

Types of International New Ventures: A Latent Class Analysis

Abstract

The literature on International Entrepreneurship embraces different types of International New Ventures (INVs) unfolding various internationalization strategies. However, empirical testing of INV strategy differences is largely missing. Based on a framework combining Process Theory with International New Venture Theory we provide evidence that different INV strategies exist by applying latent class analysis (LCA). Based on the LCA we derive four different INV classes: 1) born-again globals, 2) born globals, 3) geographically focused exporters, and 4) gradually internationalizing INVs. We show that INVs vary in their internationalization profile and are a rather heterogeneous than homogenous group of firms. Second, we study the antecedents of these four INV classes to provide a more detailed understanding on how frequently studied factors impact different INV strategies. Thus, our study contributes to the literature by applying a multivariate approach to identify different types of INVs and by providing evidence that the internationalization strategy pursued by an INV depends on the firm's inherent characteristics.

Keywords: Internationalization Strategy, Latent Class Analysis, International Entrepreneurship, International New Ventures, Born Globals

1. Introduction

International Entrepreneurship (IE) topics have been widely discussed in the International Business, Management, and Entrepreneurship community over the last two decades (for reviews see e.g. Coviello & Jones, 2004; Keupp & Gassmann, 2009; Rialp, Rialp & Knight, 2005). In particular research on international new ventures (INVs) – mostly defined as firms engaged in international business right from inception (Oviatt & McDougall, 1994) – dominated the IE literature.

Although many valuable contributions have been made to the field, research on INVs remains largely fragmented. Lacking a consistent definition, IE studies neither provided a clear demarcation nor did they develop sound classifications for INVs. For example, to define INVs, authors chose arbitrary thresholds for the *number of years until first internationalization* such as one year (e.g. Schwens & Kabst, 2009), three years (e.g. Nordman & Melén, 2008), six years (e.g. Zahra, Ireland & Hitt, 2000) or eight years (e.g. Zahra, 1996) after firm inception. The field is equally diversified with regard to further indicators of internationalization such as the *scale of internationalization* (i.e. percentage of foreign sales to total sales), the *scope of internationalization* (i.e. number of foreign markets served), the chosen *entry mode* or the *cultural distance* between the domestic and the international market entered by INVs.

Thus, the INV literature embraces different types of new ventures unfolding various internationalization strategies. However, research falls short of discussing and differentiating between the various strategies examined and applies arbitrarily chosen thresholds. This is problematic, because antecedents of international new venturing and their statistical influence may vary significantly depending on how INVs are conceptualized and defined.

If a distinction between different INV strategies is not being made, studies may misspecify the influence of determinants of international new venturing. For example, the fact that some studies found determinants such as prior international experience to have a strong impact on international new venturing (e.g., Reuber & Fischer, 1997), while others reported only marginal effect sizes (e.g., Kundu & Katz, 2003) may be due to differences in the conceptualization of an INV meaning that studies compared apples with oranges rather than a homogenous group of firms.

The present study aims at reducing the lack of consideration of different internationalization strategies *within the group of INVs*. To achieve the research aim, our procedure is twofold. First, we provide evidence by applying latent class analysis (LCA) to identify different INV strategies along the indicators time to internationalization, international scale, international scope, entry mode behavior, and cultural distance (between home and host country market). Based on the LCA we derive four different INV classes: 1) born-again globals, 2) born globals, 3) geographically focused exporters, and 4) gradually internationalizing INVs. Second, we study the antecedents of these four INV classes to provide a more detailed understanding on how frequently studied factors impact different INV strategies. We examine the impact of international growth orientation, learning orientation, product differentiation, prior international experience, and international network contacts as antecedents for INV class membership.

We contribute to IE literature with a fine-grained analysis which shows that different types of INVs prevail and that the internationalization strategies employed by the firms indeed vary from each other in terms of firm- and founder- related characteristics. Knowing which resources propel specific internationalization strategies allows to foster these resources and thus to more efficiently pursue a targeted INV strategy (Westhead, Wright & Ucbasaran, 2001; Tuppur, Saarenketo, Puumalainen, Jantunen & Kylaheiko, 2008). Depending on the internationalization strategy employed, INVs face different barriers to internationalization with a diverging resource base and differentiated managerial cognitions (Pulkkinen & Larimo, 2007). Thus, unraveling the determinants of different INV types makes an important contribution to IE literature. This knowledge is also helpful for managers, since it provides a better understanding of entrepreneurial firms with regard to their internationalization behavior and strategic decisions. For instance, firms with highly differentiated products may learn from this work which internationalization strategy best suits their specific firm.

The remainder of the paper is structured as follows: the next section reviews the background literature of our paper and outlines different INV classifications currently dominating the field. We then develop hypotheses for the determinants of INV class membership. This is followed by testing our hypotheses applying latent class analysis with covariates on a dataset of 248 German

internationally acting technology firms. We then discuss our findings and finally outline limitations and implications of our paper.

2. Background Literature and Hypotheses Development

2.1. Two views on internationalization

International entrepreneurship (IE) research and studies on INVs respectively have intensively discussed two different internationalization theories: The Process Theories of Internationalization (PTI) and the International New Venture Theory (INVT).

Most of the discussions, to date, view the PTI and the INVT as contradictory, because the two theories take quite different perspectives. PTI answers the question “why does the internationalization process unfold in an incremental manner”. Originating from the internationalization of manufacturing firms in the 1970s, PTI assumes internationalization to unfold incrementally out of an established domestic market (e.g. Johanson & Vahlne, 1977; Johanson & Vahlne, 1990; Johanson & Wiedersheim-Paul, 1975). The firm gradually expands its international activities whereby prior international market engagements function as “stepping stones” into new markets. Accordingly, the firm’s international behavior is driven by two assumptions. First, the establishment chain logic, which implies that firms increase their foreign market commitment over time by moving from export via agents to wholly-owned overseas subsidiaries. The second central element is the psychic distance concept (Johanson & Wiedersheim-Paul 1975) which is defined as “the sum of factors preventing the flow of information from and to the market” (Johanson & Vahlne 1977: 24). Through gradual internationalization from psychically close to more psychically distant markets, the firm reduces the frictions resulting from psychic distance.

Against the PTI view, INVT focuses on a different internationalization strategy pursued by young firms and answers the question of “how is it possible that firms internationalize right from inception” (Oviatt & McDougall, 1994). Originally focusing on the internationalization of knowledge-intensive firms in the mid 1990s, INVT assumes the firm to regard international markets as providing opportunities (McDougall, 1989; Oviatt & McDougall 1994; Shrader, 1996; Zahra, 1996). Accordingly, INV research predominantly assumes internationalization to unfold in a proactive

manner and emphasizes enablers to internationalization such as a strong international growth orientation (e.g. Acedo & Jones, 2007), prior international experience (e.g. Reuber & Fischer, 1997), international network contacts (e.g. Coviello, 2006; Freeman, Edwards & Schroder, 2006) and product differentiation (e.g. Bloodgood, Sapienza, & Almeida, 1996; Shrader, Oviatt & McDougall, 2000).

Various studies have reported that some firms venture abroad early in their life-cycle while generating a significant amount of international revenues from a high number of foreign markets right after firm inception (e.g. Freeman, Edwards & Schroder, 2006). Entry mode studies on INVs suggest that ventures mostly pursue low control transactions, such as export or licensing (Burgel & Murray, 2000); however, leap-frogging of certain steps to internationalization is a key characteristic for INVs (e.g. Shrader et al, 2000; Andersson & Wictor, 2003). Psychic distance is of lesser relevance according to INVT research, because firms view international markets as providing opportunities where distance does not matter if the perceived benefits in the foreign market outweigh the risks. Table 1 summarizes the two different views on internationalization and their main characteristics.

Insert Table 1 about here.

In summary, PTI and INVT provide theoretical backing for different internationalization strategies. PTI has mostly been criticized for not being able to explain the early and rapid internationalization behavior of young firms (Mudambi & Zahra, 2007). However, having a closer look at the research field of IE, it becomes obvious that the firms under study do not pursue a consistent internationalization approach which is always proactive, risk-taking, innovative, and entrepreneurial as suggested by INVT. INVs differ significantly in their strategic approach to internationalization and some of the PTI knowledge is important and valuable to explain INVs' internationalization approaches as well. Table 2 gives an overview on different studies and the thresholds applied among the dimensions a) time to internationalization, b) international scale, c) international scope, d) entry mode behavior, and e) cultural distance, which have frequently been applied as dimensions for studying the phenomenon of young firms taking a rapid and proactive approach to internationalization. For instance, the international scope dimension ranges from very low (5% of foreign sales to total sales) to high (90% of foreign sales to total sales). A similar picture can

be obtained from the other dimensions frequently used in the field of IE to define INVs (i.e. time to internationalization, international scope, entry mode behavior, and cultural distance). Thus, the firms seem to pursue various internationalization strategies which are not necessarily born-global and non-born global, but more differentiated and which are hard to capture by defining arbitrary thresholds.

Insert Table 2 about here.

We contribute to the literature by taking an multivariate approach to identify different types of INVs helping to overcome the arbitrary thresholds chosen in the literature so far. Conceptualizing different types of INVs, we agree with Sullivan (1994) arguing that internationalization is a multidimensional construct. Focusing on large MNEs, Sullivan (1994) employed several established indicators for MNE's internationalization from extant IB literature, such as overseas subsidiaries to total subsidiaries, foreign assets to total assets, and international experience of the MNE. However, these criteria might be of lesser relevance to characterize INV internationalization. INVs suffer from resource scarcity and limited experience. Hence, dimensions such as the proportion of overseas subsidiaries are inappropriate to characterize INV internationalization. Rather, the dominating dimensions frequently applied in INV research – a) age at internationalization, b) international scale, c) international scope, d) market entry mode and e) cultural distance - allow for characterizing INV internationalization in a better way. We assume different types of INVs to exist along these dimensions. We neither set arbitrary thresholds, nor decide on selective criteria, but take a more holistic approach modeling INV types as a latent class of well-known indicators. Although we do not claim to be exhaustive with the five indicators chosen, we argue that these indicators are among the most important factors in IE research and, hence, allow for identifying valid INV classes.

