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Abstract
This article explores the domain of international entrepreneurship (IE) research by thematically mapping and assessing the intellectual territory of the field. Extant reviews show that the body of IE knowledge is growing, and while notable contributions towards theoretical and methodological integration are evident, the field is described as phenomenally based, potentially fragmented and suffering from theoretical paucity. Premising that IE is positioned at the nexus of internationalization and entrepreneurship where entrepreneurial behavior involves cross-border business activity, or is compared across countries, we identify 323 relevant journal articles published in the period 1989–2009. We inventory the domain of IE to provide a relevant and comprehensive organization of its research. This involves examining the subject matter of IE research, and inductively synthesizing and categorizing it into major themes and sub-themes. In so doing, we offer a reliable, ontologically constructed and practically useful resource. From this base, we discuss the phenomena, issues, inconsistencies and interim debates on which new theory in IE may be built and research may be conducted. We conclude that IE has several coherent thematic areas and is rich in potential for future research and theory development.

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1. Executive summary

This article responds to criticism that research in international entrepreneurship (IE) is fragmented, inconsistent and lacking in unifying paradigms and theory. We counter that such criticisms are often the result of efforts to evaluate a new scholarly domain by summarizing a field’s theoretical elements (e.g. data, variables, constructs, hypotheses) in a de-contextualized manner. However, theoretical elements alone do not signify theory nor do they necessarily reveal evidence of theory development, particularly when they are divorced from the phenomena they represent. If it is accepted that the process of theory development is gradual and incremental, criticisms of IE are provocative but perhaps premature since as a domain, IE is little over two decades old. This suggests that an awareness of the inconsistencies, issues and nature of the phenomena under study, and the surrounding interim debates are fundamental to the development of theory and paradigmatic unity.

To support and advance theorizing in IE, the primary purpose of this article is to inventory and organize the subject matter of the domain to construct a repository of extant thought on which new theory and models may be built and incremental adjustments made. The review follows a fully systematic and replicable process involving the search, inductive thematic analysis and ontological organization of the literature. The scope of the review is 1989 to 2009 inclusive and commences with the definitive early paper by McDougall (1989) that distinguishes international from domestic new ventures. Search and exclusion criteria are

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drawn from field definitions (McDougall and Oviatt, 2000; Oviatt and McDougall, 2005), and the procedure follows best practice in management literature reviews. The thematic analysis of the literature and procedures for classification and organization are informed by approaches in qualitative research in psychology and ontology.

The resulting review consists of 323 articles classified into three major types of IE research: A) Entrepreneurial Internationalization, B) International Comparisons of Entrepreneurship and C) Comparative Entrepreneurial Internationalization. This typology was constructed by ontologically grouping and classifying fifty-one first-order themes that were derived from the reviewed articles. Type A research includes thematic areas in which the primary focus of each paper is concerned with: Venture Type, Internationalization, Networks and Social Capital, Organizational Issues and Entrepreneurship. Type B research has three main thematic areas consisting of Cross-Country and Cross-Cultural comparisons of entrepreneurship and studies which compare both. Type C research is the most recent to emerge and consists of studies that compare entrepreneurial internationalization across countries or cultures.

Our discussion is sequenced to follow the emergent structure of the domain of IE. For each major type of research and the thematic areas within, we identify and discuss important issues and inconsistencies, and identify observations, alternative arguments and debates relevant to future theoretical development. We also delineate research questions and opportunities for each of the three major types of research.

Overall, the review offers a number of contributions to current and future researchers in IE. These include: 1) replicable methodological protocols, 2) a thematic map providing a visual guide to the structure of the field, 3) a set of ontological tables for each of the three major types of IE research that detail theme descriptions, first- and second-order themes and major thematic areas together with a chronology of their emergence, and 4) a complete list of authors by thematic area and study year. We conclude that while the domain may have no unifying framework to date, our thematic map and ontology show that the domain is diverse but growing in coherence in several thematic areas. Rather than suffering from theoretical paucity, we contend that the intellectual territory of the domain presents rich potential with many clearly indicated avenues for theoretical development. Our intention for this article is to provide a preliminary structure and classification of the IE domain as a foundation for the future development of the field and a basis on which further debate and alternative views may build.

2. Background

After more than two decades of development, recent reviews have criticized research in international entrepreneurship (IE) as fragmented, inconsistent, lacking unifying paradigms, and hindered in development by its phenomenological basis (Keupp and Gassmann, 2009). Combs et al. (2009: 31) suggest that "...a theoretical paucity summarizes the present state of research [in IE]." Both reviews argue that IE needs unifying theoretical and methodological frameworks and approaches. We suggest that calls for paradigmatic unification are often the result of efforts to evaluate a new scholarly domain against the normal science process of development as described by Kuhn (1996). Typically, such efforts summarize a field's theoretical elements (e.g. data, variables, constructs, hypotheses) in a de-contextualized manner. However, theoretical elements alone do not signify theory (Sutton and Staw, 1995) nor do they necessarily reveal evidence of theory development across a domain. We also believe that, when divorced from the phenomena they represent, such reviews may not provide compelling evidence of a field's consistency or coherency. Furthermore, we reason that reviews focused on the end-product (e.g. a unified paradigm or causal model) bypass the preliminary and interim processes of theorizing; processes described by Weick (1995: 389) as "...activities like abstracting, generalizing, relating, selecting, explaining, synthesizing and idealizing." In Weick's view, theorizing is as important as fully fledged theories, and it involves an incremental process. Consequently, while we do not refute assertions that the IE domain may be fragmented and lack unifying paradigms as the end-products of the normal science process, we counter that it is equally important to understand its phenomena, issues and inconsistencies, as these constitute interim debates in theorizing.

Since IE is a young field with a rapidly accumulating body of knowledge on complex phenomena, we see a need for a comprehensive review, synthesis and organization of its subject matter. This motivates our thematic analysis and inventory of the domain. Inventory reviews compile extant thought, track its development, and help to identify assumptions and misconceptions (LePine and Wilcox-King, 2010). For example, since authors may be inconsistent in naming the phenomena they study (Zahra et al., 1999), an inventory review can help identify and illuminate such inconsistencies for debate, and challenge scholars to address issues in different ways. Consequently, our aim is to construct a repository of extant thought on which new theory and models may be built and incremental adjustments made (Corley and Gioia, 2011; Weick, 1995), thus providing a utility to facilitate future theorizing.

Starting from the premise that the IE domain cannot be regarded as amorphous (Giamartino et al., 1993), our goal is to explicate and organize the subject matter. From this base, we discuss the phenomena, issues, inconsistencies and interim debates that characterize IE's development, and identify areas for future research. We conduct a systematic review that involves an inductive approach to theme identification and ontological organization. The resultant thematic map and domain ontology are constructed through a process of interpretation and representation in which the information we study remains contextualized (Saab and Fonseca, 2008). We take an ontological approach in an attempt to reach, and then share, a common understanding of the structure of the domain. This is done to underpin future analysis and theory building, and to facilitate the sharing and reuse of meaningful information (Chandrasekaran et al., 1999; Noy and McGuinness, 2001; Saab and Fonseca, 2008). We anticipate that our review will benefit extant researchers in IE and new entrants to the field.

We now present our method, including its scope and analytical procedures. This is followed by our results, including observations on the literature and areas for future investigation. This leads to a more general discussion and our conclusions regarding IE as a field.
3. Method

The nature of our review is different from other systematic reviews in the IE literature. Consequently, we now explain how we planned and conducted the review, our analytic approach, and the way we organize and present our results.

3.1. Planning the review

To ensure replicability for future researchers, we follow a process of systematic review. This is generally understood to be a reliable, scientific overview of extant research on a subject area or topic (Pettycrew and Roberts, 2006). Its purpose is to identify, appraise and synthesize all relevant studies using a transparent, replicable process (Tranfield et al., 2003). Protocols for the literature search, article admittance and exclusion, and analytical processes are explicative and provide an audit trail of the processes followed.

3.2. Conducting the review

Our review involves several steps (see Appendix A). We began by determining the search protocol. The initial search criteria were derived from McDougall and Oviatt’s (2000: 903) definition of IE because this is the first formal definition of the field: “...a combination of innovative, proactive and risk-seeking behaviour that crosses national borders and is intended to create value in organizations.” The search criteria were later expanded to accommodate new definitions as the field evolved (e.g. Oviatt and McDougall, 2005). Thus, search terms were drawn from the literature and became the objective criteria for admitting or excluding articles (Kolbe and Burnett, 1991; Weed, 2008).

Books, book chapters, reports and conference papers were excluded due to variability in peer review processes and more restricted availability. In contrast, journal articles are considered to be validated knowledge (Podsakoff et al., 2005). Rather than restrict the search to journals with the highest impact in their fields, we included all published and accessible journal articles that met the selection criteria noted in Appendix A. This approach is supportive of new and innovative research ideas at an early stage of development (Tranfield et al., 2003) as well as replications and extensions that refine IE knowledge.

The scope of the search is 1989 to 2009 inclusive, and it commenced with the first journal article known to differentiate international and domestic new ventures empirically (McDougall, 1989). We began with a researcher conducting a keyword search guided by two senior scholars. This search identified relevant titles and abstracts from the ABI Inform and EBSCO search engines. All three investigators then independently checked full papers against the admittance and exclusion criteria. The resulting list was compared to extant reviews of IE and IE sub-fields to identify missing items. We also validated our search criteria against alternative perspectives on the scope of IE as a scholarly domain. The screening process resulted in a final database of 357 articles that explicitly integrate literature (e.g. theory, concepts, arguments) from both international business and entrepreneurship. As noted in Appendix A, we exclude SME internationalization papers that do not incorporate elements of entrepreneurship. Exceptions were made for certain early “foundation” articles that are widely used in IE research. Examples include Bell (1995) and Covello and Munro (1997). Such studies bridge the SME internationalization and IE literatures and were also catalytic to the development of IE research.

We then excluded reviews (e.g. Covello and Jones, 2004; Keupp and Gassmann, 2009), IE commentaries (e.g. Autio, 2005; Oviatt and McDougall, 1997; Zahra, 2005), commentaries from parent or related disciplines (e.g. Covello and McAuley, 1999; Styles and Seymour, 2006; Wright and Ricks, 1994; Yeung, 2009), introductions to special issues or articles focused on either IE education or research methods. Our final database for analysis totals 323 articles.

3.3. Analysis

Analysis for this study followed an inductive approach of theme identification and commenced with the derivation and application of a thematic and ontological protocol (detailed in Appendix B). We followed a systematic process of interpretative synthesis as an alternative to the deductive application of a pre-determined analytical framework (Sandelowski and Barroso, 2003; Walsh and Downe, 2005; Weed, 2008). Thus, the nature and structure of the domain was determined through the

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Footnote:

1 In most systematic reviews, the literature admitted to the study is content analyzed and coded relative to a pre-determined analytical framework and may be reduced to numerical values. Examples in IE include Covello and Jones (2004) and Keupp and Gassmann (2009). This approach is useful where the literature under review is tightly focused, but, as argued in Section 1, it de-contextualizes data. It is also deductive and reductionist (MacPherson and Holt, 2007). For these reasons, variations in systematic review have been advanced (Sandelowski and Barroso, 2003; Walsh and Downe, 2005; Weed, 2008).
identification, organization and classification of its subject matter. In our view, themes represent the fundamental concepts that describe the subject matter of each author’s article (Ryan and Bernard, 2003). Consequently, the themes we identified represent the core ideas, arguments and conceptual linking of expressions on which an article’s research questions, constructs, concepts and/or measurements are based (Thorpe et al., 2005).

