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Beyond financial indicators: An assessment of the measurement of performance for international new ventures

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***Highlights (for review)**

- This study examines the measurement of performance for international new ventures (INVs)
- We adopt a mixed methods approach using exploratory interviews and a quantitative survey sample of 310 New Zealand and Australian firms
- We find that INVs use a variety of international performance measures which includes financial and operational performance indicators and organisational effectiveness
- We find that INVs tend to be more international performance oriented than non-INVs
- Our study also indicates that financial performance is generally more important than operational performance for INVs
- We also find industry-specific differences in that manufacturing INVs tend to place more importance on financial performance than service INVs

Beyond financial indicators: An assessment of the measurement of performance for international new ventures

Abstract

This study examines the measurement of performance for international new ventures (INVs). While there is a growing area of literature on INVs that includes the internationalisation patterns, networks and entry strategies of these firms, there is generally a lack of research on how INVs measure their own performance. Using a sequential mixed methods approach of exploratory interviews and a survey sample of 310 firms from New Zealand and Australia, we find that INVs tend to be significantly more international performance oriented than non-INVs. Our study also indicates that financial performance measures are generally viewed as more important than operational indicators. In addition, we find that manufacturing INVs generally place more importance on financial performance than service INVs. The study offers two key contributions to the literature: (1) an integrated examination of international performance measures as used in practise by INVs, and (2) a comparative perspective between INVs and non-INVs in terms of performance measurement.

Keywords: international performance measurement; international new venture; born global firm; traditionally internationalising firm; mixed methods; financial performance; operational performance; organisational effectiveness

1. Introduction

Today's environment is shaped by increasing opportunities for small and medium-sized enterprises (SMEs) to conduct business across national borders, resulting in a growing number of SMEs entering international markets (European Commission, 2011; Knight, 2001; Rialp, Rialp, & Knight, 2005; WTO, 2010). According to the European Commission (2010), 25% of the SMEs in the European Union (EU) have started internationalisation via exporting over the last three years. A key manifestation of the proliferation of SMEs is the phenomenon of international new ventures (INVs) or born global firms (BGs) which progressively started to emerge in the early 1990s (Oviatt & McDougall, 1994; Rennie, 1993). Consistent with other studies (e.g., Autio, Sapienza, & Almeida, 2000; Knight & Cavusgil, 2004; Oviatt & McDougall, 1994), INVs can be defined as firms that seek international expansion early and rapidly, almost from their establishment, by applying their specific resources and capabilities across different countries. There have been various terms to define these firms, such as "international new ventures" (Oviatt & McDougall, 1994), "born globals" (McKinsey & Co., 1993), and "instant exporters" (McAuley, 1999). Coviello, McDougall, and Oviatt (2011) concluded that the terms "international new venture" and "born global" have been used interchangeably in the literature. This will also be the approach in this paper, although an attempt will be made to use the term *international new venture*, for the sake of consistency.

INVs are generally characterised by their innovative posture and early and rapid internationalisation, thus challenging the notion of the traditional stages model that assumes an incremental, relatively slow and risk-averse pathway to internationalisation (Johanson & Vahlne, 1977). Prime examples of INVs include Skype, Icebreaker (a New Zealand merino manufacturer), easyJet and Logitech, and they have been found in various country contexts ranging from large countries, such as the USA (e.g., McDougall & Oviatt, 1996) and

Germany (e.g., Schwens & Kabst, 2008) to smaller markets in the Asia-Pacific, including New Zealand and Australia (e.g., Liesch, Steen, Middleton, & Weerawardena, 2007).

With the increasing phenomenon of INVs in international business, scholars have focused on examining the emergence and internationalisation patterns (e.g., Chetty & Cambell-Hunt, 2004; Madsen & Servais, 1997; Zou & Ghauri, 2010), the role of networks (e.g., Andersson & Wictor, 2003; Freeman, Edwards, & Schroder, 2006; Lindstrand, Melen, & Nordman, 2011), entry strategies (e.g., Gabrielsson & Kirpalani, 2004; Schwens & Kabst, 2011), and performance determinants of INVs (e.g., Jantunen, Nummela, Puumalainen, & Saarenketo, 2008; Knight & Kim, 2009; Lew, Sinkovics, & Kuivalainen, 2013). With respect to performance, the extant literature has generally applied a set of given performance measures, such as international sales volume, international market share, international sales growth and profitability (e.g., Crick, 2009; Knight & Cavusgil, 2004). However, previous studies appear at odds regarding the use of appropriate performance measures for INVs. It seems that research has not focused explicitly on comparing the performance measurement of INVs and non-INVs. Thus, the literature on INV performance is generally fragmented and heterogeneous as highlighted by Crick (2009: 458) who argued that "… it therefore appears there is no agreement in the literature... how to measure the performance of firms internationally". In addition, despite the multiple approaches to measuring international performance of firms, the different performance measurements may not be evaluated as equally important by INVs. Since certain performance measures may be viewed as considerably more important than others by INVs, it appears critical for us to review and systematically find such differences. Thus, our paper follows Steers (1975: 555) who concluded that research should account for "differential weights on the various evaluation criteria to reflect different valences attached to each goal" due to the fact that "few organizations pursue their numerous operative goals with equal vigor or resources".

Our study is further motivated by recent calls in the international entrepreneurship (IE) literature for unifying frameworks and consistency in domain vocabulary (Jones, Coviello, & Tang, 2011; McDougall-Covin, Jones, & Serapio, 2014). This is consistent with Jones et al. (2011: 643) who identified performance aspects as one of the potential areas for future research in entrepreneurial internationalisation, and concluded that "given the variety of performance antecedents and outcomes relevant in IE, future research should acknowledge and try to examine a wide range of measures in an integrative manner".

Therefore, in order to fill the aforementioned research gaps in the literature, we conduct an exploratory study by addressing two key questions: (1) How do INVs measure their international performance? (2) How do INVs differ from non-INVs in terms of their international performance measurement?

The purpose of this study is to shed light on the performance measurement of INVs which has generally been overlooked in previous research. We contribute both theoretically and empirically to the literature by not only examining how INVs measure their own international performance, but also by systematically identifying which performance dimensions are being perceived as more important by these firms. This study also contributes to our knowledge of performance measurement for INVs and non-INVs by examining whether and how industry matters in performance measurement. We adopt an integrated perspective by including measures of the three dimensions of financial and operational performance and organisational effectiveness (Hult, Ketchen Jr, Griffith, Chabowski, Hamman, Dykes, Pollitte, & Cavusgil, 2008; Venkatraman & Ramanujam, 1986). This is in response to Hult et al.'s (2008) findings that only 7.3% of 96 reviewed studies in leading management journals from 1995-2005 used a combination of all three types of performance, while 59.4% of all studies employed only one single type of performance. Consistent with calls in the literature for appropriate methodological designs (Hurmerinta-Peltomäki &

Nummela, 2006), we adopt a mixed methods approach which includes eight exploratory interviews, followed by a quantitative survey of 310 New Zealand and Australian companies. In contrast to the often-employed purely qualitative (e.g., Mort & Weerawardena, 2006) or quantitative (e.g., Jantunen et al., 2008) approach, our mixed methods design aligns well with the exploratory and integrative nature of the paper. We position our study primarily in the international entrepreneurship (e.g., Oviatt & McDougall, 1994; Jones et al., 2011), firm performance (e.g., Venkatraman & Ramanujam, 1986), and organisational effectiveness literatures (e.g., Connolly, Conlon, & Deutsche, 1980; Friedlander & Pickle, 1968; Hitt, 1988), and adopt a comparative perspective with non-INVs to improve the interpretability of the findings.

The paper is structured as follows. First, we provide a review of the literature on performance measurement. Next, we describe the research design and method of the study, and outline the results of the empirical analysis. Finally, we discuss the major findings and their implications, and present the limitations of the study as well as directions for future research.

2. Literature review

In line with the study's objective of examining performance measurement of INVs, we first review the literature on general firm performance, followed by INV measures. The rationale for reviewing the literature on general firm as well as INV performance lies in the holistic perspective which allows for a deeper understanding of performance and follows Jones et al.'s (2011) call for integrative studies. In addition, the management literature is generally more established than the INV literature and provides the foundation for our study and assessment of performance measurement for INVs.

