

Performance management of SMEs: a systematic literature review for antecedents and moderators

Performance
management of
SMEs

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Abstract

Purpose – The purpose of this study is to gain insight into existing empirical studies on performance management of small and medium-sized enterprises (SMEs). It categorizes the main antecedents for SMEs' performance, the dimensions of SMEs' performance and all variables used as moderators in the conceptual relationships.

Design/methodology/approach – This study undertakes a systematic literature review of 58 articles published in 33 peer-reviewed academic journals from 2000 to 2020 followed by a synthesis of individual studies to analyze the trends and background of research into SMEs.

Findings – A new academic conceptual model was developed grounded in selected theoretical lenses to advance our understanding of the different categories of antecedents, moderators and SMEs' performance dimensions.

Research limitations/implications – The author has provided a future research agenda in the context of SMEs. Future studies may investigate the role of different categories of determinants, the influence of key cultural values, the digital capability in SMEs and the Internet in the internationalization of SMEs.

Practical implications – This paper offers a framework for both practitioners and scholars in thinking about those factors that may be critical for success in SMEs.

Originality/value – This is a systematic review that suggests a new conceptual model of what existing empirical studies have found on SMEs. It can be used to influence thinking and research design in the area of SMEs' performance and success.

Keywords Small and medium-sized enterprises, Antecedents, Performance, Systematic review

Paper type Research paper

1. Introduction

Small and medium-sized enterprises (SMEs) are considered as the backbone of European economics and growth representing 99% of the enterprises and 67% of all employment in the private sector in the European Union (Hilman *et al.*, 2019), a figure that has risen to more than 80% for industrial companies (Moeuf *et al.*, 2020). Small and medium-sized firms are commonly defined as having 1–49 and 50–249 employees, respectively (European Commission, 2016). Many of them, often lack resources and capabilities at the stages of manufacturing, distribution, promotion and research funding (Lee *et al.*, 2010) and their ability to compete on a larger scale is limited due to internal (lack of knowledge, skills, capital, human resources) and external (presence of big players in the market) issues (Saunila, 2016). Moreover, they have different decision-making structures from large organizations (Swoboda and Olejnik, 2013); they face different challenges with regard to internationalization, but they have the ability to react faster to the changing needs and environment (Sawers *et al.*, 2008).

It is widely accepted that the application of drivers, resources and capacities affects performance level and organizational success; hence, studying factors that foster SMEs' performance is fundamental (Wasiuzzaman, 2018). To better understand and unpack the notion of SMEs' performance, scholars (e.g. Ferraris *et al.*, 2019; Asemokha *et al.*, 2019; Rezaei and Ort, 2018; Ipinnaie *et al.*, 2017) have found a number of antecedents that promote it,



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such as firm characteristics, firm strategy, innovativeness, risk-taking, proactiveness, knowledge management and entrepreneurial orientation. Although these studies provide valuable insights, the literature offers contradictory findings regarding the intensity and the direction of the relationships. The theoretical progress that has been made in this area is influenced by the differing definitions of success used by owner-managers, business support agencies and others (Simpson *et al.*, 2012; Gadenne, 1998).

Although there are many studies providing some important results in the field of SMEs' performance, there are also missing parts in previous works. For example, Rojas-Lema *et al.* (2020) point out that the research about performance measurement in SMEs on different business contexts is limited. Moreover, Bannour and Mtar (2019) support the view that SMEs strive to gain a foothold in markets across national borders, in a bid to remain profitable and increase their performance. Business models should be extended by studying specific capabilities which may contribute to competitive advantage for SMEs' international performance (Falahat *et al.*, 2020). Issues related to organizational learning, stage of firm growth, managerial activities, innovation culture, logistics, social development and other drivers that can influence in developing and growing SMEs is still unresolved (Asemokha *et al.*, 2019). Thus, the factors that lead to enhanced SMEs' performance at company level are still largely unexplored (Simpson *et al.*, 2012). While the scientific community needs to focus on studying SMEs because of the growing evidence for the rising involvement of SMEs in international marketplaces, the literature lacks a rigorous synthesis of the antecedents of the SMEs' performance field (Tarek *et al.*, 2016). Without understanding the antecedents, the SMEs' performance cannot be systematically managed. Thus, there is a need for an enhanced and extended set of explanatory variables to provide more insights into the seeming randomness of SMEs growth (Ipinnaiye *et al.*, 2017; Stam, 2010).

Within this scenario, there is a lack of systematic literature reviews providing an in-depth understanding of which antecedents are influencing the SMEs capability to increase their organizational durability. Consequently, because of this gap, there is a need to synthesize the extant knowledge on the antecedents of SMEs' performance to facilitate theory development and reliable recommendations for management practices. In the last two decades we have witnessed a gradual intensification of academic interest in the contexts surrounding the SMEs (Morais and Ferreira, 2020) and especially in identifying the critical drivers for their increased performance (Ferraris *et al.*, 2019; Sadiku-Dushia *et al.*, 2019; Alegre and Chiva, 2013; Simpson *et al.*, 2012). Moreover, the previous evidence based on antecedents of SMEs' performance stems from heterogeneous samples, varying in terms of organizational size, environmental contexts and industry settings. Earlier reviews (Sadiku-Dushia *et al.*, 2019; Ipinnaiye *et al.*, 2017; Pucci *et al.*, 2017) focused on assessing the impact of antecedents on SMEs' performance, leaving out the influence of control and moderating variables. Given the importance of control and moderating variables, a review is not complete unless these variables are also taken into consideration (Birkinshaw and Gupta, 2013). A systematic study of this issue should therefore be beneficial to both academic researchers and practitioners.

Knowing the importance of SMEs and the aforementioned significant gap in the literature, the purposes of this study are: (1) to collect and analyze the existing empirical literature between 2000 and 2020 on the field of the SMEs research identifying their main antecedents for performance; (2) to include in the discussion the role of external and internal factors as moderating variables. This is particularly significant; despite their recognized importance in the literature, previous reviews fail to take into consideration these variables; (3) to create a theoretical framework and build a conceptual model by synthesizing SMEs published research findings and (4) to identify and emphasize potential opportunities for academics and practitioners and to propose future research directions about this relevant topic.

To make the above contributions the paper proceeds as follows: first, after a description of SMEs antecedents and performance concepts, we set out the methods and criteria that were used to review the literature. Second, the descriptive properties of the studies reviewed here are summarized and evaluated along three dimensions: (1) fieldwork characteristics; (2) sampling and data collection and (3) statistical analysis. Third, the antecedents of SMEs' performance are employed, and moderators in the literature are analyzed. Finally, the discussion and conclusions are presented along with directions for further research.

