

# Iberoamerican Journal of Entrepreneurship and Small Business

## PROPOSING A PROJECT MANAGEMENT MODEL FOR SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

1 Rodrigo Menezes de Souza 2 Taina Alves dos Santos 3 Emerson Antonio Maccari 4 Marcos Rogerio Mazieri

#### Abstract

**Objective**: to propose a project management model suitable for the context of small and mediumsized enterprises (SME).

**Methodology/approach**: through a bibliometric study associated with a lexical analysis with Descending Hierarchical Classification (DHC), this analysis allowed for statistical inferences to be made regarding the texts, to find patterns between words and phrases that clarified the concepts involved.

**Main results**: the research contributes to the understanding of project management in SME context, expanding the focuses on innovation, customers, employees, flexibility, and management performed by non-specialists. The conclusion pointed out the need for simplification and low cost for the implementation of these models in such organizations.

**Theoretical/Methodological Contributions**: this study contributed to the evolution of the literature and the pre-existing model by Kozlowski and Matejun (2016), offering the owners of SMEs the clarity in the implementation of new projects.

**Relevance/Originality**: the discovery of new characteristics, processes and benefits is relevant, enabling SMEs to anticipate problems; and the development of skills in project management and business management.

**Social/management contributions**: the application of a project management model, for SMEs, flexible to various contexts and motivations, adding value to these organizations, in terms of planning, execution and clarity of results.

**Keywords**: Project management; Small and medium-sized enterprises; Bibliometric; Lexical Analysis; Descending Hierarchical Classification.

Received on: 19/11/2019 / Approved on: 12/02/2020 Responsible editor: Profa. Dra. Vânia Maria Nassif Translator: Elaine Herrero Lopes Evaluation process: Double Blind Review Doi: <u>https://doi.org/10.14211/regepe.v9i3.1475</u>

<sup>&</sup>lt;sup>1</sup>Universidade Nove de Julho - UNINOVE, São Paulo, (Brasil). E-mail: <u>rodrigo@drinova.com</u> Orcid id: <u>https://orcid.org/0000-0002-6886-0539</u>

<sup>&</sup>lt;sup>2</sup>Universidade Nove de Julho - UNINOVE, São Paulo, (Brasil). E-mail: <u>taina.alves@uni9.edu.br</u> Orcid id: <u>https://orcid.org/0000-0002-5182-4312</u>

<sup>&</sup>lt;sup>3</sup>Universidade Nove de Julho - UNINOVE, São Paulo, (Brasil). E-mail: <u>emerson.maccari@gmail.com</u> Orcid id: <u>https://orcid.org/0000-0001-7085-224X</u>

<sup>&</sup>lt;sup>4</sup>Universidade Nove de Julho - UNINOVE, São Paulo, (Brasil). <u>marcosmazzzieri@gmail.com</u> Orcid id: <u>https://orcid.org/0000-0003-1338-3912</u>



## **1 INTRODUCTION**

In history, small and medium-sized enterprises (SME) preceded the emergence of large corporations, moving the economy of countries. For this reason, studies on them were initiated precisely in this area of knowledge (Leone, 1991). The impact on job creation and the recognition of the role of SME in the emergence of new products for the global economy, since the 1990s, have attracted attention and competitiveness to these organizations (Subrahmanya, 2004; Turner, Ledwith, & Kelly, 2010). In Brazil, they account for 44% of formal jobs created and at least 27% of gross domestic product (GDP) (Sebrae, 2014).

SME are organizations that are more susceptible to economic upheavals, as they operate in markets of limited size, with intense competition and in constant financial instability (Almeida, Costa, Braga Junior, & Porto, 2018; Köksal & Orman, 2014; Serrasqueiro & Caetano, 2015). These factors can cause restrictions, from various perspectives, such as to investment capacity (Cohen & Levinthal, 2009; Dobbs & Hamilton, 2007). This explains the numerous concerns about the return on investments made and the cash flow (Adair & Adaskou, 2015; Kozlowski & Matejun, 2016; Subrahmanya, 2004) in these organizations.

The processes of digital transformation and globalization have impacted the economy of SME, especially in developing countries, imposing on them the need to modernize their processes and use new digital technologies, thus changing their perspective of creating value in the search for competitiveness (Subrahmanya, 2004; Vial, 2019).