2.1 Measurement of firm performance

The focus in this study is on organisational performance, as considered primarily in the strategic management and international business literatures. Organisational performance has been described as a multi-faceted phenomenon that involves various viewpoints (e.g., shareholder versus employees), time periods (e.g., long-term versus short-term), and criteria (e.g., market share versus profit) (Snow & Hrebiniak, 1980). Along these lines, Venkatraman and Ramanujam (1986) developed a conceptualisation that illustrates various approaches to measuring organisational performance. They distinguished between three different types of performance in general. The first type relates to financial performance, which is an outcome-based indicator of performance and is described as the "narrowest conception of business performance" (Venkatraman & Ramanujam, 1986: 803). Some examples of measures for financial performance include profitability (e.g., return on investment (ROI), sales growth, and earnings per share (EPS)). These financial performance indicators are assumed to reflect the achievement of economic goals of the firm. A broader conceptualisation of performance includes financial and operational dimensions of performance, incorporating non-financial measures. These include, for example, product-market outcomes, such as market share, introduction of new products, and marketing effectiveness and internal process outcomes (e.g., employee satisfaction) (Hult et al. 2008; Venkatraman & Ramanujam, 1986). These operational factors may eventually lead to financial performance (Venkatraman & Ramanujam, 1986). The broadest conceptualisation of performance relates to organisational effectiveness. Some measures for organisational, or overall, effectiveness are survival of the firm, reputation, perceived overall performance, and achievement of goals (Hult et al., 2008). According to Venkatraman and Ramanujam (1986), this broad conceptualisation of performance has received relatively less attention in the literature, due to the difficulty in measuring effectiveness. Instead, the focus in strategic management and international

business research has been primarily placed on financial and operational dimensions of performance. Venkatraman and Ramanujam (1986) also pointed out some caveats as to the use of two conceptualisations (i.e., financial and operational indicators). In this regard, the issue of dimensionality of business performance should be considered which refers to the conflicting nature of performance dimensions, such as long-term growth and short-term profitability. As a result, Venkatraman and Ramanujam (1986) stated that these different performance dimensions should not be combined into one composite dimension when measuring performance of the firm. They suggested that each dimension should be recognised and examined distinctively, or the dimensionality of the conceptualisation of business performance should be tested explicitly.

More recently, Hult et al. (2008) included level of analysis in addition to the two dimensions of type of measurement and source of data addressed by Venkatraman and Ramanujam (1986). The level of analysis refers to the firm-level, strategic business unit (SBU)-level, and inter-organisational level. Hult et al. (2008) reviewed the performance measurement literature in international business research from 1995-2005 by identifying 96 articles from highly-rated journals in management, marketing and international business, such as *Journal of International Business Studies*, *Strategic Management Journal*, and *Academy of Management Journal*. They found that 57.3% of the studies used primary data sources, whereas 40.6% used secondary data and only 2.1% (i.e., two studies) employed both primary and secondary data sources. With regard to the types of measurement, 32.3% of the assessed studies used two types of measures. Out of these studies, 67.7% employed financial and operational performance, 32.3% adopted financial and overall effectiveness performance, and only 7.3% of the studies used a combination of all three types of measures. In comparison, 59.4% of all studies used only one type of performance measure. This is not in line with Venkatraman and Ramanujam (1986), who advocated the use of combinations of types of

measures and data sources for organisational performance measurement. With regard to the specific measures of performance, sales-based measures (e.g., sales volume, ratio of foreign sales to total sales, sales growth) were the predominant measurement for financial performance (52% of all assessed studies), whereas market share was mostly employed for operational performance (44%), and perceived overall performance was the most frequently used measure for overall effectiveness (47%). As far as the level of analysis is concerned, 52.9% of studies looked at the firm level, followed by the inter-organisational unit (24.5%) and the strategic business unit (22.6%). The vast majority of studies measured performance at one level (92.7%), with 6.3% of the studies measuring performance at two levels, and only one study measuring performance at all three levels.

In the context of export performance, Shoham (1998) identified three dimensions of sales, profitability, and change (in sales and profitability). In the EXPERF scale, Zou, Taylor, and Osland (1998) developed the dimensions of financial export performance, strategic export performance, and satisfaction with export venture. Based on Cavusgil and Zou (1994), Styles (1998) used sales growth and profitability, achievement of strategic objectives, and perception of success as the performance measures. More recently, Sousa (2004) categorised export performance measures into sales-, profit-, and market-related, general and miscellaneous indicators. Katsikeas, Leonidou, and Morgan (2000) reviewed the empirical literature dealing with export performance and differentiated between economic (i.e., sales-, profit-, and market share-related), non-economic (i.e., product- and market-related, and miscellaneous), and generic measures.

With regard to the entrepreneurship literature, an important focus has been placed on studying the relationship between entrepreneurial orientation (EO) and performance (Rauch, Wiklund, & Fresen, 2009; Rosenbusch, Rauch, & Bausch, 2013). In this stream of research, performance has been measured in a variety of ways, including profitability, growth, and

capital market dimensions (Combs, Crook, & Shook, 2005), financial and non-financial indicators (Rauch et al., 2009), and subjective and objective measures (Rosenbusch et al., 2013). According to the meta-analysis by Rauch et al. (2009), the majority of EO studies have tended to focus on perceived financial performance, followed by combinations of perceived financial and non-financial performance, and archival financial performance. As a result, subjective, self-perceived performance measures generally constitute the majority in EO research.

2.2 Performance measurement for INVs

The performance of INVs has been measured in a variety of ways. The following discussion is organised according to the level of analysis, frame of reference, time frame, data collection method, and the measures themselves, following Matthyssens and Pauwels' (1996) classification of performance measurement. In addition, we refer to the export performance literature which is more established than the INV literature. Table 1 provides an overview about the performance measurement for INVs.

Table 1 about here

2.2.1 Level of analysis of INV performance measurement

The level or unit of analysis refers to the organisational level at which performance is measured: corporate, export venture, or product (Katsikeas et al., 2000). The corporate level examines the overall export activity of the firm, whereas research at the export venture level looks at a specific product/market combination. With the product level, an individual product or product line is investigated (Katsikeas et al., 2000; Matthyssens & Pauwels, 1996).

One of the strengths of investigating the corporate level is that it can offer insights into the sustained export performance of a firm (Matthyssens & Pauwels, 1996). Research at the

export venture level provides an analysis of the success or failure of a particular product to an overseas market. Yet, it has been argued that the export venture level does not give insights to the long-term export performance of a firm in that failure in a particular venture may be considered as part of a learning process for overall corporate export success (Matthyssens & Pauwels, 1996).

The majority of INV studies have used the firm as the unit of analysis when measuring performance. These include, for example, Autio et al. (2000), Crick (2009), Efrat and Shoham (2012), Kuivalainen, Sundqvist, and Servais (2007), and Kundu and Katz (2003). There are also some studies that have adopted the venture level, such as Knight and Cavusgil (2004), and Knight et al. (2004), who based their performance measurement scales on Cavusgil and Zou (1994).

2.2.2 Frame of reference of INV performance measurement

The frame of reference relates to the standards against which performance is evaluated (Katsikeas et al., 2000). Five frames can be identified: domestic, industry, goal, objective, and subjective (Matthyssens & Pauwels, 1996). With the domestic frame, the performance in an export market is evaluated against the actual performance in the domestic market. Katsikeas et al. (2000) cautioned that the use of a domestic frame of reference may be problematic, due to the focus on export performance in relation to domestic performance. For example, the reasons for high export intensity may lie in poor performance in the domestic market and its small size, rather than efficient export practises. The industry-related frame assesses export performance against the performances of competitors and has, thus, an important strategic dimension, as it gives an indication of the firm's competitive advantage in the market (Chetty & Hamilton, 1993). In the goal-related frame of reference, a firm's export performance is evaluated against its own objectives. This is also a suitable approach, as it recognises that

each individual firm may have different internal goals in comparison to its competitors. In contrast to the domestic and industry-related frame, it has received less attention in the export literature and has been adopted in few studies (e.g., Cavusgil & Zou, 1994; Diamantopoulos & Kakkos, 2007). In an objective frame of reference, objective indicators of performance are utilised, such as market share and export/sales ratio (Beamish, Craig, & McLellan, 1993). The sample average is often used as the cut-off point between successful and non-successful firms. In a subjective frame, the assessment of performance is based on the reference point that the firms choose, so companies evaluate their export performance according to their own standards. In adopting a subjective frame of reference, Likert-scales are often used as performance indicators (Katsikeas, Piercy, & Ioannidis, 1996). However, the use of a subjective frame has its drawbacks. For example, it may be difficult to compare the results, as the same performance may be viewed as a success by one firm and as a failure by another (Matthyssens & Pauwels, 1996). In this respect, cultural influences and other contextual factors may play an important role in how performance is perceived. According to Matthyssens and Pauwels (1996), an objective frame of reference tends to have a higher reliability than subjective ones, whereas subjective frames are generally assumed to be more valid. However, it should be noted that it is very difficult to get accurate objective performance figures, in particular from SMEs, due to the sensitivity of the data (Sapienza, Smith, & Gannon, 1988). It has also been reported that subjective measures are correlated with objective performance indicators (Dess & Robinson, 1984). As a result, many studies have adopted a subjective frame of reference as opposed to an objective one (e.g., Katsikeas et al., 1996; Robertson & Chetty, 2000).