2. Methodology

2.1 Systematic literature review

In this study, we followed the methodology described by [Denyer et al. \(2008\)](#) and [Tranfield et al. \(2003\)](#) and called a "systematic literature review". Consistent with recent suggestions that the methodological rigor of reviews of the management literature should be strengthened (e.g. [Thorpe et al., 2005](#)), we choose a literature review for collecting and analyzing data from said research, providing the basis for building a new conceptual model and map the development of a particular research agenda field over time ([Psomas and Jiju, 2019](#)). This method allows synthesizing and organizing the literature accumulated in a specific field often providing academics and practitioners with frameworks of the existing knowledge (e.g. [Kunisch et al., 2015](#)). A literature review will create a firm foundation for advancing knowledge and facilitating theory development providing answers for a number of research questions with a power that no single study has ([Snyder, 2019](#)).

In this study, the state of knowledge on the relationships between antecedents and SMEs' performance is evaluated, including the role of moderators in these relationships. Thus, it can determine which antecedents promote and whether their effect on SMEs' performance is constant across studies and discover what future studies are required to be conducted to demonstrate the effect ([Snyder, 2019](#)). According to [Denyer et al. \(2008\)](#) and [Tranfield et al. \(2003\)](#), we (1) first explain the precise aims and objectives of the study. The focus of this study was the investigation of SMEs' performance achievement. Thus, our research objectives and conceptual boundaries are captured in the four research questions:

- RQ1. What are the antecedents for achieving enhanced performance of the SMEs?
- RQ2. What are the dimensions of SMEs' performance?
- RQ3. What are the moderators that affect the antecedents – performance relationship?
- RQ4. What are the implications for future research on the topic of SMEs?

Then, (2) a systematic literature review procedure is followed by a comprehensive search of all potentially relevant articles on the relationships between various antecedents and SMEs' performance outcome. Further, (3) a synthesis of individual studies using an explicit analytic framework and a balanced, impartial and comprehensible presentation of the results and research agenda is included ([Turner et al., 2013](#)).

2.2 Data collection

According to established methods and protocols ([Danese et al., 2018](#)), we performed a systematic review following some inclusion and exclusion criteria regarding the selection of journals, time range and selection of articles within the sampled journals. Our work differs from traditional narrative reviews because it focuses on the purpose rather than on the utility of publications ([Ginieis et al., 2012](#)); it adopts a detailed, replicable and transparent scientific process that aims to minimize bias through exhaustive bibliographical searches of published

studies (Moustaghfir, 2008). This paper adopted the guidelines proposed by Tranfield *et al.* (2003) and Moustaghfir (2008) and presents five stages, as demonstrated in Figure 1.

The fields of relevant publications from which the journals were selected were management, business research or accounting. We carried out a computerized search of the literature inquiring into ScienceDirect, Web of Science, Wiley, ABI/Inform and Scopus as the same databases have already been used in previous reviews (e.g. Khosravi *et al.*, 2019; Rezvani and Khosravi, 2018; Kaur *et al.*, 2014; Crossan and Apaydin, 2010) and contain the major journals in which this subject is discussed. This search included empirical studies that have been published between 2000 and 2020 (cut-off: 25 April 2020, including online-first articles published up to this point). This interval time was considered appropriate to capture the latest SMEs' performance research trends. We selected only peer-reviewed journals published in English. Studies in languages other than English, book chapter, conceptual, conference, review papers, opinions and unpublished full-text documents were excluded (Khosravi *et al.*, 2019).

Following previous research (Khosravi *et al.*, 2019; Danese *et al.*, 2018), titles, abstracts and keywords were scanned to confirm the study fit with the review scope, and the Boolean operators and truncations were applied. In the execution stage, the searched keyword "SMEs' performance" was used. When experience too many hits (3,268), a good way to handle this sample is to re-consider and use some criteria to reduce this large number of papers (Snyder, 2019). Consistent with prior approaches (Keupp *et al.*, 2012; Rashman *et al.*, 2009; Tranfield *et al.*, 2003), we performed keywords searches to identify the most relevant articles from these journals. The search for keywords was run twice to increase the reliability of the study. We used searched keywords any of the phrases "SMEs", "SME", "Small to medium – sized enterprise", "Small to medium – sized enterprises", "Firm performance", "SMEs' performance", "Business performance", "SMEs drivers" and "SMEs antecedents", in either their titles, abstracts or keywords and retained 1,652 articles. The use of five databases resulted in 121 duplicates, which were removed in stage 3, resulting in 1,531 outputs.

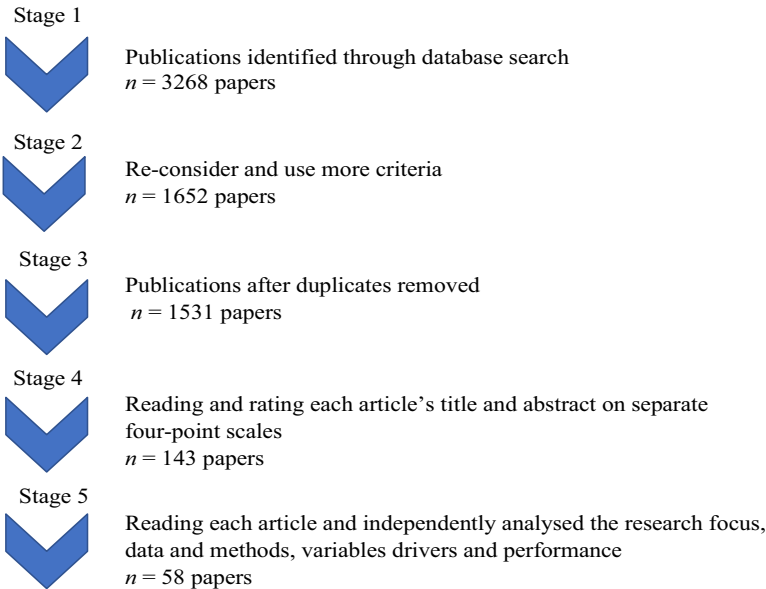


Figure 1.
Step-by-step process
for sample selection

To classify which of these 1,531 articles fit the focus and scope of this study, the author reviewed and analyzed the extent to which the articles focused on SMEs' performance, antecedents and moderators by reading and rating each article's title and abstract on separate four-point scales anchored at "not at all" and "clearly" (Snyder, 2019; Nag *et al.*, 2007). This process brought down the number of studies to 143. The author read each of the 143 articles and analyzed the research focus, data and methods, variables (if applicable), antecedents and performance (Keupp *et al.*, 2012). Then, he selected 58 papers and their data were extracted and synthesized for the purpose of a systematic literature review.