Drawing on principles of thematic coding from qualitative research, we inductively derived themes from the data, where our “data” are the articles (Braun and Clarke, 2006; Thorpe et al., 2005). An article’s focus, theoretical basis, models or hypotheses (etc.) informed our understanding of its primary and supporting themes. These themes were not extracted from their context. Thus, in contrast with content-analytical approaches that typically extract de-contextualized information, we inducted themes from our holistic understanding of each article. Reasons for this approach include the relative newness of the field, the embryonic nature of some lines of inquiry and the gradual development of a vocabulary describing IE. Theme names were derived from the literature itself, but in some instances, were applied retrospectively. For example, we use “INV” for early articles about “international new ventures”, although the authors did not use that expression because their research predated Oviatt and McDougall’s (1994) INV arguments.

The iterative process of theme identification and checks for consistency and validity was extensive and detailed (see Appendix B). The first iteration resulted in a considerable number of finely grained themes. These themes were then refined, classified and synthesized to form an ontological organization of the domain. Since our ontology is grounded in the phenomenological context of the subject matter, our classification system reflects its context and is flexible in response to developments in the field (Saab and Fonseca, 2008). Although ontological designs will vary because they reflect interpretation of the subject matter, general principles apply. These include the construction of discrete super-classes under which sub-classes and siblings are hierarchically arranged after extensive checks for duplication and redundancy at each level (Noy and McGuinness, 2001).

Our domain ontology classifies the final 51 themes by grouping similar (sibling) first-order themes, and positioning them hierarchically under appropriate and subsequently derived second-order, and, where relevant, third-order themes (thematic areas). Iteration continued until we arrived at three major types of research in IE. Finally, since Keupp and Gassmann (2009) express the concern that IE has not achieved legitimacy outside entrepreneurship, we also conduct a frequency analysis of journals in which the 323 articles are published. This helps to determine its external legitimization across journals (Busenitz et al., 2003).

3.4. Organization of results

The 323 articles fall into three types, two of which are consistent with McDougall and Oviatt’s (2000), Oviatt and McDougall (2005) definitions of IE. These are studies on entrepreneurial internationalization (Type A) and international comparisons of entrepreneurship (Type B). Type A differs from Type B in its focus on internationalization, i.e. entrepreneurship crossing borders. In contrast, Type B research examines if and how entrepreneurial behavior differs by country and/or culture. We also identify an emerging hybrid: Type C – comparative entrepreneurial internationalization (where cross-border entrepreneurship is compared across countries or cultures).

The ontological organization of IE and its patterns of research emergence are illustrated in a thematic map constructed using iMindMap 4.1 (see Fig. 1). The main branches extending from the centre of the map represent IE’s major types of research. From these extend the third-order thematic areas. These, in turn, encapsulate more narrowly defined second-order thematic groupings, and then first-order themes (where first-order themes were derived from the inductive analysis of the literature). The map also indicates the number of articles per first-order theme. These are aggregated at each higher level, leading to the final total of articles reviewed [323]. A list of the authors associated with each major type of research and its thematic areas is in Appendix C.

4. Results

The thematic map (Fig. 1) illustrates the ontology of IE. It also provides a visual aid to the structure and sequence of our discussion of results in this section. The map corresponds to the organization of Tables 1–3, each of which comprehensively details the themes, their descriptors and chronology of emergence. We now present our interpretation of the literature encompassed by the three major types of IE research we identified. For each, we comment on the thematic patterns, issues and/or inconsistencies that come to light. This highlights interim debates, and we identify implications and opportunities for new research.

4.1. Type A – Entrepreneurial Internationalization (emerged 1989)

Type A research is labeled entrepreneurial internationalization because the studies are, in different ways, concerned with entrepreneurship that crosses national borders. Our review identifies five thematic areas of Type A research and these are illustrated in Fig. 1 extending to the left of centre. Studies are focused on 1) venture type, 2) internationalization, 3) networks and social capital, 4) organizational issues and 5) entrepreneurship. Details are summarized in Table 1, and we now present our synthesis of each thematic area.

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2 Important to note here is that papers are categorized by their primary theme. Thus, a paper categorized as (e.g.) “venture type” will have supporting themes such as “internationalization” and/or “orientation” (and so on). In our analysis, we focus on the 51 primary themes we identified and articles are counted once at the first-order level. For classification purposes, themes are mutually exclusive. Only primary themes and super-ordinate classifications are detailed in the thematic map and ontological tables.
4.1.1. Venture Type (emerged 1989)

Venture type research is the first thematic area to emerge in the IE literature. It focuses on the characteristics or antecedents of the types of organizational form that compete internationally, or provides comparisons of venture type. We find 54 publications in this area (16.7%) and these correspond to seven different first-order themes (italicized below).

The earliest themes represent the foundations of IE. One distinguishes between international and domestic new ventures using both empirical data (McDougall, 1989; McDougall et al., 2003) and discussions of a new type of small firm able to compete globally from inception (Rennie, 1993). Another theme refines our early understanding of the international new venture (INV) by conceptualizing it as (e.g.) four different venture forms: export/import start-up, multinational trader, geographically focused start-up and global start-up (Oviatt and McDougall, 1994). Studies in this theme tend to build on Jolly et al. (1992) and McDougall et al. (1994) to describe the global start-up. According to Oviatt and McDougall (1994: 59), these are firms that derive “…significant competitive advantage from extensive coordination among multiple organizational activities, the locations of which are geographically unlimited”. This type of INV views its operating domain as international from inception, with its character reflecting a need for rapid growth and the entrepreneur’s prior exposure to international settings (Kuemmerle, 2002).

More prevalent in the IE literature are studies of firms labeled as born global (BG). Typically, research in this theme refers to firms that internationalize early and rapidly (as described by Knight and Cavusgil, 1996; also Madsen and Servais, 1997). The BG label originated, however, with Rennie (1993) and his description of well-networked firms established with the capability to compete internationally and coordinate resources across countries. There are important differences therefore, between the terms INV and global start-up (one form of INV), and between a global start-up and a BG if the former is founded with the intent to internationalize quickly, and the latter is defined primarily by the timing and speed of internationalization. Relevant too is that venture-type research uses multiple terms, often inconsistently.

Beyond the above, another dominant theme involves venture comparisons. In one of the rare studies comparing domestic and international new ventures, we see that the more tangible the offer (e.g. goods vs. service), the more likely the firm is to internationalize (Cloninger and Oviatt, 2007). For the most part, however, research in this theme compares different types of international ventures. Some indicate that firms that export within three years of inception and have at least 25% of their sales in foreign markets (referred to as BGs) differ from gradually globalizing firms in their mindset and risk tolerance levels (Harveston et al., 2000), and international experience (Harveston et al., 2000; Zhang et al., 2009). They also differ in their international learning and network capabilities as well as their international entrepreneurial capability (Zhang et al., 2009). We note here that many behavioral variables are used to compare venture types. Examples include motivation, market selection, entry modes, competitive advantage, entrepreneurial orientation, strategy and performance. Furthermore, empirical data has differentiated BGs from other small firms that are early internationals, late internationals and late globals (Aspelund and Moen, 2005), and others that are born regionals (Lopez et al., 2009). We also know that the BG has four variants based on technology and competitive strategies, international entrepreneurial orientation and performance. These are 1) entrepreneurial strategy and technology

\footnote{A = Entrepreneurial Internationalization; B = International Comparisons of Entrepreneurship; C = Comparative Entrepreneurial Internationalization (Entrepreneurial internationalization, compared across countries or cultures).}

Fig. 1. Thematic map of the International Entrepreneurship domain 1989–2009

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3 A = Entrepreneurial Internationalization; B = International Comparisons of Entrepreneurship; C = Comparative Entrepreneurial Internationalization (Entrepreneurial internationalization, compared across countries or cultures).
leaders, 2) high-tech focusers, 3) entrepreneurs emphasizing cost leadership, and 4) poor performers stuck in the middle (Knight and Cavusgil, 2005). Yet another type of venture in the literature is the smaller firms using advanced modes such as international joint ventures to control and manage value added (Dimitratos et al., 2003).

### Table 1

Domain ontology for Type A papers (Entrepreneurial Internationalization).

<table>
<thead>
<tr>
<th>Thematic area</th>
<th>Second-order theme</th>
<th>First-order theme</th>
<th>Theme description/explanation</th>
<th>Emerged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture Type</td>
<td>INV &amp; GSU</td>
<td>INV vs. DNV</td>
<td>Comparison of international and domestic new ventures.</td>
<td>1989</td>
</tr>
<tr>
<td></td>
<td>INV</td>
<td>Antecedent and characteristics of INVs including global start-ups (GSU).</td>
<td>1992</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INV formation</td>
<td>Start-up of international new ventures.</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td></td>
<td>INV survival</td>
<td>Survival of international new ventures.</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Born Global</td>
<td>Studies of ventures explicitly identified as “born-global” by their authors.</td>
<td>1996</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mMNEs</td>
<td>Micro-multinationals — a type of organization not explained by INV, GSU or BG.</td>
<td>2003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comparisons</td>
<td>Comparison of different international venture types.</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Internationalization</td>
<td>Patterns &amp; Process</td>
<td>Dynamic</td>
<td>Non-traditional and dynamic view of internationalization, focused on early entry/rapid development/step-jumping/non-linear or other non-traditional routes.</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Traditional view of (e.g.) exporting or stages identifying ‘entrepreneurial’ elements.</td>
<td>1995</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pattern ID &amp; Comparison</td>
<td>Identification and/or comparison of internationalization patterns.</td>
<td>1999</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Influences</td>
<td>General</td>
<td>Study of various general influences on internationalization.</td>
<td>2002</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
<td>Internet</td>
<td>Impact of the Internet on internationalization.</td>
<td>2003</td>
</tr>
<tr>
<td></td>
<td>Environmental</td>
<td>Environmental</td>
<td>Institutional and/or locational influences on internationalization.</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>Knowledge</td>
<td>Influence of knowledge and types of knowledge on internationalization.</td>
<td>2005</td>
</tr>
<tr>
<td>Networks &amp; Social Capital</td>
<td>Networks &amp; Relationships</td>
<td>Network ties</td>
<td>Specific focus on types of relationships in internationalization.</td>
<td>1995</td>
</tr>
<tr>
<td></td>
<td>Network Processes</td>
<td>Development</td>
<td>How networks and alliances are established.</td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>Social Capital</td>
<td>Capability</td>
<td>The capability of a firm/founder to network.</td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>Governance</td>
<td>Dynamics</td>
<td>Patterns of network development and change (structure, ties).</td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Governance</td>
<td>Social capital as it relates to governance in network relationships.</td>
<td>2008</td>
</tr>
<tr>
<td>Organizational Issues</td>
<td>Performance</td>
<td>Antecedents</td>
<td>Factors influencing performance.</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outcomes</td>
<td>Effect of performance on internationalization.</td>
<td>2008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orientation</td>
<td>Orientation(s) as an attribute, strategic position or culture.</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>Knowledge &amp; Capabilities</td>
<td>Knowledge Creation</td>
<td>The creation of knowledge, incl. absorptive capacity and cognition.</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capabilities</td>
<td>Capabilities developed for, during or in response to internationalization or by INVs.</td>
<td>2007</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>Corporate</td>
<td>Corporate entrepreneurship (including MNC subsidiary entrepreneurship).</td>
<td>1997</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Entrepreneur</td>
<td>The characteristics and/or behavior of entrepreneurs/managers.</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Investor Entrepreneurs</td>
<td>VC investors as entrepreneurs.</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Opportunity</td>
<td>Opportunity Recognition</td>
<td>Opportunity linked specifically to effectuation logic.</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Effecution</td>
<td>Effectuation</td>
<td>Effectuation</td>
<td>2009</td>
</tr>
</tbody>
</table>

### Table 2

Domain ontology for Type B papers (International Comparisons of Entrepreneurship).

