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# Methodological and Dimensional Issues in Dynamic Capability in Early Internationalization Research: a Systematic Literature Review

South Asian Journal of  
Business Insights  
2022,2(1), 73-96.  
ISSN 2773-7012(print)  
ISSN 2773-6997(online)  
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## Abstract

The dynamic capability (DC) perspective is one of the key theories discussed related to the phenomena of early internationalization. However, there is no considerable effort has been made to review and integrate the associate literature of this perspective in the field. This review aims to examine methodological and dimensional choices in 22 empirical studies on DC in early internationalization including international new ventures (INVs) and born-globals (BGs). In carrying out this review, a search was conducted accessing the Google Scholar search engine, encompassing journals that have published research between 1970 and 2022 on INVs/BGs and DCs. The findings revealed that amid heightened research interest in the DC perspective in studies of INVs/BGs there is a methodological imbalance as quantitative research is underdeveloped while the majority of key studies are qualitative. Further, the dimensions are vaguely discussed, and tested and more bias has been given to a few capabilities like networking and learning capabilities. Concerning about the contribution, this review debates the role of DC in INVs/BGs by revealing the areas for immediate attention in methodology and dimensional choices. The implications are relevant for DC researchers, journal reviewers and editors as well as readers of scholarly DC articles on how to conceptualize DCs. This review is a novel contribution towards the understanding of the methods used in DC research and encompasses a slightly broader scope of time compared to the earlier reviews. Building upon, yet moving beyond reviews to date, and broadening to the latest publications, this paper advances the understanding of the state of dynamic capabilities in early internationalization.

Keywords: Dynamic Capabilities, International New Ventures, Born Globals, Methodological Issues, Dimensional Issues

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## Introduction

Globalization of markets forces organizations to internationalize early to expand their involvement across national boundaries (Welch & Luostarinen, 1988) as a growth strategy (Cieslik et al., 2016). The dynamic nature of early internationalization has been seen as a deviation from traditional, stage-by-stage patterns of firm internationalization (McDougall et al. 1994). The firms' internationalization has been extensively discussed by drawing various theoretical perspectives, such as international business, entrepreneurship, strategic management, network and marketing. Amongst the different perspectives, the dynamic capability (DC) view [which is a derivative of the resource-based view (RBV)] receives a prominent place in studies done combining strategic management with internationalization (Øyna & Alon, 2018; Peng & Lin, 2017; Teece, 2014). The argument is success in internationalization which is determined by how firms' resources are used rather than the mere possession of the assets Zaheer (1995).

The elaboration of the DC approach is identified with the foundational publications of Teece and Pisano (1994) and Teece et al. (1997), which were followed by a few other conceptual investigations (Eisenhardt & Martin, 2000; Makadok, 2001; Zollo & Winter, 2002; Winter, 2003). The ability to develop, configure and renew the organizational resources have been defined as DC (Teece et al., 1997; Ambrosini & Bowman, 2009; Barreto, 2010; Wang & Ahmed, 2007). The DC view, according to Stine and Alon (2018), is one of the most extensively utilized theoretical frameworks in international new venture (INV) and born-global (BG) research. As an extension of the resource-based view (RBV), the dynamic capability's view (DCV) highlights the necessity for enterprises to create capabilities that enable them to recognize and explore opportunities fast in order to stay competitive over time (Eisenhardt & Martin 2000). However, there are considerable challenges in empirical DC research (Hitt et al., 1998; Williamson, 1999; Peng, 2001; Zahra et al., 2006; Prieto et al., 2009; Pavlou & El Sawy, 2011). For example, the lack of a standardized definition (Ambrosini & Bowman, 2009) makes operationalization decisions more difficult. Furthermore, the versatility of the theoretical foundation for the DC approach (Wang & Ahmed, 2007; Di Stefano et al., 2010) may make selecting research methodologies more difficult. In a subject where conceptual complexity necessitates sophisticated research methodologies, paying attention to methodological difficulties is a must (Meglio & Risberg, 2010). Therefore, in contrast to the fact that both study streams are over two decades old, there is still no clear understanding of how and what dynamic capacities play a role in these early internationalization events. Furthermore, despite this growing influence of the dynamic capability view on elucidating the early internationalization phenomenon the studies on dynamic capabilities (DCs) in the internationalization process have identified many methodological issues and dimensional issues (Riviere et al., 2018; Riviere and Bass, 2019). In the literature, scholars have developed different ways in which to dimensionalize the DC construct (Schilke, Hu & Helfat, 2018). The argument is DC is not a unitary concept; rather these capabilities manifest themselves in various distinct forms (Eisenhardt & Martin, 2000). With that argument, the

nature of utilization of DC dimensions in the DC studies relating to early internationalization is reviewed. Thus, in terms of DC research in early internationalization studies, this review synthesizes the conducted research and categorizes the contributions based on the methodological and dimensional choices. The research is based on two unique goals, as outlined in the following research questions:

RQ1: Which methodological choices have been applied in DC research in early internationalization studies?

RQ2: Which DC dimensions have been adopted in DC research in early internationalization studies?

### *Evolution of Dynamic Capability*

In the domain of strategic management, dynamic capabilities have been constantly acknowledged during the past two decades (Barreto, 2010; Eriksson, 2013). First introduced by Teece and his colleagues, dynamic capabilities are proposed to represent managerial capabilities that combine resources in new ways, gain additional resources, and dispose of superfluous resources (Teece et al., 1997; Teece & Pisano, 1994). The dynamic capabilities perspective originates from the resource-based view (RBV) (Peteraf et al., 2013). RBV suggests that organizations are fundamentally heterogeneous in terms of their resources and capabilities which can be leveraged to create a competitive advantage (Peteraf, 1993). Extending RBV, the dynamic capabilities perspective also integrates the theoretical aspects of evolutionary economics, behavioural theories, and organizational theories in order to explain the source of competitive advantage (Helfat & Peteraf, 2009; Vogel & Guettel, 2013).

The complexity of the theoretical underpinnings has led to several conceptual debates (Arend & Bromiley, 2009; Breznik & Lahovnik, 2014). As a very broad and complex construct, dynamic capabilities span the domains of strategy process and content – from managerial decision processes to organizational routines, and competitive actions (Helfat & Peteraf, 2009, p. 91). As a result, various definitions have been developed in the management literature to accommodate different research efforts. There are two main definitions, however, those are very frequently adopted by dynamic capabilities studies (Peteraf et al., 2013). Teece and his colleagues (1997) suggested that dynamic capabilities are unique to individual firms as they are idiosyncratic in constituent details and are path-dependent. Eisenhardt and Martin (2000) proposed the second definition based on their observation that specific dynamic capabilities possess considerable commonalities across firms. In particular, they argued that there are similarities in effective ways of undertaking business activities, such as creating alliances and developing new products (Daniel & Wilson, 2003).