2.3 Characteristics of included studies

In this section, we present data collected with the aim of providing an updated picture of the recent antecedents – SMEs' performance research. Table 1 summarizes information about the studies reviewed such as the publication journal and ABS journal rankings that we consider useful for the reader. It is noteworthy that 50% are rated as 3* or 4*, indicating the academic significance of the subject. Table 2 summarizes the descriptive properties of the 58 studies

Qty	Journal
12	Journal of Small Business Management (3*)
4	Journal of Small Business and Enterprise Development (2*)
3	Journal of Business Research (3*)
3	Management Decision (2*)
3	Small Business Economics (3*)
2	Journal of International Entrepreneurship (1*)
2	Sustainability (–)
2	Journal of Knowledge Management (2*)
2	Technovation (3*)
2	Journal of Management and Governance (1*)
1	Baltic Journal of Management (1*)
1	British Journal of Management (4*)
1	European Journal of Innovation Management (1*)
1	European Management Journal (2*)
1	European Management Review (3*)
1	Industrial Management and Data Systems (2*)
1	International Business Review (3*)
1	International Journal of Human Resource Management (3*)
1	International Journal of Manpower (2*)
1	International Marketing Review (3*)
1	Journal of Advances in Management Research (–)
1	Journal of Business Ethics (3*)
1	Journal of Cleaner Production (2*)
1	Journal of Entrepreneurship in Emerging Economies (1*)
1	Journal of Information Technology Management (1*)
1	Journal of International Entrepreneurship (1*)
1	Journal of Manufacturing Technology Management (2*)
1	Journal of Organizational Change Management (2*)
1	Journal of Organizational Effectiveness: People and Performance (2*)
1	Journal of Small Business and Entrepreneurship (1*)
1	Management Research Review (1*)
1	Research Policy (4*)
1	Technological Forecasting and Social Change (3*)

Total selected papers: 58. Total journals: 33

Table 1.
Journal sources of
referenced papers

Table 2.
Characteristics of
studies reviewed

Authors	Country of study	Sample size	Research sector	Statistical analysis	Antecedents (independent variables)	SMEs performance (dependent variables)	Effect size
<i>Falahat et al. (2020)</i> <i>Singh et al. (2020)</i>	Malaysia UAE	119 404	Multiple industries Manufacturing SMEs	SEM SEM	Competitive advantage Inbound open innovation Outbound open innovation	International performance Firm performance	0.327 0.320 0.220
<i>Ng et al. (2020)</i>	Malaysia	178	Multiple industries	SEM	Product innovativeness Process innovativeness Behavioral innovativeness	Financial performance	0.299 0.256 0.241
<i>Boothene et al. (2020)</i> <i>Asemokha et al. (2019)</i>	Ghana Finland	1,532 148	Multiple industries Industrial sample	SEM Regression	Emotional intelligence Business model innovation Entrepreneurial orientation	Firm performance International performance	0.188 0.321 0.561
<i>Kintu and Venterb (2019)</i>	Uganda	386	Multiple industries	SEM	Motivation of employees Core values	Entrepreneurial performance	0.700
<i>Gorondutse and Hilman (2019)</i>	Nigeria	394	Multiple industries	SEM	Trust Organizational culture	Firm performance	0.030 nss 0.101
<i>Puchiar et al. (2019)</i> <i>Zaborek and Mazur (2019)</i>	Slovenia Poland	71 395	Multiple industries Food manufacturing, hospitality	SEM Regression	Business model innovation Dialog, access, risk transparency	Firm performance Firm performance	0.578 0.290 Positive effect
<i>Ferraris et al. (2019)</i>	Italy	88	Multiple industries	SEM	Big data analytics Knowledge management	Firm performance	0.590 0.780
<i>Sadiku-Dushia et al. (2019)</i>	Kosovo	217	Multiple industries	Regression	Proactiveness Opportunity focus Calculated risk-taking Innovativeness Customer intensity Resource leveraging Value creation	Firm performance (efficiency, growth, profit, reputation, owners' personal goals)	-0.067 nss 0.024 nss -0.014 nss 0.061 nss 0.033 nss 0.305
<i>Gatautis et al. (2019)</i>	Lithuania	73	Multiple industries	SEM	Business model innovation	Firm performance Firm innovativeness	0.180 0.504 0.497
<i>Kmieciak (2019)</i>	Poland	120	Multiple industries	SEM	Organizational memory	Firm innovativeness Customer satisfaction	0.402 0.161
<i>Torkkeli et al. (2019)</i>	Finland	119	Multiple industries	Regression	Institutional drivers Institutional barriers Innovativeness	International performance Firm performance	0.390 0.180 0.533
<i>Zubielqui et al. (2019)</i> <i>Valdez-Juárez et al. (2019)</i>	Australia Mexico	291 343	Manufacturing SMEs, services Multiple industries	SEM SEM	Organizational learning Corporate social responsibility	Financial performance	0.361 0.245

(continued)

Authors	Country of study	Sample size	Research sector	Statistical analysis	Antecedents (independent variables)	SMEs performance (dependent variables)	Effect size
Radkic and Djajlov (2019)	EU, USA	11,169	Multiple industries		Technological innovations	Export behavior	0.027 nss
Lansiluoto et al. (2019)	Finland	123	Multiple industries	SEM	Non-technological innovations	Firm performance	0.009 nss
Foued et al. (2019)	USA	164	Multiple industries	SEM	Performance measurement systems		0.410
Kadam et al. (2019)	UAE	106	Multiple industries	SEM	Entrepreneurial orientation	Financial performance	0.480
					Firm growth		0.240
					Cultural intelligence	Firm performance (profitability, growth, market share, quality, overall performance)	0.830
Jun et al. (2020)	Korea	237	Multiple industries	Regression	Entrepreneurial orientation		0.347
					Customer orientation		0.271
					Learning orientation		
Rezaei and Ort (2018)	Netherlands	279	High-tech firms	SEM	Innovativeness	Firm performance (Sales growth, market share, overall performance)	0.123
					Risk-taking		0.051 nss
Hernández-Linares et al. (2020)	Spain	509	Multiple industries	Regression	Proactiveness	Social capital	Positive effect
					Sensing capability		0.026 nss
					Learning capability		0.167
					Integrating capability		0.144
					Coordinating capability		0.015 nss
Wang et al. (2018)	Canada	444	Multiple industries	Regression	Employee participation	Firm performance	Positive effect
Ipinnaiye et al. (2017)	Ireland		Multiple industries	Regression	Firm characteristics, firm strategy, firm size, age, innovation activity, macroeconomic conditions	Firm performance	Positive effect
Sahoo and Yadav (2017)	India	121	Multiple industries	SEM	Total quality management		0.740
Pucci et al. (2017)	Italy	411	Multiple industries	Regression	Entrepreneurial orientation	Firm performance	0.803
					Absorptive capability		0.004 nss
					Marketing capability		0.010 nss
					Relational capability		0.050 nss
					Managerial capability		0.344
Prange and Pinho (2017)	Portugal	120	Exporting SMEs	Regression	Organizational innovation	International performance	0.250
					Personal drivers		0.320
Soto-Acosta et al. (2018)	Spain	429	Multiple industries	SEM	Organizational capability drivers	Firm performance	0.310
					Innovation ambidexterity		0.530

(continued)

Table 2.

Table 2.