<table>
<thead>
<tr>
<th>Thematic area</th>
<th>Second-order theme</th>
<th>First-order theme</th>
<th>Theme description/explanation</th>
<th>Emerged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-country Research</td>
<td>Entrepreneurship</td>
<td>Finance</td>
<td>Financing for entrepreneurship.</td>
<td>1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Entrepreneur</td>
<td>The characteristics and/or behavior of entrepreneurs/managers.</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NV Formation</td>
<td>The process and influences on new venture formation.</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>Networks &amp; Relationships</td>
<td>Corporate</td>
<td>Corporate entrepreneurship (including MNC subsidiary entrepreneurship).</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>Development</td>
<td>Gender</td>
<td>Entrepreneur characteristics but with a focus on gender.</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>Capability</td>
<td>Networks</td>
<td>General focus on networks or network relationships.</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>Influences</td>
<td>Influence</td>
<td>How networks or alliances are established.</td>
<td>2003</td>
</tr>
<tr>
<td></td>
<td>Macro-Entrepreneurship</td>
<td>Institutional Influences</td>
<td>Entrepreneurship at a macro level with an institutional theory focus.</td>
<td>1991</td>
</tr>
<tr>
<td></td>
<td>National/Regional Orientation</td>
<td>Entrepreneurs or entrepreneurship at the national regional (macro) level.</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-culture research</td>
<td>Perceptions</td>
<td>Entrepreneur characteristics but with a focus on perceptions.</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Organizational issues</td>
<td>Comparisons</td>
<td>Comparison of entrepreneurs vs. non-entrepreneurs.</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Corporate</td>
<td>Corporate entrepreneurship (including MNC subsidiary entrepreneurship).</td>
<td>1994</td>
<td></td>
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<td></td>
<td>Cognition</td>
<td>Cognitions and issues related to individual learning and attitude.</td>
<td>1996</td>
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</tr>
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<td></td>
<td>Ethics</td>
<td>Ethics of the entrepreneur regarding entrepreneurial issues.</td>
<td>1997</td>
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<td></td>
<td>Performance antecedents</td>
<td>The Entrepreneur</td>
<td>The characteristics and/or behavior of entrepreneurs/managers.</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>Orientation</td>
<td>Orientation(s) as an attribute, strategic position or culture.</td>
<td>2002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Network development</td>
<td>Network development</td>
<td>How networks or alliances are established.</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>Combined</td>
<td>Cross-country &amp; Culture</td>
<td>Studies distinguishing between and using both culture and country-level analysis.</td>
<td>2002</td>
</tr>
</tbody>
</table>
In spite of the interest in INVs as a unique organizational form, few examine the processes of INV formation. This may reflect an assumption that venture formation is generic, and indeed, Evangelista (2005) finds that start-up patterns identified for INVs might be similar to those expected for any new venture. That is, venture formation involves inter-relationships between founder, environment and organizational characteristics and the processes of assembling resources and developing/launching the first product. However, other results indicate that risk-taking, proactiveness and the age of the entrepreneur affect the decision to found a new international venture (Kropp et al., 2008). Also, di Gregorio et al. (2008) argue that while INV formation is linked with entrepreneurial action to exploit opportunities (as are all entrepreneurial ventures), INVs are differentiated by the geographic dispersion of individuals, resources and market opportunities, and their ability to exploit novel combinations of those elements across national boundaries. This suggests that INV formation may be more distinct than not. Finally, the newest first-order theme in the venture type area is labeled INV formation, and studies on this topic are rare. Importantly however, Zettinig and Benson-Rea (2008) point out that, although INVs do not remain new, their evolutionary patterns are not yet understood.

4.1.2. Internationalization (emerged 1990)

IE research concentrating on internationalization is included in 96 (29.6%) of the papers in this review. As seen in Table 1, this thematic area was the second to emerge and it focuses on patterns and processes in internationalization, or influences on it. Within the former group are three first-order themes and we begin with the most frequently occurring one: studies of dynamic internationalization. These identify patterns considered anomalous to traditional internationalization due to the speed and intensity of international expansion and diversity of entry modes across temporal and spatial dimensions. Research in this theme identifies and explores such patterns, sometimes identifying in the firm’s knowledge intensity and its social capital (Bell, 1995; Belso-Martinez, 2006; Litvak, 1990; McNaughton, 2001; Yli-Renko et al., 2002), and its perception and management of risk (Acedo and Jones, 2007; Shradar et al., 2000). Early internationalization can enhance firm growth (Aultio et al., 2000), while entering diverse international markets can increase technological learning and improve performance (Zahra et al., 2000). However, potential contradictions arise in this theme. For example, Nummela et al. (2004) find that speed of internationalization is adversely affected by having an extended network while Gassmann and Keupp (2007) argue that it is enhanced by a firm being embedded in global communities and social networks.

Also in the dynamic internationalization theme are important conceptual arguments. Oviatt and McDougall (2005) develop a model of the forces influencing the speed of internationalization. They argue that speed is enabled by technology, motivated by competition, and moderated by the knowledge intensity of the opportunity and the firm’s international networks. A more general argument is that entrepreneurial internationalization involves a time-sensitive and self-reinforcing cycle of relationships (Jones and Coviello, 2005). These authors reason that behavior (conceptualized as “fingerprints” unique to each firm) is influenced by interactions between the entrepreneur, firm and environment. In turn, internationalization behavior influences market performance and generates feedback that (over time) influences the entire set of relationships. A complementary argument articulates the relationships between entrepreneurial internationalization, capabilities, survival and growth (Sapienza et al., 2006). Notable here is that, again, internationalization is positioned as an antecedent to performance. A final argument complements Oviatt and McDougall (2005) and suggests that opportunity identification determines international entry and pathways, as do the dynamic processes of exploitation, (re)deployment of resources and learning (Mathews and Zander, 2007).

We label the next first-order theme traditional internationalization. This is perhaps counter-intuitive if one views IE as emerging from phenomena that cause firms to internationalize in non-traditional ways. However, some studies, while taking a traditional
view of internationalization, also criticize it or identify anomalies that trigger debate about theoretical assumptions. They show (e.g.) that internationalization can be influenced by whether a firm has a local or a global perspective (Boter and Holmquist, 1996), or external relations and proactive attitudes towards exporting (Karagozolu and Lindell, 1998). Particularly interesting is that the management team’s human and social capital, including experience and industry know-how, are found to be better predictors of internationalization than a firm’s age or size (see Reuber and Fischer, 1997; Westhead et al., 2001).

The third theme pertaining to internationalization processes involves pattern identification and/or comparison, and this has helped refine our understanding of potential entrepreneurial internationalization pathways. In a relatively early typology, Jones (1999) maps the timing of inward and outward expansion through the establishment of R&D, production and marketing modes. She identifies four distinct patterns of internationalization for small technology firms: reluctant developers/export specialists, conventional developers, rapid developers and international entrepreneurs. Important here is that these internationalization patterns are consistent with the forms of INV that Oviatt and McDougall (1994) initially conceptualized. Since then, we have also learned that dynamic and rapid internationalization may begin later, i.e. with the “born-again global”. As defined by Bell et al. (2001), these firms suddenly embrace rapid and dedicated internationalization from a well-established position in their domestic market and with no apparent motivation to internationalize. Other patterns include de-internationalization (Bell et al., 2003; Crick and Spence, 2005) and re-internationalization (Welch and Welch, 2009). Interestingly, although Bell et al. (2003) argue that paths of internationalization are predictable and path dependent, Jones and Coviello (2005) suggest they may be stochastic and idiosyncratic. Also, Crick and Spence (2005) find them to be influenced by serendipitous events and both planned and unplanned strategy. These types of seemingly contradictory patterns are also seen in firms that pursue innovative and proactive marketing strategies but take a traditional approach to internationalization (e.g. McDonald et al., 2003).

Another perspective is that internationalization patterns are strategies in their own right. A comparison of patterns for BGs, regional and more traditional (yet global) firms shows that the BG path is characterized by rapid and extensive development of networks to facilitate simultaneous market entry (Chetty and Campbell-Hunt, 2004). Such firms are found to be driven by an aggressive learning style that seeks experimentation, tolerates initial failure and looks for solutions to problems as they arise. Together, these results lead Chetty and Campbell-Hunt (2004) to speculate that the distinctive character of the BG stems primarily from the transformation of the global economic system as well as the heightened relevance of that path (i.e. a strategy) into globalized competition. This notion of the INV and BG as strategies rather than venture forms is also reflected in Mudambi and Zahra (2007). They conceptualize the INV as an FDI strategy and compare it with the more sequential route to FDI.

The study of internationalization influences is distinct from IE research on patterns and process. The earliest first-order theme in this area addresses more general influences, including the impact of different types of entrepreneur (e.g. marketing, technical or structural), the nature of their relationships with buyers (Andersson, 2002; Hutchinson et al., 2007) or the venture’s international orientation (Boehe, 2009; Ibeh, 2005). We also identify a theme that explores the Internet as an influence on entrepreneurial internationalization with the argument that virtual supported marketplaces (VSMs) may provide platforms for internationalizing both new and existing businesses (Katz et al., 2003). While interest in the Internet is apparent in other IE research, it is usually found as a secondary or tertiary theme in internationalization research (e.g. Arenius et al., 2005; Mostafa et al., 2005; Prashanthan, 2005).

Two additional themes have also emerged in the area of internationalization. One shows that environmental influences are relevant, with industry maturity (Andersson, 2002) and structure (Callaway, 2004) influencing the intensity, scope (diversity) and speed of internationalization. Fernhaber et al. (2008) also identify locational influences, finding that industry clustering in different places affects international intensity and the international scope of new ventures. The other, quite recent, theme emphasizes knowledge influences. We see that external international knowledge sources are of most benefit to management teams with limited international experience (Fernhaber et al., 2009). Also, the international knowledge, experience and reputation of venture capitalists influences new venture internationalization beyond financial investment (Fernhaber and McDougall-Covin, 2009). Relevant too are returnee entrepreneurs, because results from China show they play an important role in transferring knowledge to firms; knowledge that enhances export orientation and performance (Filatotchev et al., 2009). Together, these results are consistent with Zahra and Hayton’s (2008) findings that the firm’s absorptive capacity moderates the relationship between international venturing and performance. They also highlight the influence of a firm’s social capital on entrepreneurial internationalization, and this reinforces conceptual arguments from Prashanthan (2005).

Most recently, IE researchers have begun to study the types of knowledge that are influential in entrepreneurial internationalization. At inception, market knowledge is found to shape the initial and subsequent internationalization of INVs (Spence and Crick, 2009). These authors also show that experiential knowledge helps fine-tune the firms’ existing strategies, and market penetration is aided by experiential, buying and network knowledge. Furthermore, diversification is aided by buying and network knowledge, as well as market research. Both repositioning and rationalizing strategies are facilitated by experiential knowledge. These patterns are consistent with findings that social knowledge (manifest in knowledge of e.g. the market, customers, culture) moderates the impact of international scope on the firm’s level of innovation (Zahra et al., 2009).

4.1.3. Networks and Social Capital (emerged 1995)

The third thematic area of Type A research is on networks and social capital (n = 23 papers; 7.1%). Table 1 shows that research here has a primary focus on 1) networks and relationships, 2) network processes, and 3) social capital. IE’s general interest in networks and relationships is first highlighted by Coviello and Munro (1995, 1997). They map network patterns to show that foreign market entry and the modes used by entrepreneurial ventures are often a reflection of the firm’s network ties. From a different but related perspective, the network is argued to be a more appropriate and efficient means of coordination than are the
firm or market (Casson, 1997), while Zacharakis (1997) applies transaction cost economics to discuss the entrepreneurial firm's use of foreign export agents, highlighting the asymmetry of such relationships.

In 2006, a plethora of network-focused research began to appear, and this comprises the bulk of the studies in this thematic area. At a more micro-level, IE research has begun to study the influence of different network ties. As one example, Presutti et al. (2007) find that weak ties are more important than strong ties in reinforcing the process of knowledge acquisition and exploitation in an international start-up. New themes also appear to be branching off from the original thrust of network research. One example is the exploration of ties between MNCs and born globals to assess co-opetition and opportunity creation for the MNC (Vapola et al., 2008). This involves a context in which smaller firms work with larger ones, similar to those studied by Coviello and Munro (1995, 1997).