In an industrialized economy, SME plays a fundamental role, as they fill gaps left by large ones. So any new initiative, which requires investment decision, must-have, clearly and rationally, the understanding of all the variables capable of affecting the growth of the company. These include economic benefits (Jenkins, 2006, 2009), quality of management, consumers, policies, internal and external influences, learning processes, decision-making (Dobbs & Hamilton, 2007) and digital transformation (Vial, 2019).

Entrepreneurs in SME need to develop strategic skills so that they can evaluate, plan and execute actions that keep the company growing (Tehseen, Ahmed, Qureshi, Uddin, & Ramayah, 2019). Thus, project management, aimed at these organizations, proposes to clarify, in a rationalized way, the leaders' understanding of the benefits to be achieved by new initiatives (Kozlowski & Matejun, 2016).

However, they are still incipient in the studies that explore the skills of SME in managing projects, nor those that connect their functional activities to the various management areas (Kozlowski & Matejun, 2016) or that relate it to profitability (Pollack & Adler, 2016).

There are two clear perspectives regarding the use of project management for SME leaders: (1) their association with increased revenue; and (2) the decrease in the percentage of

345



leaders who associate it with decreased profitability (Pollack & Adler, 2016). This fact corroborates the determining roles of project management (PMs), which are: to meet the motivations and promote the engagement of the owners of these organizations.

One of the most recurring needs of SME is to obtain financial resources for investment (Serrasqueiro & Caetano, 2015); and, even if they can be captured, not all companies know how to use them properly, especially if they do not have management techniques compatible with their size. As a result, they end up incurring the risk of needing more investments, thus generating a cycle of unresolved financial constraints.

This research, then, proposes a project management model appropriate to the context of SME, with the primary objective of assisting companies in understanding the characteristics, processes and benefits to be achieved.

#### **2 THEORETICAL FRAMEWORK**

The theoretical framework of this study was based on the contextualization of the general and management characteristics of SMEs, in addition to the project management applied in these organizations.

#### 2.1 General characteristics of SEM

Based on a review of the literature on studies that explain the growth of SME, to help understand the various contexts in which these organizations are inserted and develop, Dobbs and Hamilton (2007) propose a view based on the following perspectives: stochastic, descriptive, evolutionary, resource-based vision (RBV), learning and deterministic, whose characteristics are broken down below (and summarized in Figure 1).

The stochastic explains a set of variables, according to the diversity of SME (Kozlowski & Matejun, 2016), responsible for this growth, but which has no relation to size, at the beginning of the trajectory, and throughout the history of these companies (Dobbs & Hamilton, 2007).

From the descriptive perspective, in which this research is framed, it is verified how SME rearrange their internal processes, to adapt to crises, to keep growing (Dobbs & Hamilton, 2007) and to have competitiveness (Subrahmanya, 2004). Success will be the management of financial resources, personnel and systems, based on the owner's goals, his operational ability, his ability to manage current demands, and future strategies (Lewis, Virginia, & Churchill, 1983).

Dealing with internal and external influences, the evolutionary perspective emphasizes that SME operates in small markets, or with specific niche products, and it is not conceivable, in geographical and economic terms, to operate in broad markets (Leone, 1991).

346



In the resource-based vision (RBV), it is indicated that, in order to have profitability, competitive advantage and continuous growth, SME must rethink their business strategies and resources, making the necessary adjustments.

Learning, in turn, allows SME owners, who are close to the operation, to make decisions representative of their personal values and beliefs, aligned directly with the growth of the organization (Dobbs & Hamilton, 2007; Bos-Brouwers, 2010; Jamali, Zanhour, & Keshishian, 2009). Finally, the deterministic perspective involves statistical studies that, in a generalist way, highlight the causes for the growth of SME.

Throughout their growth cycle, SMEs go through a process, which begins to attract customers, and ends in demonstrating their ability to stay active in the market. To this end, the viability of financial resources plays a crucial role until these companies reach their goals, and the owners decide to expand or maintain the size of the business (Lewis et al., 1983).

Along this path, it is noted that the implementation of new strategies is continuously influenced by the personal aspirations and experiences of the owners (Dobbs & Hamilton, 2007). Thus, any new initiatives of SMEs must be carried out, in a rationalized way, by their owners, so that they clearly understand what will be developed (Jenkins, 2006, 2009; Simpson, Taylor, & Barker, 2004).