Authors	Country of study	Sample size	Research sector	Statistical analysis	Antecedents (independent variables)	SMEs performance (dependent variables)	Effect size
Paik <i>et al.</i> (2017)	Korea	250	Multiple industries	SEM	Inbound standardization	Firm performance (market share, sales growth, Profitability)	0.277
Rua <i>et al.</i> (2017)	Portugal	247	Textile industry firms	SEM	Outbound standardization	Export performance	0.155
					Competitive differentiation		-0.002 nss
					Competitive advantage-cost		0.322
					Entrepreneurial orientation		0.273
					Intangible resources		-0.076 nss
					Absorptive capabilities		0.448
Stoian <i>et al.</i> (2017)	UK	444	Internationalized SMEs	SEM	Interorganizational networks	International performance	-0.010 nss
					Foreign market knowledge		0.640
					behavior		0.430
Leonidou <i>et al.</i> (2017)	Cyprus	153	Manufacturing SMEs	SEM	Competitive advantage	Firm performance	0.220
Pascucci <i>et al.</i> (2016)	Italy	64	Coffee roasting firms	Regression	Export intelligence responsiveness	Export performance	0.418
Ogunyomi and Bruning (2016)	Nigeria	236	Multiple industries	Regression	Employee resourcing	Financial performance	-0.090 nss
					Reward management		0.050 nss
					Employee performance management		0.200
Park and Ryu (2015)	Korea	179	Multiple industries	Regression	Occupational health and safety	Firm performance	0.060 nss
Theriou and Chatzoudes (2015)	Greece	303	Multiple industries	SEM	Technology commercialization	Firm performance	0.635
					Entrepreneurial management		0.220
					Environmental factors		0.390
					Access to financial capital		0.160
					Entrepreneurial orientation		0.530
Omri (2015)	Tunisia	162	Multiple industries	Regression	Innovative behavior	Firm performance	0.237
					Successful innovative output		0.149
De Noni and Apa (2015)	Italy	311	Manufacturing SMEs	Regression	Degree of internationalization	Firm performance	0.449
Lonial and Carter (2015)	Sweden	164	Multiple industries	SEM	Exploratory learning		0.493
					Positional advantage	Financial performance	0.740
De Clercq <i>et al.</i> (2014)	Canada	146	Multiple industries	Regression	Contextual ambidexterity	Firm performance	nss
Bulak and Turkylmaz (2014)	Turkey	744	Multiple industries	DEA	Many factors	Firm performance	Positive effect
Bagnoli and Vedovato (2014)	Italy	60	Manufacturing SMEs		Knowledge management	Firm performance	Positive effects
Hooi and Ngui (2014)	Malaysia	286	Multiple industries	SEM	Strategy configuration coherence	Firm innovativeness	0.189
					Distinctive HR practices	Firm performance	0.366
					organizational learning capability		

(continued)

Authors	Country of study	Sample size	Research sector	Statistical analysis	Antecedents (independent variables)	SMEs performance (dependent variables)	Effect size
Saunila (2014)	Finland	750	Multiple industries	Regression	External knowledge Work climate and wellbeing Ideation and organizing structures Regeneration Participatory leadership culture Individual activity Know-how development Culture of firms Strategy of firms Structure of firms Treatment Reduction Recycling Design Environmental management systems Entrepreneurial orientation Innovation performance Organizational learning capability Networks Innovation breadth Absorptive capacity Success of strategic Alliances Firm innovativeness	Financial performance	0.007 nss -0.059 nss 0.266 0.014 nss -0.249 0.031 nss 0.139 Positive effects
Swoboda and Olejnik (2013)	Germany	504	Manufacturing SMEs	Cluster analysis		International performance	
Agan <i>et al.</i> (2013)	Turkey	500	Multiple industries	SEM		Firm performance	0.180 0.100 0.020 nss 0.340 0.240 0.100 nss 0.520 0.300 0.062 nss 0.170 0.340 0.130 0.360
Alegre and Chiva (2013)	Spain, Italy	182	Ceramic SMEs	SEM		Firm performance	
Gronum <i>et al.</i> (2012)	Australia	1,435	Multiple industries	Regression		Firm performance	
Flatten <i>et al.</i> (2011)	Germany	345	Multiple industries	SEM		Firm performance	
Rhee <i>et al.</i> (2010)	Korea	333	Technology small firms	SEM		Firm performance	
Liao and Rice (2010)	Australia	871	Multiple industries	SEM	Transformation performance Firm innovativeness	Firm performance	0.370 nss
Zeng <i>et al.</i> (2010)	China	137	Multiple industries	SEM	Inter-firm cooperation Cooperation with government agencies Cooperation with intermediary institutions Cooperation with research organizations	Innovation performance	0.700 0.080 nss 0.250 0.190
Camisón and Villar-López (2010)	Spain	394	Multiple industries	SEM	International intensity Differentiation strategy Intangible assets	Firm performance	0.008 nss 0.381 0.099 nss
(continued)							

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[illegible]

selected. Following the methodological approach of Sousa *et al.* (2008), the research methodologies used in the studies were evaluated along three dimensions: (1) fieldwork characteristics; (2) sampling and data collection and (3) statistical analysis. Of the 58 studies reviewed here, 7 were conducted in Spain, followed by Italy (5), Finland (4), South Korea (4), Australia (3), Malaysia (3), Turkey (3), United Arab Emirates (2), Canada (2), Germany (2), Poland (2), Portugal (2), Slovenia (1), Sweden (1), China (1), UK (1), India (1), Greece (1), Lithuania (1), Kosovo (1), Ireland (1), Ghana (1), Netherlands (1), Cyprus (1), Tunisia (1), USA (1), Nigeria (1) and Mexico (1). Three studies collected data from more than one country. The distribution of the selected literature shows publication in 33 different management journals, mostly in the *Journal of Small Business Management* ($n = 12$) and mainly across the period 2013–2020 with a peak in the number of articles in 2019 (see Figure 2). Though the determinants of SMEs' performance have been an issue for more than 20 years, recent research suggests a growing interest in the topic including new issues, new contexts of implementation and new dimensions (e.g. entrepreneurial orientation and business model innovation).

The vast majority of the studies reviewed involved samples drawn from multiple industries, including manufacturers and consumer products. All the studies reported here focused on small to medium-sized firms as they play an important role in many economies and often account for the largest part of the industrial base. The size of sample used in the studies reviewed ranged from a minimum of 60 to a maximum of 11,169 firms, with a mean around 256. The sample sizes are relatively high indicating a tendency to use larger samples, which allows for more sophisticated statistical analysis. Focusing on the SMEs' performance – antecedent relationship, the only research method used is the survey. This finding is not surprising, since SMEs in all sectors is a relatively mature and consolidated research setting. The majority of the studies use structural equation modeling as the most popular analytical approach used by researchers, regression is also widely adopted. This increasing popularity of structural equation modeling could be explained by the growing complexity of the models used in the literature to assess SMEs' performance (Sousa *et al.*, 2008).

