What do we know about capabilities and early internationalization? A review and synthesis

Review and
synthesis

Eldrede T. Kahiya and Caitlin Warwood

*School of Marketing and International Business, Victoria University of Wellington,
Wellington, New Zealand*

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Abstract

Purpose – The purpose of this study is to organize and assess knowledge on the capabilities pertinent to the early internationalization of born globals (BGs) and international new ventures (INVs).

Design/methodology/approach – A systematic approach is used to search, code, organize and synthesize 155 peer-reviewed journal articles on capabilities and early internationalization.

Findings – The study delimits eight operational and five dynamic capabilities. The synthesis links capabilities to three antecedents (i.e. firm specific factors, managerial socio cognitive attributes and market factors) and three outcomes (i.e. precocity, survival and performance). While 7 of the 12 linkages identified are well-established, relationships involving market factors, survival and dynamic capabilities are sparsely researched.

Research limitations/implications – The authors know more about the effects of firm specific factors and managerial socio cognitive attributes on operational and dynamic capabilities than we do the influence of market factors on either group of capabilities. Likewise, the authors know more about the influence of operational and dynamic capabilities on performance than we do their impact on precocity or survival.

Practical implications – As the pandemic has shown, businesses with adaptable capabilities (e.g. shifting from a brick and mortar to an online/omnichannel approach or micro-breweries competent to switch from manufacturing beer to hand sanitizer) have increased their chance of survival while helping society cope.

Originality/value – This to the authors' knowledge is the first study to provide a comprehensive review of literature on the nebulous concept of capabilities, in the context of the burgeoning research stream on early internationalization.

Keywords International new ventures, Born globals, Dynamic capabilities, Systematic review, International entrepreneurship, Operational capabilities

Paper type Literature review

1. Introduction

We use a systematic approach to search, collate and synthesize extant literature on “capabilities developed for, during, or in response to internationalization or by international new ventures (INVs)” – an emerging theme per Jones *et al.* (2011, p. 637). The rapid growth of literature on born globals (BG) and international new ventures, and the paucity of reviews on the role of capabilities justify our study. To appreciate the contribution we seek to make, it is imperative to provide a synopsis of the nascent area of International Entrepreneurship

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(IE), the sub-domain to which the early, rapid and accelerated internationalization discourse belongs. It took 21 years (i.e. 1989–2009) for research in *IE* to reach 323 studies (Jones *et al.*, 2011), and just nine to double this tally (Baier-Fuentes *et al.*, 2018; Bembom and Schwens, 2018; Servantie *et al.*, 2016). For instance, Servantie *et al.* (2016) and Baier-Fuentes *et al.* (2018) identify 567 and 738 studies, respectively. Bembom and Schwens (2018) suggest the literature has reached 800 studies [1]. When a field begins to generate “knowledge products at a rate far outpacing our current capacity for recall, sense-making, and use” (Rousseau *et al.*, 2008, p. 477), the need for a review becomes undeniable. As it reduces the production of fragmented knowledge and allows researchers to gauge scientific progress, evaluating accumulated research should take precedence over the pursuit of novelty (Oesterle and Wolf, 2011; Rousseau *et al.*, 2008; Tranfield *et al.*, 2003).

Past reviews comprise broad appraisals of *IE* (Baier-Fuentes *et al.*, 2018; Jones *et al.*, 2011; Coviello and Jones, 2004; Ji *et al.*, 2019; Keupp and Gassmann, 2009; Knight and Liesch, 2016; Peiris *et al.*, 2012; Servantie *et al.*, 2016; Verbeke and Ciravegna, 2018), bibliometric reviews (Dzikowski, 2018; Garcia-Lillo *et al.*, 2017; Øyna and Alon, 2018; Rodríguez-Ruiz *et al.*, 2019), integrative reviews of born globals and international new ventures exploring the first (Aspelund *et al.*, 2007; Rialp *et al.*, 2005a, 2005b) and second (Romanello and Chiarvesio, 2019) decades of research and critical reviews and conceptual articles dissecting terminology, definitions and thresholds (Cesinger *et al.*, 2012; Coviello, 2015; Paul and Rosado-Serrano, 2019; Reuber *et al.*, 2017; Svensson and Payan, 2009). Meanwhile, thematic or focused reviews assessing knowledge content (Covin and Miller, 2014; De Clercq *et al.*, 2012; Mainela *et al.*, 2014; Sedzimauskiene *et al.*, 2019) have remained underrepresented. Indeed, knowledge on several constructs is still unstructured and fragmented (Jones *et al.*, 2011; Keupp and Gassmann, 2009; Rodríguez-Ruiz *et al.*, 2019).

Aside from two recent papers (Jie *et al.*, 2021; Nguyen and Mort, 2020), there are no previous attempts to assess extant research on capabilities and early internationalization. This is surprising given that internationalization, by its very nature, is capabilities-based (Tallman and Fladmoe-Lindquist, 2002). The study of capabilities is fundamental for three reasons; capabilities are indispensable to entrepreneurial internationalization; they enable competitive strategy; and ultimately, enhance performance (Karra *et al.*, 2008; Jones *et al.*, 2011; Øyna and Alon, 2018; Sapienza *et al.*, 2006). Capabilities engender some of the precocity inherent in early internationalization and help shed light on why young, small and sometimes resource-poor ventures, engage in the successful onward international expansion (Gabrielsson *et al.*, 2008; Madsen and Servais, 1997; Sapienza *et al.*, 2006; Weerawardena *et al.*, 2007). The handful reviews and conceptual papers (Al-Aali and Teece, 2014; İpek, 2018; Øyna and Alon, 2018; Zahra *et al.*, 2011) cover portions of the discourse. For instance, Øyna and Alon (2018) indicate capabilities are one of the preeminent thematic clusters on born global research. Likewise, İpek's (2018) assessment of the resource-based view (RBV) in internationalization underscores the significance of capabilities to RBV. Conceptual work by Al-Aali and Teece (2014) and Zahra *et al.* (2011) has laid the foundation for the application of a dynamic capabilities' perspective to early internationalization. Cavusgil and Knight (2015, p. 11), while reflecting on their award-winning article ponder: “What (other) organizational capabilities are salient to early internationalization and performance abroad?”

Cavusgil and Knight's (2005) contemplation is not isolated. Øyna and Alon (2018, p. 174) “suggest that some attention should be given to how the dependency of INVs/BGs on various capabilities develops and changes over time, and how they relate to other concepts investigated in other streams (e.g., global diversity, international intensity, and entrepreneurial orientation).” Thus, our problematization adopts neglect-spotting (Alvesson and Sandberg, 2011; Sandberg and Alvesson, 2011) to underline the lack of reviews on

capabilities and early internationalization. Unlike [Nguyen and Mort \(2020\)](#), who use an integrative review of select articles to provide a microfoundations-based explanation on the role of capabilities in the internationalization of born globals, we use a systematic literature review to search, collate and synthesize extant literature on capabilities associated with born globals and international new ventures. [Nguyen and Mort \(2020\)](#) contribute to knowledge through an organizational framework and propositional inventories, whereas we pose the following questions: what capabilities are associated with born global (BGs) and INVs, what factors underpin capabilities and what outcomes are associated with capabilities? We distinguish our research from [Jie et al. \(2021\)](#), who focus on the capability-performance relationship – a subpart of our comprehensive review.

We identify eight operational (i.e. networking, entrepreneurial, marketing, knowledge and learning, innovation, financing, technology and management) and five higher-level (i.e. absorptive capacity, ambidexterity, dynamic managerial, dynamic learning and dynamic social) capabilities. Using content analysis and constant comparison, we draw three antecedents (i.e. *firm specific factors*, *managerial socio cognitive attributes* and *market factors*) and three outcomes (i.e. *precocity*, *survival* and *performance*), before linking these to *operational* and *dynamic capabilities*. We use synthesis by integration to demonstrate that just 7 of the 12 linkages are well-established. Concerning antecedents, we know more about the effects of *firm specific factors* and *managerial socio cognitive attributes* on *operational* and *dynamic capabilities* than we do the influence of *market factors* on either group of capabilities. Likewise, we know more about the influence of *operational*- and *dynamic capabilities* on *performance* than we do their impact on *precocity* or *survival*. Linkages involving *market factors* (i.e. as an antecedent), *survival* (i.e. as an outcome) and *dynamic capabilities* (i.e. both *antecedent-capability* and *capability-outcome*) are scantily researched.

To the nascent research stream in *Review of International Business and Strategy (RIBS)* examining the early and rapid internationalization of born globals and international new ventures ([Alam et al., 2020](#); [Coudounaris, 2018](#); [Dow, 2017](#); [Zalan, 2018](#)), we contribute a capabilities-based perspective. Moreover, we add early internationalization to review papers published in *RIBS* ([Coudounaris and Arvidsson, 2021](#); [Dike and Rose, 2017](#); [Gulanowski et al., 2018](#); [Lopez-Morales, 2018](#); [Thukral and Jain, 2021](#)), which condense extant knowledge and set a future research agenda on internationalization. We are to the best of our knowledge, the first systematic review to provide taxonomy on capabilities pertinent to early internationalization, to synthesize extant knowledge on the antecedents (to) and outcomes of capabilities and to map directions for future research.

2. Capabilities and early internationalization – contextualization

The importance of understanding capabilities pertinent to early internationalization ([Gabrielsson et al., 2008](#); [Madsen and Servais, 1997](#); [Sapienza et al., 2006](#); [Weerawardena et al., 2007](#)) stands in sharp contrast to the inadequate conceptualization and fragmentation evident in extant knowledge ([Coviello, 2015](#); [Jie et al., 2021](#); [Nguyen and Mort, 2020](#)). [Coviello \(2015\)](#) stresses that the interchangeable use of *resources*, *capabilities* and *strategies* obfuscates the discourse on entrepreneurial internationalization. It is imperative for IE research “to more clearly disentangle and then understand the relationships” among these elements ([Coviello, 2015](#), p. 22). To plug this gap, we adopt a systematic literature review to search, code, organize and synthesize extant knowledge on capabilities and early internationalization.

The lack of a universal definition, which traces to the interpretation of the seminal studies ([Oviatt and McDougall, 1994](#); [Rennie, 1993](#)), is so problematic that [Svensson and Payan \(2009\)](#) imply it may be emblematic of “academic protectionism” or “academic myopia.” As multiple scholars ([Madsen, 2013](#); [Rialp et al., 2005a, 2005b](#); [Zahra, 2005](#)) have highlighted, much of

subsequent research fails to use the four attributes of *speed*, *scope*, *pace* and *degree/extent* to conceptualize and operationalize early internationalization. Notwithstanding, the notion of generating measurable revenue from foreign sales early in the lifecycle of a venture (i.e. *speed-degree*), is the most unifying precept for both BG and INV research. Our conceptualization of “early internationalization,” which is informed by Svensson and Payan (2009) includes both BG and INV research streams, and studies qualify for inclusion so long they depict a sizeable proportion of foreign revenue being earned at or near inception.

