

Dynamic capabilities, competitiveness and performance of small and medium-sized enterprises: a systematic literature review

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Abstract

Dynamic capability theory was developed as part of the Resource Based View (RBV) to explain business performance and the notion of competitive advantage. The objective of this article is to offer a systematic overview of the scientific literature around the theory of Dynamic Capacities (DCs in relation to the performance of Small and Medium Enterprises (SME), it aims to explore how the theory of DCs has been approached by different authors in an SME context, and to examine the contribution of DCs to performance and their competitive advantage. One hundred and fifty-five relevant scientific contributions from 22 journals between 1997 and 2021 were analyzed through careful classification according to discipline, method and country. This literature review offers a summary of the state of the art and shares various trends and developments regarding this emerging research area. Among other things, it demonstrates the existence of conceptual ambiguities, different definitions and a lack of qualitative articles: this contributes to a wide range of research topics. Our analysis shows that DCs have received higher corroboration in the SME context than in the large enterprise context (Pezeshkan et al., 2016), and also a higher level of empirical support than RBV (Newbert, 2007) and other approaches in strategic management research such as transaction cost theory (David & Han, 2004). Thus, a need for empirical evidence and production of an explanatory nature is also noted: many hypotheses on the contribution of DCs to the competitive advantage of SMEs remain to be demonstrated. Moreover, this work highlights the significant and generally positive contribution of DCs to the performance of SMEs.

Keywords: Dynamic capabilities, Small and Medium Enterprises, Resource Based View, competitive advantage, performance.

JEL Classification: M19

Paper type: theoretical Research

1. Introduction

In the global economy era, the market power play and the functioning of the economy is not favorable to the survival of Small and Medium Enterprises (SMEs). SMEs' support to the economy has led researchers and experts to show growing attention in their performance (Shu et al., 2020). Previous literature had already concluded that SMEs face many challenges (Doern, 2009; O'Dwyer et al., 2009; xu et al., 2007). Furthermore, current economies increasingly expose them to challenges due to what some researchers have called hyper-competitive environments (D'Aveni & Gunther, 2007) or High-Velocity environments (Eisenhardt & Bourgeois, 1988). In this context, strategic management aims to ensure the competitiveness, security, and legitimacy of these companies (Keonig, 2004, p. 4). To cover these functions, strategic management has developed instruments and theories relating to the conduct of organizations and which should lead to competitiveness.

Business agility and the ability to strategically reconfigure are crucial to achieving sustainable competitive advantage (Ahmadi & Osman, 2020). Researchers, in strategic management, have studied in depth the strategic capabilities of the firm to explain its competitiveness. It shows that capabilities depend on the resources and skills that are essential for it to survive and grow (Barthod-Prothade, 2014). The resource-based approach (RBV) explains how the possession of idiosyncratic, rare, and inimitable resources leads some companies to outperform others, and therefore represents the main source of competitive advantage (Barney, 1991, 2001; Dierickx & Cool, 1989; Eisenhardt & Martin, 2000; Penrose, 1959; Wernerfelt, 1984). This explanation is often criticized for its static vision, the risk of a tautology, and the lack of precision of strategic capability (Gosling & Mintzberg, 2017; Priem & Butler, 2001). Today, to have a complete picture, researchers take into account the role of dynamic capabilities (DC) to achieve a consistent competitive advantage. Over the past two decades, the importance of DCs has steadily increased (Bitencourt et al., 2020). A central concern of strategic management is to maintain a dynamic alignment between what the company can produce and what the environment dictates (Learned et al., 1969; Miles et al., 1978). Beyond that, DCs are a relatively recent object in the academic world. They emerged in the second half of the 1990s. They thus allow the company to reconfigure its assets to adapt them to environmental changes (Teece & Pisano, 1994; Zott, 2003). Therefore, it can be proposed that DCs help companies achieve strategic goals that lead to sustainable competitive advantage.

In the context of SMEs, researchers use DC theory to explain and predict the competitiveness of SMEs in volatile environments. It is therefore a question of studying what capabilities are necessary to face the complex problems and challenges of today's world. The environment is continuously changing and evolving. Studies highlighted several sources of change: Industry 4.0, internationalization, digital servitisation, and economic and social issues (Münch et al., 2022). However, the idea of measuring an SME's DCs, their impact, and their ability to deliver superior performance has yet to be fully explored. Our systematic literature review aims to explore how authors used DC theory in an SME context. The study also examines the impact of DCs on SMEs' performance and their competitive advantage. The focus is on studies in the field of strategic management. Systematic literature review is performed using articles published in the Scopus, Jstor, Web Of Science, and Google Scholar databases during the period 1997-2021. The results of this study show that DCs have a positive impact on performance and competitive advantage in SMEs. This can help broaden the theoretical framework for building a successful and sustainable SME.

