environments. **Administrative Science Quarterly**, 31, 439–465.
- Tzelgov, J. & Henik, A. (1991). Suppression Situations in Psychological Research: Definitions, Implications and Applications. **Psychological Bulletin**, 109/3: 524-536
- Utterback, J.M. & Abernathy, W.J. 1975. A Dynamic Model of Product and Process Innovation. **Omega**, 3 (6), 639-656
- Van De Ven, A.H. 2007. **Engaged Scholarship: A guide for organizational and social research**, Oxford University Press: Oxford
- Venkatraman, N. & Prescott, J. E. 1990. Environment-Strategy Coalignment: An Empirical Test of Its Performance Implications. **Strategic Management Journal**, 11, 1, 1-23
- Venkatraman, N. 1989a. Strategic orientation of business enterprises: The construct, dimensionality, and measurement. **Management Science**, 35: 942-962
- Venkatraman, N. 1989b. The Concept of Fit in Strategy Research: Toward verbal, and Statistical Correspondence. **Academy of Management Review**, 14 (3), 423-4444
- Venkatraman, N., & Ramanujam, V. 1986. Measurement of Business Performance in Strategy Research: A Comparison of Approaches. **Academy of Management Review**, 11, 4, 801-

- Venkatraman, N., & Ramanujam, V. 1987. Measurement of business economic performance: An examination of method convergence. *Journal of Management*, 13:109–122
- Veryzer, R.W. 1998. Discontinuous innovation and new product development process. *Journal of Product Innovation Management*. 15:304-321
- Vesper, K. H. 1979. *Strategic Mapping-A Tool for Corporate Planning*, Long Range Planning, 75-92
- Vesper, K. H. 1990. *New Venture Strategies*. Prentice-Hall, Englewood Cliff, N.J.
- Walters, P. G.P. & Samiee, S. 1990. A model for assessing performance in small U.S. exporting firms. *Entrepreneurship Theory & Practice*, Winter, 33-50
- Wang, C.L. & Ahmed, P.K. 2004. The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management*, 7 (4), 303-313
- Wang, C.L. 2008. Entrepreneurial Orientation, Learning Orientation, and Firm Performance. *Entrepreneurship: Theory and Practice*, July, 635-657
- Webster, F. E. Jr. 1992. The Changing Role of Marketing in the Corporation. *Journal of Marketing*, 56, 4, 1-17
- Webster, F.E. Jr. 1981. Top management's concerns about marketing: Issues for the 1980's. *Journal of Marketing*, 48 (Spring), 46-53
- Weible, R. & Wallace, J. 1998. The impact of the internet on data collection. *Marketing Research*, 10, 3, 19-27
- Welch, L.S., & Wiedersheim-Paul, F. 1980. Initial Exports—A Marketing Failure. *Journal of Management Studies*, October, 333-344
- Werner, S., L. E. Brouthers and K. D. Brouthers 1996. International Risk and Perceived Environmental Uncertainty: The Dimensionality and Internal Consistency of Miller's Measure', *Journal of International Business Studies*, 27(3): 571–587.
- Wernerfelt, B. 1984. A Resource-Based View of the Firm. *Strategic Management Journal*, 5: 171-180
- West, S. G., Finch, F. J. & Curran, P. J. 1995. Structural Equation Models with Nonnormal Variables: Problems and Remedies. *Structural Equation Modeling, Concepts, Issues, and Applications*. R. H. Hoyle. Thousand Oaks, California, Sage Publications: 56-75
- Wiklund, J. & Shepherd, D. 2005. Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20: 71-91.
- Wiklund, J. 1999. The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship Theory and Practice*, 24, 1: 37-48
- Winkler, A. & McCarthy, P. 2004. Maximising the value of missing data. *Journal of Targeting, Measurement and Analysis for Marketing*, 13, 2, 168–178
- Wissema, J.G., Van Der Pol, H. W., & Messer, H. M. 1980. Strategic Management Archetypes.

***Strategic Management Journal***, 1, 37-47

- Wold, H. 1989. ***Introduction to the Second Generation of Multivariate Analysis***, In H. Wold, Editor, ***Theoretical Empiricism***, New York: Paragon House, 7-40
- Wong, W. Saunders, J. & Doyle, P. 1992. ***Business orientations and corporate success***. Warwick Business School Research Paper No.52, University of Warwick, Coventry, U.K.
- Woodman, R.W., Sawyer, J.E. & Griffin, R.W. 1993. Toward a theory of organisational creativity. ***Academy of Management Review***, 18 (2), 293-321
- Wookcock, C.P., Beamish, P. W., & Makino, S. 1994. Ownership-based entry mode strategies and international performance. ***Journal of International Business Studies***, 25 (2): 253 – 273.
- World Bank 2009. ***World Tables***. Baltimore: Johns Hopkins University.
- World Trade Organization, 2008 website:  
[http://www.wto.org/english/res\\_e/statis\\_e/its2008\\_e/its08\\_toc\\_e.htm](http://www.wto.org/english/res_e/statis_e/its2008_e/its08_toc_e.htm)
- Wright, P., Kroll, M., Chan, p., & Hamel, K. 1991. Strategic Profiles and Performance: An Empirical Test of Select Key Propositions. ***Journal of the Academy of Marketing Science***, 19 (3) 245-254
- Yeoh, P. & Jeong, I. 1995. Contingency relationship between entrepreneurship, export channel structure and environment. ***European Journal of Marketing***, 29, 8: 95-115
- Zahra, S. A. & Covin, J. G. 1995. Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. ***Journal of Business Venturing***, 10, 43-58
- Zahra, S. A. & Garvis, D. M. 2000. International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility. ***Journal of Business Venturing***, 15: 469-49
- Zahra, S. A. 1993. New product innovation in established companies: Associations with industry and strategy variables. ***Entrepreneurship Theory and Practice***, 18(2), 47-69
- Zahra, S. A., Neubaum, D. O. & El-Hagrassey, G. M. 2002. Competitive Analysis and New Venture Performance: Understanding the Impact of Strategic Uncertainty and Venture Origin. ***Entrepreneurship Theory and Practice***, Fall, 1-28
- Zahra, S. A., Neubaum, D. O. & Huse, M. 2000. Entrepreneurship in medium-size companies: exploring the effects of ownership and governance systems”, ***Journal of Management***, 26, 947-976
- Zahra, S.A. & Neubaum, D.O. 1998. Environmental Adversity and the Entrepreneurial Activities of New Ventures, ***Journal of Developmental Entrepreneurship***, 3(2): 123-140
- Zahra, S.A. 1995. Corporate Entrepreneurship and Financial Performance: The Case of Management buyouts. ***Journal of Business Venturing***, 10, pp.225-247
- Zahra, S.A. 1996. Technology strategy and financial performance: Examining the moderating role of the firm’s competitive environment. ***Journal of Business Venturing***, 11: 189–219
- Zahra, S.A. 2005. A theory of international new ventures: a decade of research, ***Journal of***

***International Business Studies***, 36: 20–28

- Zahra, S.A., & Bognor, W.C. 2000. Technology Strategy and Software Ventures' Performance: Exploring the moderating effect of competitive environment, ***Journal of Business Venturing***, 15: 135–173
- Zahra, S.A., Ireland, R.D. & Hitt, M.A. 2000b. International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance. ***Academy of Management Journal*** 43(5):925–950.
- Zahra, S.A., Jennings, D.F., & Kuratko, D.F. 1999. The antecedents and consequences of firm-level entrepreneurship: The state of the field. ***Entrepreneurship Theory and Practice***, 24(2), 45–65
- Zhang, C., Cavusgil, S. T., & Roath, A. S. 2003. Manufacturer governance of foreign distributor relationships: Do relational norms enhance competitiveness in the export market? ***Journal of International Business Studies***, 34(6): 550–566.
- Zhou, K. Z. 2006. Innovation, imitation, and new product performance: The case of China. ***Industrial Marketing Management***, 35(3), 394–402.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. 2005. The effects of strategic orientations on technology- and market-based breakthrough innovations. ***Journal of Marketing***, 69(2), 42–60.
- Zou, S. & Stan, S. 1998. The Determinants of Export Performance: A Review of the Empirical Literature between 1987 and 1997. ***International Marketing Review*** 15(5): 333-356
- Zou, S., Taylor, C. R., & Osland, G. E. 1998. The EXPERF Scale: A Cross-National Generalized Export Performance Measure. ***Journal of International Marketing***, 6, 3: 37-58

## **APPENDIX A: APPENDICES TO CHAPTER 4**



## Appendix A 4.1: Additional Variables and their Sources

The latent constructs	Measure descriptions	Measure sources
Intensity of Export Innovative Ideas	<p>Relative to our key export competitors, we more regularly try out experimental/new export strategies.</p> <p>Relative to our key export competitors, we more frequently come up with novel ideas for our export operations.</p> <p>In terms of identifying new/creative ideas for our export operations, we are more inventive than our key export competitors.</p> <p>Export competitors produce far fewer novel plans for their export operations relative to us.</p>	New items developed based on Lumpkin and Dess (1996) with adaptations from Jambulingam et al (2007), Wang and Ahmed (2004) and Wang (2008)
Intensity of Export Innovative Processes	<p>We update our export processes (e.g. channels of distribution, production, etc.) more often than our main export competitors.</p> <p>We innovate more often with respect to our export processes (e.g. channels of distribution, production, etc.) than our main export competitors.</p> <p>The rate at which we innovate our export processes (e.g. administrative, production, channels of distribution, etc.) exceeds industry norms.</p> <p>Export competitors undertake export process innovations (e.g. production, technical, distribution, etc.) less often than we do.</p>	New items developed based on Lumpkin and Dess (1996) with adaptations from Jambulingam et al (2007), Wang and Ahmed (2004) and Wang (2008)
Export Innovative Idea Novelty	<p>Relative to our main export competitors, our <b>ideas</b> (e.g. export strategies, new product ideas, etc.) for our export operations are:</p> <p>Radical</p> <p>Creative</p> <p>Inventive</p> <p>Novel</p> <p>Revolutionary</p>	New items developed based on Lumpkin and Dess (1996)

Appendix A 4.1: Additional Variables and their Sources (*continued*)

<b>The latent constructs</b>	<b>Measure descriptions</b>	<b>Measure sources</b>
Export Innovative Process Novelty	<p>Relative to our main export competitors, the processes (e.g. administrative, technical, production) we use in our export operations are:</p> <ul style="list-style-type: none"> <li>Radical</li> <li>Creative</li> <li>Inventive</li> <li>Novel</li> <li>Revolutionary</li> </ul>	New items developed based on Lumpkin and Dess (1996)
Competitive intensity	<p>Access to export channels of distribution is difficult in our main export market.</p> <p>Demand for our export market products/services is declining as a result of competition.</p> <p>Products/services become obsolete quickly in our export market due to competition.</p> <p>Our main export market is noted for competition between companies.</p> <p>There is substantial competition among companies in our main export market.</p> <p>Competition among companies in our main export market is intense.</p> <p>There is intense promotional war among companies in our main export market.</p>	A selection of measures adapted from Jambulingam et al's (2005) 'competitive intensity' scale, and Miller and Friesen's (1984) 'environment hostility' scale.
Market Heterogeneity	<p>Our export operations are very diverse.</p> <p>Our export customers have very different product requirements</p> <p>Our export customers' buying habits are different for all our products.</p> <p>The nature of the competition in our export markets varies from one product line to another.</p> <p>The challenges/risks in our export markets vary from one product line to another</p>	Items are adapted from Miller and Friesen's (1982) 'environment heterogeneity' scale. HET1 is adapted from Jaworski and Kohli's (1993) "market dynamism" scale
Market Dynamism	<p>In our main export market changes in:</p> <ul style="list-style-type: none"> <li>production/manufacturing technology is constantly changing</li> <li>there are lots of new competitors</li> <li>competitors are constantly trying out new competitive strategies</li> <li>customer needs and demands are changing rapidly</li> <li>firms are rapidly innovating</li> <li>new export markets are emerging for products and services in our industry</li> </ul>	All items are adapted from Miller and Friesen's (1982) 'environment dynamism' scale

