

## ARTICLE

## Creativity in SMEs: A overview and agenda for future research

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### ABSTRACT

In the last decades, the interest in creativity has grown significantly; its importance is related to the impact on the performance of companies since creativity is defined as the root of innovation. Even though research has been quite fruitful in many disciplines, its study in small and medium enterprises has been less explored. This article reviews the literature on creativity in small and medium enterprises and aims to establish proposals for future research. A bibliometric analysis was developed to achieve the objective mentioned above, considering the construction of scientific maps, performance analysis, and graphic maps. Additionally, a content analysis of the selected articles to establish the variables studied around creativity. The study has shown that it is necessary to increase research on creativity in small and medium businesses in a wide variety of topics. Therefore we offer a valuable framework to resolve existing gaps and guide future researchers.

### KEYWORDS

Creativity, Small and Medium Business, SMEs, Bibliometric

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## 1. INTRODUCTION

Small and medium-sized enterprises (SMEs) have become a relevant area of academic and research activity (McElwee & Atherton, 2005), due to their importance in creating employment and contributing to economic growth (Franco & Matos, 2015; Martinez et al., 2019). However, these companies have limitations related to their size that restrict their ability to manage competitive and environmental pressures (Agostini & Nosella, 2018). Companies must be creative to work around these constraints (Petrov et al., 2019), especially by moving in environments with limited resources (Miao et al., 2017). Nevertheless, they have the opportunity to use their learning skills to encourage creativity and innovation to remain competitive (Valaeiet al., 2017).

Creativity is a driving force that helps companies discover new business opportunities (Tu & Yang, 2013) and represents an essential phase of innovation (Fischer et al., 2016). As the engine of sustainable competitive advantage, the importance of innovation has been highly documented, and the existing studies on innovation relate it to creativity (O'Regan et al., 2006). Creativity is defined as the production of novelty and valuable ideas (Amabile et al., 1996). When properly integrated with work and capital, creative ideas can be transformed into innovations (Lu et al., 2017). The successful creation of new products, new services, or new practices starts with a person or a team that thinks and develops a good idea beyond its initial state (Baer, 2012). Creativity proves to be necessary for innovation (Heunks, 1998). Therefore, companies must develop creativity and innovation to respond to customers' changing needs (Tajeddini et al., 2013). As organizations face increasingly complex challenges, the ability to respond innovatively is based on a set of supported actions that drive creativity (Gundry et al., 2016), and the stimulation of innovation in the SME sector is a vital mission (Staniewski et al., 2016).

This work aims to provide an overview of the leading research topics on creativity in SMEs and reveal promising paths for future research that may contribute to establishing a more substantial frame of knowledge. This objective is addressed under the following research questions: Is the concept of creativity appropriately used in the context of SMEs? How has the research of creativity and its evolution in SMEs been developed over time? What variables have been studied around creativity? What future research have researchers proposed to develop? By answering these research questions, our work fills an important gap in the literature. To date, no bibliometric study has been carried out in the context of SMEs. Bibliometric studies to date have been based mainly on the development of creativity in large organizations (Williams et al., 2016). Furthermore, this available knowledge about creative practices in large companies is not easily transferable to SMEs (Radziwon & Bogers, 2018), hence the need for this study.

This work, therefore, contributes to the literature in several ways. First, it contributes to developing the literature on creativity in SMEs. Research in creativity in SMEs is an emerging topic and needs a deep conceptual knowledge of its particularities (Boso et al., 2017). Research on small and medium enterprises (SMEs) is a management subdomain and plays an essential role in other disciplines (Chege & Wang, 2020). Therefore, this study based on a vision of literature can provide a perspective to benefit creativity in SMEs (Elia et al., 2017). Second, it helps to clarify the concepts of innovation and creativity that are sometimes confused in the literature and generate severe limitations. In general, literature understands creativity as the stage of idea formation and innovation as new ideas are implemented (Chavaglia Neto et al., 2019). Literature defines creativity as the generation of new and useful ideas (Amabile, 1996).

In contrast, innovation is distinguished from creativity by implementing rather than the bare generation of ideas (Amabile, 1988). Overall, a strong correlation between creativity and innovation has been found (Sarooghi et al., 2015). In this sense, creativity is supposed to be a

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precondition for innovation. In the context of SMEs, we believe that the use of the concept of creativity is used interchangeably to refer to the same phenomenon.

The document is organized as follows. In the next section, the theory is developed. The data and methods used are discussed in the methodology section. Descriptive and content analysis is presented in the results. In discussion, the results are discussed. Finally, conclusions and proposals for future research are identified.

## 2. CREATIVITY IN SMES


Creativity is the ability to generate new and useful ideas (Amabile, 1996) and is vital for individual and organizational success (Lu et al., 2017). Organizations that encourage new ideas and foster inspiring work environments tend to thrive, whereas those that limit creativity more often fail (Mihret Dessie & Shumetie Ademe, 2017). Then, original and useful ideas are essential in entrepreneurship (Ward, 2004), and innovation becoming the critical piece of success in world markets (Yusuf, 2009).

Creativity goes through an uncertain path and with unfavorable results in many cases (Sarooghi et al., 2015), for that reason, the research has been explored from different perspectives in SMEs. It has been reported that the degree of market concentration, postulated as a determinant in large companies, did not significantly impact creativity in small or medium-sized enterprises. Moreover, an exciting challenge reported in SMEs is that they fail to convert their creativity into productivity (Sussan et al., 2017). Even though there are authors who indicate that only a limited number of variables are highly correlated with creativity (Bommer & Jalajas, 2002), other findings suggest that they are not so limited (Park et al., 2015; Shin et al., 2013). The creativity in the SME has been approached from two ways: employee creativity referred to the ability to create new thoughts and constructive results to the problems (Mittal & Dhar, 2015), and organizational creativity, understood as “the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system” (Park et al., 2015). The evidence suggests that it is vital to promote creativity to succeed and generate innovation (Aksoy, 2017).