Perspective	Premises	Object of the study	Growth variables
Stochastic	The growth of the company depends on a set of variables, not related to time.	Causes of growth.	Quality of management; consumers; organizational policies; other forces.
Descriptive	How small businesses organize themselves internally to maintain growth.	Adaptation to maintain growth.	Internal changes and crises, which prevent the continuity of growth; rearrangement of internal processes.
Evolutionary	The growth of the organization is the result of internal and external influences.	Causes of growth.	Internal and external influences.
RBV	The growth of the small business depends on how its resources are managed to maintain operation over time.	Adaptation to maintain growth.	Business strategies; resources; profitability.
Learning	The growth of the organization is influenced by the learning capacity and decision-making of its managers.	Adaptation to maintain growth.	Crises in the learning process; decision-making.
Deterministic	Quantitative view of environmentally related factors, which explain the growth of the small business.	Causes of growth.	Internal and external variables; statistical validation.

**Figure 1**. Perspectives for study on small business growth Source: Adapted from Dobbs and Hamilton (2007).



#### 2.1.1 SEM Management characteristics

In SME, innovations are more constant, as they do not have the scale to compete within a market pricing strategy (Dobbs & Hamilton, 2007). Thus, product development needs to use cheap and easy-to-understand solutions by those involved (Schumacher, 1983), as they are tested in direct contact with the operation, requiring the need for management techniques to properly take care of the resources involved (Kozlowski & Matejun, 2016).

Perspectives regarding the management characteristics of the owners of these companies are important, because of their close relationship with the operation and employees, which influences processes, strategies, decision-making and results generation (Dobbs & Hamilton, 2007; Jamali et al., 2009). On the other hand, motivations and leadership, based on personal decisions, sometimes make us not invest in the growth of the company, when they realize that the size and expected values (Dobbs & Hamilton, 2007; Spence, 1999). On the other hand, this same motivation makes leaders always close to employees, influencing processes and strategies (Dobbs & Hamilton, 2007). This facilitates decision-making and the generation of results, which define many of the behavioural characteristics of organizations (Jamali et al., 2009).

Entrepreneurs' level of education must be considered, since the higher the education level, the greater the relationship they will have in the search for business efficiency (Dobbs & Hamilton, 2007).

Additionally, experience in business management represents gains in terms of operational development and allows advances in the company's business model (Dobbs & Hamilton, 2007).

Financial resources are crucial factors for SME (Subrahmanya, 2004), raising constant concerns regarding expenses and profit (Kozlowski & Matejun, 2016), which limits the ability to invest in new solutions (Dobbs & Hamilton, 2007). This often requires these organizations to carry out cooperation processes and new alliances (Almeida et al., 2018; Breu, Guggenbichler, & Wollmann, 2008; Cohen & Levinthal, 2009) and more flexible strategies (Dobbs & Hamilton, 2007) in order to respond to market pressures.





Proposing a Project Management Model for Small and Medium-Sized Enterprises (SMEs)

## 2.2 Project management in small companies

Academic studies on project management have attracted special attention, especially when the intention is to align it with strategic business directions, which lead, in turn, to the development of innovative solutions (Kwak & Anbari, 2009), their adaptation to the complexities inherent to new business environments and corporate relations (Svejvig & Andersen, 2015). In this sense, the most recent project management model, found in the literature, is published by Kozlowski and Matejun (2016), who referred to this study (Figure 2).

The implementation of projects by SME has peculiarities, which call for the adequacy of management to the context (Kozlowski & Matejun, 2016), requiring simplified versions, capable of printing greater agility, having lower cost and maintaining the focus more on people than on bureaucratic processes (Souza, Souza, & Souza Júnior, 2014; Turner et al., 2012).

In SME, the drivers and objectives of project management are related to the search for increased revenue or market, in order to meet the needs of their owners (Kozlowski & Matejun, 2016). The projects are then directed to a vision of expectations, actions and learning, besides encompassing the traditional concepts of planning, control and validation (Packendorff, 1995).

In this scenario, the entrepreneur, who plays the role of the project manager, has a fundamental role in the implementation of simple techniques for data collection, and in decision-making (Jucá Júnior, Conforto, & Amaral, 2010), and the results will reflect the degree of this participation in the processes (Martens, Belfort, Carneiro, & Martens, 2014).

In SME, human resources are restricted and, therefore, the execution of projects is subject to limited cooperation, the non-use of advanced software; informal communication (Kozlowski & Matejun, 2016); and the management by non-specialist professionals, who, on the other hand, have favourable communication skills (Martens et al., 2014), ensuring the support of the founders of the business (Turner et al., 2010).



Discourse and Social Entrepreneurship: What Can the Practice of Students Engaged in Social Projects Reveal?