Appendix A 4.1: Additional Variables and their Sources (*continued*)

The latent constructs	Measure descriptions	Measure sources
Export industry Life Cycle	<p><b>Newly emerging industry</b> – our products or services are unfamiliar to many potential export customers and industry-wide demand for our products or services is just beginning to emerge. Though export sales may be increasing, profit is generally low or even negative.</p> <p><b>Growing industry</b> – the total industry-wide demand for our products or services is growing. Our products or services have high export market share, and more new competitors are beginning to enter the industry.</p> <p><b>Mature industry</b> – our products or services are very familiar to the vast majority of our prospective export customers, and industry-wide demand for our products or services is relatively stable.</p> <p><b>Declining industry</b> – the total industry-wide demand for our products or services is decreasing at a more or less steady rate.</p>	This measure is adapted from Covin and Slevin (1990).
Export business life cycle	<p><b>Conception and Development stage:</b> The primary focus of this company is on securing adequate financial resources, and developing an export market(s). Most of our export personnel have technical tasks but could be considered more as generalists than as specialists, as we all perform multiple tasks. The export function more closely resembles a task group than a “separate” division. Formality and procedures are almost nonexistent in the export unit, but the export manager is central to all functions and communications.</p> <p><b>Commercialization stage:</b> This company has a product that performs well and meets a need in our key export market(s). We have the capability to produce and sell but we still have to firmly establish the company in our key export market(s). The export manager is central to all functions and communications. The export function has some revenues and backlog of export orders.</p> <p><b>Growth stage:</b> This company is characterised by high growth rates in both export sales and the number of employees involved in exporting matters. The major internal focus is around issues of how to produce, sell and distribute export products/services in volume while attaining export profitability. Internal export structure and communication is becoming more formal, and increasingly individuals working in the export function are assuming specialist roles.</p> <p><b>Stability stage:</b> The major activities of the export unit include: (a) creation of 2<sup>nd</sup> and 3rd generation products, and/or totally new products; (b) securing export growth funding; (c) securing growth in export market share; and (d) penetrating new geographic territories. The export function has a formal organizational structure with clear rules and procedures. A top export management team, composed of some individuals with broad export experience, is in place or being built.</p>	This measure is adapted from Kazanjian and Drazin (1989).

Appendix A 4.1: Additional Variables and their Sources (*continued*)

<b>The latent constructs</b>	<b>Measure descriptions</b>	<b>Measure sources</b>
Export New Market Performance	<p>Regarding the following export market indicators, how well have you performed?</p> <p>Export market share objective?</p> <p>New export market entry objective?</p> <p>Export sales objectives?</p> <p>Export sales growth objectives?</p> <p>Export profit objectives?</p>	All items are adapted from Atuahene-Gima (1995) "market performance" scale
Export new product performance	<p>Please indicate your extent of agreement about how well your new products/services have performed on each of the performance indicators listed below (1 = poor; 7 = excellent):</p> <p>Revenues from new products compared with your export unit objectives.</p> <p>Growth in revenue from new products compared with your export unit objectives.</p> <p>Export profitability of new products compared with your export unit objectives.</p> <p>Growth in export profitability of new products compared with your export unit objectives.</p> <p>Growth in export sales of new products compared with your export unit objectives.</p>	All items are adapted from Atuahene-Gima et al (2005) "new product performance" scale
Export growth	<p>Compared with your industry average, how would you grade your performance on the following indicators?</p> <p>Export sales growth</p> <p>Export profit growth</p> <p>Overall improvement in export performance</p>	All items were adapted from Wiklund and Shepherd's (2005) 'growth' scale

## Appendix A 4.2: Questionnaire used in Pre-test



# ENTREPRENEURIAL PRACTICES OF BRITISH EXPORTERS

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# A STUDY OF ENTREPRENEURIAL PRACTICES OF BRITISH EXPORTERS

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The purpose of this study is to collect information on the entrepreneurial actions of British exporters and to identify common practices and outcomes.

Your co-operation in completing this questionnaire is central to the success of this research project and should take only a short time to complete. Please make each question a separate and independent judgement. It is your first impression and immediate feelings about the questions that matter to us. Please do take care to answer the questions as fully and accurately as you can and remember that there is **no right answer** to the questions asked, as different companies have different ways of doing things. Please indicate how things really are rather than how you wish they were.

**You may respond in complete candour; all your answers will remain absolutely confidential.**

Please answer all questions in relation to your major industry competitors.

When complete, please kindly return this questionnaire in the prepaid, pre-addressed envelope provided.

## SECTION 1: ABOUT YOUR ENTREPRENEURIAL ACTIONS

1. Different companies are good at performing different activities. The following questions ask you to assess your company's beliefs in various areas, relative to your competitors. Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company, by putting the numbers of your choice in the boxes provided at the end of each statement.

Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme
1	2	3	4	5	6	7
My company encourages employees to develop new ideas .....						
Changes in the society at large often give us ideas for new businesses.....						
We never experience a lack of ideas that we can convert into profitable ventures.....						
There is a great encouragement from management for creative thinking.....						
We encourage people in this company to engage in calculated risk-taking business activities.....						
The operating management philosophy of the top management of my company is a strong emphasis on entrepreneurship.....						
When it comes to problem solving, we value creative new solutions more than the solutions of conventional wisdom.....						
Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.....						
It is our belief that a change in the market creates a positive opportunity for us.....						
Members of this business unit cherish talking more about opportunities rather than problems.....						
Everyone in this business is receptive to the idea of change.....						
It is a norm in this business to embrace the idea of innovation .....						
The glue that holds this business together is our commitment to innovation and development.....						
We rate the flexibility of our employees very high.....						
My business unit emphasises competitive actions and achievement.....						
We put emphasis on growth and acquisition of new resources in this business.....						
Top managers in my company encourage employees to take individual initiatives.....						
In my company we reward individuals and/or teams for their achievements.....						
In my company, we believe that individuals/teams should be granted freedom to operate without organisational constraints.....						
I would, generally, say that my company has inflexible organisational tradition.....						



2. Given below are some general statements made by some managers about various innovation activities in their companies. By filling in the blank spaces provided in each statement, please indicate the situation as it applies in your company. Please put the numbers of your choice in the boxes provided at the end of each statement.

Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme extent
1	2	3	4	5	6	7

- We increase our existing product lines more often than our major competitors (1= not at all, to an extreme extent = 7).....
- We continuously build reputation for new methods and technologies in our industry.(1= not at all, to an extreme extent =7)..
- Compared with our closest competitor, I would generally say that we have served more new markets. (1= not at all, to an extreme extent = 7).....
- We consider our new products/services to be “new to the world” (1 = strongly disagree, 7 = strongly agree).....
- Our activities have reshaped our export market within the past five years. (1 = very unremarkably, 7 = very remarkably).....
- I would, generally, say that we are at cutting edge of technology when it comes to new manufacturing/production processes (1= not at all, 7 = to an extreme extent).....
- Competitors in our industry recognise us as innovation leaders (1= not at all, to an extreme extent = 7).....
- We are recognised for being at the leading edge of technological innovation (1= not at all, to an extreme extent = 7).....
- We are first to go to market with new products or services in our industry (1 = rarely, 7 = always).....
- We innovate even at the point of rendering our existing products or services obsolete (1 = rarely, 7 = regularly).....
- We invest heavily in research and development (not at all, 7 = to an extreme extent).....
- This company stimulates creativity among its staffs (1 = intermittently, 7 = constantly).....
- We adopt lots of new production / manufacturing processes in our company operations (1 = rarely, 7 = regularly).....
- We have more new product replacements in our industry compared with our major competitors (1 = strongly disagree, 7 = strongly agree).....
- We are very creative with our new products or services (1 = not at all, 7 = to an extreme extent).....
- We undertake more new product experiments than our closest competitors (1 = strongly disagree, 7 = strongly agree).....

**In our export operations ... (please circle the number that best represents your opinion)**

1. When I consider the degree of differences that exist between our production/manufacturing processes and that of our closest competitor’s, I generally would say that our manufacturing/production processes are:

Mere improvement on existing technology      **1...2...3...4...5...6...7**      Radical technological change  
 (1 = completely mere improvement, 7 = completely radical change)

2. When I consider the degree of differences that exist between our target market(s) and that of our closest competitor’s markets, I generally would say that our target market (s) is/are:

The same old market      **1...2...3...4...5...6...7**      Remarkably different new market  
 (1 = the same old, 7 = remarkably different new)

3. New export projects are approved on a ‘stage by stage’ basis **1...2...3...4...5...6...7**      ‘Blanket’ approval  
 (1 = completely stage by stage approval, 7 = completely blanket approval)

3. Below are lists of statements that other managers have made regarding how they make decisions, and do their jobs within their companies. The following questions ask you to assess various decision-making activities in your company, relative to your competitors. Using the scales below, please indicate the extent to which the following statements represent the actual situation in your company (Please put the appropriate number in the boxes provided at the end of each statement where needed).

- We have generally followed 'tried and true' paths (1 = not every often, 7 = at all times).....
- We normally undertake high risk projects with the expectation that we will receive very high returns (1 = not at all, 7 = to an extreme extent).....
- Top managers in my company like to "play it safe" (1 = rarely, 7 = regularly).....
- We take lots of bold and wide-ranging actions (1 = not at all, 7 = to an extreme extent).....
- Top managers implement plans only if they are certain that they will work (1 = not at all, 7 = to an extreme extent).....
- This company shows a great deal of tolerance for high risk projects (1 = not very often, 7 = at all times).....
- We normally borrow heavily to finance our export projects although we are unsure about the returns from those projects (1 = not at all, 7 = to an extreme extent).....
- We generally view our new market entry decisions as high-risk (1 = strongly disagree, 7 = strongly agree).....

4. We would now like to ask you about how your company deals with its competitors. Again, remember that there is no right answer, as different companies have different ways of dealing with their competitors. Please use the scales at the end of each statement to indicate the extent to which these statements represent the situation in your company (1 = NOT AT ALL, 7 = TO AN EXTREME EXTENT). Please circle the number that comes closest to expressing our opinion.

In our export operations,...	1 = Not at all, 7 = To an extreme extent						
We typically respond to actions which competitors initiate	1	2	3	4	5	6	7
We normally adopt head to head confrontation with our industry rivals	1	2	3	4	5	6	7
We use aggressive posture effectively to combat industry trends that threaten our survival or competitive position	1	2	3	4	5	6	7
We rapidly response to competitive actions that threaten us in our export markets	1	2	3	4	5	6	7
We have a high level of advertising expenditures relative to our major competitors	1	2	3	4	5	6	7
We are constantly cutting prices to increase market share	1	2	3	4	5	6	7
We are constantly looking for opportunities to dominate our industry rivals	1	2	3	4	5	6	7
We typically adopts a very competitive, "undo-the-competitors" posture	1	2	3	4	5	6	7

5. Below are lists of statements that other managers have made regarding how people interact, and make decisions within their companies. Please use the scale below to indicate the extent to which you agree or disagree with the following statements (**1 = STRONGLY DISAGREE, 7 = STRONGLY AGREE**). Please circle the number that comes closest to expressing your opinion.

In our export operations, ...

**1 = Strongly disagree, 7 = Strongly agree**

We normally use autonomous work units such as "skunk works" to enhance creative thinking	1	2	3	4	5	6	7
We have lots of tolerance for autonomous groups	1	2	3	4	5	6	7
We normally reduce/eliminate initiatives that are not succeeding	1	2	3	4	5	6	7
We implement the necessary structural changes (e.g. small and autonomous groups) to stimulate new ideas	1	2	3	4	5	6	7
Ambitious researchers are welcome to engage in any 'clandestine' work.	1	2	3	4	5	6	7
We have staffs who are 'fanatic' about their new ideas (e.g. new product idea, new production process ideas)	1	2	3	4	5	6	7
When making key decisions, we consider the presence of a zealous and/or volunteer champion very important	1	2	3	4	5	6	7
Managers have every reason to believe that if they act like 'King Kong', they may end-up becoming chairmen/chairwomen of this company some day	1	2	3	4	5	6	7
My business unit conducts its self very much like an independent entity.	1	2	3	4	5	6	7
There is normally intense competition between groups, managers, brands, etc. in my company.	1	2	3	4	5	6	7

6. Listed below are descriptions of statement about how some companies say they deal with their customers. Using the scales below, please indicate the extent to which the following statements apply to the actual situation in your company. Please circle the number that comes closest to expressing your opinion.