2.2. Hypotheses

As shown above, PTI and INVT make different assumptions about the internationalization of the firm. We do not assume that the majority of firms pursue either way of internationalization, but we argue that firm internationalization is more differentiated and needs a more detailed analysis. Hence, PTI and INVT reasoning can complement each other in order to provide a more holistic view on firm

internationalization and to explain different INV classes. PTI is merely seen as describing the internationalization process of established firms (e.g. traditional manufacturers) and the evolution of foreign market knowledge acquisition and exploitation. Accordingly, PTI is meant to cover later phases of internationalization and not the initial decision to start international activity. However, the PTI reasoning may enrich our understanding of international new venturing. For instance, PTI emphasizes psychic distance and market entry mode, whereas INVT focuses on the age at internationalization as well as scale and scope of international activities. Combining both theories therefore provides a more complete frame for internationalization patterns.

PTI does not only provide additional indicators for measuring international new venturing, but also allows for a more nuanced profile of INVs. Some INVs may pursue a genuine born global route with high international revenues from multiple countries right from inception. Other INVs may decide to venture abroad at a young age but more reactive, starting internationalization with a low commitment and in cultural adjacent countries.

Therefore, we assume that different types of INVs exist. This is in line with Jones (1999) who identified different types of internationalization routes followed in terms of market entry modes and for that matter the intensity of periods of activity in overseas markets. Bell and colleagues (2001) studied “born-again globals” characterizing firms that internationalized rapidly after start-up, then withdrew from international markets, and then recommenced overseas activities. Crick (2009) identified differences between “born globals” and “INVs” in respect of their performance in overseas markets. He argues that born globals have a presence in at least the world’s triad regions, whereas INVs internationalize quickly but not necessarily with a global presence. In summary we come to the following hypothesis:

Hypothesis 1: INV classes pursuing different internationalization strategies exist.

A large number of INV researchers have studied determinants of international new venturing (e.g. Coviello, 2006, Haahti, Madupu, Yavas, & Babakus, 2005, Kundu & Katz, 2003). However, a differentiated perspective on determinants of different INV classes is largely missing so far. In order to

contribute to this literature and to provide a more detailed understanding on determinants of INVs, we investigate the influence of frequently studied determinants on INV class membership. Hence, in the following, we derive hypotheses for the influence of international growth orientation (e.g. Acedo & Jones, 2007), learning orientation (Emden et al., 2005), product differentiation (e.g. Bloodgood, Sapienza, & Almeida, 1996; Shrader et al., 2000), prior international experience (e.g. Reuber & Fischer, 1997) and international network contacts (e.g. Coviello, 2006; Freeman, Edwards & Schroder, 2006) on INV class membership as illustrated in Figure 1.

Insert Figure 1 about here.

International Growth orientation. We assume a firm's membership in a certain INV class to depend on the firm's international growth orientation. Research has shown that new ventures' development highly depends on the firm's orientation towards international growth (Tuppura, Saarenketo, Puumalainen, Jantunen & Kyläheiko, 2008). Oviatt and McDougall (1994: 49) already stated that "new ventures begin with a proactive international strategy". Various other studies consider managerial perceptions and strategic orientation as pivotal for firms' internationalization and expansion (Acedo & Jones, 2007; Coviello & McAuley, 1999; Dimitratos & Jones, 2005; Gilbert, McDougall & Audretsch, 2006; Nummela, Saarenketo & Puumalainen, 2004; Saarenketo, Kuivalainen & Puumalainen, 2001; Zahra & George, 2002). A proactive attitude towards internationalization is reflected by growth seeking behavior (Covin, Slevin & Covin, 1990) impacting, for instance, the time to internationalization (Autio et al., 2000), international scale, and entry mode behavior (Shrader et al., 2000). International growth orientation may not only trigger internationalization (Tuppura et al., 2008) but also significantly distinguish between the different types of INVs. Thus, we hypothesize:

Hypothesis 2: International growth orientation significantly influences INVs' latent class membership.

Learning Orientation. We assume a firm's membership in a certain INV class to depend on the firm's learning orientation. Knowledge is a major determinant for the creation and development of

INVs (Oviatt & McDougall, 1994). According to Sinkula, Baker and Noordewier (1997), learning orientation influences a firm's propensity to generate new knowledge. A strong learning orientation of the firm implies two major aspects. On the one hand, learning orientation leads the firm to continuously search for new alternatives in established settings and "to discover imbalances of resources between countries and in creating markets where none existed" (Oviatt & McDougall, 1994: 58). On the other hand, learning binds resources which might be necessary to develop new (international) markets, hence, influencing the typology of international new venturing. INVs with a high learning orientation aim at building specific knowledge about the markets they already serve rather than expanding their business into multiple areas. This may influence the extent of resources committed to international markets. Therefore, we hypothesize that:

Hypothesis 3: The firm's learning orientation significantly influences the INVs' latent class membership.

Product differentiation. We assume a firm's membership to a certain INV class to depend on the product differentiation of the firm. The degree of product differentiation enables a firm to use its technological expertise to develop new and innovative products. Prior studies often argued that customized products lead to competitive advantages and thus foster international expansion and performance (Dhanaraj & Beamish, 2003; Lu & Beamish, 2001; Lu, Zhou, Bruton & Li, 2010). However, the effect of product differentiation on internationalization is not a simple "the more-the-higher" relationship but requires a detailed view. On one hand, product differentiation may be a source of international competitive advantages (McDougall, 1989) as it allows for adapting products to the needs of specific foreign markets (Bloodgood, Sapienza & Almeida 1997). Product differentiation may help to pursue internationalization and entering foreign markets at an early stage. On the other hand, product differentiation may also restrict international expansion to a certain degree especially in terms of global scope and foreign market distance. Culturally or institutionally distant foreign markets are more hostile than adjacent markets resulting in higher liabilities of foreignness. Moreover product differentiation is a strategy that calls for protective measures, like high control entry modes (Czinkota,

Grossman, Javalgi & Nugent, 2009). Thus, the degree of product differentiation of the firm may significantly influence its internationalization strategy. In summary we hypothesize:

Hypothesis 4: The firm's degree of product differentiation significantly influences the INVs' latent class membership.

We assume a firm's membership in a certain INV class to depend on the prior international experience of the firm's management. Research has shown that prior international experience enhances the firm's awareness of emergent opportunities (Westhead, Wright & Ucbasaran, 2001), the pace of internationalization (Zahra, Ireland & Hitt, 2000; Oviatt & McDougall, 2005), the degree of internationalization (Reuber & Fischer, 1997), and export performance (Kundu & Katz, 2003; Cavusgil & Zou, 1994). Due to an increased ability of knowledge acquisition, internationally experienced managers will more easily spot and exploit growth opportunities in foreign markets than those without prior international experience. Firms with prior international experience cope more efficiently with liabilities of foreignness (Eriksson, Johanson, Majkgard & Sharma, 1997; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Zaheer, 1995). Accordingly, prior international experience reduces uncertainties of operating abroad and helps to avoid shortfalls. This increases the probability that a firm will venture abroad (Autio et al., 2000; Oviatt & McDougall, 2005). Prior international experience impacts not only international revenues, but also the entrance into multiple foreign countries. A first foray into a foreign market is a costly learning process since the firm lacks routines how to solve problems encountered in the foreign market (Eriksson, Johanson, Majkgård & Sharma, 1997). Prior international experience provides such routines for entering and serving foreign markets (Sapienza, Autio, George & Zahra, 2006) as it guarantees a profound understanding of foreign market structures and international business routines (Shrader et al., 2000). Thus:

Hypothesis 5: Prior international experience significantly influences INVs' latent class membership.

International network contacts. We assume a firm's membership in a certain INV class to depend on the international network contacts of the firm. Networks play an important role for new ventures' internationalization (Coviello, 2006). A wealth of studies emphasizes the impact of international networks on the pace, the intensity, and the scope of international new venturing (Weerawardena, Mort, Liesch & Knight 2007; Young, Dimitratos & Dana, 2003; Zahra, Matherne & Carleton 2003). Networks influence foreign market entry (Nerkar & Paruchuri, 2005), reduce uncertainty (Freeman, Edwards & Schroder, 2006), provide financial backup (Shane & Cable, 2002), and support learning in and about foreign markets (Yli-Renko et al., 2002; Schwens & Kabst, 2009).

Regarding networks, especially two aspects are highlighted in extant network and IE studies: The size of a network (Baum et al., 2000; Reuber & Fischer, 1997) and the strength of interpersonal network contact (Dyer & Singh, 1998; Kale et al., 2000). Strong contact with foreign network partners "contributes to lowering risk and uncertainty inherent in international operations" (Weerawardena et al., 2007: 301). Hence, strong relations are a powerful tool to facilitate international new venturing (Oviatt & McDougall, 2005; Selnes & Sallis, 2003) by yielding security and financial back-up (Shane & Cable, 2002). The number of network contacts, on the other hand, may provide a vehicle for young firms to gain initial access to foreign markets (Coviello, 2006). A network of large size forwards internationalization in general by providing visibility and legitimacy (Choi & Shepherd, 2005; Gulati, 1995) as well as innovative capabilities (Chetty & Agndal, 2007; Nahapiet & Goshal, 1998). Moreover a big international network facilitates foreign market entry by providing contact to potential customers or other stakeholders and by helping to spot opportunities for market development (Weerawardena, Mort, Liesch & Knight 2007). Therefore, international network contacts influence the type of international new venturing (Oviatt & McDougall, 1994). Hence, we hypothesize:

Hypothesis 6: The size of the international network significantly influences INVs' latent class membership.

Hypothesis 7: The strength of the international network significantly influences INVs' latent class membership.