Project Management in Small Businesses				
Project Phases	Management Characteristics			
Planning	1. Motivations and Objectives	Market and revenue increase.		
	2. Project Manager	Owner of the company, which has full control over the implementation phases.		
Execution and Control	3. Human Resources Management	It depends entirely on the financial resources allocated to the project; limited cooperation, valuing independent action.		
	4. Management Tools and Software	Non-use of complex software; use of limited tools.		
	5. Communication	Close and informal communication; low level of formalization; and mobile phone use.		
Closure	6. Results Evaluation	The high degree of engagement of the owner with the objectives and results of the project; the low degree of quantitative evaluation of project performance; assessment of the scope and limited learning.		

**Figure 2.** Pre-existing model for project management in small businesses Source: Adapted from Kozlowski and Matejun (2016).

When there is adequate project management, actions can be implemented flexibly and rationally, meeting the needs of SME, with the development of new products, the proposal of solutions and the pursuit of competitive advantage (Kozlowski & Matejun, 2016; Turner et al., 2012). The focus, then, is on results, not on the impacts such management can have on a business (Pollack & Adler, 2016).

Although management studies tend to focus on megaprojects, resulting from more investments and higher results (Pollack & Adler, 2016), one cannot ignore the advantages of SME projects, which bring quality improvement, higher efficiency, rapid implementation of new demands, development of new products, financial return (Kozlowski & Matejun, 2016), in addition to aiding in the organization's management processes (Martens et al. , 2014; Oliveira & Figueiredo, 2016; Sella & Grzybovski, 2011; Silva & Matamoros, 2015).

# 3 METHODOLOGY

Intending to characterize the concepts of project management in SME, this study presented an exploratory approach, with a theoretical-descriptive character, through a bibliometric study of cocitation, associated with lexical analysis and DHC.



Bibliometrics allows the researcher to consume a high amount of materials, published in the scientific field, and, from these collections, to develop a systematized and summarized view, which helps the understanding of the works that make up the field of research (Quevedo-Silva, Santos, Brandão, & Vils, 2016).

Already, from the perspective of cocitation, it is possible to identify authors and works cited in pairs, within a group of articles that make up the field of studies, as well as the interests and intellectual patterns established by the relations between them (Small, 1973), classifying, with this, those with greater relevance (Zupic & Čater, 2015).

In this study, for data collection, the first step was to use the article filter by the topic "Project management and small-medium business," in the Web of Science, a base chosen for its credibility as a repository of articles, with a high impact factor in the scientific community (Mugnaini & Strehl, 2008), and because it was used in previous research, for the same purpose (Bernardo, Ramos, & Vils, 2018).

After collecting the first results, there were two refinements: in the "business and management" areas, given the interest of the research; and only by articles. The articles with ".txt" extension, without formatting, which were inserted in the BibExcel software, were extracted for the continuity of the cocitation bibliometric.

In BibExcel, the generated ".txt" files were read, and the steps necessary for their transformation were applied to the ".doc" and ".cit" formats, which, in turn, proceeded to the co-occurrence analysis, through the selection, by the frequency of citation >=2, based on Lotka's Law, 211 articles (Figure 3).

According to the principles of Lotka's Law, only the files with the highest frequency of citation will be answered by the field of study (Quevedo-Silva et al., 2016). Due to this new cut, 70 articles resulted from cocitation, which was downloaded to extract abstracts, results and conclusions. It is noteworthy, however, that of these, 25 were discarded due to access to the text not having been located.





Discourse and Social Entrepreneurship: What Can the Practice of Students Engaged in Social Projects Reveal?



**Figure 3.** Lotka's Law Cut for Project Management in SME Source: Elaborated by the authors (2020).

The abstracts, analyses and results of the 45 identified articles were extracted and submitted to DHC in the software Alcaceste - Iramuteq (Camargo & Justo, 2013). We chose to use these fragments, because they represent the parts of the texts in which the authors express their understanding of the theme, without necessarily making use of citations. This analysis allowed the understanding of specific words, which were interrelated in the publications, as well as the statistics of what the authors wanted to express in their research (Camargo & Justo, 2013).

Thus, classes of text segments were generated and read in order to find the concepts necessary for the elaboration of the model objectified by this research. It is noteworthy that "text segments" are excerpts that help in understanding the vocabulary resulting from DHC (Camargo & Justo, 2013); and "textual classes," groupings of text segments, made by frequency of words and by the similarity of words. When examining the text segments resulting from the DHC, not many articles were identified, which focused on project management for SME; thus, only two works were selected to continue the research.