Like the research on early internationalization, inconsistencies in conceptualization typify the study of capabilities. Across *International Business, Marketing and Management/Strategy* (Day, 1994; Knight and Kim, 2009; Leonard-Barton, 1992), Winter (2003) concerns regarding the lack of definitional clarity on capabilities linger. Winter (2003, p. 991) argues there is a “mystery surrounding both the terminology and the phenomenon.” Several key studies (Collis, 1994; Day, 1994; Leonard-Barton, 1992; Teece et al., 1997; Winter, 2003) inform our conceptualization of capabilities, while Knight and Kim’s (2009) definition of *international business competence* and Schmidt and Santamaria-Alvarez’s (2021) recent paper on *routines*, provide parameters for the International Business context relevant for our review. This delineation of conceptual boundaries is fundamental in framing a review and serves as the backdrop to the search and screening procedures detailed below.

3. Methodology

Our systematic review embodies the tenets of scientific positivism and culminates in an audit trail (Briner et al., 2009; Reay et al., 2009; Rousseau et al., 2008; Tranfield et al., 2003). We approach the review with the objective of scoping (i.e. offering clarity by delineating and summarizing the literature on a key and unexplored area) (Armstrong et al., 2011; Peterson et al., 2017). This goal is especially appropriate “when a body of literature has not been extensively reviewed, or exhibits a large, complex, or heterogeneous nature” (Peters et al., 2015, p. 141). The previous overview alluded this point.

Figure 1 shows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses model for this research. We used six combinations – [born global and capabilities], [global

Figure 1.
Preferred reporting
items for systematic
reviews and meta-
analyses (PRISMA)
framework

start up and capabilities], [international new venture and capabilities], [early internationalization and capabilities], [accelerated internationalization and capabilities] and [rapid internationalization and capabilities]. The search encompassed keywords, abstract and full text. Given the lack of past reviews on capabilities to serve as a starting point, the fact that the construct is inherently pan-disciplinary, and that hand-picked top journals may be susceptible to biases (Svensson, 2006; Svensson and Wood, 2006), we decided against searching by pre-selected journal.

Databases of *ABI Inform*, *JSTOR* and *Science Direct* produced 307 records. A search of publisher-specific databases (i.e. *Blackwell-Wiley*, *Elsevier*, *Emerald*, *Palgrave*, *Sage*, *Springer* and *Taylor and Francis*) yielded an additional 28 records resulting in a pool of 335 relevant studies. We excluded 146 records comprising book chapters, commentaries, conference papers, introductions to special issues and opinion pieces, reducing our sample to 189 full text journal articles.

Briner *et al.* (2009) and Reay *et al.* (2009) recommend determining a-priori, the inclusion criteria to guarantee the researcher is impartial and balanced. It is vital to ensure the guiding questions are specific but not too narrowly defined, and qualifying criteria are precise but not excessively stringent (Armstrong *et al.*, 2011; MacLure, 2005). Criteria for inclusion were set as follows:

- The study examines the early internationalization of born globals or international new ventures and captures this using *speed* and *degree*.
- Capabilities are a focal construct.
- The study tests or theorizes a link between capabilities and another factor.

This reduced the sample by 34 studies. For instance, articles that recognize only the *degree* but not the *speed* (Jantunen *et al.*, 2005) or vice-versa are excluded. The final sample which comprises 155 peer-reviewed journal articles published in English, compares to several recent studies (Coudounaris and Arvidsson, 2021; İpek, 2019; Kahiya, 2018; Mainela *et al.*, 2014; Martineau and Pastoriza, 2016; Thukral and Jain, 2021).

We used a standard coding protocol for bibliometric aspects, research design and methodology (İpek, 2019; Kahiya, 2018; Tuomisalo and Leppäaho, 2018). Working independently, two coders transcribed data from the articles onto the coding sheets. Reliability was verified using inter-coder agreement and discussion and joint resolution ironed out disagreements. The results of the coding were carefully transcribed from a spreadsheet to a word document, ensuring accuracy and completeness. Appendices A and B serve as the source documents for the bibliometric and methodological attributes discussed below.

The synthesis of extant knowledge required an additional step. In line with Edmondson and McManus (2007), we contend that for an emerging research stream in which the literature comprises qualitative and quantitative research, a critical realist synthesis by integration is the most fitting technique (Rousseau *et al.*, 2008; Torraco, 2005). We combine content analysis and constant comparison methods to delimit capabilities, identify antecedents (to) and outcomes of capabilities and assess the links between capabilities and the antecedents and outcomes. Our approach is compatible with two recent reviews (Kahiya, 2020; Martineau and Pastoriza, 2016) that use synthesis by integration.

4. Findings

4.1 Profile of the studies

The results first provide a bibliometric overview of the studies. A description of the methodological attributes follows thereafter.

Figure 2 shows the publishing trends over time. Zahra *et al.* (2000) are the foundational study on capabilities of born globals and international new ventures. While the first five

Figure 2.
Publishing trends
over time

years were characterized by modest increments, research accelerated rapidly post-2006. By single year, the largest number of papers (i.e. 16) was recorded in 2012 and 2017, respectively. This is consistent with the reviews (Servantie *et al.*, 2016), which underline a surge in research output in recent years.

Table 1 provides a list of journals that have published two or more articles on capabilities and early internationalization. The top 12 publications, which have disseminated four or more articles account for nearly two-thirds of this research. These journals are consistent with several recent reviews (Ipek, 2018; Kahiya, 2018; Li *et al.*, 2017; Martineau and Pastoriza, 2016) on export- or internationalization-related topics. The journals cover three main disciplines – *Entrepreneurship and small business*, *International Business* and *Marketing* – indicating wide-ranging interest in the topic. There is rationale (ex post) for conducting a broad search. Had we used a pre-selected list, we would have missed articles published in some recognizable journals [e.g. *Journal of the Academy of Marketing Science*,

Table 1.
Outlets for research
on capabilities and
born globals/
international new
ventures

Publication	Abbreviation	Frequency
<i>Journal of International Entrepreneurship</i>	JIE	29
<i>International Business Review</i>	IBR	9
<i>Journal of World Business</i>	JWB	9
<i>International Entrepreneurship and Management Journal</i>	IEMJ	7
<i>International Small Business Journal</i>	ISBJ	7
<i>Journal of International Marketing</i>	JIM	7
<i>Management International Review</i>	MIR	7
<i>Industrial Marketing and Management</i>	IMM	6
<i>International Marketing Review</i>	IMR	6
<i>Entrepreneurship Theory and Practice</i>	ETP	4
<i>Journal of Business Research</i>	JBR	4
<i>Journal of International Business Studies</i>	JIBS	4
<i>Asian Business Management</i>	ABM	2
<i>European Business Review</i>	EBR	2
<i>Journal of Asia Business Studies</i>	JABS	2
<i>Journal of Promotion Management</i>	JPM	2
<i>Journal of Small Business Management</i>	JSBM	2
<i>Management Decision</i>	MD	2
<i>Qualitative Marketing Research</i>	QMR	2
<i>Review of International Business and Strategy</i>	RIBS	2

Journal of Brand Management and *Journal of Promotion Management*] that are not typical mouthpieces for research on capabilities and early internationalization.

Table 2 depicts the 10 most cited studies per *Google Scholar* as of 13th January 2020. We provide both the total citations and average citations per year. Zahra *et al.* (2000) are the most cited, followed by Knight and Cavusgil's (2004) award-winning paper. Also, of note is the work by Chetty and Campbell-Hunt (2004), another award-winning study in its own right [2]. 9 of the 10 studies appear on both lists but the order shifts to reflect the different speeds at which articles accumulate citations. Kuivalainen *et al.* (2007) join the top 10 ahead of Knight *et al.* (2004) while, perhaps, unsurprisingly, Knight and Cavusgil (2004) top the list based on average citations [3].

Data are drawn from 40 countries, but 12 of these (Figure 3) contribute four or more samples to the total pool of 161. Cumulatively, they account for (115 of 161) 71% of the samples in this review. Small open economies (e.g. Denmark, New Zealand, Spain and Sweden) remain the focal point of this research stream, but there is interest in early internationalization, among both the traditional advanced (e.g. Germany and the USA) and big emerging economies (e.g. China and India).

Nearly a third (i.e. 52) of the studies specify the industry beyond designations of “service” or “manufacturing.” Common descriptors encompass high tech (24), information and communication technology (9), software (9), biotech (5), medical technology (4) and design-intensive (3) (Efrat and Shoham, 2012; Evangelista, 2005; Rodriguez-Serrano and Martin-Armario, 2019; Thistoll and Pauleen, 2010; Tolstoy and Agndal, 2010; Weerawardena *et al.*, 2019a; Zahra *et al.*, 2003) suggesting a bias towards knowledge-intensive sectors.

Ranking	Author(s)	Total citations	Ranking	Author(s)	Citations per year
1	Zahra <i>et al.</i> (2000)	3,269	1	Knight and Cavusgil (2004)	202.1
2	Knight and Cavusgil (2004)	3,234	2	Zahra <i>et al.</i> (2000)	163.5
3	Sapienza <i>et al.</i> (2006)	1,425	3	Sapienza <i>et al.</i> (2006)	101.8
4	Johanson and Vahlne (2003)	1,415	4	Johanson and Vahlne (2003)	83.2
5	Sharma and Blomstermo (2003)	1,081	5	Weerawardena <i>et al.</i> (2007)	67.6
6	Weerawardena <i>et al.</i> (2007)	879	6	Sharma and Blomstermo (2003)	63.6
7	Chetty and Campbell-Hunt (2004)	866	7	Chetty and Campbell-Hunt (2004)	54.1
8	Andersson and Wictor (2003)	719	8	Mort and Weerawardena (2006)	46.4
9	Mort and Weerawardena (2006)	650	9	Andersson and Wictor (2003)	42.3
10	Knight <i>et al.</i> (2004)	526	10	Kuivalainen <i>et al.</i> (2007)	39.4

Table 2.
The 10 most cited studies

Figure 3.
The most frequently surveyed countries

4.2 Design and methodological profile

Figure 4 provides a digest of the research design and methods, segmented into three principal strands – exploratory, descriptive and causal. The categories are not intended to be definitive and mutually exclusive; rather they indicate the main contours of the design and methodological landscape.

4.2.1 *Exploratory research design.* 23 studies (Al–Aali and Teece, 2014; Autio *et al.*, 2011; Karra *et al.*, 2008; Prashantham and Floyd, 2012; Weerawardena *et al.*, 2019a; Zahra *et al.*, 2011) adopt an exploratory research design. Within this cluster are two approaches – monographs/research notes and conceptual articles. Written primarily as “provocations” monographs tend to feature in prominent journals. The conceptual articles combine an illustrative literature review and an instrumental case study. Often, they provide a synthesis and propositions.

4.2.2 *Descriptive research design.* 58 studies involve descriptive research design, and qualitative case studies (Evangelista, 2005; Evers *et al.*, 2012; Freeman and Cavusgil, 2007; Laanti *et al.*, 2007; Mort *et al.*, 2012) constitute the majority (i.e. 49 out of 58). Nonprobability methods (e.g. purposive sampling) are the preferred approach for identifying cases. Uptake of a longitudinal approach through historical case analysis is higher among these studies compared to the exploratory or causal research design. Data reduction techniques (i.e. coding, pattern matching and explanation building) and cross-case comparisons are the most frequently used tools. We note here the underutilization of computer assisted textual analysis tools.

