

**The Incremental Expansion of Born Internationals:
A Comparison of New and Old Born Internationals**

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Abstract

Not much is known about the characteristics of “early internationalizers” in their later life and there is scant empirical literature – and an acute need for quantitative studies – about the features of Born Internationals (BIs) after their first years of operation. In this context, we aim to describe the later life of BIs and determine whether some of the critical aspects of internationalization are visible in their post-birth features. This study contributes to the literature on internationalization by providing quantitative evidence on key post-birth characteristics of BIs. Guided by five research hypotheses, it explores changes in the BIs’ profile and tests whether or not there are differences between newer BIs and older ones in a sample of SMEs. The results support the basic cumulative dynamics proposed by the incremental school in terms of international business experience, international commitment, and level of internationalization, which implies that these factors can to some extent be viewed as driving forces in the internationalization process of BIs.

Keywords

Born Internationals (BIs); Born Globals; Internationalization; International commitment; International experience; International performance.

1. Introduction

Over the last 30 years, a number of different internationalization theories and models have been proposed. Among them, some relatively new approaches have given rise to what have been labeled “Born Globals” (e.g., Andersson & Wictor, 2003; Aspelund & Moen, 2001; Autio & Sapienza, 2000; Chetty & Campbell-Hunt, 2004; Freeman & Cavusgil, 2007; Gleason & Wiggenhorn, 2007; Knight & Cavusgil, 1996; Kudina, Yip, & Barkema, 2008; Kuivalainen, Sundqvist, & Servais, 2007; Madsen, Rasmussen, & Servais, 2000; Moen, 2002; Rasmussen, Madsen, & Evangelista, 2001; Sharma & Blomstermo, 2003; Weerawardena, Sullivan Mort, Liesch, & Knight, 2007), “Global Start-ups” (Oviatt & McDougall, 1994), “High-Technology Start-ups” (Jolly, Alahuhta, & Jeannet, 1992), and “International New Ventures” (e.g., Autio, 2005; Coviello, 2006; Fan & Phan, 2007; McDougall, Oviatt, & Shrader, 2003; McDougall, Shane, & Oviatt, 1994; Mudambi & Zahra, 2007; Oviatt & McDougall, 1994; Servais & Rasmussen, 2000).

In this paper we refer to all of these phenomena as Born Internationals (BIs). Broadly speaking, we consider them to be firms that have been operating in foreign markets from a *very early date*, that is, from the time they started doing business or soon after. This general definition implies that “Born Globals,” “Global Start-ups,” “High-Technology Start-ups,” and “International New Ventures” can be considered BIs, but not all BIs are, for instance, Born Globals. Our BI concept is based on the sole, and *less restrictive*, criterion of “time to internationalization,” and our focus is on the more general phenomenon of *early internationalizing firms*.

Most research on these firms focuses on their unique characteristics and early years of operation (e.g., Chetty & Campbell-Hunt, 2004; Rasmussen et al., 2001). In contrast, there is scant empirical literature (and, to the best of our knowledge, virtually none with a quantitative perspective) about the characteristics of BIs after some years of operation. This gap is important mainly for academia, but also for managers and policy makers. It is important for academia because our knowledge about the way BIs internationalize is limited, which offers research opportunities to scholars focusing on the later years of these firms’ existence. Zahra (2005) raised a question about what happens to BIs when they grow up. Similarly, Chetty and Campbell-Hunt’s (2004) findings call for a study based on quantitative data to obtain an understanding of what happens with BIs when they

grow older. A little bit earlier, there were also calls for more empirical research on BIs, particularly for studies with a post-birth (Madsen & Servais, 1997) and quantitative (Sharma & Blomstermo, 2003) perspective. Turning to managers and public policy makers, knowledge that alleviates the lack of quantitative studies about BIs' post-birth features will provide them with a first benchmark with which to compare the international characteristics of these firms and to design assistance programs tailored to the firms' particular needs.

Against this background, this paper aims to cover this gap and answer two relevant questions in contemporary international business (IB) research: (a) What differences exist between key internationalization characteristics of young and old BIs? and (b) Do existing theories explain these differences? Thus, our objectives are, first, to compare the later and the earlier life of time-based groups of BIs, and second, to discuss whether some of the critical aspects of internationalization are related to the features of these groups. The contribution of this study in responding to the above questions and to the literature on internationalization is material in terms of the provision of quantitative empirical evidence regarding significant differences in the internationalization profile of different groups of BIs – implying that their internationalization process may be seen as cumulative and compatible with the dynamics of the incremental school.

In the next section we review the empirical literature on BIs. Afterwards, we contrast two theoretical perspectives on BIs and formulate five hypotheses on the characteristics of young and old BIs. We then present the methodology, describe the results, and discuss the findings and limitations. The paper ends with a presentation of a comprehensive agenda of key future research avenues and a summary of the main implications for managers and public policy makers.

2. Empirical studies on Born International firms

In order to identify intellectual voids and confirm research gaps, we reviewed the literature on Born Globals and international new ventures. The review was conducted based on several principles. We used Web of Science and applied two search terms: “born global” and “international new venture.” As part of the review process, we created Table 1, where we report a systematic scrutiny of 24 high-impact empirical articles (cited eight times or more) published during the most recent time period,

2001-2011. Therefore, Table 1 does not include conceptual (e.g., Oviatt & McDougall, 2005) and other review papers (e.g., Rialp, Rialp, & Knight, 2005). Since at the core of BIs theory the role of time and process is often highlighted, we start by studying how the internationalization literature analyzes the time-related aspects of BI. After this, we discuss how researchers have studied the international operations and expansion of BIs, that is, the markets entered and the entry modes used during internationalization.

("Insert Table 1 about here")

2.1 Time-related aspects of BI internationalization

The articles in Table 1 can be divided into several groups, based on whether they theoretically discuss and whether they report empirical data on temporal aspects of internationalization. This, in turn, gives a matrix with four cells. The first group (see cell I in Table 2a) consists of studies that do not pay any theoretical attention to age of the firm, phases, processes, or events of the internationalization (De Clerq, Hessels, & van Stel, 2008; Fan & Phan, 2007; Freeman & Cavusgil, 2007; Knight, Madsen, & Servais, 2004) and do not present any empirical temporal data on firm internationalization.

A second group contains seven articles and is to be found in cell II in Table 2a. Here we find articles that do not theoretically analyze temporal aspects of internationalization, but do present temporal data on the firms' internationalization. Within this group, two sub-groups can be identified. The first – represented by Karra, Phillips, & Tracey (2008), Loane & Bell (2006), Spence & Crick (2006), and Sullivan Mort & Weerawardena (2006) – provides data or background information about temporal aspects of the BIs' internationalization, but these temporal data are not used for analytical purposes, and therefore we have difficulty theorizing from them. In the second sub-group, three articles use temporal concepts as control variables and the authors do not theorize from them. Both Knight and Cavusgil (2004) and Zhou, Wu, and Luo (2007) use age of firm as a control variable, but in neither case does it have an influence on internationalization. Presutti, Boari, and Fratocchi (2007), on the other hand, use relationship length and age of the firm as a control variable and find that they are positively related to knowledge acquisition.

("Insert Table 2 about here")

A third and closely related group views internationalization as a process and theoretically discusses various temporal aspects but does not empirically study them (see cell III in Table 2a). According to Welch and Paavilainen-Mäntymäki (2013), whose analytical framework we use, this seems to be a rather common way to study internationalization. The articles do theoretically discuss temporal aspects, but do not present any empirical data on them. Four articles belong to this group (Fletcher, 2004; Freeman, Edwards, & Schroder, 2006; Kuivalainen et al., 2007; Tolstoy & Agndal, 2010). However, as their focus is on other concepts and the theoretical discussion on temporal aspects tends to be principal, they do not offer any additional knowledge to our understanding of the long-term internationalization of BIs. Thus, we can conclude that one third of the articles reviewed do not empirically study temporal concepts, although some of them theoretically recognize that they are important for BIs.

The fourth and biggest group is made up of nine articles. The articles both report data on temporal aspects and analyze them (see cell IV in Table 2a). They can, in turn, be divided into two sub-groups where the first analyze BIs' strategies, and the main objective is to discuss the extent to which BIs differ from traditional firms (Laanti, Gabrielsson, & Gabrielsson, 2007; Moen, 2002). In a similar vein, Chetty and Campbell-Hunt (2004) use market scope and the lag between inception and time to first export market to categorize 16 firms into regionals, globals (traditional), and born globals. In contrast with our approach, they analyze and discuss qualitative differences between the three groups. A fourth article, which also makes comparisons of the first step into a market, is Tuppara, Saarenkato, Puumalainen, Jantunen, and Kyläheiko (2008), who study how early BIs enter a market in relation to competitors, that is, first-mover orientation. It seems that characterizing BIs per se and their first step abroad is still the most important research objective, which raised the question of what happens with BIs when they have come further in their internationalization. Both Laanti et al. (2007) and Tuppara et al. (2008) find that the prior international experience has a positive impact on the first

internationalization phase. The foci are on the early start of internationalization and on the strategies pursued by the firms. These strategies are not analyzed in relation to time, which means that they do not aim or are not able to contribute to our knowledge of BIs' internationalization after the first step taken abroad.

The final five articles have a longer and wider perspective on BIs' internationalization and are therefore more relevant for our study. Coviello (2006) and Gabrielsson, Kirpalani, Dimitratos, Solberg, and Zucchella (2008) divide the internationalization process into various phases having different characteristics. Coviello (2006) is not interested in the BI and how it changes per se, but how the network surrounding the BI undergoes development over time, which includes three phases. Phase-by-phase, the network increased in range and decreased in density, while its non-redundant aspects and centrality increased. Gabrielsson et al. (2008), on the other hand, argue, based on their case studies, that BIs progress through three phases, each with specific characteristics. In contrast to Laanti et al. (2007) and Tuppara et al. (2008), they suggest that the internationalization's first two phases are characterized by a deliberate establishment of a learning system and accumulation of resources and learning. Moreover, in line with traditional theories (Johanson & Vahlne, 1977), they propose that learning is a result of the activities performed in the foreign market.

Moen and Servais (2002) hypothesize that internationalization is a gradual development. They divide the sample into three groups depending on how long they have been exporting. The study finds little support for the Uppsala school of gradual development of internationalization or the born global school. The study by Zhou (2007) is the only one focusing on the antecedents of the temporal aspects of internationalization. Importantly, we found only one empirical article reporting differences between new and older ventures (see Riddle & Gillespie, 2003), even when we did not apply the criterion about the number of citations. However, Riddle and Gillespie (2003) define new ventures as firms less than *10 years old*, so not all of the exporters in their study are necessarily BIs. In addition, their purpose was to examine how firms in the Turkish clothing industry use social networks when seeking information critical for internationalization (Riddle & Gillespie, 2003).

2.2 International operations and expansion of BIs

The literature on BIs' internationalization can also be analyzed in two other dimensions, where the first refers to the interest in studying the foreign markets the BI enters and later operates in. This interest stretches from *no* or *very little* interest in type, order, or characteristics of the markets entered to those articles where this is one of the main topics. The other dimension of international operations and expansion concerns the extent to which the articles are interested in how BIs internationalize, that is, what modes they use. Here the articles can be divided into two groups. The first group either does not study modes at all or they completely focus on export, while the other group of articles empirically study (usually several) other activities such as production, R&D, and sourcing. Based on this distinction of markets and modes, we create another two-by-two matrix (see Table 2b) and categorize the articles in four cells.

Cell I represents the main body of the literature, and here there are 12 articles which are not studying markets and either focus completely on export or ignore discussion of entry modes. Most of these depart from the assumption that BIs do exist and that they are different from other firms. The foreign markets follow other entry patterns than the ones predicted by incremental internationalization theories. This difference also concerns the entry modes. This assumption raises research questions other than those concerning markets and modes, which are more related to strategies, entrepreneurs' characteristics, and networks.

A much smaller number of articles do not study where the BI internationalizes but have a wider focus on internationalization than only export. Three articles are to be found in cell II (De Clercq et al., 2008; Freeman et al., 2006; Presutti et al., 2007). These three articles differ and they have little in common with each other apart from their broader perspective, which considers entry modes other than export.

The third group of articles is categorized as cell III. These three articles study how exporting BIs enter various country markets. These articles largely share the same research question as they either investigate the number of markets entered (Moen, 2002; Moen & Servais, 2002) or both type and number of markets entered (Kuivalainen et al., 2007). However, while the former analyze the

differences between BIs and traditional firms, the latter measures the degree of born globalness and its impact on export performance (Kuivalainen et al., 2007).

The fourth and final cell reflects the studies that take a broader perspective on entry modes than only export and that discuss and analyze type, order, and nature of the markets entered. Only six articles try to answer in depth two of the internationalization literature's key questions, "where" and "how." Also, here the authors tend to study these aspects as a consequence of strategy (Freeman & Cavusgil, 2007; Laanti et al., 2007) or orientation of the entrepreneur (Tuppura et al., 2008).

2.3 Conclusions of the review

The review highlights two important issues, which the existing literature only partly covers and explains. The first issue is that even though nine articles out of 24 both theoretically discuss and empirically observe different temporal aspects of firm internationalization, only five of them take a long-term perspective on internationalization. Importantly, although more than half of the articles (16) empirically discuss temporal aspects of internationalization, none of them compares empirical characteristics of time-based clusters of BIs. The review strengthens the observation that most articles have a fascination for BIs' early start, and much effort has been made to understand this earliness.