During the process of understanding the text segments resulting from DHC, only two articles aimed at project management for SME were identified and selected, which allowed the continuity of the research, but it is not possible to understand and detail the textual classes.





**Figure 4**. Bibliometric and lexical study for project management on the Web of Science. Source: Elaborated by the authors (2020).

A new search was then carried out in the Google Scholar database (Figure 4), by using the filter "Project Management in SMEs," and excluding patents and citations. In this survey, we chose the expression in Portuguese, aiming at achieving work with the specificity of projects aimed at SMEs in the Brazilian context. Among the results presented, through the reading of the titles, the abstract, the results and conclusions of the articles were extracted (Figure 5).



The ANEGEPE Magazine www.regepe.org.br

Discourse and Social Entrepreneurship: What Can the Practice of Students Engaged in Social Projects Reveal?



**Figure 5**. Bibliometric and lexical study for project management at Google Scholar Source: Elaborated by the authors (2020).

The texts of the nine articles extracted from Google Scholar (Table 1) were submitted to a new lexical analysis, together with the texts of the two articles resulting from research in the Web of Science. Due to the number of articles located in these databases, there was an exploratory characterization, to understand the current state of knowledge about project management in SMEs. Then, from the reading of the text segments of the resulting classes, it was possible to propose a model.



#### Table 1

Articles resulting from the analyses

Author	Article ( <i>Journal</i> )
Turner <i>et al</i> . (2010)	Project management in small to medium-sized enterprises (International Journal of Project Management).
Turner <i>et al</i> . (2012)	Project management in small to medium-sized enterprises: Tailoring the practices to the size of company (Management Decision).
Carvalho and Mello (2012)	Aplicação do método ágil <i>scrum</i> no desenvolvimento de produtos de software em uma pequena empresa de base tecnológica (Gestão & Produção).
Castro and Moraes (2015)	Uso de modelos de maturidade em gestão de projetos em uma pequena empresa de TI (Anais do IV SINGEP).
Jucá Júnior <i>et al</i> . (2010)	Maturidade em gestão de projetos em pequenas empresas desenvolvedoras de software do Polo de Alta Tecnologia de São Carlos (Gestão & Produção).
Martens <i>et al.</i> (2014)	Gerenciamento de projetos em micro e pequenas empresas (Revista Pensamento Contemporâneo Em Administração).
Oliveira and Figueiredo (2016)	Gestão de projetos em pequenas e médias empresas: Pesquisa ação em uma empresa da indústria da moda. (Workshop de Gestão, Tecnologia Industrial e Modelagem Computacional).
Sella and Grzybovski (2011)	Modelo PMBOK/PMI para gestão de projetos nas micro e pequena empresas: um estudo de caso (Revista Economia & Gestão).
Silva and Matamoros (2015)	Gestão de projetos como ferramenta estratégica para pequenas empresas. (Revista de Ciências Gerenciais).
Souza <i>et al.</i> (2014)	Fatores críticos para gerenciar projetos em empresas de pequeno porte (Anais do VI Simprod).
(Not relevant article – lexical analysis and DHC)	A importância da Gestão do Escopo para uma boa gestão do Projeto em Micro e Pequenas Empresas.

Source: Elaborated by the authors (2020).



#### **4 RESULTS AND ANALYSIS**

For the construction of this research, two searches of articles aimed at project management for SME were necessary: the first, in English, resulting in two articles; and the second, in Portuguese, incorporating nine more papers, totalling 11 articles, which comprised the basis of the proposed model.

This finding raises the debate as to whether the theme "project management," in the context of SME, has attracted more considerable attention in scientific communities in Lusophone countries, especially Brazil. It is also discussed, from this, the possibility of developing countries to have a greater interest in the study of small organizations than developed countries, which already have large corporations as the basis of their economy.

The results of lexical analysis and CHD, referring to texts extracted from the 11 selected articles, generated 5,887 occurrences and 163 text segments, categorized into seven textual classes (Figure 6).



Figure 6. Lexical analysis result

Source: Elaborated by the authors (2020).



To understand each of the classes, the extraction and subsequent reading of their respective segments of texts was performed, with the absolute score rate and maximum number of ST of 50.

Class 1, which dealt with agile methods (more flexible and adaptive) of project management and its importance for SME, represented 15.2% of the textual corpus. Among the outstanding benefits are: improved communication and collaboration among team members; reducing the risk; and increasing the efficiency of the project execution schedule (Carvalho & Mello, 2012). In this class, the flexibility of the project was identified concerning the context of the company, the schedule control processes, proper execution time planning; communication management among all those involved; and risk management, related to aspects that can influence project results.

