

**THE PHENOMENON OF INTERNATIONAL NEW VENTURES, GLOBAL  
START-UPS, AND BORN-GLOBALS: WHAT DO WE KNOW AFTER A  
DECADE (1993-2002) OF EXHAUSTIVE SCIENTIFIC INQUIRY?**

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***Abstract***

*In this paper, 27 studies from the last decade which deal more or less explicitly with the International New Venture, global start-up or born-global phenomenon are first identified, and then fully examined and critically assessed as a basis for obtaining an adequate view of the state-of-the-art of this increasingly important research avenue in the field of International Entrepreneurship (IE). The methodology used for this synthetic review allow us to analyze a number of recent, purposefully-chosen studies that are systematically compared along the following criteria: 1) main objective and type of research; 2) theoretical framework/s of reference, 3) methodological issues, and 4) main findings and/or conclusions. As a result of this literature review, a critical assessment follows in which the most relevant benefits and contributions as well as potential drawbacks, limitations or major discrepancies in the research activities conducted so far are discussed. Finally, some suggestions and implications are provided in the form of future research directions.*

**Key words:** International new ventures, global start-ups, born-globalness, international entrepreneurship, contemporary literature review.

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**INTRODUCTION**

For several decades internationalization processes of firms have been the topic of quite abundant research in the highly interrelated fields of International Business (IB), International Marketing (IM) and, more recently, Entrepreneurship. Although conceptualizations and theory development have been diverse, the internationalization process has been generally conceived as a gradual, on-going process, taking place in incremental stages and over a relatively long period of time (Johanson and Vahlne, 1977, 1990). Thus, according to the most influential streams of research in internationalization process theory, firms have usually tended to become international in a slow and rather incremental manner.

However, when the most critical assumptions and theoretical prescriptions of the internationalization process models have been empirically examined, basically among SMEs, several paradoxes, criticisms and major disagreements have usually emerged (Christensen, 1991, Knight and Cavusgil, 1996; Matthyssens and Pauwels, 1998). In fact, in a couple of exhaustive evaluations of the well-known export stage models, Andersen (1993, 1997) even questioned their adequacy as good theories, concluding that their theoretical boundaries, explanatory power, and operationalization had to be radically improved. Several other researchers have also accused the stages models for being too deterministic and mechanistic in nature (Reid, 1983). Consequently, future research in this field should seek new paths of development and other alternative visualizations (Strandskov, 1993; Coviello and McAuley, 1999; Robertson and Chetty, 2000; Fillis, 2001).

Precisely, such a research demand fits extremely well with an emerging topic in the field of International Entrepreneurship focused on *international new ventures* (INVs) and/or *born-globals* (Oviatt and McDougall, 1997; Madsen and Servais, 1997) which are, by theoretic

definition, international at inception. The former, INVs, have been previously defined as “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries” (Oviatt and McDougall, 1994, p. 49; McDougall et al., 1994, p. 470). Similarly, Knight and Cavusgil (1996, p. 11) conceptualize born global firms as being “small, technology-oriented companies that operate in international markets from the earliest days of their establishment”.

Despite many established firms still appear to internationalize following a slow, evolutionary path of development, other more dynamic and newly-established small firms seem to be able to become international almost at founding or very shortly thereafter. The emergence of these firms, mostly in the last decade, becomes a sign that important dimensions of the internationalization process may have evolved since the 70s and 80s, when much of the existing theory was developed. Thus, the growing significance of international new firms seems to be challenging most of the theory development previously established in the field, and in order to enrich our understanding about the business internationalization process, this recent generation of INVs or “born-globals” should also be taken into account.

It has been widely claimed in the literature that the existence of an increasing number of firms with rapid international growth must be shown to be an empirical fact (Oviatt and McDougall, 1997). Consequently, several key driving forces behind the emergence of INVs, global start-ups, and born globals as well as their (rise in) number, size, age, geographic distribution, industry affiliation, and even export behavior and performance has been traced over time by a number of studies in different contexts as will be seen further on in this paper.

However, although a significant amount of research has already been conducted so far trying to describe and explain this relevant phenomenon (Madsen and Servais, 1997), no previous effort still exists devoted to specifically review, analyze and evaluate in a highly systematic and comparative way this growing stream of research. Therefore, with the aim to identify the empirical support actually being received by those firms labeled born-globals/INVs, and to help develop further theoretical explanation for this emerging phenomenon, this study is focused on

systematically reviewing and also objectively evaluating the current academic literature (both theoretical and empirical) concerning these newly established, highly export-involved entrepreneurial firms. More concretely, we expect to shed light on the main characteristics and specific conditions which have been usually claimed to be relevant for the emergence and further expansion of this type of firms, mostly characterized by showing a truly global orientation from the very beginning, as well as a fast internationalizing character and a high export potential/involvement.

We acknowledge that other previous and outstanding reviews of primarily the empirical literature related to the SME internationalization field are currently available, though with a very different approach to ours (Leonidou and Katsikeas, 1996; Zou and Stan, 1998; Coviello and McAuley, 1999; Rialp and Rialp, 2001; Fillis, 2001). In particular, some of these other review efforts are focused on other specific topics such as the export development models or the determinants of export performance while others offer a much more general approach of the small firm internationalization issue, usually considering only the empirical work available. In addition, quite an abundant research agenda mostly focused on long-established and perhaps more conventionally-internationalized firms also falls out of our review (Zahra and George, 2002).

As other authors already recognize (Zou and Stan, 1998), in spite of the large quantity of published works which have basically served to establish its recognition and scientific legitimacy, a general concern in the field of exporting inquiry is the lack of synthesis and assimilation of the fragmented knowledge obtained. Thus, given the fact that also the literature concerning fastly internationalized SMEs has proliferated a lot in the last ten years, and that a number of different conceptualizations and empirical methodologies have recently emerged, it seems really worthwhile and useful at this point to offer an exhaustive and updated review of what has been achieved so far in order to better address future research efforts.

Following this argument, the structure of this paper is as follows: First, a description of the methodology used for approaching our comparative literature review is presented. Then, a

significant number of the most relevant studies developed during the 90s in the context of the International Entrepreneurship (IE) discipline that are primarily centered on INVs/global start-ups/born-globals as a specific research issue are detected, systematically reviewed and compared with the aim to identify some key theoretical insights, several methodological issues and some empirical findings about the behavior of these firms. In the following section, a critical assessment of this stream of research in the context of SMEs' internationalization in light of our previous literature analysis follows. Finally, several conclusions as well as implications including future research directions are outlined at the end of this paper.

### **METHODOLOGICAL ISSUES**

As mentioned above, the purpose of this paper is twofold: 1. to provide an updated review and synthesis of the literature emerged during the last decade (from 1993 up to 2002) about the accelerated internationalizing activities of new, entrepreneurial SMEs; and 2) to identify directions for future research aimed at developing improved theories and advancing knowledge of this phenomenon. This will be achieved by providing an objective assessment of the state of knowledge in the area.

In this section, we briefly mention the major methodological decisions made in terms of the scope of this review, including the selection criteria and the academic sources consulted for the identification of the final number of studies accepted for further analysis in this paper (27), which have helped us to develop our literature analysis in a highly systematic and rigorous way.

As this study is focused on the contemporary scientific contributions appearing in the field of born-globals and international new ventures, the publication time frame covered a fixed period of 10 years (from 1993 until 2002 inclusive). Although some studies on this issue had emerged earlier (McDougall, 1989; Ganitsky, 1989; Jolly et al., 1992), a cut-off year was established in 1993. Two reasons exist for this: 1. it was then that a pioneering and, at the end, highly referenced empirical work appeared (Rennie, 1993); and 2. to allow for a reasonable and simultaneously manageable number of studies to be reviewed in far more detail. Moreover, in

order to provide a very updated state-of-the-art on the born-global research issue and some evolution in the state of knowledge, works published during the year 2002 were included.

As has been usual in other reviews (Zou and Stan, 1998), the studies to be considered in ours were firstly identified by a systematic process that combined electronic means with manual search so as to avoid omitting any extremely relevant one. The use of electronic tools as a way of search was conducted by scanning *Emerald* as well as *Ebsco-host* bibliographic databases and by searching other Internet resources, and proved to be highly efficient in generating a number of current articles which contained (whether in their title, abstract or full text) key words such as “born-global”, “international new venture”, “global start-up”, “international entrepreneurship”, and so on. Though the journals ranged sometimes from very specific publications centered on several SMEs’ topics to more general outlets in the management field, most of the relevant papers found were published in the core, leading journals for research in the International Business, International Marketing, and Entrepreneurship literatures (a significant part of which is actually converging in the field of International Entrepreneurship). In addition, a manual search was also conducted for identifying other possible works whether in books, edited books of readings, refereed journal articles and even conference proceedings and working-papers which, in spite of being relevant for this study, had not been identified electronically. Both search methods, but specially the manual one, also proved to be useful to uncover some highly-related works which did not explicitly mention the specific research issue of interest in their title/abstract, but it then turned to appear rather implicitly in the content.

Among the list of works initially detected, a selection process based upon 6 major criteria followed so as to select the final contributions to be more exhaustively reviewed thereafter. In fact, to be eligible for further review, the candidate works had to be: 1) contemporary, as the research phenomenon is itself, studies appearing between 1993-2002; 2) originally in English-language to facilitate comparison; 3) theoretically and/or empirically sound (i.e., rigorous theoretical and/or empirical approach); 4) in the case of articles, those more or less explicitly addressing the key issue of analysis and previously published in -and/or electronically

accessible from- leading journals whose scope belonged to the international business/international marketing and/or small business/entrepreneurship disciplines; 5) in the case of chapters from books, proceedings of conferences, and working papers, only those very directly related to the topic under study; and 6) at least the most of them, usually listed in references of other major studies with a very similar character and focus. In addition, we decided to exclude doctoral dissertations in this review (for instance, Knight, 1997) mostly due to their larger format and quite complex disposal.

Based on this rigorous selection process, 27 recent studies from at least 15 different academic journals and other similar sources were identified that met the the specified criteria (out of which 13 were performed in the period 2000-2002). This is, in our opinion, quite a significant number of works that demonstrate the regency and increasing consideration given to this topic of research by current international entrepreneurship researchers. **Table 1** lists the several bibliographic sources from which the different works, papers and articles finally selected in our literature coverage were chosen.

[Insert Table 1 around here]

Thus, in all, 27 academic works were accepted for further analysis. In a similar vein to the way other authors had proceeded before (Leonidou and Katsikeas, 1996, Coviello and McAuley, 1999), each study was content-analyzed based on the information provided in each one in order to identify, for all of them, the following issues: 1. main objective and type of research; 2. theoretical framework/s used for conceptual development or analysis; 3. methodological approach (including data collection method, sample size, key informants, analytical approach of the data, and time frame of the research when indicated); and 4. key research findings and conclusions.

Before ending this section, we would like to point out that our review effort has to be understood as a pure survey of the current state of knowledge in the topic of early internationalization of SMEs, and not as a fully exhaustive review of the entire population of works that could be available. Nevertheless, the 27 international studies finally selected in our

detailed literature screening, and then accepted for further review, can be regarded to be among the most relevant ones in this field of academic inquiry. Consequently, we also believe that by means of analyzing them in more detail, as the following section attempts to do, we are able to elaborate a highly comprehensive and longitudinal assessment of the potential merits and drawbacks shown by some of the most recent and relevant research efforts conducted in this area.

### **LITERATURE REVIEW: ANTECEDENTS IN BORN-GLOBAL RESEARCH**

International Entrepreneurship (IE) constitutes both a young and increasingly important field of research in which at least three different academic traditions have recently collided: Strategic Management, International Business/Marketing, and Entrepreneurship. Such a convergence is explicitly shown by several efforts aimed to properly define and to consolidate the domain -and thus demarcation- of this particular area of scholarly inquiry (Giamartino et al., 1993; McDougall and Oviatt, 2000; Zahra and George, 2002). Whereas International Entrepreneurship (IE) was initially regarded as associated with the development of international new ventures or start-ups that, from their inception, engage in international business (McDougall, 1989), the definition of this field and its scientific domain has evolved significantly since then. Today, much more widely-accepted and comprehensive definitions of International Entrepreneurship can be found in Wright and Ricks (1994), McDougall and Oviatt (1996, 1997, 2000), or Zahra and George (2002, p. 11), for whom IE indicates “the process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in the pursuit of competitive advantage”. Thus IE has become today a multidimensional research program in which a quite diversified list of topics, frameworks, and approaches co-exist (Giamartino et al., 1993; McDougall and Oviatt, 2000).