3. Methodology

3.1. Data

We conduct our analyses on empirical data collected via mail survey from March 2007 until May 2007. To show that different INV classes exist even within a homogeneous group of firms, the dataset covers German firms from four different technology areas: nanotechnology, biotechnology, microsystems, and renewable energies. We collected data from multiple sources to establish the validity of our measures. First, we used secondary data to identify the relevant firms from the four technology areas. In close cooperation with industry experts from the Association of German Engineers (VDI) (for the populations of nanotechnology, biotechnology, and microsystems) and industry experts from the German Energy Agency (for the renewable energy population), we identified a sample with a total number of 1,944 firms. We used different databases (“Hoppenstedt” and “The Creditreform Markus Database”) to gather quantitative firm information such as, for instance, the number of employees or the year of foundation of the relevant firms. Moreover, we used the “Factiva” database to gain qualitative information about, for instance, the internationalization actions taken by the firms. Furthermore, in line with Cloninger and Oviatt (2007), we checked every firm’s website and collected other available firm information. Second, we conducted twelve informant interviews (with three firms from each technology area) as input for our questionnaire construction. Third, we tested the questionnaire on another twelve representative firms (again, three firms from each technology area) prior to the survey.

To maximize our response rate, we undertook several measures as suggested by Dillmann (2000). Firms received a letter stating the purpose and importance of the research project and subsequently a phone call in which they were requested to participate. We received 335 questionnaires (17.2%) of which 44 firms had two respondents. As we surveyed the total populations of German nanotechnology, biotechnology, microsystems, and renewable energy firms, our sample included both international firms and firms with activities exclusively in the domestic market. Our final sample includes $n=248$ firms with international activities and $n=87$ firms with explicit activities only on the domestic market. This is a percentage of 74% internationally acting and 26% domestically acting

firms which is consistent with the secondary information that we collected in databases and on the firms' websites prior to the questionnaire-based survey. The average firm age of the companies in our sample was 9.13 years and the average age at the first internationalization was 3.3 years after inception.

To test for non-response bias, we followed Armstrong and Overton (1977), examining differences between respondents and non-respondents, and compared early and late respondents in terms of the three variables of prior foreign market analysis, interaction with foreign market players, and exposure to foreign market particularities. A *t*-test showed no significant differences for all three variables. Thus, results do not indicate problems of non-response bias. Furthermore, we used the secondary data we collected prior to the survey and conducted a Kolmogorov-Smirnov two-sample test according to Siegel and Castellan (1988) in order to assess possible differences between the responding firms and the firms in the whole sample. We compared true respondents and true non-respondents for the number of employees and firm age. The test yielded no significant results for number of employees ($p=0.34$) and firm age ($p=0.26$) showing that non-response bias is not a problem for our analyses.

We applied a retrospective recall in our survey. The obvious disadvantages of this methodology merit further comment. In organizational research, retrospective reports have been used extensively to study strategic decision-making processes (Mintzberg, Raisinghani & Theoret 1976). "The primary problem is that key informants may not be able to recall the past accurately. As Golden (1992), Huber and Power (1985), Wolfe and Jackson (1987), and many others have suggested, inaccurate recall in retrospective reporting can result from inappropriate rationalization, oversimplifications, faulty post hoc attributions, and simple lapses of memory" (Miller, Cardinal & Glick, 1997: 189). Asking for information about internationalization activities of the firms in our dataset could have been a problem due to the age of some of the companies. However, descriptive statistics revealed that the vast majority of the technology firms in our sample had conducted their internationalization activities in the last few years (mean = 7 years; s.d. = 5.6). This significantly reduces the risk of informant fallibility (Golden 1992; Miller, Cardinal & Glick 1997), and leads to higher retrospective accuracy in our data.

3.2. Measurement

The variables in our model have been adapted from established items in the entrepreneurship, international business, and management literature. Whenever possible, we used multiple-item measurements to minimize measurement error and to enhance the content coverage for the constructs in our analyses. We measured statement-style items on 5-point Likert-scales ranging from 1=strongly disagree to 5=strongly agree.

To conceptualize the *INV classes* for our dependent variable, in contrast to Sullivan (1994) we do not merge the different indicators into one index, but we treat international new venturing as a latent construct, which manifests itself in different observable indicators. We thereby advance the understanding of international new venturing by exploring different latent classes of INVs, which hold a unique pattern of the employed indicators. Hence, we apply latent class analysis (LCA) to identify different types of INVs. We use established measures for the different indicators. For measuring *age at internationalization* we subtracted the founding year of the firm from the year of first internationalization. *International scale* was measured by the ratio between foreign sales and total sales (Preece, Miles & Baetz, 1998). To measure the *international scope* we asked the responding firms for the number of markets they have international activities in (Brouthers Nakos, Hadjimarcou & Brouthers, 2009; Hitt et al., 1997; Tallman & Li, 1996). *Entry mode behavior* was measured with a scale ranging from low control entry modes (direct export, long-term contracts, foreign distributor, contractual cooperation) to higher control modes (joint venture, foreign sales subsidiary, foreign subsidiary including production). As studies struggle with the scale level of entry mode and thus if it should be measured in a metric (in term of amount of control or commitment to a foreign market), a multinomial (different unordered choices) or a dichotomous manner (low vs. high control mode), we checked all alternatives. As there were no differences in our findings we defined the entry mode scale as metric. To measure *cultural distance* we applied the Economic Freedom Index (Estrin et al., 2009). This index includes several sub-indices: e.g. (licensing requirements to operate a business). We used the sub-indices for property rights protection, trade regulations, business regulations and freedom from corruption for the year 2008. Then we computed the cultural distance as the absolute value of the

difference between the measures of the home country (Germany) and host country (the first international market entered by the firm).

To measure *international growth orientation*, we used multi-item measurement including the items “We have to grow in order to succeed in the future” and “Our firm aims can be achieved mainly through further growth” (Autio et al., 2000; Nummela et al., 2004; Yli-Renko, Autio & Tontti, 2002). To increase reliability, the item “The markets we are currently serving still offer sufficient growth potential” (Cavusgil, 1984; Johnston & Czinkota, 1985; Kirpalani & Macintosh, 1980; Moini, 1992) was added (recoded). The three items load on one factor (see appendix) and show good reliability (Cronbach’s $\alpha = 0.79$).

Learning orientation is measured by a three-item scale. One example item is “Learning in this organization is viewed as key to organizational survival” (Emden et al., 2005; Hult & Ferrell, 1997; Sinkula et al., 1997). All items load on one factor. The high Cronbach’s alpha value of .83 shows internal consistency and, therefore, underlines the formation of this scale.

Product Differentiation is measured by three items which were adapted from established scales measuring the degree of unique product development (Knight & Cavusgil, 2004; Porter, 1980; Roth & Morrison, 1992). One example item is “our primary product caters to a specialized need that is difficult for our competitors to match”. All items load on one factor and Cronbach’s Alpha is reasonable (0.71).

Adapted from Reuber and Fischer (1997), *prior international experience* was defined as whether a member of the top management had a) worked in an internationally operating company and/or b) worked abroad. Binary coding was applied, as “the relationship between international experience and organizational outcomes is unlikely to be linear across time or across individuals and strategic management literature suggests that exposure to a particular type of experience, regardless of its length, is likely to be consequential” (Reuber & Fischer, 1997: 816).

We measure *international network contacts* in terms of two aspects: the size as well as the strength of international network contacts (Wijk et al., 2009). The *size* is measured by combining two questions about the number of partnerships or network ties a new venture has with foreign companies (SMEs, or MNEs respectively) which is suggested by various authors (Baum et al., 2000; Reuber &

Fischer, 1997). To determine the total number of partnerships a new venture holds abroad, the two measurements are merged into one index. The *strength* is measured by asking for the frequency of contact with the most important international cooperation partner (Dyer & Singh, 1998; Kale et al., 2000). This is also in line with the findings of Uzzi (1997) statement that "constant communication [...] [makes] the difference" (Uzzi, 1997: 45) between strong and weak ties.

When multiple-item scales are used to measure latent constructs and a composite score based on these items is used in further analyses, it is important to assess the validity and reliability of the scales used (Gerbing & Anderson, 1988). Selection of scale items on the basis of prior literature and pretesting of the survey instrument helped ensure content validity. To assess scale reliability, we computed Cronbach's alpha for each multiple scale item and found these to be well above the cut-off value of 0.7 in each case (Nunnally, 1978). International growth orientation and learning orientation are reflective latent constructs. To validate their measurement structure we conducted a confirmatory factor analysis (CFA). The CFA with two latent constructs performed best and had a good model fit (CFI = 0.98; TLI=0.97; RMSEA = 0.05). In addition, all factor loadings scored above 0.7 underlining the measurement quality.

3.3. Assessing Common Method Variance

As the measures applied in our study are self-reported and collected from a single source, there could be a problem of common method variance (CMV), in which a bias in the source might contaminate all measures in the same direction. We do not assume CMV to be a problem in our data for the following reasons. First, we assessed the interrater reliabilities for the 44 firms in which we obtained data from two respondents. Intraclass correlation coefficients (ICC) for our scales exhibited high interrater reliability (Shrout & Fleiss, 1979), all at the .001 level: for instance, international growth orientation (ICC=.77) and learning orientation (ICC=.71). Second, following Podsakoff and Organ (1986), we used the Harman's one-factor test to assess the influence of common method bias. Principle component factor analysis based on the dependent, independent, and control variables of our model revealed three factors with an eigenvalue above 1. These three factors accounted for 57.3% of the total variance; the first factor accounted for 29.3%, the second factor for 15.1% and the third factor

for 12.9% of the total variance. Third, we checked the firm's website information, brochures, and other available firm information (Cloninger & Oviatt, 2007) to verify the information from our survey. Furthermore, from the Markus database we used available secondary information on the number of employees worldwide and the year of foundation for the firms in our sample. We performed statistical tests to compare our primary data with these pieces of secondary-source information. Paired-sample *t*-tests showed that the differences in means between the survey-collected information and the Markus data were insignificant.