### *Dynamic Capabilities and Early Internationalization*

New ventures are constrained by the financial, human, and tangible resources in their early periods (Knight & Cavusgil, 2004; Kollmann & Stöckmann, 2014) and intangible capabilities are considered more important than tangible resources for new ventures (Peng, 2001). Therefore, even if the tangible resources are valuable, rare, non-imitable, and non-substitutable (Barney, 1991) and may provide a competitive advantage over rivals, they may not have a big role in new ventures (Knight & Cavusgil, 2004; Kollmann & Stöckmann, 2014). Dynamic capabilities exist in new ventures from their early stage of formation (Arend, 2014) and are associated with the venture's creation, discovery, and successful exploitation of opportunities (Zahra et al., 2006). Dynamic capabilities impact new venture formation by enhancing ordinary capabilities (Rasmussen et al., 2011). These capabilities reconfigure initial ordinary capabilities to generate new resources and competencies that can produce positively evaluated outcomes (Newbert, 2005).

Teece (2007) makes a special reference to the international business environment and highlights the importance and relevance of dynamic capabilities in internationalization. A considerable number of past studies have used the theory of dynamic capabilities to understand small firms' internationalization (Mudalige et al., 2016; Griffith & Harvey, 2006; Luo 2000; Sapienza et al., 2006). The literature suggests that dynamic capabilities encourage and facilitate internationalization (Griffith & Harvey, 200). Luo (2000) argues that dynamic capabilities are necessary for the existence of a firm under very dynamic international business conditions. Griffith and Harvey (2001) refer to 'global dynamic capabilities' as the resource adaptation, integration, and reconfiguring competencies by which a firm can achieve both coherence on a global level as well as adequate recognition of the specifics of each country's environment.

## Methodology

### *Sampling*

The systematic literature search of this study is conducted as a comprehensive content analysis of journal articles about dynamic capabilities relating to early internationalization studies. The search was carried out with the help of the Google Scholar database covering sources published between 1970 and 2022 by following the keywords; dynamic capabilities, international new ventures, and born-global in titles, abstracts, and keywords of papers. The initial search resulted in 360 journal articles. However, to facilitate the comprehensive content analysis, the articles were filtered for the initial inclusion criteria which comprise a full text and published in English. However, the search was not limited to peer-reviewed journal articles. There were five manuscripts that could not be viewed by the general audience, and 25 articles published in other languages, such as Spanish, Chinese, and Korean. The initial screening yielded 330 articles. Out of them, in 288 articles, DC is mentioned only in the topic, abstract or literature review and they are not

utilized for analysis or discussed in research findings. In 20 articles, the employed organizations have not followed or experienced early internationalization; hence they were excluded. More than 10 articles were conceptual, and therefore they were excluded from the content analysis. The screening process of sample selection was based on Eriksson (2013).

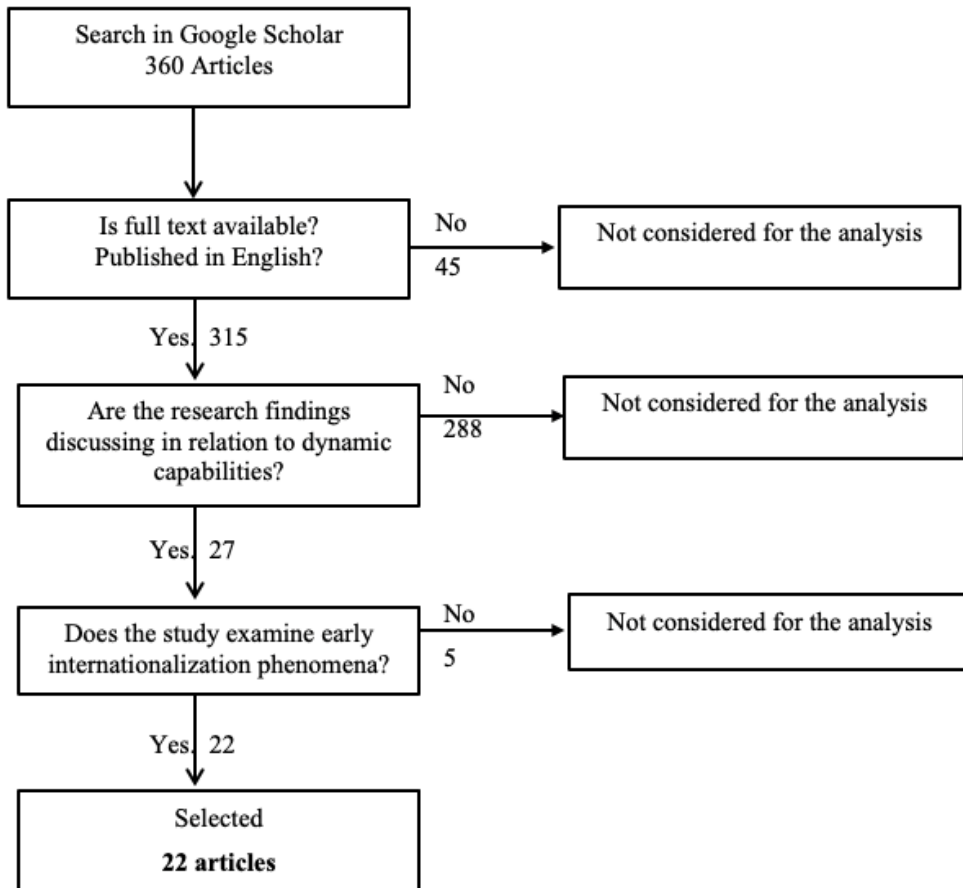


Figure 1: Selection of the articles for review

### *Coding*

The review began by coding all 360 articles against the criterion listed in Table 1. This coding method is used in Eriksson (2013) in a critical review of methodological choices. Coding has been used in a number of systematic reviews where content analysis is used as the analytical method (Schilke, Hu & Helfat, 2018). According to Eriksson (2013), coding enables the analysis of data both quantitatively and qualitatively.

Table 1: Coding Criteria

Coding Criteria	Description of Criteria
Year of publication	Which year the article was published?
Journal	Which journal the article was published in?
Data collection methods	Which data collection methods were used?
Data sources	From which sources the data were collected?
Data source triangulation	Were multiple data sources utilised?
Type of data	Is the data cross-sectional or longitudinal? If longitudinal, were they collected in real-time or retrospectively?
Data timeframe	At which time is the data concerned?
Sampling approach	What kind of sampling strategy was used?
Size of the sample	What was the size of the sample?
Data analysis methods	Which analysis methods were used?
Justification of methods	Are the selected research methods justified?
Unit of analysis	Is the unit of analysis clearly stated in the article?