Second, even if markets entered and modes used can be viewed as key dimensions of internationalization given that they reflect international experience and commitment, half of the articles completely neglect these aspects in their analyses; neither are these aspects the focus of study in the cases where either markets entered or modes used are studied, indicating that, even after so many years, there is still little knowledge about BIs' markets and modes and related constructs.

In addition, few articles analyze the effects of internationalization. Actually only four out of 24 (Knight & Cavusgil, 2004; Knight et al., 2004; Kuivalainen et al., 2007; Zhou et al., 2007) study performance, but they concentrate on export performance. More importantly, the character of the extant literature on BIs indicates that we need to uncover the features of BIs when they are older. Only the study by Riddle and Gillespie (2003) provides some quantitative evidence on the different features of new and older ventures in terms of export intensity, firm size, destination of exports, product line composition, and demographic profile of firm owners. It seems that despite Riddle and Gillespie's

(2003) study on old and new BIs, and Moen and Servais' (2002) study on gradual development of BIs, we need to increase our understanding of BIs after entry in the first market and key internationalization variables, such as international experience, commitment, and performance.

3. Theoretical perspectives and development of hypotheses

In their seminal article, Madsen and Servais (1997) discussed the links between the BIs and the dynamics of the incremental school, argued that the basic assumptions of the incremental school were still valid even for BIs, and concluded that they may behave according to an evolutionary framework when the time perspective is extended beyond their birth. We build on this view to provide an overarching framework for our study. Therefore, we consider the internationalization of the BI to be one in which the firm may accumulate international experience, international commitment, etc.

Studies reviewing the literature on the BI and the incremental school illustrate the state of the art in both fields (e.g., Moen & Servais, 2002; Rialp et al., 2005). However, while the mainstream literature on the phenomenon of BIs has been published throughout the last 15 years and has taken an empirical approach (Rialp, et al., 2005), the incremental school has been steadily developed from the seminal article of Johanson and Vahlne (1977), and its theoretical aspects have dominated the debate (e.g., Forsgren, 2002; Johanson & Vahlne, 1990, 2006, 2009). In the remainder of this section we present the differences and similarities between the BI and the incremental school literature in terms of five critical concepts underlying both perspectives (see Table 3).

("Insert Table 3 about here")

3.1. Internationalization and resource growth

The BI can be viewed, in line with Penrose (1959), as a bundle of heterogeneous resources. As the BI enters new markets, the character of the resource bundle changes in size (among other things), which generally increases; thus, the internationalization of these firms can be viewed as a growth process. As the BI's resources increase, the character of its combination of resources, which evolves through an

interactive and dynamic process, is important, since the firm's competitive advantage depends on this combination of resources.

There are two particularly important issues affecting the firm during the internationalization process. One is the fact that the resource bundle often includes a strong experiential component. The other is the limited transferability of the resources (Alchian & Demsetz, 1972; Dierickx & Cool, 1989; Peteraf, 1993). As the BI advances in age, its resources increase. In other words, resources (such as assets in the balance sheet and sales) expand over time as the firm grows (Forsgren 1990; Forsgren, Holm, & Johanson, 1992, 1995).

Resource growth, in the incremental school, is contingent on the incremental character of internationalization, and resources are therefore accumulated over time in an even and gradual process. The firm gains more resources as a result of profit and sales made over time. The amount of resources is thus dependent on how long the firm has been operating (Forsgren, 1989). The BI literature does not reject the growth that comes from daily business, but adds to this that growth of resources is also a result of provision of external capital, mergers, and acquisitions, which are made possible through financial markets as well as the owners' and the top managements' external personal networks. We formulate the following hypothesis:

Hypothesis 1 (H₁): Old Born Internationals have greater resources than young Born Internationals.

3.2. International business experience

Experience and learning are viewed as key factors in both the BI literature and among incremental scholars. The BI literature on knowledge can be divided into two streams, with the first focusing on the entrepreneurs' prior experience as a driving force (Madsen & Servais, 1997; Shrader, Oviatt, & McDougall, 2000; Zhou et al., 2007) and the second emphasizing instead the BIs' ability to learn. As a result of the latter, these firms are assumed to be better equipped than other firms to acquire knowledge quickly (Chetty & Campbell-Hunt, 2004; Zahra, 2005).

The incremental school sees the acquisition of experience as the key to internationalization, since it reduces perceived uncertainty and helps the firm recognize new opportunities in the foreign

market. This experience is conceptualized as the main constituent of market knowledge at the firm level – and therefore we focus on it instead of on experience at the managers' level³ – and it is manifested in routines and knowledge-sharing systems. Thus, by acting in the foreign market, the BI learns how to handle the specific market and, as stated, the experience gained from doing business abroad is the main source of experiential knowledge (Barkema, Bell, & Pennings, 1996; Davidson, 1980; Eriksson, Johanson, Majkgård, & Sharma, 1997; Mudambi, 1998). The strength of this experience comes from the richness of impressions that can only be gained from direct activities.

Experience is gained from exposure to different firms and markets over a period of time (Barkema & Vermeulen, 1998). Variation in experience seems to be particularly important for firms entering culturally distant markets (Erramilli, 1991). Thus, *time* and *diversity* are necessary in order to gain international business experience (Papadopoulos & Martín Martín, 2010). Although the BI starts its international operations at an early age, this does not necessarily mean that it has all the knowledge it needs for these operations nor that it does not need to continue learning after it enters its first foreign market. Obviously, the longer the BI operates internationally, the more experience it is able to gain. Exporting on a regular and long-term basis increases general knowledge about internationalization and how to do business abroad (Eriksson et al., 1997). It forces the BI to learn about market-specific customs, tariffs, customer preferences, distribution systems, consumption patterns, etc., and provides it with insight into the types of problems and difficulties that arise when operating internationally.

Finally, we not only suggest that BIs enter new markets, but that the heterogeneity of these markets forces them to adapt and apply different entry strategies. These strategies imply the use of a variety of entry modes. The more markets the BI enters and the greater variety of entry strategies it applies, the wider the range of problems the BI will need to solve. Thus, as time goes by, the BI enters new markets and uses a wider range of entry modes, which also increases its international experience. We propose the following hypothesis:

³ Previous research (e.g., Johannisson, 1998; Johannisson & Mønstead, 1997) has also shown that in small firms there is no distinct division between the key decision maker and the firm.

Hypothesis 2 (H₂): Old Born Internationals have greater international business experience than young Born Internationals.

A remark on the above hypothesis is now in order, since it would appear tautological if experience were measured exclusively on a time basis (“longitudinal experience”), given that, in these firms, “time from inception” means roughly the same as “time operating internationally.” Therefore, the kind of empirical evidence that is needed concerns the “cross-sectional” dimension of experience, that is, the content of the construct capturing the diversity of international activities. Accordingly, this is the aspect of experience that will be tested under the hypothesis.

3.3. International commitment

Commitment was advanced as a critical concept in social sciences in the 1960s (Becker, 1960) and has since been applied in several disciplines. For instance, in the IB field, it has been used to discuss the performance of international joint ventures (Cullen, Johnson, & Sakano, 1995), business relationships (Anderson & Weitz, 1992; Moorman, Zaltman, & Deshpandé, 1992; Morgan & Hunt, 1994; Sharma, Young, & Wilkinson, 2006; Skarneas, Katsikeas, & Schlegelmilch, 2002) or business networks (Holm, Eriksson, & Johanson, 1996).

Commitment comprises both continuity and stability and is usually viewed as the result of sacrifices or the investment of resources and knowledge (Gundlach, Achrol, & Mentzer, 1995; Holm, Eriksson, & Johanson, 1999). Commitment also has a future dimension, since it is often treated as a willingness to continue with something that already exists (Holm, Eriksson, & Johanson, 1996), or something that can be expected to produce a positive outcome (Hadjikhani & Johanson, 2002). In an internationalization context, market commitment was a concept advanced by Johanson and Vahlne (1977) to describe a firm’s state of entry into a specific market. The incremental school considers it to be one of the key constructs of the mechanism of internationalization. We suggest that this can also be valid for the BI. Although these firms start their international operations at an early age, they are not full-grown at birth. Rather, they commit themselves increasingly, over time, to international markets.

Committing resources to international operations implies that these resources are invested explicitly to target the foreign market. Gradually, as the BI grows, it enters and commits itself to new foreign markets. The term “international commitment” refers not only to the degree to which a firm invests in foreign markets, but also to the way in which it organizes other functions besides sales and marketing. A BI that invests in wholly owned production subsidiaries with several plants in a market is likely to be more committed to that market than a firm with no legal entity in the market and operating through an agent or distributor.

As a BI enters new foreign markets, more and more people become involved in the international activities. Since foreign markets are different, both compared to the domestic market and compared to each other, the BI has to adapt to the prevailing conditions in these markets. This observation is also valid for the existing employees of the BI, who have to learn how to do business in a new market environment. This learning process takes place mainly through interaction with firms in the foreign market and, as more and more of the firm’s people interact with firms abroad, they learn and become more specialized in ways of operating outside their own domestic market.

As it increases its activities abroad, the BI is also likely to hire new people who are already specialized in specific markets. One of the requirements for different types of international business activities is foreign language skills. Knowledge of a foreign language is a skill that tends to be more useful and more highly valued abroad than at home. We can therefore expect older BIs to differ from younger BIs not only by having more people involved in international business activities but also by possessing better foreign language skills. The above rationale leads to our third hypothesis:

Hypothesis 3 (H₃): Old Born Internationals have greater international commitment than young Born Internationals.

3.4. Level of internationalization

Empirical comparisons of level of internationalization (export intensity) in BIs and later exporters have shown significant and consistently higher values for the former in countries such as Norway, France, and Denmark (Moen & Servais, 2002). If BIs start their foreign activity with higher levels of

internationalization than later exporters, the question to be answered is whether they can ever increase those levels over time. Although we recognize that the small newly born firm begins its existence from a more internationalized position than what various theories generally argue, we believe that its level of internationalization may gradually increase.

We define the internationalization level as the extent to which the BI is dependent on its international operations and is organizationally integrated into markets other than the domestic market. As the levels of dependence and integration increase, so does the BI's internationalization level. The degree of dependence on international operations is a consequence of, among other factors, how much of the total turnover comes from sales in markets other than the domestic market (Barrett & Wilkinson, 1986; Bilkey & Tesar, 1977; Moon & Lee, 1990; Wortzel & Wortzel, 1981) and, following authors such as Bilkey and Tesar (1977) and Wortzel and Wortzel (1981), the ratio of exports to total sales is likely to increase as the BI grows older. However, these firms' international development is also likely to be accompanied by organizational changes. As its dependence on international operations increases, the BI has to make organizational adjustments in order to serve its foreign markets. A traditional research stream in international business (Leonidou & Katsikeas, 1996) argues that an internationalizing firm undergoes various stages, where a higher stage involves a higher level of internationalization.

The limited size of the domestic market in terms of existing and potential customers may force the BI to begin to internationalize very early, which means that the international operations are likely to have an influence on the BI's organization almost from its inception. Hashai and Almor (2004) argue that BIs follow a three-phase process, starting with exports to closely located markets undertaking a few value-adding activities, and eventually reaching the third stage, where much of the internationalized value-adding activities arise from production and R&D performed by subsidiaries created through mergers and acquisitions. Therefore, increasing dependence on international operations and a more internationally integrated organization are natural features of the BI's growth process. The firm's links with foreign markets increase over time. These growing relationships with foreign markets may be reflected in a higher level of internationalization. We therefore suggest the following hypothesis:

Hypothesis 4 (H₄): Old Born Internationals have higher levels of internationalization than young Born Internationals.

3.5. Performance in international markets

The incremental school has often been criticized for lacking normative ambition and striving only to describe. However, contemporary studies (Barkema et al., 1996; Delios & Beamish, 2001; Luo & Peng, 1999) clearly have a normative element since they demonstrate that an incremental process has a positive impact on survival, profitability (Delios & Beamish, 2001), and performance (Luo & Peng, 1999).

Vernon (1971) already argued for a positive relationship between internationalization and firm performance, but several scholars have since debated whether the relationship is linear (Grant, 1987; Vernon, 1971), U-shaped (Ruigrok & Wagner, 2003), inverted U-shaped (Capar & Kotabe, 2003; Gomes & Ramaswamy, 1999; Hitt, Hoskisson, & Hicheon, 1997), or S-shaped (Contractor, Kundu, & Hsu, 2003). Since most previous research supports a linear relationship, we propose that the older the BI (and, therefore, the higher its level of internationalization), the higher its performance.

The literature identifies three factors that are likely to have a positive impact not only on the traditional firm's but also on the BI's performance: *organizational learning, market conditions, and economies of scale*. First, with age comes experience, which in turn results in a usable stock of experiential knowledge. This experiential knowledge is partially about how to behave in each specific market, since business and management cultures are likely to differ from country to country. Although most of this knowledge is market-specific, another part of it relates to ways of running a business internationally and can to some extent be used across a variety of markets. International operations are more efficient and less costly when the BI is aware of which resources and which knowledge are most appropriate to apply in different markets. However, market-specific experiential knowledge, gained as a result of operations with specific organizations, institutions, and firms, enables the BI to create higher value and avoid making mistakes in a given market. All in all, it seems that time brings

knowledge, which, in turn, results in commitment and internationalization and performance gains (Papadopoulos & Martín Martín, 2010).