In our export operations, ...

**1 = Not at all, 7 = To an extreme extent**

We constantly identify future needs of our customers	1	2	3	4	5	6	7
We normally anticipate future demand conditions in our industry	1	2	3	4	5	6	7
We are very motivated to export for "proactive reasons" (e.g. market share, profit, planning, expansion)	1	2	3	4	5	6	7
We undertake lots of export planning activities	1	2	3	4	5	6	7
We implement formal export research in a systematic fashion	1	2	3	4	5	6	7
We are less likely to rely on unsolicited export orders	1	2	3	4	5	6	7
We purposefully search for opportunities in areas where customers have difficulties expressing their needs	1	2	3	4	5	6	7
My company normally exploits future product market opportunities ahead of the competition	1	2	3	4	5	6	7

## SECTION 2: ABOUT YOUR MARKETING ACTIVITIES AND FINANCIAL RESOURCES

1. Different companies are good at different things. The following questions ask you to assess your company's skills in various areas relative to your competitors. Relative to your industry competitors, please rate your company's skills in the following areas. (1 = Much worse, 7 = Much better). Please circle the number that comes closest to expressing your opinion.

Compared to your competitors, your ...	1 = Is much worse, 7 = Is much better						
Knowledge of industry trends	1	2	3	4	5	6	7
Awareness of company Overseas marketing strengths	1	2	3	4	5	6	7
Overseas marketing planning process	1	2	3	4	5	6	7
Allocation of marketing department resources	1	2	3	4	5	6	7
Integration of marketing activities	1	2	3	4	5	6	7
Skill to segment and target export markets	1	2	3	4	5	6	7
Skill to set up overseas distribution and sales channels	1	2	3	4	5	6	7
Effectiveness of export pricing programmes	1	2	3	4	5	6	7
Overseas advertising or promotional effectiveness	1	2	3	4	5	6	7
Control and evaluation of overseas marketing activities	1	2	3	4	5	6	7
Competence to build relationships in foreign markets	1	2	3	4	5	6	7
Ability to research new competitors and overseas customers	1	2	3	4	5	6	7
Skill to leverage your brand and/or company reputation to new export markets	1	2	3	4	5	6	7

2. The following statements ask you about the extent to which financial resources are available to, and can be accessed, by managers in your company. Please use the scale below to indicate the extent to which the following statements apply to the actual situation in your company (1 = not at all, 7 = to an extreme extent). Please circle the number that comes closest to expressing your opinion.

In our export operations, ...	1 = not at all, 7 = to an extreme extent						
Export managers are satisfied with the financial capital available to them for export operations	1	2	3	4	5	6	7
The export unit has easy access to financial capital to support its export operations	1	2	3	4	5	6	7
Top management does not regularly reduce export budgets	1	2	3	4	5	6	7
I would consider the current sources of financial capital to my company as adequate.	1	2	3	4	5	6	7
The right amount of financial resources are allocated to the implementation of our export operations	1	2	3	4	5	6	7
Financial resource structure is well aligned with the export operation requirements.	1	2	3	4	5	6	7

### SECTION 3: YOUR COMPANY'S BUSINESS ENVIRONMENT

1. Below are different sets of statements that are intended to collect information about your principal industry environment. Please answer each question with reference to your principal industry that generates the largest percentage of your business unit's export sales. For each question, please circle the response that best represents the actual condition in your business unit's principal industry.

In our kind of industry:

<b>Production/service technology in our principal industry</b>	has changed very much	1 2 3 4 5 6 7	has remained the same
<b>Growth opportunities in our export environment</b>	have decreased dramatically	1 2 3 4 5 6 7	have increased dramatically
<b>Rate of innovation of new operating processes</b>	rate has fallen dramatically	1 2 3 4 5 6 7	rate has risen dramatically

2. Below are sets of statements that other managers have made regarding resources in their industry business environment. Answer each question with reference to your principal industry that generates the largest percentage of your business unit's export sales. Indicate the extent to which you agree or disagree with each statement. Please circle the response that best represents the actual condition in your business unit's principal industry.

Nature of the business environment	1 = strongly disagree, 7 = strongly agree						
Access to export channels of distribution is difficult in our industry	1	2	3	4	5	6	7
There is a substantial difficulty in accessing financial capital in our industry	1	2	3	4	5	6	7
Demands for industry products is declining	1	2	3	4	5	6	7
Government interferences in our industry is substantial	1	2	3	4	5	6	7
Bankruptcy among companies in our industry is high	1	2	3	4	5	6	7
Products become obsolete quickly in our industry	1	2	3	4	5	6	7
We are much undiversified company and serve the same export customers	1	2	3	4	5	6	7
Our export customers' buying habits are about the same for all our products	1	2	3	4	5	6	7
The nature of the competition in our export business varies a great deal from one product line to another	1	2	3	4	5	6	7
The uncertainties in our export market vary a great deal from one product line to another	1	2	3	4	5	6	7

3. We would now like to ask you about the variation in your export markets. Again, please remember there is no right answer, different companies operate in different markets, and each market comes with different challenges. Answer each question with reference to your principal industry that generates the largest percentage of your business unit's export sales. Please indicate the extent to which the following statements apply to your principal industry.

Not at all	To a very slight extent	To a small extent	To a moderate extent	To a considerable extent	To a great extent	To an extreme
1	2	3	4	5	6	7

- We are much undiversified company and serve the same export customers .....
- Our export customers' buying habits are about the same for all our products.....
- The nature of the competition in our industry varies a great deal from one product line to another.....
- The uncertainties in our export market vary a great deal from one product line to another.....

4. This time, we would like to ask you about your principal industry's growth stage. Please indicate the percentage of your total annual sales revenue that is accounted for by products from each of the following four industry life cycle stages. Please distribute a total of 100% among the four industry cycle stages. Larger numbers signify greater contribution.

Introduction stage: .....	
Growth stage: .....	
Maturity stage: .....	
Decline stage: .....	
<b>TOTAL</b> .....	100%

#### SECTION 4: ABOUT YOUR COMPANY'S PERFORMANCE

A. Please use the following scale to indicate the degree of importance your firm (or business unit) currently places on each of the following performance criteria. (1 = Not at all important, 4 = somewhat important, 7 = extremely important)

1= Not at all important, 4 = somewhat important, 7 = extremely important

1. Export sales volume .....							
2. Export profit to sales ratio.....	1	2	3	4	5	6	7
3. Export market share .....							
4. Ability to fund export market growth from export profit ...	1	2	3	4	5	6	7
5. Sales growth rate.....	1	2	3	4	5	6	7
6. Cash flow.....							
7. Return on shareholder equity.....	1	2	3	4	5	6	7
8. Gross profit margin.....	1	2	3	4	5	6	7
9. Net profit from operations .....							
10. Return on investment.....	1	2	3	4	5	6	7

**B. Over the past three years, how satisfied have you been with the overall performance of your company along the following dimensions? (Please circle the number that best represents your opinion).**

	1= Very Dissatisfied			4 = Neutral		7 =Very Satisfied	
1. Market share.....	1	2	3	4	5	6	7
2. Sales level.....							
3. Sales growth rate.....	1	2	3	4	5	6	7
4. Cash flow.....							
5. Return on shareholder equity.....	1	2	3	4	5	6	7
6. Gross profit margin.....	1	2	3	4	5	6	7
7. Net profit from operations .....							
8. Profit to sales ratio.....	1	2	3	4	5	6	7
9. Return on investment.....	1	2	3	4	5	6	7
10. Your ability to fund business growth from profit.....	1	2	3	4	5	6	7

**C. The following questions further ask you to assess the financial performance of your company. Please write or circle the appropriate response where applicable.**

- Over the past three years, what has been the average annual growth/decline rate of your export sales? \_\_\_\_\_%
- Over the past three years, what has been the average annual growth/decline rate of your export profit? \_\_\_\_\_%
- How does your average annual export sales growth/decline compare to the industry average?  
(1 = much worse, 4 = much the same, 7 = much better) .....
- Compared with the industry average, how do you evaluate your average export profit growth/Decline?  
(1 = much worse, 4 = much the same, 7 = much better).....
- Overall, would you consider your export sales to be growing?  
(1 = not at all, 4 = somewhat, 7 = to an extreme extent).....
- In general, would you consider your export profit to be growing?  
(1 = not at all, 7 = to an extreme extent).....
- Over the last three financial years, what has been your average annual sale turnover? £ \_\_\_\_\_
- Overall, how PROFITABLE has EXPORTING been over the past three years?

<b>2004-2005</b>	<b>very unprofitable</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>very profitable</b>
<b>2005-2006</b>	<b>very unprofitable</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>very profitable</b>
<b>2006-2007</b>	<b>very unprofitable</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>very profitable</b>

- Thinking about the **overall performance** of your company as an exporter, how would you rate your company's performance over the past three years? **Poor**    **1**    **2**    **3**    **4**    **5**    **6**    **7**    **Excellent**

## SECTION 5: ABOUT YOUR COMPANY

Please complete this section by considering your UK-based operations only.

1. In which industry does your company operate? ..... (please PRINT)
2. Approximately what percentage of your firm's sales is generated by: **a.** physical products .....%  
**b.** services .....%
3. Roughly what percentage of your firm's sales is generated by: **a.** business to business products?.....%  
**b.** consumer products ?.....%
4. How long has your company been in business? .....  years OR since .....
5. How long has your company been exporting? .....  years OR since .....
6. Which of the following destinations does your company export to? Please tick the box (es) that apply to your company.  
EU  Eastern Europe  North America  Asia  Middle East   
Africa  South/Central America  Australia/New Zealand
7. Approximately, how many countries does your company export to? .....
8. Does your company have a separate formal export department? (Please tick) **Yes**  **No**
9. How many full-time staff does your company currently employ? .....
10. Of this number, how many are directly involved in the company's export activities? .....
11. Compared with the competition, your company is best described as:  
**Very Small player 1 2 3 4 5 6 7 Very large player**
12. On average, what has been the total sales turnover of your company over the past three years? £ .....
13. What percentage of your total sales turnover is generated by export? .....%
14. Over the past three years, approximately what has been the average total profit (before tax) of your company? £.....
15. Over the past three years, what percentage of your annual total profit is derived from export? .....

## SECTION 6: ABOUT YOURSELF

The next set of questions seeks to learn a little bit about you.

1. What is your job title? .....
2. By your estimation, what would you consider to be your employment role (please tick the most appropriate box)?  
[1] Owner /CEO /Director      [2] Senior Manager  
[3] Middle Manager              [4] Junior Manager  
[5] Other .....
3. How long have you been with your company? Approximately -----years



# **Thank you very much for your co-operation in this study**

**Please return this completed questionnaire in the prepaid, pre-addressed envelope provided.**

If you would like to receive a complimentary report containing a summary of this study, please tick the box and either complete the name and address panel or provide your email below:

**Address:**

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Alternatively, you can include your business card in the return envelope.

<i>Survey wave: P / M</i>	<i>1 / 2</i>
<i>Survey code:</i>	

*Loughborough University Business School office use only*

## **Appendix A 4.3: Cover Letter used in Pre-test**

30<sup>th</sup> October 2008

Dear Sir/Madam,

I contacted you recently to ask for your help in my research on export success. I am a doctoral researcher from Loughborough University and I am undertaking research in the area of export marketing. This study is being sponsored by the marketing and retailing group at the Business School. As part of my research I need to contact export decision-makers in companies in the UK. Your company is one of the few companies that meet our criteria. I obtained your business postal address from the British Exporter's Database (via the Institute of Export homepage).