The coding results were summarized on a spreadsheet and imported to SPSS software for statistical analysis.

## Findings

This review's findings are divided into two sections. The first section (descriptive analysis) describes the sorts of publications, methodologies, research settings, and techniques used in the papers. The second section (empirical analysis) describes the current state of knowledge about dynamic capacities in born-globals as indicated in the evaluated studies.

### *Descriptive Analysis*

The results of the review first provide an overview of the bibliometrics profile of the reviewed papers. This analysis is conducted to apprehend the reviewed articles in terms of their; year of publication, published journal, total and average citations accumulated, researched countries, and researched industries.

### *Publishing Trend Overtime*

Figure 2 depicts the publishing trend of the articles over time. The research publications accelerated rapidly past-2015. By single year, the highest number of papers (5) was recorded in 2016. The years from 2006 to 2015 were characterized by a modest increment in publications.

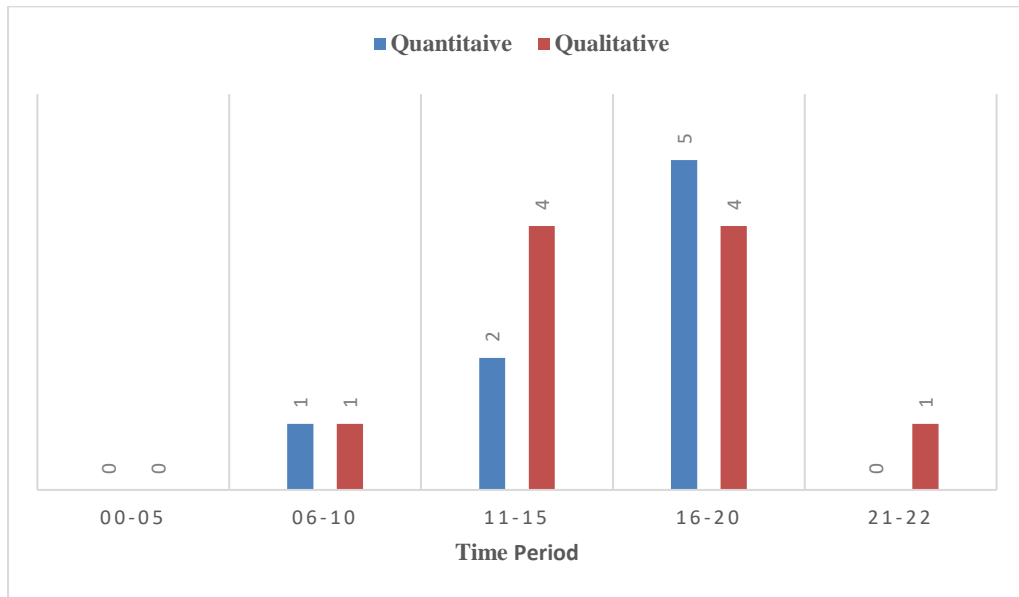


Figure 2: Publishing trends over time

### Published Journals

Table 2 illustrates a list of journals that have published one or more reviewed articles and their h-index rankings. All the journals have not published more than one reviewed article. By the value of the h-index, the *Journal of Business Research* has the highest h-index value (195). The list of journals covers the disciplines of; strategic management, entrepreneurship, and international business.

Table 2: Journal Publication

Publication	h-index
Journal of Business Research	195
Journal of the Academy of Marketing Science	170
Technological Forecasting and Social Change	117
Journal of Business Management	112
Journal of world business	112
Journal of International Management	69
Procedia-Social and Behavioral Sciences	53
Journal of international Entrepreneurship	44
Journal of Promotion Management	27
Journal of Advanced Research in Management	20
International Journal of Information Technology and Business Management	15
Academy of Entrepreneurship Journal	12
International Business Research	6
Paradigm	-
International Postgraduate Business Journal	-

*Citation Statistics*

As stipulated in Table 3, citation statistics are consistent with *Google Scholar* as of 13<sup>th</sup> April 2022. The articles were identified and listed based on both the total citation and average citations per year. Weerawardena et al. (2007), are the most cited, followed by Zhou, Barnes, and Lu (2010). Average citations per year are analyzed with the objective of identifying the articles based on the speed at which articles accumulated citations over the years since publication. The order of the articles in the two lists changes to reflect the difference in the speed of accumulating the citations. Weerawardena et al. (2007) lead the list based on the average citations per year.

Table 2: Citation Statistics

Author(s)	Total Citations	Avg. Citations Per Year
Weerawardena et al. (2007)	1186	79
Zhou, Barnes, and Lu (2010)	365	30
Weerawardena et al. (2015)	172	24
Andersson and Evers (2015)	163	23
Falahat et al (2020)	111	55
Swoboda and Olejnik (2016)	107	17
Monferrer, Blesa, and Ripollés, (2015)	99	14
Park, and Rhee (2012)	67	6
Raza et al. (2018)	39	9
Mudalige, Ismail, and Malek (2019)	25	8
Falahat et al. (2015)	22	3
Mudalige (2015)	13	2
Mudalige, Ismail, and Malek (2016a)	12	2
Pfeffermann (2017)	4	-
Mudalige, Ismail, and Malek (2016b)	3	-
Jafari-Sadeghi et al. (2022)	3	-
Monferrer, Blesa, Ripollés (2014)	1	-
Monferrer et al. (2021)	-	-
Yan, Wickramasekera, and Tan (2018)	-	-
Ramlee (2019)	-	-

*Survey Based Countries*

The data of Figure 3 were drawn from seven number of countries. Sri Lanka and Australia contributed five or more sample to the total pool of seven, which account for 50% of the



sample in the review. Both Sri Lanka and Australia remain the focal points of this research stream.

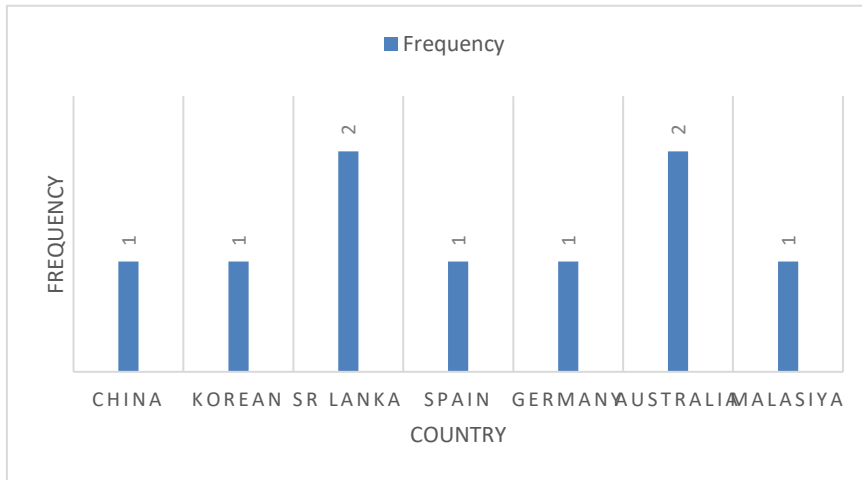


Figure 3: Frequency of counties surveyed

*Sampled Industries*

Nearly an 80% of the studies specify the industry beyond designations of the “service” or “manufacturing”. Among the reviewed articles, commonly surveyed, machinery equipment manufacturing and textile, garment, footwear or accessory manufacturing, suggesting a preference towards mainly the manufacturing sector.