Class 2, representing 17.2% of the textual corpus, addressed the characteristics of simplification and project management by non-specialist people in SMEs. It was verified the extensive use of project management in these organizations, and the entrepreneur acts as the project manager, taking care of the implementation of simple data collection techniques and decision making (Turner et al., 2010, 2012; Jucá Júnior et al., 2010). In this class, the premise of using the simplified method was pointed out, with low implementation cost, in addition to debureaucratized processes, for the execution of projects within the company, resulting in greater ease of management by non-specialists. As for the processes, it was noted the need to take control of the essential requests of the project (or requirements), aligned with the available budget. As a benefit, non-expert people develop the skills needed to manage projects.

Classes 3 and 6 were interrelated, together representing 31.10% of the textual corpus. They highlighted the importance of SME of project management tools and techniques associated with cost management, communication and budgets. The enormous difficulties observed regarding project management are in the tools and techniques, as well as in the necessary skills of the project manager for his conduct (Souza et al., 2014). Still, it is perceived that project management is done, and companies continue to grow (Silva & Matamoros, 2015) since the tools and techniques used to allow them to anticipate problems (Souza et al., 2014). These classes indicated that the project should focus more on people than on tools, which requires proper management of communication between those involved, and available budget. The combination of objective and processes develops project management skills.



Driven by price competition, and the imposition of quality by SME consumers, significant changes in management processes occurred in the 20th century (Sella & Grzybovski, 2011). Because of this, when there is a gap in the project management of an SME, a barrier is automatically created, which prevents it from carrying out and delivering more complex projects. This limits its capacity (Jucá Júnior et al., 2010), but keeps these companies active (Souza et al., 2014).

Success factors for project management in SME are revealed to be cost and budget management (Souza, Souza & Souza Júnior, 2014), communication and risks (Carvalho & Mello, 2012; Martens et al., 2014), in addition to project management training for small business owners (Castro & Moraes, 2015).

Classes 4 and 5 were also interrelated, representing 25.9% of the textual corpus. They denote the importance of project management for business management learning processes (Martens et al., 2014; Oliveira & Figueiredo, 2016; Sella & Grzybovski, 2011; Silva & Matamoros, 2015). In this sense, it was found that SME has greater alignment with project management processes, when the structure is a matrix, especially in technology companies (Martens et al., 2014).

Finally, Class 7, which represents 10.6% of the textual corpus, indicates that the aspects of maturity in project management do not seem to constitute a critical factor, given the more informal and flexible practices of SME.

The results of each class were used for the elaboration of the Project Management Proposal in SME (Figure 7), which, in turn, indicates an advance to the model suggested by Kozlowski and Matejun (2016). About the characteristics, the model highlighted how projects in SME need to be debureaucratized and flexible in order to serve all the people involved. In terms of processes, it was possible to discover the importance of managing project requirements, as well as communications and risks to be addressed throughout its development. Finally, as benefits, it was highlighted how the owners could, in addition to achieving financial results with the projects, develop management skills, able to assist them in other areas of business knowledge.





**Figure 7**. Proposed model for Project Management in SMEs, from lexical analysis Source: Elaborated by the authors (2020).

## **5 CONCLUSION**

To understand the current state of knowledge and guide a possible instantiation of project management methods, appropriate to SME, a model was proposed, based on this study, based on the survey, in databases (Web of Science and Google Scholar), of 11 existing publications on the subject. The abstracts, analyses and results extracted from these articles were submitted to DHC, by the software Alcaceste -Iramuteq (Camargo & Justo, 2013), resulting in the identification, through an exploratory and qualitative approach, of the relationships established between the concepts and the articles studied.

This study showed how bibliometric, linked to lexical analysis, with DHC, can help in the construction of a conceptual model of project management. For this reason, he offers a theoretical contribution to the literature on the subject, evolving the model of Kozlowski and Matejun (2016); and a practical contribution, since this model can be contextualized in SMEs, encouraging the implementation of new initiatives, in a standardized and transparent way, by the owner partners.



From the results achieved, it was possible to add to the pre-existing model of projects for SMEs, proposed by Kozlowski and Matejun (2016): (1) the motivations and objectives of the project focused on innovation, focusing on the client; (2) the characteristics of debureaucratization, flexibility, focus on people and management by non-specialist people; (3) the premise that models like this need to be simplified, with low implementation cost, something that had not been previously foreseen; (4) the management of the schedule, requirements and risks involved in the project, in the management processes; and (5) the ability of SME to anticipate problems, in addition to the development of skills in project management and business management.