To assist me in my research, I would be very grateful if you, or your export sales/marketing manager/director, could complete a questionnaire on export entrepreneurial practices. This should take you up to 30 minutes to complete. I am well aware that this request represents a demand on your already busy schedules, but your participation could really make the difference between success and failure of this study, and my PhD. Therefore, your co-operation is greatly appreciated.

A questionnaire is included in this letter. I have provided instructions for the completion of each section of the questionnaire, and have enclosed a stamped addressed envelope for its return. You are kindly reminded that there are no right or wrong answers to the questions asked. As I do not ask you for your name, your **complete confidentiality** is guaranteed. Please rest assured that any information you provide will be treated confidentially and for academic purposes only. I do need to ask some background information, but you cannot be identified from this as only general findings from the survey will be reported. As a way of expressing my appreciation for assisting me in my research, I guarantee you a complimentary report containing a summary of this study. In addition, you will have a chance of winning a **£200** cash prize in your name for your favourite charity. Please provide me with your correct contact details where you would want your prize to be sent.

Your assistance with this study would be very much appreciated. Should you have any queries, please do not hesitate to contact me on the contact details provided at the top of this letter or any of my doctoral supervisors: Prof. John Cadogan, Chair of Marketing, Loughborough University Business School (Tel: 01509 228846; email: J.W.Cadogan@lboro.ac.uk); and Dr. Victoria Story, Lecturer of Marketing, Nottingham University Business School (Tel: 0115 8466192; Email: vicky.Story@nottingham.ac.uk).

Thank you in advance for your help.

Yours sincerely,



Nathaniel Boso  
Doctoral Candidate & Research Assistant

## **Appendix A 4.4: Pre-notification Letter [Main Mail Survey]**

The Business School  
Ashby Road  
Loughborough, LE11 3TU  
Direct Line: 01509 228842  
Mobile: 07912 342596  
Email: N.Boso2@lboro.ac.uk

1<sup>st</sup> December 2008

Dear Sir/Madam,

I am currently a PhD student at Loughborough University Business School and I am doing my doctoral research in the area of export marketing. I am interested in understanding factors that may facilitate or inhibit export success among British exporters. I therefore need to contact export decision makers in UK exporting companies as part of my research. I obtained your business address from the British Exporters database (via the Institute of Export homepage).

To assist me with my study, I write to ask for your participation in my research. Specifically, within the next seven days I would like to send a questionnaire to you to complete and return to me. It is expected that it will take you about 30 minutes or less to complete this questionnaire. I am well aware that this request represents a demand on your already busy schedules, but your participation could really make the difference between success and failure of the study, and of course my PhD as well.

As an appreciation for your participation in this study you are guaranteed a summary report on benchmarking factors that may influence export success, which will be sent to you at the end of the study. All participants will be entered into a draw and you could win a **£200** cash prize in your name for your favourite charity. Please rest assured that any information you provide at anytime during this study will be treated **confidentially**, and no details whatsoever will be passed on to any third-party. Please contact my office on the contact details above if you do not want to participate in this study.

Your assistance in this matter is very much appreciated. Should you have any queries, please do not hesitate to contact me on the contact details provided above or any of my doctoral supervisors: Prof. John Cadogan, Chair of Marketing, Loughborough University Business School (Tel: 01509 228846; email: J.W.Cadogan@lboro.ac.uk); and Dr. Victoria Story, Lecturer of Marketing, Nottingham University Business School (Tel: 0115 8466192; Email: vicky.Story@nottingham.ac.uk).

Thank you very much in advance for your help.

Yours sincerely,



Nathaniel Boso  
Doctoral Candidate

## Appendix A 4.5: Final Questionnaire

## **A SURVEY OF ENTREPRENEURIAL PRACTICES OF BRITISH EXPORTERS**

### **RESEARCH TEAM:**

**MR. NATHANIEL BOSO**

*Doctoral Candidate in Marketing*

Tel: 01509 882 242

Email: n.boso2@lboro.ac.uk

**DR. VICKY M. STORY**

*Lecturer of Marketing*

Tel: 01158 466 192

Email: Vicky.Story@nottingham.ac.uk

**PROF. JOHN W. CADOGAN**

*Chair of Marketing*

Tel: 01509 228 846

Email: J.W.Cadogan@lboro.ac.uk

The Marketing and Retailing Group  
Loughborough University Business School  
Ashby Road  
Loughborough  
LE11 3TU

Fax: 01509 233 961

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The purpose of this study is to collect information on the entrepreneurial actions of British exporters and to identify common practices and outcomes.

Your co-operation in completing this questionnaire is central to the success of this research project. Please make each question a separate and independent judgement. It is your first impression and immediate feelings about the questions that matter to us. Please do take care to answer the questions as fully and accurately as you can and remember that there is **no right answer** to the questions asked, as different companies have different ways of doing things. Please indicate how things really are rather than how you wish they were.

When complete, please kindly return this questionnaire in the prepaid, pre-addressed envelope provided.

**You may respond in complete frankness; all your answers will  
remain absolutely confidential.**

## SECTION I: ABOUT YOUR EXPORT OPERATIONS

1 To what extent do you agree or disagree with the following statements? (Please circle the number that best represents your opinion)

	<i>Strongly Disagree</i>		<i>Neither Agree Nor Disagree</i>			<i>Strongly Agree</i>	
Our company has produced more new products/services for our export markets than our key export market competitors during the past five years.....	1	2	3	4	5	6	7
On average, each year we introduce more new products /services in our export markets than our key export market competitors.....	1	2	3	4	5	6	7
Industry experts would say that we are more prolific when it comes to introducing new products/services in our export markets.....	1	2	3	4	5	6	7
Our key export market competitors cannot keep up with the rate at which we introduce new products/services in our export markets.....	1	2	3	4	5	6	7
Relative to our key export competitors, we more regularly try out experimental/new export strategies.....	1	2	3	4	5	6	7
Relative to our key export competitors, we more frequently come up with novel ideas for our export operations.....	1	2	3	4	5	6	7
In terms of identifying new/creative ideas for our export operations, we are more inventive than our key export competitors.....	1	2	3	4	5	6	7
Export competitors produce far fewer novel plans for their export operations relative to us.....	1	2	3	4	5	6	7
We update our export processes (e.g. technical, administrative, production, channels of distribution) more often than our main export competitors.....	1	2	3	4	5	6	7
We innovate more often with respect to our export processes (e.g. technical, administrative, production, channels of distribution) than our key export competitors.....	1	2	3	4	5	6	7
The rate at which we innovate our export processes (e.g. technical, administrative, production, channels of distribution) exceeds industry norms.....	1	2	3	4	5	6	7
Export competitors undertake export process innovations (e.g. technical, administrative, production, channels of distribution) less often than we do.....	1	2	3	4	5	6	7

2 To what extent do the following statements apply to the situation in your company? (please circle the number that best represent your opinion)

	<i>Not at all</i>		<i>To a moderate extent</i>			<i>To an extreme extent</i>	
Top export managers of our company, in general, tend to invest in high-risk export projects.....	1	2	3	4	5	6	7
We make risky resource commitments in export projects.....	1	2	3	4	5	6	7
Top export managers do not normally like to “play it safe” in this company.....	1	2	3	4	5	6	7
This company shows a great deal of tolerance for high risk export projects.....	1	2	3	4	5	6	7
Our export strategy is characterised by a strong tendency to take risks.....	1	2	3	4	5	6	7
Taking chances is part of our export business strategy.....	1	2	3	4	5	6	7



3 Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the numbers of your choice in the boxes provided.

Not at All	To a very Slight extent	To a small Extent	To a moderate extent	To a considerable extent	To a great Extent	To an extreme extent
1	2	3	4	5	6	7

We find it easy to ensure that export strategy choices are aligned with our broader organisational goals.....

New export market strategies are always coordinated with our overall organisational strategies.....

Our export strategies complement our broader organisational goals.....

We have the flexibility to reconfigure our chain of resources to take advantage of new export opportunities.....

In our export markets, we can easily reorganise our business activities to ensure that they are in line with our broader organisational goals.....

We can easily leverage our resources (e.g. R&D, HR, IT, accounting) to effectively enter new export markets.....

It is not difficult for us to rearrange our resources to effectively enter new export markets.....

We can easily redeploy our current resources (e.g. R&D, HR, IT, accounting) to exploit new export opportunities.....

Even if resources are tied up with other business activities (e.g. production, sales), we can always redeploy them in new export markets.....

Resources currently used elsewhere in this company can easily be redeployed to exploit promising export opportunities.....

Export managers are satisfied with the financial capital available to them for export operations.....

The export unit has easy access to financial capital to support its export operations .....

Our export operations are better financed than our key competitors' operations.....

If we need more financial assistance for our export operations, we could easily get it.....

Financial constraints do not impede our export activities.....

We have substantial financial resources at the discretion of export managers for funding export initiatives.....

We are able to obtain financial resources at short notice to support export operations.....

Our export unit has uncommitted financial resources that can quickly be used to fund new export operations.....

**4 How would you generally describe the export markets that your company operates in? Kindly tick the box that is most representative of your export markets. (Please tick one box only)**

- Newly emerging industry** – our products or services are unfamiliar to many potential export customers and industry-wide demand for our products or services is just beginning to emerge. Though export sales may be increasing, export profit is generally low or even negative.
- Growing industry** – the total industry-wide demand for our export products or services is growing. Our products or services have high export market share, and more new export competitors are beginning to enter the industry.
- Mature industry** – our products or services are very familiar to the vast majority of our prospective export customers, and industry-wide demand for our products or services is relatively stable.
- Declining industry** – the total industry-wide demand for our export products or services is decreasing at a more or less steady rate.

**5 Please rate the following statements in relation to your key export market competitors. (Please circle the number that best represents your opinion)**

Relative to our main export competitors, **our ideas** (e.g. export strategies, new product ideas, etc.) for our export operations are:

	<i>Less</i>		<i>the Same</i>			<i>More</i>	
Radical.....	1	2	3	4	5	6	7
Revolutionary.....	1	2	3	4	5	6	7
Inventive.....	1	2	3	4	5	6	7
Novel .....	1	2	3	4	5	6	7
Creative.....	1	2	3	4	5	6	7

Relative to our main export competitors, **the products/services** we offer in our export market(s) are:

	<i>Less</i>		<i>the same</i>			<i>More</i>	
Radical.....	1	2	3	4	5	6	7
Revolutionary.....	1	2	3	4	5	6	7
Inventive.....	1	2	3	4	5	6	7
Novel .....	1	2	3	4	5	6	7
Creative.....	1	2	3	4	5	6	7

Relative to our main export competitors, **the processes** we use (e.g. technical, administrative, production, channels of distribution) in our export operations are:

	<i>Less</i>		<i>the same</i>			<i>More</i>	
Radical.....	1	2	3	4	5	6	7
Revolutionary.....	1	2	3	4	5	6	7
Inventive.....	1	2	3	4	5	6	7
Novel .....	1	2	3	4	5	6	7
Creative.....	1	2	3	4	5	6	7

**6 Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the number of your choice in the boxes provided.**

Not at All	To a very Slight extent	To a small Extent	To a moderate extent	To a considerable extent	To a great Extent	To an extreme extent
1	2	3	4	5	6	7

- We seek to exploit anticipated changes in our export market ahead of our rivals.....
- We seize initiatives whenever possible in our export market operations.....
- We act opportunistically to shape the export environment in which we operate.....
- We are constantly seeking new opportunities to shape the export environment to our own advantage.....
- Our foresight makes us a leader in our export market.....
- We consistently try to position ourselves to meet emerging export market demands.....
  
- We intensely challenge export competitors to achieve competitive goals.....
- We adopt an aggressive competitive stand in our export markets.....
- We typically adopt an “undo-the-competitor” posture in our export markets.....
- We tend to target our export competitors’ weaknesses.....
- We set ambitious export competitive targets .....
- We take hostile steps to achieve export competitive goals.....
- Our actions towards export competitors can be termed as aggressive.....
- We are responsive to the manoeuvres of our main export competitors.....
- In dealing with our main export competitors, our company typically adopts a very competitive posture aiming at overtaking the competitors.....
  