In terms of the frame of reference, INV performance studies have predominantly used a domestic and industry-related frame. Examples of a domestic frame include Autio et al. (2000), and Zahra, Ireland, and Hitt (2000), while Kuivalainen et al. (2007) adopted an

industry-related frame. Crick (2009) adopted a goal-related frame of reference. Knight and Cavusgil (2004) and Knight et al. (2004) used a combination of a domestic-, industry-, and goal-related frame of reference. Many INV studies have employed subjective measures (e.g., Crick, 2009; Jantunen et al., 2008; Knight & Cavusgil, 2004; Zhang, Tansuhaj, & McCullough, 2012), whereas objective indicators have been used relatively seldom (McDougall & Oviatt, 1996).

2.2.3 Time frame of INV performance measurement

The temporal frame gauges a firm's performance according to a time horizon. Three time frames can be identified: historical, current, and future (Katsikeas et al., 2000). Historical performance has been used frequently in export studies, with time frames for the previous two, three, and five years. For example, Katsikeas et al. (1996) looked at export performance (export sales, market share, and profitability) over the previous three years, whereas Cavusgil and Zou (1994) examined export sales growth and export profitability over the previous five years. The application of historical performance measures may give some indication of sustained export performance, as it can balance short-term fluctuations of export performance (Katsikeas et al., 2000); this approach has also been termed a "dynamic" orientation (Matthyssens & Pauwels, 1996). In addition, current export performance has been measured in some studies. For example, Brouthers and Nakos (2005) examined current export profitability, relative to domestic market profitability. However, very few studies have examined the dimension of future performance. For instance, Robertson and Chetty (2000) asked respondents to estimate their export performance for the next three years.

With regard to the time horizon of INV performance measurement, the focus has been placed on past and current performance. Several studies have examined the international performance of previous years (ranging from one to three). For example, Kuivalainen et al.

(2007) looked at profit performance over the last three years, which is consistent with the time frame adopted by Knight et al. (2004). Kundu and Katz (2003) investigated export growth as compared to the previous year. In addition, some studies used the current performance (e.g., McDougall & Oviatt, 1996). No INV performance study was found that considered anticipated future performance.

2.2.4 Data collection methods in INV performance measurement

In terms of the data collection method, two sources of data can be differentiated: primary and secondary. For primary sources, data are obtained directly from firms/organisations through, for example, questionnaires that require managers' self-assessment of export performance, or interviews with the firms' management. Secondary data consist of publicly available data, such as companies' annual reports and published case studies. In terms of the empirical approach, most export studies have used primary data, generally in the form of postal questionnaires and, to a lesser extent, in-depth interviews. Zou and Stan (1998) stated that mail surveys are the dominant form of data collection in export performance research. The preference for primary data may be attributed to the difficulty of obtaining publicly available data from small firms (Robertson & Chetty, 2000). Furthermore, it has been argued that managers are guided more by subjective measures than objective ones and, thus, perceived performance may be more important than actual performance (Madsen, 1989). In addition, objective and financial data may be difficult to compare in international business research, due to different and sometimes competing accounting standards for international firms (Hult et al., 2008).

Many INV studies have tended to use primary data sources when investigating international performance. This may be explained by the difficulty in obtaining publicly available data from small firms, such as INVs. Among primary sources, several studies used

self-administered mail questionnaires (e.g., Jantunen et al., 2008; Knight & Cavusgil, 2004; Li, Qian, & Qian, 2012), whereas other researchers adopted interviews and case studies as the data collection method (e.g., Chetty & Campbell-Hunt, 2004; Mort & Weerawardena, 2006). Knight and Cavusgil (2004), and Knight, Madsen, and Servais (2004) used a combination of qualitative and quantitative research, by developing a postal survey based on the insights from initial interviews with managers. Crick (2009) used a survey, followed by the main qualitative data collection.

2.2.5 INV performance measures in empirical studies

Export performance measures can be classified into three groups: financial, non-financial, and generic (Katsikeas et al., 2000; Matthyssens & Pauwels, 1996). Financial measures involve sales-, profit-, and market share-related measures, whereas non-financial indicators include factors, such as export market penetration, and the contribution of exporting to company reputation (Sousa, 2004). Generic measures involve, for example, perceived export success, and satisfaction with export performance (Katsikeas et al., 2000). The literature on export performance measures is scattered, as shown by the large number of performance indicators found in reviews of the export performance literature. For example, Katsikeas et al. (2000) reported 42 different performance indicators, and Sousa (2004) found 50 measures. However, there are a few key measures that have been used consistently in export studies. These pertain to financial indicators, and include export intensity (i.e., export/total sales ratio), export sales growth, export sales volume, and export profitability (Katsikeas et al., 2000). This is consistent with Sousa (2004) who reviewed 43 export performance studies from 1998-2004. Other measures that were used, but rarely, include contribution of exporting to company reputation, achievement of export objectives, rate of new market entry, and number of export transactions (Sousa, 2004).

When adopting export performance measures, it is possible to use one single indicator, or multiple and composite indicators. One of the limitations of employing a single measure pertains to its inherent difficulty in capturing the multi-dimensionality of performance. In contrast, multiple measures of export performance may provide more insight into the dynamics of performance (Matthyssens & Pauwels, 1996). Similarly, Murphy, Trailer, and Hill (1996) argued that multiple measures of performance should be used. A potential disadvantage of using different performance measures is the trade-off between short-term and long-term goals. For example, it may be that a firm is more committed to enhancing its short-term profitability rather than building up a strong reputation in the long-term. In addition, the dimensionality of performance is an important consideration, which refers to the categories of financial, operational, and organisational effectiveness performance (Venkatraman & Ramanujam, 1986). Generally, the use of performance measures from multiple dimensions is advocated (Hult et al., 2008). The use of multiple dimensions allows the examination of each dimension independently or formation of a composite measure. Venkatraman and Ramanujam (1986: 807) called for the adoption of a multi-dimensional approach, where each performance dimension is examined independently, arguing that a "unidimensional composite of a multidimensional concept such as business performance tends to mask the underlying relationships among the different subdimensions". In the context of export performance, "export sales", "export growth", and "export profit" are common dimensions (Matthyssens & Pauwels, 1996). Other studies have formed a composite scale, by combining different dimensions (e.g., Cavusgil & Zou, 1994).

Many INV studies have adopted financial and generic performance measures, where respondents were asked about their level of satisfaction with their firms' international performance. For example, Knight and Cavusgil (2004) investigated the level of satisfaction with product performance, in terms of market share and sales growth, and looked at the

perceived success of the product in its main export market. Similarly, Jantunen et al. (2008) examined the amount of satisfaction with international activities with regard to sales volume, market share, profitability, market entry, image development, and knowledge development. Kuivalainen et al. (2007) used the degree of satisfaction with sales and profit performance. Crick (2009) adopted overseas sales growth, sales volume, profitability and market share. In addition, other economic measures have been used by several authors. For instance, Autio et al. (2000) employed growth in international sales as a percentage of total sales for the previous five years, and Zahra et al. (2000) adopted return on equity (ROE). Mort and Weerawardena (2006) argued that profit and ROI may not be appropriate performance measures for INVs, as these firms may have not yet achieved the stage of sustained growth, and opted to use the entry of INVs into multiple, international markets and rapid market expansion as measures for international performance. In contrast to the export performance literature, export intensity has not been used widely in the measurement of the performance of INVs; this may be explained by the fact that this indicator is used predominantly as a criterion to define INVs. In addition, INV studies have primarily incorporated financial measures, in accordance with the export performance literature.