4. Latent Class Analysis

4.1. Analytical procedure

We apply latent class analysis (LCA) to test our hypotheses. LCA is an empirically based statistical approach for explaining the heterogeneity in response-profiles in terms of underlying latent classes (Reboussin, Ip & Wolfson, 2008: 878). In the LCA framework, patterns of internationalization behavior are assumed to result from underlying (latent) classes. This means that an unobserved class membership is reflected, and thus indicated in observable internationalization behavior. Recently, the LCA perspective has not only been applied to sociology (Reboussin et al. 2008; Roeder, Lynch & Nagin, 1999; Vermunt, 2004) but also increasingly to the management context. Examples comprise network embeddedness research (Grewal, Lilien & Mallapragada, 2006) or market segmentation studies (Bassi, 2007). Corresponding to this broadening interest, latent class regression models that incorporate covariates as predictors of class membership have been developed (Huang and Bandeen-Roche, 2004), which we will also apply in this study. However, in a first step, we perform an ordinary LCA without covariates to test for sample heterogeneity, and thus the existence of different latent classes of INVs.

“The standard LCA measures one or more unobserved (latent) categorical variables through a set of observed indicator variables” (Kreuter, Yan & Tourangeau, 2008: 725). As indicators we apply five variables deduced from prior IE research: Time to internationalization, international intensity, international scope, entry mode behavior, and cultural distance.

In order to evaluate the quality of class prediction and to guide the decision on the number of classes we apply several goodness-of-fit indicators. Currently, researchers use a combination of criteria to decide on the number of classes. Such criteria include Akaike's Information Criterion (AIC; Akaike, 1987) and Bayesian's Information Criterion (BIC; Schwartz, 1978). A recent monte carlo simulation study from Nylund, Asparouhov and Muthén (2007) provides evidence that the BIC is superior to AIC. If AIC and BIC propose different class numbers, BIC should be preferred. In addition, the application of bootstrap likelihood ratio tests (BLRT) is proposed. Accordingly we choose the BIC, the sample size adjusted BIC and BLRT to evaluate model fit and to measure the overall classification quality.

4.2. Results from LCA

In hypothesis 1 we assumed different latent classes of INVs to exist. Therefore we evaluated our sample for heterogeneity applying a BLRT which tests for the assumption that a proposed class number (k classes) is superior to a model with one class less ($k-1$ classes). In the first place we compared a two class solution with a one class solution. Results in Table 3 show, that the two class solution is significantly better than the one class solution. Hence, hypothesis 1 assuming different INV classes to exist is supported as there is more than one class of INV types in our data.

In order to identify the appropriate number of classes, recent research argues to consider theoretical reasoning in combination with statistical criteria (Nylund et al., 2007). Concerning the INV phenomenon no clear definition exists: neither theoretically, nor empirically (Hashai & Almor, 2004). Some IE studies follow a diametric approach separating between early and late internationalizers or between born globals and traditional firms (e.g. Autio et al, 2000; Johnson, 2004; Schwens & Kabst, 2009; Weerawardena, Mort, Liesch & Knight, 2007). Tuppara and colleagues argued on the basis of three different INV classes: born-globals, born-again globals and traditionals (Tuppara, Saarenketo, Puumalainen, Jantunen & Kyläheiko, 2008). According to the seminal framework of Oviatt & McDougall (1994) four types of INVs exist: export-import start-ups, geographically focused start-ups, multinational traders and global start-ups. As extant research is fragmented and inconclusive with arbitrary threshold chosen to define the number of INV classes, it does not provide a sound grounding

for a certain class solution. Therefore, we apply statistical tests to decide on the number of INV classes. We consult three different parameters: the BIC, the sample size adjusted BIC and the BLRT.

Results from LCA suggest a four class solution being superior to other class numbers. As shown in Table 3 the BIC and the adjusted BIC have their minimum at the four class solutions. The BLRT is significant at the four class solution, meaning that a four class solution is significantly better than a 3 class solution. Moreover the BLRT is not significant for comparing the five class solution with the four class solution, meaning that four classes suffice to divide the sample.

Insert Table 3 about here.

The characteristics of the four classes are shown in Table 4. Class 1 accounts for 11.6% of the sample. We chose the label “born-again globals” for class one, since these firms venture abroad in a later stage than other INVs, thereby realizing a medium range of international sales in few foreign markets. However, they decide for the highest control entry mode among all INV classes and go into decently distant markets. Class 2 denotes for the “classic” born global firm, which realizes a high proportion of revenues from multiple countries and starts internationalization very early. These firms rather choose a low control mode but also venture into distant markets. Therefore, these firms might be considered to have the most proactive internationalization strategy. Class 3 also realizes a huge proportion of sales abroad, but on a restricted international scope. These characteristics indicate a geographically focused start-up described by Oviatt & McDougall (1994). As this class of INVs enters foreign markets with low control modes, such as exporting, we labeled class 3 “geographically focused exporters”. The last class denotes for nearly half of the INVs in our sample. This large class of firms follows, in comparison to the other INV classes, a slower internationalization track. Firms in this class internationalize later than born globals or geographically focused exporters. They have only a limited international scope and realize only small amounts of revenues from foreign markets. In addition, they start internationalization in adjacent foreign markets, with a low cultural distance. As this internationalization pattern is in accordance with the PTI perspective, we labeled these firms “gradually internationalizing INVs”.

Insert Table 4 about here.

4.3. Results from LCA with covariates

To test our hypotheses 2-7 we ran a LCA with covariates (LCAWC). Table 5 gives these results. The statistical reasoning of a LCAWC is comparable to a multinomial logistic regression, with the difference that latent classes are regressed on the covariates. This is why the exponentiated coefficients can be interpreted as odds ratios. As shown, most of our hypotheses hold true. Hypothesis 2, assuming an impact of international growth orientation on INVs class membership, is supported. International growth orientation significantly influences the odds of belonging to a specific INV class. Especially born globals and geographically focused exporters are growth oriented compared to born-again globals and gradually internationalizing INVs. Hypothesis 3, assuming an impact of learning orientation on INVs class membership, is supported as well. Learning orientation increases the chance that a rather slow or incremental route of internationalization is chosen and that an INV becomes a gradually internationalizing INV. Hypothesis 4, assuming product differentiation to impact INVs class membership, is supported. Results suggest that geographically focused exporters become more likely when a firm increases its product differentiation. The other INV classes do not differ from each other with respect to this covariate. Hypothesis 5, assuming an impact of prior international experience on INVs' class membership, is also supported. International experience forwards the chances of becoming a geographically focused exporter or a born global. Both classes become significantly more likely (compared to gradually internationalizing INVs and born-again globals) if prior international experience exists. On the contrary, prior international experience does not significantly differentiate between gradually internationalizing INVs and born-again globals. Our network hypotheses only partly hold true. Hypothesis 6, which assumed an impact of international network size on INVs' class membership, needs to be rejected. All INV classes are quite equally influenced by network size. We only see a marginally significant difference on the 10%-level between late INVs and geographically focused exporters. This can be interpreted as follows: the chance of becoming a geographically focused exporter rather than a born-again global increases by 2% with every additional international network contact. Hypothesis 7, which assumed an impact of international network strength on INVs class membership, is at least partially supported, since there is a significant change in the odds ratio

between geographically focused exporters and born-again globals due to network strength. Interestingly, network strength works conversely to network size as it increases the chance of becoming a born-again global rather than a geographically focused exporter.

Insert Table 5 about here.

5. Discussion

With this study we aimed at empirically proving that multiple INV types exist and that their occurrence is influenced by different factors. We thereby wanted to provide a sound classification of INVs which was lacking in IE research so far. Further, we address the problem that extant research is largely fragmented and inconclusive on the number of INV classes. Therefore, we applied statistical tests to decide on the number of INV classes and how to differentiate them from each other.

We contribute to IE theory by forging a link between PTI and INVT reasoning, which so far have been viewed quite contradictory. Most IE studies (e.g. Freeman, Edwards & Schroder 2006; Shrader et al., 2000) assume that the “risk-averse and incremental nature of process theories [would not be] adequate to explain the entrepreneurial strategies that smaller-firm senior management might adopt for accelerated internationalization” (Freeman & Cavusgil, 2007: 1). We showed that PTI reasoning allows for a broader perspective on international new venturing. Including PTI to explain INVs gave us the opportunity to apply a broader set of indicators to describe a firm’s internationalization than a sole INVT reasoning would have provided. Forging a link between these two theoretical frameworks also helps us to better interpret several internationalization patterns. As the results of the LCA show, about half of the technology firms observed pursue a rather reactive and slow road to internationalization. These gradually internationalizing INVs significantly differ from other INV classes, such as born globals. Gradually internationalizing INVs only have a limited international scope and realize only small amounts of revenues from foreign markets. In addition, they start internationalization in adjacent foreign markets, with a low cultural distance. Thus, their international commitment is rather low in comparison to other INV types and their internationalization behavior is rather reactive. Gradually internationalizing INVs start internationalization early in their lifecycle -

which is in line with INVT - but prefer to step into foreign markets in an incremental manner as forwarded by PTI.

The empirical contribution of this study is twofold: First, we add to the IE literature that INVs vary in their internationalization profile and are a rather heterogeneous than homogenous group of firms. Studies about INVs or born global firms struggle with arbitrary thresholds to define the phenomenon. Instead of utilizing arbitrary thresholds to conceptualize the types of INVs as has been done in previous studies (e.g. Jantunen et al., 2008), we contribute to the literature by applying a multivariate statistical approach to identify different types of INVs. Thus, we advance the understanding of international new venturing by exploring different latent classes of INVs. Identifying four INV classes and their configurations, allows future research on INVs to properly control for class membership and to take varying strategic approaches to internationalization into account (Chetty & Campbell-Hunt, 2004).

Second, we tried to contribute to the IE field by studying the antecedents of the identified INV classes to provide a more detailed understanding on determinants of INVs. Based on our results, we argue that the internationalization strategy pursued by INVs is not a random choice, but depends on the firm's inherent characteristics (Zahra & Mudambi, 2007). We illustrate that different types of INVs have to be taken into consideration when analyzing INVs' strategic approach to internationalization and its antecedents. Our results contribute to the discussion on internationalization, demonstrating which resources are conducive to specific internationalization strategies, and which resources might also restrict several strategic choices. This knowledge allows for better managing and understanding an entrepreneurial firm with regard to its internationalization behavior and the strategic decisions behind it.