4.2.3 *Causal research design.* 74 studies (Baum *et al.*, 2015; Cannone and Ughetto, 2014; Efrat and Shoham, 2012; Knight and Cavusgil, 2004; Kuivalainen *et al.*, 2007; Martin and Javalgi, 2016; Rodríguez-Serrano and Martin-Armario, 2019; Weerawardena *et al.*, 2015; Zahra *et al.*, 2000), representing nearly half of the studies in our review, adopt causal research design. Mail surveys are the principal tool for collecting data, and secondary sources/databases are used sparingly. The use of electronic or online surveys is rare. 32 studies use basic multi-variate techniques, while the remainder use advanced multi-variate analytical methods. Ordinary least squares regression and structural equation modelling are the most regularly used basic and advanced multi-variate tools, respectively.

4.3 Theories on capabilities and early internationalization

4.3.1 *Social capital perspective.* Bourdieu’s conceptualization of social capital has shaped social science research. According to Bourdieu and Wacquant (1992, p. 119), “social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue

Figure 4. Research design and methods

of possessing a *durable network of more or less institutionalized relationships* of mutual acquaintance and recognition.” Uncovering the genesis of social capital, assessing its various manifestations and the impact on international expansion constitute recognizable research sub streams on internationalization (Chen and Lovvorn, 2011; Chetty and Agndal, 2007; Sinkovics *et al.*, 2014). Studies that apply a social capital explanation for the role of capabilities in early internationalization embrace Kungwansupaphan and Siengthai (2014) and Manolova *et al.* (2010, 2014) and Prashantham and Dhanaraj (2010).

4.3.2 Knowledge perspective. Grant’s (1996) dissertation on the organization as both a creator and repository of knowledge has helped promote the application of the knowledge-based view (KBV) in internationalization (Felin and Hesterly, 2007; Park *et al.*, 2015; Prashantham, 2005). Because knowledge is the bedrock of internationalization, the KBV has found wide acceptance in this research stream. One application of the KBV to internationalization involves dissecting myriad knowledge-based components encompassing the *know what, know why, know how, know who, know when* (Park *et al.*, 2015) and another focuses on the role of knowledge in facilitating internationalization (Nordman and Melén, 2008). This latter application is especially important to our study as it captures both the static and dynamic aspects of knowledge. For instance, several studies (Domurath and Patzelt, 2016; Park and Rhee, 2012; Rodríguez-Serrano and Martín-Armario, 2019), examining the effect of absorptive capacity on accelerated internationalization allude the KBV.

4.3.3 Learning perspective. Extending Levitt and March (1988, p. 319), who defined learning “as routine-based, history-dependent, and target-oriented,” Huber (1991) identify manifold sources of learning including congenital, vicarious, experiential and grafting. Bruneel *et al.* (2010), De Clercq *et al.* (2012), İpek (2019) and Pellegrino and McNaughton (2017) among others borrow from this foundational research to emphasize the application of the learning perspective to the internationalization of born globals international new ventures. For example, İpek (2019) underlines the explanatory power of organizational learning in export research, whereas De Clercq *et al.* (2012) and Pellegrino and McNaughton (2017) provide a detailed account of the evolution of learning in early and rapid internationalization. Examples of research applying the learning perspective to investigate capabilities and accelerated internationalization include Bruneel *et al.* (2010), De Clercq and Zhou (2014), Kim *et al.* (2011) and Voudouris *et al.* (2011).

4.3.4 Resource-based view. While Barney’s (2001) valuable – rare – inimitable – non-substitutable typology is arguably the most recognizable framework on the RBV, the perspective traces to earlier scholarship on the theory of the firm (Snow and Hrebiniak, 1980; Wernerfelt, 1984). Leonard-Barton (1992) elaborates that the study of capabilities originates from the research stream on competences, invisible assets and resource deployments, conducted under the auspices of the RBV. The application of the RBV to the study of internationalization can be summed up as follows: The presence of an ample resource base may motivate the development of capabilities, and the routinization of those capabilities fosters new resources (İpek, 2018; Pinho and Prange, 2016). Tenets of the RBV are evident in some studies encompassing Sepulveda and Gabrielsson (2013), Tolstoy and Agndal (2010), Verreyne *et al.* (2016) and Zahra *et al.* (2003).

4.3.5 Institutional perspective. The institutional perspective is an established lens in both *Management and International Business*. Most of the research on institutional theory and internationalization (Gaur *et al.*, 2014; Kostova *et al.*, 2008; Kiss and Danis, 2008), emanates from North’s (1990) dissertation. Broadly, the institutional environment facilitates or constrains internationalization. The institutional environment can influence the development of capabilities and moderate the relationship between those capabilities and outcomes of internationalization. Surprisingly, only Zhang *et al.* (2017) incorporate an

institutional perspective to probe the role of sub-national institutions in capability development. Institutions are underappreciated in early internationalization and nearly 30 years after Oviatt and McDougall, scholarship is still answering the elementary question of what institutional attributes promote the emergence of born globals (Fainshmidt *et al.*, 2021; Prieto-Sánchez and Merino, 2021).

4.3.6 Microfoundations. While the microfoundations perspective is not novel (Collins, 1981) it is an increasingly pivotal lens in *Management, Organizational Behaviour* and *Strategy* (Barney and Felin, 2013; Felin *et al.*, 2012, 2015; Minniti and Bygrave, 1999; Teece, 2007). Of relevance to our review is its application to entrepreneurship, dynamic capabilities and firm internationalization (Minniti and Bygrave, 1999; Teece, 2007). Teece (2007) expostulates that microfoundations serves as a mechanism for delayering individuals, processes and structure embedded in capabilities, competencies and routines. Yet, Prashantham and colleagues (Prashantham and Floyd, 2012, 2019) are among the few scholars who use microfoundations to the study of capabilities and early internationalization.

5. Synthesis and discussion

To reiterate, our synthesis distinguishes *operational* from *dynamic capabilities*, identifies three antecedents (firm specific factors, managerial socio cognitive attributes and market factors) and three outcomes (precocity, survival and performance) of the capabilities, before dissecting the resultant linkages. We begin this by delimiting capabilities. This is followed by an outline of correlates and a discussion of the linkages.

5.1 Delimiting capabilities

Operational “functional,” “ordinary,” “survivalist” “threshold” or “zero-order” capabilities are static competences a firm requires on a day-to-day basis, whereas dynamic capabilities are higher level competences which confer competitive advantage. We delineate 13 capabilities and their illustrative definitions. Because many of the studies do not offer lucid definitions, we extended our search to mainstream *Management* literature. Definitions for “entrepreneurial,” “financing,” “innovation,” “networking” and “absorptive capacity” are drawn from the literature being studied, while the remainder are sourced from broader *Management* literature. Table 3 offers a summary of illustrative definitions of the capabilities, indicative components and select past literature.

5.2 Antecedents to capabilities

There are three main clusters of antecedents – firm specific factors, managerial socio cognitive attributes and market factors. Within each of these clusters, we highlight the specific variables studied. The clusters are comparable to groupings found in recent reviews of *IE* research (İpek, 2019; Kahiya, 2020; Martineau and Pastoriza, 2016). For instance, Kahiya (2020) identifies managerial, environmental and firm-level determinants, while Martineau and Pastoriza (2016) recognize firm-level, individual-level and environmental antecedents.

5.3 Outcomes of capabilities

Precocity, survival and performance are the three primary outcomes of capabilities. Precocity –sometimes referred to as early international orientation or proclivity – is the tendency to develop the aptitude to internationalize earlier than anticipated. Survival, or business longevity pertains to how well a venture sustains its operations post initial market entry. The concept of survival or longevity is especially central to the early

Capability	Definition	Components	Illustrative studies
<i>Entrepreneurial</i>	"... the ability to identify and acquire the necessary resources to act upon opportunities identified in the market, or to create new market opportunities" (Karra <i>et al.</i> , 2008, p. 443)	Bricolage, collaboration, institutional bridging, opportunity identification	(Freeman and Cavusgil, 2007; Falahat <i>et al.</i> , 2018; Gerschewski <i>et al.</i> , 2016; Hughes <i>et al.</i> , 2010; Odorici and Presutti, 2013; Romanello and Chiarvesio, 2017; Zhang <i>et al.</i> , 2017; Zhou <i>et al.</i> , 2010)
<i>Financing</i>	Building and leveraging a strong venture financing network (Manolova <i>et al.</i> , 2014)	Internal/external-, short/long term-, access (to) financing	(Gabrielsson <i>et al.</i> , 2004; Huang and Hsieh, 2013; Kuivalainen <i>et al.</i> , 2010)
<i>Innovation</i>	"The precocity, receptivity, and inclination to adopt unfamiliar ways and ideas... (for) meeting customer needs or creating new offerings" (Kim <i>et al.</i> , 2011, p. 881)	Business model, product, process, technological	(Abrahamsson <i>et al.</i> , 2019; Cannone and Ughetto, 2014; Spence <i>et al.</i> , 2011; Thai and Chong, 2008; Thistoll and Pauleen, 2010; Weerawardena <i>et al.</i> , 2015)
<i>Learning and knowledge acquisition</i>	"... we may think of learning in an iterated-choice context, as the process of updating the probabilities of choosing any particular action as new information on its consequences is received" (Minniti and Bygrave, 2001, p. 8)	Acquiring, disseminating, integrating, "unlearning," "relearning"	(Baum <i>et al.</i> , 2011; Chetty and Campbell-Hunt, 2004; De Clercq and Zhou, 2014; Kumar, 2013; Varma <i>et al.</i> , 2016; Voudouris <i>et al.</i> , 2011; Weerawardena <i>et al.</i> , 2007; Zahra <i>et al.</i> , 2011)
<i>Management</i>	"... the management capacity, management expertise, and management processes available to the firm for evaluating, shedding, adding, bundling, and leveraging its resources to achieve a competitive advantage" (Graves and Thomas, 2006, p. 208)	Planning, organizing, leading, decision-making	(Boermans and Roelfsema, 2013; Cannone and Ughetto, 2014; Efrat and Shoham, 2012; Gabrielsson <i>et al.</i> , 2004; Kungwansupaphan and Siengthai, 2014; Nummela <i>et al.</i> , 2016)
<i>Marketing</i>	There are two strands; capabilities pertaining to the marketing mix, and those concerning the development and deployment of marketing strategy (Morgan <i>et al.</i> , 2009)	Branding, customer support, entrepreneurial marketing	(Altshuler and Tarnovskaya, 2010; Cannone and Ughetto, 2014; Efrat and Shoham, 2012; Haskell <i>et al.</i> , 2016; Khavul <i>et al.</i> , 2010; Kim <i>et al.</i> , 2011; Knight <i>et al.</i> , 2004; Laudien and Daxböck, 2017; Martin <i>et al.</i> , 2018; Mort <i>et al.</i> , 2012)
<i>Networking</i>	"... the capacity of the firm to develop a purposeful set of routines within its networks, resulting in the	Building, adding, deleting, reconfiguring	(Chetty and Campbell-Hunt, 2004; Debrulle and Maes, 2015; Falahat <i>et al.</i> , 2018; Hughes <i>et al.</i> , 2019;

(continued)