## 3. METHOD

### 3.1. BIBLIOMETRIC ANALYSIS

Bibliometric methods are valuable tools to track and trace scientific processes (Benavides-Velasco et al., 2013; Wydra, 2020). They are increasingly used to help critical decision-making in research policies on highly specialized topics (Rons, 2018) since they provide useful information for researchers (Rey-Martí et al., 2016). Bibliometric indicators, such as cited counts and journal impact factors, are often used to evaluate the impact of articles (Pan et al., 2018). Therefore, the bibliometric analysis examines objective quantitative information (Albort-Morant & Ribeiro-Soriano, 2016).



### 3.2. CHOICE OF DATABASE

The information in the documents was retrieved from the SCI-Expanded of the Clarivate Analytics Web of Science, from all categories and all types of publications to obtain an interdisciplinary and multidisciplinary approach (Loi et al., 2016). The Web of Science (WoS) has traditionally been the primary source of scientific publications (Baier-Fuentes et al., 2019), and it has been established that Web of Science has a significant advantage over other databases in coverage of social science literature (Norris & Oppenheim, 2007).

### 3.3. SEARCH CRITERIA

The following search string was used: “TS = (“creativ\*” AND “small and medium business” OR “creativ\*” AND “SME\*”) NOT TS = (“creative commons” OR “creative industries”) in the WoS Topic (TS) field, which searches the terms in the title, abstract, keywords or keyword fields plus °, creative commons and creative industries are excluded because they are not part of the study. The resulting database corresponds to 278 records. The search considers the years 1975 to 2020.

### 3.4. CODIFICATION PROCESS

The next step was to review the 278 publications identified manually, and those that did not address creativity, called false positives, were excluded (Vallaster et al., 2019). Although a series of documents focus on entrepreneurship, we decided to keep them, considering that the authors refer to the study of creativity in students, managers, or the director of SMEs. With the 137 resulting records, a single database was prepared in a flat file containing the complete record with the author, language, year of publication, type of research, country, research field, keywords, cited references, and citation variables publications search results.

### 3.5. INDICATORS

In the present study, activity indicators are used, which measure the productivity of a researcher, institution, or journal measured in the number of publications, quality indicators that are focused on measuring the frequency with which a publication, an author, or a journal is cited for other publications (Cadavid-Higuaita et al., 2012) and bibliometric methods, these are, the co-citation, which arises when two articles are independently cited by one or more articles and the bibliographic association, which takes place when two articles make reference to a third common article in their bibliographies; indicating that there is a probability that the two articles deal with a related topic (Ferreira, 2018).

Measures of centrality and density are used to represent bibliometric networks (Callon et al., 1991). The centrality of Callon (Callon et al., 1991) measures the degree of interaction of a network contrasted to other networks. It is identified as indicated in (1), where  $k$  represents a word belonging to the subject and  $h$  a keyword belonging to another subject.

$$c = 10 * \sum e_{kh} \quad (1)$$

The density of Callon (Callon et al., 1991) measures the internal strength of a network and can be defined as (2), where  $i$  and  $j$  are keywords belonging to the subject and  $w$  the number of keywords (nodes) that frame the subject.

$$d = 100 \frac{\sum e_{ij}}{w} \quad (2)$$

(i) Upper-right quadrant with high density and strong centrality represent topics that are important for structuring the field and are also well developed. (ii) Upper-left quadrant with high density and low centrality, these themes are well developed but are less critical for the field. (iii) Lower-left quadrant with low density and low centrality, they represent topics that are less developed and are of lower importance; and (iv) Lower-right quadrant themes with high centrality but low density, these topics, although not developed enough, are crucial for a research field (Reverte & Badillo, 2019).

Graph of overlapping is used to analyze the evolution of research and critical concepts (Price & Gürsey, 1975), in which five-time periods have been established: [1984-2000] [2001-2005] [2006-2010] [2011-2015] [2016-2020], the first article published corresponds to the year 1984.

### 3.6. TOOLS USED

There are two tools used for the analysis, the free access software VOSviewer that allows the construction of bibliometric maps (Waltman & Van Eck, 2012), mainly used to create a map based on the constructed data (Cobo et al., 2011). Moreover, the second is software used called SciMAT, which allows the construction of scientific maps and the visualization of the evolution of a scientific area (Cobo et al., 2017) through strategic maps.