To conclude, we reviewed the extant literature on the performance measurement of INVs. In doing so, we discussed firm, export and INV performance to provide an integrated and comprehensive perspective. We can conclude that there is a wide heterogeneity in employed performance measures. Export sales, export sales growth and export profitability emerge as the most commonly used export performance measures in the literature.

Compared to export performance, the INV performance literature is rather new and is in its relative infancy. In terms of performance measurement, several studies have formed single, composite performance measures (e.g., Jantunen et al., 2008; Knight & Cavusgil, 2004), while others examined different types of performance (e.g., sales performance, profit

performance, and sales efficiency performance) (Crick, 2009; Kuivalainen et al., 2007). The majority of INV studies tend to use subjective performance measures. While most studies incorporate financial indicators, it can be concluded that there is a wide range of different performance measures employed in INV studies, similar to the export performance literature.

3. Methodology

Following Tashakkori and Teddlie (1998), we employed a sequential mixed methods approach which consisted of exploratory interviews and a quantitative survey instrument. It has been argued that mixed methods are suitable for international entrepreneurship due to the integration of the quantitative focus of international business and the qualitative emphasis of entrepreneurship (Hohenthal, 2006). The purpose of the mixed methods design was to increase the validity of the research and obtain a deeper understanding of the phenomena at hand (Hurmerinta-Peltomäki & Nummela, 2006; Jick, 1979), in line with the development and initiation aspects by Greene et al. (1989). More specifically, the role of the exploratory interviews was to inform the survey instrument and help in interpreting the findings.

We operationalised INVs as companies that had started to internationalise within the first three years after establishment and had obtained at least 25% of total sales from foreign markets within three years. While we acknowledge that there are a multitude of different operationalisations of INVs (see Kuivalainen, Saarenketo, & Puumalainen, 2012), our definition is in line with the widely-used operationalisation of Knight and Cavusgil (2004), and has been used in several previous studies (e.g., Moen & Servais, 2002; Mort & Weerawardena, 2006). Non-INVs were operationalised as those companies that did not meet the INV criteria outlined above.

3.1 Qualitative interviews

We conducted eight semi-structured, in-depth interviews with senior managers of INVs in New Zealand and Australia (five New Zealand, three Australian). The purpose of the interviews was to gain insights into the performance measures that are being adopted by INVs. In addition, the findings from the interviews were being used to operationalise the web-based survey instrument. We selected New Zealand and Australia as the empirical context for this study as the two countries are characterised as small and open economies (SMOPECs). In addition, there is a large number of SMEs and INVs in these countries which provides a fruitful environment for studying these types of firms (McGaughey, 2007).

Following a purposive sampling approach (Miles & Huberman, 1994), we used two key criteria to select the sample firms: (1) being an exporter, and (2) being a New Zealand or Australian-based company. In addition, we selected companies from various industries, including ICT, manufacturing, education, oil, food and wine to provide breadth in the analysis and help improve the generalisability of the findings. The firms' details were drawn from the Dun & Bradstreet database and belonged to the three categories of "manufacturing", "service", and "other" as used in the subsequent quantitative analyses (see Section 4.2). The sample firms could all be classified as INVs with an average international sales ratio of 62.9% three years after establishment, and a start into internationalisation 1.75 years after formation. In addition, the sample firms had, on average, 38 employees and were 8.9 years old. Table 2 provides a summary of the characteristics of the interviewed firms.

Table 2 about here

The interviews were conducted via Skype (5) or face-to-face (3) at the companies' premises and lasted for approximately 1 hour. The interview questions focused on the

performance aspects of INVs and included questions, such as “How does the company measure performance?” and “Which indicators (financial and non-financial) is the company using to measure international performance?” The interviews were audio-recorded, transcribed and further analysed using the software NVivo.

3.2 Quantitative surveys

The sampling frame for the quantitative web-based survey included 2,000 firms (1,000 from New Zealand and 1,000 from Australia). We used the Dun & Bradstreet database to develop the sampling frame by applying three criteria: (1) being a New Zealand or Australian company, (2) being an exporter, and (3) being established between 1999 and 2009. Relatively young firms were selected in order to reduce memory bias of managers.

We invited 2,000 firms to participate in the study by sending a postal letter which contained the link to the survey prior to following up with two reminder emails. In total, 310 usable responses were obtained accounting for a net response rate of 15.5%.

3.2.1 Measurement

Considering the multidimensionality of performance, we adopted measures on each of the three types of performance based on the influential, seminal studies by Venkatraman and Ramananujam (1986) and Hult et al. (2008): (1) financial performance (i.e., international sales volume, international sales growth, international profitability, ROI from international markets) (e.g., Autio et al., 2000; Knight & Cavusgil, 2004), (2) operational performance (i.e., market share in international markets, global reach, new product/service introduction in international markets, time to market for new products/services internationally, number of successful new products/services in international markets, gaining a foothold in international markets) (e.g., Crick, 2009; Kuivalainen et al., 2007; Vorhies, Barker, & Rao, 1999), and (3) organisational effectiveness (i.e., international reputation of the firm, overall international

performance) (e.g., Jantunen et al., 2008; Hitt, 1988). These performance measures were developed by the extant literature review and the exploratory interviews (see next section). For our survey, the performance indicators "global reach", "gaining a foothold in international markets", "new product/service introduction in international markets" and "time to market for new products/services internationally" were developed from the interviews. The variables were multi-item constructs which were derived from seven-point Likert scale survey items, where 1 means not important at all and 7 means extremely important. Exploratory factor analysis (EFA) yielded two variables for performance: financial performance (5 items) and operational performance (7 items). Each of the constructs explained more than the recommended 50% of the variance. Interestingly, EFA did not yield a separate construct for organisational effectiveness. The measures for organisational effectiveness (i.e., overall international performance and international reputation of the firm) loaded on the financial performance (overall international performance) and operational performance construct (international reputation of the firm), respectively. From a conceptual standpoint, this may be partly attributed to the difficulties in measuring organisational effectiveness, in particular in the context of SMEs and INVs (e.g., Steers, 1975).

4. Results

The research questions of this study relate to the international performance measurement of INVs. Specifically, we examined what important international performance measures are in the context of INVs and adopted a comparative perspective with traditionally internationalising firms to derive stronger conclusions about INVs. In the following section, we outline the findings from the qualitative and quantitative portions of the study.

4.1 Findings from qualitative interviews

Face-to-face interviews conducted with eight INVs provided the data for this study. All interviewees mentioned that they were using a combination of various international performance measures. The managers from COMP1 and COMP2 noted that international performance is generally hard and difficult to measure. Seven out of the eight interviewed firms placed strong importance on financial measures as demonstrated by the following interview excerpts:

> *"I guess we measure ourselves with the traditional financial measures. I think interestingly, we do a lot of planning in US dollars because most of our inputs and outputs are US dollars. The only New Zealand components are the staff here really, because we buy everything in US dollars, we sell most things in US dollars so we do a lot of planning in US dollars. We obviously measure ourselves against the competitors in terms of market share, and you know that sort of thing. But really the measurements are I'd say the traditional measurements of revenue growth, profit growth, EBITDA."* (COMP1)

> *"By sales predominantly and sales volume. And also by the stores that we're in. But it's really, it's more to do with sales growth."* (COMP2)

The interviewee from COMP3 explained the reasons for the importance of financial-based measures:

> *"It's all based around financial performance basically. We actually cut a few people out of our programme that weren't performing. And added a few people into the programme which definitely have raised the bar of who we are and what we do. … But it all comes down to finances. If it's not there, we can't buy it. If the sale hasn't been made, we can't move forward. … At the end of the day, like I said, if my staff member wants a pay rise of 5,000 dollars, and then I view their targets in sales, I mean, where am I supposed to get the money from?"* (COMP3)

The most common financial performance measures were international sales volume, international sales growth, ROI, and international profit. Besides these measures, the manager from COMP1 mentioned EBITDA (i.e., earnings before interest, tax, depreciation and amortisation), and the representative from COMP4 noted that the company is using the financial value of new clients (i.e., additional revenue by new clients) as an international performance measurement.