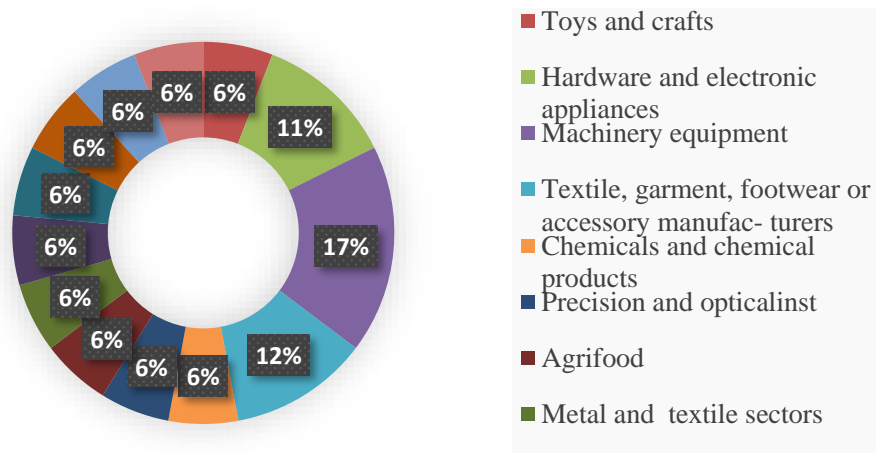


Figure 4: Surveyed industries

### *Design and Methodological Profile*

The detailed discussion of the methodological choices of the reviewed articles is discussed based on the coding results against the criteria in Table 1.

#### *Data Collection Methods*

The articles were reviewed to examine the data collection method. The studies providing descriptive insights or framework/models are identified as qualitative and the studies where hypotheses testing is utilized are coded as quantitative. The imbalances in quantitative, qualitative or mixed approaches in data collection and analysis in the literature of DC research are often discussed. This review implies the same argument by resulting in 10 in qualitative studies, 10 quantitative studies and none of the mixed-method studies. The quantitative studies have accelerated in publication after the year 2015.

#### *Data Sources*

The majority of reviewed articles mainly sourced their data primarily by conducting systematically designed surveys either self-administered or interviewer-administered. Only 30% percent of the quantitative studies employ primary and secondary data together or only secondary data sources.

#### *Data Source Triangulation*

Data triangulation is used only in the study of Swoboda and Olejnik (2016) as a means to overcome the concern of common method bias or to enhance the validity of the responses. They have gathered secondary data about the demographics of randomly selected nonrespondents to compare responding and non-responding firms where it was found insignificant differences. Other reviewed articles' data collection was based on a single source.

#### *Data Timeframe*

The data collection period was divided into two parts: cross-sectional and longitudinal. Except for the study of Falahat et al. (2015) in which the data time frame is not specified in the methodology all of the other studies utilized cross-sectional data.

#### *Sampling Approach*

The sampling approach of the study of Swoboda and Olejnik (2016) is not explained. Two of reviewed articles have used all the identified populations based on a reliable directory of respondents in the surveyed countries. The studies Zhou, Barnes, and Lu

(2010) and Falahat et al. (2015) have mentioned the use of a quota or stratified random sampling approach. The remaining reviewed articles have used a random sampling approach. The research findings' generalizability is influenced by the sampling method. Random sampling is believed to be the only way to achieve statistical generalization of the population (Johnston et al., 2011); qualitative investigations often rely on theoretical generalization (Eisenhardt, 1989).

#### *Size of the Sample*

The sample size of the reviewed articles ranges from 100 to 700. The number of studies which account for larger samples exhibited an increasing trend over the years. However, a common practice among the reviewed articles was to include firms representing completely different industry backgrounds to enhance the sample size.

#### *Data Analysis Method*

All the quantitative studies have utilized structural equation modelling (SEM) over regression analysis as the data analysis method. Park and Rhee (2012) and Monferrer et al (2021) have given the justification to use SEM over regression analysis as it facilitates simultaneously examining a series of interrelated dependence relationships among variables. Five of the remaining articles have failed to provide justification for choosing their respective analysis method. Among the software used for SEM analysis; AMOS is used by two studies, PLS is used by four, one study used Mplus, and one study used EQS 6.1. The majority of the studies have used PLS software. However, none of the studies have given a justification for choosing the respective software applications.

#### *Unit of Analysis*

The unit of analysis was examined in terms of whether it is explicitly stated or not in the article. Monferrer et al. (2021) and Falahat et al. (2015) the unit of analysis have not clearly mentioned. The remaining articles have chosen their unit of analysis as senior managers, chief executive officers (CEOs), entrepreneurs, and owner-managers. The widely used unit of analysis is senior managers and Zhou, Barnes, and Lu (2010) have been more considerate about their choice of the unit by choosing particularly the people who have the knowledge of the internationalization activities of their own organizations.

#### *Dimensions of Dynamic Capability*

Among the reviewed articles there are studies where there is a misalignment between the topic and the dimensions used. Swoboda and Olejnik (2016), for example, looked at solely scanning skills, while Mudalige, Ismail, and Malek (2016) looked at both scanning and learning capabilities. However, the subjects of those studies mention DC in general without specifying the particular capabilities utilized in respective studies. Scanning and learning

were the most preferred dynamic capabilities used in the analysis among the reviewed studies. As shown in Appendix B, other empirical studies utilized the dynamic capabilities; absorption capabilities (n=3), adoption capability (n=2), innovation capabilities (n=2), sensing capabilities (n=3), learning capabilities (n=4) and reconfiguration capabilities (n=1).