Like the early IE studies, a common approach in network research is to view relationships as a mechanism for internationalization (e.g. Al-Laham and Souitaris, 2008; Zhou et al., 2007). Some IE studies explore network development (e.g. Wakkee, 2006) but have been slow to link institutional context with this issue. One exception is Kiss and Danis' (2008) conceptualization of how a country's level of institutional progress directly shapes the composition of social networks. Other research explores network dynamics, i.e. changes in network composition over time (Coviello, 2006). In a related vein, networks are shown to be useful for the acquisition, mobilization and development of organizational, human, physical, financial and social capital as the entrepreneurial firm internationalizes (e.g. Coviello and Cox, 2006). Beyond the network itself, another first-order theme focuses on network capability with (e.g.) Mort and Weerawardena (2006) arguing that network capability, complemented by entrepreneurial opportunity-seeking behavior, plays a central role in rapid and successful internationalization.

Together, much of the research in the above themes integrates network analysis with resource-based theory. It also distinguishes the network concept from that of social capital. This is seen in Berg et al.'s (2008) propositions regarding the governance of hybrid structures (tying back to Zacharakis, 1997) while Prashantham (2008) argues that social capital is a resource for innovation and strategic renewal in new venture internationalization. Furthermore, Presutti et al.'s (2007) results suggest that the structural dimensions of social capital have greater impact than those that are relational and cognitive. We therefore see that network research in IE appears to be becoming more sophisticated in that it deconstructs network dynamics and the relationships between networks and resources (among other areas), and recognizes that network ties are more than just “strong” or “weak”. We also note that not all network relationships may be advantageous, an issue identified by Coviello and Munro (1997), Mort and Weerawardena (2006) and Sasi and Arenius (2008).

4.1.4. Organizational Issues (emerged 1996)

Table 1 shows that a thematic area pertaining to organizational issues began to appear almost in parallel with network research. It includes studies on performance, orientation, and knowledge and capabilities, all in the context of entrepreneurial internationalization (n = 34 papers; 10.5%). We begin our discussion with the research on performance and the first-order theme emphasizing performance antecedents. In IE, these include (e.g.) international work experience, product differentiation and firm size (Bloodgood et al., 1996), formal export planning and technological sophistication (Zahra et al., 1997), attitudes toward foreign markets and government assistance (Preece et al., 1999), an entrepreneurial orientation (Jantunen et al., 2005) and organizational structure, opportunity-driven behavior and the founder's technical knowledge (Kocak and Abimbola, 2009). Also influential on international performance are the domestic market's dynamism, hostility and heterogeneity (Zahra et al., 1997) and uncertainty (Dimitratos et al., 2004). Importantly, some studies show inconsistent results. For example, Zahra et al. (1997) find that venture age but not size has an impact on international intensity, while Zahra et al. (2003) later question the influence of both age and size (and past performance) in explaining the speed and degree of sales internationalization, i.e. intensity. They conclude that intangible technological resources such as networks and reputation are more influential. This in turn contradicts findings that the use of strategic alliances has little influence on either international intensity or global diversity (Preece et al., 1999).

A more recently emerging theme appears as a parallel to early research on performance antecedents: performance outcomes. This is the influence of performance on the firm in terms of e.g. learning, and orientation. In one of the few studies identified on this issue, Wennberg and Holmquist (2008) use aspiration-level performance theory to show (e.g.) that performance below aspiration levels increases the firm's search for opportunities to internationalize. They argue that internationalization follows a boundedly rational process characterized by search behavior that is triggered by performance feedback.

Another thematic grouping pertaining to organizational issues is orientation. Different orientations include the 1) strategist, 2) responder, 3) opportunist and 4) experimentalist, each of which manifests in a distinct approach to internationalization (Freeman and Cavusgil, 2007). These orientations were identified by examining the strategies, perceptions and decisions of geographically focused start-ups with accelerated internationalization. More typically however, IE research examines the effect of entrepreneurial orientation (EO). For example, EO influences the firm's response to globalization developments, technology acquisition and preparation for internationalization (Knight, 2000), while firms with a marked EO have higher relative

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4 A wide range of outcome measures are used in IE research. These range from the extent of internationalization, sales growth and income (Bloodgood et al., 1996) to scope of exporting or global diversity (e.g. Preece et al., 1999; Zahra et al., 1997), international intensity (e.g. Dimitratos et al., 2004; Jantunen et al., 2005; Preece et al., 1999; Zahra et al., 1997, 2003), speed of internationalization (e.g. Acero and Jones, 2007; McNaughton, 2001), or profitability and sales growth in each foreign market (Shrader et al., 2000). Subjective measures are also used. These include satisfaction with international performance in terms of (e.g.) capability and image development, market access (Dimitratos et al., 2004; Jantunen et al., 2005; Zahra et al., 1997), subjective measures of market and financial performance relative to competitors (Knight, 2001) and perceptions of international competitiveness (Kocak and Abimbola, 2009).
international sales and operate in a greater number of foreign countries (Ripollés-Mélia et al., 2007). The concept of international entrepreneurial proclivity (aka orientation) also facilitates the direct relationship between foreign market knowledge and early and rapid internationalization (Zhou, 2007). Pertinent too is that, for the study of early internationalization, different dimensions of international entrepreneurial orientation (IEO) may need to be treated separately, because proactiveness is found to be more pronounced, followed by the innovative dimension, and lastly, risk-taking (Zhou, 2007). On the other hand, for established firms, an EO is an outcome rather than antecedent to internationalization (Ripollés-Mélia et al., 2007). These results raise an interesting question regarding temporal dimensions of EO and IEO.

Notable from the above is that similar results come from different measures (i.e. IEO and EO). We also see that IE research discusses a variety of orientations. This is reflected in Dimitratos and Plakoyiannaki (2003) articulation of international entrepreneurial culture. This concept includes international marketing orientation, international learning orientation, international networking orientation, international risk attitude, international motivation, and international innovation propensity. To date, however, measures have not been developed to capture international entrepreneurial culture as a complete concept. Instead, several studies compare different orientations, and results are not always consistent. For example, the innovativeness component of an EO, a market orientation (MO) and a learning orientation (LO) are found to influence financial outcomes positively (Kropp et al., 2006), but Jantunen et al. (2008) show that an LO (and not EO) has the strongest effect on subjective measures of international performance (e.g. profit, sales volume, image development). Then, Frishammer and Andersson (2009) find neither an MO nor EO has much influence on satisfaction with international performance. We suspect that, although the firms in these studies appear similar, they are not. However, a lack of detail regarding each sample precludes a truly meaningful comparison of findings.

Finally, research on organizational issues includes a third grouping: studies concentrated on the topics of knowledge and capability. One first-order theme is knowledge creation, and it reflects arguments that a cognitive perspective in IE research will allow (e.g.) the study of how entrepreneurs recognize and exploit international opportunities (Zahra et al., 2005). Early empirical work also shows that learning effort in international and domestic markets is positively influenced by the firm’s EO and early entry in foreign markets (Sapienza et al., 2005). More recently, knowledge creation is discussed as an ongoing process during entrepreneurial internationalization (Tolstoy, 2009), with Casillas et al. (2009) arguing that knowledge creation begins with the availability of prior knowledge and then a search for new knowledge. This is followed by the combination of prior and new knowledge and action. Finally, learning arises from the outcome of these actions.

These arguments highlight the importance of the knowledge of the founders and management team acquired before the creation of the company and within the firm itself, as well as experiential and network knowledge. Such arguments are consistent with the studies in other themes (e.g. knowledge influences on internationalization; networks). A related perspective posits that social tactics will moderate the relationship between international experiential knowledge and internationalization (Michailova and Wilson, 2008). They expect this relationship to be stronger when learning is individual and formal, the content is sequential and fixed, and the process of socialization involves (e.g.) mentoring and reinforcement of the individual’s identity. Mimicry is also an important process in entrepreneurial internationalization; Schwens and Kabst (2009a) results show that early internationalizers learn by imitating others.

The above research on knowledge creation is linked to that focused on capabilities and this is the final theme in Type A organizational issues research. Weerawardena et al. (2007) argue that four dynamic capabilities influence the speed, scope and extent of internationalization: 1) a market-focused learning capability, 2) a marketing capability (regarding market access and positioning), 3) an internally focused learning capability, and 4) a networking capability. Others refer to entrepreneurial capabilities, i.e. international opportunity identification, institutional bridging, and a preference and capacity for cross-cultural collaboration (Karra et al., 2008). Such capabilities are found to be more salient than product or market characteristics for rapid internationalization (Karra et al., 2008). Again, this shows consistency with earlier themes.

4.1.5. Entrepreneurship (emerged 1997)  

The final (and newest) thematic area in Type A includes the 15 studies (4.6%) focused on entrepreneurship issues. These are thematically grouped into entrepreneur/ship and opportunity. The former begins with research on international corporate entrepreneurship (see Table 1) where we learn that even in multinational subsidiaries, entrepreneurship can enhance a firm’s local responsiveness, global learning and global integration (Birkinshaw, 1997). Related findings indicate that entrepreneurial initiatives are particularly important when an MNC subsidiary lacks manufacturing competence or experiential knowledge in the foreign market (Lee and Chen, 2003). In emerging markets such as China, corporate entrepreneurship (defined as a behavior involving the pursuit of innovation, venturing and strategic renewal), can mediate the effects of technological achievements and domestic network ties on international venturing (Yiu et al., 2007). However, a point of diminishing returns is reached when a company aggressively pursues international corporate entrepreneurship under excessive environmental hostility (Zahra and Garvis, 2000).

Other studies in this group focus on the individual entrepreneur but in an international context. For example, the entrepreneur’s international orientation and environmental risk perceptions influence the firm’s degree of internationalization (Ruzzier et al., 2007). Also important are the entrepreneur’s connections with the customer, tacit knowledge, vision and resource-based risk tolerance (Perks and Hughes, 2008), and history as (e.g.) a portfolio entrepreneur (McGaughey, 2007). We also identify a conceptualization of VC investors as entrepreneurs. When compared to other types of investors, those who invest in a BG differ in terms of deal origin, investment size, and exit preferences (Moen et al., 2008). Furthermore, the experience of BG investors as
managers of large firms seems to increase their investment capacity, while their personal and professional networks influence financing and access to information about investment opportunities.

The second thematic group – the concept of opportunity recognition – is quite new to IE. An early framework is the argument that both exploration and exploitation can lead to market discovery, where discovery is conceptualized as an opportunity to seize, or a problem to address (Hohenthal et al., 2003). However, market discovery as a result of exploitation is argued to be less likely than discovery as a result of exploration because exploration is characterized by a cognitive readiness for discovery. This position is similar to arguments that international opportunity recognition requires development of a cross-culture competence; a competence that helps to increase the level of entrepreneurial self-efficacy (Muzyczenko, 2008). At the same time, Chandra et al. (2009) find that discovery is more typical of entrepreneurs with no prior international experience, and those with international experience and knowledge are more likely to recognize first-time opportunities using both deliberate search and discovery. Consistent with Hohenthal et al. (2003) however, Chandra et al. (2009) indicate that discovery does not occur simply through serendipitous encounters with new information from (e.g.) networks. Rather, it involves interpreting possible matches between pre-existing means (resources, skills) and new ends (international markets) in a problem-solving process. As one example, different combinations of technical and international market knowledge will influence whether opportunity recognition is proactive or reactive (Nordman and Melén, 2008).

The final theme for Type A entrepreneurship research shows a continuous and creative process in which entrepreneurial managers are absorbed into the emerging social community of the international venture (Mainela and Puhakka, 2009). Opportunity recognition is linked to the personal initiatives of the managers, i.e. entrepreneurs who try to create the best possible (and realistic) solution for problems by trying to interpret, change or create products and markets with their partners. These patterns are explained by another new concept and theme in the IE literature, Sarasvathy’s (2001) logic of effectuation.