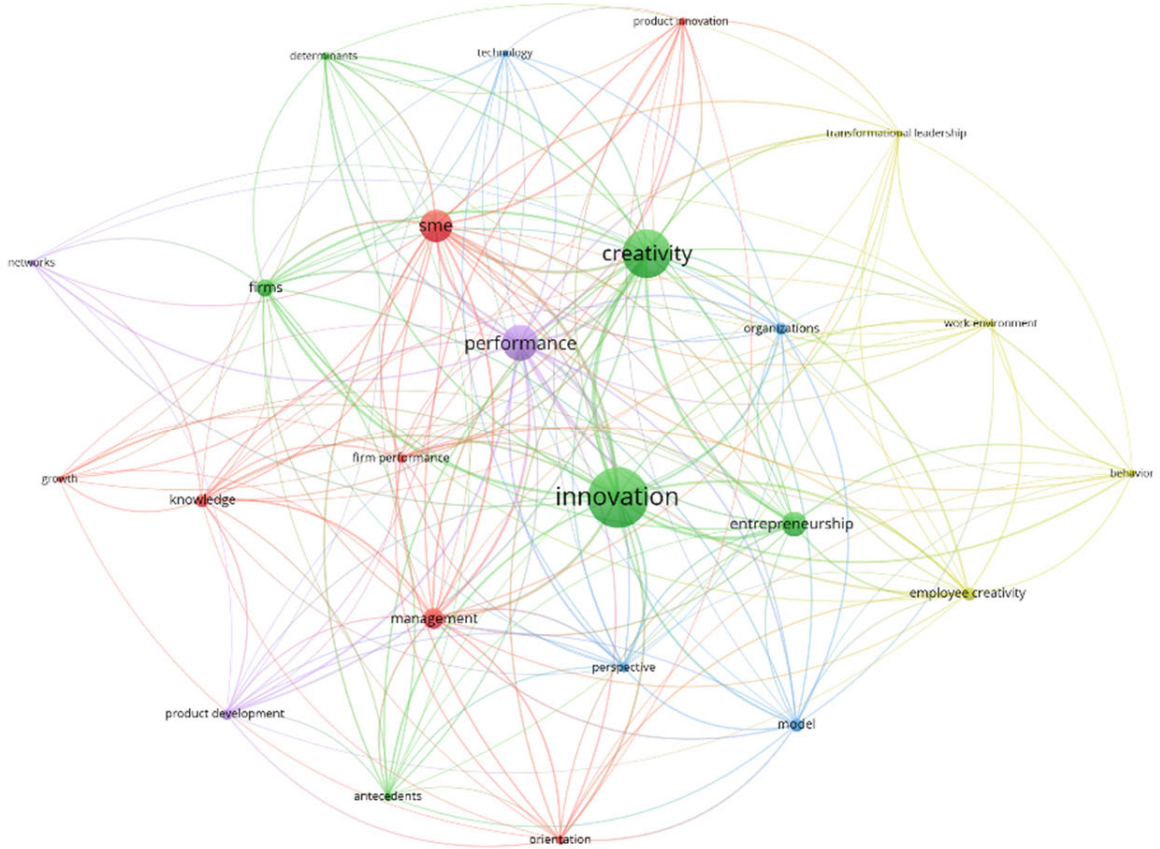
## 4. RESULTS

### 4.1. DESCRIPTIVE ANALYSIS

More than half of the articles have been published between 2014 and 2020, and the United States is the country with the highest contribution (15%), followed by England (10%) and Netherlands (8%). From a total of 328 authors, who have contributed with studies, Naser Valaei leads the research with four papers, followed by Sajad Rezaei with three papers. Twelve authors have published two papers, and 314 authors have published a single paper. The journals that have published most on the subject are Small Business Economics (8), Technovation (5), and Creativity and Innovation Management (5). 98% of the publications are in English. Of all them, 32% have been classified in the management area, 21% in business, 11% in economics, 6% in industrial engineering, and 29 categories represent the remaining 20%.

Figure 1 shows a co-occurrence of author keywords with a minimum co-occurrence threshold of six appearances and the top co-occurrence links. The analysis shows 5 groups. The first is led by innovation and creativity, the second is led by performance, the third group is led by employee creativity, the fourth group on management, and the last group relates models and perspectives. Co-occurrence analysis of keywords generates a network of topics and relationships. The size represents the relevance of an element, and colors are used to group the elements, and distance suggests more significant co-occurrence among keywords when it is shorter (Mulet-Forteza et al., 2018).

The total of publications has been cited in 7,700 opportunities, with an h-index value equivalent to 44, which means that at least 44 articles have received at least 44 citations. Thus, 20% of articles received 72% of the total cited, and only 6% of the documents have been cited more than 200 times. Table 1 represents the number of articles classified according to quantify citations, and Table 2 shows the ten most cited articles.



**Figure 1.** Map of keywords  
*Source:* VOSviewer – Own Elaboration.

**Table 1**  
*Most cited publications*

Numbers of Citations	Number of Papers	% of Papers	Number of citations
> 200 citations	8	6%	2952
> 150 citations	7	5%	1193
> 100 citations	10	7%	1124
> 75 citations	8	6%	729
> 50 citations	8	6%	489
> 25 citations	17	12%	571
> 1 citation	64	47%	542

*Source:* Own Elaboration.

**Table 2**  
*Most cited publications*

Title	Journal	Year of publication	Number of citations
Transformational leadership, creativity, and organizational innovation	Journal of Business Research	2009	524
Intrapreneurship: Construct refinement and cross-cultural validation	Journal of Business Venturing	2001	501
Creativity and entrepreneurship: A regional analysis of new firm formation	Regional Studies	2004	421
Cognition, creativity, and entrepreneurship	Journal of Business Venturing	2004	373
Innovation practice and its performance implications in Small and Medium Enterprises (SMEs) in the manufacturing sector: A resource-based view	Strategic Management Journal	2010	347
Corporate Sustainability and Innovation in SMEs: Evidence of Themes and Activities in Practice	Business Strategy and the Environment	2010	300
Building an integrative model of small business growth	Small Business Economics	2009	276
A 'business opportunity' model of corporate social responsibility for small- and medium-sized enterprises	Business Ethics-a European Review	2009	210
The transformational and transactional leadership of men and women	Applied Psychology-An International Review	1996	199
The antecedents of SME innovativeness in an emerging transition economy	Technovation	2009	192

*Source:* Own Elaboration.