2. Literature review (theoretical background)

2.1. Dynamic capabilities theory

In a rapidly changing competitive environment, the mere possession of resources is insufficient for a company to survive (Eisenhardt & Martin, 2000; Li & Liu, 2014; C. L. Wang & Ahmed,

2007). A company must have the ability to combine, improve and redesign its internal and external skills (Teece et al., 2009). In their papers (Schumpeter, 1934) and (Penrose, 1959) provide the conceptual foundations of the DC theory (See, the article by Teece et al. (1997) on DCs which is considered a pioneering article). The DC approach is an improved version of the firm's resource-based approach (RBV) (Barney, 1986, 1991). The latter suggests that firms in the same industry work differently because they have different types of resources and capabilities (Peteraf, 1993).

In addition, the RBV examines the unique, rare, and inimitable resources of the firm as a source of competitiveness and high performance. It also assumes that the competitiveness of the firm depends on its ability to proactively and effectively manage its resource base (Barney, 1991). This view agrees other theories in strategic management that consider the company's strategy as a function of the external environment, taking into account several points such as the structure of the industry (Porter, 1979), the strategic conflict (Shapiro, 1989), and transaction cost economics (Williamson, 1979). It turns out that the volatility of the business environment requires flexible and creative strategies. In this regard, DC theory has garnered progressively more interest from the researcher community since the appearance of literature on ambidexterity (Hsu et al., 2013; Luo & Rui, 2009). This means the firm's ability to respond to environmental complexity (Tushman & O'Reilly, 1996).

Conceptualizing DCs is a complex task as they fundamentally do not reflect a single mechanism (Akhtar et al., 2020). DCs are distinct from ordinary business capabilities (Karimi & Walter, 2015; Qaiyum & Wang, 2018). They require the reconfiguration of existing resources to achieve the intended result. Thus, Teece et al. (1997) defined DCs as the "*ability of a firm to integrate, build and reconfigure internal and external competencies in response to rapid changes in the environment*" (p. 516). Subsequently, the concept has evolved since some authors define it as the potential of a company to systematically solve problems; the propensity to identify opportunities and threats; to take timely decisions oriented toward the market, and to change its resource base (Barreto, 2010).

Researchers describe DCs as an organization's ability to transform and adapt current resources through exploitation and exploration. Internal organizational factors in DC research serve DC development (Álvarez & Torrecillas, 2020; Bendig et al., 2018). Most notably, the DC view concludes that it is insufficient to gain a competitive advantage at any given time. On the contrary, resources and capabilities must be reallocated, reconfigured, and modified to cope with the dynamism of the environment (Helfat et al., 2009; Teece, 2007a).

DCs are described as activities that extend, modify or create ordinary capabilities (Helfat, 2012; Santos-Vijande et al., 2013; Zollo & Winter, 2002), which permit the company to make a living in the present (Cepeda & Vera, 2007). According to the authors, DCs correlate with the activities that companies develop and adapt to their routines, in a systematic and relatively predictable way. Therefore, the fact that a company adapts in a creative but unstructured way to a succession of crises is not a DC. According to Winter and Nelson (1982), organizational routines are first defined as the organizational memory of the firm, which has a collection of "formal memories" through documents, archives, and artifacts, but also individual skills. (p.99). Zollo and Winter (2002) consider DCs as "*a learned and stable pattern of collective activity through which the organization systematically generates and modifies its routines in the quest to improve its efficiency*" (p.340). Routines can also be distinguished as follows: operational routines (used in business activities) and DCs (those dedicated to modifying operational routines) (idem). For Eisenhardt and Martin (2000), it is about "*organizational and strategic routines through which firms reach new resource configurations*" (p.1107). They argued that DCs include strategic decision-making, product development and alliances. They claim that these capabilities are recognizable and that the core activities are similar from one company to another, but that they are not equal from one sector to another. More recently, authors associate

DCs with organizational capacity. Helfat et al. (2007, p. 4) note that DC is the ability of a firm to intentionally develop, expand or change its resource base. Most literature reviews on the nature of DCs (e.g., Breznik & Lahovnik, 2014; Easterby-Smith & Prieto, 2008; C. L. Wang & Ahmed, 2007) consider the definition by Teece et al. (1997) as the most appropriate.