4.1.6. Observations and implications for Type A research

Several issues emerge for IE scholars interested in entrepreneurial internationalization. We begin with four observations and implications that are relatively operational in nature. We then identify seven areas of potential research for IE based on our synthesis and interpretation of the studies reviewed here.

4.1.6.1. Operational issues. First, many venture types are relevant in IE. Starting with the INV concept, we re-iterate that it is important to recognize that the global start-up is only one form of INV, and the INV is not necessarily a BG. Furthermore, if BGs are defined as “...a breed of young companies that begin selling their products at or near the firm’s founding” and “...companies that from or near foundation, obtain a significant portion of total revenue from sales in international markets” (Knight and Cavusgil, 2005: 15), a study could inadvertently include firms that (e.g.) do not necessarily intend to internationalize from inception (as do global start-ups), but happen to export quite early. This makes cross-study comparisons challenging. The phrase “early internationalizing firm” might address the aspect of timing and be used to cover global start-ups and BGs collectively. We suggest however, that this label may not provide a fine enough level of distinction to capture the IE literature’s range of venture types since they differ by e.g. market scope, strategy, orientation. That is, while timing of internationalization and market scope are important, so are other variables. A first step might be to reconcile Oviatt and McDougall’s (1994) framework with the data generated by Jones (1999), Aspelund and Moen (2005), Knight and Cavusgil (2005) and Lopez et al. (2009) to develop a richer typology and understanding of venture types.

Our second point follows from the above and reflects the themes identified through our inductive review. That is, while sample/site selection in IE research is often determined by firm age and size, our themes suggest that capabilities, orientation, social capital (and so on) help define firms that demonstrate entrepreneurial internationalization. We use Knight and Cavusgil (2004) as an example here. Although the firms in that study internationalized two years after founding, a key sampling criterion was that they were founded after 1980. They also had a median of 190 employees at time of data collection. Thus, established rather than new firms were studied. This suggests that since Knight and Cavusgil (2004) find patterns similar to those describing very small and new ventures, the variables of firm size and age may not be particularly relevant in IE. As noted previously, this is suggested by other findings (e.g. Reuber and Fischer, 1997). It is also implied in McDougall and Oviatt (2000), Oviatt and McDougall (2005) definitions of the field, and reiterated by Keupp and Gassmann (2009). To understand this more fully, we need investigations of entrepreneurial internationalization in a comparative context that includes smaller, newer firms and larger and/or older firms. Such investigations might compare the influence of absorptive capacity on entrepreneurial internationalization, the role of mimicry or the relative influence of different dynamic capabilities, i.e. areas where the resource base of the smaller and newer firm presumably has impact.

Third, we encourage scholars to ensure that the samples and sites chosen for analysis are consistent enough to be compared. A good example of where insight is hampered is in the orientation literature that we highlight earlier. There, slight sample differences and a lack of detail preclude a meaningful comparison of the findings from Kropp et al. (2006), Jantunen et al. (2008) and Frishammar and Andersson (2009). Scholars must carefully define their samples and detail the nature of the firms under investigation to allow for meaningful comparison of results. This is essential for coherent development of the field.

Fourth, as will be evident from the discussion that follows, although IE has two parent disciplines (both of which are multi-disciplinary in their own right), it is influenced and will be informed by research from many fields. When Covello and Jones (2004) reviewed 55 studies, they called for integration between the international business and entrepreneurship fields.
Now, having reviewed 323 articles that intersect these areas (recognizing that some do so more than others), we see clearly that IE research is incorporating insights from areas such as; strategy, sociology, marketing, finance, knowledge management and economics. One empirical example is Yli-Renko et al.’s (2002) study of how a firm’s internal and external social capital relates to knowledge intensity, acquisition and international performance. A conceptual example is Rhee’s (2008) integration of three theoretical perspectives (transaction costs, social networks and absorptive capacity) to predict entry mode choice and new venture internationalization performance. We support the repeated calls for multi-disciplinary research in IE (Coviello and Jones, 2004; Coviello and McAuley, 1999; McDougall and Oviatt, 2000).

4.1.6.2. Research implications. Turning to specific topic areas for research, we note that more than 45% of the literature on IE focuses on either internationalization or venture type issues. Interestingly enough, most studies simply assume there are differences between international and domestic new ventures (exceptions are Cloninger and Oviatt, 2007; McDougall, 1989; McDougall et al., 2003). Thus, our first implication is that we need clarification of the parameters that differentiate these organizational forms. Relevant questions to be addressed include how they differ in the process of venture formation, their network capabilities, network development and dynamics, social capital patterns, orientation, absorptive capacity and capabilities. Essentially, is the domestic new venture truly different in its approach to these organizational processes? Research in these and other areas is consistent with Zettinig and Benson-Rea’s (2008) call for research on how an INV survives in a sustainable manner. As part of this, tracking the evolution of organization forms would provide insight to if, how and when there is change in (e.g.) the strategy, orientation or capabilities required to form and then survive and maintain international growth. This is a second area for research. For example, if a global start-up exits its international markets and then re-internationalizes, in what organizational form does it manifest? If a geographically focused start-up becomes global, how do its capabilities change, if at all? We also find interesting the idea that BGs and INVs are not venture forms but a strategic option for a firm (e.g. Chetty and Campbell-Hunt, 2004; Mudambi and Zahra, 2007). This opens a line of inquiry on INV strategy pursued by other types of organization such as spin-outs and subsidiaries.

Since network relationships are often asymmetric, a third area of research might explore how uncertainty and risk are managed by applying agency theory. This recognizes the risk inherent in network relationships, an issue under-developed in the IE literature. We also believe that research on the nature and impact of a dynamic networking capability is warranted and this may well benefit from leveraging social capital theory. However, given the findings that weak ties are more important than strong ties in reinforcing the process of knowledge acquisition and exploitation (Presutti et al., 2007), we suggest that further investigation is needed on the relative impact of the structural, relational and cognitive dimensions of social capital. This is because other literatures (e.g. relationship marketing, learning theory) suggest that the latter two dimensions are or should be influential.

Related to this is a fourth area of research concerning knowledge and capabilities. Although Sapienza et al. (2005) find no relationship between international learning effort and degree of internationalization, Casillas et al. (2009) argue that the speed at which a company launches into an international market is positively related to its absorptive capacity and the degree to which new and prior knowledge are compatible. Thus, we suggest that the source of experiential knowledge and the process by which it is accumulated need further exploration. Michailova and Wilson (2008) provide a useful base in that regard. If however, mimicry is influential in learning, we also need studies of how different internationalization patterns manifest, as influenced by experiential knowledge vs. imitative learning. The time-sensitive aspects of learning also warrant attention. Important here may be the distinction (or overlap) between entrepreneurial and learning capabilities, as is an understanding of which capabilities are influential over time, and how. Since knowledge creation is combinative, further research is required on how co-learning occurs between the entrepreneur, team and network, in terms of international opportunity recognition and/or as the venture internationalizes. Finally, since both orientation and capabilities influence internationalization, we suggest it would be appropriate to study how these concepts are related and how they mediate (e.g.) the rapid internationalization–performance relationship.

Somewhat surprising is that relatively few Type A studies have entrepreneurship as their primary theme, and this presents a fifth area to investigate. While much of the research we discuss later regarding Type B is focused on the entrepreneur, we need a greater understanding of entrepreneurs and their teams as they relate to entrepreneurial internationalization, as well as venture capitalists/investors (potentially as entrepreneurs). For example, do intellectual and relational capital, or capabilities differ across organizational contexts? Research in that vein could also help develop a better understanding of how knowledge is created and exploited, again at the level of the entrepreneur. Finally, since the entrepreneurship literature distinguishes between nascent, serial and portfolio entrepreneurs, this provides an additional dimension for exploring entrepreneurial internationalization.

Sixth, IE research focused on opportunity has rich potential. Given that opportunity recognition is itself a process, understanding how it emerges in relation to (e.g.) changes in the entrepreneur’s learning, the firm’s network or internationalization patterns is of interest. Studies might also link opportunity recognition processes to venture type. Alternatively, they could assess the impact of institutional context on opportunity recognition and enactment. Furthermore, we wonder about the relationship between a firm’s orientation and opportunity recognition, and the extent to which it results in either discovery (through search) or creation. Important here is the fresh perspective offered by Sarasvathy’s (2001) logic of effectuation. We see recent emergence of this in IE and look forward to rich debate on how it relates to cognitive processes and the development of knowledge and capabilities for entrepreneurial internationalization.

Finally, given the variety of performance antecedents and outcomes relevant in IE, future research should acknowledge and try to examine a wide range of measures in an integrative manner. This could help our understanding of how specific performance
measures are influenced by specific antecedents. We might also link antecedents and outcomes to venture type (e.g. global start-up vs. geographically focused start-up). Since we know that de-internationalization and re-internationalization occur, and that different types of ventures may be more or less successful – as seen in Knight and Cavusgil’s (2005) “poor performers stuck in the middle” – IE scholars might draw on the concept of escalation commitment (Staw, 1976) to help understand internationalization decisions. Escalation commitment can occur where entrepreneurs continue to invest in (e.g.) a foreign market based on their cumulative prior investment despite evidence that the cost of doing so outweighs expected benefits.

Recalling too that some findings in the performance theme are inconsistent, it might be that seemingly contradictory approaches to entrepreneurial internationalization work synergistically over time. This is similar to the notion of ambidexterity (O’Reilly and Tushman, 2004; Han and Celly, 2008), also seen in (e.g.) the shift and balance in exploration vs. exploitation strategies, strong vs. weak ties or effectuation logic vs. teleology. We also observe that, although internationalization is an antecedent to overall performance, both internationalization and performance may be antecedents to (e.g.) opportunity search, learning, the firm’s orientation, or innovation levels (Jones and Coviello, 2005; Ripollés-Mélia et al., 2007; Wennberg and Holmquist, 2008; Zahra et al., 2009). This requires further investigation.

4.2. Type B – International Comparisons of Entrepreneurship (emerged 1990)

We now turn to the IE research that compares entrepreneurship across borders; Type B (illustrated in Fig. 1 branching from the top right of centre). Type B research can be divided into thematic areas that compare data collected across countries for national level patterns, assess differences at a cultural level, or combine the two. 5 Type B themes are found in Table 2.

4.2.1. Cross-country Research (emerged 1990)

We identify 47 studies (14.6%) belonging to the country-differences area of IE research. As before, first-order themes are shown in italics. The earliest research comparing entrepreneurship across countries focuses on either financing for entrepreneurship (Choy, 1990) or more typically, investigations of how (e.g.) the perceptions and behaviors of entrepreneurs might differ. The United States is often used as the base comparator. Results show that although U.S. and Japanese entrepreneurs see themselves as “different from others” (Ohe et al., 1991), variations are apparent. For example, highly educated people in Japan rarely leave large corporations to become entrepreneurs unless they have a strong perceived personal difference, while similar workers in the United States frequently do so with only a minimal amount of perceived difference (as measured by Ohe et al., 1991). More recent findings show that respondents in India, Turkey and the United States all perceive entrepreneurs to be (e.g.) competent or self-reliant, but they vary in the extent to which they emphasize these characteristics (Gupta and Fernandez, 2009). Shifting from perceptions to behavior, Croatian entrepreneurs differ from their U.S. counterparts in many ways, including (e.g.) that they start businesses with less capital and less-detailed plans, and do not seek as much professional advice (Lussier and Pfeifer, 2000). A related theme that also emerged in the early years of Type B research pertains to new venture formation (e.g. Kolvereid and Obloj, 1994; Shane et al., 1991). Across Britain, New Zealand and Norway, only the desire for job freedom is universal (Shane et al., 1991), while a mix of nationality and gender determine 13 other possible influences.