## 4.2. CONTENT ANALYSIS

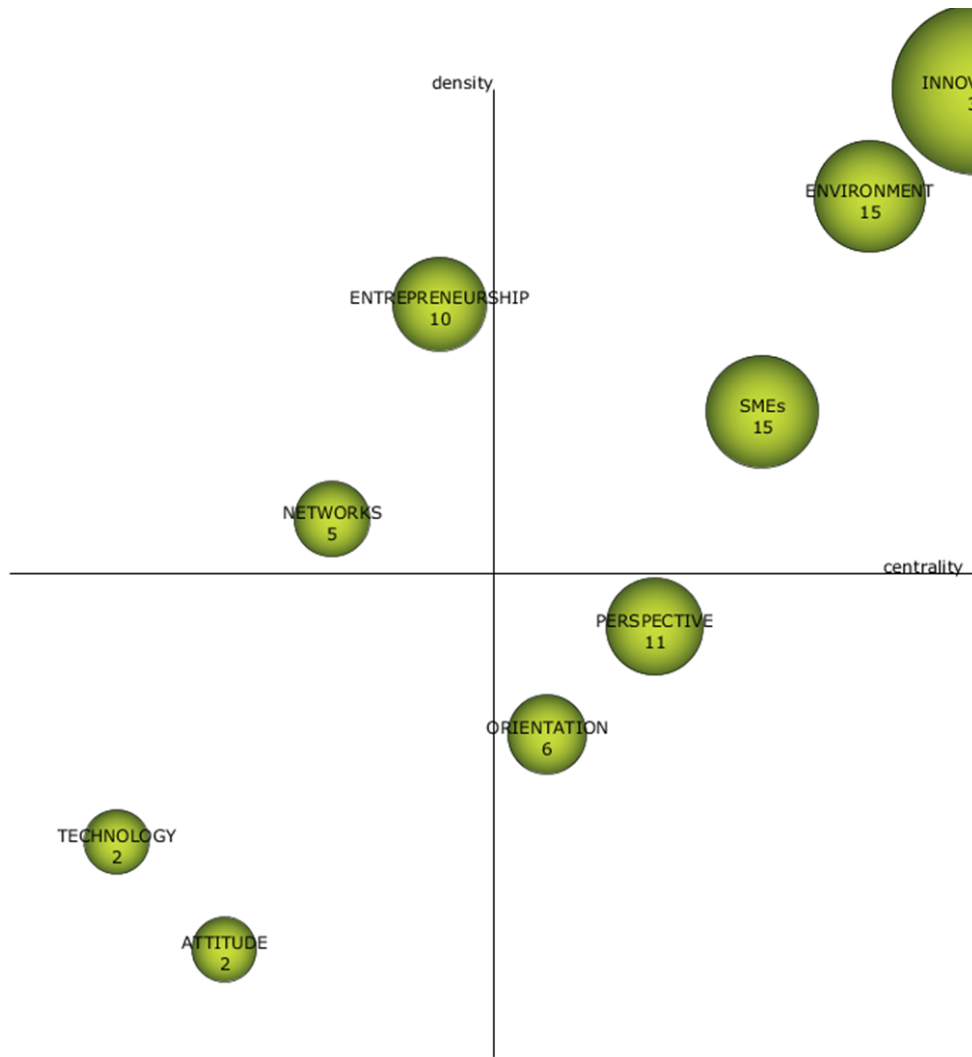
There are 9 themes developed when studying creativity in SMEs, in Table 3 presents the themes, including the values of centrality, density, the value h-index and number of citations, each of the concepts that structure the subject, and the number of associated documents is included. In Figure 2, the subjects are presented graphically, positioned according to the value of centrality in the horizontal axis and the value of density in the vertical axis.

**Table 3**  
Themes - Nodes

Theme	Centrality	Density	h-index	Citations	Nodes	Documents
Innovation	108,78	51,94	31	4635	Performance	63
					Innovation	80
					Creativity	73
					Management	40
					Capabilities	34
Environment	58,39	12,67	15	2099	Model	28
					Corporate Entrepreneurship	8
					Environment	25
					Cognitive Style	4
					Entrepreneurship	41
Entrepreneurship	34,47	10,86	10	567	Strategy	14
					Risk-Taking	4
					Firms	20
					Resource	18
					SMEs	45
SMEs	49,76	8,64	15	1559	Determinants	17
					Organizations	27
					Perspective	18
					Product Development	26
					Antecedents	10
Perspective	44,17	6,67	11	932	Policies	7
					Knowledge	27
					Networks	8
					Regional Innovation Systems	2
					Case Studies	2
Networks	25,97	7,61	5	155	Industry	4
					Technology	8
					Culture	11
					Orientation	9
					Leadership	17
Technology	14,67	3,48	2	48	Research & Development	15
					Self-efficacy	6
					Attitude	5
					Behavior	9
					Business	7
Orientation	35,2	5,09	6	156		
Attitude	16,97	1,69	2	475		

Source: Own Elaboration.