Based on Teece (2014), DCs seek to match consumer opportunities and needs through learning mechanisms that are difficult to imitate. For analytical purposes, Teece (2007b) note that DCs can be operationalized as the ability to identify/create opportunities and threats, seize opportunities, and maintain competitiveness by enhancing, protecting, and if necessary, reconfiguring the company's resources. According to the author, the capacity of identification is the ability of companies to continuously scan (activities of monitoring), create, learn and interpret. Access to information being fundamental to the identification of opportunities, the company must therefore seek to develop organizational processes allowing the exploration of opportunities via technologies and markets. In a rapidly changing market, new information and knowledge can create pathways for innovation. Technologies improve the collection of relevant marketing information, which is a crucial action of the ability to identify opportunities. The capability to detect and analyze the new customer context allows companies to better understand customer motivations and create personalized customer value (Goerzig & Bauernhansl, 2018). Identification involves investment in research and development (R&D). The present literature proposes that research activity promotes a firm's knowledge and its ability to explore new information (Todorova & Durisin, 2007).

From the moment an opportunity has been identified, the company must redeploy and redirect its resources and mobilize new ones. This happens through learning dedicated to the search for new solutions and the creation of new knowledge. The ability to seize the opportunity consists of managing all the activities that will make it possible to exploit the opportunity to deliver value to customers (Teece, 2007a). It focuses on both internal coordination and integration activities such as integrating new knowledge about customer needs, market developments, and also knowledge about new emerging technologies (Iansiti & Clark, 1994) and the transformation of resources into innovative products. Then, the ability to seize opportunities is one of the managerial skills that are essential in DC theory (Teece & Pisano, 1994). The integration of new knowledge "*Into a collective system makes it possible to deploy new configurations of operational capabilities*" (Pavlou & El Sawy, 2011, p. 245). Since redeployed and new knowledge primarily belongs to individuals, and capabilities reside at a collective level, this knowledge must be disseminated within the enterprise. Warner & Wäger (2019) concluded that digitalization enables SMEs to seize opportunities. It happens by experimenting with the disintermediation and reintermediation of existing value chains. The mobilization of resources that occurs to seize the opportunity is based on the operational routines. This allows the company to reduce the gaps in its capacities and the implementation of new business models thanks to the creation of new capacities. They also contribute to the development of new products and innovations (Teece, 2019). Karim and Capron (2016) signal that reconfiguration capability includes activities such as adding, redeploying, recombining, or disposing of resources or business units.

Adaptive capacity suggests a firm's ability to rapidly coordinate and reconfigure resources to respond to environmental changes (Gibson & Birkinshaw, 2004) while maintaining performance (Kaur & Mehta, 2017). Thus, adaptive capacity enables a firm to spot and take advantage of emerging opportunities in the market (Hofer et al., 2015; Tseng & Lee, 2014). Companies with adaptive capacity learn faster (Akgün et al., 2012), and react quickly to changes following business priorities (Wang & Ahmed, 2007). They also integrate external information into the company's knowledge base (Tseng & Lee, 2014).

2.2. Dynamic capacities and the competitiveness of the firm in the context of SMEs

In the field of strategic management, knowing how the company obtains and maintains a competitive advantage is a fundamental question. According to Porter (1989), competitive advantage is a dominant concept in strategic management research with a long and varied history. This is the most common mechanism to explain the persistence of economic performance. To maintain a competitive advantage, companies must renew their valuable assets as their external environment changes, through the DCs approach (Breznik & Lahovnik, 2014). Based on this, the ability of companies to provide products and services to consumers is fundamental, but not sufficient to gain significant market share over the long term against their competitors (Bambang et al., 2021). For this, they must acquire a competitive advantage. A competitive advantage is reflected in the firm's ability to overcome existing challenges and exploit business opportunities, including opportunities for growth and expansion (Idris et al., 2020; Prahalad & Hamel, 1994). In other words, it means that a company can maintain a Q gain higher than the average of other companies (Dhameria et al., 2021).

Maintaining competitive advantage is a dynamic and iterative process (Ya et al., 2010). As a result, researchers have suggested that a firm must develop specific capabilities and continuous learning to maintain its competitiveness in the market (Argyris & Schön, 1997; Hammer, 2003). Thus, the objective of DCs is multiple. In addition to increasing the chances of survival, DCs often offer the company potential for growth (Helfat et al., 2009) and explain how a company can maintain its competitive advantage, particularly in new markets or changing environments (Gnizy et al., 2014).