Our results suggest that besides the capability for expanded international operation which is increased by internationally experienced managers, an orientation towards growth is an essential predictor for born globals and geographically focused exporters. INVs not only need the ability to efficiently manage high scale internationalization but also a growth devoted strategy to pursue a "fast and high" internationalization strategy. Such a strategy provides higher chances but also increased risk of failure. In order to overcome these risks a proactive and growth seeking management is pivotal.

This finding is in line with prior conclusions on INVs. Oviatt & McDougall already mentioned that born globals may be considered to have an “international vision [...] from inception” (Oviatt & McDougall, 1994: 47).

Gradually internationalizing INVs are significantly more devoted to learning than other INV types, as indicated by their higher learning orientation. Even though learning orientation is often associated with a higher propensity to internationalize (e.g. Oviatt & McDougall, 2005; Chetty & Champbell-Hunt, 2004), it seems to be rather restricting than facilitating international expansion. One may conclude that especially gradually internationalizing INVs need to learn intensively in order to better serve the few markets they are operating in and to identify opportunities more efficiently. Only this allows them to achieve sustainable firm development and competitive advantages. Whereas gradually internationalizing INVs may concentrate their learning efforts on few markets, which they develop incrementally, other INVs, especially born globals, venture into multiple foreign markets at a high pace. Learning binds resources just as international expansion does. As INVs are typically characterized by a limited resource endowment, a high degree of learning and global expansion may be contradictory rather than complementary in early years. On the opposite, born globals act proactively to acquire resources and to sell outputs wherever in the world they have the greatest value. A strong degree of learning orientation tracking and tracing new opportunities in already established markets is at conflict with such strategy. Therefore born globals, born-again globals and geographically focused exporters are less likely to be as learning oriented as gradually internationalizing INVs, which have to devote more time and resources to intensive learning about the markets they are serving.

As far as product differentiation is concerned our results depict that geographically focused exporters are most positively related to this covariate. Prior studies argue that product differentiation is a vehicle for international competitive advantages (McDougall, 1989) as it allows for adapting products to the needs of specific foreign markets (Bloodgood et al., 1997). Therefore, product differentiation helps to pursue internationalization and to enter foreign markets at an early stage. Our results underpin this argument, as geographically focused exporters are the first to enter international markets, about one year after inception, and have a high proportion of international sales.

However, another rationale may apply simultaneously: Adapting the products to specific customer needs is expensive. Hence, it is reasonable to assume that geographically focused exporters depend on an early internationalization and realization of international revenues in order to amortize the costs of product adaptation. This is also in line with our finding that geographically focused exporters only act in few international markets. Since these INVs emphasize product differentiation they devote most of their scarce resources to this strategy. Entering multiple foreign markets right from inception requires financial as well as managerial resources. Simultaneously emphasizing international scope while devoting resources for product differentiation, may simply overburden the limited financial and managerial resource base of INVs. Therefore geographically focusing international expansion seems to be the appropriate strategy for businesses with a high degree of product differentiation.

Besides reducing risks of failure, prior international experience allows managers to exploit growth opportunities more efficiently. Our results provide evidence that INV types with strong international intensity – born globals and geographically focused exporters - primarily have internationally experienced managers. One may conclude that international experience allows for a more efficient market penetration and exploitation of growth opportunities as foreign business practices and customer needs are better known and understood. Thus, rapid international growth at a high scale is forwarded.

Networks have proven to play an important role in new venture internationalization as an alternative governance mechanism (Coviello, 2006). A wealth of studies emphasizes the impact of international networks on the scale and scope of international new venturing (Weerawardena et al., 2007; Young, Dimitratos & Dana, 2003; Zahra, Matherne & Carleton 2003). Networks facilitate foreign market entry (Nerkar & Paruchuri, 2005), reduce uncertainty (Freeman, Edwards & Schroder, 2006), provide financial backup (Shane & Cable, 2002), and support learning in and about foreign markets (Yli-Renko et al., 2002; Schwens & Kabst, 2009). Our study shows, that international networks differentiate between born-again globals and geographically focused exporters, but not between other INV types. Interestingly, size and strength work conversely. The number of network contacts increases the chances of INVs to become geographically focused exporters rather than born-

again globals. This may be the case since a big network supports internationalization in general by providing visibility and legitimacy (Choi & Shepherd, 2005; Gulati, 1995) as well as innovative capabilities (Chetty & Agndal, 2007; Nahapiet & Goshal, 1998). Moreover a large international network facilitates foreign market entry by providing contact to potential customers or other stakeholders and by helping to spot opportunities for market development (Weerawardena et al., 2007). Therefore, international network size may foster foreign market development and thus increase international scale at a young age, which is a characteristic of geographically focused exporters.

Strong contact with foreign network partners “contributes to lowering risk and uncertainty inherent in international operations” (Weerawardena et al., 2007: 301). Hence, strong relations are a powerful tool to facilitate international new venturing (Oviatt & McDougall, 2005; Selnes & Sallis, 2003) by yielding security and financial back-up (Shane & Cable, 2002). Born-again globals start internationalization at a higher age than their counterparts, but after once being established in international markets they expand quickly (Jantunen et al., 2008). A strong international network with trustworthy partners may support this strategy. Born-again globals seem to create some close relations to foreign partners prior to or while starting international activities in order to penetrate their targeted markets more rapidly. Having strong international relations also allows for using “higher” entry modes. Born-again globals show this pattern, as they hold the highest entry mode compared to other INV types. Fostering strong relations to foreign markets therefore is a vehicle to enter markets with higher entry modes, such as long-term distribution contracts. These transaction forms require trust, as they are more resource intensive and increase mutual dependence between partners. Accordingly, having some strong interactions with foreign partners may act as the foundation to reduce insecurity between partners and to stabilize cooperation. Moreover, the level of cultural distance is intermediate for born-again globals, meaning that they do not only venture into adjacent markets but also into culturally diverse environments. These environments are especially insecure. By providing information and reducing the threat of opportunism (Uzzi, 1997), intensive inter-organizational contact reduces environmental uncertainty, and thus fosters born-again globals foray into culturally distant markets. Therefore, strong international networks seem to allow for the specific combination of entering distant markets with a higher entry mode.

6. Limitations and Implications

As is the case for most empirical studies, several limitations apply to our study as well. First, as internationalization is more a process than a state, we face measurement problems of the INV phenomenon as we are lacking longitudinal data. Longitudinal research designs could delineate changes over time, and show if INVs develop gradually from one type to another, or if the choice of one type is stable over time. Moreover, changes in international activities' scale and scope or management's cognitions can only be analyzed in depth, as well as their impact on the long-term survival and development of the firm, when powerful longitudinal data is available. This would help to identify if a change in the determinants really results in a change of the INV type, which may prove the results found in this study. Second, even though including multiple technologies, this study only focused on German technology-based companies and, therefore, is lacking a comparative value on an international scale. Thus, we cannot state if influential factors vary across different countries or cultural regions. Third, the measurement of cultural distance has some shortfalls. Even though an observation of the cultural distance between INVs' country of origin and the focal markets delineates differences between the INV types, the measurement of cultural distance remains problematic. In order to observe cultural distance we need sound measurements of culture in the first place. However, research applies many different measures of culture or institutional background. Prominent examples are Hofstede's studies, the Globe Study, or several indices like the here employed EFI. Besides this problem of multiple sources of cultural evaluations we face the problem of how to handle the multiple indicators of each source. Some studies sum up every cultural measure, making an overall evaluation of culture (Kogut & Singh, 1988), some test every some decide for concentrating on the most relevant cultural aspects for the respective research question (Dickson, Weaver & Hoy, 2006). In line with the last way of addressing this measurement issue we employed relevant sub-indices of EFI for new ventures internationalization eliding indices such as governmental size which is less relevant for our research question. We decided for this procedure as it is applied to a couple of recent studies on intercultural or institutional differences (e.g. Estrin et al., 2009), even though we acknowledge that other procedures are also well established.

Moreover our sample has some limitations with regard to its size and concentration on high-technology firms. Most studies on INVs have concentrated on such high-tech samples, which is why we decided to focus on this population as well. However, recent studies (e.g. Keupp & Gassmann, 2009) argue that it would be reasonable to emphasize on a broader scope of technologies rather than limiting to a certain field of technology. Therefore future research should address this issue and try to survey larger samples of multiple high and low technology industries in order to compare the different INV types. However, our results have shown that differing between the INV types yields more idiosyncratic results. Future research should elaborate on the different types of INVs in more detail and in order to achieve a more fine-grained picture of the rather complex phenomenon of international new ventures.

This study also has some managerial implications. In summary, our findings may help practitioners to find the most appropriate internationalization strategy according to the firm's internationalization profile. To foster international expansion, it is reasonable to employ proactively growth seeking managers which hold some prior international experience. Firms with highly differentiated products seem to best pursue a rapid internationalization with a limited scope in order to reduce risks of patent infringement and thus to increase survival chances.