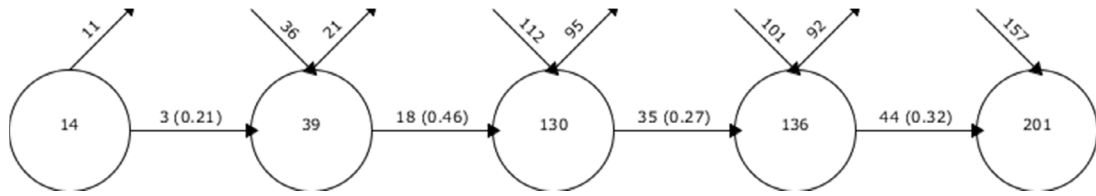




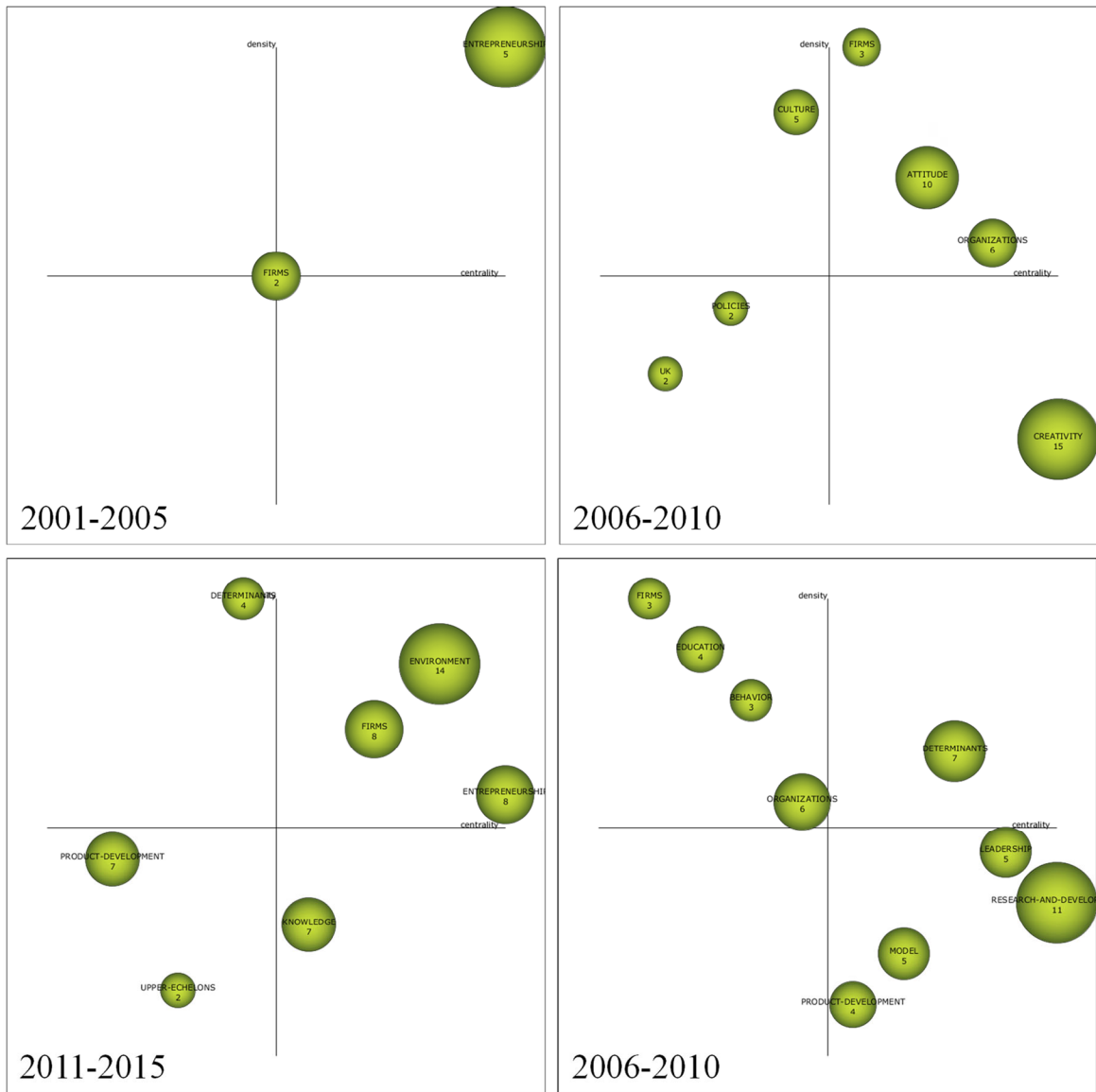
**Figure 2.** Themes  
*Source:* SciMAT – Own Elaboration

The evolution of the research in four periods of time is presented in Figure 3. The number within the circle represents the total number of keywords in the period. The arrows between two consecutive periods represent the number of shared keywords in both periods. The stability index is shown in parentheses, defined as an overlap fraction (van Eck & Waltman, 2009). The incoming arrows indicate the number of new keywords in the period, and the outgoing ones represent the keywords that have not been used in the next period. In Figure 4, the diagrams are presented by period considering centrality and density. The first period is not presented, given that the small number of words does not generate a network.

The individual analysis of the documents is organized in a framework presented in Figure 5, which includes three types of studies: empirical, theoretical, and case studies. The categories dependents and independents variables have been identified, and for the empirical studies, the scale of measurement of creativity, industries studied, and countries of the study of creativity in SMEs are added. The indicated values show the rate of occurrence in the review, establishing at least the threshold of 2 occurrences to group the concepts.