In addition to financial measures, operational performance measures were also mentioned during the interviews. For example, the manager from COMP5 noted that the company prefers non-financial rather than financial measures:

> *"So we are not using any financial measurements for measuring performance, but more the non-financial stuff which is around market share and basically our global reach. So it's really about basically for us trying to get a global presence in as many major markets as possible and then sort of growing it from there through a combination of direct export, direct investment and sales with our own entity which we have in the USA, and also through licensing."* (COMP5)

Similarly, the representative from COMP4 emphasised the importance of market share:

> *"Absolutely, this is very important. Market share is very important for us. 75% of all polytechnics and 50% of all universities in Australia use our products. And seven states in the US are using our product, which I think is a remarkable achievement if you consider that there are only 51 states in the US."* (COMP4)

The manager from COMP1 noted that the time to market for new products is an important operational performance measurement:

> *"It's quickly turning prototypes into products or ideas into products, so it's, you know, product life-cycle. Getting products to markets quickly."* (COMP1)

Market share was the most common operational performance measure adopted by the sample firms. Another important operational measure was global reach, which relates to the strategic, worldwide dispersion of international markets a company is active in. Other measures included marketing measures, such as brand awareness (COMP4), percentage of dollar spent on advertising and promotion (COMP6) and marketing promotion (COMP3); technical measures, e.g., equipment failure rates (COMP7) and technical benchmarks (COMP8); and miscellaneous measures, such as number of visitors at trade shows and amount of follow-on business from there (COMP5), and website search engine optimisation (COMP3). Table 2 summarises the key insights from the interviews with illustrative quotes about the international performance measurement of INVs. The findings from the interviews were used

to develop the measurement items of the survey instrument which is outlined in the next section.

4.2 Results from quantitative surveys

Prior to conducting the quantitative analysis, we checked the survey data for potential biases. In order to examine whether non-response bias is affecting the data, we followed the extrapolation procedure as recommended by Armstrong and Overton (1977). Thus, using the 75/25 cut-off of Weiss and Heide (1993), and Sousa, Ruzo, and Losada (2010), we compared the answers of early respondents (that is, the first 75% of respondents who completed the survey) and late respondents (that is, the last 25%) according to key demographic and firm characteristics, including number of full-time employees, company's annual gross sales, company age, company's international experience, international sales ratio, industry, location and position in the company. Using independent samples *t*-tests and crosstabulations on the constructs of interests, we found no significant differences among early and late responses which indicates that non-response bias is not a serious concern in the study. In addition, a comparison of the sample composition and population figures did not reveal any major sample bias in terms of demographic characteristics.

Our sample consisted of 147 INVs (102 New Zealand, 45 Australia) and 163 non-INVs (101 New Zealand, 62 Australia). The INVs had, on average, 23.4 (non-INV: 28.5) employees, 71.6% (non-INV: 5.9%) international sales three years after establishment, and were 9.6 (non-INV: 11.9) years old. The industry sectors included 27.2% (non-INV: 31.3%) manufacturing, 38.8% (non-INV: 37.4%) service, and 34.0% (non-INV: 31.3%) other (e.g., agriculture, fishing and forestry). It should be noted that the distinction into manufacturing, service and other is commonly used in the literature (e.g., Damanpour, 1991; Sengupta,

Heiser, & Cook, 2006; Sirilli & Evangelista, 1998). Table 3 summarises the characteristics of the sample firms.

Table 3 about here

4.2.1 Level of importance of international performance measures

T-tests were undertaken to compare the means of various international performance measures between INVs and non-INVs. Table 4 shows the results.

Table 4 about here

As reported in Table 4, the *t*-tests indicated that INVs tend to place significantly higher levels of importance on all 12 international performance measures ($p<0.01$ or $p<0.05$) compared to non-INVs. The ranks of the respective measures are for information purposes only and have not been statistically tested.

Table 5 shows the results pertaining to the comparisons of the mean levels of importance for the aggregated performance measures (i.e., financial and operational performance).

Table 5 about here

Similar to the findings illustrated in Table 4, INVs have generally significantly higher levels of importance placed on financial and operational performance ($p<0.01$) as compared to non-INVs. In addition, we conducted one-sample *t*-tests which revealed that INVs tend to place significantly more importance on financial than operational performance ($p<0.01$). The same result was obtained for the one-sample *t*-test for the non-INVs ($p<0.01$).

We also examined whether there would be any cross-country differences in performance measures between firms in New Zealand and Australia. In terms of the New Zealand sample, our *t*-tests revealed the same results as for the complete sample (i.e., New Zealand INVs generally placed significantly more importance on all international performance measures (as well as the aggregate indicators) compared to non-INV New Zealand firms ($p<0.01$ or $p<0.05$)). The detailed findings are shown in Tables 6 and 7, respectively.

Tables 6 and 7 about here

With regard to the Australian sample, the results were similar except for the operational indicators "market share in international markets", "international reputation of the firm", "new product/service introduction in international markets", "global reach", "time to market for new products/services internationally", "gaining a foothold in international markets", and "number of successful new products/services in international markets", where no significant differences between INVs and non-INVs were found. The detailed results are reported in Tables 8 and 9.

Tables 8 and 9 about here

We conducted one-way analysis of variance (ANOVA) in order to compare the mean level of importance for international performance measures across the three industry sectors (i.e., manufacturing, service, and other). The results for the INV sample are summarised in Table 10.

Table 10 about here

As Table 10 illustrates, there are significant differences in the mean levels of importance of international performance measures among the three industry types (i.e., manufacturing, service and other) in terms of international sales growth, international profitability, and ROI from international business. More specifically, manufacturing INVs tend to place significantly more importance on international sales growth ($p<0.10$) and international profitability ($p<0.05$) compared to service firms, based on confidence interval analysis. Companies that belong to the "other" industry category, consider, on average, ROI from international business as significantly more important compared to service firms ($p<0.05$).

For comparative purposes, we further conducted ANOVAs for the non-INVs. Table 11 highlights the results.

Table 11 about here

In terms of the sample of non-INVs, there are significant differences among the industry types with regard to mean level of importance attached to international sales growth ($p<0.05$), market share in international markets ($p<0.01$), new product/service introduction in international markets ($p<0.05$), global reach ($p<0.05$), gaining a foothold in international markets ($p<0.05$), number of successful new products/services in international markets ($p<0.01$), and overall international performance ($p<0.10$). In particular, non-INV manufacturing firms, on average, place significantly higher levels of importance on these performance measures as compared to companies in the "other" industry category.

The ANOVA results for testing the mean differences for level of importance of the aggregated international performance measures are displayed in Tables 12 (INV sample) and 13 (non-INV sample).

Tables 12 and 13 about here

As shown in Table 12, manufacturing INVs generally consider financial performance significantly more important compared to service firms ($p<0.10$).

As Table 13 illustrates, non-INV manufacturing companies tend to place significantly more importance on financial ($p<0.05$) and operational performance ($p<0.01$) than firms in the "other" industry category.

5. Discussion and conclusion

We began this study by asking how INVs measure their own international performance and further raised the question whether the specific performance dimensions are viewed as equally important by INVs and non-INVs. In this paper, our review of the performance literature revealed three types of measures: financial performance (i.e., economic, accounting and market outcome-based performance indicators), operational performance (i.e., product-market and process outcome-based indicators), and overall organisational effectiveness (i.e., reputation, survival and perceived overall performance). Our review showed that it is advisable to use several different types of measures when investigating performance. It has been suggested to examine measures from across the three performance categories (i.e., financial, operational and overall effectiveness) to create a multi-dimensional approach, or to test hypotheses at multiple levels of performance (Hult et al., 2008).

More importantly, we extended the performance literature and examined how these given performance measures were evaluated by INVs, and how INVs *per se* measured their performance. Recent INV perspectives offer important insights of this potential "inappropriateness" of given performance measures for INVs. In contrast to the conventional wisdom that firms expand into foreign markets through incremental international expansion

(e.g., Johanson & Vahlne, 1977), recent INV literature indicates that many firms are going international very rapidly from an early stage in their market expansion (e.g., Jones et al., 2011; Knight & Kim, 2009; Oviatt & McDougall, 1994). In other words, pursuing international growth and opportunities is a top priority and one of the fundamental features for INVs. We proposed these lines of arguments and also found such empirical evidence that INVs are largely different from non-INVs in that they are more likely to put more emphasis on international performance than non-INVs. That is, INVs were generally more international performance oriented than non-INVs. In addition, we provided evidence that different performance domains, such as financial and operational performance, were not viewed as equally important by INVs. The findings indicated that INVs placed a particular importance on financial performance.