3. Content and synthesis of the research: a multi-level approach

After conducting the literature review and selecting the final sample, it was forwarded to the third stage, the data synthesis. Consistent with Khosravi *et al.* (2019), data synthesis was achieved using content analysis in order to condense text into fewer content-related categories. Following the method that Ritchie *et al.* (2013) suggest, the literature collected was textually

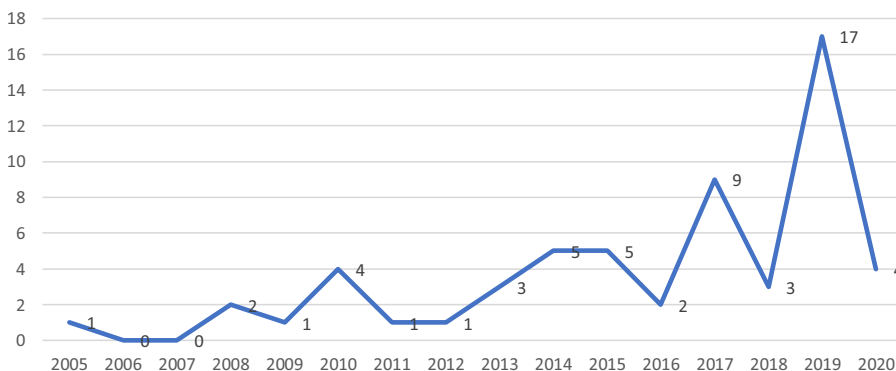


Figure 2.
Publication trend
across the period
2000–2020

analyzed to derive a set of suitable categories with precise reference to the performance dimensions of SMEs and their antecedents as well as associated moderating effects.

3.1 Categorization of SMEs business performance

Firm performance is the ultimate measure of organizational outcome, and it is affected by many market contingencies and organizational conditions. Approaches and definitions of firm measurement vary as it is multidimensional, taking into account all stakeholders within the organization and the balance and potential trade-off between short-term and long-term objectives (Simpson *et al.*, 2012). As a complex construct, performance has been measured in a variety of ways (Kafetzopoulos *et al.*, 2020). According to Neely *et al.* (2000), there are two basic types of performance measure in any organization, those that are related to results (financial performance) and those that focus on the determinants of the results (quality, flexibility, resource utilization and innovation). Several researchers in literature have proposed ways and tools to measure business performance using sub-dimensions such as financial performance, non-financial performance, innovation performance and quality performance (Samson and Terziovski, 1999). Wang and Ang (2004) discuss the difficulties inherent in obtaining measures of performance especially in the context of small businesses. Traditional measures of performance may not be available or may be inappropriate because of the small starting base; different financial measures may measure different aspects of performance; financial measures may be affected by industry-related characteristics making direct comparisons between industries or businesses misleading and many measures require a longitudinal design. Thus, performance has been operationalized by different indicators including accounting, market, production, financial or future performance variables (Gunday *et al.*, 2011; Bowen *et al.*, 2010).

In the present literature review, we found also that SMEs' performance is multidimensional (Jardioui *et al.*, 2020). Simpson *et al.* (2012) conclude that there is no consensus on how SME business success or performance should be measured or on the critical factors contributing to that performance. This area of research is complex, the definitions of success are either simplistic or fuzzy at best and the number of factors contributing to the survival and performance of an SME is potentially extremely large. The uniqueness of the businesses, their business environments, the aspirations of the owner-managers for their business and the variety of perceptions of success involved make the area very difficult to research. Figure 3 demonstrates that our selected set of studies focused

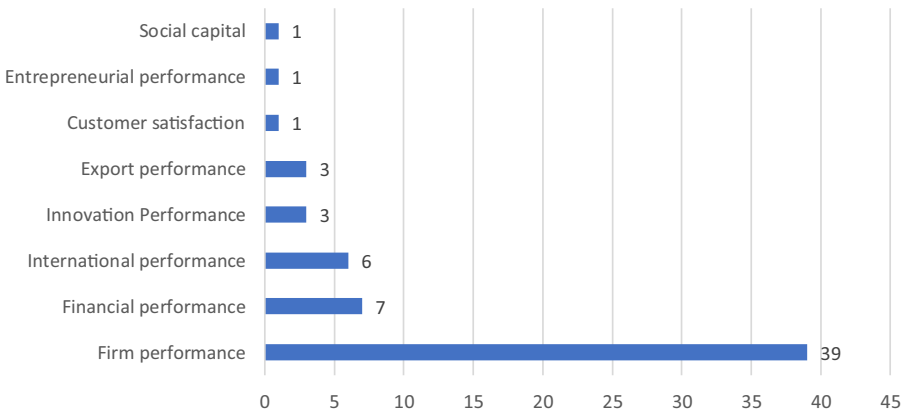


Figure 3.
Frequency of
performance
dimensions used in
articles

primarily on firm performance, international and financial performance. A more limited set of studies has considered outcomes such as innovation and export performance, customer satisfaction, entrepreneurial performance and social capital.

The most cited category is related to *firm performance*. Cegarra-Navarro *et al.* (2016) operationalized firm performance using items from previous research on financial and non-financial performance. The majority of the research is based on measures of firm performance, financial performance and business growth (Poon *et al.*, 2006). *Financial performance* is the degree to which an organization achieves economic outcomes (Hogan and Coote, 2014). A restrictive set of financial performance measures may adversely impact on an organization's long-term viability, so organizations should develop a broad range of performance measures (O'Mara *et al.*, 1998). Indicators of financial performance in SMEs such as company sales growth, profitability, net profit margin, financial results and cash flow, are used in a variety of studies. The third category of performance is related to *international performance* and it is understood as the degree to which a firm's objectives are achieved in international markets as a result of the configuration of international SMEs' culture, strategy and structure (Swoboda and Olejnik, 2013). The fourth category, *innovation performance*, is directly related to innovation management systems. Various types of innovation have been described in literature and researchers have explored its classification in different ways. Some studies examine only a single type of innovation such as process innovation (Abrunhosa and Sá, 2008) or product innovation (Zeng *et al.*, 2017), whereas others conceptualize marketing and organizational innovation (Chang *et al.*, 2012; Gunday *et al.*, 2011). The next SMEs' performance refers to *export performance*. According to Sousa *et al.* (2008) in the context of international markets, firms' survival and expansion, and the consequent economic growth of many countries, is strongly dependent on a better understanding of the determinants that influence export performance. Thus, factors that set off SME growth (including exporting) are still in need of research (Stouraitis *et al.*, 2017).

3.2 Antecedents of SMEs' performance

Mature SMEs increasingly face an important strategic dilemma: how can they increase their performance? The answer to these questions could be the antecedents as those characteristics that reflect the structural, learning and culture of an SME, being the capabilities that help organizations develop a competency in their operations. The 58 selected studies were thoroughly examined in a search for antecedents and moderators of SMEs' performance.

Organizational characteristics are the key enabling factors in SMEs' performance because the organization's existing capacities will constrain or not the performance output (Khosravi *et al.*, 2019). Organizational-related factors can be further classified into many antecedents that positively influence different facets of performance management. Furthermore, the importance of individual context of SMEs' performance is supported by many theories and empirical studies, in particular upper echelon theory (Hambrick and Mason, 1984). Scholars used upper echelons theory to analyze the relationship between the characteristics, attitudes, personalities and behaviors of managers and leaders that significantly influence their analyses of the circumstances they face and, in turn, affect their choices (e.g. adopt new innovation).