**Figure 3.** Temporal evolution  
*Source:* SciMAT – Own Elaboration



**Figure 4.** Evolution Themes by Period  
*Source:* SciMAT – Own Elaboration

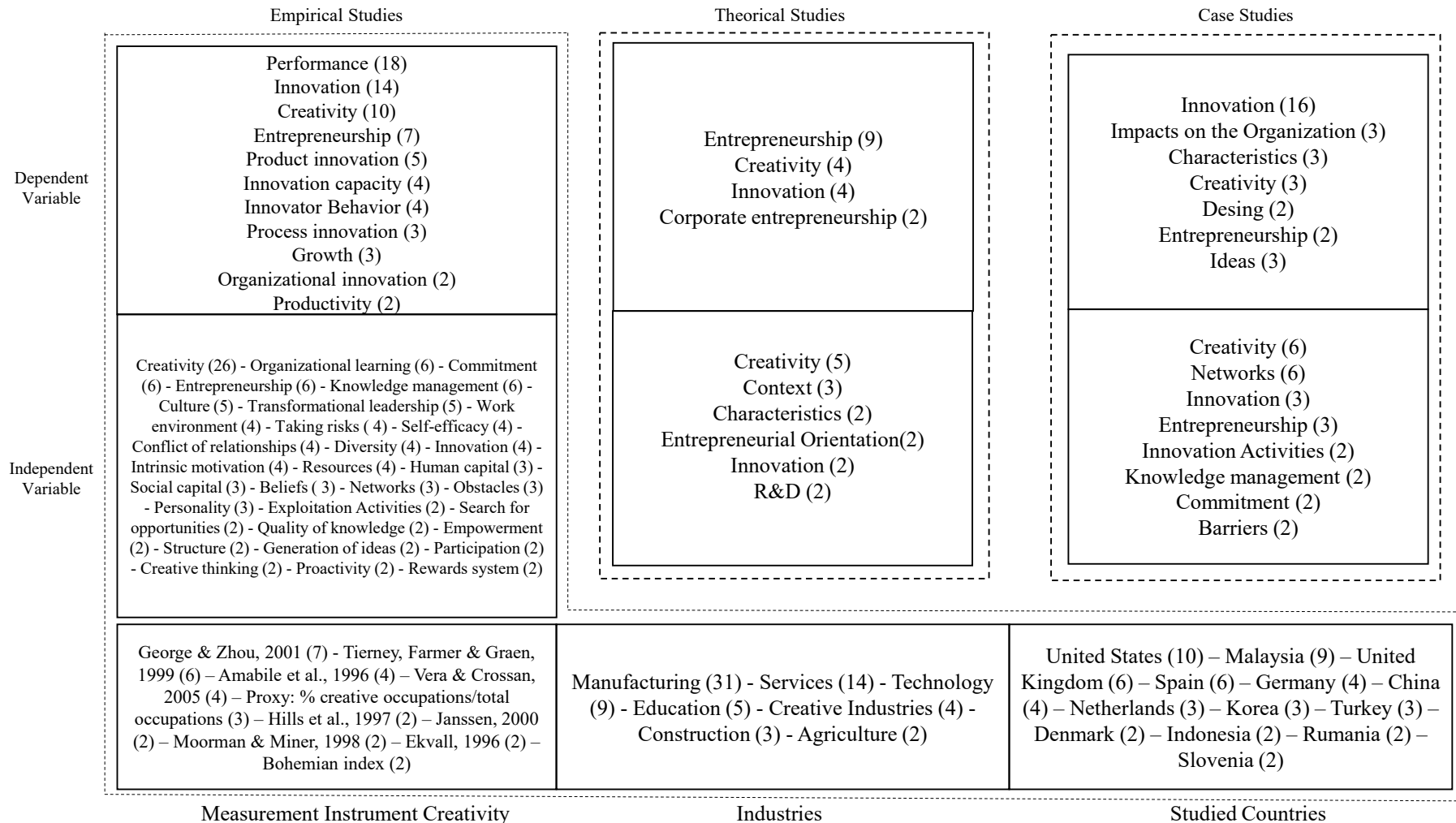


Figure 5 . Framework of creativity studies in SMEs

Source: Own Elaboration

## 5. DISCUSSION

The study sample is represented by 17% with theoretical studies, 27% case studies, and 56% empirical studies. Thus, it is possible to observe how initially the research has been approached more generally, articles that consider creativity as a construct, variable, or factor as part of the study of innovation, and articles that measure creativity in employees or entrepreneurs.

The research has evolved to more specific aspects. For example, the tools used by the authors respond to analyses to determine moderating effects of variables, fuzzy analysis, and modeling of structural equations to answer the hypotheses. In addition, empirical studies are more abundant.

Those themes positioned with greater centrality and density are called engines, which invites researchers to be reviewed when creativity is being studied in the SME. The first topic in this situation is called performance, and the network comprises studies that relate concepts, innovation, creativity, employee creativity, management, environment, and product innovation. The other topic is moderators, which incorporate those factors that moderate the studied relationships, and these are risk-taking, product, entrepreneurs, motivation, and workgroups.

The overlap fraction for the last period exhibits a value of 0.32. Thus, in SMEs' creativity, concepts are recently addressed and are interpreted as an evolving area that is important to researchers.

Theoretical studies have analyzed factors and possible connections between creativity, innovation, and entrepreneurship as fundamental processes (Shah, 2014; Ward, 2004) and theories that explain the organizational drivers of innovation, entrepreneurship, or new companies' emergence (Sklaveniti, 2017).

Regarding case studies, the majority has focused on identifying those factors of creativity that influence the innovation capacity of companies. Creativity has been analyzed from the perspective of employees (Walsh et al., 2017), entrepreneurs (Machnik-Słomka & Kordel, 2016), or external stakeholders (Hardie, 2016).

Empirical studies are the most numerous (75). Creativity is measured through surveys based on secondary data or the use of a proxy variable. The measures most used by the literature are those proposed by (Zhou & George, 2001) in seven papers, the measure by (Tierney et al., 1999) with six papers, and the instruments of (Amabile et al., 1996) and (Vera & Crossan, 2005) used in four papers. Furthermore, studies have focused more on the manufacturing and services industries.