Table 3.
Capabilities –
definitions,
components and
indicative studies

Capability	Definition	Components	Illustrative studies
	generation of new resource configurations and the firm's capacity to integrate, reconfigure, gain and release resource combinations" (Mort and Weerawardena, 2006, p. 558)		Prashantham and Dhanaraj, 2010; Prashantham <i>et al.</i> , 2019; Tolstoy and Agndal, 2010)
<i>Technological</i>	"... include the technology skills of the individuals and teams, the processes and routines followed, and other technological assets (e.g., machines or information and manufacturing systems) that together contribute to the firm's path-dependent technology potential" (Kyläheiko <i>et al.</i> , 2011, p. 511)	Patent, copyright, trademark, trade secrets, technical expertise, ICT, unique processes, certifications	(Falay <i>et al.</i> , 2007; Gabrielsson <i>et al.</i> , 2004; Haskell <i>et al.</i> , 2016; Efrat and Shoham, 2012; Kim <i>et al.</i> , 2011; Knight and Cavusgil, 2004, 2005; Zhang <i>et al.</i> , 2013)
<i>Absorptive capacity</i>	"... a dynamic capability pertaining to knowledge creation and utilization that enhances a firm's ability to gain and sustain a competitive advantage" (Zahra and George, 2002, p. 185)	Acquisition, assimilation, transformation and exploitation	(Altshuler and Tarnovskaya, 2010; Domurath and Patzelt, 2016; Freeman <i>et al.</i> , 2010; Park and Rhee, 2012; Rodríguez-Serrano and Martín-Armario, 2019)
<i>Ambidexterity</i>	"... a dynamic capability (which) embodies a complex set of routines including decentralization, differentiation, targeted integration, and the ability of senior leadership to orchestrate the complex trade-offs that ambidexterity requires" (O'Reilly and Tushman, 2008, p. 2000)	Effectual-causal logics, exploration-exploitation, proactive-reactive, profit-growth focus, customization-adaptation	(Han and Celly, 2008; Jantunen <i>et al.</i> , 2008; Monferrer <i>et al.</i> , 2015)
<i>Dynamic managerial</i>	"... the capabilities with which managers build, integrate, and reconfigure organizational resources and competences... they reflect three underlying factors: managerial human capital, managerial social capital, and managerial cognition" (Adner and Helfat, 2003, p. 1020)	Alertness, cognition, dexterity, percipience, sensemaking	(Autio <i>et al.</i> , 2011; De Clercq and Zhou, 2014; Oxtorp, 2014; Rasmussen <i>et al.</i> , 2001)

(continued)

Table 3.

Table 3.

Capability	Definition	Components	Illustrative studies
<i>Dynamic learning</i>	“... involve coordination, learning, and strategic competitive response activities that include new creatively and innovatively derived routines and resources” (Verreyne <i>et al.</i> , 2016, p. 4288)	Low repetition patterning, change intent, resource sustainability, path breaking	(Bruneel <i>et al.</i> , 2010; Schwens and Kabst, 2011; Prashantham and Dhanaraj, 2010; Voudouris <i>et al.</i> , 2011)
<i>Dynamic social capital</i>	The capacity to renew, regenerate and reconfigure (initial) social capital in response to ties obsolescence and tie decay (Prashantham and Dhanaraj, 2010)	Initial social capital, tie obsolescence, tie decay	(Loufrani-Fedida <i>et al.</i> , 2019; Schwens and Kabst, 2011; Voudouris <i>et al.</i> , 2011)

internationalization discourse given it helps elucidate what becomes of born globals and international new ventures as they evolve from entrepreneurial start-up to stable maturity. Performance denotes the financial (e.g. turnover and growth); operational (e.g. efficiency); and objective or subjective (e.g. margin vs satisfaction with performance) outcomes associated with capabilities. Figure 5 which depicts well-established, under-researched and proposed linkages is the basis for the remainder of this discussion.

5.4 Well-established research linkages

5.4.1 Firm specific attributes and operational capabilities, linkage 1a-2d ($n = 27$). There is wide-ranging support for the positive influence of firm specific attributes on operational capabilities. Entrepreneurial orientation drives global technology competences and information technology capabilities; it fosters networking capabilities; and in combination with pre-existing knowledge, it enables marketing and service capabilities (Falahat *et al.*, 2015; Knight and

Figure 5.
Antecedents and
outcomes of
capabilities

Cavusgil, 2004; Martin and Javalgi, 2019; Martin and Javalgi, 2016; Martin *et al.*, 2018; Zhang *et al.*, 2013). Likewise, alliance entrepreneurship – a construct conceptually analogous to entrepreneurial orientation – influences alliance capability (i.e. an operational capability akin to networking). Further, market orientation and customer focus are critical for the development of both marketing and technological capabilities (Karatepe *et al.*, 2016; Kim *et al.*, 2011; Knight and Cavusgil, 2004; Yu *et al.*, 2011; Zhang *et al.*, 2013). Often these technological competences manifest in the form of innovations. Global-, learning- and competitor orientation(s) are represented to a lesser extent. Global orientation enables marketing capabilities; coopetition empowers innovative capabilities; while learning orientation helps nurture IT-related technological capabilities (Freeman and Cavusgil, 2007; Vapola *et al.*, 2008; Zhang *et al.*, 2013).

5.4.2 Firm specific attributes and dynamic capabilities, linkage 1a-2e (n = 13). Strategic orientations are a key predictor of dynamic capabilities. Entrepreneurial- and market orientation explain absorptive capacity, and international orientation influences dynamic learning capabilities (Monferrer *et al.*, 2015; Rodriguez-Serrano and Martin-Velicia, 2015; Rodriguez-Serrano and Martin-Armario, 2019; Voudouris *et al.*, 2011; Weerawardena *et al.*, 2015; Zhou *et al.*, 2010). The function pre-existing knowledge and resources play in fostering dynamic capabilities appears more widespread than in the case of operational capabilities (Pehrsson *et al.*, 2015; Prashantham and Dhanaraj, 2010; Tolstoy and Agndal, 2010). For instance, locally acquired knowledge resources and knowledge fostered through headquarters and subsidiary interactions help cultivate dynamic and resource combination capabilities. Likewise, dynamic social capital emanates from using firm attributes (e.g. experience and links with multi-national companies) to leverage initial social capital.

5.4.3 Managerial socio cognitive attributes and operational capabilities, linkage 1b-2d (n = 17). The premise of this linkage is that entrepreneurial profiles spawn divergent operational capabilities. Because managerial or owner attributes (e.g. education, experience, expertise, language proficiency and mindset) embody an individual's social capital, managerial socio cognitive attributes explain marketing and networking capabilities (Falay *et al.*, 2007; Freeman and Cavusgil, 2007; Gabrielsson *et al.*, 2004; Kungwansupaphan and Siengthai, 2014; Odorici and Presutti, 2013; Rasmussen *et al.*, 2001; Tang, 2006). An inverse relationship between operational capabilities and managerial socio cognitive attributes is plausible. For instance, that managerial capabilities influence entrepreneurial orientation is explained by the fact that decision makers can orchestrate the requisite strategic posture.

5.4.4 Managerial socio cognitive attributes and dynamic capabilities, linkage 1b-2e (n = 10). Individual-experiential attributes associated with managerial profiles are the well-spring of dynamic capabilities (Evers, 2011; Fletcher and Prashantham, 2011; Freeman *et al.*, 2010; Huang and Hsieh, 2013; Mort and Weerawardena, 2006; Oxtorp, 2014; Prashantham and Dhanaraj, 2010; Prashantham and Floyd, 2012, 2019; Voudouris *et al.*, 2011). Among other attributes, managers should be adept at anticipating the precise point at which tie decay renders static social capital obsolete, activating the cycle of renewal, growth or upgrading. Admittedly this demands of managers, high core self-evaluation and a reflective mindset. The transient nature of managerial socio cognitive attributes helps explain the differing speeds with which dynamic capabilities are developed, as well as the potency when deployed. For instance, return migration, indigenous knowledge and collaborative decision-making foster managerial socio cognitive resources which influence different forms of dynamic capabilities.

5.4.5 Operational capabilities and precocity, 2d-3f (n = 47). The bulk of these studies (Bruneel *et al.*, 2010; Evangelista, 2005; Falay *et al.*, 2007; Freeman and Cavusgil, 2007; Garcia-Cabrera *et al.*, 2017; Kraus *et al.*, 2017; Yu *et al.*, 2011) examine drivers of precocity or proclivity through a comparison of born globals/international new ventures to other internationalizing firms or traditional exporters. To the extent that they enable an internationalizing firm to invest

in the innovations vital for early internationalization, technological capabilities increase the propensity to be a born global or international new venture. As they enable a venture to adapt communication, engagement and customer support to different markets, marketing capabilities facilitate accelerated internationalization and rapid acceptance in overseas markets. This linkage also holds for financing capabilities, knowledge competences and organizational flexibility.

5.4.6 Operational capabilities and performance, 2d-3h (n = 23). Marketing, service and customer-based competences inspire performance and growth in born globals (Efrat and Shoham, 2012; Karatepe *et al.*, 2016; Kumar and Yakhlef, 2014; Martin and Javalgi, 2016, 2019; Martin *et al.*, 2018). The effectiveness of marketing capabilities emanates from their capacity to confer competitive and positional advantages on the internationalizing firms. To varying degrees, entrepreneurial, management, networking and technological competences (Khalid and Larimo, 2012; Kocak and Abimbola, 2009; Knight and Cavusgil, 2004; Zhang *et al.*, 2013) also influence performance. Entrepreneurial and technological capabilities stimulate operational and financial performance, whereas management capabilities are critical for growth.

5.4.7 Dynamic capabilities and performance, 2e-3h (n = 10). This cluster (Chin *et al.*, 2016; Han and Celly, 2008; Hughes *et al.*, 2010; Pehrsson *et al.*, 2015; Prashantham *et al.*, 2019; Rodríguez-Serrano and Martín-Armario, 2019; Rodríguez-Serrano and Martín-Velicia, 2015; Weerawardena *et al.*, 2015) investigates absorptive capacity, dynamic learning capabilities and ambidexterity. Absorptive capacity accounts for the bulk of the variability in innovation performance among early and rapidly internationalizing firms. Additional benefits accrue through a reverse linkage in that knowledge acquisition and absorptive capabilities developed through rapid internationalization may drive superior performance in the domestic market. Network capability upgrading, dynamic learning capabilities and ambidexterity also influence performance although the precise mechanisms by which this occurs is not always evident in the literature.

5.5 Under-researched linkages

5.5.1 Market factors and operational capabilities, linkage 1c-2d (n = 3). The three studies (Laurell *et al.*, 2017; Zhang *et al.*, 2013; Zhang *et al.*, 2017) make this one of the most sparsely researched linkages. While the positive impact of government support and research institutions on the development of operational capabilities may transcend countries, the influence of legal rules and government transparency on capability growth is context-bound. This indicates an institutional or context-embedded explanation is useful for unpacking the link between market factors and operational capabilities.

5.5.2 Market factors and dynamic capabilities, linkage 1c-2e (n = 5). Five studies (Evers *et al.*, 2012; Huang and Hsieh, 2013; Prashantham and Floyd, 2012; Oxtorp, 2014; Voudouris *et al.*, 2011) test the relationship between market factors and dynamic capabilities. Environmental turbulence, shifts in demands, changing customer preferences, competition and crises engender “repeated exposure to situational uncertainty” necessary for activating the single and double loop learning vital for fostering incremental, renewal and regenerative dynamic marketing capabilities [4].

5.5.3 Operational capabilities and survival, 2d-3g (n = 4). A small cluster (Efrat and Shoham, 2012; Gabrielsson and Gabrielsson, 2013; Kumar and Yakhlef, 2014; Nummela *et al.*, 2016) evaluates the linkage between operational capabilities and survival. Management and innovation capabilities are vital for long term survival, and shortfalls in managerial capabilities expedite venture failure. The efficacy of managerial capabilities on survival arises from their capacity to resolve growth-related problems which often plague early internationalizing firms.