- Key export strategies are decided by people within the export unit.....
- Export personnel behave autonomously in our export operation.....
- Export personnel act independently to carry out their export ideas through to completion.....
- Export personnel are self-directed in pursuit of export opportunities.....
- Management approves of independent activities by export personnel to develop new export opportunities.....
- Identifying new export business opportunities is the concern of all export personnel.....
- New export business opportunities suggested by export personnel are acted upon by export decision makers.....

**7 Using the scale below, please indicate the extent to which you agree or disagree with the following statements by putting the number of your choice in the boxes provided.**

**Strongly disagree**

**Disagree**

**Slightly disagree**

**Neutral**

**Slightly agree**

**Agree**

**Strongly agree**

In our export operations...

we generate a lot of information concerning trends (e.g., regulations, technological developments, political, economic) in our export markets.....

we constantly monitor our level of commitment and orientation to serving export customer needs....

we are fast to detect fundamental shifts in our export environment (e.g., regulation, technology, economy) .....

we periodically review the likely effect of changes in our export environment (e.g., regulations, technology).....

we generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.....

too much information concerning our export competitors is discarded before it reaches decision makers.....

information that can influence the way we serve our export customers takes forever to reach export personnel.....

important information about our export customers is often 'lost in the system'.....

information about our export competitors' activities often reaches relevant personnel too late to be of any use.....

important information concerning export market trends (e.g. regulation, technology) is often discarded as it makes its way along the communication chain.....

if a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.....

we are quick to respond to significant changes in our competitors' price structures in foreign markets.....

we rapidly respond to competitive actions that threaten us in our export markets.....

we are quick to respond to important changes in our export business environment (e.g., regulation, technology).....

8 Please read the statements below and tick the box to indicate which is characteristic of your firm and its export activities today. Undoubtedly, your firm may not fit neatly into any one of the statements, but please select that one which most closely captures the current state of your company.

The primary focus of this company in its export operations is on securing adequate financial resources, and developing an export market(s). Most of our export personnel have technical tasks but could be considered more as generalists than as specialists, as we all perform multiple tasks. The export function more closely resembles a task group than a "separate" division. Formality and procedures are almost nonexistent in the export unit, but the export manager is central to all functions and communications. Export revenue is in an early phase of development.

This company has a product that performs well and meets a need in our key export market(s). We have the capability to produce and sell but we still have to firmly establish the company in our key export market(s). The export manager is central to all functions and communications. The export function has now developed some revenue streams and a backlog of export orders is growing.

This company is characterised by high growth rates in both export sales and the number of employees involved in exporting matters. The major internal focus is around issues of how to produce, sell and distribute export products/services in volume while attaining export profitability. Internal export structure and communication is becoming more formal, and increasingly individuals working in the export function are assuming specialist roles.

The major activities of the export unit include: (a) creation of second and third generation products, and/or totally new products; (b) securing export growth funding; (c) securing growth in export market share; and (d) penetrating new geographic territories. The export function has a formal organizational structure with clear rules and procedures. A top export management team, composed of some individuals with broad export experience, is in place or being built.

**SECTION II: ABOUT YOUR COMPANY’S EXPORT MARKET ENVIRONMENT**

1 Please answer the following questions by circling the number that best describes the actual condition in your company’s export market environment. (Please circle the number that best represents your opinion)

	<i>Strongly disagree</i>		<i>Neutral</i>			<i>Strongly agree</i>	
Access to export channels of distribution is difficult across our export markets.....	1	2	3	4	5	6	7
Demand for our products or services in our export markets is declining as a result of competition.....	1	2	3	4	5	6	7
Products become obsolete quickly in our export markets due to competition.....	1	2	3	4	5	6	7
Our export markets are noted for competition between companies.....	1	2	3	4	5	6	7
There is substantial competition among companies in our export markets.....	1	2	3	4	5	6	7
Competition among companies in our export markets is intense.....	1	2	3	4	5	6	7
There is an intense promotional war among companies in our export markets.....	1	2	3	4	5	6	7

2 Please answer the following questions by circling the number that best describes the actual condition across your company's export market environments. (Please circle the number that best represents your opinion)

In our export market environments...	<i>Not at all</i>		<i>To a moderate extent</i>			<i>To an extreme extent</i>	
production/manufacturing technology is constantly changing.....	1	2	3	4	5	6	7
there are lots of new competitors.....	1	2	3	4	5	6	7
competitors are constantly trying out new competitive strategies.....	1	2	3	4	5	6	7
customer needs and demands are changing rapidly.....	1	2	3	4	5	6	7
firms are rapidly innovating.....	1	2	3	4	5	6	7
new export markets are emerging for products and services in our industry.....	1	2	3	4	5	6	7

3 Using the scale below, please indicate the extent to which the following statements describe the actual situation across your export market environments by putting the number of your choice in the boxes provided.

<b>Strongly disagree</b>	<b>Disagree</b>	<b>Slightly disagree</b>	<b>Neutral</b>	<b>Slightly agree</b>	<b>Agree</b>	<b>Strongly agree</b>
1	2	3	4	5	6	7

Our export operations are very diverse.....	
Our export customers have very different product requirements.....	
Our export customers' buying habits are different for all our products.....	
The nature of the competition in our export markets varies from one product line to another.....	
The challenges/risks in our export market vary from one product line to another.....	

**SECTION III: ABOUT YOUR COMPANY**

1 Over the past three years, how satisfied have you been with the overall performance of your company along the following dimensions? (Please circle the number that best represents your opinion)

	<i>Very Dissatisfied</i>		<i>Neutral</i>			<i>Very Satisfied</i>	
Export market share.....	1	2	3	4	5	6	7
Export sales volume.....	1	2	3	4	5	6	7
Export sales growth rate.....	1	2	3	4	5	6	7
New export market entry.....	1	2	3	4	5	6	7
Export profitability.....	1	2	3	4	5	6	7

**2 Please indicate how well your new products/services have performed on each of the performance indicators listed below. (Please circle the number that best represents your opinion)**

Compared with your export unit's objectives, how well have you performed on each of the following indicators?

	<i>Below expectation</i>		<i>Meet expectation</i>			<i>Exceeded expectation</i>	
revenues from <b>new</b> products or services.....	1	2	3	4	5	6	7
growth in revenue from <b>new</b> products or services.....	1	2	3	4	5	6	7
export profitability of <b>new</b> products or services.....	1	2	3	4	5	6	7
growth in export profitability of <b>new</b> products or services....	1	2	3	4	5	6	7
growth in export sales of <b>new</b> products or services.....	1	2	3	4	5	6	7

**3 Regarding the following export market objectives, how well have you performed? (Please circle the number that best represents your opinion).**

	<i>Below expectation</i>		<i>Meet expectation</i>			<i>Exceeded expectation</i>	
Overall export market share.....	1	2	3	4	5	6	7
Number of new export markets entered.....	1	2	3	4	5	6	7
Export sales volumes.....	1	2	3	4	5	6	7
Export sales growth.....	1	2	3	4	5	6	7
Export profits.....	1	2	3	4	5	6	7

**4 Over the last three years, what has been the average annual percentage change in your export...**

Sales.....  % Growth **OR**  % Decline

**5 Over the last three years, what has been the average annual percentage change in your export...**

Profit.....  % Growth **OR**  % Decline

**6 Compared with your industry average, how would you grade your performance on the following indicators? (Please circle the number that best represents your opinion)**

	<i>Below average</i>			<i>The same</i>		<i>Above average</i>	
Export sales.....	1	2	3	4	5	6	7
Export profit.....	1	2	3	4	5	6	7
Overall export performance.....	1	2	3	4	5	6	7

**7 In which industry does your company operate?.....**

**8 Approximately how long has your company been in business?.....**

Years **OR**  Since

9 Approximately how long has your company been exporting?.....  Years **OR**  Since

10 **Approximately what percentage of your company's export sales is generated by...**

Physical products.....  %

Services.....  %

Total = 100%

11 **Approximately what percentage of your company's export sales is generated by...**

B2B products.....  %

Consumer products.....  %

Total = 100%

12 **Which of the following destinations does your company export to? (Please tick all that applies).**

EU

Eastern Europe

North America

Mainland China

Other Asian Countries

South & Central America

Middle East

Australia/New Zealand

Africa

13 **Please answer the following questions by completing the boxes provided.**

Approximately how many countries does your company export to?.....

Does your company have a separate formal export department?.....

Approximately how many full-time staff does your company currently employ?.....

Of this number, approximately how many are directly involved in the company's export activities?.....

On average, how much does your company spend on R&D annually?..... £

On average, what has been the total sales turnover of your company over the past three years?..... £

On average over the past three years, approximately what percentage of your total sales turnover has been generated by exports ?.....  %

Over the past three years, approximately what has been the average total profit (before tax) of your company?..... £

On average over the past three years, approximately what percentage of your annual total profit is derived from exports?.....  %

14 Compared with the size of your export market competitors, your company is best described as a...

**Very Small player**

**Medium player**

**Very large player**

1

2

3

4

5

6

7



**SECTION IV: ABOUT YOURSELF**

The next set of questions seeks to learn a little bit about you.

2  
1 What is your job title?

2 What would you consider to be your employment role (please circle the most appropriate number)?

[1] Owner /CEO /Director

[2] Senior Manager

[3] Middle Manager

[4] Junior Manager

[5] Other, (please specify).....

3 How long have you been with your company?.....  **Years** OR  **Since**

4 Please indicate your agreement with the following statements. (Please circle the number that best represents your opinion)

	<i>Strongly disagree</i>	<i>Neutral</i>	<i>Strongly agree</i>				
Questionnaire deals with issues I am very knowledgeable about.....	1	2	3	4	5	6	7
My answers to the questions in the questionnaire are very accurate.....	1	2	3	4	5	6	7

This concludes the questionnaire.

**Thank you very much for your time and valuable contribution to this study.**

To receive a free copy of the final report from this study, please enclose your business card along with the questionnaire in the pre-paid reply envelope, or enter your email address below (please use block letters):

.....@.....

<i>Loughborough University Business School Office use only</i>
<i>Survey wave: Pre-test / Main</i>
<i>Wave #: 1 / 2</i>
<i>Survey code: F .....</i>
<i>Date questionnaire posted: .... / .... / 200 .....</i>
<i>Date questionnaire received: ..... / ..... / 200 .....</i>
<i>Was reminder sent? Y / N</i>

## Appendix A 4.6: Reminder Postcard

Thank you for agreeing to fill out my questionnaire on entrepreneurial practices of UK exporters. I hope that you received it during the past fortnight. If you have already returned it to me, thank you once more. If you have not yet had the chance to complete the questionnaire (and I am well aware that this does place a strain on your busy schedule), I would like to take this opportunity to tell you that I still need your response, since your answers are critical for the accuracy and success of this research project. I confirm that all replies are **strictly confidential**. If you did not receive a copy of the questionnaire, or have any questions about this study, please do not hesitate to contact me using the details given below. Thank you, your support is greatly appreciated.

Yours sincerely – Nathaniel Boso

**Marketing & Retailing Group**  
**The Business School**  
Loughborough University, LE11 3TU  
Ph: 01509 228842 - Mob: 07912342596  
Email: n.boso2@lboro.ac.uk



## **Appendix A 4.7: Cover Letter (Main Mail Survey)**

11<sup>th</sup> January 2009

Dear Sir/Madam,

### **EXPORT ENTREPRENEURSHIP SURVEY**

Thank you very much for deciding to participate in my research on export entrepreneurship. As I indicated in my last letter to your company, I am a doctoral researcher from Loughborough University and I am undertaking my research in the area of export marketing. This study is being sponsored by the marketing and retailing group at the Business School. As part of my research I need to contact export decision-makers in the UK. I obtained your business postal address from the Fame database. As part of my research model I needed to ensure complete confidentiality and anonymity of the individuals that complete the questionnaire, hence my decision to direct all questionnaires to the positions in the chosen companies irrespective of who occupies such positions. In fact, it is your first impression and immediate feelings about the questions that matter to me.