In a different context, research on corporate entrepreneurship shows significant differences in its nature and extent across privatized firms in Russia, Belarus and Ukraine (Filatotchev et al., 1999). Venture capital research also appears in Type B, and we see significant differences in the approach to investee valuation and sources of information among venture capital investors in English, French and German legal systems as well as across geographical regions (Wright et al., 2004). In related work, clusters of countries (Latin America and Asia) differ and affect venture capital activity. In turn, the actions of venture capitalists and others may shape the institutions that in turn, influence them (Bruton et al., 2009).

A final first-order theme pertinent to entrepreneurship in Type B compares gender issues. Data from the Global Entrepreneurship Monitor (GEM) show that countries with higher levels of entrepreneurial activity tend to have higher relative numbers of female entrepreneurs (Baughn et al., 2006). Interestingly, other GEM results show that women are less involved in entrepreneurial activity than men are, largely because they tend to perceive themselves and the entrepreneurial environment less favorably (Langowitz and Minniti, 2007). Also important to note however, is that concerns have been raised about the GEM measures. Wong et al. (2005) find that economic growth is a result of high growth potential entrepreneurship rather than GEM’s measure of TEA (total entrepreneurial activity). Acs and Amoros (2008) use data from Latin America to argue that GEM’s TEA measures are limited in their reliability as a measure of entrepreneurship. Type B research also examines general network issues and network influences, as well as network development and network capabilities. Differences are found across nations in terms of (e.g.) how contacts are courted, who does the networking and network diversity (Birley et al., 1991), and how entrepreneurs perceive opportunities based on the cohesion of their networks (Arenius and Clercq, 2005). The latter relies on GEM data from Finland and Belgium, while Klyver et al. (2008) draw on GEM for data from 20 nations to suggest that, while the importance of networking differs across countries, there are also similarities in networking practices. Yet other results show that country differences do not play a major role in networking (Greve and Salaff, 2003).

5 As noted in Appendix A, we exclude studies on transnational, ethnic and immigrant entrepreneurship from this review. This follows Drori et al. (2009: 1003), who observe that “while in principle, transnational entrepreneurship is fundamentally compatible with IE’s entrepreneurial initiative the approach and domain differ markedly from IE.” Also, articles were included only if they met the criteria detailed in Appendix A.
Along with the previously noted studies on corporate entrepreneurship and venture capital that signal the importance of context, a clear focus of interest in Type B studies is institutional influences related to the environment and industry. For example, Busenitz et al. (2000) develop a measure for country institutional profiles, while Di Gregorio (2005) integrates a variety of theoretical perspectives to conceptualize different strategies to manage country risk. Common across these studies (more or less) is the argument that a country’s institutional context is important in comparative studies of entrepreneurship. Related to this, much of the Type B research examines national level patterns of entrepreneurship. For example, GEM data show that more generous social security systems (e.g. high levels of mandatory employer and employee contributions) negatively affect a nation’s level of entrepreneurial aspirations (Hessels et al., 2008a) and the prevalence of innovative, high-job-growth, and export-oriented entrepreneurship (Hessels et al., 2008b). GEM data also show that a nation’s level of economic development governs nascent entrepreneurship (Wennekers et al., 2005), the role of entrepreneurship (Van Stel et al., 2005) and paths to competitiveness (Acs and Amoros, 2008), while other data (from the 15 EU member states and the United States) indicate that country-specific effects are important both for latent and actual entrepreneurship (Grilo and Thurik, 2005). The need to apply an institutional perspective to IE research is also recognized in cross-country studies of orientation. For example, Renko et al. (2009) find that the MO of young biotechnology firms influences the level of capital investment they receive in Finland and Sweden, but not in the United States.

4.2.2. Cross-culture Research (emerged 1992)

We identify 27 studies (8.4%) that investigate cultural influences on entrepreneurial behavior (see Table 2) and these generally examine cultural values. Most of this research is thematically grouped as entrepreneur/ship, and looks at characteristics of the entrepreneur. Entrepreneurs are found to hold similar values across national cultures (del Junco and Brás-dos-Santos, 2009; McGrath et al., 1992a). Other studies draw comparisons, showing that entrepreneur’s cultural values differ from those of non-entrepreneurs (Ardichvili and Gasparishvili, 2003; Grichnik, 2008). Holt (1997) has generally similar results, yet observes differences consistent with Confucian philosophy. This is similar to conclusions that collectivist values of the entrepreneur are evident, relevant and highly enduring (McGrath et al., 1992b; Morris et al., 1994).

Complementary results are seen in Thomas and Mueller (2000), who show that, across nine countries, the entrepreneur’s internal locus of control, moderate risk-taking propensity and energy level decrease as cultural distance from the United States increases. Jung et al. (2001) also find differences between the U.S. and other cultures, showing that perceptions of entrepreneurial self-efficacy are lower in Korea (a collectivist culture) than in the United States (individualist), where self-efficacy is positively related to entrepreneurial intentions and action. Together, these findings seem consistent with Mueller and Thomas’ (2001) conclusions that some cultures are more conducive to entrepreneurship than others.

Cognition is another frequent topic of study. Busenitz and Lau (1996) argue that cultural differences influence the cognitive process of individuals and their start-up intentions. This is confirmed in studies of venture formation experts (Morse et al., 1999), the role of cognitive scripts in venture creation (Mitchell et al., 2000), and patterns regarding the existence, nature and relative importance of specific cognitions (Mitchell et al., 2002). Similar results are found regarding business ethics (e.g. Clarke and Aram, 1997). These studies all acknowledge a universal (non-nation specific) culture of entrepreneurship.

Finally, research on organizational issues is less prevalent in Type B than Type A, but we see cross-cultural researchers in IE have an interest in performance, orientation and network development. Kreiser et al. (2002) find the Covin and Slevin EO scale to be valid across cultures and using this measure, firms with a higher EO use alliances more intensively and the relationship is stronger in countries with feminine or collective characteristics (Marino et al., 2002). Cultures with high uncertainty avoidance and collectivism strengthen the positive relationship between MO and new venture performance (Brettel et al., 2009). These traits also influence technology alliance formation (Steensma et al., 2000a,b), i.e. network development.

4.2.3. Combined Cross-country and Cross-culture Research (emerged 2002)

A final thematic area in Type B is country and culture differences, a very small group of studies (four papers; 1.2%). Comparing Chinese, Chinese Americans and Caucasian Americans, for example, the country/institutional effect is more influential than the cultural effect on entrepreneurs’ perception of the environment and their strategic orientation (Tan, 2002). At the same time, both culture and institutional practices affect venture formation (Baughn and Neupert, 2003) and the intention and confidence to create new ventures (Nguyen et al., 2009). Conceptually, Baker et al. (2005) develop arguments on the role of social and cultural context in the discovery-evaluation-exploitation process. In doing so, they integrate sociology, industrial organization economics, organizational ecology and economic geography theory to explain how (and why) comparative IE research must recognize both institutional and cultural influences.

4.2.4. Observations and opportunities for Type B research

As a general observation, Type B research accounts for just less than one quarter of the IE papers we reviewed. While this may reflect our search parameters, the studies we do find highlight three patterns that are important for future research in IE. First, the GEM data have clearly provided a platform for IE investigations across nations, but we note the concerns identified by Wong et al. (2005), and Acs and Amoros (2008). Thus, we point out that other national data exist (see Grilo and Thurik, 2005). Additional datasets include the OECD Entrepreneurship Indicators Project (EIP), Euromonitor and the World Bank Group Entrepreneurship Survey.
Beyond GEM, micro-level research is also important. This might include studying, for example, how the institutional context shapes entrepreneurial capabilities or how opportunities are recognized and enacted. Possibly helpful is Busenitz et al.’s (2000) instrument for assessing country institutional profiles, a tool validated by Manolova et al. (2008) in emerging markets. This relates to our second point. We suggest the inconsistent findings regarding (e.g.) networks likely reflect the extent to which institutional influences are investigated (or not) in those studies. For example, culture may influence network practices (Marino et al., 2002; Steensma et al., 2000a,b), but what is the role of the regulatory, legal and industry context? This is particularly important when we acknowledge that Type B research has an interest in venture capital issues and increasingly, emerging economies are a focus of comparison.

Third, we suggest that in the same way cross-cultural research might benefit from the application of an institutional lens, research with an institutional focus could be enriched through the application of a cultural perspective. Thus, we see opportunities for comparative research where both institutional theory and cultural theory are used to frame the investigation. We also argue that international comparisons of entrepreneurship (i.e. Type B) could benefit from exploring issues germane to Type A research. This leads us to our final type of IE research, that which integrates Type A and Type B in that it examines entrepreneurial internationalization across countries and/or cultures.

4.3. Type C – Comparative Entrepreneurial Internationalization (emerged 2001)

The third and newest type of IE research examines entrepreneurial internationalization in a comparative or cross-national manner. This is represented by 23 articles (7.1%), summarized in Table 3 and illustrated in the thematic map (Fig. 1) branching to the bottom right of centre. Type C studies are both recent (since 2001) and eclectic in that they cover 13 different first-order themes. To focus our discussion we refer to the four second-order themes and two first-order themes in Table 3.

Type C studies often use cross-national data to compare international venture types. Findings from Denmark and Australia show that although born globals are presumed to have the intent to internationalize from inception, internationalization is not necessarily an objective in the founding process (Rasmussen et al., 2001). Rather, this decision is determined by the nature of the new firm (e.g. software developers need international markets). Studies comparing firms in Norway and France show slightly different results and indicate that, although the market situation is important, the early decisions of the firm also influence export development and the extent to which a firm is a born global rather than a born local or a late global (Moen, 2002). This view is similar to findings from Sweden and Finland that the founder and his/her global vision at inception are key factors in a firm that demonstrates rapid and early internationalization patterns (Gabrielson and Pelkonen, 2008). The latter study is part of the research on internationalization patterns and processes and internationalization influences, and other investigations show similar patterns across Germany, France, Italy and the United Kingdom (e.g. Perks, 2009). Data from the United States, the United Kingdom, Australia, Canada, Ireland and New Zealand indicate the management team’s combined creativity, knowledge and resourcefulness is also important in rapid or dynamic internationalization, particularly in knowledge-based sectors (Johnson, 2004; Loane et al., 2007). This suggests the entrepreneurial team, not just the entrepreneur, is relevant, a finding reinforced by Andersson and Evangelista’s (2006) exploration of the nature of the BG entrepreneur.

The above findings support the Type A studies on entrepreneurial internationalization; however, most Type C research explores similar kinds of firms (e.g. technology-based and knowledge-intensive B2B organizations), albeit across country contexts. In contrast, Fan and Phan (2007) study the foreign market entries of new ventures in the intra-European airline industry. They consider this context a more robust test of INV arguments because airlines sell a service to the general market influenced by the same types of factors acting on more traditional firms (e.g. size of the domestic market, early production capacity and economic forces). This therefore, is a possible example of how INVs are similar to rather than different from, other venture forms.

Cross-country research also shows that networks are crucial in leveraging external resources such as venture capital or angel funding (Loane et al., 2007), and beyond leveraging networks, firms make active efforts to build them (Loane and Bell, 2006). We also see that consistent with conclusions from early network studies in Type A, as well as Loane and Bell (2006), partnering with foreign MNEs offers an intermediated mode of internationalization that allows for knowledge spillover (Terjesen et al., 2008). A nation’s inward and outward FDI also lead to knowledge spillover, as do international trade, proportion of export-oriented firms and level of entrepreneurial activity (De Clercq et al., 2008).

De Clercq et al.’s (2008) study highlights an issue not often addressed in the above cross-nation investigations: environmental influences on internationalization. Research in this theme shows that although the timing of early internationalization depends on firm-level effects (corporate resources, organizational experience and industrial sector), the entry locations of German and UK firms are substantially influenced by the regulatory environments of their target country (Coeurderoy and Murray, 2008). Interestingly, related research (with environmental influences as a secondary theme) shows that entrepreneurial firms headquartered in the United States are less likely to be international (Arbaugh et al., 2008), while publicly held firms are more international. Yet other results highlight the potential influence of country image (Andersson and Evangelista, 2006).