A possible explanation of the priority placed on financial performance compared to other domains such as operational performance is that INVs are usually very small and relatively young. While financial performance is often the ultimate goal for many firms, non-financial performance, such as operational performance, may be viewed as an important intermediary instrument as it can lead to better financial performance. For instance, market share, as an important operational performance indicator, has been found to influence profitability (Buzzell & Gale, 1987; Szymanski, Bharadwau, & Varadarajan, 1993). Other operational performance measures, such as new product introduction and innovation, have also been found to significantly influence company growth and profitability (Zahra, 1993). In order to survive in a hyper-competitive global market, INVs may thus pay more attention to enhancing financial performance which seems to be a direct and more important indicator of their success due to their unique liabilities of smallness and newness (Autio et al., 2000). The findings from our interviews shed further light on this issue. For instance, the manager from COMP7 aptly noted that “The first rule of business is to stay in business”, which highlights

the importance of survival and profitability for the firm. In the context of survival, Sapienza, Autio, George, and Zahra (2006) proposed that early internationalisation may decrease the probability of survival for firms.

In terms of comparisons among different industry sectors regarding performance measurement, it appears that there have been no empirical studies undertaken in the IE literature to the best of our knowledge. We found that manufacturing INVs tend to place significantly more importance on financial measures compared to service INVs. With regard to the sample of non-INVs, manufacturing firms had generally significantly higher levels of importance attached to financial and operational performance measures compared to "other" companies. The results suggest that industry does matter in terms of international performance measurement, and that firms may place different emphasis on certain performance indicators depending on their industry sector, which is consistent with Hirsch (1975). This yields potentially important practical implications for entrepreneurs when starting-up a new business as it suggests that some performance measures may be more critical than others to monitor in certain industries.

In sum, INVs were found to be more international performance oriented than non-INVs. In addition, specific performance domains were not viewed as equally important. Our results indicated that INVs pay more attention to financial performance than operational performance when going international at an early stage. These findings are meaningful, and have important practical implications. One key managerial implication from our study is that entrepreneurs are advised to adopt a holistic view when assessing the performance of their companies. While we found empirical evidence in our survey that financial measures were generally considered as more important than operational measures, certain operational indicators emerged as critical from our qualitative interviews, such as reputation and survival

of the firm. Thus, these findings are consistent with the conclusion of Steers (1975) that business organisations generally put different weight and valence to their performance goals.

Our study also contributes to the international business and INV literature by offering important theoretical implications for research on the conceptualisation and measurement of performance among INVs. The theoretical implications of the findings are two-fold. First, while research including multiple conceptualisations and measurements of performance is highly encouraged, further studies should specifically include multiple international oriented, and financial and economic outcome-based performance measures when examining firm performance in the INV context. While various performance domains have been largely studied and analysed both in the international business and INV literature, comparative studies of different performance measures between traditional international companies and INVs have generally been under-researched. Our study sought to contribute to this advancement by examining the performance measurement as evaluated by INVs and non-INVs. We found evidence that one of the novel features of INVs is their international performance orientation. Consistent with Jones et al.'s (2011) call for integrative performance studies, our comparative perspective allowed a more fine-grained view of performance measurement, thus contributing to the rather heterogeneous IE performance literature (Crick, 2009; Knight & Cavusgil, 2004).

A second theoretical contribution relates to advancing the organisational effectiveness literature by finding empirical evidence for the relevance of financial and operational performance indicators in the context of INVs. Our EFA did not yield a separate construct for organisational effectiveness which may be linked to the challenges of measuring organisational effectiveness (see e.g., Friedlander & Pickle, 1968; Steers, 1975). More specifically, our study is consistent with Steers (1975: 549) who argued that "the

[organisational] effectiveness construct is so complex as to defy simple attempts at model development".

Although the present study has attempted to provide researchers with a conceptually and practically sound understanding of the performance measurement for INVs, there are several important issues that go beyond the scope of this study and are worthy of future research. For example, we examined subjective performance measures as perceived by INVs. A potential area of future research relates to comparing subjective and objective performance measures. In this regard, it may be interesting to investigate how the level of firm ownership may shape perceptions of performance (e.g., SMEs that have received venture capital vs. SMEs that are owned by their entrepreneurs).

In addition, the sample firms were drawn from Australia and New Zealand which means that our findings may not be applicable to other country contexts. Future research would be valuable for the discussion regarding whether and how the performance measurement for INVs varies across different home-country environments. Finally, a limitation of the study refers to potential memory bias of managers which may have shaped the responses to the surveys and interviews.

In conclusion, our exploratory study aimed to contribute to the literature by bridging the gap of performance measurement between INVs and non-INVs, and may thus provide a first step towards a better understanding of the performance measurement of INVs.

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Table 1
Measurement of performance for INVs.

Author	Type of performance measure	Type of data	Level of analysis	Industry	Country	Journal[1]
McDougall & Oviatt (1996)	Financial performance: International sales ratio, return on investment (ROI)	Primary: Survey	Firm	Manufacturing	USA	JBV
Autio, Sapienza, & Almeida (2000)	Financial performance: International sales growth	Secondary: Panel data	Firm	Electronics	Finland	AMJ
Kundu & Katz (2003)	Financial performance: Export growth, exports as a percentage of total sales	Primary: Survey	Firm	Software	India	Small Business Economics
Dimitratos, Lioukas, & Carter (2004)	Financial performance: Foreign country sales ratio	Primary: Survey	Firm	Food, beverages, garments, footwear, software	Greece	IBR
Knight & Cavusgil (2004)	Sales growth, pre-tax profitability, ROI, market share, perceived success of venture	Primary: Interviews and surveys	Export venture	Manufacturing	USA	JIBS
Knight, Madsen, & Servais (2004)	Financial performance: Sales growth, pre-tax profitability, ROI, market share	Primary: Interviews and surveys	Export venture	Manufacturing	Denmark, USA	IMR
Mort & Weerawardena (2006)	International market performance: Entry into multiple markets, rapid market expansion	Primary: Case studies	Firm	Hi-tech and low-tech industry	Australia	IMR
Kuivalainen, Sundqvist, & Servais (2007)	*Export sales*: Export sales growth, satisfaction with export volume, market share, and rate of new market entry; *Export profits:* Satisfaction with export profits, overall profitability; *Sales efficiency performance:* Ratio of firm's total annual export sales turnover to the total number of employees, ratio of total annual export sales turnover to the total number of countries exported to	Primary: Survey	Firm	Not specified	Finland	JWB

Author	Type of performance measure	Type of data	Level of analysis	Industry	Country	Journal[1]
Gleason & Wiggenhorn (2007)	Financial performance: Profitability (ROA, ROE)	Secondary	Firm	Not specified	USA	JWB
Zhou, Wu, & Luo (2007)	Financial performance: Export, profitability, and total sales growth	Primary: Survey	Firm	Manufacturing	China	JIBS
Jantunen, Nummela, Puumalainen, & Saarenketo (2008)	Sales volume, market share, profitability, market entry, image development, knowledge development, overall performance	Primary: Survey	Firm	Industrial sectors	Finland	JWB
Crick (2009)	Overseas sales growth, overseas sales volume, overseas profitability, overseas market share	Primary: Survey and case studies	Firm	Technology	UK	IMR
Kocak & Abimbola (2009)	Not specified	Primary: Interviews	Firm	Various industries	Turkey	IMR
Kim, Basu, Naidu, & Cavusgil (2011)	Financial performance	Primary: Survey	Firm	Not specified	India	JBR
Efrat & Shoham (2012)	Strategic performance	Primary: Interviews and survey	Firm	High-tech	Israel	JWB
Li, Qian, & Qian (2012)	Financial performance: Profit margin/return on sales	Primary: Survey	Firm	High-tech	USA	IMR
Park & Rhee (2012)	Financial performance: International sales ratio	Primary: Survey	Firm	Various industries	South Korea	Management Decision
Zhang, Tansuhaj, & McCullough (2012)	Financial performance Strategic performance	Primary: Survey	Firm	Manufacturing	China	Journal of International Entrepreneurship

[1]JBV: Journal of Business Venturing, AMJ: Academy of Management Journal, IBR: International Business Review, JIBS: Journal of International Business Studies, IMR: International Marketing Review, JWB: Journal of World Business, JBR: Journal of Business Research

Table 2
Characteristics of interviewed firms.