A significant amount of research has considered creativity as an independent variable (26) and has focused on innovation (14) and performance (18) as a dependent variable. These show a positive relationship of creativity in organizational innovation (Ismail, 2016), in product innovation (Ahlin et al., 2014), or innovation capacity mediated by other factors (An et al., 2018). However, most of the research usually considers creativity as a single construct. The study has been left aside as a process that identifies a problem to the creative result. Moreover, little is known about the different stages of the creative process (Caniëls & Rietzschel, 2015), although recently, researchers in organizational creativity have begun to focus their attention on creative processes (Koch et al., 2017). From the analysis, it is also possible to conclude that most studies focus on technological innovation. Even though the need for additional research in non-technological innovation has been emphasized (Heredia et al., 2019).

Our review reveals that the articles that have used creativity as a dependent variable have studied various independent variables that favor it. Regarding organizational creativity, it is affected by the employee evaluation system (Park et al., 2015) and the characteristics of the CEO (Shin et

al., 2013). Furthermore, employees' creativity is affected by a style of transformational leadership, in a positive way (Mittal & Dhar, 2015) and in a negative way, according to (Bai et al., 2016). Finally, the proactive efforts of management (Bommer & Jalajas, 2002) and intercultural relations (Lu et al., 2017) affect creativity.

## 6. CONCLUSIONS AND AGENDA FOR FUTURE RESEARCH

A study of the field of creativity in SMEs has been presented. The analysis was carried out using indicators of activity, quality, and relationship, where it is possible to understand how research has been developed in this field.

The research related to creativity in the SME has had a significant increase. Only in the last four years has been published 50% of the total production. The analysis carried out includes publications from 46 countries of the world. However, most of the research is concentrated in the United States and Europe. Highlights Malaysia as a significant contributor to the study of creativity in SMEs, mainly in empirical studies. The Latin American countries have contributed some research, but none of these countries appears as productive or influential; the future expectations for these countries would have to expand research in all areas, including studies in SMEs.

Regarding the researchers, there are no authors who lead the field of research in productivity and influence. However, the author with the highest number of publications (4) in 2017 is Naser Valaei. Another relevant finding related to the researchers is that most (97%) have only published an article related to creativity.

As we had anticipated, in the SME context, the concept of creativity is used interchangeably to refer to creativity or innovation. The analysis does not include 50% of the articles, although they appear as search results for including the term creativity. Upon reviewing in detail, it was determined that they do not address creativity. They focus their research mainly on the study of innovation, but they also use the keyword creativity. Therefore, we ask the authors to use both concepts correctly.

From the perspective of the evolution of creativity studies in SMEs, our study shows how research is fragmenting into more specific subfields from a general analysis in the early stages of development. In the theoretical context, advances in creativity have been scarce in recent years, so there is still a real need for more theoretical contributions (Anderson et al., 2014). However, the componential model of (Amabile, 1988) is the most widely used theoretical framework on creativity and innovation in organizations. It remains a widely cited theory that attempts a complete description of both the process of individual creativity and the process of organizational innovation (Amabile & Pratt, 2016). In that direction, although new studies are emerging at a critical rate, it is necessary to point out "that only the surface has been scratched" (Blomberg et al., 2017).

The field of study of creativity in SMEs is in its early stages since most of the articles reviewed have been developed with a focus on entrepreneurship or entrepreneurial processes and few empirical studies that analyze the behavior of SMEs. Organizational creativity has been investigated, but many remain explored (Klijn & Tomic, 2010). Moreover, the SME is an area that needs to be deepened. The particular characteristics of the SME do not allow the successful models of large companies to have the same effect (Bos-Brouwers, 2010; Radziwon & Bogers, 2018). There has been a notable

lack of research that explores the processes inherent in creativity compared to a large number of studies that evaluate the multitude of factors called antecedents to innovation (Anderson et al., 2014). In the analysis, most studies focus on the direct relationship between creativity and innovation, ignoring the process called that other authors have also done (An et al., 2018).

### 6.1. AN AGENDA FOR FUTURE RESEARCH IN CREATIVITY IN SME

The analysis carried out has shown that it is necessary to increase research on creativity in SMEs in a wide variety of topics. Future research should try to identify and test a series of factors so that creativity can generate economic development (Belitski & Desai, 2016). The opportunity arises to analyze what or how additional factors can influence the transformation of creativity in the company (Przychodzen et al., 2016). Moreover, background related to family businesses has been neglected in the general debate. So that we can classify in future lines of research that we have organized into five themes:

**Management:** There are a call to study the problem of the convertibility of creativity into productivity (Sussan et al., 2017), empirical studies that analyze capacities to manage creativity (Arora, 2016), and organizational factors, value systems, or management practices (Elia et al., 2017). The incorporation of open innovation strategies (Balan, 2017), use of online platforms (Walsh et al., 2017), or enterprise resource planning (ERP) platforms to support creative processes (Okanga, 2017). With this, create a knowledge base that generates effectiveness in the processes of creativity in the SME.

**CEO – Entrepreneur:** There is a call to provide theoretical and empirical research proposals aimed at managers or entrepreneurs, which allows us to answer why particular SMEs progress to the innovation stage while others cease to exist (Sklaveniti, 2017). There is a call to incorporate other leadership behaviors, such as transactional leadership or empowering leadership (Bai et al., 2016) and experimental and longitudinal research designs to assess the influence of transformational leadership in the development of employee creativity (Mittal & Dhar, 2015; Valaei, Rezaei, & Emami, 2017).

**Creativity – Innovation – Entrepreneurship:** We find that creativity contributes to economic development directly and indirectly through entrepreneurship (Belitski & Desai, 2016), and the authors indicate that the value proposition of future research lies in the intersections of creativity, innovation, and entrepreneurship rather than analyze it individually (Dino, 2015). There are open questions related to methodologies, evaluations, and content of creativity, innovation, and entrepreneurial skills (Edwards-Schachter et al., 2015), both at the individual level (Jovanović et al., 2018) and the organizational level (Sokół & Figurska, 2017), in particular in terms of business training programs (Dino, 2015) or creativity seminars (Cullmann et al., 2015) in the SME. Most of the research in this area is within the framework of higher education institutions.