Second, conditions in the BI's market of entry are also linked with its performance. In the early phase of an entry process, the liability of foreignness and lack of legitimacy, that is, established firms' lack of knowledge about the BI, increase the internationalization costs, since it is costly for a new entrant to gain acceptance as a sector actor. Distant and peripheral markets are usually less comprehensible for the BI, which increases the perceived uncertainty. Operating in several markets generates both benefits and costs. The transferability of competencies, innovations, and resources between units located in different markets (Kogut & Zander, 1993) can give a BI a competitive advantage over domestically operating firms. This seems especially important in the case of BIs given that most of them are high-technology firms. Not all costs are decreasing, however. The coordination of these units also generates costs, especially if the markets are dispersed and different in character; probably, the more distant the market, the higher the coordination and learning costs.

Third, as the BI grows it can decrease its costs by using cheaper labor and purchasing components and raw materials in a larger number of countries. In addition, its overhead costs are spread over more countries and units, and achieving economies of scale can also reduce production costs. Finally, it can gain global market power (Grant, 1987) and extend the product cycle (Vernon, 1966). Over time, the BI, which has operated in foreign markets almost from its inception, will develop relationships with agents and distributors in some markets and found its own production subsidiaries or sales organizations in others. These commitments give the BI a platform from which to operate more closely with other firms, including its customers, suppliers, and competitors, in the international markets. We expect this efficiency and closeness to have a positive effect on the internationalization and performance of the BI. In view of the above, we propose the fifth hypotheses as follows:

Hypothesis 5 (H₅): Old Born Internationals have higher levels of performance in international markets than young Born Internationals.

4. Methodology

The sample, questionnaire, field research, and operationalization of variables are addressed in this methodology section.

4.1. Sample

Regardless of the relative shortage of research on Spanish firms, investigation based on this developed country can provide important outcomes in the international marketing and business fields. Its economic traits, the international expansion of its firms, and the lack of studies using samples comprising Spanish BIs make this country a promising and attractive research context in which to increase understanding of the international expansion and growth process of early-internationalizing firms.

A sample of 204 firms was extracted by stratified random sampling from the population of regular exporters with 10 or more employees⁴ in the region of Navarre. A census (“Catalogue of Exporters”) of the regional chamber of commerce containing 424 regular exporters was used as the sampling frame. The firms are representative of the population by firm size. The sample contains a cross-section of industries offering both consumer and industrial products. A total of 59 firms in the sample were identified as BIs, defined as companies having started their regular international operations no more than two years after inception. This operationalization is consistent with our focus on “early internationalizers” and similar, for instance, to those used by Moen & Servais (2002), Chetty & Campbell-Hunt (2004), and Freeman & Cavusgil (2007) to identify or define Born Globals, and by McKinsey and Co. (1993) to split their sample into Born Globals and traditional exporters. Two criteria were applied to identify SMEs (in accordance with the European Commission Recommendation 96/280/EC for the definition of small and medium-sized enterprises): fewer than 250 employees and turnover no higher than 40 million euros or a balance sheet total of no more than 27 million euros. Since 14 of the targeted firms were classified as large firms, the final number of BI

⁴ We limited our approach to SMEs of 10 or more employees to enhance the comparability of firms in the sample in terms of size and to keep a sample size affordable in terms of budget.

SMEs analyzed was 45. This separation of firms according to size is quite frequent in the international business and marketing literature and has been advocated for the study of Born Globals (Madsen & Servais, 1997). The 22.1% of BI SMEs found in the sample used in this study is below the percentages reported by Moen and Servais (2002) in countries such as Norway (38.8%), France (34.3%), and Denmark (30.7%). However, as already stated, the Spanish sample does not include micro firms.

The 45 BIs show a highly balanced sector distribution: agrifood (24.4%); textiles, clothing, footwear, and leather goods (11.1%); wood and furniture (11.1%); chemicals (6.7%); basic metals processing (20%); non-metallic products (4.4%); machinery (6.7%), and vehicles and transport equipment (15.5%). This sectoral diversity positively contrasts with the more common bias towards high-technology or knowledge-intensive industries present in a significant number of previous empirical studies on BIs. We consider our sample, therefore, to offer more cross-sector generalization potential for findings than is customary in research on this issue. It is also large enough for the purposes of this research and, to the best of our knowledge, one of the largest ever used to study the post-birth features of BIs.

4.2. Questionnaire and field research

Most of the questions in the structured questionnaire focused on firm and manager characteristics, international strategy, and firm export performance. The questionnaire content and design were pretested for face validity in two stages. First, an initial draft was reviewed by six marketing researchers or business consultancy experts. Then, after minor modifications, a revised draft was tested on five firms through in-person interviews with the executives in charge of foreign operations. As a result, some items were refined and some questions omitted in order to reduce completion time.

Data were collected by means of personal interviews with the international or general manager in charge of the firm's foreign activity. The duration of the interviews was approximately one hour, fifteen minutes on average, while the field research took close to eight months. Since not all of the firms wanted to cooperate, a total of 314 firms had to be contacted to obtain the sample of 204 firms, which implies a response rate of nearly 65%. Each firm that did not cooperate was replaced by another one of the same size and in the same industry. We carried out tests for non-response bias (Armstrong

& Overton, 1977) by means of the variables resources (number of employees) and internationalization (international to total sales) and found non-significant differences.

In an attempt to avoid the risk of common method variance bias associated with cross-sectional research designs (Chang, Witteloostuijn, & Eden, 2010; Lindell & Whitney, 2001; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), the indicators and questions used to test the hypotheses were separated in the questionnaire, and different response formats and scales were employed (see Table 4). In addition, “total assets” and “number of employees” data were drawn from two secondary information sources (the Iberian Balance Sheet Analysis System and the “Catalogue of Exporters of Navarre,” respectively). Finally, as a post hoc statistical procedure, we carried out a Harman’s one-factor test, where it is assumed that if a substantial amount of common method bias is present, either a single factor will emerge from the analysis or a “general” factor will account for the covariance in the independent and criterion variables (Podsakoff & Organ, 1986). We therefore checked the dimensionality of the 20 indicators used to test the hypotheses in an exploratory factor analysis (EFA). The sample appeared to be free of this potential limitation, since we obtained six factors with eigenvalues greater than 1 that accounted for 36.1, 15.4, 11.6, 8.1, 6.3, and 5.2% of the variance (20 factors to account for all the variance in the indicators).

("Insert Table 4 about here")

4.3. Measurement of the variables

The operationalization of the variables appears in Table 4. All measures have already been used in a variety of international business and marketing studies. Although we tested our hypotheses separately for each variable, we provide the composite reliability (Werts, Linn, & Jöreskog, 1974) or internal consistency for the different sets of measures related to them and dimensions of performance. All exceed the recommended acceptance threshold of .7 (Nunnally, 1978). The first, resources, is measured as total assets, total sales, and total workforce or number of employees (e.g., Kaynak & Kuan, 1993; Miesenböck, 1988) (composite reliability = .88). The second, international experience, is operationalized as the diversity of both entry modes used in international operations and countries in

which the firm operates (composite reliability = .74). Experience in many different country markets leads to a more generalizable knowledge, and measures of diversity of foreign markets have been frequently used in the operationalization of international experience (e.g., Chetty, Eriksson, & Lindbergh, 2006). As argued in the formulation of the hypotheses, these measures are targeted to capture the “cross-sectional” dimension of international experience (e.g., Brouthers & Nakos, 2005; Cavusgil & Zou, 1994).

The third, international commitment (Johanson & Vahlne, 1977, 2006), is measured as the number of employees primarily engaged in international activities, the number of languages in which the firm is skilled, and entry modes commitment (Johanson & Wiedersheim-Paul, 1975), that is, entry with or without direct investment (composite reliability = .73). Among others, measures of the number of employees involved in international activities are commonly used indicators to capture international commitment (e.g., Lages & Montgomery, 2004).

The fourth, level of internationalization, is a construct for which there is no commonly accepted measurement (Ramaswamy, Kroeck, & Renforth, 1996; Sullivan, 1994, 1996). It was operationalized as the conventional international to total sales ratio (e.g., Bausch & Krist, 2007) and as the stage of internationalization or international development (e.g., Martín Martín & Papadopoulos, 2007). In other words, not only the proportion of foreign sales was considered, but also the classification of the BI on a 5-point scale (ranging from low to high levels of international development) based on a cluster analysis of the initial total sample and aimed at identifying groups of firms and classifying them according to their degree of internationalization (composite reliability = .95).

Finally, we used a total of eight established indicators for measuring firm performance, especially international performance and its various dimensions (Katsikeas, Leonidou, & Morgan, 2000): perceived success of international activities (e.g., Cavusgil & Zou, 1994), international sales, and perceived international profitability (e.g., Styles, 1998) (composite reliability = .83); market concentration or ratio of sales in the main, second, third, and fourth foreign markets to total international sales (composite reliability = .97), and change (growth) in international sales (Diamantopoulos & Siguaw, 2006).

5. Empirical characteristics of Born Internationals

Since we wanted to provide detailed descriptive information about the characteristics of time-based clusters of BIs, we separated them into three groups according to how long they had been operating in the sector: young (no more than seven years), mature (more than seven but no more than 20 years), and old (more than 20 years). Nevertheless, to avoid arbitrariness in the establishment of cut-off points between young and old BIs when testing the hypotheses, we employed a hierarchical cluster analysis (Everitt, Landau, & Leese, 2001) using the squared Euclidean distance as the measure of proximity to identify significant time-based clusters of BI firms. This way, the intuitive groupings were replaced with the outcome of the cluster analysis. This technique required the use of at least two “active” variables: “years operating” in the sector was used again, and “years since the first export order” was added. The characteristics of the two resulting groups (young and old BIs) were compared by testing mean differences (scale variables) and Chi-square statistics, Spearman’s Rho, and Kendall’s Tau-b (categorical and ordinal variables). In order to control for the effect of the industry to which the BI belonged, we also tested for differences in the sector distribution between young and old BIs and did not find significant differences for any of the eight sectors with the exception of “non-metallic products” – the one with fewer firms in the sample – where the number of old BIs is significantly higher than the number of young BIs.

5.1. Post-birth features of young, mature, and old BIs

We provide an extensive characterization of the small and medium-sized young, mature, and old BIs (see Table 5). The descriptive statistics show that all 20 variables appear to change as expected. First, average firm resources (H1) steadily cumulate in terms of total assets (from 2.07 million euros to 13.03), total sales (from 2.09 to 9.67 million euros), and number of employees (from 20 to 79, approximately). Second, all the experience indicators render values in line with our hypothesis (H2). “Years since the first export order” and “years regularly exporting” show the same increasing values for young, mature, and old BIs (3.61, 10.81 and 29.09 respectively), implying that BIs have been permanently international since they began exporting. Both the diversity of methods used in

international operations and the countries entered also increase in number (from 1.46 to 2.36, and from 5.38 to 17.55 respectively). Third, the firms' international commitment (H3) grows in terms of the number of employees engaged in international activities (from .69 to 2.73), foreign language skills (from 1.77 to 2.45), and entry mode commitment (entry with or without investment in facilities).

("Insert Table 5 about here")

When it comes to firm internationalization (H4), the preliminary descriptive results show that it increases in all three groups on both of the indicators considered: international to total sales (from 32.61 to 64.67%) and stage of international development (from 1.77 to 4.36). Finally, performance (H5) also points to a positive development over time. Specifically, the eight indicators of international performance vary as expected: overall success of international activities (from 5.58 to 6.91), international sales (from .59 to 5.79 million euros), and international profitability (from 2.61 to 3.30); market concentration (the four indicators decrease from young to old BIs), and change in international sales (from 96.06 to 7.36%).

5.2. Cumulative development of BIs

Based on an optimization criterion that minimizes intra-cluster inertia and maximizes inter-cluster inertia, the software proposed "two" as the optimum solution between two and ten potential clusters. Inter-clusters (1.5070), intra-clusters (.2514 for old, and .2416 for young BIs), ratio of inter/total (.7535) inertia, and the dendrogram showed that if the groups were interpretable they had both high external heterogeneity and high internal homogeneity. The cluster containing the young BIs is composed of 33 SMEs, while the cluster containing the old BIs has 12 firms. This distribution is very similar to that used in the previous analysis if the young and mature BIs were merged into a single group (13+21). We present the descriptive group statistics for the two new clusters (see Table 6). All variables behave as expected in terms of increase/decrease, thus reinforcing the previous evidence about the cumulative nature of the BI internationalization process and suggesting their international expansion over time.

("Insert Table 6 about here")

Three of the main constructs articulating the incremental models – international experience (H2), international commitment (H3), and degree of internationalization (H4) – are significantly different in the two clusters (see Table 7), while resources (H1) and performance (H5), despite finding directional support, are not. Specifically, 10 of the 18 indicators are significantly different: number of employees; diversity of entry modes and countries entered (H2); staff in international activities, foreign language skills and entry mode level of commitment (H3); international to total sales ratio and stage of international development (H4), and international sales and concentration of international sales in three main foreign markets. As for the statistical tests for entry mode commitment level, we found significant values at the 99% confidence level, using Pearson's Chi-square (8.493, sig. .004), Kendall's Tau-b (.434, sig. .004) and Spearman's Rho (.434, sig. .003) statistics.

("Insert Table 7 about here")

To sum up, the empirical tests show that three hypotheses find total support: international experience (H2), international commitment (H3), and degree of internationalization (H4). In contrast, the hypotheses dealing with resources (H1) and performance (H5) cannot be accepted. We discuss these findings below.