	COMP1	COMP2	COMP3	COMP4	COMP5	COMP6	COMP7	COMP8
Number of employees	70	15	15	32	42	8	75	50
Industry	ICT	Food	Manufacturing	Education	Manufacturing	Wine	ICT	Oil and Gas
Year of establishment	2001	2001	2003	2003	1994	1998	1999	2002
Year of first internatio-nalisation	2002	2003	2006	2005	1997	1998	2001	2003
International sales ratio three years after firm establishment	99%	60%	40%	51%	30%	75%	98%	50%
First main international markets	South Korea, USA, UK, Japan, Taiwan	USA, Australia, Singapore	Hong Kong, SingaporeUK, USA, Taiwan	Singapore, Canada	USA, UK, Australia	USA, UK, Europe	France, Europe	Middle East
Insights from interviews about international performance measurement	"But really the measurements are I'd say the traditional measurements of revenue growth, profit growth, EBITDA, and then market share."	"We measure our international performance by sales predominantly and sales volume. And also by the stores that we're in. But it's really, it's more to do with sales growth."	"It's all based around financial performance basically."	"Market share is very important for us. 75% of all polytechnics and 50% of all Australian universities use our product."	"We are not using any financial measurements for measuring performance, but more the non-financial stuff which is around market share and basically our global reach."	"We measure international performance mainly by return on invested capital and market growth	"The first rule of business is to stay in business."	"We measure international performance basically only by sales revenue at the moment."

Table 3
Characteristics of survey sample.

	INVs	**Non-INVs**
Number of firms	147	163
Number of employees	23.4	28.5
International sales three years after company establishment	71.6%	5.9%
Company age (in years)	9.6	11.9
Industry sectors	Manufacturing (27.2%) Service (38.8%) Other (34.0%)	Manufacturing (31.3%) Service (37.4%) Other (31.3%)
Company's annual gross sales in 2009 (NZ/A$)	1-5 million	1-5 million

Table 4
T-test results for level of importance of international performance measures.[1]

Classification	Variable		INVs	Rank	Non-INVs	Rank	Sig.
Financial performance	International sales volume	Mean	6.61	1	5.60	3	**
		Std. Deviation	0.74		1.36		
		N	147		161		
Financial performance	International sales growth	Mean	6.52	2	5.52	=4	**
		Std. Deviation	0.82		1.37		
		N	147		160		
Financial performance	International profitability	Mean	6.36	3	5.77	2	**
		Std. Deviation	0.94		1.18		
		N	146		159		
Financial performance	Overall international performance	Mean	6.32	4	5.52	=4	**
		Std. Deviation	0.95		1.34		
		N	146		161		
Operational performance	International reputation of the firm	Mean	6.19	5	5.91	1	*
		Std. Deviation	1.07		1.18		
		N	147		159		
Financial performance	Return on investment (ROI) from international business	Mean	6.04	6	5.50	6	**
		Std. Deviation	1.08		1.34		
		N	147		160		
Operational performance	Gaining a foothold in international markets	Mean	5.94	7	5.36	7	**
		Std. Deviation	1.22		1.43		
		N	147		160		
Operational performance	New product/service introduction in international markets	Mean	5.67	8	4.99	8	**
		Std. Deviation	1.23		1.51		
		N	146		161		
Operational performance	Global reach (i.e. presence in strategically located countries worldwide)	Mean	5.37	9	4.62	9	**
		Std. Deviation	1.52		1.70		
		N	147		160		
Operational performance	Number of successful new products/services in international markets	Mean	5.30	10	4.58	11	**
		Std. Deviation	1.36		1.52		
		N	145		158		
Operational performance	Time to market for new products/services internationally	Mean	5.29	11	4.60	10	**
		Std. Deviation	1.39		1.70		
		N	145		159		
Operational performance	Market share in international markets	Mean	5.05	12	4.21	12	**
		Std. Deviation	1.55		1.77		
		N	146		160		

*p<0.05; **p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 5
T-test results for level of importance of international performance measures (by types of performance).[1]

Variable		INVs	Non-INVs	Sig.
Financial performance	Mean	6.38	5.58	**
	Std. Deviation	0.70	1.08	
	N	145	157	
Operational performance	Mean	5.52	4.91	**
	Std. Deviation	1.00	1.19	
	N	142	155	

*p<0.05; **p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 6
T-test results for level of importance of international performance measures (New Zealand sample)[1]

Classification	Variable		INVs	Rank	Non-INVs	Rank	Sig.
Financial performance	International sales volume	Mean	6.63	1	5.78	3	**
		Std. Deviation	0.70		1.29		
		N	102		101		
Financial performance	International sales growth	Mean	6.57	2	5.61	4	**
		Std. Deviation	0.79		1.30		
		N	102		100		
Financial performance	Overall international performance	Mean	6.43	3	5.56	5	**
		Std. Deviation	0.78		1.24		
		N	102		101		
Financial performance	International profitability	Mean	6.36	4	5.89	2	**
		Std. Deviation	0.93		1.10		
		N	102		99		
Operational performance	International reputation of the firm	Mean	6.29	5	5.98	1	*
		Std. Deviation	0.94		1.20		
		N	102		99		
Operational performance	Gaining a foothold in international markets	Mean	6.08	6	5.38	7	**
		Std. Deviation	1.03		1.40		
		N	102		100		
Financial performance	Return on investment (ROI) from international business	Mean	6.05	7	5.50	6	**
		Std. Deviation	1.09		1.32		
		N	102		100		
Operational performance	New product/service introduction in international markets	Mean	5.75	8	4.92	8	**
		Std. Deviation	1.14		1.55		
		N	101		101		
Operational performance	Global reach (i.e. presence in strategically located countries worldwide)	Mean	5.46	9	4.55	9	**
		Std. Deviation	1.43		1.77		
		N	102		100		
Operational performance	Number of successful new products/services in international markets	Mean	5.37	=10	4.49	11	**
		Std. Deviation	1.25		1.46		
		N	100		100		
Operational performance	Time to market for new products/services internationally	Mean	5.37	=10	4.51	10	**
		Std. Deviation	1.31		1.71		
		N	101		99		
Operational performance	Market share in international markets	Mean	5.18	12	4.12	12	**
		Std. Deviation	1.56		1.68		
		N	101		101		

*$p<0.05$; **$p<0.01$

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 7
T-test results for level of importance of international performance measures (by types of performance) (New Zealand sample).[1]

Variable		INVs	Non-INVs	Sig.
Financial performance	Mean	6.41	5.67	**
	Std. Deviation	0.66	0.96	
	N	102	97	
Operational performance	Mean	5.62	4.87	**
	Std. Deviation	0.97	1.14	
	N	98	97	

*$p<0.05$; **$p<0.01$

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 8
T-test results for level of importance of international performance measures (Australia sample).[1]

Classification	Variable		INVs	Rank	Non-INVs	Rank	Sig.
Financial performance	International sales volume	Mean	6.56	1	5.30	7	**
		Std. Deviation	0.81		1.44		
		N	45		60		
Financial performance	International sales growth	Mean	6.40	2	5.38	5	**
		Std. Deviation	0.89		1.47		
		N	45		60		
Financial performance	International profitability	Mean	6.36	3	5.57	2	**
		Std. Deviation	0.97		1.29		
		N	44		60		
Financial performance	Overall international performance	Mean	6.07	4	5.43	4	**
		Std. Deviation	1.25		1.40		
		N	44		60		
Financial performance	Return on investment (ROI) from international business	Mean	6.02	5	5.50	3	**
		Std. Deviation	1.06		1.38		
		N	45		60		
Operational performance	International reputation of the firm	Mean	5.96	6	5.78	1	NS
		Std. Deviation	1.30		1.15		
		N	45		60		
Operational performance	Gaining a foothold in international markets	Mean	5.62	7	5.33	6	NS
		Std. Deviation	1.53		1.48		
		N	45		60		
Operational performance	New product/service introduction in international markets	Mean	5.49	8	5.10	8	NS
		Std. Deviation	1.41		1.43		
		N	45		60		
Operational performance	Global reach (i.e. presence in strategically located countries worldwide)	Mean	5.16	9	4.75	10	NS
		Std. Deviation	1.71		1.58		
		N	45		60		
Operational performance	Number of successful new products/services in international markets	Mean	5.13	10	4.72	11	NS
		Std. Deviation	1.56		1.63		
		N	45		58		
Operational performance	Time to market for new products/services internationally	Mean	5.11	11	4.77	9	NS
		Std. Deviation	1.56		1.68		
		N	44		60		
Operational performance	Market share in international markets	Mean	4.76	12	4.36	12	NS
		Std. Deviation	1.50		1.91		
		N	45		59		