References

- Acedo, F. J. & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, 42, 236-252.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Andersson, S., & Wictor, I. (2003). Innovative internationalisation in new firms: Born-globals—the Swedish case, *Journal of International Entrepreneurship*, 1(3), 249–276.
- Andersson, S. (2004). Internationalization in different industrial contexts. *Journal of Business Venturing*, 19, 851-875.
- Armstrong, J. S. & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14, 396-402.
- Aspelund, A. & Moen, O. (2005). Small international firms: Typology, performance and implications. *Management International Review*, 45, 37-57.
- Autio, E. (2005). Creative tension: the significance of Ben Oviatt's and Patricia McDougall's article "toward a theory of international new ventures". *Journal of International Business Studies*, 36, 9-19.
- Autio, E., Sapienza, H. J. & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43 (5), 909-924.
- Baum, J. A. C., Calabrese, T. & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in canadian biotechnology. *Strategic Management Journal: Special Issue: Strategic Networks*, 21 (3), 267-294.
- Bell, J., and J. McNaughton,, and R. Young, and D. Crick (2003). Towards an integrative model of small firm internationalization. *Journal of International Entrepreneurship*, 1, 339-362.
- Bloodgood, J. M., Sapienza, H. J. & Almeida, J. G. (1997). The Internationalization of high-potential U.S. ventures: Antecedents and outcomes. *Entrepreneurship Theory and Practice*, 20 (4), 61-76.
- 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.
- Brouthers, L. E., Nakos, G., Hadjimarcou, J., Brouthers, K. D. (2009). Key factors for successful export performance for small firms. *Journal of International Marketing*, 17(3), 21-38.
- Brush, G. (1992). Factors motivating small firms to internationalize: The effect of firm age. Doctoral dissertation, Boston University.
- Burgel, O., & G. C. Murray (2000). the international market entry choices of start-up companies in high-technology industries, *Journal of International Marketing*, 8 (2), 33-62.
- Cavusgil, S. T. (1984). Organizational characteristics associated with export activity. *Journal of Management Studies*, 21 (1), 3-22.
- Cavusgil, S. T & Zou, S (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *The Journal of Marketing*, 58(1), 1-21.
- Chen, R., & Martin, M. J. (2001). Foreign expansion of small firms: The impact of domestic alternatives and prior foreign business involvement. *Journal of Business Venturing*, 16, 557-574.

- Chetty, S. & Campbell-Hunt, C. (2004). A strategic approach to internationalization: a traditional versus a "born-global" approach. *Journal of International Marketing*, 12 (1), 57-81.
- Chetty, S., Agndal, H. (2007). Social capital and its influence on changes in internationalization mode among small and medium-sized enterprises. *Journal of International Marketing*, 15(1), 1-29.
- Choi, Y. R., Shepherd, D. A. (2005). Stakeholder perceptions of age and other dimensions of newness. *Journal of Management*, 31(4), 573-596.
- Cloninger, P. A. & Oviatt, B. (2007). Service content and the internationalization of young ventures: An empirical test. *Entrepreneurship Theory and Practice*, 31(2), 233-56.
- Contractor, F. J., Hsu, C. C. & Kundu, S. K. (2005). Explaining export performance: A comparative study of international new ventures in Indian and Taiwanese software industry. *Management International Review*, 45, 83-110.
- Coombs, J. E., Mudambi, R., & Deeds, D. L. (2006). An examination of the investments in U.S. biotechnology firms by foreign and domestic corporate partners. *Journal of Business Venturing*, 21, 405-428.
- Coviello, N. E. (2006). The network dynamics of international new ventures. *Journal of International Business Studies*, 37(5), 713-31.
- Coviello, N. E. & McAuley, A. (1999). Internationalisation and the smaller firm: A Review of Contemporary Empirical Research. *Management International Review*, 39 (3), 223-256.
- Coviello, N. E. & Jones, M. V. (2004). Methodological issues in international entrepreneurship research. *Journal of Business Venturing*, 19(4), 485-508.
- Covin, J. G., Slevin, D. P. & Covin, T. J. (1990). Content and performance of growth-seeking strategies: A comparison of small firms in high- and low-technology industries. *Journal of Business Venturing*, 8, 391-412.
- Crick, D. (2009). The internationalisation of born global and international new venture SMEs. *International Marketing Review*, 26(4/5), 453-476.
- Czinkota, M., Grossman, D., Javalgi, R., & Nugent, N. (2009). Foreign market entry mode of service firms: The case of U.S. MBA Programs. *Journal of World Business*, 44(3), 274-286.
- Dhanaraj, C. & P. W. Beamish (2003). A resource-based approach to the study of export performance. *Journal of Small Business Management*, 41(3), 242-261.
- Dimitratos, P. & Jones, M. V. (2005). Future directions for international entrepreneurship research (guest editorial). *International Business Review*, 14, 119-128.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of inter-organizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Emden Z., Yaprak, A. & Cavusgil, S. T. (2005). learning from experience in international alliances: antecedents and firm performance implications. *Journal of Business Research*, 58 (7), 883-892.
- Eriksson, K., Johanson, J., Majkgård, A. & Sharma, D. (1997). Experiential knowledge and cost in the internationalization process. *Journal of International Business Studies*, 28, 337-360.
- Estrin, S., Baghdasaryan, D. & Meyer, K. E. (2009). The impact of institutional and human resource distance on international entry strategies. *Journal of Management Studies*, 46 (7), 1171-1196.
- Fan, T. & Phan, P. (2007). International new ventures: Revisiting the influences behind the "born-global" firm. *Journal of International Business Studies*, 38, 1113-1131.

- Fernandez, Z. & Nieto, M. J. (2006). Impact of ownership on the international involvement of SMEs. *Journal of International Business Studies*, 37, 340-351.
- Fernhaber, S. A., McDougall, P. P., & Oviatt, B. M. (2007). Exploring the role of industry structure in new venture internationalization. *Entrepreneurship: Theory and Practice*, 31, 517-542.
- Fernhaber, S. A., Gilbert, B. A., McDougall, P. P. (2008). International entrepreneurship and geographic location: An empirical examination of new venture internationalization. *Journal of International Business Studies*, 39(2), 267-290.
- Freeman, S., Edwards, R., & Schroder, B. (2006). How smaller born-global firms use networks and alliances to overcome constraints to rapid internationalization. *Journal of International Marketing* 14(3), 33-63.
- Gassmann, O., & Keupp, M. M. (2007). The competitive advantage of early and rapidly internationalizing in the biotechnology industry: A knowledge-based view. *Journal of World Business*, 42, 350-366.
- George, G., Wiklund, J. & Zahra, S. A. (2005). Ownership and the internationalization of small firms. *Journal of Management*, 31, 210-233.
- Gilbert, B. A., McDougall, P. P. & Audretsch, D. B. (2006). New venture growth: A review and extension. *Journal of Management*, 32, 926-950.
- Golden, B. R. (1992). The past is the past - or is it? The use of retrospective accounts as indicators of past strategy. *The Academy of Management Journal* 35(4), 848-860.
- Haahti, A., Madupu, V., Yavas, U. & Babakus, E. (2005) Cooperative strategy, knowledge intensity and export performance of small and medium sized enterprises. *Journal of World Business*, 40(2): 124-138.
- Hashai, N. & Almor, T. (2004). Gradually internationalizing 'born global' firms: An oxymoron? *International Business Review*, 13, 465-483.
- Hitt, M. A., Hoskisson, R. E. & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal* 40(4), 767-798.
- Huber, G. P. & Power, D. J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy. *Strategic Management Journal* 6(2). 171-180.
- Hult, G. T. M & Ferrell, O. C. (1997). Global organizational learning capacity in purchasing: construct and measurement. *Journal of Business Research*, 40 (2), 97-111.
- 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*, 4, 20-29.
- Johanson, J. & Vahlne J.-E. (1990). The mechanism of internationalisation. *International Marketing Review*, 7(4): 11-24.
- Johanson, J. & Wiedersheim-Paul, F. (1975), The Internationalization of the firm-Four Swedish Cases. *Journal of Management Studies*, 12(3), 305-322.
- Johnson, J. E. (2004). Factors influencing the early internationalization of high technology start-ups: US and UK evidence. *Journal of International Entrepreneurship*, 2, 139-154.
- Johnston, W. J., & Czinkota, M. R. (1985). Export attitudes of industrial manufacturers. *Industrial Marketing Management*, 14 (2), 123-132.

- Jones, V. M. (1999). The internationalization of small high-technology firms. *Journal of International Marketing*, 7 (4), 15-41.
- Kale, P., Singh, H. & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal*, 21(3): 217-237.
- Kandaswami, S. & Huang, X. (2000). International marketing strategy of SMES. A comparison of born-global vs. non born-global firms in Australia. Paper presented at the ICSB Conference, Brisbane, June 2000.
- Keupp, M. M. & Gassmann, O. (2009). the past and the future of international entrepreneurship: A review and suggestions for developing the field. *Journal of Management*, 35 (3), 600-633.
- Kirpalani, V. H. & Macintosh, N. B. (1980). International market effectiveness of technology-oriented small firms. *Journal of International Business Studies*, 11 (3), 81-90.
- 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. & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies* 35(2), 124-141.
- Kundu, S. U. & Katz, L. A. (2003). Born-international SMEs: Bi-level impacts of resources and intentions. *Small Business Economics*, 20, 25-47.
- Leiblein, M. J., & Reuer, J. J. (2004). Building a foreign sales base: The roles of capabilities and alliances for entrepreneurial firms. *Journal of Business Venturing*, 19, 285-307.
- Lindquist, M. (1991). Infant multinationals: The internationalization of young, technology-based Swedish firms. Stockholm, Stockholm School of Economics, Institute of International Business.
- Lopez, L. E., Kundu, S. K & Ciravegna, L. (2009). Born global or born regional? Evidence from an exploratory study in the Costa Rican software industry. *Journal of International Business Studies*, 40(7), 1228-1238.
- Luostarinen, R. & Gabrielsson, M. (2006). Globalization and marketing strategies of born globals in SMOPECs, *Thunderbird International Business Review*, 48(6), 773-801.
- Lu, J. & Beamish, P. W. (2001). Internationalization and performance of SMEs, *Strategic Management Journal*, 22(6/7), 565-586.
- Lu, Y., Zhou, L., Bruton, G. & Li, W. (2010). Capabilities as a mediator linking resources and the international performance of entrepreneurial firms in an emerging economy. *Journal of International Business Studies*, 41, 419-436.
- Lummaa, H. J. (2002). internationalization behaviour of Finnish born global companies. Master Thesis, Helsinki University of Technology.
- Madsen, T. K., Rasmussen, E. & Servais, P. (2000). Differences and similarities between born globals and other types of exporters. *Advances in International Marketing*, 10, 247-265.
- Majocchi, A. & Zucchella, A. (2003). Internationalization and performance. *International Small Business Journal*. 21(3), 249-268.
- McDougall, P.P. (1989). International versus domestic entrepreneurship: New venture strategic behavior and industry structure. *Journal of Business Venturing*, 4(6), 387-399.
- McDougall, P. P., & Oviatt, B. M. (1996). New venture internationalization, strategic change, and performance: A follow-up study. *Journal of Business Venturing*, 11, 23-40