6. Discussion and limitations

6.1. Discussion

The double comparison of groups of younger and older BIs on the five interrelated key internationalization constructs provided valuable quantitative empirical evidence on the post-birth characteristics of BIs. To begin with, as for resources (H1), we found that only one of the three indicators measuring this construct ("number of employees") is significantly different in the cluster solution. The other two ("total assets" and "total sales") are not, implying that hypothesis H1 cannot

be accepted. This suggests that the resource bundle (Penrose, 1959) of BIs appears to become more intensive in terms of human resources than in terms of assets and total sales. We interpret this as a natural consequence of the positive characteristics of our sample, which has a major presence of more “traditional” and relatively labor-intensive industries, in contrast with the typical bias towards high-technology or knowledge-intensive industries from which most research on BIs (Rialp et al., 2005) has been built. In this light, Riddle & Gillespie (2003) found in their clothing export industry sample a significant difference not only in number of employees but also in total sales, so they concluded that new ventures were significantly smaller than older ventures. New studies should clarify these findings in view of the intrinsic potential of the BI as a source of employment and wealth creation in their later life.

The next, international experience (H2), is one of the central constructs traditionally used to explain internationalization (Johanson & Vahlne, 1977, 1990, 2006). This research has found empirical evidence on more experienced firms in the group of old BIs. This association was expected for the time-based or longitudinal component of experience but was also confirmed for the two indicators of “cross-sectional” experience employed. Therefore, we conclude that our second hypothesis, that old BIs have greater international business experience than young BIs, cannot be rejected. It is important to note that older BIs are expected to learn and obtain experiential knowledge (like any other firms) from their international experiences (e.g., Barkema & Drogendijk, 2007; Chetty et al., 2006; Eriksson et al., 1997, 2000). We suggest that this experiential learning not only becomes a prime driver of their internationalization, but it also leads to incremental behavior by the mechanisms explained by Forsgren (2002). In other words, the fact that founders’ previous international experience is higher for BIs than for traditional firms (e.g., Chetty & Campbell-Hunt, 2004) cannot be viewed as an obstacle to later growth driven by post-birth experiential learning. Put simply, BIs keep learning (and growing) when they are not young. This view of the BI is, in our understanding, compatible with the more aggressive learning strategies that are required to be a born global (Chetty & Campbell-Hunt, 2004).

The third construct, international commitment, was hypothesized to be higher for older BIs (H3). All three of our commitment indicators show consistent results and support the hypothesis.

Older BIs use more committed entry modes, have more staff engaged in international activities, and possess a higher degree of some specific skills (such as languages) needed for the development of foreign operations. Riddle and Gillespie (2003), however, found a non-significant difference in number of foreign languages fluently spoken by owners of new and older ventures. Our findings cannot be directly compared since they refer to all the staff in international activities. Overall, our results are consistent with Hashai and Almor's (2004) study, which shows that Born Global firms engage in gradual increased commitment to foreign markets. We therefore suggest that the dynamics of the incremental model might be the driving forces behind the international development of early international firms. Regarding market commitment, Johanson and Vahlne (1990) expect additional commitments to be made in small steps generally, with the exception of firms with large resources, enjoying stable and homogeneous market conditions, and possessing experience gained in markets with similar conditions. Our findings appear to provide little insight about the "relative" length of the steps taken by BIs, but suggest them to be cumulative. In our understanding, this incremental path is compatible with larger commitment steps being taken by BIs at birth or later on, in light of the explanatory role played by their founders' previous experience in the same or similar markets (Laanti et al., 2007).

Level of internationalization, our fourth construct, is associated with the age of the BI. The empirical analysis fully supports the hypothesis (H4). From this empirical perspective, our results contrast with previous evidence of non-significant differences in export intensity of older and new ventures (Riddle & Gillespie, 2003), even though these researchers found that export intensity was close to 5% higher in the group of older ventures. Our findings complement studies showing higher export intensity of BIs at birth in comparison to later exporters (Moen & Servais, 2002). Further rationale for a relationship between age and level of internationalization comes from the fact that it is implicit in the thinking of the incremental school, given that the internationalization is driven by the cumulative growth of experience and commitment (Johanson & Vahlne, 1977, 1990), and we have found that both are higher in the group of old BIs.

Finally, performance (H5) is, together with resources, the only construct that does not present an overall consistent significant association with the age of the BI. Despite all indicators having

directional support, the findings from the cluster analysis imply that we cannot accept the hypothesis (H5) and recommend caution when drawing conclusions. Specifically, the two groups appear to differ significantly ($p < .05$) only in international sales and very weakly ($p < .1$) in one of the market concentration indicators. These findings point to an international expansion pattern in which BIs have no guarantee of performance improvements as they further their internationalization. In our opinion, this is due more to their having had a high international performance level since their early days than to any failure to perform satisfactorily. According to the descriptive statistics, the “old” group enjoys a higher performance level than the young (and the mature) BIs, even if the differences are significant only for international sales. However, the subsample of older BIs is composed of firms that had been operating for around 20 years more, on average, than young BIs; that is, there might be some bias towards successful BIs – as we discuss later under the limitations of the study. In order to verify that old BIs enjoy a relatively robust and satisfactory performance, we carried out an additional comparison, this time using non-Born Internationals as a reference. We therefore compared the cluster of old BIs with the 97 old “traditional” firms in our sample, which were grouped based on the same minimum number of years in operation. This way, we prevented the potential bias associated with different survival rates for older and younger BIs. The results show that the differences between old BIs and traditional firms are significant for success of international activities ($p < .90$), international sales ($p < .95$), and market concentration in the main foreign market ($p < .90$). Taken together, they indicate that old BIs may enjoy a more satisfactory and successful life in some performance dimensions than old traditional firms⁵.

We think that, subject to the limitations below, this study has filled an important gap in contemporary IB research and answered two relevant questions: (a) What differences exist between key internationalization characteristics of young and old BIs? and (b) Do existing theories, in

⁵ The descriptive statistics pointed to BIs’ superior performance in terms of higher perceived success of international activities (6.83 vs. 5.93), international sales (5.35 vs. 1.96), lower market concentration percentage in all four of our indicators (from 40.95 vs. 54.64% to 76.29 vs. 87.77%), international profitability (3.22 vs. 2.91), and international sales growth (28.33 vs. 28.27%).

particular incremental internationalization, explain these differences? The contribution of this study to addressing the questions above can be seen in terms of the quantitative empirical evidence provided, which shows contrasting characteristics of young and old BIs and suggests a cumulative internationalization process. This statement is based on the observation of the characteristics of BIs in three key constructs related to the dynamics proposed by the incremental school (international experience, commitment, and internationalization) and consistent with Madsen and Servais' (1997) conclusion that these firms may follow an evolutionary post-birth behavior.

6.2. Limitations

The first limitation is that our sample is based on firms that are still in business. Failure may therefore have been undersampled (Denrell, 2003). In other words, we did not control for success (or failure) of BIs in terms of survival rates. All firms in the sample can be considered to be successful (or at least “surviving”) early internationalizers. Nevertheless, the literature has suggested the liabilities of newness and foreignness (Zahra, 2005) as challenges to the survival of these firms. While acknowledging this possible success bias, and, specifically, that the performance of the old BIs may have been enhanced by our research design, we argue that the bias can be expected to be less important in our cross-sectional and industry-balanced sample of BIs than in one based only on either traditional or high-tech firms (as has more often been the rule than the exception in previous research). Lower survival rates for industry-balanced samples of firms such as BIs do not seem likely since these are expected to not only be more internationalized, internationally committed, and experienced but, probably, also more diversified, market oriented, able to react to changes, and in possession of more developed business networks than traditional firms.

The second limitation is that we did not control for environmental changes over time, despite the number of long-established firms in the sample. We recognize this potential shortcoming, which is common in research comparing young and old companies. There may be industry-specific environmental changes, which may have affected firms in particular industries. Although, as previously stated, we did not find significant differences in the sector distribution between young and old BIs, and each sector may share most of the same exposure to uncontrollable external factors, old

BIs may have been exposed to factors not affecting young BIs. This and the previous limitation are shared by most studies comparing new and old firms (see for instance Riddle & Gillespie, 2003).

A third limitation, common to some streams of international business research, has to do with the cross-sectional nature of this study, which inhibits the possibility of making causal inferences between time-based variables and the different dependent constructs tested in our model. In order to increase our understanding of the way time affects the evolution of BIs, longitudinal studies will be required (Cook & Campbell, 1979). In addition, for determining the type of expansion undergone by BIs, an analysis of the same BI firms in a longitudinal manner will be more appropriate in future studies.

A final limitation has to do with sample characteristics in terms of its geographical context and size. Although one-country samples represent a frequent limitation in empirical research – since they are used in as many as 61% of international business articles and 73% of papers on international marketing (Yang, Wang, & Su, 2006) – the cross-national validity of the findings should be assessed by carrying out studies in other regions and countries. However, in order to obtain a more uniform sample we chose to exclude micro-enterprises and large firms and targeted a representative sample of SMEs. This sampling approach is a notable feature of our research design, since only 9.3% of articles published in the leading international business journals have used probabilistic sampling (Yang et al., 2006). Further, the statistical results are based on comparisons of two small groups of firms. Therefore, while the significant findings can be seen as robust, the non-significant results may be explained by the small sample size.⁶ Despite the limitations mentioned above, we conclude that our sample is expected to add value to our research, since it is still both representative and adequate (Singh, 1986).

⁶ The effect size of the non-significant indicators ranged between 0.23 and 0.56, suggesting the value of using a larger sample size.

7. Future research agenda, implications, and conclusion

We have provided quantitative empirical evidence showing contrasting characteristics of young and old BIs and suggesting the possibility of a cumulative internationalization process. As previously discussed, considering that failure may have been undersampled, future research can study, compare, and control failure rates of BIs and firms internationalizing later. Further, our answer to the question about existing theories' ability to explain differences between key internationalization features of young and old BIs points to a compatibility with the dynamics of the incremental school. This is inferred from the comparison of the characteristics of BIs belonging to different time-based clusters and implies that BIs might follow a route sharing similarities with that of "traditional" firms in the internationalization process. Therefore, there is room to challenge others to pursue future research on BIs and to test causality of the mechanism of internationalization in the post-birth development of BIs by using longitudinal studies. Below, we highlight some promising areas, keeping our focus on the three hypotheses that received total support in the empirical study.

7.1. International experience in the internationalization of BIs

This study shows that experience is higher in the group of old BIs, and since experience is generally assumed to be the main component of the critical knowledge for internationalization (i.e., experiential knowledge), the learning process may be seen as critical for the BI firm. BI theory approaches the experience-gaining and learning process from two angles. First, key people involved in international activities are the top management or the firm's founders, who, in their previous careers, have gained experience (Oviatt & McDougall, 2005); that is, much of the critical knowledge has been gained before internationalization starts. Despite this assumption, this study gives an indication that old BIs have increased experience, which suggests that BIs do not stop learning experientially at an early age. Future studies could focus on the role of learning throughout the internationalization process of BIs. By increasing our understanding of the learning process, we can know more about the internationalization of BIs.

Second, Zahra (2005) suggests that BIs are better and faster learners than more traditional firms. It raises interesting questions about the relationships between time to and speed of

internationalization (Acedo & Jones, 2007) and the BI's learning before and after its first sales abroad. In line with how this study has conceptualized and measured experience, one can assume that high speed of internationalization means that the BI quickly exposes itself to new markets, cultures, ways of doing business, etc. This exposure, in turn, forces it to reflect, adapt, and change, and when this happens gradually, the BI may have time to absorb and integrate the experience. But, one can also assume that there is a limit to how much experience a BI can absorb in a specific period of time and that there is a point when additional experience cannot be transformed into knowledge. Empirical studies on speed of internationalization are rare, and thus knowledge about the relationship between speed and learning is even scarcer. Future research can work on filling this gap in the relationship between speed and learning in the context of BI firms.

7.2. International commitment in the internationalization of BIs

This study gives support to the idea that BIs' commitment to international markets is higher in older firms, which is in line with the views of the internationalization mechanism of the incremental school. The vast majority of BI studies focus entirely on exports (Fan & Phan, 2007), while our research indicates that the BI also applies more resource-demanding entry modes (and that these are more frequent the older the BI is). This makes it likely that even relatively small firms with fewer resources than multinational companies locate activities and functions in different country markets.

This higher international commitment also involves an increase in complexity, and this has to be managed by a relatively new and small firm. A situation with high international complexity and commitment – where internationalization involves more than just export activity – requires new ways of coordinating and controlling the organization. This means that there is a balance between, on the one hand, the degree of international commitment and, on the other hand, the complexity and the size of the organization. We therefore call for more research on how relatively new and small BIs manage high international complexity characterized by more than exports.

7.3 Internationalization of BIs

This study suggests that BIs may follow an incremental process of international expansion. However, it does not deal with or say anything about whether they also follow some stages (Johanson & Wiedersheim-Paul, 1975) or phases (Cavusgil, 1980; Lindmark, 1994), that is, an order or pattern of internationalization. Proponents of the BI theory claim – and we agree – that the stages proposed in the literature are not valid for BIs. However, the BI literature has so far not advanced any process or sequence of internationalization as an alternative to the stages.