To assist me in my research, I would therefore be very grateful if you could complete this questionnaire for me. This should take you up to 20 minutes to complete. I am well aware that this request represents a demand on your already busy schedules, but your participation could really make the difference between success and failure of this study, and my PhD. Therefore, your co-operation is greatly appreciated.

I have provided instructions for the completion of each section of the questionnaire, and have enclosed a stamped addressed envelope for its return. You are kindly reminded that there are no right or wrong answers to the questions asked. Again, as I do not ask you for your name, you are guaranteed **complete confidentiality and anonymity**. I do need to ask some background information, but you cannot be identified from this as only general findings from the survey will be reported. As a way of expressing my appreciation for assisting me in my research, I guarantee you a complimentary report containing a summary of this study. In addition, you will have a chance of winning a **£200** cash prize in your name for your favourite charity. Please include your business card or write your email at the back of the questionnaire so that I can notify you in case you emerge as the winner of the prize draw, and to ensure that the summary report is sent to your preferred contact address.

Your assistance with this study is very much appreciated. Should you have any queries, please do not hesitate to contact me on the contact details provided at the top of this letter or any of my doctoral supervisors: Prof. John Cadogan, Chair of Marketing, Loughborough University Business School (Tel: 01509 228846; email: J.W.Cadogan@lboro.ac.uk); and Dr. Victoria Story, Lecturer of Marketing, Nottingham University Business School (Tel: 0115 8466192; Email: vicky.Story@nottingham.ac.uk).

Thank you in advance for your help.

Yours sincerely,



Nathaniel Boso  
Doctoral Researcher  
Marketing and Retailing Group

## Appendix A 4.8: New 4-Page Questionnaire

# A SURVEY OF ENTREPRENEURIAL PRACTICES OF BRITISH EXPORTERS

## RESEARCH TEAM:

**MR. NATHANIEL BOSO**  
*Research Associate in Marketing*

**DR. VICKY M. STORY**  
*Lecturer of Marketing*

**PROF. JOHN W. CADOGAN**  
*Chair of Marketing*

The Marketing and Retailing Group  
Loughborough University Business School  
Ashby Road  
Loughborough  
LE11 3TU  
Email: n.boso2@lboro.ac.uk  
Tel: 01509883175  
Fax: 01509 233 961

The purpose of this study is to collect information on the entrepreneurial actions of British exporters and to identify common practices and outcomes. Your co-operation in completing this questionnaire is central to the success of this research project. Please make each question a separate and independent judgement. It is your first impression and immediate feelings about the questions that matter to us. Please do take care to answer the questions as fully and accurately as you can and remember that there is **no right answer** to the questions asked, as different companies have different ways of doing things. Please indicate how things really are rather than how you wish they were. When complete, please kindly return this questionnaire in the prepaid, pre-addressed envelope provided.

**You may respond in complete frankness; all your answers will remain absolutely confidential.**

## SECTION I: ABOUT YOUR COMPANY

1 Over the past three years, how satisfied have you been with the overall performance of your company along the following dimensions? (Please circle the number that best represents your opinion)

	<i>Very Dissatisfied</i>		<i>Neutral</i>			<i>Very Satisfied</i>	
	1	2	3	4	5	6	7
Export market share.....	1	2	3	4	5	6	7
Export sales volume.....	1	2	3	4	5	6	7
Export sales growth rate.....	1	2	3	4	5	6	7
New export market entry.....	1	2	3	4	5	6	7
Export profitability.....	1	2	3	4	5	6	7

2 Over the last three years, what has been the average annual percentage change in your export...

Sales.....  % Growth **OR**  % Decline

## SECTION II: ABOUT YOUR EXPORT OPERATIONS

1 To what extent do you agree or disagree with the following statements? (Please circle the number that best represents your opinion)

	<i>Strongly Disagree</i>		<i>Neither Agree Nor Disagree</i>			<i>Strongly Agree</i>	
Our company has produced more new products/services for our export markets than our key export market competitors during the past five years.....	1	2	3	4	5	6	7
On average, each year we introduce more new products /services in our export markets than our key export market competitors.....	1	2	3	4	5	6	7
Industry experts would say that we are more prolific when it comes to introducing new products/services in our export markets.....	1	2	3	4	5	6	7
Our key export market competitors cannot keep up with the rate at which we introduce new products/services in our export markets.....	1	2	3	4	5	6	7
Relative to our key export competitors, we more regularly try out experimental/new export strategies.....	1	2	3	4	5	6	7
Relative to our key export competitors, we more frequently come up with novel ideas for our export operations.....	1	2	3	4	5	6	7
In terms of identifying new/creative ideas for our export operations, we are more inventive than our key export competitors.....	1	2	3	4	5	6	7
Export competitors produce far fewer novel plans for their export operations relative to us.....	1	2	3	4	5	6	7
We update our export processes (e.g. technical, administrative, production, channels of distribution) more often than our main export competitors.....	1	2	3	4	5	6	7
We innovate more often with respect to our export processes (e.g. technical, administrative, production, channels of distribution) than our key export competitors.....	1	2	3	4	5	6	7
The rate at which we innovate our export processes (e.g. technical, administrative, production, channels of distribution) exceeds industry norms.....	1	2	3	4	5	6	7
Export competitors undertake export process innovations (e.g. technical, administrative, production, channels of distribution) less often than we do.....	1	2	3	4	5	6	7

2 To what extent do the following statements apply to the situation in your company? (please circle the number that best represent your opinion)

	<i>Not at all</i>		<i>To a moderate extent</i>			<i>To an extreme extent</i>	
Top export managers of our company, in general, tend to invest in high-risk export projects.....	1	2	3	4	5	6	7
We make risky resource commitments in export projects.....	1	2	3	4	5	6	7
Top export managers do not normally like to “play it safe” in this company.....	1	2	3	4	5	6	7
This company shows a great deal of tolerance for high risk export projects.....	1	2	3	4	5	6	7
Our export strategy is characterised by a strong tendency to take risks.....	1	2	3	4	5	6	7
Taking chances is part of our export business strategy.....	1	2	3	4	5	6	7

3 Using the scale below, please indicate the extent to which the following statements represent the actual situation in your company by putting the number of your choice in the boxes provided.

Not at All	To a very Slight extent	To a small Extent	To a moderate extent	To a considerable extent	To a great Extent	To an extreme extent
1	2	3	4	5	6	7

We seek to exploit anticipated changes in our export market ahead of our rivals.....

We seize initiatives whenever possible in our export market operations.....

We act opportunistically to shape the export environment in which we operate.....

We are constantly seeking new opportunities to shape the export environment to our own advantage.....

Our foresight makes us a leader in our export market.....

We consistently try to position ourselves to meet emerging export market demands.....

We intensely challenge export competitors to achieve competitive goals.....

We adopt an aggressive competitive stand in our export markets.....

We typically adopt an "undo-the-competitor" posture in our export markets.....

We tend to target our export competitors' weaknesses.....

We set ambitious export competitive targets .....

We take hostile steps to achieve export competitive goals.....

Our actions towards export competitors can be termed as aggressive.....

We are responsive to the manoeuvres of our main export competitors.....

In dealing with our main export competitors, our company typically adopts a very competitive posture aiming at overtaking the competitors.....

Key export strategies are decided by people within the export unit.....

Export personnel behave autonomously in our export operation.....

Export personnel act independently to carry out their export ideas through to completion.....

Export personnel are self-directed in pursuit of export opportunities.....

Management approves of independent activities by export personnel to develop new export opportunities.....

Identifying new export business opportunities is the concern of all export personnel.....

New export business opportunities suggested by export personnel are acted upon by export decision makers.....



**4 Please rate the following statements in relation to your key export market competitors. (Please circle the number that best represents your opinion)**

Relative to our main export competitors, **our ideas** (e.g. export strategies, new product ideas, etc.) for our export operations are:

	<i>Less</i>			<i>the Same</i>			<i>More</i>	
	1	2	3	4	5	6	7	
Radical.....	1	2	3	4	5	6	7	
Revolutionary.....	1	2	3	4	5	6	7	
Inventive.....	1	2	3	4	5	6	7	
Novel .....	1	2	3	4	5	6	7	
Creative.....	1	2	3	4	5	6	7	

Relative to our main export competitors, **the products/services** we offer in our export market(s) are:

	<i>Less</i>			<i>the same</i>			<i>More</i>	
	1	2	3	4	5	6	7	
Radical.....	1	2	3	4	5	6	7	
Revolutionary.....	1	2	3	4	5	6	7	
Inventive.....	1	2	3	4	5	6	7	
Novel .....	1	2	3	4	5	6	7	
Creative.....	1	2	3	4	5	6	7	

Relative to our main export competitors, **the processes** we use (e.g. technical, administrative, production, channels of distribution) in our export operations are:

	<i>Less</i>			<i>the same</i>			<i>More</i>	
	1	2	3	4	5	6	7	
Radical.....	1	2	3	4	5	6	7	
Revolutionary.....	1	2	3	4	5	6	7	
Inventive.....	1	2	3	4	5	6	7	
Novel .....	1	2	3	4	5	6	7	
Creative.....	1	2	3	4	5	6	7	

**SECTION III: ABOUT YOURSELF**

The next set of questions seeks to learn a little bit about you.

2  
1 What is your job title?

2 How long have you been with your company?.....  **Years** OR  **Since**

This concludes the questionnaire.

**Thank you very much for your time and valuable contribution to this study.**

To receive a free copy of the final report from this study, please enclose your business card along with the questionnaire in the pre-paid reply envelope, or enter your email address below (please use block letters):

.....@.....

## Appendix A 4.9: Second Performance Questionnaire

# A SURVEY OF ENTREPRENEURIAL PRACTICES OF BRITISH EXPORTERS

**MR. NATHANIEL BOSO**  
*Research Associate in Marketing*

**DR. VICKY M. STORY**  
*Lecturer of Marketing*

**PROF. JOHN W. CADOGAN**  
*Chair of Marketing*

**Contact:**  
The Marketing and Retailing Group  
Loughborough University Business School  
Ashby Road  
Loughborough  
LE11 3TU  
Tel: 01509223175  
Fax: 01509 233 961

You may respond in complete frankness; all your answers will remain **absolutely confidential.**

## SECTION I: ABOUT YOUR COMPANY

**1 Over the past three years, how satisfied have you been with the overall performance of your company along the following dimensions? (Please circle the number that best represents your opinion)**

	<i>Very Dissatisfied</i>		<i>Neutral</i>			<i>Very Satisfied</i>	
Export market share.....	1	2	3	4	5	6	7
Export sales volume.....	1	2	3	4	5	6	7
Export sales growth rate.....	1	2	3	4	5	6	7
New export market entry.....	1	2	3	4	5	6	7
Export profitability.....	1	2	3	4	5	6	7

**2 Please indicate how well your new products/services have performed on each of the performance indicators listed below. (Please circle the number that best represents your opinion)**

	<i>Below expectation</i>		<i>Meet expectation</i>			<i>Exceeded expectation</i>	
Compared with your export unit's objectives, how well have you performed on each of the following indicators?							
revenues from <b>new</b> products or services.....	1	2	3	4	5	6	7
growth in revenue from <b>new</b> products or services.....	1	2	3	4	5	6	7
export profitability of <b>new</b> products or services.....	1	2	3	4	5	6	7
growth in export profitability of <b>new</b> products or services.....	1	2	3	4	5	6	7
growth in export sales of <b>new</b> products or services.....	1	2	3	4	5	6	7

**3 Regarding the following export market objectives, how well have you performed? (Please circle the number that best represents your opinion).**

	<i>Below expectation</i>		<i>Meet expectation</i>			<i>Exceeded expectation</i>	
Overall export market share.....	1	2	3	4	5	6	7
Number of new export markets entered.....	1	2	3	4	5	6	7
Export sales volumes.....	1	2	3	4	5	6	7
Export sales growth.....	1	2	3	4	5	6	7
Export profits.....	1	2	3	4	5	6	7

4 Over the last three years, what has been the average annual percentage change in your export?

Sales.....  % Growth OR  % Decline

5 Over the last three years, what has been the average annual percentage change in your export?

Profits.....  % Growth OR  % Decline

6 Compared with your industry average, how would you grade your performance on the following indicators? (Please circle the number that best represents your opinion)

	<i>Below average</i>		<i>The same</i>			<i>Above average</i>	
Export sales.....	1	2	3	4	5	6	7
Export profit.....	1	2	3	4	5	6	7
Overall export performance.....	1	2	3	4	5	6	7

7 In which industry does your company operate?.....

8 Please answer the following questions by completing the boxes provided.

Approximately how many countries does your company export to?.....