5.5.4 *Dynamic capabilities and precocity, 2e-3f (n = 4)*. Al-Aali and Teece (2014), Andersson and Evers (2015), Lin and Si (2019), Loufrani-Fedida *et al.* (2019) and Sapienza *et al.* (2006) contribute to the linkage between dynamic capabilities and precocity. Dynamic capabilities have complementary roles in stimulating precocity. For instance, dynamic managerial capabilities underpin opportunity identification – a fundamental component of early internationalization; and ambidexterity (i.e. a trade-off between exploration and exploitation) determines how early and quickly the opportunities identified are targeted. Because dynamic networking capabilities are a multi-layered reservoir of relational competences, they operationalize precocity and enable early internationalizing ventures to commence, sustain and expand international operations. Interestingly, a reverse causal relationship is possible in that early internationalization may spark the development of dynamic capabilities required for survival and growth.

5.5.5 *Dynamic capabilities and survival, 2e-3g (n = 2)*. The two studies (Sapienza *et al.*, 2006; Zetting and Benson-Rea, 2008) outlining the connection between dynamic capabilities and survival make this the least researched linkage. Zetting and Benson-Rea (2008) illustrate that adaptability on the fly is the key to longevity for early internationalization, while Sapienza *et al.* (2006) argue that the dynamic capabilities required for survival diverge from those necessary for growth. For example, survival is associated with the reconfiguring of costly market-facing capabilities, whereas growth pertains to the less expensive and more pliable internal capabilities.

5.6 Proposed linkages

5.6.1 *Relationship between dynamic and operational capabilities, 2d-2e*. What capabilities does a venture use the day international operations commence? “Operational followed by dynamic” is one premise: In this instance, capability upgrading and resource combination help harness and reconfigure operational capabilities into a dynamic form. Another view is that dynamic capabilities are the baseline at the dawn of internationalization. Venture formation manifests in translating dynamic capabilities to the deployable operational version. Regardless of the exact starting point, the shift from “dynamic to operational” or “operational to dynamic” culminates in crossing the chasm, which behaves scholarship to recognize the microprocesses associated with the routinization of the transformed or upgraded competences.

5.6.2 *Reverse relationship between outcomes and capabilities*. Another potentially informative line of inquiry is the reverse connection between outcomes of early internationalization and capabilities. It is reasonable to infer that sustained financial and operational performance may obviate the need to develop or upgrade capabilities. Thus, one can theorize that periods of sustained growth or performance diminish the likelihood of capability reconfiguration, renewal, or upgrading. Correspondingly, stagnation in growth or underperformance increases such probability. We reiterate these arguments as we suggest directions for future scholarship.

6. Directions for future research

In charting directions for subsequent studies, we focus on research context, knowledge content and implications for theory and practice and underline manifold areas later studies should address. Our approach is consistent with De Clercq *et al.* (2012), Ipek (2019), Kahiya (2018) and Tuomitalo and Leppäaho (2018).

6.1 Contexts

The focus on developed markets and the pivot towards the international activities of knowledge-intensive ventures makes this research stream inadvertently “context free” (i.e. seeks to produce universal knowledge from empirical generalizations, while neglecting nuance associated with contextual dissimilarities) (Tsui, 2004). We advocate a shift from

context-excluded research to context-sensitive and context-embedded research (Michailova, 2011; Tsui, 2007).

Concerning the national context, we recommend additional context-sensitive and new context-embedded research. The underrepresentation of the role of capabilities in the international exploits of firms from Sub Saharan Africa (SSA) and Central and Eastern Europe (CEE) (e.g. the 60-plus countries constituting SSA and CEE contribute just three studies) probably deprives extant research of potentially enriching insights. Indeed, scholars (Vissak, 2007) studying CEE-based firms note the prevalence of “fast internationalizers” in that region. Few studies address *comparative entrepreneurial internationalization*. The small cluster of comparative studies matches firms in geographically and culturally proximate markets, an approach which robs theory of contrastive explanations. Instead of another comparative study focusing on knowledge-intensive firms in small open economies, IE research will prosper from, for instance, comparing generic manufacturing BGs from Tunisia, to newly listed ventures in Europe, or telematics software providers in New Zealand [5]. Likewise, examining capabilities outside the confines of knowledge-intensive firms is potentially edifying, as it may alter the prominence of some capabilities (e.g. technology and innovation). Studying these diverse contexts will test the limits of our knowledge (i.e. falsification or verification) – a crucial precursor to theoretical advancements and adaptation of strategy (Khanna, 2014). This also provides the pluralism so desperately required to move an emerging discipline forward (Tsui, 2007).

6.2 Capabilities construct and correlates

There is limited use of formal definitions for the countless capabilities researched. We advocate the adoption of the illustrative definitions and components of capabilities provided in Table 3 to disentangle capabilities from one another and from related constructs. A portion of the literature makes hyperbolic claims about dynamic capabilities epitomized by the statement “this study uses a dynamic capabilities perspective.” Such declarations alone do not qualify a study as dynamic capabilities-focused, much less help throw light on many areas of debate. We recommend a conceptualization of dynamic capabilities involving attributes like change, microprocesses, liminality, routinization, among others. If, as Autio *et al.* (2011) argue, every capability comprises two parameters – “organizing process” and “cognitive map” – then IE scholarship is merely scratching the surface.

We also encourage the examination of other capabilities beyond those covered in this stream of research. For instance, *organizational entrainment* (Khavul *et al.*, 2010) – the ability of a rapidly internationalizing firm to *synchronize its activity cycles* with those of key exchange partners – fits the profile of a higher-level or dynamic capability. Beyond IE there is growing interest (Parker and Ameen, 2018) in studying *resilience* as a capability.

Subsequent studies should focus on two under-researched linkages (i.e. 1c-2d and 1c-2e) on market factors. For both linkages, future studies should consider additional attributes beyond transparency and institutional support. Institutional stability, institutional void and industry competition – established constructs in IB – could be informative antecedents. That there are few studies probing the link between *market factors* and *dynamic capabilities* (1c-2e) is startling given the linkage proffers the “forged in fire” mantra – change or turbulence sets the stage for dynamic capabilities. Are threats superior to opportunities in fostering dynamic capabilities? Are there diminishing returns to the development of dynamic capabilities *vis-à-vis* duration and magnitude of change? These questions should motivate subsequent studies to delve deeper into the relationship between market factors and dynamic capabilities.

We encourage future research to examine another three under-researched linkages (i.e. 2d-3g, 2e-3f and 2e-3g). Concerning *operational capabilities* and *survival* (2d-3g), the handful studies indicate a link between marketing and management capabilities, and survival or

business longevity. Yet, from a conceptual basis, the impact of *operational capabilities* on *survival* should be rather limited given *operational capabilities* allow born globals and international new ventures to be “in the game” as opposed to winning it over the long haul. Additional research on this linkage will provide clarity.

Two of the three linkages (i.e. 2e-3f and 2e-3g) involving *dynamic capabilities* and their *outcomes* demand further scrutiny. The paucity of studies exploring the link between *dynamic capabilities* and *precocity* (2e-3f) probably arises from the challenge of determining which capabilities are salient when internationalization commences. The reverse causal relationship – precocity triggers the development of dynamic capabilities – is worth exploring in subsequent research. That the investigation of the linkage between *dynamic capabilities* and *survival* (2e-3g) is confined to two studies was completely unanticipated. In principle, *survival* represents the very outcome where the efficacy of dynamic capabilities (i.e. the effect of constant adaptation on business longevity) should be evident. We encourage researchers to expand this linkage beyond the two studies we identified.

7. Conclusions and implications

Arguing that the growth of knowledge products in *IE* now exceeds our ability to remember, organize, or use extant literature, we conducted a systematic literature review on the capabilities underpinning the early internationalization of born globals and international new ventures. Several recent studies (Al-Aali and Teece, 2014; Coviello, 2015; İpek, 2018; Jie *et al.*, 2021; Øyna and Alon, 2018; Nguyen and Mort, 2020; Pinho and Prange, 2016), which advocate the advancement of knowledge on capabilities, provided additional motivation for this review. We identified 13 capabilities which we bifurcated into eight operational (i.e. networking, entrepreneurial, marketing, knowledge and learning, innovation, financing, technology, management) and 5 higher-level (i.e. absorptive capacity, ambidexterity, dynamic managerial, dynamic learning and dynamic social) capabilities. Content analysis and constant comparison method enabled us to draw three antecedents (i.e. *firm specific factors*, *managerial socio cognitive attributes* and *market factors*) and three outcomes (i.e. *precocity*, *survival* and *performance*), before linking these to *operational* and *dynamic capabilities*. A narrative synthesis of the 12 linkages and the summary in Figure 5 mark the pinnacle of our contribution.

7.1 Implications for theory

Our synthesis has shown that just 7 of the 12 linkages are well-established. Regarding antecedents, we know more about the effects of *firm specific factors* and *managerial socio cognitive attributes* on *operational* and *dynamic capabilities* than we do the influence of *market factors* on either group of capabilities. Correspondingly, we know more about the influence of *operational*- and *dynamic capabilities* on *performance* than we do their impact on *precocity* or *survival*. As a general observation, linkages involving *market factors* (i.e. as an antecedent), *survival* (i.e. as an outcome) and *dynamic capabilities* (i.e. both *antecedent-capability* and *capability-outcome*) are scantily researched. We have directed future studies to investigate the specific under-researched links comprising *market factors* and *operational capabilities*; *market factors* and *dynamic capabilities*; *operational capabilities* and *survival*; *dynamic capabilities* and *precocity*; and *dynamic capabilities* and *survival*. There is an opportunity for subsequent studies to make greater use of the institutional perspective to enrich the theoretical robustness of relationships involving *market factors*. Likewise, scholarship on *dynamic capabilities* (as an antecedent or outcome) will benefit from the nuanced view on the social aggregation of individuals, processes and structures, the microfoundations perspective affords.

The gaps in knowledge we have underlined not only indicate that our understanding of the origin of capabilities is incomplete but also they signal we have a partial grasp of the

influence of capabilities on precocity, survival and performance. On the one hand, we add to niche strands of research such as *strategic orientations* and *born globals* (Jantunen *et al.*, 2008; Evers *et al.*, 2019), on the other, our review speaks to a wider community beyond early internationalization. For instance, our portrayal of the link between *operational* and *dynamic capabilities* adds to a sub-stream of management/strategy research (Cepeda and Vera, 2007; Newey and Zahra, 2009) studying this conundrum.

7.2 Implications for policymaking

McNaughton and colleagues (Bell and McNaughton, 2000; McNaughton and Pellegrino, 2014) argue early internationalization presents a unique challenge to policymaking in that it does not lend itself to traditional need-based firm segmentation typologies. Yet, within this discourse, the role of policymaker-driven export promotion programmes in fostering capabilities is incontrovertible. What is the most effective way of tailoring such support for born globals and international new ventures?

Our review documented the criticality of managerial profiles to capability building. Attitudinal and behavioural states largely explain the divergent capacities to foster operational and dynamic capabilities. We argue that unlike traditional export research which segments exporters using firm demographics, managerial profiles provide an alternative criterion for targeted policymaker support. While the notion of targeting by managerial profiles is not entirely a novel concept (Gray, 1997), it has remained peripheral to the early internationalization discourse. We submit that targeting gaps in skills, knowledge and international exposure and providing other immersive experiences stimulates the attitudinal and behavioural states critical for enhancing capability development.