Notwithstanding, entrepreneurship, as well as internationalization, can be viewed as a growth process over time (Greiner, 1998; Kazanjian & Drazin, 1990). Several entrepreneurship scholars propose that this process can, in turn, be divided into various phases, which have different characteristics in terms of problems and opportunities (Churchill & Lewis, 1983). Each phase requires its specific combination of organization, competence, and resources. But, there is also literature claiming that the key issue is not the phases in themselves but the space or the chasm between them (Moore, 1999), and that the challenge is not to handle the phases but to build the bridge over the chasm. Based on the decreasing validity of the internationalization stages, on the remaining validity of the process and mechanism of internationalization (Johanson & Vahlne, 2009), and on the view of internationalization as entrepreneurship, more research on the phases and chasms could be a fruitful way of finding new potential patterns of BIs' internationalization.

7.4. Implications for practice and policy makers and conclusion

There are several managerial implications of this research for the professional practitioner. The first one is related to the fact that BIs do not seem to stop accumulating experience – despite the possession of international experience by their managers or funders. From this, it follows that it is important that BIs, like traditional firms, develop structures and routines so that they are prepared to face and react to surprises, discoveries, and unexpected insights, which are critical ingredients of internationalization. As the BI continues to enter new foreign markets, it is exposed to new conditions, which it must either reject or absorb and transform into knowledge that can be used. This process is, of course, challenging for firms that are small, young, and usually lacking in resources. Therefore, the managers of BIs

should be aware of international complexity and get ready for new challenges right from the start, despite their better preparedness for international operations.

Second, our findings suggest that managers in BIs can increase their international experience related to foreign markets by following different routes. Alternatives would be to enter a diverse number of markets (wide geographic scope) and use diverse entry modes in international operations (e.g., combine exports, distributors, and sales subsidiaries). By engaging in such diverse activities managers can learn more quickly than from repetitive international activities and be better prepared for new challenges.

A third managerial implication is related to the previous ones and to our findings about international commitment and internationalization. Specifically, the structure and routines that the BI may develop have to be helpful in managing its increased international commitment and internationalization also, which implies growing integration and increasing resources tied to markets other than the domestic market. So besides the critical task of facilitating the transformation of experience to knowledge, it seems that the BI has to find ways to enhance the coordination of people and investments in various markets. For instance, managers could collaborate with other SMEs concerning resource commitment in their international markets, such as by piggybacking on another firm's distributors or sales subsidiaries.

A fourth and final managerial implication of our findings is that BI managers should have limited expectations about improved performance in terms of overall success of international activities, profitability, sales concentration, and international sales growth when their firms are old. The reasons are not a lack of satisfactory performance but relate to the fact that these firms have already been achieving high performance since their early days in the international arena. Our findings show that their most reasonable hope is higher international sales. Given that other aspects of international performance, such as international success and profitability, have been satisfactory since they started acting in foreign markets, the likelihood of improved international sales is the main argument from a performance perspective that professional practitioners can use when discussing the expected results of their BIs when they are old.

Despite the similitude between BIs' and traditional firms' internationalization suggested by this study, public policy makers are encouraged to develop export and internationalization assistance programs addressed to cover the specific needs of early internationalizers in their early days of operation. On the one hand, BIs have a different profile from inception. For instance, top management entrepreneurs (instead of sales staff) are the key people in their internationalization process, they usually have existing relationships and networks in other markets, and their strategy is proactive. This means that typical programs addressed to convey the benefits of internationalization and to develop basic capabilities (planning, languages, etc.) required for managing the foreign activities are expected to be of limited effectiveness in this group. On the other hand, many of them are SMEs, and therefore shortcomings can still be expected. In fact, among the key constraints they face is a lack of financial and knowledge resources (Freeman et al., 2006). As a result, public policy makers can still help BIs obtain the support they need in terms of financial (e.g., credit lines, credit insurance) and knowledge (e.g., R&D, information) assistance in their early days in order to complete the profile required to increase their chances of successful international development in their later life.

When advising SMEs, policy makers therefore need to have assistance programs that alleviate managers' lack of knowledge. Considering the high speed of internationalization of BIs, this can be solved by focusing on accelerating international learning. For example, policy makers could facilitate seminars where managers share their international experiences and learn from each other instead of waiting to accumulate this knowledge through their own experience. Another example would be to encourage the creation of (social) networks of international managers and to provide them with incentives to do so as a way to foster exchange of their professional experiences in foreign markets.

We conclude by suggesting that the ideas and findings presented in this paper point to a cumulative internationalization process of BIs and, therefore, to the possibility that the incremental and the BI theories may not be contradictory, as is sometimes suggested. We speculate that they might be even complementary, since fruitful findings and developments in each stream of research seem to be able to provide insights about the other.

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*(3), 236–252.
- Alchian, A. A., & Demsetz, H. (1972). Production, information cost and economic organization. *American Economic Review, 62*(5), 777–795.
- Anderson, E., & Weitz, B. (1992). The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research, 29*(February), 18–34.
- Andersson, S., & Wictor, I. (2003). Innovative internationalisation in new firms: Born-globals—The Swedish case. *Journal of International Entrepreneurship, 1*(3), 249–276.
- Armstrong, S. J., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research, 14*(August), 396–402.
- Aspelund, A., & Moen, O. (2001). A generation perspective on small firms' internationalization: From traditional exporters and flexible specialists to born globals. In C.N. Axinn & P. Matthyssens (Eds.), *Reassessing the internationalization of the firm. Advances in international marketing*, Vol. 11 (pp. 197–225). Amsterdam: JAI/Elsevier.
- Autio, E. (2005). Creative tension: The significance of Ben Oviatt and Patricia McDougall's article "Toward a theory of international new venture." *Journal of International Business Studies, 36*(1), 9–19.
- Autio, E., & Sapienza, H. J. (2000). Comparing process and born global perspectives in the international growth of technology-based new firms. *Frontiers of Entrepreneurship Research*. Center for Entrepreneurial Studies, Babson College, 413–424.
- Barkema, H. G., Bell, J. H. J., & Pennings, J. M. (1996). Foreign entry, cultural barriers and learning. *Strategic Management Journal, 17*(2), 151–166.
- Barkema, H. G., & Drogendijk, R. (2007). Internationalising in small, incremental or larger steps? *Journal of International Business Studies, 38*, 1132–1148.
- Barkema, H. G., & Vermeulen, F. (1998). International expansion through start-up or acquisition: A learning perspective. *Academy of Management Journal, 41*(1), 7–26.

- Barrett, N. I., & Wilkinson I. F. (1986). Internationalization behavior: Management characteristics of Australian manufacturing firms by level of international development. In P. W. Turnbull & S. J. Paliwoda (Eds.), *Research in International Marketing* (pp. 213–233). London: Croom Helm.
- Bausch, A., & Krist, M. (2007). The effect of context-related moderators on the internationalization-performance relationship: Evidence from meta-analysis. *Management International Review*, 47(3), 319–347.
- Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, 66(1), 32–40.
- Bilkey, W. J., & Tesar, G. (1977). The export behavior of smaller-sized Wisconsin manufacturing firms. *Journal of International Business Studies*, 8(1), 93–98.
- Brouthers, L. E., & Nakos, G. (2005). The role of systematic international market selection on small firms' export performance. *Journal of Small Business Management*, 43(4), 363–381.
- Capar, N., & Kotabe, M. (2003). The relationship between international diversification and performance in service firms. *Journal of International Business Studies*, 34(4), 245–255.
- Cavusgil, S. T. (1980). On the internationalization process of the firm. *European Research*, Nov, 273–280.
- Cavusgil, S. T., & Zou, S. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58(January), 1–21.
- Chang, S. J., van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41, 178–184.
- 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., Eriksson, K., & Lindbergh, J. (2006). The effect of specificity of experience on a firm's perceived importance of institutional knowledge in an ongoing business. *Journal of International Business Studies*, 37, 699–712.
- Churchill, N. C., & Lewis, V. L. (1983). The five stages of small business growth. *Harvard Business Review*, 61(3), 30–50.

- Contractor, F. J., Kundu, S. K., & Hsu, C.-C. (2003). A three-stage theory of international expansion: The link between multinationality and performance in the service sector. *Journal of International Business Studies*, 34(1), 5–18.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis for field settings*. Chicago, IL: Rand McNally.
- Coviello, N. E. (2006). The network dynamics of international new ventures. *Journal of International Business Studies*, 37(5), 713–731.
- Cullen, J. R., Johnson, J. L., & Sakano, T. (1995). Japanese and local partner commitment to IJVs: Psychological consequences and investments in the IJV Relationship. *Journal of International Business Studies*, 26(1), 91–115.
- Davidson, W. (1980). The location of foreign direct investment activity: Country characteristics and experience effects. *Journal of International Business Studies*, 11(2), 9–22.
- De Clercq, D. Hessels, J. & van Stel, A. (2008). Knowledge spillovers and new ventures' export orientation, *Small Business Economics*, 31(3), 283–303.
- Delios, A., & Beamish, P. W. (2001). Survival and profitability: The roles of experience and intangible assets in foreign subsidiary performance. *Academy of Management Journal*, 44(5), 1028–1038.
- Denrell, J. (2003). Vicarious learning, undersampling of failure, and the myths of management. *Organization Science*, 14(3), 227–243.
- Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, 17(4), 263–282.
- Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504–1511.
- Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D. (1997). Experiential knowledge and cost in the internationalization process. *Journal of International Business Studies*, 28(2), 337–360.

- Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D. (2000). Effects of variation on knowledge accumulation in the internationalization process. *International Studies of Management and Organization*, 30(1), 26–44.
- Erramilli, M. K. (1991). The experience factor in foreign market entry behaviour of service firms. *Journal of International Business Studies*, 21(3), 479–502.
- Everitt, B. S., Landau, S., & Leese, M. (2001). *Cluster Analysis* (fourth edition). London: Arnold.
- Fan, T., & Phan, P. (2007). International new ventures: Revisiting the influences behind the ‘born-global’ firm. *Journal of International Business Studies*, 38(7), 1113–1131.
- Fletcher, D. (2004). International entrepreneurship and the small business. *Entrepreneurship and Regional Development*, 16(4), 289–305.
- Forsgren, M. (1989). *Managing the internationalization process. The Swedish case*. London & New York: Routledge.
- Forsgren, M. (1990). Managing the international multi-centre firm: Case studies from Sweden. *European Management Journal*, 8(2), 261–267.
- Forsgren, M. (2002). The concept of learning in the Uppsala internationalization process model: A critical review. *International Business Review*, 11, 257–277.
- Forsgren, M., Holm, U., & Johanson, J. (1992). Internationalization of the second degree. In S. Young, & J. Hamill (Eds.), *Europe and the Multinationals: Issues and Responses for the 1990s* (pp. 235–253). London: Edward Elgar.
- Forsgren, M., Holm, U., & Johanson, J. (1995). Division headquarters go abroad: A step in the internationalization of the MNC. *Journal of Management Studies*, 32(4), 475–491.
- Freeman, S., & Cavusgil, S. T. (2007). Toward a typology of commitment states among managers of born-global firms: A study of accelerated internationalization. *Journal of International Marketing*, 15(4), 1–40.
- 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.

- Gabrielsson, M., Kirpalani, V. H. M., Dimitratos, P., Solberg C. A., & Zucchella, A. (2008). Born globals: Propositions to help advance the theory. *International Business Review*, 17(4), 385–401.
- Gleason, K. C., & Wiggenhorn, J. (2007). Born globals, the choice of globalization strategy, and the market's perception of performance. *Journal of World Business*, 42(3), 322–335.
- Gomes, L., & Ramaswamy, K. (1999). An empirical examination of the form of the relationship between multinationality and performance. *Journal of International Business Studies*, 30(1), 173–187.
- Grant, R.M. (1987). Multinationality and performance among British manufacturing companies. *Journal of International Business Studies*, 18(3), 79–89.
- Greiner, L. E. (1998). Evolution and revolution as organizations grow. *Harvard Business Review*, 50(4), 37:46.
- Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment of exchange. *Journal of Marketing*, 59(January), 78–92.
- Hadjikhani, A., & Johanson, M. (2002). The fifth dimension: Expectations in the internationalisation process model. In M. Forsgren, V. Havila, & H. Håkansson (Eds.), *Critical Perspectives on Internationalisation* (pp. 146–168). Amsterdam, London, Oxford: Elsevier Science Ltd. Pergamon.
- Hashai, N., & Almor, T. (2004). Gradually internationalizing 'born global' firms: An oxymoron? *International Business Review*, 13(4), 465–483.
- Hitt, M. A., Hoskisson, R. E., & Hicheon, K (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, 40(4): 767–798.
- Holm, D. B., Eriksson, K., & Johanson, J. (1996). Business networks and cooperation in international business relationships. *Journal of International Business Studies*, 27(5), 1033–1053.
- Holm, D. B., Eriksson, K., & Johanson, J. (1999). Creating value through mutual commitment to business network relationships. *Strategic Management Journal*, 20, 467–486.
- Johannisson, B. (1998). Personal networks in emerging knowledge-based firms: Spatial and functional patterns. *Entrepreneurship and Regional Development*, 10, 297–312.

