



## **Innovation and knowledge management in micro and small businesses: challenges and opportunities**

Innovation and knowledge management in micro and small enterprises: challenges and opportunities

**Antonio da Conceição Meneses Junior**

Ages University Center – UNIAGES  
Simon Dias/SE

<http://lattes.cnpq.br/5096214632430094>

<https://orcid.org/0009-0008-8138-7361>

[junior\\_sergipe@hotmail.com](mailto:junior_sergipe@hotmail.com)

**Edilania Lima Andrade Pereira**

Sergipe School of Business and Administration - FANESE Coronel João Sá/  
BA

[edilania.mixbella@gmail.com](mailto:edilania.mixbella@gmail.com)

### **SUMMARY**

This article analyzes how innovation and knowledge management can contribute to the competitiveness and sustainability of micro and small enterprises (MSEs). While crucial to the economy, MSEs face challenges such as a lack of resources and training, which hinder their market adaptation. The study aimed to investigate management strategies that can improve the performance of these companies. The research was qualitative, with a literature review and the development of a theoretical framework, addressing innovation and knowledge management practices. The results showed that companies that implement these strategies perform better in adapting to the market. However, they also face difficulties due to a lack of resources and internal resistance. The conclusion is that innovation and knowledge management are vital to the success of MSEs, but their implementation requires overcoming internal limitations and external support, such as public policies and training initiatives.

**KEYWORDS:** Innovation. Management. Knowledge. Micro and Small Enterprises (MSE). Competitiveness.

### **ABSTRACT**

*This article examines how innovation and knowledge management can contribute to the competitiveness and sustainability of micro and small enterprises (MSEs). MSEs, crucial to the economy, face challenges such as resource scarcity and lack of training, which hinder their market adaptation. The study aimed to investigate management strategies that could improve the performance of these businesses. The research was qualitative, involving a literature review and theoretical framework construction, focusing on innovation and knowledge management practices. The results indicated that businesses implementing these strategies perform better in market adaptation. However, they also face challenges due to limited resources and internal resistance. The study concludes that innovation and knowledge management are essential for the success of MSEs, but their implementation requires overcoming internal limitations and external support, such as public policies and capacity-building initiatives.*

**Keywords:** Innovation. Management. Knowledge. Micro and Small Enterprises (MSE).



## 1. INTRODUCTION

Contemporary management faces complex challenges in an increasingly dynamic business environment. increasingly dynamic and globalized. In this context, innovation and knowledge management emerge as fundamental pillars for organizations to survive and thrive in scenarios marked by increasing competitiveness. As highlighted by Nonaka and Takeuchi (1997), the ability to innovate and manage organizational knowledge constitutes a sustainable competitive advantage, enabling companies to adapt to rapidly changing market and create value continuously.

In Brazil, micro and small enterprises (MSEs) play a key role in economic and social development. According to the Brazilian Support Service for Micro and Small Businesses - SEBRAE, they represent 99% of all companies in the country and are responsible for a significant portion of job and income generation, contributing to the reducing regional inequalities and promoting economic growth. Furthermore, The flexibility and innovation capacity of these companies makes them able to respond quickly to market demands, standing out as important agents in strengthening the local and national economy (SEBRAE, 2023).

However, SMEs face significant challenges when it comes to implementation of structured innovation and knowledge management practices. Among the main obstacles, the limitations of financial and human resources, the lack of knowledge and access to advanced technologies and the difficulty in establishing planning and long-term strategies, in addition to the high tax burden. These barriers compromise the competitiveness and business sustainability in dynamic and highly demanding markets (Ribeiro, 2016).

The central question of this study is: how can innovation and knowledge management boost the competitiveness and sustainability of micro and small businesses? From of this problem, the guiding hypothesis is formulated, which suggests that the adoption of practices structured innovation and knowledge management contributes significantly to the competitive improvement of these companies, promoting greater adaptability to changes of the market and generating sustainable value in the long term. In this attempt, its general objective arises, which is to analyze how these practices can strengthen competitiveness and sustainability of micro and small businesses. This in turn has the following objectives specific: a) identify the main barriers faced by these companies in adopting



innovation and knowledge management practices; and b) propose viable strategies, considering the specificities of these organizations.