Two main streams of research in the field of IE, both of them clearly developed through the 1990s, can be distinguished (Zahra and George, 2002): 1. the growing international role played by young entrepreneurial ventures, on one hand; and 2. the entrepreneurial activities of more established firms also associated with internationalization (usually regarded as international

*intrapreneurship* or corporate entrepreneurship in international markets), on the other. Thus, one stream focuses on international new ventures, “born-global” firms, or start-ups characterized mostly because they become international almost from inception, while the other rather looks at the international activities developed by long-established companies (Lu and Beamish, 2001; Zahra and George, 2002). Without neglecting the critical importance of the latter stream, this study basically belongs to the former approach. Therefore, our literature review is exclusively focused on this emerging, but at the same time extremely significant, research issue of internationalizing new ventures which can also be generically called “born globalness”.

International new ventures or born-globals have been considered, although only partially, in some of the most recent reviews and general assessments of the SMEs’ internationalization literature (Zou and Stan, 1998; Cavusgil, 1998; Coviello and McAuley, 1999; Fillis, 2001; Peng, 2001), thus revealing its regency as a current research topic in this field. An abnormally high speed in a small firm’s internationalization and/or its high degree of international growth are among the key dimensions of IE under which this stream of literature has been recently developed (Autio et al., 2000; Zahra and George, 2002).

Thus, contrarily with the two most orthodox and well-known schools of research on business internationalization which conceptualize this phenomenon as a process of gradual commitment, the Uppsala Internationalization Model (Johanson and Vahlne, 1977) and the Innovation-related export development models (Bilkey and Tesar, 1977; Cavusgil, 1980; Reid, 1981), there seems to exist increasing evidence that such a traditional view of risk-averse, incremental firm internationalization process involving a varying number of stages, just like “rings in the water” in the Madsen and Servais’ (1997) words, may be considered conceptually weak, and that changing market and technological conditions are challenging its relevance (Knight and Cavusgil, 1996; Oviatt and McDougall, 1997).

Several studies, specially in the 90s, have identified an increasing number of firms which, instead of following the traditional stages pattern (this is, opting for domestic expansion before

initiating foreign (export) activities in geographically or psychically-close countries firstly), choose to be extensively present abroad right from their birth or very shortly thereafter. However, quite surprisingly, this type of firms becoming international, sometimes even global, from –or almost from- inception, have been labeled very differently from one study to another, thus generating some confusion in the area. While the term “Born Globals” has likely been the most popular (Rennie, 1993; Knight and Cavusgil, 1996; Madsen and Servais, 1997; Bell and McNaughton, 2000; Madsen et al., 2000; Rasmussen et al., 2001; Larimo, 2001; Aspelund and Moen, 2001; Moen, 2002), other names such as Global Start-ups (Oviatt and McDougall, 1995), High Technology Start-ups (Burgel and Murray, 2000), Global High-Tech Firms (Roberts and Senturia, 1996), Instant Internationals (Fillis, 2001), and International New Ventures -INVs- (Oviatt and McDougall, 1994; McDougall et al., 1994; Oviatt and McDougall, 1997; Servais and Rasmussen, 2000) have also been used for designing these firms.

The existence and behavior of this type of firms has already been reported in different sectors (both, low- and high-tech industries) and geographical areas of the developed world (Knight and Cavusgil, 1996). Therefore, although academic researchers had for a long time ignored them, an increasing number of international scholars in different fields of organization science have turned their attention to this relevant phenomenon, thus demonstrating not only its importance but also its growing consideration as a frontier research issue in the highly related fields of (International) Entrepreneurship and International Business/Marketing (Cavusgil, 1998). These are, precisely, three extensive fields specifically covered by many of the leading academic journals from which the majority of studies included in our final review were extracted.

Therefore, in front of the fact that we are witnessing a specific interest in this topic of accelerated SME internationalization, and dealing with one of the objectives of this paper, the summary **Table 2** provides quite a rich chronological view of 27 theoretical and empirical studies developed during this last decade (1993-2002). These have more or less explicitly focused on less traditional ventures. In order to synthesize them as systematically as possible, our approach in this literature comparison has been operationally developed, as mentioned

above in the methodological section, by means of positioning each academic contribution along the same classification criteria: main objective and type of research, conceptual framework, methodological issues as well as key results of each study.

[ Insert Table 2 around here]

## **ANALYSIS AND DISCUSSION OF THE REVIEW RESULTS**

In order to understand and objectively assess the current state of knowledge in this area, some issues related to the different objectives, categories of studies and theoretical frameworks are discussed below, as well as those other patterns regarding empirical methods and key findings of the reviewed studies. However, we will initiate this section by addressing some major discrepancies that can be easily detected within the literature in terms of both, the alternative names given to this type of ventures, and the (empirical) definition of the INV/born-global condition of an exporting firm.

### **Conceptual and operational missleadings**

As mentioned above, the denomination given to this specific phenomenon has been rather diverse and somewhat confusing, because not always sinonimous labels have been used to design those firms that decide to internationalize from inception (INVs, global start-ups, born globals, instant internationals, global hi-tech firms, and so on). Since the term “global” has been sometimes criticized for its overstatement of the nature of international reach by a new firm (Hordes et al., 1995), and that an increasing number of scholars -mainly from the field of entrepreneurship- have tended to apply the name of INVs to these newly-established, highly-involved exporters, it seems that this more “entrepreneurial” terminology should be, at least in our opinion, more generally adopted by future researchers regardless their specific field of procedence.

In spite of the alternative names used for designing this concept, the emphasis has generally been put on examining smaller, entrepreneurial firms which are early internationally-oriented, roughly from the time of their birth, and for which the generally accepted theories of

international business apparently fail to explain their existence and behavior (McDougall et al., 1994). Thus, while the underlying notion and theoretic definition of the phenomenon of born-global, global start-up or international new venture, as a young, entrepreneurial firm that is virtually engaged in international business right from inception, seems to be highly consistent and quite widely accepted in the literature (Oviatt and McDougall, 1994; Knight and Cavusgil, 1996), not the same can be concluded from the perspective of the empirical operationalization given to this concept. Actually, too many different criteria have been somewhat arbitrarily chosen by authors, thus making any comparison intent really challenging.

A major area of controversy in this sense can be found in terms of the specific “time span” - generally measured in years- or time elapsed between the moment of first international sales obtained by a firm and the moment of its founding, a usual criterion used in operationally defining an INV or born-global firm (sometimes together with the export-to-sales ratio). While some researchers seem to advocate for a six-year period as the eligible standard in measuring such a delay in initiating international operations from the start-up of a business (Oviatt and McDougall, 1997), other authors have selected other criteria for empirically defining the concept (i.e. type of firm) under analysis. For instance, according to Rennie (1993), the firms labeled as “born-globals” began exporting, on average, only two years after foundation and achieved 76 percent of their total sales through exports. However, following Knight and Cavusgil (1996, p. 12), Madsen et al. (2000, pp. 250-1), and also Servais and Rasmussen (2000, p. 14) empirically define born globals as “firms that were established after 1976 and have reached a share of foreign sales of at least 25% after having started export activities within three years after their birth”. For Aspelund and Moen (2001), the set of born globals in their sample is basically comprised of exporting firms established in, or post a specific year (1989), while Moen (2002, p. 158) defines them as “having export sales higher than 25 percent and an establishment date post-1990”. Thus, while the two-to-three year period from birth to export initiation by a firm has been tentatively adopted as a measure for such time lag, quite different empirical definitions and approaches of the born global issue can be found in the literature.

From a different perspective, other authors conceive the firm age at international entry as a central research issue in itself. In particular, Autio et al. (2000) introduce the learning effects of age at entry as one of the determinant dimensions of international growth among entrepreneurial firms, thus examining -instead of assuming- whether it is better for these firms to strategically start the internationalization process soon after founding or to postpone international entry until the firm has accumulated significant resources. This seems to be, in our opinion, the most rigorous approach.

Leaving apart the possible theoretical controversy existing in discerning something that seems after all to be a researcher's methodological choice (whether the firm's age at international entry has to be embedded in the operational definition of the born-global concept or, alternatively, used as a separated explanatory variable), we would just claim from here for the establishment of more unified criteria for the empirical definition of the born global condition of a nascent, entrepreneurial small firm. This is, indeed, a highly theoretical concept which is essentially complex and multidimensional. Consequently, any future effort in its operationalization should be multidimensional as well (thus, including measures indicating, at least, a high export involvement at a certain point in time, the firm's age at international entry, and the number of export markets covered in a short amount of time).

### **Research objectives and types of research**

In terms of research objectives, most of the studies identified above are generally aimed to describe, understand and interpret the reasons underlying the growing emergence of the INV, global start-up or born-global phenomenon (Rennie, 1993; Oviatt and McDougall, 1994; Roberts and Senturia, 1996; Knight and Cavusgil, 1996; Larimo, 2001; Wickramasekera and Bamberly, 2001). In this sense, they try to reveal the differentiating characteristics, as well as the particular behavior observed by these small firms abroad -often in a specific setting-, and a number of factors determining their performance usually in comparison with other counterparts, whether exporting or not (Oviatt and McDougall, 1995; Bell, 1995; Madsen et al., 2000; Servais and Rasmussen, 2000; Aspelund and Moen, 2001, Moen, 2002).

However, several studies have adopted some more specific research objectives. A comparative explanatory framework approach can be detected in the studies developed by McDougall et al. (1994), Oviatt and McDougall (1997, 1999), Madsen and Servais (1997), Autio and Sapienza (2000), and Zahra and George (2002). The links existing between new venture internationalization, further performance and subsequent international growth have been also exhaustively examined in some previous longitudinal research (Bloodgood et al., 1996; McDougall and Oviatt, 1996; Autio et al., 2000). The critical role played by network relationships for the international market development is explicitly inquired by Coviello and Munro (1995), while Rasmussen et al. (2001) also investigate the importance of the networking issue, together with other elements, in understanding the role played by the founder/entrepreneur in the founding process of a born global firm. On the other hand, Burgel and Murray (1998), and also Zahra et al. (2000) choose to analyze the determinants and/or learning effects of mode of entry choices made by (hi-tech) start-ups. Finally, the study developed by Knight (2000) is driven from the entrepreneurship/marketing paradigm to explore globalization effects on SMEs, while Bell and McNaughton (2000) focus on identifying the challenges faced by public policy supporting small business internationalization, which are associated with the increasing emergence of born-globals.

Quite interestingly, a significant portion of the current literature about born globals (or international new ventures/global start-ups) has often been assumed to deal directly with high-tech businesses, usually considering the more critical globalization effects that are present in the type of sectors in which these firms compete (Bell, 1995; Coviello and Munro, 1995; Roberts and Senturia, 1996; McDougall and Oviatt, 1996; Burgel and Murray, 1998; Autio and Sapienza, 2000; Autio et al., 2000; Zahra et al., 2000). Fewer researchers show a wider focus, thus not exclusively limiting themselves to study highly-technological, international start-ups but adopting an overall or even low-technological sector approach in their analysis (Rennie, 1993; Madsen and Servais, 1997; Servais and Rasmussen, 2000; Wickramasekera and Bamberly, 2001; Moen, 2002). Of course, this assumption on the type of firm and sector under

analysis has usually had a tremendous impact on a number of methodological decisions taken in empirical studies, as well as on key research findings, as will be discussed below.

Concerning the different type of research conducted so far in this field, both quantitative- and qualitative-oriented research coexist, although empirical studies of a rather descriptive, comparative and/or exploratory nature (Rennie, 1993; Bell, 1995; Coviello and Munro, 1995; Roberts and Senturia, 1996; Madsen et al., 2000; Wickramasekera and Bamberly, 2001; Aspelund and Moen, 2001; Rasmussen et al., 2001; Larimo, 2001; Moen, 2002) seemingly predominate over highly consistent theoretical studies (Oviatt and McDougall, 1994, 1997, 1999; Madsen and Servais, 1997; Bell and McNaughton, 2000; Zahra and George, 2002) and well supported, hypothesis-testing empirical research (Bloodgood et al., 1996; Burgel and Murray, 1998; Knight, 2000; Autio and Sapienza, 2000; Autio et al., 2000, and Zahra et al., 2000).