Finally, related work on organizational issues examines the links between R&D, internationalization and post-IPO growth in the United Kingdom, Germany and Italy, with differences explained by institutional infrastructure. At the same time, some of their
patterns are consistent across institutional context (Filatotchev and Piesse, 2009). This study also finds that R&D intensity is an important antecedent for internationalization of sales. Other performance research shows that, across Belgian and Spanish new ventures, perceived positional advantage is influenced by the firm’s early international commitment, with the commitment-performance relationship mediated by market orientation (Blesa et al., 2008).

4.3.1. Observations and opportunities for research in Type C

We believe that Type C research (comparative entrepreneurial internationalization) is truly at the intersection of international business and entrepreneurship. Consequently, it is the crux of IE. However, few such studies can be identified. Perhaps not surprisingly, Type C studies are quite recent and tend simply to compare data across nations. Efforts have only recently been made to apply institutional theory, and we are unable to identify any that investigate the impact of culture on entrepreneurial internationalization and its related themes. Since however, IE research is conducted in nations as diverse as Finland, France, Nigeria and Korea, the use of institutional and cultural theory to help explain the existence and behavior of different international venture types across countries and cultures requires attention in order to develop Type C as a research area.

Similar arguments are made for investigations on the motivation for entrepreneurial internationalization and the entrepreneur’s intent at inception. For example, we expect that both cultural and institutional influences would be reflected in the INV’s patterns of path dependence (or independence). Other areas for Type C investigation include cultural and institutional influences on the formation of (e.g.) a global start-up vs. a geographically focused start-up, the discovery and enactment of opportunity, and whether learning in entrepreneurial internationalization is more or less impacted by socialization tactics across cultures and contexts. Finally, since internationalization is context- and time-specific (Jones and Coviello, 2005), and Chetty and Campbell-Hunt (2004) highlight the potential impact of timing (rather than time) on internationalization, research might investigate how firms in different contexts respond to macro influences such as economic recession or political change in a particular time period.

Important too is diversifying IE research into fresh and different industrial contexts. One example is the previously noted work by Filatotchev and Piesse (2009) that investigates newly listed (albeit established) firms. Viewing such ventures as entrepreneurial provides a new form of organization to study. At the same time, although Fan and Phan (2007) observe that the intra-European airline industry provides an appropriate context for IE research, we believe there is a need to investigate other types of non-knowledge intensive firms. Since the organizations studied by Fan and Phan (2007) compete in a mature market with high capital intensity, one might expect these characteristics to have an influence on entrepreneurial behavior. However, we support their call for more comparative research. This could reflect patterns in Type A research in which we see studies of entrepreneurial internationalizing firms in contexts ranging from arts and crafts (e.g. McAuley, 1999) to software (e.g. Bell, 1995).

Overall, we consider Type C a particularly fertile area and encourage IE research in all the themes identified through this review. We also note that it could help bridge IE and transnational entrepreneurship, a rich field of study that was excluded from the current review.

4.4. Publication scope and external legitimacy

We found that the publication outlets for these 323 articles are mostly in international business (24.8%), entrepreneurship (22.3%) and international entrepreneurship journals (15.2%). Thus, over 60% of IE research is published in journals from either the parent disciplines or in IE journals themselves. The rest are found in small business (12.1%), management (11.7%), international marketing (9.3%), marketing (3.1%) or other (1.5%) journals. These results suggest that IE research is relevant across the wider field of management. Since all 323 articles contain theory, concepts or arguments from both international business and entrepreneurship, we find these patterns promising in that they contrast with Keupp and Gassmann’s (2009) concerns that few if any IE studies integrate thinking from both parent disciplines, and that IE research lacks legitimacy outside entrepreneurship journals.⁶

5. Conclusions

Our review is not definitive nor is it intended to be. Rather, we attempt to inventory, summarize, synthesize and interpret research in IE over the 1989–2009 timeframe. We review 323 articles described and labeled by inductive thematic analysis to 51 first-order themes. Following an ontological process, the structure of the IE domain is built upwards from first-order themes to thematic areas, and finally, to three major bodies of research that we label “Types”. These are Type A –

⁶ A possible explanation for this is that the dataset for Keupp and Gassmann’s (2009) review seems to have been created using different criteria than ours. For example, their articles were generated from a pre-determined set of 16 journals and it appears they did not screen papers to specifically identify those integrating IB and entrepreneurship elements. It is also not clear if they allowed for studies comparing entrepreneurship across countries or cultures. Finally, their dataset includes traditional SME export studies incorporating no concepts, arguments or theory from entrepreneurship (e.g. Bijmolt and Zwart, 1994; Brouthers and Nakos, 2005) and teaching cases such as Opalinski and Good (1996) or Coviello (1996).
entrepreneurial internationalization, Type B – international comparisons of entrepreneurship, and Type C – comparative entrepreneurial internationalization. Consequently, we contribute to an understanding of the IE domain and its structure through a ground-up inductive process of thematic identification that is also context sensitive (Saab and Fonseca, 2008). The output from this review is presented in the form of a thematic map (Fig. 1), domain ontology (Tables 1–3), and author summary (Appendix C).

Our intent with this inventory of the IE domain is to construct a repository of extant thought and its development. The domain ontology and mapping of the field in both thematic and chronological order is offered as a resource for current and future IE scholars. By discussing the literature within the context of the domain’s thematic areas and its more finely grained themes, we have attempted to draw attention to key developments and findings while taking care to highlight issues and inconsistencies in (e.g.) definitions, samples, conceptual approaches and findings, all of which contribute to interim debates in IE theorizing. Equally important is the identification of operational implications and numerous areas for future research. We hope these will facilitate discussion of and research on inter-related topics within IE. We believe it is important that IE research is conducted across themes, and that diversity in theoretical foundations and perspectives will strengthen IE as a whole.

We also make a methodological contribution by providing a fully documented and replicable methodology so that the ongoing development of knowledge in IE may be more easily captured and retained. For that purpose, we developed methodological protocols for the search, selection and exclusion of literature, and for its thematic analysis and ontological organization (Appendices A and B). Our approach differs from earlier reviews of IE in its comprehensiveness and attention to field definitions and their evolution. Based on best practice from management and other disciplines, our inductive and interpretive thematic analysis and ontological organization complements other reviews that use a deductive content-analysis or pre-determined analytic framework.

Of course, we acknowledge that the results of any review are a reflection of the literature analyzed. Here, we explicitly selected articles that include ideas, concepts, arguments or theory from both international business and entrepreneurship (recognizing that some do so more than others). Nevertheless, it is important to acknowledge the potential impact of our search parameters. Specifically, since we exclude certain small business studies (see Appendix A) as well as transnational, ethnic and immigrant entrepreneurship (see Footnote 4 and Appendix A), there are restrictions to our findings. Also, we worked on the premise that validation rests on agreement among researchers (Ryan and Bernard, 2003), and all coding decisions were discussed and clarified as we built our database. Nevertheless, it might be appropriate for an external team to assess a random sample of the coded items. This reflects the argument that collective judgment of the community suggests validity (Ryan and Bernard, 2003; Thorpe et al., 2005). Consistent with the observations of McDougall and Oviatt (2000), we concur that it is very possible to categorize papers into more than one grouping (hence multiple levels of themes). For this reason, we caution that any counts of the literature can be misleading and so we use these prudently.

We appreciate and respect that others may interpret papers differently and produce alternative ontological designs. It is also important to note that the comprehensive nature of our review precludes detailed content analysis of thematic areas or themes for this article. Our intent here was to provide a foundation ontology and associated set of methodological protocols to support and enable further interpretation and analysis. Therefore, deeper analysis regarding (e.g.) each paper’s unit of analysis, nation(s) of study or methods is anticipated in future reviews that might assess IE methodologies or take a more focused approach to a specific theme.

Overall, like Weick (1995), we believe that good theory is built through an iterative process of debate and discussion as well as testing. As part of such a process, we identify and discuss the development and increasing sophistication of certain areas in IE research. We also highlight thematic areas that are more recent or under-researched. In answer to criticism that IE is fragmented, inconsistent and lacking in unifying paradigms and theory, we counter that two decades is a very short time for development if theorizing is, as Weick (1995) suggests, an incremental and time-based process. While there may be no unifying framework per se, our ontology shows that the domain is diverse but growing in coherence. As a result, we argue that due to the multi-disciplinary and multi-theoretical nature of IE, the continuance of debate and theorizing is appropriate and healthy. Furthermore, the process of thematically mapping, organizing and assessing the intellectual territory of the domain identifies rich theoretical potential rather than theoretical paucity. Indeed, one might argue that because IE is based on complex phenomena, it is perhaps unlikely that theories unique to IE will be produced. Instead, it will continue to develop theory that spans the domains of international business and entrepreneurship, as well as beyond.

Appendix A Methodological procedures for search, selection and exclusion

A. Criteria for defining IE as a field of study and delineating its parameters.

1. Directly and explicitly integrate theory and concepts from both IB and E in two categories as per Covielo and Jones (2004) based on McDougall and Oviatt (2000):
   a. Entrepreneurial behavior across borders
   b. International comparisons of entrepreneurial behavior
2. Peer-reviewed journal articles only
3. Empirical AND conceptual AND review
B. Exclusion criteria by theoretical relevance

1. Studies focused on SMEs rather than IE per se, i.e. where entrepreneurship issues and theories are not integrated or addressed in the study;
2. Studies in which the primary focus is not international entrepreneurship. E.g. studies of biotech firms in global industries or in which the focus is on technological innovation rather than business or entrepreneurial processes;
3. Studies focused on domestic entrepreneurship in one country;
4. Cross-cultural assessment of EO measures that focus on scale and measure development or validation;
5. Studies on transnational and/or immigrant entrepreneurship;
6. Research published in edited books and conference proceedings;
7. Editorials, IE reviews and commentaries (of the IE field or part thereof, methods, parent fields or related fields);
8. Articles discussing IE education or research techniques for IE;
9. Case studies (e.g. published as a case study for teaching purposes);
10. Articles unavailable electronically or by other reasonable means.

C. Search method and scope – Stage I

1. Full search of articles across academic journals relevant to the field, from 1989 to 2009
2. Admittance criteria by general keyword search using ABI/EBSCO/Proquest Global database and similar.
3. Initial focus on: a) citation and abstract, and b) title
4. Keywords:
   a. International entrepreneurship,
   b. Entrepreneur and international
   c. Internationalis(z)ation, international business, foreign market,
   d. International new ventures, born global, global start-up, INV
   e. Instant/rapid – export/internationalis(z)er, micro MNEs
   f. McDougall, Oviatt
   g. Entrepreneurship and national
   h. Global Entrepreneurship Monitor, GEM
5. A focused/manual search of selected key journals to ensure that articles of relevance not using specified keywords are included. Thus focused search of:
   a. JBV and ETP (top EP journals)
   b. JIBS, JWB, MIR (top IB journals), and IBR, IMR, JIMktg
   c. AMJ, AMR (top management journals)
   d. JIEN
   e. SEJ (new entrepreneurship journal not widely available on library search engines)
   f. Known special/focus issues on IE-related topics (e.g. European Journal of Management, Journal of International Management, Small Business Economics)

D. Search method and scope – Stage II

1. Manual reading/checking by two senior investigators, of all papers included in the database to this point to include or exclude, based on fit with definitional and search parameters (n = 644).
2. Pattern-matching of Stage I list relative to published reviews by two senior investigators. Benchmark review papers include Zahra and George (2002), Coviello and Jones (2004), Rialp et al. (2005a), Aspelund et al. (2007), Wright et al. (2007), Coombs et al. (2009), Keupp and Gassmann (2009) and two major compilations of IE research (McNaughton and Bell, 2009; Oviatt and McDougall, 2007).
3. Re-assess articles excluded by our review but included elsewhere (and include where deemed appropriate)

E. Search method and scope – Stage III

1. Redo the search of 1989–2009 to address refined definition of IE from Oviatt and McDougall (2005), using keywords:
   a. Opportunity
   b. Discovery
2. Include and assess articles deemed to fit search parameters.