Our literature review discovered as many as 40 different antecedents that have a positive effect on performance, reflecting organizational characteristics as the key enabling factors in performance. Factors that had a negative or non-statistically significant relationship with performance were excluded from further categorization. In order to classify these organizational-related antecedents within the proposed framework,

an effort was made to group them. We follow the study of [Raisch and Birkinshaw \(2008\)](#) or [Khosravi et al. \(2019\)](#) who classified organizational-related factors as antecedents of management innovation into knowledge management, organizational context and strategy, human resource management and organizational resources. All the antecedents that emerged from this study were evaluated according to their context and the underlying construct that they attempted to represent. Thus, we categorized these antecedents into five categories, namely: *innovation antecedents*, *human resources antecedents*, *organizational strategy antecedents*, *organizational context antecedents* and *knowledge – learning antecedents*.

The relationship between each antecedent’s category and SMEs’ performance can be supported by a distinct theory. Specifically, organizational strategy antecedents are justified by resource-based theory ([Sousa et al., 2008](#)), knowledge–learning antecedents by the knowledge management theory ([Liao and Wu, 2010](#)), human resources antecedents by human capital theory ([Antonioli, 2009](#)) and innovation antecedents by the innovation diffusion theory ([Douglas et al., 2016](#)). Lastly, organizational context antecedents can be supported by contextual theory ([Lin, 2014](#)). As we observe, SMEs’ performance is determined by the firm’s inherent characteristics and strategy, no factor lies outside of the firm’s control and the external environment in which it operates.

As [Table 3](#) shows, of the 5 organizational categories affecting SMEs’ performance, organizational strategy, organizational context and knowledge – learning are the most frequently cited antecedents.

Organizational strategy antecedents are the most frequently cited. To realize their strategies, organizations must develop and deploy policies, plans, goals and processes based on the capabilities of their people and their partnerships and resources ([Kafetzopoulos and](#)

Antecedents	Frequency of use	Antecedents	Frequency of use
<i>Innovation antecedents</i>		Environmental management systems	2
Innovativeness	5	Corporate social responsibility	1
Business model innovation	3	Value creation	1
Open innovation (inbound – outbound)	2	Integrating capability	1
Product–process innovation	3	Performance measurement systems	1
Innovative behavior	2	Flexibility and organizational design	1
Innovation ambidexterity	1	Trust	1
Innovation breadth	1	Total quality management	1
<i>Human resources antecedents</i>		Access to financial capital	1
HR motivation–participation	6	Organizational memory	1
Personal and institutional drivers	2	Technology commercialization	1
Self-commitment	1	Transformation performance	1
Managerial capability	1	Inbound standardization	1
<i>Organizational strategy antecedents</i>		Outbound standardization	1
Entrepreneurial orientation	8	Institutional barriers	1
Strategic orientation	6	Big data analytics capabilities	1
Cooperation–Alliances	5	<i>Knowledge – learning antecedents</i>	
Competitive advantages – priorities	3	Knowledge management	6
Degree of internationalization	2	Market knowledge–orientation	6
Risk orientation	2	Learning orientation–capability	4
Differentiation strategy	1	Absorptive capacity	2
<i>Organizational context antecedents</i>			
Organizational culture	3	<i>Total: 40 different antecedents</i>	
Firm characteristics	2		

Table 3.
Studies of antecedents
of SMEs performance
reviewed

Gotzamani, 2019). Organizational strategies antecedents include management programs, systems, forms, relationships, practices, etc. that show the path to achieve the objectives of SMEs. Adopting strategy in firms such as entrepreneurial orientation, strategic orientation, cooperation or risk orientation leads to enhanced SMEs' performance because firms with this strategic posture create opportunities that enable the introduction of new products and brands ahead of competitors (Okpara, 2009; Rauch *et al.*, 2004).

The second category is *organizational context antecedents*. They refer to organizational factors and contingencies that can potentially influence a process and the way it is executed altering the desired outcome (Asif, 2017). The character of an organizational context antecedent has the potential to play a central role that enables individuals to choose between and demonstrate both alignment and adaptability (e.g. Gibson and Birkinshaw, 2004). The organizational context encourages the individuals to innovate more, while it supports them to manage their time to maintain the equilibrium among the incompatible demands for exploitation and exploration (Gibson and Birkinshaw, 2004).

Knowledge – learning antecedents is the third category. Several studies suggest that knowledge and learning are drivers of SMEs' performance (Ferraris *et al.*, 2019; Valdez-Juárez *et al.*, 2019). The fundamental concept is that learning may help firms in reducing the complexity and risks in a SME (Darroch and McNaughton, 2002). Moreover, it can trigger capabilities by enabling transfer and creation of new knowledge leading to the development of novel ideas (De Souza Bermejo *et al.*, 2015). Swan *et al.* (1999) believe that the knowledge management should have the objective of improving knowledge capabilities of a firm that consequently improves firm performances.

Human resources antecedents: Human resources are defined as collective knowledge, skills, abilities and traits at the unit level (Nyberg *et al.*, 2014). In this sense, it is imperative to identify, understand and develop the differential characteristics of human resources ideal for SMEs' operation. Human resources in SMEs often have a greater and more direct influence on organization-level outcomes than in large firms (Blasi *et al.*, 1996). Wang *et al.* (2018) point out that the participation of SME employees may lead to significant contributions to their firms' operations; their behavior can help enhance organizational performance directly.

Innovation antecedents are critical to a firm obtaining a dominant position and achieving higher profits (Cheng *et al.*, 2010). They have a considerable impact on corporate performance by producing an improved market position that conveys competitive advantage and superior performance (Walker, 2004). SMEs which have more innovative elements place more emphasis on management techniques and reach sustainable levels of higher performance (Hult *et al.*, 2004). Innovativeness is a strategic means by which SMEs deal with changes in the internal and external environments in order to respond to the turbulent environment (Rhee *et al.*, 2010). Recently, the findings of Kafetzopoulos *et al.* (2020) support the view that innovation capabilities like product, process and marketing directly contribute to firms' performance.

3.3 Moderating effects

A moderator is being defined as a variable which systematically modifies the form and/or strength of the relationship between a predictor and criterion variable (Sharma *et al.*, 1981). Moderators might explain the mixed findings among the primary SME studies. Therefore, researchers are encouraged to start their studies with an examination to assess whether the relationship between the independent and dependent variable varies as a function of the value of a third variable (moderator) (Sousa *et al.*, 2008). The importance of testing moderating effects in the literature is clearly supported in Hall and Rosenthal (1991), who comment that moderator variables are at the very heart of scientific enterprise.