According to the issues discussed above, we have designed a *taxonomy* of the different studies reviewed to facilitate a certain cross-comparison of this literature. Such a classification scheme is developed as an organizing framework of the recent International Entrepreneurship literature centered on INVs, born-globals and global start-ups, and is organized by means of a 2x2 matrix along two different axis: theoretical versus empirical research, in the horizontal axis, and exploratory, descriptive research versus hypothesis-testing, explanatory in nature, in the vertical one. The results of this matrix are shown in **Figure 1**. Moreover, when explicitly specified, the high-tech orientation of a particular empirical study in front of a more general view of the type of firms under analysis is also distinguished. The exact positioning of all of these works in this figure is represented by the number given, in rigorous chronological order of appearance, to each individual study in Table 2.

**[Insert Figure 1 around here]**

It can be seen from the above that empirical research has tended to be far more abundant than theoretically-oriented research on this issue. Also, a certain lack of well founded, hypothesis-testing and/or explanatory research aimed to cover other firms from a number of industries, not

only those high technology-based ones, is detected. This seems to be particularly important for generalizing much more the results found so far among samples of basically hi-tech INVs and/or born-globals/start-ups to a wider spectrum of manufacturing and service smaller new firms.

### **Theoretical frameworks**

As summarized in Table 2, a certain number of conceptual approaches and theoretical frameworks can be found in contemporary international new venture and born global literatures. However, the extend to which these frameworks are explicitly proposed as the conceptual base in each study is not so uniform, probably due to the diverse research objectives being addressed. For instance, only a minority of studies can be considered to be highly-theoretical, often including a future research agenda related to the behavior of these firms (Oviatt and McDougall, 1994, 1997, 1999; Knight and Cavusgil, 1996; Madsen and Servais, 1997; and Zahra and George, 2002). Building upon existing internationalization theories and recent developments in the field of Strategic Management and Entrepreneurship, Oviatt and McDougall (1994, 1999) have established a conceptual framework and a theoretical classification of INVs. Madsen and Servais (1997) develop a research model of the propensity and further development of born-globals in which the characteristics of the environment, of the organization itself, and of the founder/s are seen to be critical. Also, the possible links existing between the recent born-global literature, the internationalization process model (the Uppsala-Model), along with the network and evolutionay approaches are widely explored by these authors. From a more policy-oriented perspective, Bell and McNaughton (2000) outline an eclectic, normative model of small firm internationalization that seeks to accomodate the diverse pathways that smaller firms (both, traditional and born globals) may take during their internationalization process. Finally, a general theoretical model on International Entrepreneurship (IE), as a major research field, has been more recently developed by Zahra an George (2002). Their model basically connects the IE antecedents with its types of activities and outcomes, together with other strategic and environmental issues.

Among the empirical works, while most of the studies clearly identify which theory/s provide the conceptual basis and focus for their further investigation (McDougall et al., 1994; Bell, 1995; Coviello and Munro, 1995; Bloodgood et al., 1996; Roberts and Senturia, 1996; Burgel and Murray, 1998; Knight, 2000; Autio and Sapienza, 2000; Servais and Rasmussen, 2000; Autio et al., 2000; Zahra et al., 2000; Aspelund and Moen, 2001; Rasmussen et al., 2001; Larimo, 2001, and Moen, 2002), some of them are solely based on past literature of born globals and INVs (Oviatt and McDougall, 1995; McDougall and Oviatt, 1996; Madsen et al., 2000; Wickramasekera and Bamberly, 2001), or simply are not explicitly grounded on any specific theory (Rennie, 1993).

A significant number of studies develop a large part of their theoretical approaches by identifying and examining both internal and external key driving forces and trends behind the observable emergence, continuous rise and further development of small firms becoming international almost at founding, i.e. rather from inception (Rennie, 1993; Oviatt and McDougall, 1995, 1997; Knight and Cavusgil, 1996; Madsen and Servais, 1997; Bell and McNaughton, 2000; Madsen et al., 2000; Servais and Rasmussen, 2000; Aspelund and Moen, 2001; Larimo, 2001, and Moen, 2002). According to these authors, among the most common factors triggering and giving significance to this growing phenomenon, there are at least four of extreme importance and, moreover, interrelated: 1) new market conditions in many sectors of economic activity (including the increasing importance of niche markets for SMEs worldwide), 2) technological developments in the areas of production, transportation and communication (IT), 3) the increased importance of global networks and alliances, and 4) more elaborate capabilities of people, including those of the founder/entrepreneur who starts the born global/INV, (Knight and Cavusgil, 1996; Madsen and Servais, 1997; Servais and Rasmussen, 2000; Moen, 2002). However, so far these different driving forces rising the ability of SMEs to compete globally, and mostly their consequences, have been only superficially explored, but not conveniently integrated in most of the theoretical frameworks of reference designed for conducting research. Furthermore, it can be expected that such trends will be even stronger in

the next years, thus making the phenomenon of born-globalness more widespread in the future. Therefore, more and more industries and firms will be highly affected by these factors and should be expected to internationalize more rapidly than ever before.

In order to explain the phenomenon under analysis, some of the reviewed works above seem to rely exclusively on a single theoretical framework, usually that of the Nordic internationalization process models (basically, the Uppsala-Model) or other similar export stage (behavioral-oriented) models, an approach generally known as the traditional *Process Theory of Internationalization* (Bell, 1995; Knight and Cavusgil, 1996; Wickramasekera and Bamberly, 2001; Larimo, 2001). In a similar vein, Coviello and Munro (1995) adopt a network theory perspective to examine the impact of network relationships on international market development and marketing-related activities among entrepreneurial firms. Also, the traditional Aaby and Slater's (1989) model for assessing export performance, though complemented with some previous findings shown in the born global literature, constitutes a major conceptual basis for the works developed by Aspelund and Moen (2001) and Moen (2002).

Contrarily, several studies are expressly designed to compare the explanatory value of competing theoretical approaches about alternative business internationalization patterns, usually distinguishing between traditional, gradually-internationalizing firms and INVs/born globals (McDougall et al., 1994, 1999; Autio and Sapienza, 2000; Bell and McNaughton, 2000), or are explicitly built upon different frameworks of analysis. This reveals a certain amount of theoretical integration in the international entrepreneurship field focusing on this latter type of ventures (Oviatt and McDougall, 1994, 1997; Bloodgood et al., 1996; Roberts and Senturia, 1996; Madsen and Servais, 1997; Burgel and Murray, 1998; Knight, 2000; Servais and Rasmussen, 2000; Rasmussen et al., 2001; Zahra and George, 2002). For instance, evolutionary economic theory, together with part of the original thinking behind the stage models, and the (international) network approach -as well as their respective links- have been frameworks jointly considered for explaining the born-global phenomenon (Madsen and Servais, 1997; Servais and Rasmussen, 2000). Rasmussen et al. (2001) try to incorporate the entrepreneurship

literature to this view for examining the founding process of a born global firm, thus stressing the interaction between the founder and his/her environment through two interconnected processes: sensemaking and networking. Also, the combined entrepreneurship/marketing paradigm is followed by Knight (2000) in order to evaluate the behavior and performance of SMEs affected by relevant globalization effects. Finally, several authors have founded their theoretical conceptualizations and testable hypotheses on highly exhaustive and recently developed theoretical frameworks such as the resource-based view of the firm (Bloodgood et al., 1996), the transaction cost theory and organizational capability perspectives (Burgel and Murray, 1998), or the increasing knowledge- and learning-based view (Autio et al., 2000; Zahra et al., 2000).

In our opinion, though it does not seem to be the rule in this stream of research, the use of a single theoretical framework for explaining the acceleration of international operations by young SMEs appears to be somewhat reductionist and likely inhibits any further theory development on this issue. Alternatively, the much more promising trend, also detected in this review, in terms of a multiple and/or combined use of existing theories and frameworks in explaining this phenomenon constitutes a step forward a more holistic understanding of it, and should be undoubtedly encouraged and stressed in further research.

However, in spite of this increased theoretical rigor, some authors regret that really comprehensive theoretical explanations and causal models of the phenomenon of born globals are still lacking (Knight and Cavusgil, 1996; Oviatt and McDougall, 1999; Servais and Rasmussen, 2000). Therefore, there seems to be enough room for a better developed, conceptually rigorous, and more generally-accepted theoretical framework of reference in this topic.

### **Empirical methods**

A wide variety of research methods characterize the contemporary INV/global start-up/born global literatures, something that constitutes, in our opinion, an excellent reflex of both, the highly complex nature of the research issue itself, and the very diverse research objectives being

addressed. In this context, specific mention should be made of the usual distinction observed between two possible methodological approaches, surveys and case studies, as alternative – though not mutually excludent- research techniques in conducting the empirical work.

In particular, those studies aimed to identify general patters characterizing the specific behavior and subsequent performance of these firms, usually against other ventures, and/or, those adopting a very formal hypothesis-building/testing approach in conducting such research efforts, tend to rely significantly more on medium-to-large-scale, aggregate mail survey data and databases as their basic, and rather sole, research technique. In this category of studies we find, among others, those developed by Bloodgood et al. (1996); McDougall and Oviatt (1996), Burgel and Murray (1998), Knight (2000), Autio and Sapienza (2000), Madsen et al. (2000), Autio et al. (2000), Aspelund and Moen (2001), and Moen (2002). Also, among fully or partly quantitative, survey-based studies, cross-sectional approaches (Rennie, 1993; Bell, 1995; Burgel and Murray, 1998; Knight, 2000; Autio and Sapienza, 2000; Madsen et al., 2000; Zahra et al., 2000; Wickramasekera and Bumberry, 2001; Aspelund and Moen, 2001; Moen, 2002) tend to be more widely applied than purely longitudinal ones (panel data) (McDougall and Oviatt, 1996; Bloodgood et al., 1996; Servais and Rasmussen, 2000; Autio et al., 2000). However, as the high internationalization level of a born global firm is indeed the result of a whole process, research that is too static in nature should be preferently avoided.

On the other hand, those authors who attempt to undertand complex and rather context specific issues related to born-globalness usually make greater use of research designs based on qualitative and grounded approaches, and more specifically of case-study research. As a consequence, case-based research, highly longitudinal in nature, is clearly represented in the born-globals and international new ventures streams of literature. Such a qualitative, case-based approach -and its subsequent use as a research technique- is explicitly applied in studies such as those made by McDougall et al. (1994), Oviatt and McDougall (1995), Roberts and Senturia (1996), Rasmussen et al. (2001), and Larimo (2001). Interestingly, only six out of the twenty empirical studies reviewed have used multiple research methods for gathering and analysing

relevant data, thus combining (mail) surveys with in-depth field interviews, secondary sources, and even case studies (Rennie, 1993; Bell, 1995; Coviello and Munro, 1995; Servais and Rasmussen, 2000; Zahra et al., 2000; and Rackmasekera and Bamberry, 2001).

As mentioned above, a large number of studies have tended to assume that the issue under study is highly associated with high-tech sectors and/or firms, thus developing their empirical research specifically in small business contexts of a highly technological base and/or content (McDougall et al., 1994; Oviatt and McDougall, 1995; Bell, 1995; Coviello and Munro, 1995; McDougall and Oviatt, 1996; Roberts and Senturia, 1996; Burgel and Murray, 1998; Autio and Sapienza, 2000; Autio et al., 2000; Zahra et al., 2000; Larimo, 2001). However, other authors have also addressed their investigation towards firms and start-ups with international activities from a wider spectrum of sectors and markets (including manufacturing and/or services) not necessarily fastly growing and highly technological (Rennie, 1993; Bloodgood et al., 1996; Knight, 2000; Madsen et al., 2000; Servais and Rasmussen, 2000; Wickramasekera and Bamberry, 2001; Aspelund and Moen, 2001; Rasmussen et al., 2001; and Moen, 2002). It seems clear to us that studies which choose to examine born-globalness by focusing exclusively on populations -and derived samples- of high-technological firms in fast-growing, global sectors may be providing quite different and not fully comparable results with lesser context-specific research.