SMEs must be able to resist and react in an environment characterized by high levels of stress, threats, and uncertainty. Several seminal papers on the dynamic capability concept (di Stefano et al., 2010) implicitly or explicitly focus on how it works in large organizations (Augier & Teece, 2009; Eisenhardt & Martin, 2000; Galunic & Eisenhardt, 2001; Helfat et al., 2009). In contrast, this complimentary perspective to the RBV explanations is particularly suited to SMEs, which are generally characterized by scarce resources and are dependent on strong capabilities for their competitiveness (Cavusgil & Knight, 2015; Freixanet et al., 2020).

In chaotic environments, strategies and capabilities built around centralization and coordination of big assets are more cumbersome, Teece et al. (2016, p. 24) note that "*hierarchy can be the enemy of agility*". SMEs have special characteristics that differentiate them from simply being smaller versions of large companies (Motwani et al., 1999; Saunila, 2017; Verreyne et al., 2019). They differ in their organizational structure. They often have limited resources in terms of human and financial capital. They often depend on a small number of customers in limited markets (Hausman, 2005; Hudson et al., 2001; Julien, 1993). On the other hand, their flat organizational structures, with a limited number of hierarchy levels, allow flexibility and facilitate adaptation and creativity (Qian & Li, 2003; Wolff & Pett, 2006). In a literature review, (Zahra et al., 2006) identified a lack of DC research in start-ups and SMEs. DC theory can be considered a source of competitive advantage and high performance (Moccia et al., 2019). It explains the idea that competitive advantage is based on the acquisition by a company of precious, rare, inimitable, and non-substitutable resources (Cheng et al., 2014). DCs are responsible for enabling companies to integrate their capabilities to adapt to changes in the environment in the future (Cao et al., 2018).

Indeed, the simplest processes used by SMEs can be more relevant to the identification and rapid reconfiguration of resources. The size of SMEs improves the ability to recognize that consumer needs and opportunities have changed. For example, this is possible through direct contact with customers or the ability to reconfigure simple resources (Arora & Gambardella, 1994; Eggers, 2020; Kraus et al., 2020). Second, smallness improves the ability to renew new business models. Reconfiguring resources is easier when organizations are agile and less

overloaded with structures, routines, political factions, bureaucracy, and other elements. Finally, SMEs are more likely to have personal relationships with stakeholders in ways that facilitate the timely generation of new DCs (Borch & Madsen, 2007).

In summary, the types of DCs that small SMEs have are likely to help them be agile. Organizational agility is progressively seen by academics as a basis of competitive advantage. Companies are moving their capabilities and business models to better respond to market opportunities and threats (Teece et al., 2016). Agility is principally the result of executing effective strategic change at the right time to achieve beneficial performance results. According to the DC literature, agility involves the continuous ability to sense new market conditions, adapt or seize opportunities, and modify strategies (Teece 2007; Teece et al. 2016).

The underlying assumption is that firms that can identify and then seize new opportunities and reconfigure their resource bases and capabilities accordingly can create and maintain a competitive advantage (Teece, 2012). Since the average length of time that firms can sustain a competitive advantage decrease over time (Wiggins & Ruefli, 2005), the issue of competitive advantage has become a major concern of scholars and practitioners. In addition, numerous studies have identified that DCs have a significant or mediating impact on firm performance (Mikalef et al., 2020).