**Contexts:** As creativity is a relatively young concept, better measures may still be necessary, adjust proxies to measure creativity, or divide the concept into more detailed subcomponents (Faggian et al., 2017). As previously indicated, there are several instruments to measure creativity, but the authors invite to use other scales, such as personality tests and creativity exercises, or a mixture of these (Camacho-Miñano & del Campo, 2017). In general, research reports cross-sectional studies, so there is a call to develop longitudinal research that allows increasing knowledge about possible associations and causes among the investigated variables (Khedhaouria et al., 2015; Liu, 2018; Mittal & Dhar, 2015; Soltanian et al., 2016). Furthermore, test the dynamic relationships between creativity and innovation performance (An et al., 2018), incorporating more complex

dynamics to explain better creativity in organizations (Park et al., 2015). Finally, it includes a call to study different geographical contexts (Micheli et al., 2018), institutional settings (Zheng & Callaghan, 2018), demographic groups (Crammond et al., 2018), and various contexts economic or market (Bakhshi et al., 2015) to examine results, practices or performances of creative and innovative activities in SMEs.

**Creativity:** We find that the call to study creativity focuses on three axes—the first axis in aspects of the environment. Open innovation has been considered a key success factor for SMEs; in creativity, the study of creative territories as a source of ideas remains an area to explore (Dechamp & Szostak, 2016). Therefore more research is required to triangulate the creative benefits of close intercultural relationships (Lu et al., 2017) or functional diversity (Valaei et al., 2017). Since it has been suggested that the dynamism and hostility of the market influence the performance of SMEs, it is necessary to deepen how they explain creativity (Khedhaouria et al., 2015). Variables such as technological turbulence can be tested to explain better and comprehensive creativity and its relationship with performance results (Boso et al., 2017). Finally, future research should try to identify and test a range of possible external channels for creativity (Belitski & Desai, 2016).

The second axis is individual creativity, and researchers are expected to be encouraged to study personality traits and their subdimensions to deepen the characteristics of the participants for the development of theories (Mandal et al., 2017). Future research should study the relationship between employee commitment and behavior (Hakimian et al., 2016), motivation for achievement (Khedhaouria et al., 2015), types of learning (Valaei et al., 2017), analytical skills, willingness to learn, resistance to stress, experience, and skills (Sokół & Figurska, 2017). The effects of intrinsic motivations have been studied to a greater extent so that future studies could explore the effects of extrinsic motivations or pro-social motivations (Soltanian et al., 2016). Previous literature suggests a mediating function of concepts such as work commitment, work autonomy, job satisfaction, diversity, talent attraction, retention and learning, all of which require additional empirical confirmation (Alegre & Pasamar, 2018).

The third axis states that additional studies are needed on motivators and organizational facilitators of creativity in SMEs (Hardie, 2016), studies that consider the philosophy of ownership or management (Perkins et al., 2017), the organizational structure and culture (Valaei et al., 2017) and cultural control (Ismail, 2016). It is also requested to explore the multiple dimensions of social capital: cognitive, structural, and relational, as well as its effects on creativity (Liu, 2018).

In conclusion, our document postulates that the investigation of creativity in SMEs is incipient. Perhaps an essential drawback of research is the inability to address all aspects of creativity.

Our study has identified the need to answer the following research questions for each topic analyzed:

- How do management skills facilitate creativity to be more effective in SMEs?
- Does the leadership of the directors exert a relevant influence on the creative performance of the SME?
- Do creativity-innovation-entrepreneurship relationships contribute to economic development?
- Are there behavioral differences in the relationship between creativity and innovation according to the geographical or sectoral context analyzed?
- What are the motivators and facilitators that promote creativity in SMEs?
- How does the environment influence the creativity of the SME?
- How do digitization technology and its use influence creativity in SMEs?
- What environmental conditions can improve or limit creativity in SMEs?

- How to systematically manage creativity in sectors?
- How do individual/group / internal organizational characteristics influence creativity management in organizations, and how do such relationships affect the performance of SMEs?
- Finally, what are the key factors to effectively manage creativity in SMEs?

In summary, the described and related questions should explore: i) creativity management, ii) creative processes, iii) creative products, iv) creative people, v) creative teams, vi) creative contexts, vii) how all these elements interact with each other, concerning SMEs.

The answer to these research questions will offer a useful framework to resolve existing gaps and guide future research, which will improve the academic understanding of creativity in the SME.

The findings of this study have significant implications. First, academics will have the opportunity to dedicate their time to newer topics with less-developed research, which will support the advances and growth of this topic. Second, study questions are provided to the authors for future use. Second, business decision-makers will better understand how creativity affects small and medium-sized enterprises (SMEs) in performance and innovation. If they know what things enhance creativity, they can focus on those things and implement them more effectively, helping them gain a competitive advantage.

This study has the limitation that the Web of Science uses as the sole source of information. Although it is among the largest and most important databases, it may not contain all the publications in creativity in the SME. Despite these limitations, this document has interesting results and allows to expand the previous research on creativity and expand it in SMEs. Future bibliometric investigations could consider search parameters different from those used and other databases to perform the analysis, such as Scopus or Google academic.

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#### NON CONFLICT OF INTEREST STATEMENT

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#### AUTHOR'S CONTRIBUTION

Authors 1 and 2 contributed to the project design and administration; theoretical foundation; research, and analysis of the literature; writing and proofreading the paper, and tables and figures elaboration.