7.3 Implications for practice

The task of developing, upgrading and renewing capabilities falls squarely on the focal organization. Our review amplifies, for practitioners, the significance of choosing and embracing appropriate forms of strategic orientations. In this regard the question Jantunen *et al.* (2008) adopt as the title of their manuscript: “Strategic orientations of born globals – Do they really matter?” can be answered in the affirmative. To varying degrees, competitor-, customer-, entrepreneurial-, global-, learning- and market orientation influence both operational and dynamic capabilities. Thus, our review suggests it is not so much the resources at the venture’s disposal as it is the decision maker’s ability to pivot the organization, which engenders capability development.

The COVID-19 pandemic underscores the practical utility of capabilities. For instance, the link between market factors (e.g. uncertainty and dynamism) and capability development means that this once-in-a-century exogenous shock provides an ideal setting (i.e. the impetus) to upgrade, renew and reconfigure capabilities. Firms with the right strategic orientations and appropriate managerial socio cognitive attributes are well-placed to adjust and seize opportunities. As the pandemic has shown, businesses with adaptable capabilities (e.g. shifting from a brick and mortar to an online/omnichannel approach or micro-breweries competent to switch from manufacturing beer to hand sanitizer) have increased their chance of survival while helping society cope.

Our study comes with limitations. Although we used a systematic approach to search, qualify and organize the literature, other studies fitting the objective of this research may have been missed. We adopted synthesis by integration which is inferior to vote-counting or statistical meta-analysis. While the hazy nature of both *early internationalization* and *capabilities* justified our approach, we caution readers against making wholesale causal inferences from the synthesis. Our review has tackled the daunting amorphous concept of capabilities and provided guidance for future studies.

1. They combine Jones *et al.*'s (2011) list with ongoing updates to the International Entrepreneurship Scholar's website See <http://ie-scholars.net/>
2. Chetty and Campbell-Hunt won the *American Marketing Association's – 2009, Hans B. Thorelli Award*.
3. Note, many factors influence this metric. We use this only as a rudimentary indicator.
4. See [Autio et al. \(2011\)](#) for a description of "repeated exposure to situation uncertainty."
5. See, in exact order, [Ayadi-Frikha \(2014\)](#), [Filatotchev and Piesse \(2009\)](#) and [Odlin and Benson-Rea \(2017\)](#).

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Table A1.
Research design and
methods

Author	<i>Journal</i>	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Zahra <i>et al.</i> (2000)	<i>AMJ</i>	USA	Manufacturing (various technical and chemical)	Cross-sectional, causal	Quantitative	Survey	Regression
Rasmussen <i>et al.</i> (2001)	<i>APJ/ML</i>	Australia;	Manufacturing (computer software)	Cross sectional, descriptive	Qualitative – case study	Interviews; archival data	Coding, pattern matching
Andersson and Wictor (2003)	<i>JIE</i>	Denmark Sweden	Manufacturing (high tech)	Cross-sectional, descriptive	Qualitative	Archival data; secondary data	Pattern matching; explanation building
Johanson and Vahne (2003)	<i>JIE</i>	Sweden; Poland	Service (clinical trials)	Longitudinal, descriptive	Conceptual; qualitative support	Interviews; secondary data	Narrative synthesis
Sharma and Blomstermo (2003)	<i>IBR</i>	Sweden	Manufacturing (high tech)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Narrative synthesis
Zahra <i>et al.</i> (2003)	<i>JIE</i>	USA	Manufacturing (software)	Cross-sectional, causal	Quantitative	Survey	Regression
Chetty and Campbell-Hunt (2004)	<i>JIM</i>	New Zealand	Not stated	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Coding, pattern matching; explanation building
Gabrielsson <i>et al.</i> (2004)	<i>EBR</i>	Finland	Service and Manufacturing (high tech, service and design)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study
Knight and Cavusgil (2004)	<i>JBS</i>	USA	Manufacturing (various exporters)	Cross-sectional, causal	Quantitative	Survey	Path analysis (LISREL)
Knight <i>et al.</i> (2004)	<i>IMR</i>	Denmark; USA	Manufacturing (various)	Cross-sectional, causal	Mixed methods	Interviews; survey	Path analysis (LISREL)
Nummela <i>et al.</i> (2004)	<i>JIE</i>	Finland	Service (ICT)	Cross-sectional, causal	Quantitative	Survey	Regression
Knight and Cavusgil (2005)	<i>MIR</i>	USA	Manufacturing (various exporters)	Cross-sectional, causal	Quantitative	Interviews; survey	Analysis of variance
Evangelista (2005)	<i>JIE</i>	Australia	Manufacturing (software)	Cross-sectional, causal	Qualitative	Interviews	Coding and synthesis

(continued)

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Rialp <i>et al.</i> (2005a, 2005b)	<i>JIE</i>	Spain	Manufacturing (various)	Cross-sectional, descriptive	Qualitative	Interviews, secondary data	Pattern matching
Mort and Weerawardena (2006)	<i>IMR</i>	Australia	Manufacturing (various)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Pattern matching, explanation building
Sapienza <i>et al.</i> (2006)	<i>AMR</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Tang (2006)	<i>JABS</i>	China	Service and manufacturing (commercial and consulting)	Longitudinal, descriptive	Conceptual; qualitative support	Interviews; secondary data	Pattern matching, cross-case analysis
Falay <i>et al.</i> (2007)	<i>JMM</i>	Finland	Manufacturing (design intensive)	Cross-sectional, descriptive	Qualitative	Interviews	Pattern matching, cross-case analysis
Freeman and Cavusgil (2007)	<i>JIM</i>	Australia	Manufacturing (various)	Longitudinal, descriptive	Qualitative	Interviews; archival data	Pattern matching, explanation building, cross-case analysis
Kang and Jin (2007)	<i>JTI</i>	Korea	Manufacturing (textiles)	Cross-sectional, exploratory	Conceptual; qualitative support	Literature review; interviews	Narrative synthesis
Kuivalainen <i>et al.</i> (2007)	<i>JWB</i>	Finland	Multiple industries (industrial)	Cross-sectional, causal	Quantitative	Survey	Regression
Laanti <i>et al.</i> (2007)	<i>IMM</i>	Finland	Manufacturing (wireless tech)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data; survey	Pattern matching, explanation building, cross-case analysis
Ripollés-Melá <i>et al.</i> (2007)	<i>JIE</i>	Spain	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Vissak (2007)	<i>JEWB</i>	Estonia	Service and manufacturer (biotech and IT/publishing)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Coding pattern matching, explanation building

(continued)

Table A1.

Table A1.

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Weerawardena <i>et al.</i> (2007)	<i>JWB</i>	N/A	N/A	Exploratory	Conceptual	Literature review	N/A
Zhang and Tansuhaj (2007)	<i>MBR</i>	USA	Manufacturing (medical, lab equipment)	Longitudinal, exploratory	Conceptual; qualitative	Interviews; archival data; primary sources	Narrative synthesis
Zhou (2007)	<i>JWB</i>	China	Manufacturing (textile and clothing)	Cross-sectional, descriptive	Quantitative	Interviews; survey	Regression
Blesa <i>et al.</i> (2008)	<i>JIE</i>	Belgium; Spain	Multiple industries	Cross-sectional, descriptive	Quantitative	Questionnaire	Structural equation modelling
Han and Celly (2008)	<i>CJAS</i>	Canada	Multiple industries	Cross-sectional, descriptive	Quantitative	Survey	Regression
Jantunen <i>et al.</i> (2008)	<i>JWB</i>	Finland	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Karra <i>et al.</i> (2008)	<i>LRP</i>	Turkey	Manufacturing (leather)	Longitudinal, descriptive	Conceptual, qualitative support	Interviews	Case study
Thai and Chong (2008)	<i>JIE</i>	Vietnam	Manufacturing and primary industry (various – commercial and food)	Longitudinal, descriptive	Mixed methods	Interviews	Case study
Vapola <i>et al.</i> (2008)	<i>JIE</i>	Finland; USA	Manufacturing (high tech)	Longitudinal, descriptive	Conceptual, qualitative support	Interviews; archival; secondary data	Pattern matching, explanation building
Zettinig and Benson-Rea (2008)	<i>EMJ</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Boehe (2009)	<i>LABR</i>	Brazil	Manufacturing (software)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Cabrol <i>et al.</i> (2009)	<i>EJ</i>	France	Manufacturing	Longitudinal, descriptive	Qualitative	Interviews; secondary data; archival data	Pattern matching, explanation building
	<i>IMR</i>	Turkey	Not stated				

(continued)

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Kocak and Abimbola (2009)				Cross-sectional, exploratory	Conceptual; qualitative support	Interviews; secondary data	Pattern matching, explanation building, cross-case analysis
Spence and Crick (2009)	<i>QMR</i>	Canada	Service and manufacturing (technology)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Case study
Zhang <i>et al.</i> (2009)	<i>JIE</i>	China	Manufacturing	Cross-sectional, causal	Quantitative (scale development and testing)	Personal survey	Regression
Altshuler and Tarnovskaya (2010)	<i>JBM</i>	Denmark	Manufacturing (technology)	Longitudinal, descriptive	Qualitative	Interviews	Case study
Brumeel <i>et al.</i> (2010)	<i>SEJ</i>	Belgium	Service and manufacturing (technology)	Cross-sectional, causal	Quantitative	Interviews	Regression
Dib <i>et al.</i> (2010)	<i>JIE</i>	Brazil	Manufacturing (software)	Cross-sectional, causal	Quantitative	Questionnaire	Exploratory factor analysis
Freeman <i>et al.</i> (2010)	<i>IBR</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Hughes <i>et al.</i> (2010)	<i>JIM</i>	Mexico	Multiple industries (high-tech)	Cross-sectional, causal	Quantitative	Interviews	Structural equation modelling
Khavul <i>et al.</i> (2010)	<i>JIM</i>	China; India	Service and manufacturing (various)	Cross-sectional, causal	Quantitative	Survey; interviews	Structural equation modelling
Kuivalainen <i>et al.</i> (2010)	<i>JIE</i>	Finland	Manufacturing (ICT)	Cross-sectional, causal	Quantitative	Survey	Regression
Manolova <i>et al.</i> (2010)	<i>JWB</i>	Bulgaria	Multiple industries (various)	Cross-sectional, causal	Quantitative	Survey	Regression
Prashantham and Dhanaraj (2010)	<i>JMS</i>	India	Manufacturing (software)	Longitudinal, descriptive	Qualitative	Interviews; archival data	Case study
Thistoll and Pauleen (2010)	<i>JIE</i>	South Pacific	Manufacturing (high-tech)	Cross-sectional, descriptive	Qualitative	Interviews	Case study

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Table A1.