The limitation of the research was due to the choice of the theoretical survey, made through the bibliometric of cocitation, which presents as results articles widely disseminated in the study of the theme, but which excludes the most recent because they have not yet received a considerable volume of citations.

As a suggestion, new qualitative studies, with companies that allow the implementation of this model, can detail the characteristics, processes and benefits involved. Moreover, considering that the proposed model came from the literature, it is necessary to develop empirical studies to verify the feasibility of its use in the field. This can be a way of defending the coherence of the model with the reality of SME, especially when compared to the adoption of a similar model, in the context of large companies. Besides, new investigations can be elaborated in order to add greater clarity and relevance to the literature on project management in SME, in developing countries, such as Brazil.

# REFERENCES

Adair, P., & Adaskou, M. (2015). Trade-off theory vs. Pecking order theory and the determinants of corporate leverage: Evidence from a panel data analysis upon french SMEs (2002-2010). *Cogent Economics and Finance*, *3*(1), 1-12.

Almeida, J. M. S. de, Costa, P. R. da, Braga Junior, S. S., & Porto, G. S. (2018). Capacidade Relacional e Desenvolvimento de Novos Produtos em Pequenas Empresas de Base Tecnológica. *Regepe – Revista de Empreendedorismo e Gestão de Pequenas Empresas*, 7(3), 141-166. Bernardo, E. G., Ramos, H. R., & Vils, L. (2018). Panorama da Produção Científica em Empreendedorismo Rural: Um Estudo Bibliométrico. *Regepe – Revista de Empreendedorismo e Gestão de Pequenas Empresas*, *8*(1), 102-125.

Bos-Brouwers, H. E. J. (2010). Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice. *Business Strategy and the Environment*, *19*(7), 417-435.

Breu, F., Guggenbichler, S., & Wollmann, J. (2008). Strategic Networks. *Vasa*, *21*(3), 203-215.

Camargo, B. V., & Justo, A. M. (2013). Iramuteq: um software gratuito para análise de dados textuais. *Temas em Psicologia*, *21*(2), 513-518.

Carvalho, B. D., & Mello, C. H. P. (2012). Aplicação do método ágil scrum no desenvolvimento de produtos de software em uma pequena empresa de base tecnológica. *Gestão & Produção*, *19*(3), 557-573.

Castro, L. M., & Moraes, R. D. O. (2015). Uso de modelos de maturidade em gestão de projetos em uma pequena empresa de TI. *Anais do Simpósio Internacional de Gestão de Projetos, Inovação e Sustentabilidade – SINGEP*, São Paulo, SP, Brasil, 4.

Cohen, W. M., & Levinthal, D. A. (2009). Absorptive Capacity: A New Perspective on and Innovation Learning. *Administrative Science Quarterly 35*(1), 128-152.

Dobbs, M., & Hamilton, R. T. (2007). Small business growth: recent evidence and new directions. *International Journal of Entrepreneurial Behavior & Research*, *13*(5), 296-322.

Jamali, D., Zanhour, M., & Keshishian, T. (2009). Peculiar strengths and relational attributes of SMEs in the context of CSR. *Journal of Business Ethics*, *87*(3), 355-377.

Jenkins, H. (2006). Small business champions for corporate social responsibility. *Journal of Business Ethics*, *67*(3), 241-256.



Jenkins, H. (2009). A "business opportunity" model of corporate social responsibility for small – and medium – sized enterprises. *Business Ethics-a European Review*, *18*(1), 21-36.

Jucá Júnior, A. S., Conforto, E. C., & Amaral, D. C. (2010). Maturidade em gestão de projetos em pequenas empresas desenvolvedoras de software do Polo de Alta Tecnologia de São Carlos. *Gestão & Produção*, *17*(1), 181-194.

Köksal, B., & Orman, C. (2014). Determinants of capital structure: evidence from a major developing economy. *Small Business Economics*, *44*(2), 255-282.

Kozlowski, R., & Matejun, M. (2016). Characteristic features of project management in small and medium-sized enterprises. *E+M Ekonomie a Management*, *19*(1), 33-48.

Kwak, Y. H., & Anbari, F. T. (2009). Analyzing project management research: Perspectives from top management journals. *International Journal of Project Management*, *27*(5), 435-446.

Leone, N. M. D. C. P. (1991). A dimensão física das pequenas e médias empresas (PME'S): À procura de um critério homogeneizador. *Revista de Administração de Empresas*, *31*(2), 53-59.