### *Scales Adopted*

The reviewed articles exhibit an array of scales of DC to empirically measure the variables. The majority of reviewed articles have utilized the scale of Chen et al. (2009) to measure absorption capabilities in which they define "absorptive capacity was captured by the ratio of R&D staff to the overall number of employees" (Park & Rhee, 2012). Their argument is that, while there is no single criterion, using a measure with sample characteristics in mind appears to be useful for capturing capacity. The scale to measure adoption capability is used from Gibson and Birkinshaw (2004), which is on the basis of 3 items to evaluate the degree to which the firm's management systems encourage the employees to challenge antiquated routines and practices, permit rapid response to market changes, and favour the acceptance of possible modifications in their business priorities associated with the identification of new opportunities. The scale for innovation capabilities is used from Akman and Yilmaz (2008), consisting of 5 items that capture the main characteristics of the firm's innovation capability, such as the organizational culture based on innovation, the skills associated with the internal processes of innovation and the understanding of external elements for their innovative application. The sensing capability scale is from Lin and Wu (2013), which was developed based on the work of Teece et al. (1997) and Eisenhardt and Martin (2000). This research has used Lin and Wu (2013) measurement scale to measure reconfiguration capability. The learning capabilities scale is from Pham et al. (2017) and Flores, Zheng, Rau and Thomas (2010).

### *Role of Dynamic Capability*

In terms of the effect of DC, the results of the reviewed studies revealed that absorption capacity played a mediating effect, particularly in the relationship between network use and knowledge competencies (Park & Rhee, 2012). Monferrer, Blesa, and Ripollés (2015) have received similar results in relation to absorption capabilities. It is assumed that network market orientation fosters the development of dynamic, exploratory capacities in born globals, which influence their capacity to utilize information through innovations, resulting in improved performance. Mudalige, Ismail, and Malek (2019) discovered that owner-specific dynamic capabilities have a favourable impact on both firm DC and internationalization, and that firm DC have a good impact on internationalization. Furthermore, it was discovered that the market assets position, as assessed by perceptual environmental dynamism, influenced firm dynamic capabilities positively, but that the structural and reputational asset positions of SMEs had no bearing on the development of

firm dynamic capabilities. Furthermore, in the interaction between owner-specific DC and internationalization, firm DC has acted as a mediator.

## Discussion, Conclusions and Implications for Future research

More than thirty years had passed since the seminal articles by Teece and Pisano (1994) and Collis (1994) introducing the DCs and the terms “International New Ventures” and “Born Globals” in the work of Rennie (1993) and Oviatt and McDougall (1994) and giving DC research time to develop beyond the initial conceptual discussions. This review search included articles published up to the end of 2022. This review encompasses a slightly broader scope of time compared to the earlier reviews. This review is the first step in assisting scholars in identifying and addressing the major obstacles of empirical DC research in early internationalization studies. The goal of the review was to answer two research questions: (1) In early internationalization investigations, what methodological choices were used in DC research? (2) In early internationalization investigations, which DC dimensions have been used in DC research?

Based results of the current review, it can be concluded that DC research in early international studies lacks empirical support for the conceptual frameworks given by qualitative studies. This finding coincides with Eriksson (2013), where it is highlighted the imbalance of analysis of methodological difficulties in DC research. Despite the fact that developing countries benefit the most from DCs and the early internationalization phenomenon is the most common phenomenon in developing economies, only three research have looked at the DC in relation to the early internationalization phenomenon in developing countries versus the remaining studies from either developed or emerging economies. In terms of dimensional difficulties, while simplification of theoretical constructs is a necessary component of operationalization, it can be overdone, resulting in the loss of the core concept's essence. Further, combining different data sources was found to be an issue requiring consideration in future studies, because a holistic view is necessary in DC research (Pandza et al., 2003a). Therefore, it is stressed that it is vital to address the issues identified in future research. Triangulation is thus argued to benefit DC research. The use of more varied analysis methods may enhance the development of the DC approach.

This review naturally has limitations. As the analysis only includes articles published in journals, there may be a bias towards certain types of study. Nonetheless, since the scope was not limited to any particular journals, the methodological bias of anyone journal is unlikely to influence the findings. Moreover, it is important to bear in mind that DC has been examined under a variety of concepts and this review only includes articles containing the DC concept. Therefore, while including a good proportion of the studies, it is not an all-embracing review of studies relevant to the DC literature. To enhance the validity and reliability of this review, the choices made have been reported in detail. As this is the first

attempt to focus on the methodological issues in DC research, there is certainly a need for further work. Operationalisation of the DC concept, which is one of the fundamental issues in empirical research, but beyond the scope of this study, is one of the most important avenues for further examination. Identifying different ways of operationalising the concept, and analysing their strengths and weaknesses, would add considerable value to theory development. On the other hand, of the methodological issues identified in this study, the lack of transparency merits further research. The fact that the majority of the studies do not clearly state the unit of analysis or justify the choice of methods is alarming. It would be interesting to contrast the findings of these studies with those from more transparent studies. Additionally, it is necessary to consider issues related to the successful identification of the organizations to be studied. In other words, the approaches to sampling deserve more attention. Further, the use of past performance data in the analysis in relation to the current level of DC needs to be examined in detail. Finally, examining methodological choices in combination with the research topics represents an avenue for further review studies.

## References

- Akman, G., & Yilmaz, C. (2008). Innovative capability, innovation strategy and market orientation: an empirical analysis in Turkish software industry. *International Journal of Innovation Management* 12(1), 69–111. <http://dx.doi.org/10.1142/S1363919608001923>
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International journal of management reviews*, 11(1), 29-49. <http://dx.doi.org/10.1111/j.1468-2370.2008.00251.x>
- Andersson, S., & Evers, N. (2015). International opportunity recognition in international new ventures—a dynamic managerial capabilities perspective. *Journal of International Entrepreneurship*, 13(3), 260-276. <http://dx.doi.org/10.1007/s10843-015-0149-5>
- Arend, R. J. (2014). Entrepreneurship and dynamic capabilities: how firm age and size affect the 'capability enhancement–SME performance' relationship. *Small Business Economics*, 42(1), 33-57. <http://dx.doi.org/10.1007/s11187-012-9461-9>
- Arend, R. J., & Bromiley, P. (2009). Assessing the dynamic capabilities view: spare change, everyone? *Strategic organization*, 7(1), 75-90. <http://dx.doi.org/10.1177/1476127008100132>
- Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of management*, 36(1), 256-280. <http://dx.doi.org/10.1177/0149206309350776>
- Bourgeois III, L. J., & Eisenhardt, K. M. (1988). Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. *Management science*, 34(7), 816-835. <http://dx.doi.org/10.1287/mnsc.34.7.816>