- Johannisson, B., & Mønstead, M. (1997). Contextualizing entrepreneurial networking. The case of Scandinavia. *International Studies of Management and Organization*, 27(3), 109–136.
- Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(Spring/Summer), 23–32.
- Johanson, J., & Vahlne, J.-E. (1990). The mechanism of internationalization. *International Marketing Review*, 7(4), 11–24.
- Johanson, J., & Vahlne, J.-E. (2006). Commitment and opportunity development: A note on the internationalization process (IP) model. *Management International Review*, 46(2), 165–178.
- Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(2), 1411–1431.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalisation of the firm: Four Swedish case studies. *Journal of Management Studies*, 12(3), 305–322.
- Jolly, V., Alahuhta, M., & Jeannet, J.-P. (1992). Challenging the incumbents: How high-technology start-ups compete globally. *Journal of Strategic Change*, 1, 71–82.
- Karra, N., Phillips, N. & Tracey, P. (2008). Building the born global firm: Developing entrepreneurial capabilities for international new venture success. *Long Range Planning*, 41(4), 440–458.
- Katsikeas, C. S., Leonidou, L. C., & Morgan, N. A. (2000). Firm-level export performance assessment: Review evaluation and development. *Journal of the Academy of Marketing Science*, 28(4), 493–511.
- Kaynak, E., & Kuan, W. K.-Y. (1993). Environment, strategy, structure, and performance in the context of export activity: An empirical study of Taiwanese manufacturing firms. *Journal of Business Research*, 27(1), 33–49.
- Kazanjian, R. K. & Drazin, R. (1990). A stage-contingent model of design and growth for technology-based ventures. *Journal of Business Venturing*, 5(3), 137–150.
- Knight, G. A. & Cavusgil, S. T. (1996). The born global firm: A challenge to traditional internationalization theory. In S. T. Cavusgil, & T. K. Madsen (Eds.), *Export internationalizing*

- research—Enrichment and challenges. *Advances in International Marketing*, Vol. 8 (pp. 11–26). New York, NY: JAI Press.
- Knight, G. A. & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 121–141.
- Knight, G. A., Madsen, T. K. & Servais, P. (2004). An inquiry into born-global firms in Europe and the USA. *International Marketing Review*, 21(6), 645–665.
- Kogut, B., & Zander, U. (1993). Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of International Business Studies*, 24(4), 625–645.
- Kudina, A., Yip, G., & Barkema, H. (2008). Born global. *Business Strategy Review*, 19(4), 38–44.
- Kuivalainen, O., Sundqvist, S., & Servais, P. (2007). Firms' degree of born-globalness, international entrepreneurial orientation and export performance. *Journal of World Business*, 42(3), 253–267.
- Laanti, R., Gabrielsson, M., & Gabrielsson, P. (2007). The globalization strategies of business-to-business born global firms in the wireless technology industry. *Industrial Marketing Management*, 36(8), 1104–1117.
- Lages, L. F., & Montgomery, D. B. (2004). Export performance as an antecedent of export commitment and marketing strategy adaptation. *European Journal of Marketing*, 38(9–10), 1186–1215.
- Leonidou, L. C., & Katsikeas, C. S. (1996). The export development process: An integrative review of empirical models. *Journal of International Business Studies*, 27(3), 517–551.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional designs. *Journal of Applied Psychology*, 86, 114–121.
- Lindmark, L. (1994). Småföretagens internationalisering. In L. Lindmark, P.R. Christensen, H. Eskelinen, B. Forsström, O. J. Sørensen, & E. Vatn. *Småföretagens internationalisering – en jämförende studie* (pp. 26–40). Nord REFO Vol. 7 Denmark.
- Loane, S. & Bell, J. (2006). Rapid internationalization among entrepreneurial firms in Australia, Canada, Ireland and New Zealand: An extension to the network approach. *International Marketing Review*, 23(5), 467–485.

- Luo, Y., & Peng, M. W. (1999). Learning to compete in a transition economy: Experience, environment and performance. *Journal of International Business Studies*, 30(2), 269–296.
- Madsen, T. K., Rasmussen, E. S., & Servais, P. (2000). Differences and similarities between born globals and other types of exporters. In A. Yaprak, & J. Tutek (Eds.), *Globalization, the multinational firm, and emerging economies. Advances in international marketing*, Vol. 10 (pp. 247–265). Amsterdam: JAI/Elsevier.
- Madsen, T. K., & Servais, P. (1997). The internationalization of born globals: An evolutionary process? *International Business Review*, 6(6), 561–583.
- Martín Martín, O., & Papadopoulos, N. (2007). Internationalization and performance: Evidence from Spanish firms. *Journal of Euromarketing*, 16(1/2), 87–103.
- McDougall, P. P., Oviatt, B. M., & Shrader, R. C. (2003). A comparison of international and domestic new ventures. *Journal of International Entrepreneurship*, 1(1), 59–82.
- McDougall, P. P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of Business Venturing*, 9(6), 469–487.
- McKinsey & Co. (1993). *Emerging exporters*. Melbourne: Australian Manufacturing Council.
- Miesenböck, K. J. (1988). Small business and exporting: A literature review. *International Small Business Journal*, 6(2), 42–61.
- Moen, O. (2002). The born globals: A new generation of small European exporters. *International Marketing Review*, 19(2), 156–175.
- Moen, O. & Servais, P. (2002). Born global or gradual global? Examining the export behavior of small and medium-sized enterprises. *Journal of International Marketing*, 10(3), 49–72.
- Moon, J. & Lee, H. (1990). On the internal correlates of export stage development: An empirical investigation in the Korean electronics industry. *International Marketing Review*, 7(5), 16–26.
- Moore, G. A. (1999). *Crossing the chasm* (2nd edition). New York: Harper Business Essentials.
- Moorman, C., Zaltman, G., & Deshpandé, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing*, 29(August), 314–328.

- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20–38.
- Mudambi, R. (1998). The role of duration in multinational investment strategies. *Journal of International Business Studies*, 29(2), 239–261.
- Mudambi, R., & Zahra, S. A. (2007). The survival of international new ventures. *Journal of International Business Studies*, 38(2), 333–352.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw Hill.
- 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 modeling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5), 537–544.
- Papadopoulos, N., & Martín Martín O. (2010). Toward a model of the relationship between internationalization and export performance. *International Business Review*, 19, 388–406.
- Penrose, E. T. (1959). *The theory of the growth of the firm*. New York: John Wiley.
- Peteraf, M. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12, 69–82.
- Presutti, M., Boari, C. & Fratocchi, L. (2007). The knowledge acquisition of the foreign development of high-tech start-ups: A social capital approach, *International Business Review*, 16(1), 23–46.
- Ramaswamy, K., Kroeck, K. G., & Renforth, W. (1996). Measuring the degree of internationalization of a firm: A comment. *Journal of International Business Studies*, 27(1), 167–177.
- Rasmussen, E. S., Madsen, T. K., & Evangelista, F. (2001). The founding of the born global company in Denmark and Australia: Sensemaking and networking. *Asia Pacific Journal of Marketing and Logistics*, 13(3), 75–107.

- Rialp, A., Rialp, J., & Knight, G. A. (2005). The phenomenon of early internationalizing firms: What do we know after a decade (1993–2003) of scientific inquiry? *International Business Review*, 14(2), 147–166.
- Riddle, L. A. & Gillespie, K. (2003). Information sources in the Turkish clothing export industry. *Small Business Economics*, 20(1), 105–120.
- Ruigrok, W., & Wagner, H. (2003). Internationalization and performance: An organizational learning perspective. *Management International Review*, 43(1), 63–83.
- Servais, P., & Rasmussen, E. S. (2000). Different types of international new ventures. *Proceedings of the Academy of International Business (AIB) annual meeting*, Phoenix, AZ, USA, (November), 1–27.
- Sharma, D. D., & Blomstermo, A. (2003). The internationalization process of born globals: A network view. *International Business Review*, 12(6), 739–753.
- Sharma, N., Young, L., & Wilkinson, I. (2006). The commitment mix: Dimensions in international trading relationships in India. *Journal of International Business Studies*, 14(3), 64–91.
- Shrader, R. C., Oviatt, B. M., & McDougall, P. P. (2000). How new ventures exploit tradeoffs among international risk factors: Lessons for the accelerated internationalization of the 21st century. *Academy of Management Journal*, 43(6), 1227–1247.
- Singh, A. K. (1986). *Tests, measurements and research methods in behavioural sciences*. New Delhi: Tata McGraw-Hill Publishing Company Limited.
- Skarmeas, D., Katsikeas, C. S., & Schlegelmilch, B. B. (2002). Drivers of commitment and its impact on performance in cross-cultural buyer-seller relationships: The importer's perspective. *Journal of International Business Studies*, 33(4), 757–783.
- Spence, M. & Crick, D. (2006). A comparative investigation into the internationalisation of Canadian and UK high-tech SMEs. *International Marketing Review*, 23(5), 524–548.
- Styles, C. (1998). Export performance measures in Australia and the United Kingdom. *Journal of International Marketing*, 6(3), 12–36.
- Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of International Business Studies*, 25(2), 325–342.

- Sullivan, D. (1996). Measuring the degree of internationalization of a firm: A reply. *Journal of International Business Studies*, 27(1), 179–192.
- Sullivan Mort, G. M. & Weerawardena, J. (2006). Networking capability and international entrepreneurship: How networks function in Australian born global firms. *International Marketing Review*, 23(5), 549–572.
- Tolstoy, D. & Agndal, H. (2010). Network resource combination in the international venturing of small biotech firms. *Technovation*, 30(1), 24–36.
- Tuppuura, A., Saarenkato, S., Puumalainen, K., Jantunen, A., & Kyläheiko, K. (2008). Linking knowledge, entry timing and internationalization strategy. *International Business Review*, 17(4), 473–487.
- Vernon, R. (1966). International investment and international trade in the product life cycle. *Quarterly Journal of Economics*, 8(2), 190–207.
- Vernon, R. (1971). *Sovereignty at Bay: The Multinational Spread of US Enterprises*. New York: Basic Books.
- Weerawardena, J., Sullivan Mort, G. M., Liesch, P. W., & Knight, G. (2007). Conceptualizing accelerated internationalization in the born global firm: A dynamic capabilities perspective. *Journal of World Business*, 42(3), 294–306.
- Welch, C. & Paavilainen-Mäntymäki, E. (2013). Putting process (back) in: Research on the internationalization process of the firm. *International Journal of Management Reviews*, forthcoming.
- Werts, C. E., Linn R. L., & Jöreskog, K. G. (1974). Intraclass reliability estimates: Testing structural assumptions. *Educational and Psychological Measurement*, 34, 25–33.
- Wortzel, L. H., & Wortzel, H. V. (1981). Export marketing strategies for NIC and LDC-based firms. *Columbia Journal of World Business*, (Spring), 51–60.
- Yang, Z., Wang, X., & Su, C. (2006). A review of research methodologies in international business. *International Business Review*, 15(6), 601–617.
- Zahra, S. A. (2005). A theory of international new ventures: A decade of research. *Journal of International Business Studies*, 36(1), 20–28.

Zhou, L. (2007). The effects of entrepreneurial proclivity and foreign market knowledge on early internationalization. *Journal of World Business*, 42(3), 281–293.

Zhou, L., Wu, W. P., & Luo, X. (2007). Internationalization and the performance of born-global firms: The mediating role of social networks. *Journal of International Business Studies*, 38(4), 673–690.

TABLE 1.

SUMMARY OF THE MOST CITED EMPIRICAL ARTICLES ABOUT BORN INTERNATIONALS

Authors	Purpose	Method	Temporal approach	International operations and expansion	Key findings
Chetty & Campbell-Hunt (2004)	To explore the extent and locus of differences in the two theories of the internationalization process — the traditional stages view and the born global view.	Two interviews at each of 16 firms from New Zealand, representing successful internationalization, either before or after the country opened up for foreign trade and investment.	Market scope and start of internationalization define the three types of firms in the sample. Pace and time to internationalize of the three types of firms are analyzed.	Data about both home market and foreign markets. It analyzes the psychic distance to the market entered. Considers production and marketing and export and finds that BIs tend to behave according to theories of traditional firms, while regional firms are manufacturing in other countries.	Many of the characteristics of the born global view are also valid for traditional firms. Niche strategy, uniqueness, and product leadership have explanatory value.
Coviello (2006)	To assess the network dynamics of BIs. The research question is: What are the structural and interactional patterns at various stages of network evolution?	Three BIs in New Zealand. Inductive interviews are the data source. Analyzed with UCINET 6.	The network development is analyzed through three stages. The durability of the relationships in the network was analyzed.	No data or discussion on type, order or number of markets. Economic/business ties dominate the networks during all three stages, but no discussion on what economic or business ties mean.	Based on the empirical observations, it arrives at seven propositions on the network's development over time and the three stages.
De Clercq et al. (2008)	To identify at the macro level: (1) inward FDI, outward FDI, and international trade, on the one hand, and the proportion of export-oriented BIs on the other hand and, in turn, (2) the proportion of export-oriented BIs and a country's level of entrepreneurial activity.	Several secondary data sources like Global Entrepreneurship Monitor, UNCTAD, and World Bank. Used regression analysis to test the nine hypotheses.	Age of the BI or phases, processes, and events during the internationalization are not discussed or analyzed. No data on these aspects.	The domestic market is analyzed in terms of inward and outward FDI, export level, and income. Type or order of the foreign markets are not discussed. The firm is analyzed as an export-oriented new venture and no other modes are discussed. Inward and outward FDI are measured on macro level.	Eight of nine hypotheses are supported. They demonstrate that a country's outward FDI and export influence its proportions of export-oriented BIs and that there the positive knowledge spillover effects from outward FDI and export is stronger in higher-income countries.
Fan & Phan (2007)	To investigate whether born globals are influenced by the same economic factors, in their early internationalization decisions, as the staged internationalizing firms.	Data on 135 BIs entering the European airline market were collected with the help of the Official Airline Guide. Three two-stage regression models used.	No data on temporal aspects, and time, phases, and events are neither discussed nor analyzed.	Size of a country market and number of incumbent competitors are analyzed. Cultural distance between home market and foreign market is hypothesized to influence allocation of production capacity. The causes and outcomes of production and the allocation of production capacity are studied.	The size of foreign market and the inaugural production capacity have a positive effect on decision to internationalize, while size of home market and competition in the foreign market have a negative effect on internationalization.
Fletcher (2004)	A close analysis of two small business internationalizations, in which the lead entrepreneurs discuss how the BIs became international.	Two BIs and their two founders make up the cases. They were interviewed for 1-3 hours.	Internationalization is viewed as a process, but the nature or character of the process over time is not discussed.	It does not discuss or analyze order, type, or number of markets; export and marketing are implicitly highlighted as key activities.	International opportunities come accidentally and are socially constructed and enacted. Building relationships with other companies is a key aspect.
Freeman & Cavusgil (2007)	To answer the main research question: What are the entrepreneurial strategies that senior management might adopt for their BIs?	29 in-depth interviews with senior managers from 12 Australian BIs. Archive data also used.	Time, phases, and events are not analyzed or discussed. Age of BI and speed are not empirically studied.	Investigate which markets the managers enter and how, and what has an impact on type of order entered. Number of markets. Analyzes the entry modes and activities related to the modes.	Based on the entrepreneurial attitudes of the managers, a typology of four commitment states is presented.
Freeman et al. (2006)	To examine the internationalization strategies of BIs and how they overcome constraints.	Three BIs provided 20 interviewees, which resulted in 52 hours of in-depth interviews and focus group discussions.	The framework has early and rapid foreign market entry as a dependent variable, but there are no data or discussion of the concept.	The character of the home market is argued to have an impact on internationalization, but no data or discussion of type, order or number of foreign markets. The use of multiple entry modes is discussed, as is the lack of economies of scale, as unit costs of production and buying power are constraints.	Based on the constraints, five strategies are observed to have a positive effect on the BIs' early and rapid foreign market entry, where various partnerships and networks are especially important.