Final sample for analysis: n = 323.
Appendix B. Procedures for thematic analysis and ontological organization

A. Data organization
2. Prepare Excel workbook for recording and comparing coding by researchers.

B. Theme identification and coding
1. Two researchers independently read each paper for meaning, taking into account the author(s’) focus and stated purpose, research questions, key arguments, methodology and main constructs to determine the phenomena(on) with which it is concerned.
2. A descriptive statement outlining its primary focus is assigned to each paper in turn taking care to echo its conceptual terminology and vocabulary.
3. After reading and describing the first 20 papers, the researchers compare descriptive statements and resolve discrepancies through discussion.
4. Initial thematic names (T1, T2 and T3) are generated for each paper, with names derived from their descriptive statements.
5. New thematic names are generated as required and applied to similar papers published later, thus preserving the chronology of the dataset.
6. After every 20 papers, the two researchers compare results for consistency.

C. Ontological organization
1. The three thematic names for each paper are ranked and agreed, resulting in the first-ranked theme becoming the first-order thematic name for each paper (T1).
2. Following an ontological process, T1 thematic names are grouped by similarity to form second-order and major thematic areas, thus forming a taxonomic (subtheme – supertheme) hierarchy.
3. Themes are reviewed for redundancy or duplication.

D. Thematic and ontological interpretation and validation
1. Descriptors and themes are summarized in tables and sorted in chronological order by thematic area (supertheme), followed by second-order and first-order themes and corresponding descriptive statements as a domain ontology.
2. The thematic structure of the field is mapped (Fig. 1) and compared for consistency with tables (Tables 1–3) and Excel data.
3. An interpretive account of each theme is written by returning to the papers, pattern-matching against theme descriptors and ontological fit.

E. Quality checking against established practice
1. Each data item (paper) was given equal attention, and coded independently by two researchers.
2. The process was thorough, inclusive and comprehensive (three thematic descriptors).
3. Themes were checked against each other and back to the original dataset.
4. Themes were checked for internal coherence, consistency and distinctiveness.
5. Data were analyzed (interpreted) for meaning and common vocabulary preserved.
6. Themes were iteratively pattern-matched with the data, and the ontology tables and thematic map checked for consistency.
7. The active and reflective role of the researchers is fully acknowledged.

Appendix C. Authors by type of research and thematic area

These thematic areas represent our interpretation and grouping of the primary first-order theme of each article reviewed. Note that an article categorized as (e.g.) Venture Type will contain supporting themes such as Internationalization and/or Networks (and so on). However, the article is listed only once as indicated by its first-order theme (see Fig. 1 and Tables 1–3). Themes and thematic areas in this study are treated as mutually exclusive at each level.

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7 Procedures were adapted from Braun and Clarke’s (2006) guidance for the use of thematic analysis in qualitative research in Psychology, and framed within Tranfield et al’s (2003) guidance for systematic reviews in Management. Ontological procedures were adapted from Noy and McGuinness (2001), also Saab and Fonseca (2008).
<table>
<thead>
<tr>
<th>Thematic area</th>
<th>Authors (listed alphabetically, by year)</th>
</tr>
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<tbody>
<tr>
<td><strong>Type A: Entrepreneurial Internationalization</strong></td>
<td></td>
</tr>
<tr>
<td>Venture Type</td>
<td>McDougall, 1989; Jolly et al., 1992; Rennie, 1993; McDougall et al., 1994; Oviatt and McDougall, 1994, 1995; Knight and Cavusgil, 1996; Madsen and Servais, 1997; Hansen and Wirtzowski, 1999; McAuley, 1999; Harveston et al., 2000; Yeoh, 2000; Kuemmerle, 2002; Andersson and Wictor, 2003; Dimitratos et al., 2003; Kundu and Katz, 2003; McDougall et al., 2003; Riddle and Gilespie, 2003; Sharma and Blomstrom, 2003; Bell et al., 2004; Fletcher, 2004; Gabrielson and Kirpalani, 2004; Gabrielson et al., 2004; Ibeh et al., 2004; Knight and Cavusgil, 2004; Leiblein and Reuer, 2004; Aspelund and Moen, 2005; Evangelista, 2005; Gabrielson, 2005; Knight and Cavusgil, 2005; Rialp et al., 2005b; Freeman et al., 2006; Gleason et al., 2006; Luostarinen and Gabrielson, 2006; Zhu et al., 2006; Brannback et al., 2007; Cloniger and Oviatt, 2007; Gleason and Wiggenhorn, 2007; Hallbäck and Larimo, 2007; Kuivalainen et al., 2007b; Laazi et al., 2007; McGaughey, 2007; Rialp and Rialp, 2007; Servais et al., 2007; Zhang and Tansuhaj, 2007; Kropp et al., 2008; Thai and Chong, 2008; Westhead, 2008; Zettining and Benson-Rea, 2008; Crick, 2009; Lopez et al., 2009; Melén and Nordman, 2009; O’Cass and Weerawardena, 2009; Zhang et al., 2009.</td>
</tr>
<tr>
<td>Internationalization</td>
<td>Litvak, 1990; Bell, 1995; Batra, 1995; Boter and Holmquist, 1996; Korhonen et al., 1996; Bell et al., 2002; Ardichvili and Gasparishvili, 2003; Bucar et al., 2003; Grichnik, 2008; Seawright et al., 2008; Stewart et al., 2008; 2000; Begley and Tan, 2001; Jung et al., 2001; Mueller and Thomas, 2001; Kreiser et al., 2002; Marino et al., 2002; Mitchell et al., 2002; 2007; Yiu et al., 2007; di Gregorio et al., 2008; Andersson and Florén, 2008; Moen et al., 2008; Muzychenko, 2008; Nordman et al., 2008.</td>
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<tr>
<td>Networks &amp; Social Capital</td>
<td>Coviello and Munro, 1995; Casson, 1997; Coviello and Munro, 1997; Zacharakis, 1997; Varis et al., 2005; Coviello, 2006; Coviello and Cox, 2006; Han, 2006; Mort and Weerawardena, 2006; Ruokonen et al., 2006; Wakkee, 2006; Zain and Ng, 2006; Pisano et al., 2007; Presutti et al., 2007; Zhou et al., 2007; Al-Laham and Souitaris, 2008; Berg et al., 2008; Blomqvist et al., 2008; 2009; Han, 2008; Kiss and Danis, 2008; Prashantham, 2008; Sasi and Arenius, 2008; Vapola et al., 2008.</td>
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<tr>
<td>Organizational Issues</td>
<td>Bloodgood et al., 1996; Zahra and Sirmon, 1997; Preece et al., 1999; Knight, 2000, 2001; Ibeh and Young, 2001; Shrader, 2001; Rhee, 2002; Balabanis and Katsikea, 2003; Dimitratos and Plakoyiannaki, 2003; Zahra et al., 2003; Dimitratos et al., 2004; Jantunen et al., 2005; Bloodgood, 2006; Sapienza et al., 2005; Zahra et al., 2005; Kropf et al., 2005; LiPuma, 2006; Freeman and Cavusgil, 2007; Kuivalainen and Sundqvist, 2007; Ripollés-Mélia et al., 2007; Weerawardena et al., 2007; Zhou, 2007; Han and Celky, 2008; Jantunen et al., 2008; Karra et al., 2008; Michailova and Wilson, 2008; Zahra and Hayton, 2008; Casillas et al., 2009; Frishammer and Andersson, 2009; Schwens and Kabst, 2009b; Tolstoy, 2009; Wenneberg and Holmquist, 2009; Kocak and Abimbola, 2009.</td>
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<td>Entrepreneurship</td>
<td>Birkinshaw, 1997; Caruana et al., 1998; Zahra and Garvis, 2000; Hohenthal et al., 2003; Lee and Chen, 2003; Ruzzier et al., 2007; Yu et al., 2007; di Gregorio et al., 2008; Andersson and Florén, 2008; Moen et al., 2008; Muzychenko, 2008; Nordman and Melén, 2008; Perks and Hughes, 2008; Chandra et al., 2009; Mainela and Puhakka, 2009.</td>
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<td><strong>Type B: International Comparisons of Entrepreneurship</strong></td>
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<tr>
<td>Cross-country Comparisons</td>
<td>Choy, 1990; Birley et al., 1991; Ohe et al., 1991; Pitt et al., 1991; Shane et al., 1991; Kolvereid and Obloj, 1994; Manigart, 1994; Kirby et al., 1996; Murray, 1996; Filatotchev et al., 1997; Hornsby et al., 1997; Busenitz et al., 2000; Lussier and Pfeifer, 2000; Smallbone and Welter, 2001; Carlsson, 2002; Greve and Salaff, 2003; Lituchy and Reavley, 2004; Wright et al., 2004; Arentius and Clercq, 2005; Arenius and Minniti, 2005; Di Gregorio, 2005; Grill and Thurik, 2005; Morales-Güçlün and Roig, 2005; van Steijn and Cavusgil, 2005; Wennekers et al., 2005; Wennekers et al., 2006; Grilo and Irgoyen, 2006; Langowitz and Minniti, 2006; Tominc and Rebernik, 2007; Turan and Kara, 2007; Acs and Amoros, 2008; Capelleras et al., 2008; Dickson and Weaver, 2008; Hessel et al., 2008a; Hessel et al., 2008b; Klyver et al., 2008; Levine and Autio, 2008; Luo and Junkunc, 2008; Manolova et al., 2008; Bruton et al., 2009; Gupta et al., 2009; Gupta and Fernandez, 2009; Rantanen and Bernasconi, 2009; Renko et al., 2009; Valliere and Peterson, 2009.</td>
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<tr>
<td>Cross-cultural Comparisons</td>
<td>McGrath and MacMillan, 1992; McGrath et al., 1992a,b; Morris et al., 1994; Busenitz and Lau, 1996; Clarke and Aram, 1997; Holt, 1997; Hunt and Adams, 1998; Morse et al., 1999; Mitchell et al., 2000; Steensma et al., 2000a, b; Thomas and Mueller, 2000; Begley and Tan, 2001; Jung et al., 2001; Mueller and Thomas, 2001; Kreiser et al., 2002; Marino et al., 2002; Mitchel et al., 2002; Archibugi and Gaspari, 2003; Bucar et al., 2003; Grichnik, 2008; Seawright et al., 2008; Stewart et al., 2008; Brettel et al., 2009; del Junco and Brás-dos-Santos, 2009; Taddei and Mueller, 2009.</td>
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<tr>
<td>Combined</td>
<td>Tan, 2002; Baughn and Neupert, 2003; Baker et al., 2005; Nguyen et al., 2009.</td>
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<tr>
<td><strong>Type C: Comparative Entrepreneurial Internationalization</strong></td>
<td></td>
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<tr>
<td>Comparative Entrepreneurial Internationalization</td>
<td>Rasmussen et al., 2001; Moen, 2002; Moen and Servais, 2002; Johnson, 2004; Knight et al., 2004; Lévesque and Shepherd, 2004; Loane et al., 2004; Contractor et al., 2005; Loane, 2005; Andersson and Evangelista, 2006; Loane and Bell, 2006; Spence and Crick, 2006; Fan and Phan, 2007; Loane et al., 2007; Arbaugh et al., 2008; Blesa et al., 2008; Coeurdroy and Murray, 2008; De Clercq et al., 2008; Gabrielson and Pelkonen, 2008; Gabrielson et al., 2008; Terjesen et al., 2008; Filatotchev and Peisie, 2009, Perks, 2009.</td>
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</table>
References