- Breznik, L., & Lahovnik, M. (2014). Renewing the resource base in line with the dynamic capabilities view: A key to sustained competitive advantage in the IT industry. *Journal for East European Management Studies*, 19(4) 453-485. <http://dx.doi.org/10.5771/0949-6181-2014-4-453>
- Chen, X., Zou, H., & Wang, D. T. (2009). How do new ventures grow? Firm capabilities, growth strategies and performance. *International Journal of Research in Marketing*, 26(4), 294-303. <http://dx.doi.org/10.1016/j.ijresmar.2009.08.004>
- Cieřlik, A., Michałek, J., & Szczygielski, K. (2016). Innovations and export performance: Firm-level evidence from Poland. *Entrepreneurial Business and Economics Review*, 4(4) 11-28. <https://doi.org/10.15678/EBER.2016.040402>
- Collis, D. J. (1994). Research note: how valuable are organizational capabilities?. *Strategic management journal*, 15(S1), 143-152. <http://dx.doi.org/10.1002/smj.4250150910>
- D'aveni, R. A., & Ravenscraft, D. J. (1994). Economies of integration versus bureaucracy costs: does vertical integration improve performance?. *Academy of Management Journal*, 37(5), 1167-1206. <http://dx.doi.org/10.5465/256670>
- Di Stefano, G., Peteraf, M., & Verona, G. (2010). Dynamic capabilities deconstructed: a bibliographic investigation into the origins, development, and future directions of the research domain. *Industrial and corporate change*, 19(4), 1187-1204. <http://dx.doi.org/10.1093/icc/dtq027>
- Edmondson, A. C., & McManus, S. E. (2007). Methodological fit in management field research. *Academy of management review*, 32(4), 1246-1264. <http://dx.doi.org/10.5465/amr.2007.26586086>
- Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32(3), 543-576. <http://dx.doi.org/10.5465/256434>
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they?. *Strategic management journal*, 21(10-11), 1105-1121. [http://dx.doi.org/10.1002/1097-0266\(200010/11\)21:10<11%3C1105::AID-SMJ133%3E3.0.CO;2-E](http://dx.doi.org/10.1002/1097-0266(200010/11)21:10<11%3C1105::AID-SMJ133%3E3.0.CO;2-E)
- Eriksson, T. (2013). Methodological issues in dynamic capabilities research—a critical review. *Baltic Journal of Management*, 8(3), 306-327. <https://doi.org/10.1108/BJOM-Jul-2011-0072>
- Falahat, M., Migin, M. W., Chuan, C. S., & Kong, P. F. (2015). Conceptualizing the early and rapid internationalizing firms. *Procedia-Social and Behavioral Sciences*, 211, 612-618. <http://dx.doi.org/10.1016/j.sbspro.2015.11.080>
- Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Y. Y. (2020). SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEs' international performance. *Technological Forecasting and Social Change*, 152, 119908. <http://dx.doi.org/10.1016/j.techfore.2020.119908>
- Flores, L. G., Zheng, W., Rau, D., & Thomas, C. H. (2012). Organizational learning: Subprocess identification, construct validation, and an empirical test of cultural

- antecedents. *Journal of Management*, 38(2), 640-667. <http://dx.doi.org/10.1177/0149206310384631>
- Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209-226. <http://dx.doi.org/10.5465/20159573>
- Griffith, D. A., & Harvey, M. G. (2001). A resource perspective of global dynamic capabilities. *Journal of international business studies*, 32(3), 597-606. <http://dx.doi.org/10.1057/palgrave.jibs.8490987>
- Griffith, D. A., Harvey, M. G., & Lusch, R. F. (2006). Social exchange in supply chain relationships: The resulting benefits of procedural and distributive justice. *Journal of operations management*, 24(2), 85-98. <http://dx.doi.org/10.1016/j.jom.2005.03.003>
- Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: progress along a developmental path. *Strategic organization*, 7(1), 91-102. <http://dx.doi.org/10.1177/1476127008100133>
- Hitt, M. A., Keats, B. W., & DeMarie, S. M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Perspectives*, 12(4), 22-42. <http://dx.doi.org/10.5465/ame.1998.1333922>
- Hurmerinta-Peltomäki, L., & Nummela, N. (2006). Mixed methods in international business research: A value-added perspective. *Management International Review*, 46(4), 439-459. <http://dx.doi.org/10.1007/s11575-006-0100-z>
- Jafari-Sadeghi, V., Mahdiraji, H. A., Busso, D., & Yahiaoui, D. (2022). Towards agility in international high-tech SMEs: Exploring key drivers and main outcomes of dynamic capabilities. *Technological Forecasting and Social Change*, 174, 121272. <http://dx.doi.org/10.1016/j.techfore.2021.121272>
- Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of international business studies*, 35(2), 124-141. <http://dx.doi.org/10.1057/palgrave.jibs.8400071>
- Kollmann, T., & Stöckmann, C. (2014). Filling the entrepreneurial orientation–performance gap: The mediating effects of exploratory and exploitative innovations. *Entrepreneurship Theory and Practice*, 38(5), 1001-1026. <http://dx.doi.org/10.1111/j.1540-6520.2012.00530.x>
- Luo, Y. (2000). Dynamic capabilities in international expansion. *Journal of world business*, 35(4), 355-378. [http://dx.doi.org/10.1016/S1090-9516\(00\)00043-2](http://dx.doi.org/10.1016/S1090-9516(00)00043-2)
- Makadok, R. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic management journal*, 22(5), 387-401. <http://dx.doi.org/10.1002/smj.158>
- McDougall, P. P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of business venturing*, 9(6), 469-487. [https://doi.org/10.1016/0883-9026\(94\)90017-5](https://doi.org/10.1016/0883-9026(94)90017-5)



- Meglio, O., & Risberg, A. (2010). Mergers and acquisitions—Time for a methodological rejuvenation of the field?. *Scandinavian Journal of Management*, 26(1), 87-95. <http://dx.doi.org/10.1016/j.scaman.2009.11.002>
- Monferrer, D., Blesa, A., & Ripollés, M. (2015). Born globals through knowledge-based dynamic capabilities and network market orientation. *BRQ Business Research Quarterly*, 18(1), 18-36. <https://doi.org/10.1016/j.brq.2014.04.001>
- Monferrer, D., Moliner, M. Á., Irún, B., & Estrada, M. (2021). Network market and entrepreneurial orientations as facilitators of international performance in born globals. The mediating role of ambidextrous dynamic capabilities. *Journal of Business Research*, 137, 430-443. <https://doi.org/10.1016/j.jbusres.2021.08.058>
- Mudalige, D. (2015). A dynamic capabilities perspective of internationalization and performance of SMEs in South Asia: A conceptual framework. *International Journal of Information Technology and Business Management*, 35(1), 44-62.
- Mudalige, D., Ismail, N. A., & Malek, M. A. (2016a). Exploratory study on relationship between entrepreneur characteristics and dynamic capabilities in export SMES. *Paradigm*, 20(2), 113-130. <https://doi.org/10.1177/0971890716672934>
- Mudalige, D., Ismail, N. A., & Malek, M. A. (2019). Exploring the role of individual level and firm level dynamic capabilities in SMEs' internationalization. *Journal of International Entrepreneurship*, 17(1), 41-74. <http://dx.doi.org/10.1007/s10843-018-0239-2>
- Mudalige, D., Ismail, N. A., & Malek, M. M. (2016b). Application of theory of dynamic capabilities to explicate internationalization of SMES in Sri Lanka. *International Postgraduate Business Journal*, 8(2), 1-18.
- Newbert, S. L. (2005). New firm formation: A dynamic capability perspective. *Journal of small business management*, 43(1), 55-77. <http://dx.doi.org/10.1111/j.1540-627X.2004.00125.x>
- Øyna, S., & Alon, I. (2018). A review of born globals. *International Studies of Management & Organization*, 48(2), 157-180. <http://dx.doi.org/10.1080/00208825.2018.1443737>
- Pandža, K., Polajnar, A., Buchmeister, B., & Thorpe, R. (2003). Evolutionary perspectives on the capability accumulation process. *International Journal of Operations & Production Management*, 23(8), 822-849. <http://dx.doi.org/10.1108/01443570310486310>
- Park, T., & Rhee, J. (2012). Antecedents of knowledge competency and performance in born globals: The moderating effects of absorptive capacity. *Management Decision*, 50(8), 1361-1381. <https://doi.org/10.1108/00251741211261971>
- Pavlou, P. A., & El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, 42(1), 239-273. <http://dx.doi.org/10.1111/j.1540-5915.2010.00287.x>