TABLE 1.

SUMMARY OF THE MOST CITED EMPIRICAL ARTICLES ABOUT BORN INTERNATIONALS (CONTINUED)

Authors	Purpose	Method	Temporal approach	International operations and expansion	Key findings
Gabrielsson et al. (2008)	To attempt to develop concepts that will help to provide a realistic definition and to explain how BIs behave over time.	Eight BIs from Greece, Finland, Norway, and Italy provide the cases. An in-depth interview was conducted at each firm.	BIs progress through three different phases. Under each phase one or more propositions are advanced.	Provides background data on number of entered markets but does not use them in the analysis. Presents data on several activities and entry modes but does not use them for analytical purpose. However, export and sales are still the driving activities.	It finds that the same concepts as in the traditional models are still valid but the order and relation between the concepts differ between traditional firms and BIs.
Karra et al. (2008)	To answer three research questions: What entrepreneurial capabilities are critical for rapid international new venture success? Where do entrepreneurial capabilities come from? How can entrepreneurs develop capabilities necessary for successful international new venture creation?	Data were collected through 66 interviews and 24 meetings focusing on serial entrepreneurs' entry into markets in the former Soviet Union and Bulgaria.	Reports on chronological process of the serial entrepreneurs' international operation, but does not analyze or discuss it per se.	Provides data on several markets and observes that institutional bridging between national contexts and cultural collaboration and relationships across country markets are antecedent to success. Describes how the serial entrepreneur organizes distribution, sales, production, design, sourcing, and retail selling. Knowledge about customer and consumer behavior and building a distribution network are important.	It finds that three types of entrepreneurial capabilities are critical for international new venture success: international opportunity identification, institutional bridging, and capacity for cross-cultural collaboration.
Knight et al. (2004)	It argues that little is known about new and small firms selling in international markets, and it addresses this gap.	32 cases were followed by a survey where data were collected from 292 firms in USA (186) and Denmark (106). LISREL was used.	Age of firm, degree and phase of internationalization of the firm are not discussed.	The study is limited to the firm's main export market. Marketing through export. No other activities are discussed.	Customer focus influences product quality, marketing competence, and product differentiation. The importance of these factors' impact on performance is mixed between the countries.
Knight & Cavusgil (2004)	To explore the role of innovative culture and organizational capabilities in the early adoption of internationalization and subsequent international performance in BIs.	Two-phase design: first, interviews with 33 representatives of 24 firms; then a sample of 203 BIs exporting at least 25% of total production were analyzed with LISREL8.	Age of BI is used as control variable, but gave no significant difference.	Firms were exporting to 20 countries on average, but order, type, and number of markets are not analyzed. Export and sales are the only business activities discussed, but not analyzed.	The hypotheses are completely or partially supported: performance in international markets is influenced by business strategies, which, in turn, are positively affected by entrepreneurial and marketing orientation.
Kuivalainen et al. (2007)	To fill the gap by studying differences among BIs regarding their entrepreneurial orientation and export performance.	A sample of 185 BIs from Finland that have more than 50 employees and are exporting. Hypotheses were analyzed using hierarchical regression model.	Time is theoretically discussed, but not empirically studied.	It discusses type and number of markets, which is a component of the concept "degree of born globalness." Export performance is the dependent variable. It hypothesizes that it is influenced by scale, scope, and time. Scale is measured as export turnover.	True BIs (high degree of born globalness) are found to compete more aggressively in their export markets and to have better export performance.
Laanti et al. (2007)	The research problem centers on how the globalization strategies of born globals differ from those of conventional firms and on determining the unique capabilities and resources that enable these deviations.	Four Finnish wireless-technology BIs are the sample. Primary data in terms of in-depth interviews were conducted at the case firms (no information on number of interviews).	Observes that internationalization starts early, but does not discuss other phases or periods of the internationalization.	Analyzes which markets the firms entered and in which order. Finds that it deviates from traditional theories. Key European markets as well as more distant markets in Asia are entered early. Under the concept of operation strategy it analyzes both activities, like sales, R&D, sourcing and production, and entry modes, and they use a mix of inward, outward, and co-operation modes directly after internationalization starts.	It observes that founders had international experience, that the firms had technological innovations and operated in niche markets, and that their networks, first domestic and then global, were important. Moreover, the firms often received government funding. These factors influenced firm strategy.

TABLE 1.

SUMMARY OF THE MOST CITED EMPIRICAL ARTICLES ABOUT BORN INTERNATIONALS (CONTINUED)

Authors	Purpose	Method	Temporal approach	International operations and expansion	Key findings
Loane & Bell (2006)	To investigate the role of networks in the acquisition of knowledge and resources and to discuss the impact of enhanced resource and knowledge stocks on the rapid internationalization of a cross-national sample of entrepreneurial firms.	Online sources used to collect data on 218 BIs from Australia, Canada, Ireland, and New Zealand. E-mail used to verify and to add new data, resulting in 143 responses. Finally, interviews held at 53 BIs. A thematic context analysis was used.	The study provides background data on age of the firm and speed of internationalization but does not use them for analytical purposes.	The study provides background data on number of export markets but does not use them for analytical purposes. The study provides background data on export but does not use them for analytical purposes.	Managers use their own social or business networks to gain knowledge and access to international markets. Even more common is that firms are forced to build their own networks rather than using existing ones when they enter new markets.
Moen (2002)	To analyze the differences between BIs and exporting firms not classified as BIs.	A sample of 405 BIs from Denmark (335) and France (70). Analysis was performed using a one-way analysis of variance and Bonferroni test.	Analyzes the importance of firm age and start of export.	Hypothesizes that there is a gradual development in the number of markets served through export. Number of countries is measured. No other activities are mentioned. No discussion on entry modes.	With a few exceptions the study demonstrates that there are differences between BIs and other firms' competitive advantages, export strategy, global orientation and environmental situation. Finds little support for the Uppsala school of gradual development of internationalization, but neither does the BI school receive much support.
Moen & Servais (2002)	To examine the key element of the stage model: the existence of gradual development.	A sample of 677 BIs from Denmark (272), France (70), and Norway (335). Data were analyzed with SPSS 9.0.	Divides the sample into three groups depending on how long they have been exporting.	Measuring export markets' attractiveness, but not the number of markets or the order of entry. Focuses on export and marketing, but also measures the global orientation.	Knowledge acquisition from a key foreign customer positively impacts economic and task performance. Structural social capital has a positive effect on knowledge acquisition. Relational social capital and cognitive social capital negatively affect knowledge acquisition.
Presutti et al. (2007)	To verify if knowledge acquired from business relationships is useful in reinforcing the development in foreign markets and to emphasize the role of social capital in reinforcing knowledge acquisition useful to foreign growth.	Study based on a sample of 107 firms located in Tiburtina Valley, close to Rome. Data were analyzed with LISREL.	Relationship length and age of the firm are used as control variables, both of which were positively related with knowledge acquisition.	Knowledge acquired in the relationship with the major foreign customer abroad is hypothesized to lead to a high number of foreign markets. Foreign sales (export) is in focus, but number of R&D partnerships is a dependent variable, caused by knowledge acquired in the relationship with the major foreign customer.	Among the informal information sources, business contacts are absolutely the most important. There were some small differences between new and older ventures.
Riddle & Gillespie (2003)	To examine how newly established firms in the Turkish clothing export industry use networks to acquire information to help them export successfully.	Data collected through a survey at 250 Turkish clothing-exporting new and older ventures. In-depth interviews with governmental officials and industry leaders.	A division of new and older ventures and their demographic profile and informal network information sources.	Presents data on seven regional destinations of firm export, but does not analyze them. Focus is on export and the sources, mainly information acquisition, which promotes export.	Internationalization is triggered and maintained by existing contacts, utilization of resources and reaction to environmental events. The differences between Canada and UK were small. UK firms were less cautious about entering market, while Canadian firms tended to operate in North America.
Spence & Crick (2006)	To analyze the critical factors that affect decision making at each major phase of the internationalization and to determine entrepreneurs' management teams' view of the importance of these factors.	Sample of 24 high-technology BIs from Canada (12) and UK (12). One interview at each firm and data from secondary sources. Within-case and cross-case analyses.	Data on firm inception and start of internationalization, but no analysis of the temporal aspects of internationalization.	Data on first and subsequent markets, but not analyzed. Activities are not analyzed but there are data on both entry modes and various business activities.	

TABLE 1.

SUMMARY OF THE MOST CITED EMPIRICAL ARTICLES ABOUT BORN INTERNATIONALS (CONTINUED)

Authors	Purpose	Method	Temporal approach	International operations and expansion	Key findings
Sullivan Mort & Weerawardena (2006)	Based on the problem "What is the role of networking capability in the internationalization process of the exemplar small entrepreneurial firm - the born global?" it aims to answer five research questions.	In-depth interviews with key decision makers in six Australian firms from both high-tech and low-tech industries. Other sources were also used.	Data about age of firm and year of started export of each firm are not used for analytical purposes.	Some country markets and their characteristics are mentioned, but number, order and type of market are not analyzed. The focus of the study is on networks, and without being the explicit purpose, export through relationships with customers abroad is the only activity mentioned.	It advances a structural model where networking capability is proposed as mediating variable influencing knowledge-intensive products and rapid internationalization, while firm behavioral characteristics are viewed as an antecedent.
Tolstoy & Agndal (2010)	To investigate the association between network resource combinations and the exploitation of international ventures undertaken by smaller biotech firms.	Six BIs were selected. Three of them introduced existing offerings in new markets while three introduced new offerings in new markets. 18 interviews with 13 informants in the six BIs.	No temporal aspect is discussed or analyzed.	Discusses the number of countries entered and hypothesizes that it is influenced by first-mover orientation and international growth orientation. Operation mode is measured as exporting, co-operation (non-equity partnerships and alliances) and foreign direct investment, which are hypothesized to be influenced by first-mover orientation and international growth orientation.	BIs offering new products in existing markets mobilize a broader scope of resources and are more dependent on their ability to coordinate network relationships, while BIs entering new markets with existing products are less dependent on resources from network relationships.
Tuppura et al. (2008)	To analyze the effect of the firm's resource base, market-timing orientation, and international growth orientation on the internationalization path, choice of operation modes, and the choice between geographical concentration and diversification.	The final sample consists of 299 Finnish firms with at least 50 employees. Data were collected by means of a structured questionnaire and analyzed using linear and multinomial logistic regression models.	First-mover orientation is measured as the likelihood of being an early market entrant (exact measurement not revealed).	Each case analyzes one specific market. In three of them the case firm is already established, while in other three the firm enters a new country market. Builds on Ansoff's product/market matrix and thereby focuses on export and marketing.	Six of twelve hypotheses are supported. First-mover orientation was influenced by resource-base versatility and accumulated expertise and influenced internationalization path. Accumulated expertise is positively related to international growth orientation, which influences number of countries entered
Zhou (2007)	To test three hypotheses based on the idea that BIs are driven by opportunity-seeking rather than accumulating experience by solving knowledge problems, which makes entrepreneurial proclivity an independent variable.	A sample of 775 new and privately owned exporting BIs from six provinces in China. Hypotheses tested with multiple regression equations.	Pace/speed/rapidity of internationalization is hypothesized to be positively influenced by entrepreneurial proclivity and to influence growth of international sales.	Background data on number of markets are not analyzed. Order of market not discussed. Focus on export and on general business activities.	Entrepreneurial proclivity positively influences foreign market knowledge, which in turn leads to high speed of internationalization. The interaction of entrepreneurial proclivity and cultural diversity is positively related to foreign market knowledge.
Zhou et al. (2007)	To test a structural model of two hypotheses where social networks are viewed as a mediating variable between internationalization and performance.	Sample of 129 Chinese BIs answered a questionnaire. Data were analyzed with AMOS.	Phase or start of internationalization are not discussed. Age of firm is used as control variable but has no significant influence.	Number, types, and order of markets entered are not discussed or analyzed. Performance is measured in terms of profitability, sales and export and they are influenced by the firm's social network.	It finds support for the mediating role of social networks for outward internationalization (both export and profitability, but not sales) and inward internationalization (only export).