The impact of different antecedents on firm performance seems to be context-dependent because the empirical results vary widely between studies (Rubera and Kirca, 2012). Thus, there are central issues in which empirical evidence supports the existence of moderators on the effects of antecedents–SMEs’ performance relationship (Fainshmidt *et al.*, 2016). A key characteristic of the organizational theory discipline is its emphasis on a firm’s environment. Environmental factors can contribute to firm performance in a positive or negative way (Samsami *et al.*, 2015). If, for example, the market is stable and can be perfectly predicted, there will be little immediate risk to firms. Otherwise, the change of environmental conditions poses uncertainty and thus risk to firms (Kafetzopoulos *et al.*, 2020). Though the moderating role of environment has been at the core of the SMEs’ literature (Hernández-Linares *et al.*, 2020), several studies related to SMEs’ performance include references to internal or external boundary conditions. For example, Soto-Acosta *et al.* (2018), Park and Ryu (2015) and Omri (2015) expected environmental dynamism and external rivalry (De Clercq *et al.*, 2014) to moderate the relationship between innovativeness or technology commercialization and SMEs’ performance. Concerning internal moderators, culture, internal rivalry or market orientation also play an important role in performance (Gorondutse and Hilman, 2019; Hernández-Linares *et al.*, 2020; De Clercq *et al.*, 2014). Table 4 shows several factors split into internal and external moderators that the SMEs’ literature suggests in order to explain the relationship between antecedents and performance.

3.4 The conceptual model

The results of our systematic literature review of the 58 selected studies are represented in a conceptual model in Figure 4. The studies were thoroughly examined for antecedents, SME performance and moderators of the antecedents–performance relationships. Then, all the

Table 4.
Moderators of the
SMEs’ antecedents–
performance
relationship of studies
reviewed

Factors	Relationship	Sources
<i>Internal moderators of SMEs performance</i>		
Organizational culture	Moderates the relationship between trust of business social responsibility and firm performance	Gorondutse and Hilman (2019)
Internal rivalry	Moderates the relationship between contextual ambidexterity and SMEs’ performance	De Clercq <i>et al.</i> (2014)
Network competence	Moderates the relationship between institutional environment and international performance	Torkkeli <i>et al.</i> (2019)
Market orientation	Moderates the relationship between dynamic capabilities and firm performance	Hernández-Linares <i>et al.</i> (2020)
<i>External moderators of SMEs performance</i>		
Environmental dynamism	(1) Moderates the relationship between innovation ambidexterity and firm performance	Soto-Acosta <i>et al.</i> (2018) Park and Ryu (2015) Omri (2015)
	(2) Moderates the relationship between technology commercialization and firm performance	
	(3) Moderates the relationship between innovative work behavior and firm performance	
	(4) Moderates the relationship between successful innovative output and firm performance	
External rivalry	Moderates the relationship between contextual ambidexterity and SMEs’ performance	De Clercq <i>et al.</i> (2014)
Consumer attitude dynamism	Moderates the relationship between technological capability and firm growth	Poudel <i>et al.</i> (2019)
International expansion	Moderates the relationship between innovativeness and firm performance	Jun <i>et al.</i> (2020)

distinguishable factors were classified in the proposed model. As the model shows, SMEs' performance was categorized into eight dimensions and the antecedents were categorized into five main subcategories. We also categorized the moderators as internal moderators of SMEs' performance and external moderators of SMEs' performance.

4. Discussion and conclusion

In this study, following methodology proposed by [Denyer *et al.* \(2008\)](#), [Sousa *et al.* \(2008\)](#) and [Tranfield *et al.* \(2003\)](#), we analyzed 58 articles published in 33 journals constitutive of the SMEs field over the period 2000–2020. This review demonstrates an appropriate strategy for selecting articles, capturing data and providing insights in order to offer something beyond a recitation of previous research.

The first contribution for this paper is that its findings indicate that: (1) there has been an increasing academic interest in the subject of SMEs by highly-rated academic journals, especially during the last six years; (2) more studies have been conducted in Spain, followed by Italy, Finland and South Korea; (3) the majority of the studies focused on samples from multiple sectors while the importance of manufacturing firms was also identified; (4) the level of statistical sophistication has improved as most of the studies used SEM or regression as the statistical method; (5) studies used a variety of moderating variables between antecedents – performance. The importance of testing moderating effects is clearly supported by [Sousa *et al.* \(2008\)](#).

The second contribution of this study is the recognition and categorization of the antecedents which support the achievement of SMEs' performance. It answers to [Paul *et al.* \(2017\)](#) suggestion for future research to understand the small and medium firm's choice to increase performance and remain as an exporter to be both prudent and fruitful. It is noteworthy to observe that researchers were working with restricted types of antecedents. For example, [Swoboda and Olejnik \(2013\)](#) noted two distinct sets of antecedents of SMEs' performance such as structural and strategy. Moreover, some valuable contributions have been made by the studies of [Ng *et al.* \(2020\)](#), [Singh *et al.* \(2020\)](#), [de Zubielqui *et al.* \(2019\)](#) and

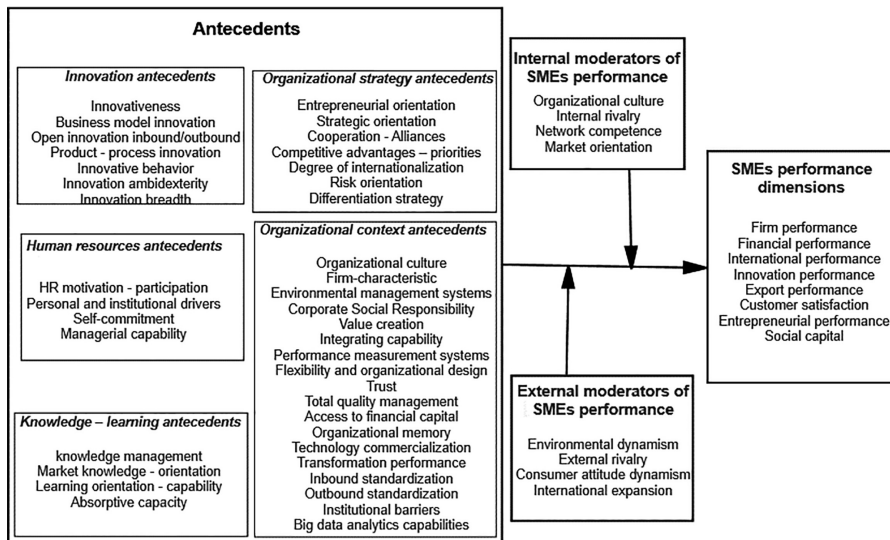


Figure 4.
The proposed
conceptual model of
SMEs performance

Rhee *et al.* (2010) which presented models that focused their attention only on innovation antecedents. Accordingly, Valdez-Juárez *et al.* (2019) and Wang *et al.* (2018) focus on knowledge – learning and human resource antecedents. While many articles include the entrepreneurial orientation or competitive advantages – priorities variables as antecedents for international or export performance, only one paper emphasizes the role of total quality management (Ipinnaïye *et al.*, 2017) or differentiation strategy (Camisón and Villar-López, 2010) in SMEs' performance. This is somewhat surprising, as the small business management and entrepreneurship literatures emphasize the role of quality and differentiation in firms' decision-making processes. The present study identifies 40 antecedents from literature; it has established which of them are most apparent and may play the most important role in achieving performance. Then it groups these antecedents into five main categories (Table 3) that enable us to understand, in a fine-grained manner, how to achieve SMEs' performance in practice. The results of this study build on existing theory, which can help managers to adapt and apply more kinds of antecedents at different organizational levels. This framework can be a guide for SMEs on how to achieve performance using the right mix of different antecedents' categories in order to lead to restructuring and growth.