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Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Tolstoy and Agndal (2010)	<i>Technovation</i>	Sweden	Manufacturing (high-tech, medical)	Longitudinal, descriptive	Qualitative	Interviews	Case study
Zhou <i>et al.</i> (2010)	<i>JIBS</i>	China	Manufacturing (commercial and industrial)	Cross-sectional, causal	Quantitative	Survey; interviews	Structural equation modelling
Autio <i>et al.</i> (2011)	<i>ETP</i>	Finland	Manufacturing (ICT)	Longitudinal, descriptive	Qualitative, conceptual	Interviews	Coding, pattern matching
Baum <i>et al.</i> (2011a)	<i>JSBM</i>	Germany	Manufacturing (high-tech)	Cross-sectional, causal	Quantitative	Interviews; archival data; primary firm data	Regression
Baum <i>et al.</i> (2011b)	<i>ISBJ</i>	Germany	Manufacturing (high-tech)	Cross-sectional, causal	Qualitative	Survey; event timelines	Regression
Hashai (2011)	<i>JIBS</i>	Israel	Manufacturing (high-tech)	Cross-sectional, causal	Quantitative	Secondary data; questionnaire	Regression
Kim <i>et al.</i> (2011)	<i>JBR</i>	India	Manufacturing (various)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Prashantham and Young (2011)	<i>ETP</i>	N/A	N/A	Exploratory	Conceptual	Literature review	N/A
Schwens and Kabst (2011)	<i>SBR</i>	Germany	Manufacturing (high-tech)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Spence <i>et al.</i> (2011)	<i>MIR</i>	Canada	Multiple industries	Cross-sectional, causal	Quantitative	Telephone interviews; survey	Logistic regression
Voudouris <i>et al.</i> (2011)	<i>ISBJ</i>	Greece	Manufacturing (high-tech)	Longitudinal, descriptive	Qualitative	Interviews; archival data; observation	Case study
Yu <i>et al.</i> (2011)	<i>SMJ</i>	US	Manufacturing (biotech)	Cross-sectional, causal	Quantitative	Archival data; survey	Regression
Zahra <i>et al.</i> (2011)	<i>JMI</i>	N/A	N/A	Exploratory	Conceptual	Literature review	N/A

(continued)

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Efrat and Shoham (2012)	<i>JWB</i>	Israel	Manufacturing (high-tech)	Longitudinal, causal	Quantitative	Interviews	Regression, discriminant analysis
Evers <i>et al.</i> (2012)	<i>JIM</i>	Ireland; Sweden; Denmark	Service (life sciences)	Cross-sectional, descriptive	Qualitative	Secondary data; interviews	Case study
Freeman <i>et al.</i> (2012)	<i>MIR</i>	Australia; UK	Service and manufacturing (various)	Cross-sectional, descriptive	Qualitative	Interviews	Case study
Khalid and Larimo (2012)	<i>MIR</i>	Multiple (not specified)	Manufacturing (ICT)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Kumar (2012a)	<i>SAJ/BMC</i>	India	Service and manufacturing (ICT)	Longitudinal, descriptive	Conceptual	Interviews; secondary data	Case study
Kumar (2012b)	<i>JIE</i>	India	Service (ICT)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study
Li <i>et al.</i> (2012)	<i>IMR</i>	USA	Manufacturing (various)	Cross sectional, causal	Quantitative	Questionnaire	Regression
Mort <i>et al.</i> (2012)	<i>EJM</i>	Australia	Service and manufacturing (fashion, high-tech and low-tech)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study
Park and Rhee (2012)	<i>MD</i>	South Korea	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling; regression
Prashantham and Floyd (2012)	<i>JIBS</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Ripollés and Blesa (2012)	<i>JWB</i>	Spain	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Ripollés <i>et al.</i> (2012)	<i>IBR</i>	Spain	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling

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Table A1.

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Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Taylor and Jack (2013)	<i>ISBJ</i>	Australia	Multiple industries	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Case study
Torkkeli <i>et al.</i> (2012)	<i>JIE</i>	Finland	Multiple industries	Cross-sectional, causal	Quantitative	Questionnaire	Regression
Zhang <i>et al.</i> (2013)	<i>ISJ</i>	China; USA	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Partial least squares regression
Zhou <i>et al.</i> (2012)	<i>JIM</i>	China	Manufacturing and primary industry (various)	Cross-sectional, causal	Quantitative	Survey	Regression
Boermans and Roelfsema (2013)	<i>ABM</i>	India	Manufacturing (various)	Cross-sectional, causal	Quantitative	Survey	Regression
Gabrielsson and Gabrielsson (2013)	<i>IMM</i>	Finland	Manufacturing (high-tech)	Longitudinal, causal	Mixed methods	Interviews	Case study; empirical support
Hallback and Gabrielsson (2013)	<i>IBR</i>	Finland	Manufacturing (high-tech, tech accessories)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Case study
Huang and Hsieh (2013)	<i>JABS</i>	Taiwan	Manufacturing (OEM)	Longitudinal, descriptive	Qualitative	Interviews, archival data	Case study
Kumar (2013)	<i>ABM</i>	India	Service (IT)	Longitudinal, descriptive	Conceptual; qualitative support	Secondary data; interviews	Case study
Kyvik <i>et al.</i> (2013)	<i>JIE</i>	Norway; Portugal	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Manolova <i>et al.</i> (2014)	<i>ISBJ</i>	Bulgaria	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Odorici and Presutti (2013)	<i>JIE</i>	Italy	Service and manufacturing (ICT)	Longitudinal, descriptive	Conceptual; qualitative support	Interviews; secondary data	Case study
Sepulveda and Gabrielsson (2013)	<i>IMM</i>	Finland	Service and manufacturing (various)	Cross-sectional, descriptive	Conceptual; qualitative support	Interviews; secondary data	Case study
	<i>TIBR</i>	Australia	Not stated		Quantitative		Regression

(continued)

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Zolin and Schlosser (2013)							
Ayadi-Frikha (2014)	<i>JKE</i>	Tunisia	Manufacturing (clothing, food and textiles)	Longitudinal, causal	Mixed method	Secondary archival data	Cognitive mapping
Baronchelli and Cassia (2014)	<i>IEMJ</i>	Italy	Manufacturing (various)	Cross-sectional, causal	Quantitative	Secondary data; interviews	Regression
Cannone and Ughetto (2014)	<i>IBR</i>	Global (47 Countries)	Service and manufacturing (ICT and electronics)	Cross-sectional, causal	Quantitative	Survey	Regression
De Clercq and Zhou (2014)	<i>JIM</i>	China	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Gabrielsson <i>et al.</i> (2014)	<i>MIR</i>	Finland	Manufacturing (health care)	Cross-sectional, descriptive	Qualitative	Interviews; secondary data; archival data	Case study
Hagen and Zucchella (2014)	<i>MIR</i>	Switzerland; Italy; Austria	Service and manufacturing (high-tech and fashion)	Longitudinal, descriptive	Qualitative	Interviews; archival data	Pattern matching, cross-case logic
Kaur and Sandhu (2014)	<i>JAPE</i>	Malaysia	Service and manufacturing	Cross-sectional, descriptive	Mixed methods	Interviews; survey; secondary data	Pattern matching, cross-case logic
Kollman and Christofoer (2014)	<i>JIE</i>	Germany	Multiple industries	Cross-sectional, causal	Conceptual; quantitative support	Survey	Conjoint analysis, cluster analysis
Kumar and Yakhlef (2014)	<i>JEEE</i>	India	Service	Longitudinal, exploratory	Conceptual; qualitative support	Interviews; secondary data	Case study
Kungwansupaphan and Siengthai (2014)	<i>IEMJ</i>	Thailand	Manufacturing and primary industry (food)	Cross-sectional, causal	Mixed methods	Survey; interviews	Structural equation modelling

(continued)

Table A1.

Table A1.

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Masango and Marinova (2014)	<i>IEMJ</i>	South Africa	Service and manufacturing (high-tech)	Cross-sectional, descriptive	Qualitative	Interview; secondary data	Pattern matching, explanation seeking
Oxtorp (2014)	<i>JIE</i>	Denmark	Manufacturing (power amplification)	Longitudinal, descriptive	Qualitative	Interviews; observations	Case study
Andersson and Evers (2015)	<i>JIE</i>	N/A	N/A	Exploratory	Conceptual	Literature review	N/A
Baum <i>et al.</i> (2015)	<i>JWB</i>	Germany	Manufacturing (high-tech)	Cross-sectional, causal	Quantitative	Questionnaire	Latent class analysis
Debrulle and Maes (2015)	<i>EMR</i>	Belgium	Multiple industries	Cross-sectional	Quantitative	Survey	Regression
Fuerst and Zetting (2015)	<i>EBR</i>	Colombia	Service (various internet-based)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study; visual mapping
Gerschewski <i>et al.</i> (2015)	<i>JWB</i>	Australia; New Zealand	Multiple industries	Cross-sectional, causal	Mixed methods	Interviews; survey	Regression
Monferrer <i>et al.</i> (2015)	<i>BRQ</i>	Spain	Multiple industries	Cross-sectional, causal	Quantitative	Questionnaire	Structural equation modelling
Muñoz-Bullón <i>et al.</i> (2015)	<i>IEMJ</i>	Global (28 Countries)	Multiple industries	Longitudinal, causal	Quantitative	Survey	Regression
Pehrsson <i>et al.</i> (2015)	<i>JIE</i>	Sweden; USA	Manufacturing (medical and fashion)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study
Prashantham and Birkinshaw (2015)	<i>MIR</i>	India	Manufacturing and service (software)	Cross-sectional, causal	Mixed method	Survey	Regression
Prashantham and Dhanaraj (2015)	<i>APJM</i>	India	Service and manufacturing (software)	Cross-sectional, causal	Mixed methods	Survey	Regression
Rodriguez-Serrano and Martín-Velicia (2015)	<i>JPM</i>	Spain	Manufacturing (various)	Cross-sectional, causal	Quantitative	Interviews	Structural equation modelling
	<i>JAMS</i>						(continued)

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Weerawardena <i>et al.</i> (2015)		Australia; USA	Service and manufacturing (various)	Longitudinal, causal	Mixed methods	Interviews; questionnaire	Structural equation modelling
Wehner <i>et al.</i> (2015)	<i>JBE</i>	N/A	N/A	Exploratory	Conceptual	Literature	Narrative synthesis
Amorós <i>et al.</i> (2016)	<i>IEMJ</i>	Chile	Multiple industries	Cross-sectional, causal	Quantitative	Interviews; survey	Regression
Chin <i>et al.</i> (2016)	<i>APBR</i>	China	Manufacturing (OEM)	Cross-sectional, causal	Quantitative	Survey	Regression; structural equation modelling
Domurath and Patzelt (2016)	<i>ETP</i>	Germany	Multiple industries	Cross-sectional, causal	Quantitative	Experiment; post-experimental survey	Hierarchical linear modelling
Gerschewski <i>et al.</i> (2016)	<i>RIBS</i>	Australia; New Zealand	Multiple industries	Cross-sectional, descriptive	Qualitative	Interviews	Case study
Haskell <i>et al.</i> (2016)	<i>JIE</i>	Canada; USA	Manufacturing (biotech)	Cross-sectional, descriptive	Mixed method	Interviews; surveys	Coding, descriptive statistics
Karatepe <i>et al.</i> (2016)	<i>ER</i>	Turkey	Manufacturing (various)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Lin <i>et al.</i> (2016)	<i>JIE</i>	China	Multiple industries	Cross-sectional, descriptive	Mixed methods	Survey; interviews	Cross case analysis, descriptive statistics
Martin and Javalgi (2016)	<i>JBR</i>	Mexico	Service and manufacturing (high-tech)	Cross-sectional, causal	Qualitative	Survey	Partial least squares regression
Nummela <i>et al.</i> (2016)	<i>ISBJ</i>	Finland; Ireland	Manufacturing (software)	Cross-sectional, descriptive	Qualitative	Interviews	Critical incident technique
Stayton and Mangenatin (2016)	<i>JIE</i>	USA	Manufacturing (clean tech)	Cross-sectional, descriptive	Qualitative	Interviews	Pattern matching, cross-case analysis
Varma <i>et al.</i> (2016)	<i>JEWB</i>	India	Service (IT)	Cross-sectional, causal	Quantitative	Secondary data	Logistic regression
Al-Aali and Teece (2014)	<i>ETP</i>	N/A	N/A	Exploratory	Conceptual	Literature review	N/A

(continued)

Table A1.