- McDougall, P. P., Oviatt, B. M. & Shrader, R. C. (2003). A comparison of international and domestic new ventures. *Journal of International Entrepreneurship*, 1, 59-82.
- McKinsey and Co. (1993). Emerging exporters: Australia's high value-added manufacturing exporters. Melbourne: McKinsey and Co., Australian Manufacturing Council.
- McNaughton, R. B. (2001). The export mode decision-making process in small knowledge-intensive firms. *Market Intelligence and Planning*, 19, 12-20.
- McNaughton, R. B. (2003). The number of export markets that a firm serves: Process models versus the born-global phenomenon. *Journal of International Entrepreneurship*, 1, 297-311.
- Miller, C. C., Cardinal, L. B. & Glick, W. H. (1997). Retrospective reports in organizational research: A reexamination of recent evidence. *The Academy of Management Journal*, 40(1), 189-204.
- Minguzzi, A. & Passaro, R. (2000). The network of relationships between the economic environment and the entrepreneurial culture in small firms. *Journal of Business Venturing*, 16, 181-207.
- Mintzberg, H., Raisinghani, D. & Theoret, A. (1976). The structure of "unstructured" decision processes. *Administrative Science Quarterly* 21(2), 246-275.
- Moini, A. H. (1992). A study of exporting and non-exporting small manufacturing firms. *Journal of Business and Entrepreneurship*, 4 (3), 77-88.
- Mudambi, R., & Zahra, S. A. (2007). The survival of international new ventures. *Journal of International Business Studies*, 38, 333-352.
- Nerkar, A. & Paruchuri, S. (2005). Evolution of R&D capabilities: The role of knowledge networks within a firm. *Management Science*, 51(5), 771-786.
- Nahapiet, J. & Goshal, S. (1998). Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Nordman, E.R. & Melen, S. (2008). The impact of different types of knowledge for the internationalization process of born globals in the biotech business. *Journal of World Business*, 43, 171-185.
- Nummela, N., Saarenketo, S. & Puumalainen, K. (2004). Global mindset - a prerequisite for successful internationalisation? *Canadian Journal of Administrative Sciences*, 21 (1), 51-64.
- Oviatt, B. M. & McDougall, P. P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25 (1), 45-64.
- Oviatt, B. M. & McDougall, P. P. (2005). Defining international entrepreneurship and modelling the speed of internationalization. *Entrepreneurship Theory & Practice*, 29 (5), 537-553.
- Podsakoff, P. M. & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12 (4), 531-544.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for analyzing industries and competitors*. New York, NY: Free Press.
- Preece, S. B., Miles, G. & Baetz, M. C. (1998). Explaining the international intensity and global diversity of early-stage-technology-based firms *Journal of Business venturing*, 14, 259-281.
- Presutti, M., Boari, C. & Fratocchi, L. (2007). Knowledge acquisition and the foreign development of high-tech start-ups: A social capital approach. *International Business Review*, 16(1), 23-46.
- Pulkkinen, J. & Larimo, J. (2007). Variety in international new ventures: Typological analysis and beyond. *Journal of Euromarketing*, 16 (1), 37-57.

- Reboussin, B. A., Ip, E. H. & Wolfson, M. (2008). Locally dependent latent class models with covariates: an application to under-age drinking in the USA. *Journal of the Royal Statistical Society (Series A)*, 171(4), 877-897.
- Rennie, M. W. (1993). Born global, *The McKinsey Quarterly*, 4(4), 45-52.
- Reuber, A. R. & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behaviour of SMEs. *Journal of International Business Studies*, 28 (4), 807-825.
- Rialp, A. Rialp, J., & Knight, G. A. (2005). The phenomenon of international new ventures, global start-ups, and born-globals: What do we know after a decade (1993-2003) of exhaustive scientific inquiry?, *international business review*, 14, 1-20.
- Roeder, K., Lynch, K. G. & Nagin, D. S. (1999). Modeling uncertainty in latent class membership: a case study in criminology. *Journal of the American Statistical Association*, 94, 766-776.
- Saarenketo, S., Kuivalainen, O. & Puumalainen, K. (2001). Emergence of born global firms: internationalization patterns of infocom SMEs as an example. 4th McGill Conference on International Entrepreneurship, University of Strathclyde, Glasgow, UK, Vol. 2, 442-468.
- Sapienza, H. J., Autio, E., George, G. & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31 (4), 914-933.
- Schwens, C. & Kabst, R. (2009). How early opposed to late internationalizers learn: experience of others and paradigms of interpretation. *International Business Review*, 18 (5), 509-522.
- Selnes, F. & Sallis, S. (2003). Promoting relationship learning. *Journal of Marketing*, 67 (3), 80-89.
- Shane, S. & Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science* 48(3), 364-81.
- Shrader, R.C. (1996). Influences on and performance implications of internationalization by publicly owned new ventures: A risk taking perspective. Unpublished doctoral thesis, Georgia State University, Atlanta.
- Shrader, R. C. (2001). Collaboration and performance in foreign markets: The case of young high-technology manufacturing firms. *Academy of Management Journal*, 44, 45-60.
- Shrader, R. C., & Oviatt, B. M. & McDougall, P. P. (2000). How new ventures exploit trade-offs among international risk factors: lessons for accelerated internationalization of the 21st century. *Academy of Management Journal*, 43 (6), 1227-1247.
- Shrout, P. E., Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86(2), 420-428.
- Siegel, S., and Castellan Jr., N. J. (1988). Nonparametric statistics for the behavioral science (second edition). New York: McGraw-Hill.
- Sinkula, J. M., Baker, W. E. & Noordewier, T. (1997). A framework for market-based organizational learning: linking values, knowledge, and behavior. *Journal of the Academy of Marketing Science*, 25 (4), 305-318.
- Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of International Business Studies*, 25, 323-342.
- Tuppura, A., & Saarenketo, S., Puumalainen, K., Jantunen, A. & Kyläheiko, K. (2008). Linking knowledge, entry timing and internationalization strategy. *International Business Review*, 17, 473-487.

- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 42(1), 35-67.
- Weerawardena, J., Mort, G. S., Liesch, P. W. & Knight, G. (2007). Conceptualizing accelerated internationalization in the born global firm: A dynamic capabilities perspective. *Journal of World Business*, 42, 294-306.
- Westhead, P., Wright, M. & Ucbasaran, D. (2001). The internationalization of new and small firms: A resource-based view. *Journal of Business Venturing*, 16, 333-358.
- Wolfe, J. & Jackson, C. (1987). Creating models of the strategic decision making process via participant recall: A free simulation examination. *Journal of Management* 13(1), 123-134.
- Yeoh, P. L. (2004). International learning: Antecedents and performance implications among newly internationalizing companies in an exporting context. *International Marketing Review*, 21(4/5), 511-535.
- Yli-Renko, H., Autio, E. & Tontti, V. (2002). Social capital, knowledge, and the international growth of technology-based new firms. *International Business Review*, 11, 279-304.
- Zaheer, S. (1995). Overcoming the liabilities of foreignness. *Academy of Management Journal* 38(2), 341-363.
- Zhou, L., Wu, W., & Luo, X. (2007). Internationalization and the performance of born-global SMEs: The mediating role of social networks. *Journal of International Business Studies*, 38, 673-690.
- Zahra, S.A. (1996). Technology strategy and new venture performance: A study of corporate-sponsored and independent biotechnology ventures. *Journal of Business Venturing* 11(4), 289-311.
- Zahra, S. A., Neubaum, D. O., & Huse, M. (1997). The effect of the environment on export performance among telecommunications new ventures. *Entrepreneurship: Theory and Practice*, 22, 25-47.
- Zahra, S. A., Ireland, R. D. & Hitt, M. A. (2000). 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. & George, G. (2002). International entrepreneurship: The current status of the field and future research agenda. *Strategic leadership: Creating a new mindset*. Ed. M. Hitt, and R. Ireland, and M. Camp, and D. Sexton. London: Blackwell, 225-288.
- Zahra, S. A., Matherne, B. P. & Carleton, J. M. (2003). Technological resource leveraging and the internationalization of new ventures. *Journal of International Entrepreneurship* 1(2), 163-186.

Figures and Tables

Figure 1: Research Model

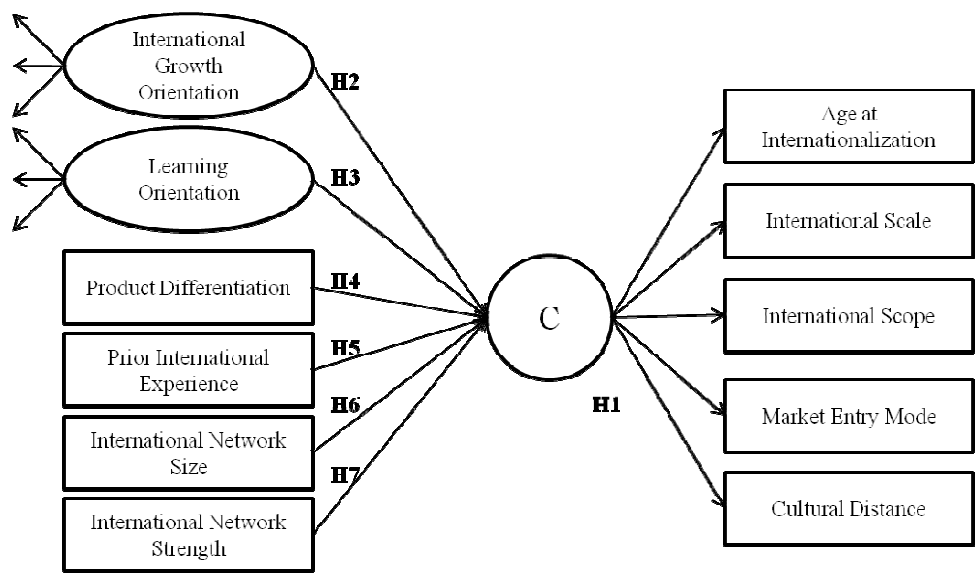


Table 1: Comparison between Process Theories and International New Venture Theory

| | Process Theories of Internationalization (PTI) | International New Venture Theory (INVT) |
|---------------------------------------|---|--|
| Empirical origin | Swedish <i>manufacturing</i> firms in mid-1970s | <i>Knowledge-intensive</i> firms in mid-1990s |
| Major focus | Primarily focuses on <i>constraints to internationalization</i> (e.g. psychic distance) and on the firm's <i>learning orientation</i> | Primarily focuses on enablers to internationalization (prior international experience, international network contacts, international growth orientation, knowledge intensity, product differentiation) |
| Timing to internationalization | Late internationalization after a stable domestic market has been established | Early internationalization right after firm inception |
| International scale | Incremental increase of percentage of foreign sales to total sales | Significant amount of revenues achieved from international markets from early on |
| International scope | Gradual development of additional foreign markets; prior foreign markets function as "stepping stones" | Significant amount of foreign markets served from the beginning |
| Entry mode behavior | Firms start off with low commitment to foreign markets incrementally increasing foreign market commitment along the establishment chain | No sequential foreign market development; multiple and different modes used (dominated by low commitment modes); "leap-frogging" of internationalization modes as a key characteristic |
| Psychic distance | Firms move gradually from less to more psychic distant host countries | Firms move to countries where they spot "windows of opportunity" regardless how psychic distant those countries are. |