*p<0.05; **p<0.01

NS= not significant

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 9
T-test results for level of importance of international performance measures (by types of performance) (Australia sample).[1]

Variable		INVs	Non-INVs	Sig.
Financial performance	Mean	6.32	5.44	**
	Std. Deviation	0.79	1.26	
	N	43	60	
Operational performance	Mean	5.30	4.99	NS
	Std. Deviation	1.16	1.26	
	N	44	58	

*p<0.05; **p<0.01

NS= not significant

[1] Scale of 1 (Not important at all) to 7 (Extremely important)

Table 10
ANOVA results for level of importance of international performance measures, based on industry (INV sample)[1]

			INVs				
Classification	**Variable**		**Manu-facturing (M)**	**Service (S)[2]**	**Other (O)[3]**	**Sig.**	**Conclusion based on confidence intervals for the mean**
Financial performance	International sales volume	Mean	6.73	6.55	6.58	NS	
		Std. Deviation	0.55	0.81	0.78		
		N	40	55	52		
Financial performance	International sales growth	Mean	6.73	6.35	6.54	*	M > S
		Std. Deviation	0.60	1.00	0.73		
		N	40	55	52		
Financial performance	International profitability	Mean	6.55	6.11	6.49	**	M > S
		Std. Deviation	0.75	1.08	0.86		
		N	40	55	51		
Financial performance	Overall international performance	Mean	6.50	6.24	6.27	NS	
		Std. Deviation	0.64	0.93	1.16		
		N	40	54	52		
Operational performance	International reputation of the firm	Mean	6.38	6.13	6.12	NS	
		Std. Deviation	0.98	1.02	1.18		
		N	40	55	52		
Operational performance	Return on investment (ROI) from international business	Mean	6.08	5.75	6.33	**	O > S
		Std. Deviation	1.05	1.14	0.96		
		N	40	55	52		
Operational performance	Gaining a foothold in international markets	Mean	6.20	5.80	5.88	NS	
		Std. Deviation	0.97	1.37	1.22		
		N	40	55	52		
Operational performance	New product/service introduction in international markets	Mean	5.95	5.55	5.59	NS	
		Std. Deviation	1.20	1.14	1.34		
		N	40	55	51		
Operational performance	Global reach (i.e. presence in strategically located countries worldwide)	Mean	5.73	5.11	5.37	NS	
		Std. Deviation	1.26	1.73	1.44		
		N	40	55	52		
Operational performance	Number of successful new products/services in international markets	Mean	5.66	5.05	5.29	NS	
		Std. Deviation	1.17	1.43	1.36		
		N	38	55	52		
Operational performance	Time to market for new products/services internationally	Mean	5.51	5.17	5.25	NS	
		Std. Deviation	1.37	1.42	1.37		
		N	39	54	52		
Operational performance	Market share in international markets	Mean	5.18	5.00	5.00	NS	
		Std. Deviation	1.60	1.60	1.47		
		N	40	54	52		

*p<0.10; **p<0.05; ***p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important); NS=Not significant
M=Manufacturing
[2] Service (i.e., Professional, Scientific, and Technical Services, Information and Communication, ICT, Education, Financial and Insurance Services)
[3] Other (i.e., Agriculture, Forestry, and Fishing, Mining, Other)

Table 11
ANOVA results for level of importance of international performance measures, based on industry (non-INV sample) [1]

			Non-INVs				
Classification	**Variable**		**Manu-facturing (M)**	**Service (S)[2]**	**Other (O)[3]**	**Sig.**	**Conclusion based on confidence intervals for the mean**
Financial performance	International sales volume	Mean	5.82	5.64	5.31	NS	
		Std. Deviation	1.23	1.57	1.19		
		N	51	61	48		
Financial performance	International sales growth	Mean	5.98	5.38	5.19	**	M > O
		Std. Deviation	1.09	1.50	1.36		
		N	51	61	47		
Financial performance	International profitability	Mean	5.98	5.75	5.58	NS	
		Std. Deviation	0.98	1.30	1.22		
		N	50	60	48		
Financial performance	Overall international performance	Mean	5.80	5.52	5.19	*	M > O
		Std. Deviation	1.10	1.49	1.35		
		N	51	61	48		
Operational performance	International reputation of the firm	Mean	6.18	5.70	5.92	NS	
		Std. Deviation	1.10	1.31	1.05		
		N	50	60	48		
Operational performance	Return on investment (ROI) from international business	Mean	5.82	5.41	5.28	NS	
		Std. Deviation	1.11	1.48	1.36		
		N	51	61	47		
Operational performance	Gaining a foothold in international markets	Mean	5.65	5.52	4.85	**	M > O
		Std. Deviation	1.26	1.48	1.43		
		N	51	61	47		
Operational performance	New product/service introduction in international markets	Mean	5.43	4.84	4.73	**	M > O
		Std. Deviation	1.36	1.64	1.43		
		N	51	61	48		
Operational performance	Global reach (i.e. presence in strategically located countries worldwide)	Mean	5.06	4.72	4.04	**	M > O
		Std. Deviation	1.68	1.64	1.43		
		N	51	61	47		
Operational performance	Number of successful new products/services in international markets	Mean	5.12	4.33	4.28	***	M > O
		Std. Deviation	1.28	1.73	1.36		
		N	51	60	46		
Operational performance	Time to market for new products/services internationally	Mean	4.94	4.62	4.23	NS	
		Std. Deviation	1.43	1.90	1.66		
		N	51	60	47		
Operational performance	Market share in international markets	Mean	4.88	4.00	3.75	***	M > O
		Std. Deviation	1.60	1.97	1.50		
		N	51	60	48		

*p<0.10; **p<0.05; ***p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important); NS=Not significant
M=Manufacturing

[2] Service (i.e., Professional, Scientific, and Technical Services, Information and Communication, ICT, Education, Financial and Insurance Services)

[3] Other (i.e., Agriculture, Forestry, and Fishing, Mining, Other)

Table 12
ANOVA results for level of importance of international performance measures (by types of performance), based on industry (INV sample)[1]

Variable		INVs			Sig.	Conclusion based on confidence intervals for the mean
		Manu-facturing (M)	Service (S)[2]	Other (O)[3]		
Financial performance	Mean	6.52	6.20	6.47	*	M > S
	Std. Deviation	0.57	0.77	0.68		
	N	40	54	51		
Operational performance	Mean	5.78	5.37	5.48	NS	
	Std. Deviation	0.89	1.05	1.02		
	N	38	53	51		

*p<0.10; **p<0.05; ***p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important); NS=Not significant
M=Manufacturing
[2] Service (i.e., Professional, Scientific, and Technical Services, Information and Communication, ICT, Education, Financial and Insurance Services)
[3] Other (i.e., Agriculture, Forestry, and Fishing, Mining, Other)

Table 13
ANOVA results for level of importance of international performance measures (by types of performance), based on industry (non-INV sample)[1]

		Non-INVs				
Variable		**Manu-facturing (M)**	**Service (S)[2]**	**Other (O)[3]**	**Sig.**	**Conclusion based on confidence intervals for the mean**
Financial performance	Mean	5.88	5.54	5.30	**	M > O
	Std. Deviation	0.93	1.18	1.05		
	N	50	60	46		
Operational performance	Mean	5.34	4.84	4.55	***	M > O
	Std. Deviation	1.06	1.30	1.06		
	N	50	58	46		

*p<0.10; **p<0.05; ***p<0.01

[1] Scale of 1 (Not important at all) to 7 (Extremely important); NS=Not significant
M=Manufacturing
[2] Service (i.e., Professional, Scientific, and Technical Services, Information and Communication, ICT, Education, Financial and Insurance Services)
[3] Other (i.e., Agriculture, Forestry, and Fishing, Mining, Other)