Table A1.

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Arte (2017)	<i>IJEBR</i>	India	Multiple industries	Longitudinal, exploratory	Conceptual; qualitative support	Interviews; archival data	Narrative synthesis
Bunz <i>et al.</i> (2017)	<i>IMR</i>	Germany	Service (consulting)	Longitudinal, descriptive	Qualitative	Observation; interviews; secondary data	Case study
Dow (2017)	<i>RIBS</i>	Australia	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Efrat <i>et al.</i> (2017)	<i>IBR</i>	Israel	Manufacturing (various)	Cross-sectional, causal	Mixed methods	Interviews	Structural equation modelling
Garcia-Cabrera <i>et al.</i> (2017)	<i>IEMJ</i>	Spain	Manufacturing (various)	Longitudinal, causal	Quantitative	Survey; archival data	Regression
Kowalik <i>et al.</i> (2017)	<i>BJM</i>	Poland	Multiple industries	Cross-sectional, causal	Quantitative	Survey	Regression
Kraus <i>et al.</i> (2017)	<i>JPM</i>	Germany; Austria; Switzerland; Liechtenstein	Multiple industries	Cross-sectional, causal	Qualitative	Archival data	Structural equation modelling
Laudien and Daxböck (2017)	<i>MRR</i>	Global (16 Countries)	Manufacturing (fashion and lifestyle)	Cross-sectional, descriptive	Mixed methods	Interviews; secondary data	Case study
Laurell <i>et al.</i> (2017)	<i>IEMJ</i>	Sweden	Manufacturing (medical)	Longitudinal, descriptive	Qualitative	Interviews	Case study; pattern matching
Martin <i>et al.</i> (2017)	<i>IBR</i>	Mexico	Multiple Industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Rodriguez-Serrano and Martin-Armario (2019)	<i>JSBM</i>	Spain	Manufacturing (high-tech and med-tech)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Romanello and Chiarvesio (2017)	<i>IJE</i>	Italy	Manufacturing	Cross-sectional, descriptive	Qualitative	Interviews; secondary data	Pattern matching, cross-case analysis
Zhang <i>et al.</i> (2017)	<i>IJE</i>		Multiple industries				

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Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Andersson <i>et al.</i> (2018)	<i>QMR</i>	China; South Korea China; Sweden	Manufacturing (automation, automotive)	Cross-sectional, causal Longitudinal, descriptive	Mixed methods Qualitative	Interviews; survey Interviews	Partial least squares regression Case study
Aspelund <i>et al.</i> (2018)	<i>JIE</i>	Norway	Manufacturing (high-tech)	Longitudinal, descriptive	Qualitative	Interviews; archival data	Case study
Falahat <i>et al.</i> (2018)	<i>IMR</i>	Malaysia	Multiple Industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Gerschewski <i>et al.</i> (2018)	<i>ISBJ</i>	New Zealand; Australia	Multiple Industries	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
Ji <i>et al.</i> (2018)	<i>ISMO</i>	USA	Multiple industries	Cross-sectional, causal	Quantitative	Secondary data	Regression
Khan and Lew (2018)	<i>IBR</i>	Pakistan	Service (IT)	Longitudinal, descriptive	Qualitative	Interviews; secondary data	Case study
Martin <i>et al.</i> (2018)	<i>JBR</i>	Mexico	Manufacturing (various)	Cross-sectional, causal	Quantitative	Survey; interviews	Structural equation modelling
Abrahamsson <i>et al.</i> (2019)	<i>JIE</i>	Sweden	Multiple industries	Cross-sectional, causal	Quantitative	Archival data	Logit modelling
Hughes <i>et al.</i> (2019)	<i>IMM</i>	Germany; Austria; Switzerland; Liechtenstein	Multiple industries	Cross-sectional, causal	Mixed methods	Survey	Fuzzy set analysis
Lin and Si (2019)	<i>MD</i>	China	Multiple (manufacturing, IT, financial services)	Cross-sectional, causal	Quantitative	Survey	Hierarchical regression
Loufrani-Fedida <i>et al.</i> (2019)	<i>IBR</i>	France	Multiple (IT/high value manufacturing)	Descriptive	Qualitative	Interviews, secondary data	Coding, cross-case analysis
Martin and Javalgi (2019)	<i>JBR</i>	Mexico	Multiple (high tech firms)	Cross-sectional, causal	Quantitative	Survey	Structural equation modelling
	<i>APJBM</i>	Bangladesh				Survey	(continued)

Table A1.

Table A1.

Author	Journal	Nation	Industry	Research design	Methodology	Data collection	Data analysis
Mostafiz <i>et al.</i> (2019)			Garment/knitwear manufacturers	Cross-sectional, descriptive	Quantitative (scale development)		Exploratory and confirmatory factor analysis
Prashantham and Floyd (2019)	<i>JBV</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Prashantham <i>et al.</i> (2019)	<i>ISBJ</i>	N/A	N/A	Exploratory	Conceptual	Literature	N/A
Weerawardena <i>et al.</i> (2019a)	<i>IMM</i>	Australia	Multiple (knowledge/tech)	Descriptive	Qualitative	Interviews, secondary data	Coding
Weerawardena <i>et al.</i> (2019b)	<i>IMM</i>	USA	Technical services	Cross-sectional, causal	Quantitative	Survey	Partial least squares – structural equation modelling
AMJ	<i>Academy of Management Journal</i>	<i>IEMJ</i>	<i>International Entrepreneurship and Management Journal</i>		JAMS	<i>Journal of the Academy of Marketing Science</i>	
AMR	<i>Academy of Management Review</i>	<i>IJEBR</i>	<i>International Journal of Entrepreneurial Behaviour and Research</i>		JAPE	<i>Journal of the Asia Pacific Economy</i>	
APBR	<i>Asia Pacific Business Review</i>	<i>IMR</i>	<i>International Marketing Review</i>		JKE	<i>Journal of the Knowledge Economy</i>	
APIBM	<i>Asia Pacific Journal of Business Management</i>	<i>ISBJ</i>	<i>International Small Business Journal</i>		JTI	<i>Journal of the Textile Institute</i>	
APIJ	<i>Asia Pacific Journal of Management</i>	<i>ISMO</i>	<i>International Studies of Management and Organization</i>		JWB	<i>Journal of World Business</i>	
APIJL	<i>Asia Pacific Journal of Marketing and Logistics</i>	<i>JABS</i>	<i>Journal of Asia Business Studies</i>		LABR	<i>Latin American Business Review</i>	
ABM	<i>Asian Business Management</i>	<i>JBIM</i>	<i>Journal of Brand Management</i>		LRP	<i>Long Range Planning</i>	
BJM	<i>Baltic Journal of Management</i>	<i>JBE</i>	<i>Journal of Business Economics</i>		MD	<i>Management Decision</i>	
BRQ	<i>Business Research Quarterly</i>	<i>JBR</i>	<i>Journal of Business Research</i>		MIR	<i>Management International Review</i>	
CJAS	<i>Canadian Journal of Administrative Sciences</i>	<i>JBV</i>	<i>Journal of Business Venturing</i>		MRR	<i>Management Research Review</i>	

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ER	<i>Economic Research</i>	<i>JEWB</i>	<i>Journal of East-West Business</i>	MBR	<i>Multinational Business Review</i>
EI	<i>Entrepreneurship and Innovation</i>	<i>JEEE</i>	<i>Journal of Entrepreneurship in Emerging Economies</i>	QMR	<i>Qualitative Marketing Research</i>
ETP	<i>Entrepreneurship Theory and Practice</i>	<i>JIBS</i>	<i>Journal of International Business Studies</i>	RIBS	<i>Review of International Business and Strategy</i>
EBR	<i>European Business Review</i>	<i>JIE</i>	<i>Journal of International Entrepreneurship</i>	SBR	<i>Schmalenbach Business Review</i>
EJM	<i>European Journal of Marketing</i>	<i>JIM</i>	<i>Journal of International Marketing</i>	SAJBMIC	<i>South Asian Journal of Business Management Cases</i>
EMJ	<i>European Management Journal</i>	<i>JMI</i>	<i>Journal of Management Inquiry</i>	SEJ	<i>Strategic Entrepreneurship Journal</i>
EMR	<i>European Management Review</i>	<i>JMS</i>	<i>Journal of Management Studies</i>	SMJ	<i>Strategic Management Journal</i>
IMM	<i>Industrial Marketing and Management</i>	<i>JMM</i>	<i>Journal of Marketing Management</i>	Tech	<i>Technovation</i>
ISJ	<i>Information Systems Journal</i>	<i>JPM</i>	<i>Journal of Promotion Management</i>	TIBR	<i>Thunderbird International Business Review</i>
IBR	<i>International Business Review</i>	<i>JSBM</i>	<i>Journal of Small Business Management</i>		

Table A1.

Authors	Entrepreneurial	Financing	Innovation	Learning Knowledge	Management	Marketing	Networking	Technology	Absorptive capacity	Ambidexterity	Dynamic managerial	Dynamic social capital	Dynamic learning
Zahra <i>et al.</i> (2000)													
Rasmussen <i>et al.</i> (2001)													
Andersson and Wictor (2003)													
Johanson and Vahlne (2003)													
Sharma and Blomstermo (2003)													
Zahra <i>et al.</i> (2003)													
Chetty and Campbell-Hunt (2004)													
Gabrielsson <i>et al.</i> (2004)													
Knight and Cavusgil (2004)													
Knight <i>et al.</i> (2004)													
Nummela <i>et al.</i> (2004)													
Knight and Cavusgil (2005)													
Evangelista (2005)													
Rialp <i>et al.</i> (2005)													
Mort and Weerawardena (2006)													
Sapienza <i>et al.</i> (2006)													
Tang (2006)													
Falay <i>et al.</i> (2007)													
Freeman and Cavusgil (2007)													
Kang and Jin (2007)													
Kuivalainen <i>et al.</i> (2007)													
Laahti <i>et al.</i> (2007)													
Ripollés-Melá <i>et al.</i> (2007)													
Vissak (2007)													
Weerawardena <i>et al.</i> (2007)													
Zhang and Tansuhaj (2007)													
Zhou (2007)													
Blesa <i>et al.</i> (2008)													
Han and Celly (2008)													
Jantunen <i>et al.</i> (2008)													
Karra <i>et al.</i> (2008)													
Thai and Chong (2008)													
Vapola <i>et al.</i> (2008)													
Zettinig and Benson-Rea (2008)													
Boehe (2009)													
Cabrol <i>et al.</i> (2009)													
Kocak and Abimbola (2009)													
Spence and Crick (2009)													
Zhang <i>et al.</i> (2009)													
Altshuler and Tarnovskaya (2010)													

Figure A1.
Capabilities studied

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