Does your company have a separate formal export department?.....

Approximately how many full-time staff does your company currently employ?.....

Of this number, approximately how many are directly involved in the company's export activities?.....

On average, how much does your company spend on R&D annually?.....  GBP

On average, what has been the total sales turnover of your company over the past three years?.....  GBP

On average over the past three years, approximately what percentage of your total sales turnover has been generated by exports ?.....  %

Over the past three years, approximately what has been the average total profit (before tax) of your company?.....  GBP

On average over the past three years, approximately what percentage of your annual total profit is derived from exports?.....  %

**SECTION II: ABOUT YOURSELF**

The next set of questions seeks to learn a little bit about you.

1 What is your job title?.....

2 What would you consider to be your employment role? (Please circle the most appropriate number)

[1] Owner /CEO /Director      [2] Senior Manager

[3] Middle Manager      [4] Junior Manager

[5] Other, (please specify).....

3 Please indicate your agreement with the following statements. (Please circle the number that best represents your opinion)

	<i>Strongly disagree</i>			<i>Neutral</i>		<i>Strongly agree</i>	
Questionnaire deals with issues I am very knowledgeable about.....	1	2	3	4	5	6	7
My answers to the questions in the questionnaire are very accurate.....	1	2	3	4	5	6	7

Thank you very much for your time and valuable contribution to this study.

<i>Office use only</i>
Survey code: F .....
Date questionnaire posted: .... / .... / 200 .....
Date questionnaire received: .... / .... / 200 .....

## **Appendix A 4.10: Letter that Accompanied Second Performance Questionnaire**

1st October 2009

Dear xxxxx,

## **EXPORT SURVEY**

We recently made a contact with someone in charge of export operations in your company for information on your export activities. We are extremely grateful to your company for taking time off your busy schedule to complete the questionnaire for us.

However, the requirement of our research demands that we collect fresh information on your company's export performance indicators. This is to help to us to ensure the validity of the information that was provided earlier by your export managers. We would, therefore, be very grateful if you could do us a favour by completing a short questionnaire for us on your company's export performance indicators. This should take you up to 15 minutes to complete.

We have provided instructions for the completion of each section of the questionnaire, and have enclosed a stamped addressed envelope for its return. You are kindly reminded that there are no right or wrong answers to the questions asked. Again, as we do not ask you for your company's name, your company is guaranteed **complete confidentiality**. We do, however, need to ask some background information about you, but you cannot in anyway be identified from this as only general findings from the survey will be reported.

As a way of expressing our appreciation for assisting us in this research, we guarantee you a complimentary report containing a summary of this research. In addition, you will have a chance of winning a **£200** cash prize in your name for your favourite charity. Please include your business card or write your email at the back of the questionnaire so that we can notify you in case you emerge as the winner of the prize draw, and to ensure that the summary report is sent to your preferred contact address.

Your assistance with this study is very much appreciated. Should you have any queries, please do not hesitate to contact the research team on the contact details provided at the top of this letter.

Thank you in advance for your help.

Yours sincerely,



Nathaniel Boso  
*Research Associate*

## APPENDIX B: APPENDICES TO CHAPTER 6

### Appendix B 6.1: Details of Items Measuring the Six Export EOBs

Item Codes	Item Descriptions and Anchors
	<b>Export product innovation Intensity</b> (1 = strongly disagree; 7 = strongly agree)
NUM_PD1	Our company has produced more new products/services for our export markets than our key export market competitors have during the past five years.
NUM_PD2	On average, each year we introduce more new products /services in our export markets than our key export market competitors.
NUM_PD3	Industry experts would say that we are more prolific when it comes to introducing new products/services in our export markets.
NUM_PD4	Our key export market competitors cannot keep up with the rate at which we introduce new products/services in our export markets.
	<b>Export product innovation Novelty</b> (1 = less; 4 = the same; 7 = more)
INVD_PD1	Relative to our main export competitors, the products/services we offer in our export market(s) are radical.
INVD_PD2	Relative to our main export competitors, the products/services we offer in our export market(s) are creative.
INVD_PD3	Relative to our main export competitors, the products/services we offer in our export market(s) are incentive.
INVD_PD4	Relative to our main export competitors, the products/services we offer in our export market(s) are novel.
INVD_PD5	Relative to our main export competitors, the products/services we offer in our export market(s) are revolutionary.
	<b>Export risk-taking</b> (1 = Not all; 7 = to an extreme extent)
RISK_TK1	In general, top export managers of our company tend to invest in high-risk export projects.
RISK_TK2	We make large and risky resource commitments in export projects.
RISK_TK3	Top export managers do not normally like to “play it safe” in this company.
RISK_TK4	This company shows a great deal of tolerance for high risk export projects.
RISK_TK5	This company shows a great deal of tolerance for high risk export projects.
RISK_TK6	Our export strategies can be characterised by a strong tendency to take risks.
RISK_TK1	Taking chances is an element in our export business strategy.
	<b>Export proactiveness</b> (1 = Not all; 7 = to an extreme extent)
PROACT1	We seek to exploit anticipated changes in our export market ahead of our rivals.
PROACT2	We seize initiatives whenever possible in our export market operations.
PROACT3	We act opportunistically to shape the export environment in which we operate.
PROACT5	Our foresight makes us a leader in our export market.
PROACT6	We consistently try to position ourselves to meet emerging export market demands.
	<b>Export competitive aggressiveness</b> (1 = Not all; 7 = to an extreme extent)
COM_AGG2	We adopt an aggressive competitive stand in our export markets.
COM_AGG3	We typically adopt an “undo-the-competitor posture.
COM_AGG6	We take hostile steps to achieve export competitive goals.
COM_AGG7	Our actions towards export competitors can be termed as aggressive.

Appendix B 6.1 Details of Items Measuring the Six Export EOBs (*continued*)

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Item Codes	Item Descriptions and Anchors
	<b>Export autonomy</b> <b>(1 = Not all; 7 = to an extreme extent)</b>
AUT2	In our export operations, export personnel behave autonomously.
AUT3	Export personnel act independently to carry out their ideas through to completion.
AUT4	Export personnel are self-directed in pursuit of export opportunities.
AUT5	Identifying new export business opportunities is the concern of all export personnel.

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## Appendix B 6.2: Tables for Inter-Item Correlations

### Export Product Innovation Intensity

	NUM_PD1	NUM_PD2	NUM_PD3	NUM_PD4
NUM_PD1	1.000			
NUM_PD2	.763	1.000		
NUM_PD3	.756	.774	1.000	
NUM_PD4	.647	.723	.698	1.000

### Export Product Innovation Novelty

	INVD_PD1	INVD_PD2	INVD_PD3	INVD_PD4	INVD_PD5
INVD_PD1	1.000				
INVD_PD2	.809	1.000			
INVD_PD3	.651	.725	1.000		
INVD_PD4	.552	.636	.654	1.000	
INVD_PD5	.547	.627	.771	.740	1.000

### Export Risk-Taking Behaviour

	RISK_TK1	RISK_TK2	RISK_TK3	RISK_TK4	RISK_TK5	RISK_TK6
RISK_TK1	1.000					
RISK_TK2	.703	1.000				
RISK_TK3	.607	.594	1.000			
RISK_TK4	.664	.707	.584	1.000		
RISK_TK5	.636	.699	.546	.893	1.000	
RISK_TK6	.613	.697	.584	.754	.808	1.000

### Export Proactive Behaviour

	PROACT1	PROACT2	PROACT3	PROACT5	PROACT6
PROACT1	1.000				
PROACT2	.662	1.000			
PROACT3	.572	.636	1.000		
PROACT5	.589	.514	.532	1.000	
PROACT6	.535	.632	.508	.625	1.000

Appendix B 6.2 Tables for Inter-Item Correlations (*Continued*)

**Export Competitively Aggressive Behaviour**

	COM_AGG2	COM_AGG3	COM_AGG6	COM_AGG7
COM_AGG2	1.000			
COM_AGG3	.660	1.000		
COM_AGG6	.612	.697	1.000	
COM_AGG7	.679	.704	.781	1.000

**Export Autonomous Behaviour**

	AUT2	AUT3	AUT4	AUT5
AUT2	1.000	.680	.615	.526
AUT3	.680	1.000	.793	.630
AUT4	.615	.793	1.000	.683
AUT5	.526	.630	.683	1.000

**Export Intelligence Generation**

	GEN_1	GEN_2	GEN_3	GEN_4
GEN_1	1.000			
GEN_2	.528	1.000		
GEN_3	.511	.497	1.000	
GEN_4	.480	.475	.562	1.000

**Export Intelligence Dissemination**

	RDIS1	RDIS2	RDIS3	RDIS4	RDIS5
RDIS1	1.000	.660			
RDIS2	.660	1.000	.704		
RDIS3	.510	.704	1.000		
RDIS4	.491	.582	.617	1.000	
RDIS5	.516	.633	.676	.666	1.000

**Inter-Item Correlation Matrix**

	RESP_1	RESP_2	RESP_3
RESP_1	1.000		
RESP_2	.591	1.000	
RESP_3	.588	.662	1.000

Appendix B 6.2 Tables for Inter-Item Correlations (*Continued*)

**Export Performance**

	SAT_PERF1	SAT_PERF2	SAT_PERF3	SAT_PERF4
SAT_PERF1	1.000			
SAT_PERF2	.858	1.000		
SAT_PERF3	.684	.816	1.000	
SAT_PERF4	.576	.639	.677	1.000

**Export Customer Dynamism**

	HETERO_2	HETERO_3	HETERO_4	HETERO_5
HETERO_2	1.000			
HETERO_3	.760	1.000		
HETERO_4	.529	.633	1.000	
HETERO_5	.546	.591	.829	1.000