TABLE 2

TWO CONTENT CLASSIFICATIONS OF THE MOST CITED EMPIRICAL ARTICLES ABOUT BORN INTERNATIONALS

(a) Time-related issues

Empirical data reported

		No	Yes
Theoretically discussed	Yes	III (4 articles)	IV (9 articles)
	No	I (4 articles)	II (7 articles)

(b) International operations and expansion

Modes used

		Only export	Several modes
Markets entered	Yes	III (3 articles)	IV (6 articles)
	No	I (12 articles)	II (3 articles)

TABLE 3

A COMPARISON OF THE BORN INTERNATIONAL AND THE INCREMENTAL SCHOOL LITERATURE

	Born International theory	Incremental theory
Resource growth	<ul style="list-style-type: none"> • Accumulation of resources does not follow an even and gradual process 	<ul style="list-style-type: none"> • Resources are accumulated in an incremental process by conducting daily business
International business experience	<ul style="list-style-type: none"> • Top management and key people tend to already have experience before the BI's internationalization • The BI uses various entry modes from its birth • The specific high speed of internationalization forces the BI to learn when exposed to new environments 	<ul style="list-style-type: none"> • The firm does not have any prior experience, but through salespeople and, later on, employees operating in the foreign markets, it gradually gains experience • The firm uses diverse entry modes in a specific order • The firm gains experience by performing various activities in the foreign markets, which tends to reduce the perceived uncertainty
International commitment	<ul style="list-style-type: none"> • "High speed" and "leapfrogging" describe the BI's increased international commitment • Division of labor, where different functions and activities can be globally spread and located far from main markets 	<ul style="list-style-type: none"> • A gradual process characterized by incremental commitment steps • The firm's internationalization in various markets goes from no ownership to ownership and from sales to production
Level of internationalization	<ul style="list-style-type: none"> • Dependence on international markets is already high from the very beginning • A big part of the turnover comes from early international operations • The organization of the BI is soon integrated into international markets 	<ul style="list-style-type: none"> • Dependence on international markets increases gradually as the firm commits more resources to these markets • Turnover from international operations tends to grow slowly and makes up the foundation for further international expansion • The organization of the firm is adapted to each market in which it has operations
Performance in international markets	<ul style="list-style-type: none"> • By being active in various international markets the BI can transfer innovations, resources, and competencies among its units • The BI's units in different markets are integrated and the BI can thereby spread overhead costs over more markets 	<ul style="list-style-type: none"> • Experiential knowledge gained in each market is the main source of the firm's performance. It is gained in each specific market with limited transferability • The firm's operations in each foreign market are run independently from its other units in other markets

TABLE 4

VARIABLES AND MEASURES

Hypotheses / Variables	Measurement
H₁ Resources	
Total assets	amount (million euros / €)
Total sales (avg. last three years)	amount (million euros / €)
Number of employees	number of employees
H₂ Experience	
Years operating ^a	number of years
Years since the first export order ^a	number of years
Years regularly exporting ^a	number of years
Diversity of entry modes (used in international operations)	number of entry modes
Countries entered (geographic scope of firm's international operations)	number of countries
H₃ International commitment	
Staff in international activities (>half of workday)	number of employees
Foreign languages (firm's foreign language skills)	number of languages
Entry modes commitment	investment (yes/no)
H₄ Level of internationalization	
International to total sales (avg. last three years)	percent international/total
Stage of international development	1-5 clusters
H₅ International performance	
Success of international activities (avg. last three years)	scale 1(low)-10(high)
International sales (avg. last three years)	amount (million euros / €)
International profitability (avg. last three years)	scale 1(low)-4(high)
Concentration in 1 st market (sales in main foreign market vs. total international sales)	percent
Concentration in 2 markets (sales in main two foreign markets vs. total int'l sales)	percent
Concentration in 3 markets (sales in main three foreign markets vs. total int'l sales)	percent
Concentration in 4 markets (sales in main four foreign markets vs. total int'l sales)	percent
International sales growth (avg. last three years)	percent

^a This variable is used for the descriptive statistics but it is not empirically tested since it would be tautological ("time" is used to create the groups).

TABLE 5

YOUNG, MATURE, AND OLD BORN INTERNATIONALS (BIs). DESCRIPTIVE STATISTICS

Indicator	Group	N	Mean	Standard deviation	Min	Max
Total assets	Young BIs	13	2.07	1.61	.22	5.07
	Mature BIs	21	8.38	10.98	.28	45.01
	Old BIs	11	13.03	16.42	.97	59.62
Total sales	Young BIs	13	2.09	1.74	.19	6.06
	Mature BIs	21	8.43	9.95	.51	30.35
	Old BIs	11	9.67	8.21	.84	31.03
Number of employees	Young BIs	13	20.15	12.20	10.00	50.00
	Mature BIs	21	40.71	42.53	10.00	180.00
	Old BIs	11	78.91	60.26	15.00	180.00
Years operating	Young BIs	13	4.69	1.75	1.00	7.00
	Mature BIs	21	11.52	3.57	8.00	19.00
	Old BIs	11	29.54	7.02	21.00	43.00
Years since the first export order	Young BIs	13	3.61	1.76	1.00	7.00
	Mature BIs	21	10.81	3.68	6.00	19.00
	Old BIs	11	29.09	7.22	21.00	43.00
Years regularly exporting	Young BIs	13	3.61	1.76	1.00	7.00
	Mature BIs	21	10.81	3.68	6.00	19.00
	Old BIs	11	29.09	7.22	21.00	43.00
Diversity of entry modes	Young BIs	13	1.46	.52	1.00	2.00
	Mature BIs	21	1.57	.75	1.00	3.00
	Old BIs	11	2.36	1.29	1.00	5.00
Countries entered	Young BIs	13	5.38	3.57	1	10
	Mature BIs	21	8.76	5.97	2	20
	Old BIs	11	17.55	15.53	2	40
Staff in int'l activities	Young BIs	13	.69	.63	.00	2.00
	Mature BIs	21	1.57	1.43	.00	5.00
	Old BIs	11	2.73	2.49	.00	8.00
Foreign languages	Young BIs	13	1.77	1.01	1.00	4.00
	Mature BIs	21	1.81	.98	.00	3.00
	Old BIs	11	2.45	.82	1.00	4.00
Int'l to total sales	Young BIs	13	32.61	22.95	2.11	75.38
	Mature BIs	21	36.94	23.53	5.12	98.96
	Old BIs	11	64.67	32.53	15.71	95.41
Stage of int'l development	Young BIs	13	1.77	.83	1.00	3.00
	Mature BIs	21	2.43	1.25	1.00	5.00
	Old BIs	11	4.36	.81	3.00	5.00
Success of international activities	Young BIs	13	5.58	2.25	1.00	9.00
	Mature BIs	21	6.62	1.66	2.00	10.00
	Old BIs	11	6.91	1.64	3.00	9.00
International sales	Young BIs	13	.59	.61	.00	2.20
	Mature BIs	21	2.94	4.16	.09	16.80
	Old BIs	11	5.79	3.95	.14	11.53
International profitability	Young BIs	13	2.61	.74	1.00	4.00
	Mature BIs	21	3.08	.67	1.67	4.00
	Old BIs	11	3.30	.46	3.00	4.00
Concentration in 1 st market	Young BIs	13	59.42	27.50	25.73	100.00
	Mature BIs	21	47.43	20.42	12.00	90.00
	Old BIs	11	41.04	22.53	5.50	80.00
Concentration in 2 markets	Young BIs	13	77.36	18.28	51.46	100.00
	Mature BIs	21	68.85	20.50	24.00	100.00
	Old BIs	11	61.32	30.74	8.80	100.00
Concentration in 3 markets	Young BIs	13	88.85	10.20	70.67	100.00
	Mature BIs	21	78.72	19.79	34.00	100.00
	Old BIs	11	69.83	28.96	11.00	100.00
Concentration in 4 markets	Young BIs	13	95.94	4.46	90.00	100.00
	Mature BIs	21	84.46	19.04	40.00	100.00
	Old BIs	11	75.32	28.62	12.10	100.00
International sales growth	Young BIs	13	96.06	127.39	-18.33	363.17
	Mature BIs	21	27.85	61.42	-35.35	259.01
	Old BIs	11	7.36	25.34	-41.38	52.84

TABLE 6

GROUP STATISTICS FOR THE TWO CLUSTERS OF YOUNG AND OLD BORN INTERNATIONALS (BIs)

Indicator	Cluster	N	Mean	Standard deviation	Min	Max
Total assets	Young BIs	33	6.04	9.28	.22	45.01
	Old BIs	12	12.22	15.90	.97	59.62
Total sales	Young BIs	33	6.10	8.53	.19	30.35
	Old BIs	12	9.10	8.07	.84	31.03
Number of employees	Young BIs	33	33.39	35.81	10.00	180.00
	Old BIs	12	73.58	60.34	15.00	180.00
Years operating	Young BIs	33	8.61	4.19	1	17
	Old BIs	12	28.67	7.35	19	43
Years since the first export order	Young BIs	33	7.73	4.33	1.00	17.00
	Old BIs	12	28.25	7.47	19.00	43.00
Years regularly exporting	Young BIs	33	7.73	4.33	1.00	17.00
	Old BIs	12	28.25	7.47	19.00	43.00
Diversity of entry modes	Young BIs	33	1.51	.67	1.00	3.00
	Old BIs	12	2.33	1.23	1.00	5.00
Countries entered	Young BIs	33	7.39	5.45	1	20
	Old BIs	12	16.92	14.97	2	40
Staff in int'l activities	Young BIs	33	1.12	1.08	.00	4.00
	Old BIs	12	2.92	2.47	.00	8.00
Foreign languages	Young BIs	33	1.76	.97	.00	4.00
	Old BIs	12	2.50	.80	1.00	4.00
Int'l to total sales	Young BIs	33	35.86	23.17	2.11	98.96
	Old BIs	12	60.65	34.00	15.71	95.41
Stage of int'l development	Young BIs	33	2.18	1.16	1.00	5.00
	Old BIs	12	4.17	1.03	2.00	5.00
Success of international activities	Young BIs	33	6.23	1.97	1.00	10.00
	Old BIs	12	6.83	1.59	3.00	9.00
International sales	Young BIs	33	2.09	3.50	.00	16.80
	Old BIs	12	5.35	4.07	.14	11.53
International profitability	Young BIs	33	2.92	.73	1.00	4.00
	Old BIs	12	3.22	.52	2.33	4.00
Concentration in 1 st market	Young BIs	33	52.38	23.99	12.00	100.00
	Old BIs	12	40.95	21.48	5.50	80.00
Concentration in 2 markets	Young BIs	33	72.32	20.11	24.00	100.00
	Old BIs	12	61.63	29.33	8.80	100.00
Concentration in 3 markets	Young BIs	33	82.67	17.59	34.00	100.00
	Old BIs	12	70.68	27.76	11.00	100.00
Concentration in 4 markets	Young BIs	33	88.91	16.34	40.00	100.00
	Old BIs	12	76.29	27.50	12.10	100.00
Int'l sales growth	Young BIs	33	47.71	90.87	-35.35	363.17
	Old BIs	12	28.33	76.55	-41.38	259.01

TABLE 7

YOUNG AND OLD BORN INTERNATIONALS. T-TEST OF DIFFERENCE OF MEANS

Indicator	Levene's test for equality of variances		Equal variances	T-test for equality of means		
	F	Sig.		t	Df	Sig. (2-tailed)
Total assets	1.589	.214	Assumed	-1.615	43	.114
Total sales	.092	.763	Assumed	-1.059	43	.296
Number of employees	7.135	.011	Not assumed	-2.172	13.919	.048**
Diversity of entry modes	5.433	.025	Not assumed	-2.189	13.423	.047**
Countries entered	25.668	.000	Not assumed	-2.152	12.076	.052*
Staff in int'l activities	19.091	.000	Not assumed	-2.438	12.575	.030**
Foreign languages	.770	.385	Assumed	-2.372	43	.022**
Int'l on total sales	5.287	.026	Not assumed	-2.337	14.883	.034**
Stage of int'l development	.757	.389	Assumed	-5.226	43	.000***
Success of int'l activities	.363	.550	Assumed	-.956	43	.345
International sales	1.423	.239	Assumed	-2.643	43	.011**
International profitability	.831	.367	Assumed	-1.317	43	.195
Concentration in 1 st market	.407	.527	Assumed	1.450	43	.154
Concentration in 2 markets	2.507	.121	Assumed	1.389	43	.172
Concentration in 3 markets	3.905	.055	Assumed	1.720	43	.093*
Concentration in 4 markets	5.198	.028	Not assumed	1.496	13.929	.157
International sales growth	.371	.546	Assumed	.658	43	.514

* Significant at 90% confidence.

** Significant at 95% confidence.

*** Significant at 99% confidence.