A very positive aspect of the empirical research conducted so far is that the emergence of born global firms and INVs has been reported in several countries of the developed world (Knight and Cavusgil, 1996), thus demonstrating that this phenomenon is not country-specific at all. These firms have been found to exist in so diverse places such as Australia, US, Switzerland, Ireland, New Zealand, UK, Germany, France, Israel and most of the Nordic Countries (Denmark, Norway, and Finland). However, future research should cover other different geographical areas, particularly in less developed countries, to confirm the non-geographic specificity of this issue.

Generally speaking, the empirical methodology used in most studies, either surveys or case studies, is characterized by collecting information from key groups of individuals (founder/founding team, CEOs, managing directors, and so on) mostly in charge of international decision-making processes in their respective firms. However, when a survey-based approach has been applied, somewhat biased and not very large-scale sampling designs are performed, basically mail structured-questionnaires have been used to collect usually quantitative information only, cross-sectional analyses clearly dominate, and non-response bias, as well as construct validity and reliability analyses of the collected data have not tended to be generally reported. Moreover, due to their highly comparative and their exploratory rather than explanatory approach, many of these studies have separated their samples of firms under analysis in different groups of born-globals and/or other types of firms to significantly differentiate their respective characteristics, behavior, and performance (Rennie, 1993; McDougall and Oviatt, 1996; Autio and Sapienza, 2000; Knight, 2000; Madsen et al., 2000; Servais and Rasmussen, 2000; Aspelund and Moen, 2001; Moen, 2002). Usually, those subgroups of the sampling firms have been empirically defined according to the sometimes arbitrary operationalization of the born-global concept in use. Finally, mainly descriptive, comparative statistics (such as frequencies, chi-squared analysis, T-tests, etc.), versus more sophisticated, multivariate approaches (correlation and regression analyses), have been used for conducting data analysis. Some relevant exceptions to this general assessment of the quantitative-oriented research can be found in most hypothesis-testing oriented empirical studies (Bloodgood et al., 1996; Burgel and Murray, 1998; Knight, 2000; Autio et al., 2000; and Zahra et al., 2000).

Regarding other studies making specific use of the (multiple) case-based approach (McDougall et al., 1994; Oviatt and McDougall, 1995; Coviello and Munro, 1995; Roberts and Senturia, 1996; Rasmussen et al., 2001; and Larimo, 2001), a certain triangulation of data sources exists, though a purposeful selection of firms has not always been well justified, research protocols are not explicitly mentioned, and usually the descriptive data of the different cases is presented in a

highly qualitative manner (by means, for instance, of score cards). This data is rarely supported with figures and/or statistics. Moreover, the specific techniques used for comparative data analysis (content-analysis or the pattern-matching with theory approach) seem to stress literal more than theoretical replication logic (Yin, 1989). This adds some problem regarding the key issue of the generalization possibilities associated with this mode of research. Future studies, applying the case-based approach should make a more rigorous use of this critical qualitative technique by focusing more explicitly on testing existing theory or building new one (Eisenhardt, 1989).

In summary, it can be argued that, although normally appropriate to each study's defined research problem, the overwhelming use of a single method approach of data collection and data analysis may not fully capture the key issues and processes under investigation. In our opinion, further research should make a more diversified use of these highly compatible methodologies, thus applying a multiple-method approach in conducting the empirical part. In this context of methodological diversification, and dealing with data triangulation and comparison, we believe that a more rigorous use of the (multiple) case study method, rather than the one detected in some of the studies above, may reveal itself as an extremely valuable combined research technique. According to some methodologist researchers, like Yin (1989), Eisenhardt (1989), and more recently Chetty (1996), this methodology is a very rigorous one that allows dynamic decision-making processes –like, for example, accelerated exporting- to be much more deeply investigated. In particular, this approach can be specially useful in research contexts where: (i) existing theories seem to be inadequate or incomplete; (ii) each firm should be studied from different perspectives and then compared with others; (iii) multiple data-collection and analytic methods should be applied (including, of course, quantitative research); and (iv) cross-industry biases, small size of samples, and resistance to (usually cross-sectional) survey methods could cause crucial empirical problems. We are convinced that the born global research issue is highly characterized by most of these aspects.

### **A cross comparison of key research findings**

While those more specific results contained in each separate study have been extensively reviewed in Table 2, in this section we are interested in extracting general patterns related to previous findings and conclusions in born globals research. More concretely, our discussion is organized according to both several communalities and major disagreements that can be identified along the existing literature. However, due to its condition of a highly consistent research field, some more common patterns of findings than controversial results emerge from our review.

First, with respect to communalities, several studies agree that the issue under study, accelerated internationalization from establishment or “born-globalness”, constitutes an increasingly distinctive pattern of the internationalization process of some SMEs when seen in comparison to other types of businesses (Rennie, 1993; Madsen et al., 2000; Servais and Rasmussen, 2000; Aspelund and Moen, 2001; Larimo, 2001; Moen, 2002). In addition, most of them manifest that the formation process of new ventures that are able to compete almost globally from inception, and also their rise in number, seems to be largely inconsistent with some traditional IB expansion theories (stage/process models) which tend to assume that firms become incrementally international long after they have been established (McDougall et al., 1994, 1999; Knight and Cavusgil, 1996; Roberts and Senturia, 1996; Oviatt and McDougall, 1997; Madsen et al., 2000; Moen, 2002). Rather, born globals expand internationally in a way that may be more in accordance with evolutionary thinking, organizational capability perspective, knowledge-and/or learning-based views, and networking theories (Madsen and Servais, 1997; Burgel and Murray, 1998; Autio and Sapienza, 2000; Autio et al., 2000; Zahra et al., 2000). Thus, in order to remain useful as an explanatory framework, such stage models should be extended and complemented accordingly with these and other perspectives from global strategic management and entrepreneurship (Wickramasekera and Bamberry, 2001; Zahra and George, 2002).

In particular, network theory applied to both, the founder/s and the new firm itself, has proved to be specially insightful for explaining the specific international development patterns of these highly entrepreneurial ventures (Oviatt and McDougall, 1994; McDougall et al., 1994; Oviatt and McDougall, 1995; Bell, 1995; Coviello and Munro, 1995; Madsen and Servais, 1997; Servais and Rasmussen, 2000; Wickramasekera and Bamberly, 2001; Larimo, 2001). A somewhat discrepating result in this sense is reported by Rasmussen et al. (2001) for whom, in spite of focusing deeply on the network approach, the existance of a network at the founding of a born global company was not found as important as previously expected. Other researchers should deal more directly with this issue in the future.

Also, a number of researchers have similarly discussed several elements for the existence, prevalence, and further development of INVs/born global firms at an individual, organizational, and/or environmental level (Oviatt and McDougall 1994, 1997; Knight and Cavusgil, 1996; Madsen and Servais, 1997). In particular, several industrial and environmental influences affecting new ventures globalization and market conditions are considered to be critical (Bloodgood et al., 1996; Roberts and Senturia, 1996; Knight, 2000; Rasmussen et al., 2001; Moen, 2002). Finally, some of these authors propose several future research lines that still should be addressed in this topic (Oviatt and McDougall, 1997; Madsen and Servais 1997; Zahra and George, 2002).

Second, in terms of major discrepancies of the research findings and conclusions, at least a couple of them deserve our attention. The first one refers to the possible identification of a specific “born global” firm’s profile in different industries (Rennie, 1993; Bloodgood et al., 1996; Madsen and Servais, 1997; Knight, 2000; Madsen et al., 2000; Servais and Rasmussen, 2000; Wickramasekera and Bamberly, 2001; Aspelund and Moen, 2001; Rasmussen et al., 2001; Moen, 2002) versus its specific location in high-tech sectors only (McDougall et al., 1994; Bell, 1995; Coviello and Munro, 1995; McDougall and Oviatt, 1996; Roberts and Senturia, 1996; Burgel and Murray, 1998; Autio et al., 2000; Zahra et al., 2000; Larimo, 2001). According to Autio and Sapienza (2000), the new venture internationalization theory seems to

be better suited to explain the early internationalization patterns of rather technology-intensive new firms.

Clearly, although this central question, of examining whether accelerated internationalization and/or born-globalized SMEs are indeed completely new and highly sector-specific phenomena or not, can only be depured and clarified by further research, we would like to speculate here with a plausible explanation for this critical contradiction generally found in the literature. We believe that small firm export behavior affect both tradicional and born global firms. However, born globals can be further classified as being “knowledge- and/or service-intensive” or “knowledge-based” firms (Bell and McNaughton, 2000). As this latter category of born globals, which is very closely-related to the emergence of new technologies (IT, biotechnology, etc.), have their core competence precisely in their sophisticated knowledge base (Oviatt and McDougall, 1999), their density in high-tech areas can be expected to be extremely high. In contrast, the former type of born globals make an intensive use of knowledge to develop new offerings, improve productivity, introduce new methods of production and/or improve service delivery, but are not inherently knowledge-based. However, this latter behavior seems to be increasingly happening in a number of industrial and service sectors, not only those which are considered to be highly technological. Thus, in our opinion, more and more countries, and particularly industries of a diverse technological content, will witness in the near future an increasing emergence and further development of mostly knowledge- and/or service-intensive born globals against more traditionally-oriented exporters.

A second area of a certain degree of empirical controversy and debate among researchers is related to the considerable variety and disparity of the results usually found in terms of those factors mostly characterizing succesful internationalization of INVs, global start-ups, and born globals (Servais and Rasmussen, 2000). As most of the current empirical research seems to be highly context-specific, almost every author in this field has aimed to elaborate his/her own list of such key success factors (Rennie, 1993; Oviatt and McDougall, 1995; Bell, 1995; Bloodgood et al., 1996; Knight and Cavusgil, 1996; McDougall and Oviatt, 1996; Roberts and Senturia,

1996; Burgel and Murray, 1998; Knight, 2000; Madsen et al., 2000; Servais and Rasmussen, 2000; Autio et al., 2000; Zahra et al., 2000; Wickramasekera and Bamberly, 2001; Aspelund and Moen, 2001; Larimo, 2001, and Moen, 2002).

Trying to be consistent with our integrative approach of this stream of literature, the *top-ten* characteristics most usually regarded as critical success factors for this type of newly-established, highly export-involved entrepreneurial firms abroad would be the following, not necessarily in this order of importance: 1) a managerial global vision from inception; 2) high degree of previous international experience on behalf of managers; 3) management commitment; 4) strong use of personal and business networks (networking); 5) market knowledge and market commitment; 6) unique intangible assets based on knowledge management; 7) high value creation through product differentiation, leading-edge technology products, technological innovativeness (usually associated with a greater use of IT), and quality leadership; 8) a niche-focused, proactive international strategy in geographically spread lead markets around the world from the very beginning, 9) narrowly-defined customer groups with strong customer orientation and close customer relationships; and, finally, 10) flexibility to adapt to rapidly changing external conditions and circumstances.

## **CONCLUDING REMARKS AND IMPLICATIONS**

In this paper, up to 27 of the most outstanding works from the last decade which deal more or less explicitly with the International New Venture, global start-up or born-global phenomenon have been firstly identified, and then fully examined and critically assessed as a basis for obtaining an adequate view of the state-of-the-art of this increasingly important research avenue in the field of International Entrepreneurship (IE). The methodology used for this review has allowed us to analyze a number of recent, purposefully-chosen studies that were systematically compared along the following criteria: 1) main objective and type of research; 2) theoretical framework/s of reference, 3) methodological issues, and 4) main findings and/or conclusions. As a result of this literature review, a critical assessment of the most relevant benefits and contributions as well as potential drawbacks, limitations or major discrepancies in the research

activities conducted so far has also been discussed. In the light of the above, and due to the basic orientation of this paper (an extensive literature review), a number of suggestions and implications follow as a future research agenda for other researchers in this topic. Somewhat more tentative implications both for managers and policy-makers are provided as well.

For researchers focused on investigating the SMEs' internationalization processes, and specially those interested in the born-global/INV phenomenon in a given context, we believe this study can clearly benefit them by having identified and also comparatively assessed the most relevant work carried out concerning this type of ventures. Throughout this paper, many of the opportunities still open for further research, as well as those inherent drawbacks currently affecting this area have been detected. In our opinion, both, new opportunities and major drawbacks existing in this research topic, seem to derive directly from the fact that the phenomenon of "born globalness" is perhaps quite recent in time and thus, not well defined as a key research issue yet.