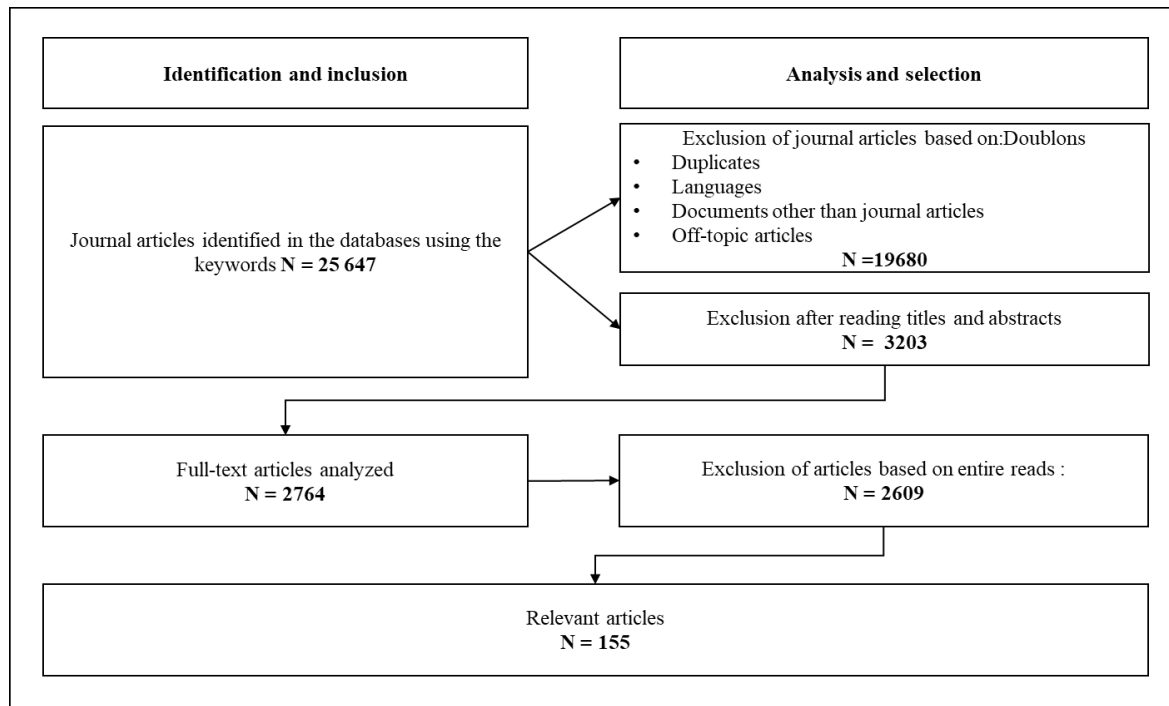
3. Method and Materials

Systematic literature reviews help as the basis for the advancement of knowledge, facilitate the development of theories and uncover new areas of research (Webster & Watson, 2002). A literature review is a powerful tool that analyzes and synthesizes previous literature and summarizes, categorizes, and challenges existing knowledge.

This literature review was conducted following the PRISMA protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Liberati et al., 2009). However, these protocols have been slightly modified to adapt to the objective of our study. Our systematic literature review aims to identify published articles that analyze DC formation processes and their impacts on the competitiveness of SMEs.

First, an in-depth search was carried out on SCOPUS, WEB OF SCIENCE, JSTOR, and GOOGLE SCHOLAR databases. They are considered to be one of the most prestigious databases (Fortunato et al., 2018; Q. Wang & Waltman, 2016). The first search process encompasses the keywords presented in Table 1. Only articles published in journals were selected. Podsakoff et al. (2005) argue that selecting only journal articles would mean validated knowledge, and we chose the duration between 1997 and 2021 inclusive. We chose 1997 as the starting point because it was the year David Teece's seminal article on DCs was published. In addition, other DC systematic reviews have also used 1997 as a starting point to define the sample design (Laaksonen & Peltoniemi, 2018).

Figure 2: The PRISMA flowchart



Source: authors

Cho & Egan (2009) recommend the use of a classification table when analyzing the articles from the systematic review to facilitate the abstraction of the initial data. This approach was applied using two software: Nvivo Plus (Version 11.4.1.1064) and Mendeley (Version 1.19.8). The goal is to develop a classification matrix that groups articles according to the following subheadings: Name(s) of the author(s), year of publication, review of the publication, objectives of the study, methodology (qualitative, quantitative, or mixed), methods (data collection approach, method of analysis, etc.), place of study, sample, a summary of results and industry.