- Peng, M. W. (2001). The resource-based view and international business. *Journal of management*, 27(6), 803-829.  
<http://dx.doi.org/10.1177/014920630102700611>
- Peng, Y. P., & Lin, K. H. (2017). The effect of global dynamic capabilities on internationalizing SMEs performance: Organizational culture factors as antecedents. *Baltic Journal of Management*, 12(3), 307-328.  
<https://doi.org/10.1108/BJM-09-2016-0199>
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic management journal*, 14(3), 179-191.  
<http://dx.doi.org/10.1002/smj.4250140303>
- Peteraf, M., Di Stefano, G., & Verona, G. (2013). The elephant in the room of dynamic capabilities: Bringing two diverging conversations together. *Strategic management journal*, 34(12), 1389-1410. <http://dx.doi.org/10.1002/smj.2078>
- Pfeffermann, N. (2017). The role of communication as a dynamic capability in business model innovation. In *Revolution of Innovation Management* (pp. 191-212). Palgrave Macmillan, London. [http://dx.doi.org/10.1057/978-1-349-95123-9\\_7](http://dx.doi.org/10.1057/978-1-349-95123-9_7)
- Pham, T. S. H., Le Monkhouse, L., & Barnes, B. R. (2017). The influence of relational capability and marketing capabilities on the export performance of emerging market firms. *International Marketing Review*. 34(5), 606-628.  
<https://doi.org/10.1108/IMR-07-2014-0235>
- Prieto, I. M., Revilla, E., & Rodríguez-Prado, B. (2009). Building dynamic capabilities in product development: How do contextual antecedents matter?. *Scandinavian Journal of Management*, 25(3), 313-326.  
<http://dx.doi.org/10.1016/j.scaman.2009.05.005>
- Ramlee, A. A. (2019). The dynamic capability development through learning orientation: Malaysian International New Venture (INV) firms. *Voice of Academia (VOA)*, 15(2), 1-10.
- Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin-off venture emergence. *Journal of Management Studies*, 48(6), 1314-1345.  
<http://dx.doi.org/10.1111/j.1467-6486.2010.00995.x>
- Raza, S., Minai, M. S., Abrar ul Haq, M., Iy, A., & Zain, A. Y. M. (2018). Entrepreneurial network towards small firm performance through dynamic capabilities: the conceptual perspective. *Academy of Entrepreneurship Journal*, 24(4), 1-9.
- Rennie, M. W. (1993). Born global. *The McKinsey Quarterly*, (4), 45-53.
- Riviere, M., & Bass, A. E. (2019). How dimensions of internationalization shape the MNE's renewal capability: Multidimensional and multilevel considerations. *Long Range Planning*, 52(4), 101862. <http://dx.doi.org/10.1016/j.lrp.2018.12.002>
- Riviere, M., Suder, G., & Bass, A. E. (2018). Exploring the role of internationalization knowledge in fostering strategic renewal: A dynamic capabilities perspective. *International Business Review*, 27(1), 66-77.  
<http://dx.doi.org/10.1016/j.ibusrev.2017.05.006>

- Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of management annals*, 12(1), 390-439. <http://dx.doi.org/10.5465/annals.2016.0014>
- Swoboda, B., & Olejnik, E. (2016). Linking processes and dynamic capabilities of international SMEs: the mediating effect of international entrepreneurial orientation. *Journal of Small Business Management*, 54(1), 139-161. <http://dx.doi.org/10.1111/jsbm.12135>
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of international business studies*, 45(1), 8-37. <http://dx.doi.org/10.1057/jibs.2013.54>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, 18(7), 509-533. [http://dx.doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7%3C509::AID-SMJ882%3E3.O.CO;2-Z](http://dx.doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.O.CO;2-Z)
- Teece, D., & Pisano, G. (1994). The dynamic capabilities of firms: an introduction. *Industrial and corporate change*, 3(3), 537-556.
- Vogel, R., & Güttel, W. H. (2013). The dynamic capability view in strategic management: A bibliometric review. *International Journal of Management Reviews*, 15(4), 426-446. <http://dx.doi.org/10.1111/ijmr.12000>
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International journal of management reviews*, 9(1), 31-51. <http://dx.doi.org/10.1111/j.1468-2370.2007.00201.x>
- Weerawardena, J., Mort, G. S., Liesch, P. W., & Knight, G. (2007). Conceptualizing accelerated internationalization in the born global firm: A dynamic capabilities perspective. *Journal of world business*, 42(3), 294-306. <http://dx.doi.org/10.1016/j.jwb.2007.04.004>
- Weerawardena, J., Mort, G. S., Salunke, S., Knight, G., & Liesch, P. W. (2015). The role of the market sub-system and the socio-technical sub-system in innovation and firm performance: A dynamic capabilities approach. *Journal of the Academy of Marketing Science*, 43(2), 221-239. <http://dx.doi.org/10.1007/s11747-014-0382-9>
- Welch, L. S., & Luostarinen, R. (1988). Internationalization: Evolution of a concept. *Journal of general management*, 14(2), 34-55.
- Williamson, O. E. (1999). Strategy research: governance and competence perspectives. *Strategic management journal*, 20(12), 1087-1108. [http://dx.doi.org/10.1002/\(SICI\)1097-0266\(199912\)20:12%3C1087::AID-SMJ71%3E3.O.CO;2-Z](http://dx.doi.org/10.1002/(SICI)1097-0266(199912)20:12%3C1087::AID-SMJ71%3E3.O.CO;2-Z)
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic management journal*, 24(10), 991-995. <http://dx.doi.org/10.1002/smj.318>
- Wu, Y. C., Lin, B. W., & Chen, C. J. (2013). How do internal openness and external openness affect innovation capabilities and firm performance?. *IEEE Transactions on*