In particular, specific directions for future researchers can be proposed firstly in terms of unifying and improving the rather too heterogeneous operational definitions and indicators of INV/born globals firms currently available in the literature, in order to make future research efforts more highly understandable and comparable. Also, the very diverse conceptual approaches existing in the INV/born global research tradition is motivating the lack of a generally-accepted, fully-explanatory model of this phenomenon (Oviatt and McDougall, 1999; Servais and Rasmussen, 2000). In the future, better formulated and more highly integrated theoretical frameworks -emerging from different disciplines- should support new lists of research propositions and/or hypothesis-building efforts in both, theoretical and empirical works. Some critical methodological decisions also need to be radically refined in further empirical studies. Other researchers should avoid, for instance, the use of a single research method and, actually, take much more advantage of the potential synergies resulting from an insightful combination of both quantitative- and qualitative-oriented research. A methodological strategy based upon longitudinal surveys of a large-scale, representative sample of firms

together with a number of case-based studies of both born-global and non-born global ventures would be, in our opinion, a very welcome one. Finally, previous patterns of empirical results detected above, in the form of both similarities and discrepancies, also open new directions for conducting research on born-globals, mostly in lesser investigated contexts, in order to confirm or reject such previous findings from a greater empirical base.

Thus, only by continuously observing the antecedents, conditions, processes of internationalization, and main characteristics of this specific type of firms as well as those of the entrepreneurs/managers who run them, a lot more will be learned about the limits of the existing internationalization theory. In particular, this seems especially relevant in the case of geographic contexts like ours, Spain, where so far the study of small entrepreneurial firms that may have become instantly international has been very scarce and rather exploratory in nature (Ripollés et al., 1999).

Therefore, some very stimulating outcomes emerge, in our opinion, from the international new ventures/born-globals research tradition widely reviewed and critically assessed in this study. We sincerely hope that by having shed light on these issues in a highly systematic and rigorous manner, further understanding and development in the inquiry of born-global firms will be achieved.

Before ending this paper, we would also like to indicate its possible implications for managers and policy-makers involved in international affairs. By having identified the most differentiating characteristics and potential international growth shown especially by these firms, entrepreneurs and/or managers in charge of international operations in their firms may also benefit from the content of this paper. In particular, we have found that a right combination of knowledge-based organizational resources together with an entrepreneur's distinctive profile (showing a clear international outlook from the founding of his/her business and previous international experience), and optimization of both personal and interorganizational relationships (networking) seem to be key preconditions for securing further international development and more successful performance of born-globals/INVs. In contrast, for policy-

makers, we would mainly stand out the increasing need existing to better address public policy in support of internationalization from the evidence that this type of exporting firms may require more well-tailored support from public agencies and programs due to the fast pace of their international development from inception.

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**Table 1. Bibliographic sources of the International Entrepreneurship studies**

<b>Source of publication</b>	<b>Number of works included in this review</b>
<i>The McKinsey Quarterly</i>	1
<i>European Journal of Marketing (EJM)</i>	2
<i>Journal of International Business Studies (JIBS)</i>	1
<i>Journal of Business Venturing (JBV)</i>	2
<i>Academy of Management Executive (AME)</i>	1
<i>Entrepreneurship Theory and Practice (ETP)</i>	1
<i>Industrial Marketing Management (IMM)</i>	1
<i>International Business Review (IBR)</i>	1
<i>Management International Review (MIR)</i>	1
<i>Journal of International Marketing (JIM)</i>	2
<i>Advances in International Marketing (AIM)</i>	3
<i>Academy of Management Journal (AMJ)</i>	2
<i>Asia Pacific Journal of Marketing and Logistics (APJML)</i>	1
<i>International Marketing Review (IMR)</i>	1
<i>Frontiers of Entrepreneurship Research (FER)</i>	1
<i>Others (chapters in edited books, working-papers, conference proceedings and/or presentations, etc.)</i>	6
<b>TOTAL NUMBER OF STUDIES ACCEPTED FOR ANALYSIS</b>	<b>27</b>

**Table 2. Chronologically-ordered contemporary research on International Entrepreneurship (INVs, Global Start-Ups, Born-Globals) 1993-2002\***