4. Results and discussion

4.1. Description and analysis of the studies identified and selected

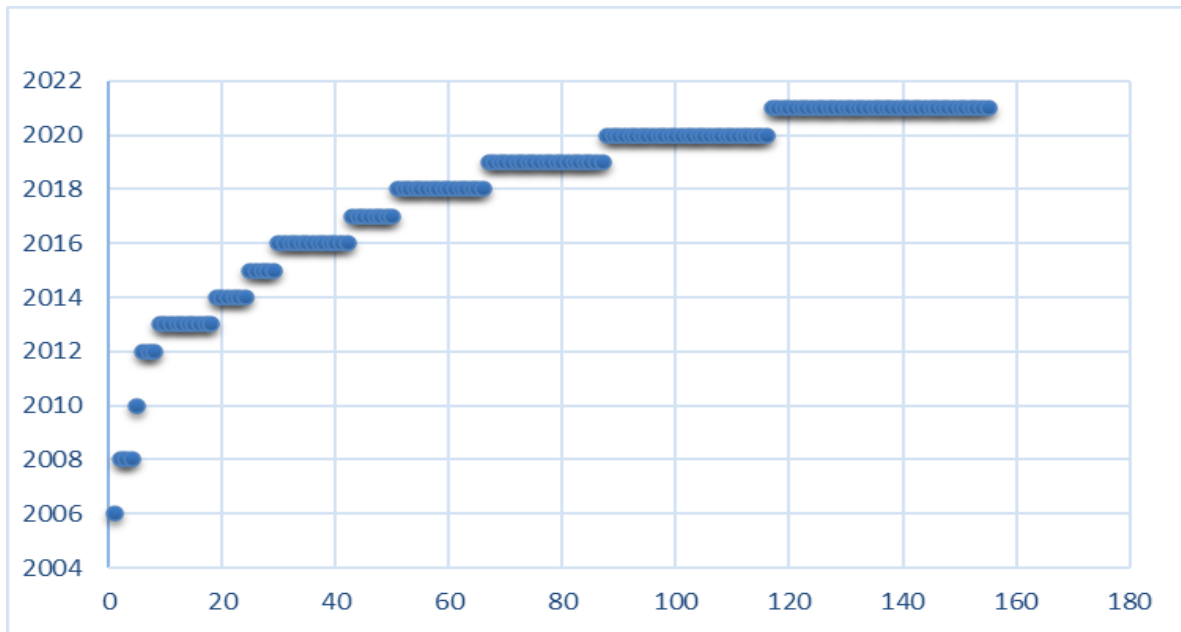
A total of 155 journal articles were identified after excluding duplicates and articles that did not meet the study inclusion criteria. The 155 papers were analyzed using the content analysis method and we performed a systematic analysis by the "vote count" method for the empirical papers.

4.1.1. Content analysis

First, each article was carefully studied (full article) according to the thematic areas determined by the objective of this study: the context of the study, the research methodology, data collection method, the data analysis technique, the sector studied, the type of participants on which the study focused, the guideline or framework used for the operationalization of the concepts.

Throughout the phase of reading and analyzing the articles, we took notes to categorize all, thus arranging small groups of articles for each of the different criteria.

Figure 3 : Distribution of publications by year



Source: Authors

After analyzing the articles included in our review, Figure 3. highlights an increase in the annual publication of journal articles. DC research is becoming a trend. Although the theory of DCs was born more than 25 years ago, it is an area of research that is still growing. DC theory has not remained stabilized and frozen in time but has evolved over the years in new contexts, more particularly in the context of SMEs, and in new dimensions.

The articles included in our paper were written by 138 different authors (Table 2). We looked at the number of articles per author. The analysis reveals that the majority (89.8%) of the authors published only one article, and only 14 authors published more than one article.

Table 2: Articles published by authors

Author	Affiliation	Number of articles
Jorge Ferreira	Faculty of Economics, University of Coimbra, Coimbra, Portugal	4
Zaheer Khan	Kent Business School, University of Kent, United Kingdom	3
Alex Kevill	University of Huddersfield, United Kingdom	2
Kashif Ullah Khan	Ghulam Ishaq Khan Institute of Engineering Science and Technology, Pakistan	2
Everest Limaj	Vienna University of Economics and Business, Austria	2
Mangku Purnomo	Brawijaya University, University in Malang, Indonesia	2

Alejandro J. Gutiérrez Rodríguez	Faculty of Economics and Administrative Sciences, University of Ibagué, Colombia	2
Orlando Rua	Porto School of Accounting and Business, Portugal	2
Luis Enrique Valdez-Juárez	Department of Management and Economic Sciences, Technological Institute of Sonora, Mexico	2
Manon Eikelenboom	Campus Fryslân, University of Groningen, Wirdumerdijk, Leeuwarden, the Netherlands.	2
Abel Duarte Alonso	École de commerce de Liverpool, Université John Moores de Liverpool, Royaume-Uni	2
David Deakins	Department of Entrepreneurship and Strategy, Lancaster University, Lancaster, UK,	2
Anjar Priyono	Department of Management, Universitas Islam Indonesia, Sleman, Yogyakarta, Indonesia	2
Richard J. Arend	Institute for Entrepreneurship and Innovation, Henry W. Bloch School of Management, University of Missouri, USA	2

Source: Authors

In journals (Table 3), the theory of DCs and their conceptualization in an SME context has been treated with significant interest in the strategic management literature. Different themes are identified such as logistics, management, resource management, organizational and human behavior, marketing, international trade and management, innovation management, entrepreneurship, innovation, planning, organizational culture, management of the supply chain, and clean production.