## Appendix B 6.3: Tables for Item-Scale Correlations

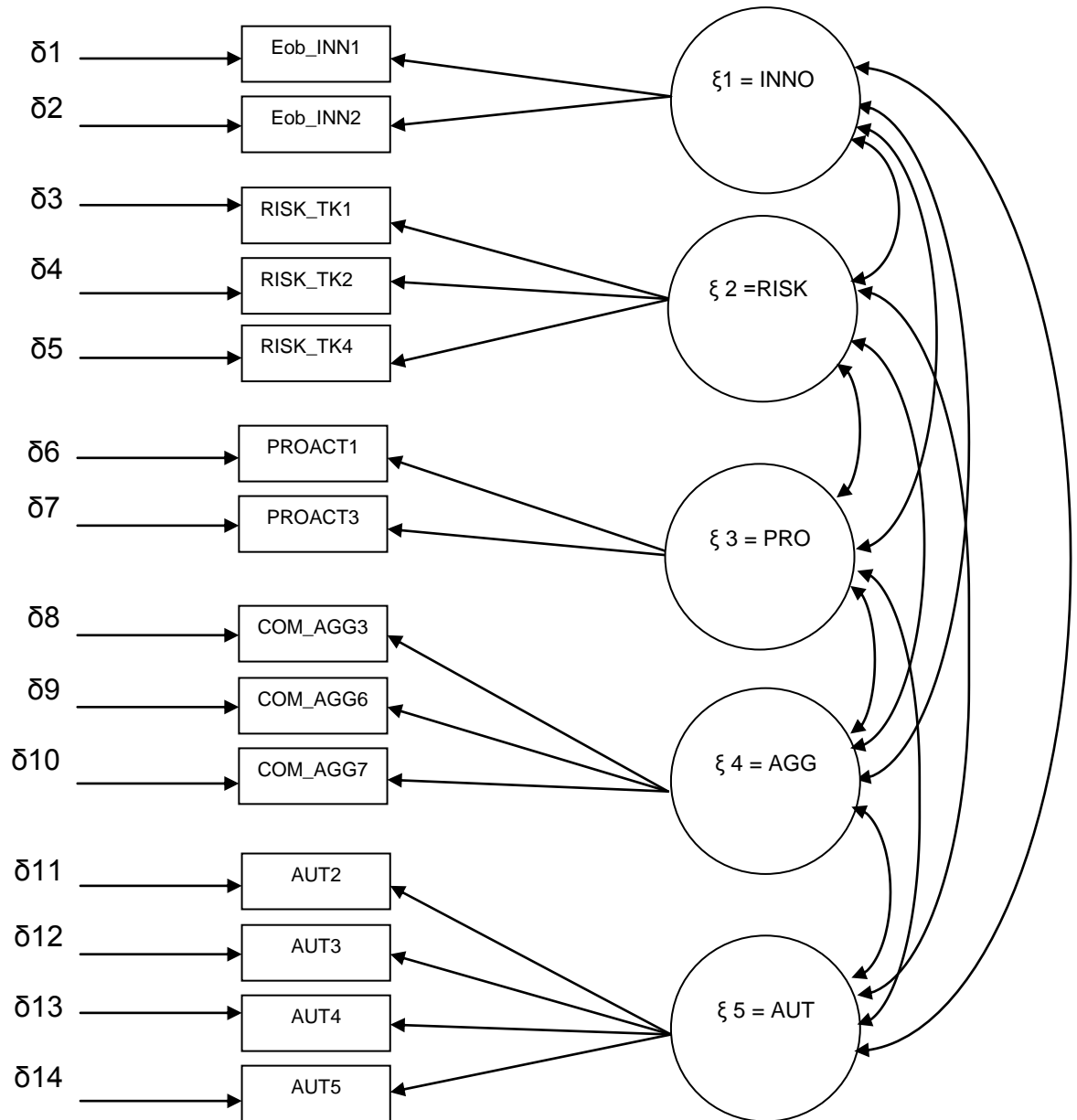
Scales	Scale items	Corrected Item-Total Correlation
Export Product Innovation Intensity	NUM_PD1	.796
	NUM_PD2	.842
	NUM_PD3	.826
	NUM_PD4	.751
Export Product Innovation Novelty	INVD_PD1	.728
	INVD_PD2	.814
	INVD_PD3	.813
	INVD_PD4	.736
	INVD_PD5	.772
Export Risk-Taking behaviour	RISK_TK1	.743
	RISK_TK2	.793
	RISK_TK3	.661
	RISK_TK4	.853
	RISK_TK5	.848
	RISK_TK6	.811
Export Proactive Behaviour	PROACT1	.713
	PROACT2	.746
	PROACT3	.672
	PROACT5	.680
	PROACT6	.691
	Export Competitively Aggressive Behaviour	COM_AGG2
COM_AGG3		.770
COM_AGG6		.793
COM_AGG7		.826
Export Autonomous Behaviour	AUT2	.680
	AUT3	.818
	AUT4	.809
	AUT5	.686

Appendix B-6.3: Tables for Item-Scale Correlations (*Continued*)

Scales	Scale items	Corrected Item-Total Correlation
Export Intelligence Generation	GEN_1	.616
	GEN_2	.608
	GEN_3	.643
	GEN_4	.611
Export Intelligence Dissemination	RDIS1	.635
	RDIS2	.780
	RDIS3	.750
	RDIS4	.697
	RDIS5	.744
Export Intelligence Responsiveness	RESP_1	.646
	RESP_2	.700
	RESP_3	.701
Export Performance	SAT_PERF1	.785
	SAT_PERF2	.882
	SAT_PERF3	.814
	SAT_PERF4	.681
Export Customer Dynamism	HETERO_2	.684
	HETERO_3	.759
	HETERO_4	.767
	HETERO_5	.755

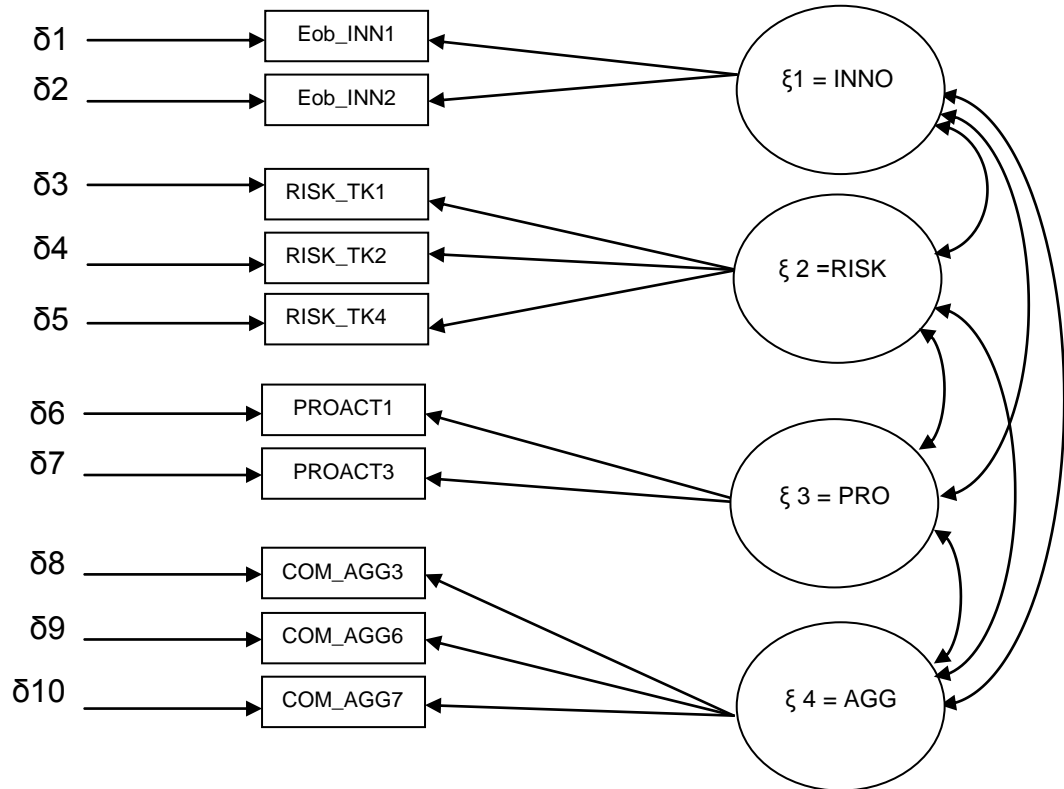
## Appendix B-6.4: Alternative Export EOB CFA Model Specifications

Alternative Model 1: Five-dimensional export EOB CFA model

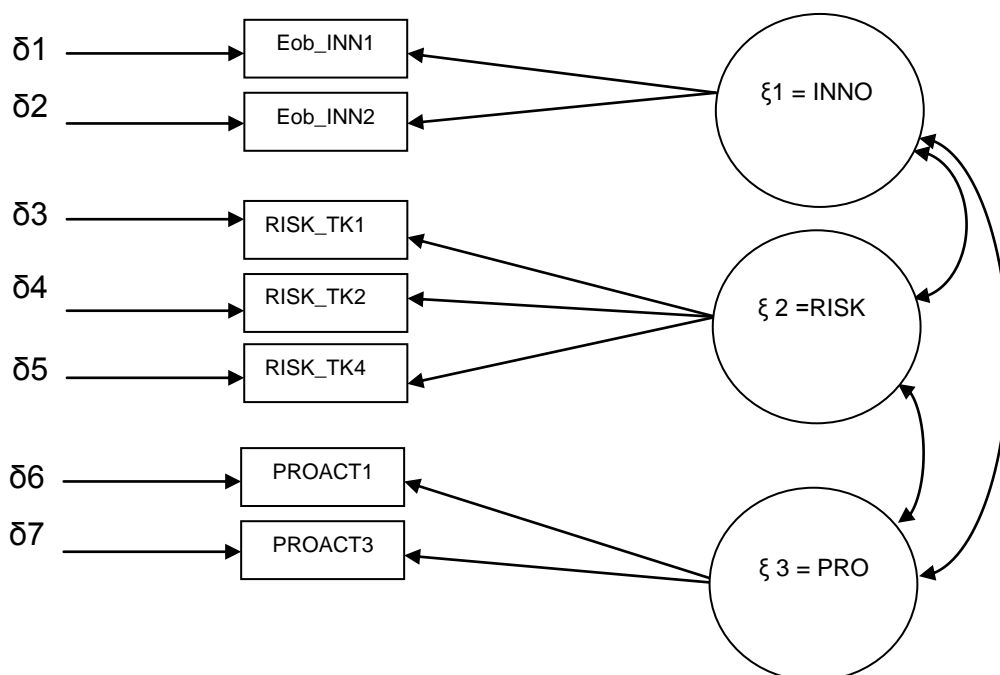


Appendix B-6.4: Alternative Export EOB CFA Model Specifications (Continued)

Alternative Model 2: Four-dimensional export EOB CFA model



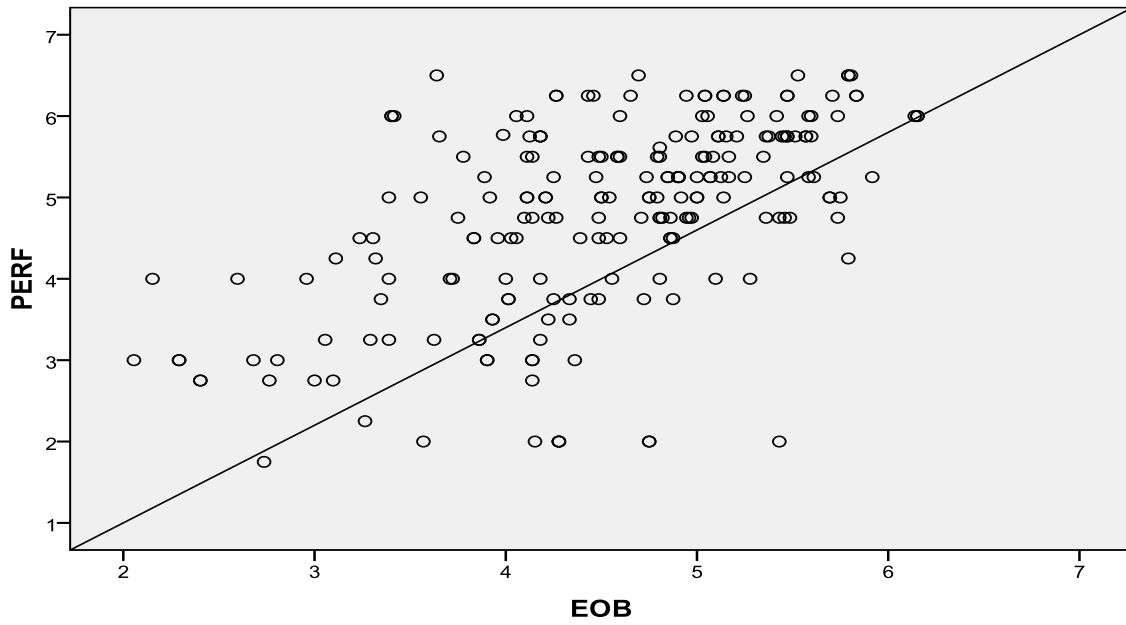
Alternative Model 3: Three-dimensional export EOB CFA model



# APPENDIX C: APPENDICES TO CHAPTER 7

## Appendix C 7.1: Scatterplots for a Selected Number of Variables

**Linearity Assumption (Export Performance and Export EOB)**



**Linearity Assumption (Export Performance and EMO)**