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
1. Rennie (1993)	<ul style="list-style-type: none"> <li>- To understand the reasons for the explosive growth of Born Globals and to develop insights to inform future policy and business planning.</li> <li>- Empirical, descriptive study.</li> </ul>	<ul style="list-style-type: none"> <li>- Not explicitly grounded on any specific theory.</li> <li>- Indicates several arguments for the rise of SMEs and their ability to compete globally.</li> </ul>	<ul style="list-style-type: none"> <li>- Australia's high-value-added manufacturing sector.</li> <li>- Survey (over 300 exporting firms), focus groups and in-depth interviews (60 firms).</li> <li>- Descriptive statistics.</li> </ul>	<ul style="list-style-type: none"> <li>- Rise of numerous SMEs that successfully compete globally (virtually from inception) without an established domestic base.</li> <li>- A distinctive fast-growing, "born-global" firm's profile can be found in all industries even in sectors considered to be declining.</li> <li>- Born globals are flexible and compete in niche markets based on quality and value created through innovative technology and product design.</li> </ul>
2. Oviatt & McDougall (1994)	<ul style="list-style-type: none"> <li>- To define and describe the increasing phenomenon of firms that are international from inception (INVs), and to present an explanatory framework.</li> <li>- Theoretical study.</li> </ul>	<ul style="list-style-type: none"> <li>- Definition of INVs as start-ups whose origins are international.</li> <li>- A theoretical framework on INVs is developed which integrates accepted MNE/IB theory with recent developments in Strategic Management and Entrepreneurship research.</li> <li>- Theoretical classification of INVs.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- 4 necessary and sufficient elements for the existence of new ventures that are instantly international (INVs): (1) organizational formation through internalization of some transactions, (2) strong reliance on alternative governance structures to access resources, (3) establishment of foreign location advantages, and (4) control over unique resources (knowledge).</li> <li>- 4 types of INVs are outlined also according to the number of countries involved and the coordination of value chain activities: (i) Export/Import Start-up, (ii) Multinational Trader, (iii) Geographically Focused Start-up, and (iv) Global Start-up.</li> </ul>
3. McDougall, Shane & Oviatt (1994)	<ul style="list-style-type: none"> <li>- To provoke a discussion of the limitations of existing theories from the field of IB in explaining the behavior of INVs.</li> <li>- Theoretical and case-study research.</li> </ul>	<ul style="list-style-type: none"> <li>- 5 generally accepted theories from IB are compared against the emergence and subsequent development of INVs: (1) Monopolistic Advantage Theory, (2) Product Cycle Theory, (3) Stage Theory of Internationalization, (4) Oligopolistic Reaction Theory, and (5) Internalization Theory.</li> </ul>	<ul style="list-style-type: none"> <li>- Compilation of 24 exploratory case studies of INVs in at least 10 countries, and comparison among themselves.</li> <li>- 12 case studies directly developed by the authors and analyzed by the use of 3 sources of evidence: (1) documents, (2) physical artifacts, and (3) semi-structured personal interviews conducted with the founder/founding team and/or chief financial officers of each firm.</li> </ul>	<ul style="list-style-type: none"> <li>- The formation process of INVs is not well explained by existing theories from the field of IB which assume that firms become international long after they have been formed.</li> <li>- Founders of INVs are individuals who see opportunities from establishing ventures that operate across national borders because of the competencies (networks, knowledge, and background) they have developed earlier and are unique to them.</li> <li>- They engage in international business from the time of venture formation so as to create international business competencies and to avoid path-dependence on domestic competencies that the firm may not be able to shift out of due to inertial forces.</li> <li>- They also prefer to use hybrid governance structures for their international activities to preserve resources during the cash-draining formation process.</li> </ul>
4. Oviatt & McDougall (1995)	<ul style="list-style-type: none"> <li>- To identify a pattern underlying the creation dynamics and success characteristics of global start-ups (new firms that are virtually global from inception) versus domestic new ventures.</li> <li>- Empirical, case study-based approach.</li> </ul>	<ul style="list-style-type: none"> <li>- A framework describing 6 key driving forces to determine whether the business being considered should be a global or a domestic start-up.</li> </ul>	<ul style="list-style-type: none"> <li>- Same as above.</li> </ul>	<ul style="list-style-type: none"> <li>- Characteristics of successful global start-ups are: (1) a global vision exists from inception, (2) managers are internationally experienced, (3) global entrepreneurs have strong international business networks, (4) preemptive technology or marketing is exploited, (5) unique intangible assets are present, (6) product or service extensions are closely linked, and (7) the organization is closely coordinated worldwide.</li> <li>- A progress report based on a comparative score card of 12 firms reveals that the first three characteristics are critical at founding.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
5. Bell (1995)	<ul style="list-style-type: none"> <li>- To analyze the relevance of the stages theory in the initial export decision and internationalization process of small firms belonging to high technology and service-intensive sectors (the computer software sector).</li> <li>- Empirical study.</li> </ul>	<ul style="list-style-type: none"> <li>- Export development/ internationalization “stage” models.</li> </ul>	<ul style="list-style-type: none"> <li>- Small computer software firms (less than 200 employees) in Finland, Ireland and Norway.</li> <li>- Mail survey (98 firms) followed by in-depth personal interviews (24 firms)</li> <li>- Qualitative, cross-sectional description supported by frequencies.</li> </ul>	<ul style="list-style-type: none"> <li>- Market selection influenced by client followership, sectoral targeting, and the industry’s trend to collaborate (the concepts of psychic and geographic distance were not supported).</li> <li>- Although firms exhibited increased commitment to export, this was done by entering new markets rather than increasing investments in existing overseas markets (findings did not support incremental internationalization).</li> <li>- The Network Approach is suggested for better explaining the frequently non-linear behavior of computer software firms.</li> </ul>
6. Coviello and Munro (1995)	<ul style="list-style-type: none"> <li>- To examine the entrepreneurial high-technology ventures’ approach to international market development focusing on their use of network relationships to pursue foreign market opportunities and conduct international marketing activities.</li> <li>- Empirical, exploratory research. Case-study approach.</li> </ul>	<ul style="list-style-type: none"> <li>- Application of a network theory perspective in the context of the entrepreneurial firm that seeks to expand internationally.</li> <li>- The impact of network relationships on international market development, and marketing-related activities within international markets is widely examined.</li> </ul>	<ul style="list-style-type: none"> <li>- 4 in-depth case studies of the internationalization processes of small, entrepreneurial firms in the New Zealand software industry at a relatively mature stage of international development.</li> <li>- Multiple in-depth interviews with the key decision-makers combined with secondary data.</li> <li>- Structured mail survey of 25 younger firms in the same industry and at an earlier stage of internationalization.</li> <li>- Pattern-matching with theory, descriptive statistics, and content analysis.</li> </ul>	<ul style="list-style-type: none"> <li>- Network theory offers a rich perspective on how and why the international development patterns of entrepreneurial firms occur. More concretely, in terms of the impact of network relationships on international market development and on marketing-related activities, both case and survey results revealed that:</li> <li>- The relatively rapid and disperse involvement in foreign markets by entrepreneurial hi-tech firms can be linked to opportunities and constraints emerging from a network of relationships (both formal and informal).</li> <li>- A heavy reliance on network relationships for marketing-related activities is also detected, though a tendency existed for more established high-tech firms to develop internal marketing capabilities.</li> </ul>
7. Bloodgood, Sapienza and Almeida (1996)	<ul style="list-style-type: none"> <li>- To examine the antecedents (strategic and structural characteristics) and outcomes (subsequent performance in terms of sales growth and profitability) of the extent of internationalization of new-highly potential ventures based in the US and still relatively young at the time of the initial public offering (IPO).</li> <li>- Empirical, hypothesis-testing, and quantitative research.</li> </ul>	<ul style="list-style-type: none"> <li>- After reviewing the monopolistic advantage theory and stage theory applicability for explaining new venture internationalization, a resource-based view of this phenomenon is used as a relevant theoretical framework.</li> <li>- Hypothesed relationships are established among the initial resource conditions (TMT’s international experience, the firm’s sources of competitive advantage, degree of innovativeness, and firm’s size), the extend of internationalization achieved at IPO, and subsequent firm performance.</li> </ul>	<ul style="list-style-type: none"> <li>- A sample size of 61 venture capital-backed, high-potential firms drawn from several industries that were less than five years old at the time of IPO in 1991 and whose performance results were measured in 1993.</li> <li>- Apart from details on the operationalization of the different variables, no other methodological information is given.</li> <li>- Descriptive statistics and zero-order correlations are provided.</li> <li>- To test the hypotheses, initial conditions were regressed against the firm’s extend of internationalization, and then both were regressed against firm performance two years later. Firms and industry controls were applied in these analyses.</li> </ul>	<ul style="list-style-type: none"> <li>- A resource-based model on new venture internationalization is significantly, though partly, supported according to this research work.</li> <li>- (Early) internationalization is directly related to the use of product differentiation as a source of competitive advantage, the international work experience of the board of directors, and firm size at the time of IPO.</li> <li>- The use of low cost, product differentiation, or innovation as a source of competitive advantage, and size at the time of IPO were directly related to sales growth in the two-year period following the IPO.</li> <li>- The level of internationalization at the time of the IPO is positively related to earnings two years later.</li> <li>- As a general conclusion it can be added from this study that the rapid globalization of markets requires that certain firms compete internationally virtually from the outset. However, results also suggest that early internationalization is finally contingent upon the industry and resource conditions faced by the firm at founding and soon thereafter.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
8. Knight and Cavusgil (1996)	<ul style="list-style-type: none"> <li>- (1) To review traditional internationalization theory and criticisms thereof; (2) to describe the recent emergence and characteristics of born global firms; (3) to propose factors that may have given rise to their emergence; (4) to suggest implications that born globals may hold for management at smaller companies; and (5) to offer possible approaches for conducting research on these firms.</li> <li>- Theoretical, descriptive study.</li> </ul>	<ul style="list-style-type: none"> <li>- Traditional Internationalization Theory (including both the Uppsala and Innovation models) is deeply reviewed.</li> <li>- Then, the study is built upon the most relevant criticisms posed for this theory's validity and assumptions and on prior studies characterizing the born global firm in different geographic contexts.</li> <li>- Recent factors and trends giving rise to the emergence of the born global phenomenon are discussed.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- Growing evidence of the widespread emergence of born globals in numerous countries of the developed world.</li> <li>- The born global phenomenon suggests an important new challenge to traditional internationalization theory.</li> <li>- Common characteristics of the born global firm are identified according to previous export-related research among SMEs.</li> <li>- 6 major trends promoting born globals' emergence and international endeavors are: 1. the increasing role of niche markets; 2. recent advances in process technologies; 3. recent advances in communications technology; 4. inherent advantages of SMEs (flexibility, adaptability, etc.); 5. the means of internationalization much more accessible to all firms; and 6. global networks.</li> </ul>
9. McDougall and Oviatt (1996)	<ul style="list-style-type: none"> <li>- To examine the link existing between new venture performance and the internationalization of new ventures.</li> <li>- Empirical, 2-year period (follow-up) study.</li> </ul>	<ul style="list-style-type: none"> <li>- A framework examining changes in degree of internationalization (percentage of international sales) in conjunction with changes in strategies and their implications on venture performance.</li> </ul>	<ul style="list-style-type: none"> <li>- A sample of 62 US new venture manufacturers (36 of which were originally domestic and 26 originally international) in the computer and communications equipment industries during the late 1980s.</li> <li>- Descriptive quantitative data and subgroup analysis.</li> </ul>	<ul style="list-style-type: none"> <li>- Higher levels of internationalization (measured as % of foreign-to-total venture sales) were associated with higher relative market share two years later, whereas no significant direct relationship existed between percentage of international sales and subsequent ROI.</li> <li>- During the 2-year study period, many of the ventures clearly modified their level of internationalization.</li> <li>- Increased international sales in technology-based new ventures seems to require simultaneous supporting strategic actions in order to positively impact venture performance. Thus, successful internationalization appears to imply changes in the venture's strategy.</li> </ul>
10. Roberts & Senturia (1996)	<ul style="list-style-type: none"> <li>- An exploratory effort to explain the globalization patterns, trends, and success of emerging high-technology companies.</li> <li>- Empirical study.</li> </ul>	<ul style="list-style-type: none"> <li>- Development of an integrated model of globalization that combines a cluster of other influences with elements of two traditional models of global expansion: (1) Vernon's specific product cycle model, and (2) the more generic internationalization process models.</li> </ul>	<ul style="list-style-type: none"> <li>- A convenience, non-random sample of 19 Massachusetts-based, independent companies that supply software or peripheral products for desktop computing.</li> <li>- In-depth field interviews with senior employees with direct responsibility for international activities.</li> <li>- Descriptive and rather indicative chi-squared statistical analyses.</li> </ul>	<ul style="list-style-type: none"> <li>- Unique aspects of one emerging high-tech industry result in a vastly accelerated globalization pattern –not leading toward overseas production activities- that is inconsistent with traditional expansion models.</li> <li>- The integrated model, building upon Vernon, insights from the generic internationalization model, external environmental variables and the internal “managerial internationalization” process shows far better explanatory power than the traditional approaches.</li> <li>- Globalization success is most strongly linked to how aggressively senior management allocates internal resources to developing an overseas business model.</li> <li>- External environmental forces also affect globalization of high-tech products and firms.</li> </ul>
11. Oviatt & McDougall (1997)	<ul style="list-style-type: none"> <li>- To explore and highlight recent challenges to traditional internationalization theories due to the apparently increased significance of INVs and the accelerated speed of their internationalization process.</li> <li>- Theoretical study in the form of a descriptive research agenda.</li> </ul>	<ul style="list-style-type: none"> <li>- General description of existing internationalization theories and their historical context.</li> <li>- Delineation of key research questions related to INVs in order to address emerging empirical dilemmas and to suggest new empirical directions and methods.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- The risk-averse and incremental nature of internationalization described by traditional process theory may inadequately explain the case of INVs.</li> <li>- 7 research issues configure a successful program of research on the internationalization process of small, new ventures: (1) the prevalence of INVs, (2) the role of INVs, (3) international business experience, (4) industry influences in internationalization, (5) managing international risks, (6) accelerated internationalization, and (7) inward and outward internationalization of value chain activities.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
12. Madsen & Servais (1997)	<ul style="list-style-type: none"> <li>- To summarize the empirical evidence reported about born-globals, to interpret this phenomenon at a deeper theoretical level by offering a new conceptualization of the research issue, and to generate propositions about the antecedents as well as the necessary and sufficient conditions for the rise of these firms.</li> <li>- Literature review and theoretical study.</li> </ul>	<ul style="list-style-type: none"> <li>- Driving forces and theoretical approaches of the phenomenon of Born-globals.</li> <li>- Theoretical links to the U-Model, the (international) network approach, and the evolutionary approach.</li> <li>- A research model of Born-globals is outlined as a general framework for conducting future research into this phenomenon.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- The born-global phenomenon is not limited to high-tech industries and/or specific countries.</li> <li>- 7 theoretically and empirically derived propositions about the antecedents of born-global firms, the extension of this phenomenon, the international location of their activities, their sources of supplementary competences, their growth requirements, and their propensity inside the national economies.</li> <li>- Born-globals grow in a way which may be more in accordance with networking and evolutionary thinking.</li> <li>- The propensity and further development of the born-global firm is likely affected by the characteristics of the environment, and those of the organization and the founder/entrepreneur, simultaneously.</li> </ul>
13. Burgel & Murray (1998)	<ul style="list-style-type: none"> <li>- To use a large set of data to analyze the determinants of the international market entry choices (selling abroad either by direct exporting or through the use of distributors) made by start-up companies in high-technology industries.</li> <li>- Empirical, hypothesis-testing research.</li> </ul>	<ul style="list-style-type: none"> <li>- Two predominant foreign market entry decisions (direct exporting vs. exporting through distributors) for technology based start-ups are hypothesized to be a function of firm-specific factors, product-specific factors, and target-country specific factors.</li> <li>- Key elements of three competing internationalization theories (the stage models, the transaction-cost economics, and the organizational capability perspective) are incorporated in the authors' hypotheses construction thus forming a multivariate approach.</li> </ul>	<ul style="list-style-type: none"> <li>- The entry decision itself, and not the firm, was chosen as the main unit of analysis.</li> <li>- Random sampling process stratified by size class and service/manufacturing (33 high-tech industries in total).</li> <li>- Finally, 398 export decisions were taken from a UK survey of 246 usable technology-based start-ups with international activities.</li> <li>- Mail survey addressed to the managing directors.</li> <li>- Descriptive statistics and multivariate, regression analysis (three probit models)</li> </ul>	<ul style="list-style-type: none"> <li>- The entry mode decision is necessarily a trade-off between the resources available and the support requirements of the customer.</li> <li>- Issues of the innovativeness of the technology and the historic channel experience of the firm in its domestic market are particularly strong determinants of mode choice. Due to "liability of alienness" firms selling products that incorporate innovative technology, as well as those approaching large target markets, and start-ups already using intermediaries in their home market tend to rely more on foreign distributors. Direct exporting, in contrast, is chosen when managers show previous international working experience or when a product requires a significant client-specific adaptation.</li> <li>- According to these results, an organizational capability perspective on the behavior of start-up companies in high-tech sectors offers a better explanation of the entry decisions than either transaction-cost or stage theory.</li> </ul>
14. Oviatt and McDougall (1999)	<ul style="list-style-type: none"> <li>- To design a framework in order to stimulate discussion plus theoretical and empirical efforts that may eventually lead to a contemporary dynamic theory of firm internationalization and its acceleration.</li> <li>- Theoretical study (identification of key research questions and propositions).</li> </ul>	<ul style="list-style-type: none"> <li>- A framework for developing a dynamic theory explaining accelerated international entrepreneurship (involving breath and modes of internationalization, and the role of emerging businesses) is identified.</li> <li>- While rapidly changing technology is taken as the foundation of accelerated internationalization, four other building blocks (political economy, industry conditions, firm effects, and the management team) also complete this conceptual framework.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- Increasing numbers of new and small firms which emerge to conduct business across national borders are bypassing the incremental, step-wise pattern of internationalizing. In addition, the speed with which they internationalize is accelerating.</li> <li>- 10 issues regarding technological innovation, international regulation, opportunities for foreign growth, the prevalence of emerging business, the size and degree of regulatory protection of a country's economy, industry conditions, firm effects –including both firm size and firm strategy-, and the role played by the management team are hypothesized to be increasing in relative importance to tacit managerial knowledge of foreign markets (U-Model) as determinants of the speed, breath, and mode of internationalization, and the role of emerging firms.</li> <li>- However, the difficulty of devising a rich yet parsimonious theory that explains accelerated firm internationalization is still significant.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
15. Knight (2000)	<ul style="list-style-type: none"> <li>- To investigate the interrelationships of entrepreneurial orientation, marketing strategy, tactics and firm performance among SMEs affected by globalization.</li> <li>- Empirical, hypothesis-testing research.</li> </ul>	<ul style="list-style-type: none"> <li>- A theoretical background is provided on theory of entrepreneurial orientation, marketing strategy, tactics, and their linkage to performance.</li> <li>- A theoretical model and hypothesized relationships are build to anticipate the effect of entrepreneurial orientation (culture) on performance in the moderating context of globalization and through the mediating influences of marketing strategy and tactics.</li> </ul>	<ul style="list-style-type: none"> <li>- 268 randomly chosen, usable manufacturers in highly global industries reflecting electronic and electrical equipment, textile mill products, apparel, and related products.</li> <li>- Mail survey (to the CEOs).</li> <li>- Construct validity and reliability (LISREL) analyses.</li> <li>- Globalization's effect is tested through subgroup analysis, which splits the sample into high-/ low-globalization groups.</li> <li>- T-tests, correlation analysis and multivariate regression, and differences comparisons in the results of hypotheses testing between the two sub-samples.</li> </ul>	<ul style="list-style-type: none"> <li>- Results indicate that among small firms that perceive higher levels of globalization:</li> <li>- 1. Entrepreneurial orientation is associated with the development of a quality leadership.</li> <li>- 2. Globalization response, and 3. Internationalization preparation are positively associated with corporate performance.</li> <li>- Thus, in general, SMEs strongly affected by globalization tend to put greater emphasis on acquiring technology, on responding to internationalization, and on preparing in advance before entering foreign markets as important managerial tactics in dealing with the forces of globalization.</li> </ul>
16. Autio & Sapienza (2000)	<ul style="list-style-type: none"> <li>- To examine the domain and the explanatory validity of two currently seen as competing views of the internationalization processes of SMEs.</li> <li>- Empirical, hypothesis-testing research.</li> </ul>	<ul style="list-style-type: none"> <li>- Process Theory of Internationalization (PTI)</li> <li>- New Venture Internationalization Theory (NVIT).</li> <li>- Similarities and differences between these two views help the authors define their respective domain boundaries and derive testable hypotheses accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>- 230 technology-intensive new British firms operating in 17 different industry sectors met sample selection criteria.</li> <li>- Mail survey.</li> <li>- Different sub-sections of the empirical sample according to the internationalization stage of each firm.</li> <li>- Hierarchical regression analyses.</li> </ul>	<ul style="list-style-type: none"> <li>- The two models (NVIT and PTI) should be seen as complementary rather than competing, because both emphasize learning and path-dependencies on the international growth of SMEs.</li> <li>- The NVIT may be better suited to explain the early internationalization patterns of technology-intensive new firms, whereas the PTI might be better suited to explain internationalization patterns in more advanced stages.</li> <li>- Salience of the knowledge-based view in understanding international growth and development patterns of technology-intensive new firms.</li> </ul>
17. Madsen, Rasmussen & Servais (2000)	<ul style="list-style-type: none"> <li>- To provide new empirical evidence, coming from the Danish case, about the structure and behavior of born globals (products/markets/competition, geographical markets served, and their choice of entry modes as well as control of marketing activities) in comparison with other types of exporters.</li> <li>- Descriptive and comparative empirical research study.</li> </ul>	<ul style="list-style-type: none"> <li>- Brief description of the main driving forces behind the recent rise of born globals based upon other authors' contributions.</li> <li>- Born global firms are expected to be different in terms of their degree of specialization and niche orientation, of the geographical markets they choose to enter first in, and of their choice of entry modes into foreign markets as well as control over marketing practices.</li> </ul>	<ul style="list-style-type: none"> <li>- A valid sample of 272 manufacturing Danish SMEs (between 10-499 employees) with foreign sales is used.</li> <li>- Mail survey addressed to the CEO.</li> <li>- 47 out of the 272 firms were categorized as born-globals according to several standard operational criteria and then compared against other three types of exporters (experimental exporters, traditional exporters, and international firms).</li> <li>- Frequencies analysis and descriptive statistics looking for statistically significant differences are used.</li> </ul>	<ul style="list-style-type: none"> <li>- Typical Danish born globals tend to be quite small and most operate in non-high tech industries.</li> <li>- The group of born globals is much younger than the other exporters, they have started exporting right away and show very extensive foreign activity quicker, thus they do not follow a traditional slow and gradual pattern in their internationalization process.</li> <li>- Born globals show a unique profile compared with all other groups of exporters with regard to different factors. They seem to target a narrow customer group which may be located in many different geographical places and they build up sales and marketing networks with external partners.</li> <li>- Except for the characteristics mentioned above, the group of born-globals resemble international firms much more than they resemble experimental and traditional exporters in terms of their production methods, geographical scope, the use of intermediaries abroad, and their proactive and global behavior.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
18. Servais & Rasmussen (2000)	<ul style="list-style-type: none"> <li>- To explore some of the main characteristics previously reported about born-globals and to relate these findings to a taxonomy of born-globals and factors facilitating different types of these firms using data from a survey in Denmark.</li> <li>- Theoretical and empirical (longitudinal) study.</li> </ul>	<ul style="list-style-type: none"> <li>- Review of external driving forces as preconditions for the rise of born-globals.</li> <li>- Although comprehensive theoretical explanations of the phenomenon of born-globals are still lacking, evolutionary economic thinking (and even part of the original logic behind the stages models) as well as the network approach to internationalization (both local and global networks), and the possible links existing among themselves are the chosen frameworks to understand and explain this phenomenon.</li> </ul>	<ul style="list-style-type: none"> <li>- 144 rather small and highly export-involved Danish born-globals located in several industries (though not focusing on high tech firms only) of which 22 participated in a case-approach interview and 77 answered a questionnaire.</li> <li>- Selection of firms was based upon an earlier survey study and upon on-going collection of data in Denmark.</li> <li>- The sample is split into four groups of born-globals (young and big, young and small, old and small, and old and big) in terms of its year of foundation and the number of employees, and then systematically compared on different factors by means of frequencies analysis and corroborating descriptive data.</li> </ul>	<ul style="list-style-type: none"> <li>- Born-globalness indeed constitutes a manifest category of the internationalization process of SMEs.</li> <li>- Networks, both on the local and on the global markets, are important for the majority of these firms.</li> <li>- Regarding the export channels used by the analyzed Danish Born Globals, some of the results are in accordance with the gradual approach, but still all types of these very export-oriented firms –young and old, small and big- to a high degree rely on the use of agents and direct sales to end users.</li> <li>- Almost all firms, and specially the young ones, did start in the group they are placed in 1996 (small or big), meaning that they seemed to find their right size from the foundation. With a few exceptions, these Danish born-globals were not growing measured in the number of employees and had absolutely no intention of doing it.</li> <li>- In terms of their international vs. global condition, young born globals are more oriented towards the international (European) markets than older ones, but no difference is found between the large and small young firms in their orientation towards European or global markets.</li> </ul>
19. Autio, Sapienza & Almeida (2000)	<ul style="list-style-type: none"> <li>- To shed light on the effect of when in its development a firm first goes international on the rate of its subsequent international growth by focusing on the strategic implications of age at entry, knowledge intensity, and imitability on international sales growth in entrepreneurial firms.</li> <li>- Quantitative, hypothesis-testing empirical research with panel data.</li> </ul>	<ul style="list-style-type: none"> <li>- A knowledge- and learning based framework is developed to examine the effects of the age of a firm at first international sales, its knowledge intensity, and the imitability of its core technology on its subsequent international growth.</li> <li>- Consequently, testable hypotheses are build to test the postulated learning effects of age at entry, the amplifying effects of knowledge intensity, and the limiting effects of imitability on the firm's growth in international sales.</li> </ul>	<ul style="list-style-type: none"> <li>- Panel data on international sales over five years for 59 responding entrepreneurial, privately-held small firms in a rapidly growing, high-tech Finnish market (electronics industry).</li> <li>- Data were collected via mailed surveys (1993) and follow-up telephone interviews were carried out in 1997.</li> <li>- Summary statistics (means, standard deviations, ranges), and zero-order correlations among the independent variables were obtained.</li> <li>- 3 regression models were used for hypothesis-testing.</li> </ul>	<ul style="list-style-type: none"> <li>- The median age at first international entry was 4 years, with 20% of the sample firms initiating international sales during their first year of operation. On the average, these firms grew at a compound annual rate of 31% in international sales (1992-1997).</li> <li>- Earlier initiation of internationalization and greater knowledge intensity are associated with faster international growth. Thus early pursuit of international opportunity induces greater entrepreneurial behavior and confers a growth advantage.</li> <li>- Contrary to expectations, firms with more imitable technologies also grew faster, thus questioning current views of the role of imitability in international growth.</li> <li>- Both conceptual and empirical bases regarding the process of internationalization of younger firms are provided in terms of how and why knowledge accumulation/learning are critical to international growth.</li> </ul>
20. Zahra, Ireland & Hitt (2000)	<ul style="list-style-type: none"> <li>- To examine the effects of international expansion, as measured by international diversity and mode of market entry, on a new venture's technological learning and the effects of such learning on its financial performance.</li> <li>- Empirical, hypothesis-testing study.</li> </ul>	<ul style="list-style-type: none"> <li>- From a knowledge and learning-based perspective, a conceptual model integrating several hypotheses is outlined which highlights the effects of new ventures firms' international expansion activities on their technological learning and the implications of knowledge integration for technological learning gained through international expansion.</li> </ul>	<ul style="list-style-type: none"> <li>- 321 independent and corporate INVs from 12 high-tech, US sectors</li> <li>- Data obtained from a combination of two-wave mail survey (1993), secondary sources, archival data, and phone/e-mails contacts with firms and trade associations.</li> <li>- In 103 firms, respondents included more than 1 key manager/executive.</li> <li>- Response bias, reliability and validity of the data were tested.</li> <li>- Descriptive statistics and several multivariate regression analyses.</li> </ul>	<ul style="list-style-type: none"> <li>- This study adds to knowledge not only of international diversity and entry modes and their effects on performance and learning, but also to knowledge about new ventures. More specifically, data are provided on the (technological) learning that occurred inside them.</li> <li>- International diversity and high-control entry modes indeed increase technological learning. In turn, this new technological knowledge internally created has a positive effect on firm performance (ROE and sales growth).</li> <li>- International diversity and mode of entry have a positive, direct effect on new venture's performance, in addition to their more indirect effect of increasing technological learning.</li> </ul>