Table 3: Journals that have published more than one article dealing with DC theory in the context of SMEs

Academic Journal	H-index	2006-2011	2012-2014	2015-2016	2017-2019	2020-2021	Total
<i>Sustainability</i>	85			1	4	11	16
<i>Journal of business research</i>	195			1	2	10	13
<i>Journal of Open Innovation: Technology, Market, and Complexity</i>	22					5	5
<i>Baltic Journal of Management</i>	28		1	1	2		4
<i>International Business Review</i>	95		2	1	1		4
<i>Industrial Marketing Management</i>	136			1	1	1	3
<i>Journal of Small Business Management</i>	85			1	2	3	6
<i>Journal of World Business</i>	112			1		2	3

<i>Long Range Planning</i>	102		1			2	3
<i>Small Bus Econ</i>	131		3				3
<i>Cogent Business & Management</i>	16					2	2
<i>European Business Review</i>	42					2	2
<i>Heliyon</i>	28					2	2
<i>Int. J. Entrepreneurship and Small Business</i>	33			1	1		2
<i>International Journal of Innovation Management</i>	44				1	1	2
<i>International Journal of Production Economics</i>	185					2	2
<i>International Marketing Review</i>	89		1		1		2
<i>Journal of Innovation & Knowledge</i>	20				2		2
<i>Journal of International Marketing</i>	89	1	1				2
<i>Periodica Polytechnica Social and Management Sciences</i>	11				2		2
<i>Technovation</i>	130	1				1	2
<i>VINE Journal of Information and Knowledge Management Systems</i>	30				1	1	2

Source: Authors

Regarding the methodological choices, 62% of the articles are quantitative studies, 30% are qualitative studies, and 8% are studies that adopt mixed methods. We have literature reviews and theoretical analyses that mainly deal with DC theory. This result shows that there is a lack of articles in the field that study the DC theory in the context of SMEs using qualitative methods. Mathematical modeling methods are the most used, followed by single or multiple case studies, and surveys. Researchers used a variety of data collection methods with questionnaires and interviews being the most used methods. The largest sample size (5073) was mentioned in the quantitative study by Liu et al. (2020). These authors utilized data from surveys of Chinese SMEs conducted in 2012 by the National Federation of Industry and Commerce of China (FNICC), and the State Administration for Industry and Commerce (SAIC). The smallest samples are found in articles that discuss DCs through qualitative methodologies. The most widely used data analysis technique is structural equation modeling, followed by confirmatory factor analysis and narrative analysis. The choice of this method is motivated by the fact that DCs are often conceived as a latent construct that is difficult to assess on their own (Hilliard & Goldstein, 2019). Indeed, the resulting measurement models were

often configured with sets of items, sometimes describing unique sub-dimensions that are easier to operationalize and measure concretely.

Focusing on the sector of activity, 23 searches are carried out in industrial SMEs, 24 in the service sector, and 108 in both sectors. In both contexts, the most used research method is the questionnaire survey. DCs in the context of SMEs have been studied in several countries. Table 4. presents the number of articles by country. The main results of these studies will be discussed as well.

Table 4: number of articles per country

Country	Number of papers
China	15
Germany and Spain	12
Italy and the United States	11
Portugal	10
Australia and Indonesia	8
Norway	7
South Korea and the United Kingdom	5

Source: Authors

Such a geographical distribution reveals that DC theory studies in the context of SMEs are particularly applicable in countries where innovation plays an important role, i.e., industrialized countries with mature and complex economies. The most cited article in our sample is the article by Achtenhagen et al. (2013) cited 624 times published in the journal "Long Range Planning" followed by the article by Branzei & Vertinsky (2006) cited 424 times published in the "*Journal of Business Venturing*".

4.1.2. Results of the Analysis of Empirical Articles

To examine the degree of empirical support for the relationship between DCs and performance, and/or competitive advantage in an SME context, we conducted a "vote-counting" procedural analysis (Hartung et al., 2008) for the 97 empirical articles. Fainshmidt et al. (2016) used this methodology to estimate the level of empirical support for DC theory in the context of firms of different sizes. Newbert (2007) used the method to put a value of the resource-based approach. Also similarly, David & Han (2004) used the vote count methodology to assess the degree of empirical support for the transaction cost theory.