Table 2: Overview - Differences among INV Criteria in prior Studies

| Internationalization dimension | (cut-off) value | Studies |
|--|---|--|
| Time to internationalization (Firms had to internationalize within X years after inception) | at the outset | Fan & Phan, 2007; Lopez et al., 2009; Loustarinen & Gabrielsson, 2006; Oviatt & McDougall, 1994; Yeoh, 2004 |
| | 1 year | Brush, 1992; Contractor et al., 2005; Schwens & Kabst, 2009; |
| | 2 years | Andersson, 2004; Chetty & Campell-Hunt, 2004; Knight & Cavusgil, 1996; Knight & Cavusgil, 2004; McKinsey & Co, 1993; Shrader, 2001 |
| | 3 years | Coviello, 2006; Harveston et al., 2000; Knight & Cavusgil, 1996; Knight et al., 2004; Madsen et al., 2000; McDougall et al., 2003; Nordman & Melén, 2008; Presutti et al., 2007; Tuppara et al., 2008; Zhou et al., 2007; Zahra et al., 2003 |
| | 5 years | Acedo & Jones, 2007 |
| | 6 years | Fernhaber et al., 2007; Oviatt & McDougall, 1994; Shrader, 1996; Shrader et al., 2000; |
| | 8 years | McDougall, 1989; Zahra, 1996; |
| | 10 years | Gassmann & Keupp, 2007 |
| | 12 years | Covin et al., 1990 |
| | 25 years | Lindquist, 1991 |
| International scale (mostly measured by percentage of foreign sales to total sales) needs to be as high as X% | 5% | McDougall & Oviatt, 1996; Yeoh, 2004; Zahra et al., 2000 |
| | 10% | Kandasaami & Huang, 2000; McDougall, 1989; Zhou et al., 2007; |
| | 20% | Fan & Phan, 2007; Johnson, 2004; |
| | 25% | Andersson, 2004; Harveston et al., 2000; Knight et al., 2004; Knight & Cavusgil, 1996; Knight & Cavusgil, 2004; Madsen et al., 2000; Tuppara et al., 2008 |
| | 30% | Minguzzi & Passaro, 2000 |
| | 50% | Loustarinen & Gabrielsson, 2006 |
| | 75% | McKinsey & Co., 1993; Rennie, 1993 |
| International scope (mostly measured by the number of foreign markets or country clusters a firm has international activities in. To be classified as INVs firms had to serve X countries) | 90% | Lopez et al., 2009; Lummaa, 2002 |
| | ≥ 1 | Gassmann & Keupp, 2007 |
| | countries, mean 2.17 (S.D. 1.08) | Zahra et al., 2000; |
| | continents: mean 1.75 (S.D.1.08) | Fernhaber et al., 2008 |
| | countries, mean 3.89 (S.D. 10.88) | George et al., 2005 |
| | >= 5 | Kandasaami & Huang, 2000 |
| | countries, mean 14.44 (S.D 14.77) | Tuppara et al., 2008 |
| | countries, mean 14.51 (S.D 9.68) | Zahra et al., 1997 |
| | countries, mean 16.81 | Majocchi & Zucchella, 2003 |
| | countries, mean 18.8 (S.D. 16.9) | Aspelund & Moen, 2005 |
| Entry mode behavior | countries, median: 20 | Knight & Cavusgil, 2004 |
| | export | Acedo & Jones, 2007; Aspelund & Moen, 2005; Brouthers & Nakos, 2005; Brouthers et al., 2009; Chiao et al., 2006; Contractor et al., 2005; Dhanarai & Beamish, 2003; Fernandez & Nieto, 2006; Filatotchev et al., 2009; Knight & Cavusgil, 1996; Knight & Cavusgil, 2004; Kundu & Katz, 2003; Lee & Jang, 1998; Lopez et al., 2009; Majocchi & Zucchella, 2003; Minguzzi & Passaro, 2000; Tuppara et al., 2008; Yeoh, 2004; Zahra et al., 2000; Zhou et al., 2007 |
| | co-operations (licensing, franchising) | Tuppara et al., 2008 |
| | interfirm alliances | Coombs et al., 2006; Leiblein & Reuer, 2004; Majocchi & Zucchella, 2003; |
| | strategic alliances | Coombs et al., 2006; Leiblein & Reuer, 2004; Majocchi & Zucchella, 2003; Preece et al., 1998 |
| | joint venture or equity investment | Dickson et al., 2006 |
| | foreign plants or subsidiaries | Chen & Martin, 2001 |
| | combinations | Coviello & McAuley, 1999; Dimitratos et al., 2003; Jones & Coviello, 2005 |
| | countries with higher psychic distance (are key markets) | Aspelund & Moen, 2005; Lopez et al., 2009 |
| | two cultural clusters (as defined by Hofstede (1980)), and geographical regions | Lummaa, 2002 |
| | low-risk developed countries more frequently entered (sample: U.S. firms) | Shrader et al., 2000 |
| Cultural distance | three areas: Europe, North-America, rest of the world (sample: Italian firms) | Majocchi & Zucchella, 2003 |
| | physic distance concept for Sweden (Denmark 1; ...; Portugal 15) | Andersson, 2004 |
| | Hofstede's classification of national cultures | Yeoh, 2004; Yli-Renko et al., 2002; Zahra et al., 2000; |
| | "global vision at inception" | Gabrielsson et al., 2008 |
| | Measures for countries in sample: GLOBE: Institutional collectivism; Uncertainty avoidance; Assertiveness | Dickson et al., 2006 |

Table 3: Information Criteria and Statistical Indices for Different Group Solutions

| Number of Latent Classes | BIC | Adjusted BIC | BLRT |
|-------------------------------------|------------|---------------------|-------------|
| 1 class solution | 7257.07 | 7193.68 | - |
| 2 class solution | 7197.94 | 7083.84 | 0.00 |
| 3 class solution | 7187.47 | 7022.66 | 0.00 |
| 4 class solution | 7144.57 | 6929.04 | 0.00 |
| 5 class solution | 7267.94 | 7001.70 | 0.63 |

Table 4: Latent Class Characteristics and Labels

| | Proportion (in %) | International Intensity | International Scope | Age at Inter- nationalization | Entry mode (control) | Cultural Distance |
|--|----------------------|----------------------------|------------------------|----------------------------------|-------------------------|----------------------|
| Class 1 (born-again globals) | 11.6 | 28.1 (medium) | 6 (low) | 9.8 (high) | 4.8 (medium) | 8.7 (medium) |
| Class 2 (born globals) | 14.9 | 59.1 (high) | 26 (high) | 1.4 (low) | 2.6 (low) | 12.7 (high) |
| Class 3 (Geographically focused Exporters) | 24.8 | 67 (high) | 7 (low) | 1.3 (low) | 3.1 (low) | 8.5 (medium) |
| Class 4 (Gradually internationalizing INVs) | 48.7 | 17.7 (low) | 5 (low) | 2.5 (medium) | 3.3 (low) | 7.8 (low) |

Table 5: Results from the LCA with Covariates

| Reference class | Class 1 (born-again globals) | | | Class 2 (born globals) | | Class 3 (gfe) |
|----------------------------------|------------------------------|-----------|----------|------------------------|----------|---------------|
| | class 2 | class 3 | class 4 | class 3 | class 4 | class 4 |
| | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> | <i>b</i> |
| International Growth Orientation | 5.30 *** | 5.00 *** | 0.78 | 0.94 | 0.15 *** | 0.16 *** |
| Learning Orientation | 0.61 | 0.67 | 2.36 * | 1.10 | 3.86 *** | 3.52 * |
| Product Differentiation | 0.97 | 3.20 * | 0.73 | 3.31 * | 0.75 | 0.23 ** |
| Prior International Experience | 15.03 * | 28.88 *** | 1.17 | 1.92 | 0.08 *** | 0.04 ** |
| International Network Size | 0.99 | 1.02 † | 0.99 | 1.02 | 1.01 | 0.99 |
| International Network Strength | 0.64 | 0.68 * | 0.73 | 1.06 | 1.13 | 1.07 |
| Intercept | -0.03 | 0.30 | 1.41 *** | 0.33 | 1.44 *** | 1.11 ** |

Note: n=234; *b* = exponentiated coefficients (1.1 equals an increase of 10% in the chance of belonging to in class X compared to the reference class due to a one unit increase in the covariate; 0.9 equals a 10% decrease in the chance of belonging to in class X compared to the reference class; Significance Levels: *** ≤ 0.001 ; ** ≤ 0.01 ; * ≤ 0.05 ; † ≤ 0.10 ; gfe = geographically focused exporter