- engineering management*, 60(4), 704-716.  
<http://dx.doi.org/10.1109/TEM.2013.2262050>
- Yan, J., Wickramasekera, R., & Tan, A. (2018). Small e-business firm internationalization process: The role of dynamic managerial capabilities. In *Academy of International Business (AIB) Annual Meeting* (pp. 1-1).
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341-363. <http://dx.doi.org/10.2307/256683>
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917-955. <http://dx.doi.org/10.1111/j.1467-6486.2006.00616.x>
- Zhou, L., Barnes, B. R., & Lu, Y. (2010). Entrepreneurial proclivity, capability upgrading and performance advantage of newness among international new ventures. *Journal of International Business Studies*, 41(5), 882-905. <http://dx.doi.org/10.1057/jibs.2009.87>
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339-351. <http://dx.doi.org/10.1287/orsc.13.3.339.2780>

## Appendix

Table A1: Methodology Choices of Quantitative Studies

Authors	Firm Type	Time Frame	BG/IN V	Unit of Analysis	Sample Size	Country
Zhou, Barnes and Lu (2010)	Multiple	-	INV	Executives	436	China
Park and Rhee (2012)	Multiple	-	INV	CEO/General Manager	271	South Korean
Monferrer, Blesa and Ripollés (2015)	Multiple	2010	BGs	Managers	303	Spain
Mudalige, Ismail, and Malek (2019)	Multiple	-	SMEs	Owner	197	Sri Lanka
Monferrer, Blesa and Ripollés (2015)	Multiple	2015	BGs	-	306	Spanish BGs
Mudalige, Ismail, and Malek (2016a)	Multiple	-	SMEs	-	197	Sri Lanka
Mudalige, Ismail, and Malek (2016b)	Multiple	-	SMEs	-	197	Sri Lanka
Falahat, Lee, Ramayah, and Soto-Acosta (2020)	Multiple	-	BGs	-	250	Malaysia
Swoboda and Olejnik (2016)	Multiple	-	SMEs	Owner	604	Germany

Table B1: Dynamic Capability Dimensions Applied in Quantitative Studies

Authors	Focus	Findings	Dynamic capabilities	Dynamic capability definition
Zhou, Barnes and Lu (2010)	Developing a theoretical model by linking entrepreneurial proclivity to LAN-related performance through the mediating mechanisms of both knowledge and network capability upgrading functions.	Mediating effect of capability upgrading, particularly among relatively larger new ventures and those operating with cost/price advantages in the international marketplace.	<ul style="list-style-type: none"> <li>Knowledge capability upgrading</li> <li>Network capability upgrading</li> </ul>	Cavusgil and Zou, (1994)  Freeman, Edwards and Schroder(2006); Styles and Ambler(1994)
Park and Rhee (2012)	To investigate the antecedents of knowledge competency and	For early internationalizing small firms, the prior international	<ul style="list-style-type: none"> <li>Absorptive capacity</li> </ul>	Zahra and George (2002)

	international performance in South Korean born globals, with particular focus on the moderating effects of the absorptive capacity.	business experience of managers and networks affect building knowledge competencies. In the relationship between the use of networks and knowledge competencies, in particular, absorptive capacity is found to play a moderating role.		
Monferrer, Blesa and Ripollés, (2015)	The influence of network market orientation on Spanish born globals' adaptation, absorption and innovation dynamic capabilities as well as their influence on the performance achieved by these companies.	Confirm that network market orientation facilitates the development of dynamic, exploratory capabilities (adaptation and absorption capabilities) in born globals and that these, in turn, influence their capacity to exploit knowledge through innovations, thereby obtaining higher performance.	<ul style="list-style-type: none"> <li>• Adaptation capabilities</li> <li>• Absorption capabilities</li> <li>• Innovation capabilities</li> </ul>	Gibson and Birkinshaw (2004)
Mudalige, Ismail and Malek (2019)	To understand the applicability of dynamic capabilities at the individual and the firm level to the SME internationalization process in developing country context and to assess to what extent a firm's asset position and individual level dynamic capabilities influence the	Owner-specific dynamic capabilities have a positive influence on both firm dynamic capabilities and internationalization, and firm dynamic capabilities positively influence internationalization. Market assets position measured as perceptual environmental dynamism positively	<ul style="list-style-type: none"> <li>• Sensing Capability</li> <li>• Learning Capability</li> </ul>	Lin and Wu (2013) Flores, Zheng, Rau and Thomas (2010).

	generation of firm level DC in SMEs.	influenced firm DC but structural and reputational asset positions of SMEs did not influence generation of firm DC. Firm DC had a mediation effect in the relationship between owner-specific dynamic capabilities and internationalization.		
Monferrer, Blesa and Ripollés (2015)	To examine the impact of adaptation, absorption of BGs influences on their innovation capability. To examine the impact of innovation capability developed by BGs has effects on their international performance.	Capabilities play an essential mediating role to achieve this effect through the integrated application of dynamic capabilities and ambidexterity theories. Thus, exploratory (adaptation and absorption) capabilities will influence the capacity to exploit knowledge through innovation capability and lead to higher performance.	<ul style="list-style-type: none"> <li>• Adaptation capability</li> <li>• Absorption capability</li> <li>• Innovation capability</li> </ul>	Gibson and Brikshaw's (2004) Chen et al.'s (2009) Akman and Yilmaz (2008).
Mudalige, Ismail, and Malek (2016a)	To examine the impact of Entrepreneur characteristics (EC) influence organizational dynamic capability (ODC) processes		<ul style="list-style-type: none"> <li>• Sensing capability</li> <li>• Learning capability</li> </ul>	Lin and Wu (2013) Flores, Zheng, Rau and Thomas (2010).
Mudalige, Ismail, and Malek (2016b)	Organizational dynamic capabilities positively influence SME internationalization		<ul style="list-style-type: none"> <li>• Sensing capability</li> <li>• Learning capability</li> </ul>	Lin and Wu (2013) Flores, Zheng, Rau and Thomas (2010).

Falahat et al. (2020)	examine both direct and indirect causal effects of institutional support (informational, training, trade mobility and financial aid-related support) on internationalization.	• Learning capability	Pham et al. (2017)
Swoboda and Olejnik (2016)	we argue that s can capitalize on scanning and planning processes because of their international entrepreneurial orientation	the results implicate a bidirectional relationship between processes and international entrepreneurial orientation.	• Scanning Serinhaus (1993) Miller and Friesen's (1982) scale on environmental scanning and Beal's (2000) extended scale on the scope of scanning in terms of customers and competitors in the task environment.

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