With this in mind, we coded whether the hypothesis test was supportive of a positive relationship between DCs and performance or competitive edge. There, if an empirical test yields a significant coefficient supporting a hypothetical relationship, a vote of "1" is recorded; otherwise, a "0" vote is recorded. Since empirical studies may include different DCs, we follow the breakdown adopted by Pezeshkan et al. (2016). Thus, some studies have measured general DCs, and others have operationalized DCs more specifically (See, Ferreira et al., 2021; Khan et al., 2020; Min & Kim, 2021).

Tableau 5 : Levels of Support for the Positive Relationship Between DCs and Competitive Advantage/Performance.

Variable	Article	Test	Validated
Independent variable			
DCs	36 (37%)	115 (20%)	95 (83%)
DCs × resource / capacity	20 (21%)	32 (6%)	23 (72%)
Specific DCs	66 (68%)	188 (33%)	157 (84%)
Specific DCs x resource / capacity	48 (49%)	110 (19%)	101 (92%)
Independent variable			
Competitive advantage	17 (18%)	43 (8%)	33 (77%)
Competitive Advantage x DCs	12 (12%)	21 (4%)	17 (81%)
Competitive Advantage x DCs	20 (21%)	37 (7%)	33 (89%)
Performance	49 (51%)	118 (21%)	97 (82%)
Performance x DCs	33 (34%)	65 (11%)	52 (80%)
Competitive Advantage x Specific DCs	51 (53%)	138 (24%)	118 (86%)
Total	97 (100%)	569 (100%)	464 (83%)

Source: Authors

Analysis of the empirical papers reveals that the 97 papers contain 569 individual tests of DCs theory, of which 464 (82%) has been validated. Table 5. represents the levels of support for the positive relationship between DCs and competitive advantage/performance. It shows that the level of empirical corroboration varies depending on the independent variable. For example, in the 32 tests in which the independent variable is operationalized as DC × resources/capability, empirical support is only found for 23 (72%). On the other hand, in the tree where the explanatory variable is operationalized as DC, specific DCs, and Specific DCs × resources/capacity, it is found at a higher level (83%, 84%, 92%). The level of support was also greater when studies used performance (80%) as opposed to competitive advantage (77%) as the variable to be explained. Support for the general DCs-competitive advantage relationship (82%) was higher than the more specific DCs-competitive advantage (89%). Generally, although the level of corroboration varies from one subgroup to another, we follow Newbert (2007) and Pezeshkan et al. (2016). We then conclude that the results indicate strong levels of support for a positive effect of DCs on SME performance and competitiveness. We discuss the implications of these results below.

4.2. Discussions and Implications

This research was conducted to identify the use of DC theory by researchers in an SME context. It also aims to assess its level of empirical support over the past 25 years. Through the PRISMA process, content analysis, and analysis of empirical articles, we find a significant and overall positive contribution of DCs to the performance of SMEs. Moreover, our analysis of the articles proves that DCs have received higher corroboration in the SME context than in the large enterprise context (Pezeshkan et al., 2016). Furthermore, it has a higher level of empirical support than the RBV (Newbert, 2007) and other approaches in strategic management research

such as transaction cost theory (David & Han, 2004). These results show us that DCs are necessary for SMEs. They allow SMEs to remain agile and constantly reconfigure tangible and intangible resources.

5. Conclusion, Limits, and Research Path

Indeed, the scientific articles were treated with a rigorous and adapted methodology. However, the majority of the studies reviewed in our study were cross-sectional rather than longitudinal. Therefore, any findings from this study should be viewed with caution. It also prevented us from exploring any effect of DCs on the sustainability of SMEs' performance. Thus, the present systematic literature review only evaluates studies based on DC theory that explores and seeks to explain the performance or competitive advantage of an SME. Although the DC theory has been used to explain other additional exogenous variables, we did not include them in our research to better understand competitive advantage and performance in the field of strategic management (Andersén, 2011; Teece et al., 1997).

Thus, future longitudinal studies on DCs are a fruitful avenue of research to better understand the DC-performance link. Although we have followed the guidelines of Pezeshkan et al. (2016) to structure our sample, we have no intention of presenting it as exhaustive. We tried to complete the above procedure by manually collecting more articles, but some may have escaped our study. In the same line, the results of this study should in no way be considered deterministic.

The objective of this systematic literature review was to have a general view and to assess the empirical corroboration of what is considered to be one of the most accepted strategic management theories recently (Helfat & Peteraf, 2009). Our focus was to provide a picture of findings and research to encourage more in-depth future research on the fundamentals and consequences of DCs in the context of SMEs.

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