Lewis, Virginia L., & Churchill, N. C. (1983). The Five Stages of Small Business Growth. *Harvard Business Review*, *61*(3), 30-50.

Martens, C. D. P., Belfort, A. C., Carneiro, K. D. A., & Martens, M. L. (2014). Gerenciamento de projetos em micro e pequenas empresas. *Revista Pensamento Contemporâneo em Administração*, *8*(3), 151-171.

Mugnaini, R., & Strehl, L. (2008). Recuperação e impacto da produção científica na era Google: uma análise comparativa entre o Google Acadêmico e a Web of Science. *Encontros Bibli: Revista Eletrônica de Biblioteconomia e Ciência Da Informação*, *13*, 92-105.

Oliveira, N. M., & Figueiredo, P. (2016). Gestão de projetos em pequenas e médias



empresas: Pesquisa ação em uma empresa da indústria da moda. In Workshop de Gestão, Tecnologia Industrial e Modelagem Computacional, 2, 78-79.

Packendorff, J. (1995). Inquiring into the temporary organization: New directions for project management research. *Scandinavian Journal of Management*, *11*(4), 319-333.

Pollack, J., & Adler, D. (2016). Skills that improve profitability: The relationship between project management, IT skills, and small to medium enterprise profitability. *International Journal of Project Management*, *34*(5), 831-838.

Quevedo-Silva, F., Santos, E. B., Brandão, M. M., & Vils, L. (2016). Estudo Bibliométrico: Orientações sobre sua Aplicação. *Revista Brasileira de Marketing*, *15*(2), 246-262.

Schumacher, E. F. (1983). O negócio é ser pequeno: um estudo de economia que leva em conta as pessoas (Vol. 1). Rio de Janeiro: Zahar.

Sebrae. (2014). Participação das Micro e Pequenas Empresas na Economia Brasileira. Brasília: Sebrae.

Sella, V. T., & Grzybovski, D. (2011). Modelo PMBOK/PMI para gestão de projetos nas micro e pequena empresas: um estudo de caso. *Revista Economia & Gestão*, *11*(27), 36-66.

Serrasqueiro, Z., & Caetano, A. (2015). Trade-Off Theory versus Pecking Order Theory: capital structure decisions in a peripheral region of Portugal. *Journal of Business Economics and Management*, *16*(2), 445-466.

Silva, S. A. D. A. M., & Matamoros, E. P. (2015). Gestão de projetos como ferramenta estratégica para pequenas empresas. *Revista de Ciências Gerenciais*, *14*(20), 27-47.

Simpson, M., Taylor, N., & Barker, K. (2004). Environmental responsibility in SMEs: Does it deliver competitive advantage? *Business Strategy and the Environment*, *13*(3), 156-171.

Small, H. (1973). Co-citations in the scientific literature: a new measure of the





relationship beetween two documents. Journal of the American Society for Information Science, 24(4), 265-269.

Souza, A. M. D., Souza, M. D. V., & Souza Júnior, A. A. D. (2014). Fatores críticos para gerenciar projetos em empresas de pequeno porte. Anais do Simpósio de Engenharia de Produção de Sergipe – Simprod, São Cristóvão, Sergipe, Brasil, 6.

Spence, L. (1999). Does size matter? The state of the art in small business ethics. Business Ethics: A European Review, 8(3), 163-174.

Subrahmanya, M. B. (2004). Small industry and globalisation: Implications, performance and prospects. Economic and Political Weekly, 39(18), 1826-1834.

Svejvig, P., & Andersen, P. (2015). Rethinking project management: A structured literature review with a critical look at the brave new world. International Journal of Project Management, 33(2), 278-290.

Tehseen, S., Ahmed, F. U., Qureshi, Z. H., Uddin, M. J., & Ramayah, T. (2019). Entrepreneurial competencies and SMEs' growth: the mediating role of network competence. Asia-Pacific Journal of Business Administration, 11(1), 2-29.

Turner, R., Ledwith, A., & Kelly, J. (2010). Project management in small to mediumsized enterprises. International Journal of Project Management, 28(8), 744-755.

Turner, R., Ledwith, A., & Kelly, J. (2012). Project management in small to mediumsized enterprises: Tailoring the practices to the size of company. Management Decision, 50(5), 942-957.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. Journal of Strategic Information Systems, 28(2), 118-144.

Zupic, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. Organizational Research Methods, 18(3), 429-472.