The third contribution is that the study clarifies the dimensions of SMEs' performance. Several researchers in literature have proposed ways and tools to measure business outcomes using sub-dimensions such as financial performance, market performance, innovation performance and non-economic performance (Cegarra-Navarro *et al.*, 2016; Samson and Terziowski, 1999). These outcomes have been operationalized by different indicators including accounting, market, production, financial or innovation variables (Gunday *et al.*, 2011; Bowen *et al.*, 2010). The present study takes into account multiple measures of outcomes to attain robustness of results (e.g. firm, financial, international, innovation or export performance). Within this framework, it is possible to clarify the effects of various types of antecedents on specific SMEs outcomes. Therefore, one of the contributions of the present study is related to the deeper understanding of SMEs operation outcomes which may guide future studies to develop new advantages and theories for enhanced performance.

The fourth contribution concerns the variables used as moderators in the selected papers splitting them into two groups: internal moderators of SMEs' performance and external moderators of SMEs' performance. The literature suggests that these moderators explain the conflicting findings in respect to the SMEs' performance. This paper answers key questions proposed by several scholars about moderators and important boundary conditions for enhanced SMEs' performance (Gorondutse and Hilman, 2019; Jun *et al.*, 2020). The presentation of 8 variables used as moderators offers new insights helping to reconcile the inconsistent results in the extant literature and fill the gaps that may open up in different environments and capture the niche market segments.

Lastly, the fifth contribution concerns the consolidation of a large body of knowledge on SMEs into a multidimensional framework that organizes extant literature and provides a better understanding of SMEs management. The proposed model connects six categories of antecedents with eight dimensions of outcomes, taking into consideration the moderating role of eight internal and external moderators. SMEs researchers (Falahat *et al.*, 2020; Pucihar *et al.*, 2019; Ipinnaïye *et al.*, 2017; Paik *et al.*, 2017; Rua *et al.*, 2017; Simpson *et al.*, 2012) have been working for some time on the development of models, but until now, none of them have given a complete picture as to what the critical issues are which can enable SMEs to distinguish themselves from their competitors. The model formulated in this study is potentially better specified compared to alternative models because it comes from a comprehensive systematic review and includes all the important dimensions in the SMEs field. It offers a good starting point for future empirical research on one or more of the identified antecedents or SMEs' performance presented in this study.

Generally, the SME literature has been criticized for providing only fragmented results and for not being able to develop a widely accepted model giving directions for performance achievement (Sadiku-Dushia *et al.*, 2019; Lansiluoto *et al.*, 2019; Simpson *et al.*, 2012). Moreover, many issues pertaining to SMEs' performance indicate many inconsistencies (e.g. Radicic and Djalilov, 2019; Hernández-Linares *et al.*, 2020) and are still little understood. In the literature, there is a wide variety of antecedents as a set of independent variables, performance dimensions and moderators to explain SME capabilities for growth (Gorodutse and Hilman, 2019; Torkkel *et al.*, 2019; Jun *et al.*, 2020). Nevertheless, the lack of a common framework makes it very difficult to compare the findings from different studies and obstructs theory development in the field of SMEs' performance. This may be caused by their failure to consider the heterogeneity of SMEs attributable to qualitative characteristics. Future studies might tackle the problem of heterogeneity either by taking a descriptive approach to defining different typologies of SMEs, or by using a prescriptive method to define the type of SME on which the study focuses (Frank and Roessl, 2015). There is a need, therefore, to move toward fragmented frameworks and conceptualizations that explain the performance of the SMEs in a more convincing manner.

Based on this study, important implications can be derived for practitioners, policy makers and researchers, as this paper, to our knowledge, offers a systematic and transparent review of extant research, followed by a synthesis on the SMEs field which maps extant literature about the subject, underlining main concepts as well as their findings. Our selection of articles studied brings to fore the diverse theoretical settings that researchers have used to understand the challenges faced by SMEs seeking to increase performance, as well as the strategies and tactics deployed. Thus, it has developed a holistic picture and a conceptual model of what existing empirical studies have found on SMEs' performance, as well as its antecedents and moderators. Our work can serve as a reliable reference guide to entrepreneurs and practicing managers at SMEs that are focused on firm performance or are seeking to start their exports activity. Prior researchers identified some of the micro level challenges as internal organizational antecedents, such as innovativeness, HR motivation – participation, knowledge management, cooperation – alliances, organizational culture, etc. It is better for SMEs to identify the antecedents, moderators and challenges to perform and formulate appropriate responses and strategies from time to time.

An important finding of this study is also that entrepreneurial and strategy orientation is of vital importance for a firm to increase its performance. Rua *et al.* (2017) argues that higher degree of entrepreneurial intention is vital for SMEs international performance. SMEs need to pay attention to different factors influencing their growth. Managers should strive to understand SMEs' performance not only from a technological perspective, but also from a management and marketing innovation perspective. This research introduces many antecedents that have been playing a pivotal role in enhancing SMEs' performance. The proposed conceptual model can guide SMEs policy makers to select the suitable antecedent and the appropriate strategy as a priority for improving performance.

As this is a theoretically based study, further research agenda is crucial. Our literature review shows that most research (39) has been carried out on SMEs with a home base in developed countries. We therefore suggest an examination of independent variables and performance for SMEs from emerging economies, which are growing at a much faster pace than advanced economies and are increasingly integrating into the worldwide economy (Aulakh and Kotabe, 2008). Researchers can take their cue from the existing study and follow new avenues with greater awareness and use consolidated points and frameworks on which to ground research. Future studies may investigate the role of different categories of determinants such as new emerging quality challenges such in terms of quality risk, security, trust and compliance or leadership characteristics which may contribute to SMEs' international performance. Extensions of the present research may include understanding

the influence of key cultural values in SMEs such as power distance, masculinity vs. femininity, uncertainty avoidance, long-term vs. short-term orientation and the achievement of effectiveness–efficiency outcomes in SMEs. The digital capability is also a promising field for research: for example, the current role of the Internet in the internationalization of SMEs, the utilization and management of e-commerce for launching products in international and global markets or the use of Enterprise Resource Planning and Enterprise Information Systems technologies. Another omission from the proposed theoretical framework is how individual ambidexterity can be beneficial for the SMEs innovation performance. Finally, future research should also analyze in depth the antecedents of SMEs' performance and suggest new proactive plans of action plans in case of serious global crisis caused by issues such as health (COVID-19) or the economy (stock markets crash).

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