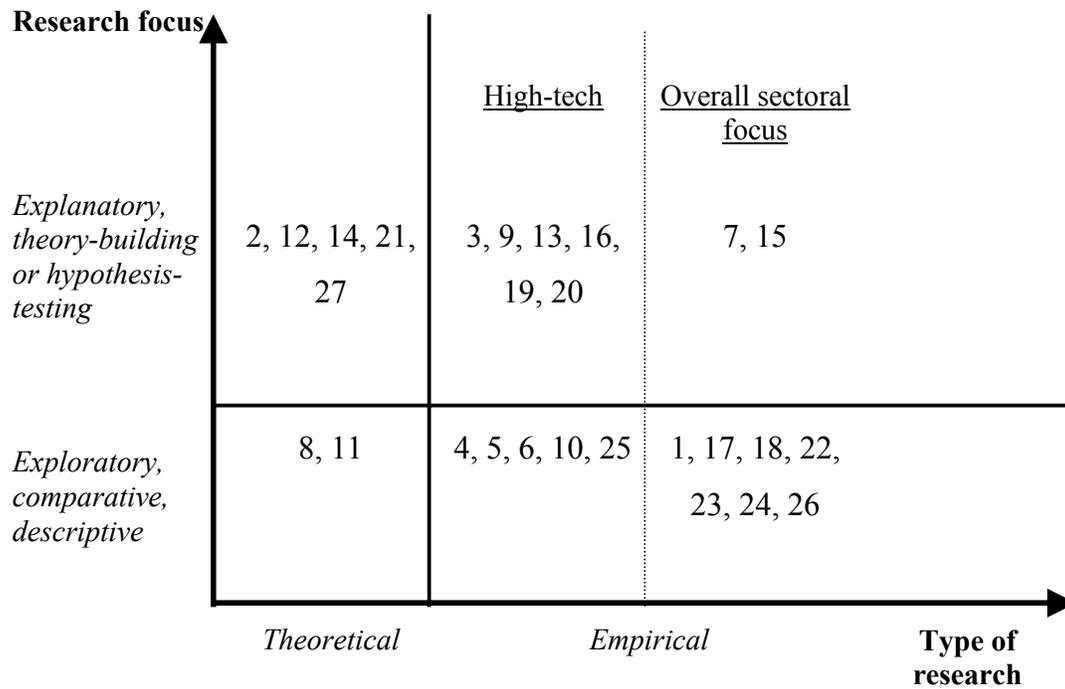
Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
21. Bell and McNaughton (2000)	<ul style="list-style-type: none"> <li>- This study is aimed to clarify the challenge that the growing emergence of born global (knowledge/service-intensive or knowledge-based) firms represent to public policy in support of SME internationalization. Thus, new policy directions and recommendations in support of these firms are provided and widely justified.</li> <li>- Theoretical-content study.</li> </ul>	<ul style="list-style-type: none"> <li>- Derived from a review and synthesis of the literature, an eclectic, normative model of small firm internationalization is formally presented that seeks to integrate the diverse pathways smaller firms may take during their internationalization process.</li> <li>- This model is developed around five key issues: external and internal environment, managers' mental model, state of internationalization, and knowledge as a source of competitive advantage.</li> <li>- Also, recent trends that have lead to the emergence of born-globals are reviewed.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- Major differences in internationalization (process) behavior, in terms of motivation to internationalize, international objectives, international expansion patterns, pace, method of distribution/entry modes, and international strategies, exist between traditional firms and born global (knowledge-/service-intensive or knowledge-based) firms.</li> <li>- However, the current activities of most of the national export promotion organizations (EPOs) rather focus on the needs of traditional firms as they are configured to support an incremental internationalization process.</li> <li>- The more rapid pace of internationalization among born globals presents a major challenge to EPOs, not only in terms of providing assistance in a timely manner, but also in respect to the nature of the support provided.</li> <li>- As a consequence of the above, public policy for small firm internationalization requires fundamental reconsideration in order to better address the specific support needs of born global firms.</li> </ul>
22. Wickramasekera & Bamberly (2001)	<ul style="list-style-type: none"> <li>- This study is aimed to ascertain if the phenomenon of born-global firms exists within the Australian SMEs wine industry, the factors associated with being a born global, and the challenges this poses to traditional "stage" theories and the incremental, sequential approach to internationalization.</li> <li>- Empirical, exploratory research.</li> </ul>	<ul style="list-style-type: none"> <li>- An overview of existing export behavior theories and of previous research into born-globals implicitly delineates the theoretical framework and key research issues of this study.</li> </ul>	<ul style="list-style-type: none"> <li>- Mail survey of a successful regional industry composed of a "raw" sample of 292 SMEs Australian winemakers.</li> <li>- Questionnaires were targeted at the marketing manager of each winery or the person regarded as being responsible for the firm's decision whether or not to export.</li> <li>- 8 semi-structured interviews with winery managers.</li> <li>- Frequencies analysis, mean-test and qualitative description.</li> </ul>	<ul style="list-style-type: none"> <li>- The phenomenon of "born globalness" is not confined to the high technology firms as it also extends to regional firms such Australian wineries.</li> <li>- The acceleration in internationalization is brought about by management experience in the industry, international market knowledge, overseas contacts (networks), coupled with management commitment.</li> <li>- This phenomenon provides in fact an additional support for stage models only when examined in conjunction with networks as an explanatory variable of internationalization, and when other management factors are also taken into consideration.</li> </ul>
23. Aspelund and Moen (2001)	<ul style="list-style-type: none"> <li>- A comparison of three different generations of Norwegian exporters to investigate whether differences (in terms of export behavior and export performance antecedents) exist between exporting SMEs based upon the time period within which they were established.</li> <li>- Comparative, cross-sectional study.</li> </ul>	<ul style="list-style-type: none"> <li>- The conceptual basis lies on the Aaby &amp; Slater's (1989) model for assessing export performance, supported with a general discussion of the recent trends facilitating the emergence of flexible specialists and born-global exporters vs. mass producers.</li> <li>- 2 research questions, in the form of general (implicit) hypotheses, are inquired.</li> </ul>	<ul style="list-style-type: none"> <li>- Mail survey of 213 valid Norwegian small -but devoted- exporting firms.</li> <li>- Sampling firms were then clustered into 3 groups (traditional exporters, flexible specialists, and born-globals) according to their age.</li> <li>- Comparison analysis along the selected categories (one-way analysis of variance).</li> <li>- 13 regression analyses are used to test whether firms of different age had different export performance antecedents.</li> </ul>	<ul style="list-style-type: none"> <li>- Results revealed statistically significant distinguishing features between the various generations of exporters. A firm's export behavior and performance are partly contingent on the year of establishment (firm age), resulting in systematic differences between these generations of exporting firms.</li> <li>- The speed of the internationalization has increased for the recently established firms.</li> <li>- Key factors for the Born Globals (those firms which just a few years after establishment achieve considerable sales in a number of export markets) were found to be technological competitive advantage, niche focused export strategy, and widespread use of IT combined with strong consumer orientation.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
24. Rasmussen, Madsen & Evangelista (2001)	<ul style="list-style-type: none"> <li>- To see how the founder of a born-global (a company that is internationalized right from the beginning) has reduced the equivocality in relation to others, specially international actors, through two major activities in the founding process: sensemaking though enactment and networking.</li> <li>- Empirical, case-oriented qualitative study with data from Danish and Australian born-global firms.</li> </ul>	<ul style="list-style-type: none"> <li>- Past research on the born global firms mostly focusing on theoretical and empirical research conducted in Denmark and Australia, the two geographic contexts of this study.</li> <li>- Based upon these antecedents, and focusing on the founder and his/her interaction with the environment (the founding process itself), an initial and revised research model of the born-global firm are developed stressing two connected processes and their characteristics: sensemaking and networking.</li> </ul>	<ul style="list-style-type: none"> <li>- Interviews conducted in Denmark and Australia allow the authors to develop the 5 case studies of this research (three of the cases refer to Danish born-globals and the two other to Australian ones).</li> <li>- Each case is individually analyzed first, and then compared with the others looking some common patterns, in terms of company information, the founders' background, the founding process (sensemaking, networking, and internationalization), and notes/analysis.</li> </ul>	<ul style="list-style-type: none"> <li>- From these 5 case studies it can be drawn that internationalization was not a strategic objective for the founders in the founding process, but something that was necessary if they would found this or that type of firm. Thus, other reasons than to found a highly international company capitalized the founding decision, though the high degree of internationalization followed in all cases.</li> <li>- The process of sensemaking can hold disparate elements together and create action. However, the existence of a network at the founding of the born-global was not as important as expected, thus implying that it is possible to found a new, highly international firm from the ground with just a good idea, some experience, and without any previous network of the founder being involved.</li> <li>- The born-global issue must be studied in the context of the degree of internationalization in the actual industry.</li> </ul>
25. Larimo (2001)	<ul style="list-style-type: none"> <li>- To add new information for understanding SME's internationalization, specially that of born global type companies. This goal is achieved by reviewing the main features of the Nordic models of internationalization, and then by ckecking their fit to the internationalization of born-globals in terms of their development of product, markets, operation strategies and success factors in foreign markets.</li> <li>- Case-study approach of two Finnish born-globals.</li> </ul>	<ul style="list-style-type: none"> <li>- Nordic internationalization models: the Uppsala Model developed by Johanson &amp; Vahlne and the POM-model by Loustarienen.</li> <li>- Characteristics and reasons for the existance of born-global firms, conditions giving rise to them, and common features of this type of firms are built upon previous research efforts made by several authors in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>- 2 selected cases of Finnish born-globals are comparatively analyzed with respect to the background and development of the company, sales object, market and operation strategies, networks, market and competition, and finally recent and future prospects of each case company.</li> <li>- The data for the two cases is based on those received during earlier projects lead by the author, annual reports and other interim material, and interviews with an informant manager (in the fist case firm) and with the marketing manager (in the second one).</li> </ul>	<ul style="list-style-type: none"> <li>- The 2 born-globals cases behaved in their sales object, market, and operation mode strategies according to an evolutionary framework (the Nordic internationalization models). However, the initiation of exporting from the establishment, and the expansion related to market and operation strategies were extremely rapid processes.</li> <li>- Fast decision-making helped these two firms react fast and be more willing to take greater risks. Also common to both companies were being focused on a niche market and on their core competence areas, strong market commitment, and international outlook by the management rather from inception.</li> <li>- SMEs can internationalize their operations very rapidly and simultaneously be profitable when competing against MNEs. Value creation and flexibility in the form of high quality, technological innovativeness, networking and close customer relationships seem to be critical.</li> </ul>
26. Moen (2002)	<ul style="list-style-type: none"> <li>- To develop further understanding of the born-global/INV phenomenon by studying the differences existing between born-globals and those exporting firms not classified as born-globals in terms of competitive advantages, export strategy, global orientation, and environmental situation.</li> <li>- Empirical, comparative study of small firms in 2 European countries.</li> </ul>	<ul style="list-style-type: none"> <li>- The basic research questions are framed in terms of the factors postulated in the Aaby &amp; Slater's model of export performance, past evidence of born-globalness, factors triggering it, and several reasons justifying the importance of this increasing phenomenon: firms that engage in significant international activity a short time after being founded.</li> </ul>	<ul style="list-style-type: none"> <li>- A valid sample of 335 Norwegian and 70 French randomly selected firms with fewer than 250 employees, classified as exporters and manufacturers was usable for this study.</li> <li>- Mail survey addressed to top level managers.</li> <li>- Companies in both countries were assigned into 4 groups according to their export-to-sales ratio and year of foundation (old and local, old and global, new and local, and new and global or born-global).</li> <li>- Comparative descriptives, one-way analysis of variance, and Bonferroni tests are performed.</li> </ul>	<ul style="list-style-type: none"> <li>- A substantial number of newly established exporting firms are born-globals. These firms have a significant international involvement shortly after establishment.</li> <li>- In terms of international orientation, export strategy, competitive advantage and market situation, newly established global firms (born-globals) have similar characteristics to old, global firms, while "new and local" firms are similar to "old and local firms".</li> <li>- The "destiny" of the firm seems to be determined at the foundation juncture (the firm is likely to remain either a high-involvement exporter or a low-scale exporter).</li> <li>- The decision maker's global orientation and the market conditions are important factors, explaining why some firms are born-globals, while others are new-locals.</li> <li>- The gradual development process described in traditional internationalization models was not found to be evident in analyzing the export behavior of newly-established, highly-involved exporting firms.</li> </ul>

Number/ Author/s (Year)	Objective/ Type of research	Theoretical approach/es	Empirical methodology	Key research findings
27. Zahra & George (2002)	<ul style="list-style-type: none"> <li>- To analyze the concept of International Entrepreneurship (IE) and its theoretical domain, to review past empirical work on IE and analyze its theoretical foundations (synthesis of key factors believed to influence IE), to design a new integrative framework of IE, and to address future research in this field.</li> <li>- Literature review, theoretical study including a future research agenda.</li> </ul>	<ul style="list-style-type: none"> <li>- In the third section of this work, a theoretical framework of International Entrepreneurship is presented that connects its antecedents (firm resources and top management team characteristics), types of IE activities (extend, speed, and scope of a firm's international operations), and IE outcomes (both financial and non-financial), together with other strategic and environmental factors that might affect the payoff from IE.</li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>	<ul style="list-style-type: none"> <li>- IE is a young but growing, interesting, and important research stream comprising both IE activities of new ventures and established companies. It offers great opportunities to employ and integrate theories from multiple disciplines thus enriching the development of theory and implications for practising managers.</li> <li>- The definition and domain of the field of IE is clearly expanded from this study.</li> <li>- Past research is exhaustively reviewed to identify and consolidate factors that may affect IE.</li> <li>- An integrative framework that links factors affecting IE and their outcomes is advanced and outlined. The proposed model makes an integrative use of theories from IB, global strategy, strategic management, and also entrepreneurship.</li> <li>- Specific directions and suggestions for the future scholarly pursuit of IE is provided, mainly in terms of the IE process, the context of IE, and post-internationalization processes and outcomes.</li> </ul>

\*Several studies combine conceptualizations, frameworks and empirical work. Thus these literature-organizing criteria (columns) purely indicate the origin, main focus, key characteristics, and findings of each study.  
N/A: not applicable.

**Figure 1. A taxonomy of the 27 selected and reviewed studies**



**Legend:**

1	Rennie (1993)	15	Knight (2000)
2	Oviatt & McDougall (1994)	16	Autio & Sapienza (2000)
3	McDougall, Shane & Oviatt (1994)	17	Madsen, Rasmussen & Servais (2000)
4	Oviatt & McDougall (1995)	18	Servais & Rasmussen (2000)
5	Bell (1995)	19	Autio, Sapienza & Almeida (2000)
6	Coviello & Munro (1995)	20	Zahra, Ireland & Hitt (2000)
7	Bloodgood, Sapienza & Almeida (1996)	21	Bell & McNaughton (2000)
8	Knight & Cavusgil (1996)	22	Wickramasekera & Bamberly (2001)
9	McDougall & Oviatt (1996)	23	Aspelund & Moen (2001)
10	Roberts & Senturia (1996)	24	Rasmussen, Madsen & Evangelista (2001)
11	Oviatt & McDougall (1997)	25	Larimo (2001)
12	Madsen & Servais (1997)	26	Moen (2002)
13	Burgel & Murray (1998)	27	Zahra & George (2002)
14	Oviatt & McDougall (1999)		