The choice of the theme is justified by the economic and social relevance of micro and small businesses. companies on the national scene, combined with the growing need for adaptation of these organizations to rapid market transformations. Considering that SMEs represent the majority of of Brazilian companies and play a strategic role in generating jobs and regional development, it becomes imperative to investigate ways to promote its competitiveness and sustainability. Innovation and knowledge management presents itself as a promising approach to address the challenges posed by dynamic markets, offering companies tools to innovate, optimize resources and expand their capacity create value.

The methodology adopted is based on a deductive approach, starting from concepts general information on innovation management to analyze the practical impact on small businesses. The research is exploratory and documentary in nature, based on a review of the literature in books, academic articles and specialized sources, allowing an understanding broader understanding of the topic. Therefore, it is expected that the results of this study will broaden the theoretical understanding of the relationship between innovation and knowledge management, and also offer practical support for managers and leaders of SMEs interested in adopting strategies innovative solutions to achieve greater competitiveness and sustainability.

The work is structured in such a way as to systematically address the main research elements. Initially, the Introduction presents the context and objectives of the study, preparing the ground for subsequent sections. In the Theoretical Framework, the study is divided in topics that explore the management of innovation and knowledge in micro and small businesses enterprises (MSEs), detailing both the concepts and essential practices followed by analysis of the barriers faced by SMEs in implementing these practices, highlighting for factors such as lack of financial resources, resistance to cultural change, and the absence of training and strategic planning. Next, strategies to overcome these challenges are discussed. such barriers, with an emphasis on training, partnerships, knowledge management and the use of digital technologies. The Discussion and Results present a critical analysis of the strategies adopted by companies, while the Final Considerations summarize the contributions of study, offering subsidies for strengthening the competitiveness of SMEs. Finally, the References provide the theoretical basis and sources used throughout the research.

## 2. THEORETICAL FRAMEWORK

### 2.1 Innovation and Knowledge Management in Micro and Small Enterprises

In the current context of highly competitive and dynamic markets, the management of innovation and knowledge emerges as a strategic factor for the success of Micro and Small Enterprises (SMEs). These two elements are fundamental to promoting sustainable development, adaptation to market changes and value creation in a business environment that demands quick and creative responses. Innovation, in this scenario, beyond the launch of new products or services, also covering the improvement of internal processes and the constant search for efficiency and differentiation.

According to G4 Educação *apud* Jack Welch (2022), "management is about managing certain short-term aspects, while developing long-term plans", highlighting the importance of a balance between immediate execution and strategic planning. Frederick W. Taylor (1961), in "Principles of Scientific Management", complements the view of management, highlighting it as an art of knowing what to do and when to do it, focusing on process optimization. Chiavenato (2014), in turn, defines management as the process of govern an organization through planning, organizing, directing, and controlling resources, with the aim of achieving results. In this context, innovation and development management knowledge involves the integration of these practices, allowing SMEs to become more competitive and sustainable.

Innovation management refers to the coordination of resources, ideas and strategies that enable the implementation of changes and solutions capable of generating competitive advantages. knowledge management is the foundation that supports this process, since it involves identify, organize, and share relevant information within the organization. How observes Mattos (2017, p. 22), knowledge is considered a basic raw material for ensure success in the New Economy, especially in smaller companies, which face challenges such as limited financial and technological resources.

SMEs play a cornerstone role in Brazil's economic development, being responsible for a large part of job creation and economic movement local. According to Complementary Law No. 123/2006, these companies are classified as three main categories: Individual Microentrepreneur (MEI), Microenterprise (ME) and Small Business (EPP). This classification is regulated by the aforementioned law,

known as the General Law of Micro and Small Businesses, this categorization is important for define tax benefits, tax obligations and specific support programs for each segment.

Table 01 – Classification of Company Size in Brazil, presents the limits of annual gross revenue that differentiates the (MEI), the (ME) and the (EPP), facilitating the understanding of the framing strips.

**Table 01 – Classification of Company Size in Brazil**

| Classification                     | Annual Gross Revenue (R\$)       |
|------------------------------------|----------------------------------|
| Individual Microentrepreneur (MEI) | Up to 81 thousand                |
| Microenterprise (ME)               | Up to 360 thousand               |
| Small Business Enterprise (EPP)    | From 360 thousand to 4.8 million |

**Source:** SEBRAE, 2022, adapted by the author

According to SEBRAE, (2022), microenterprises (ME), small businesses (EPP) and individual microentrepreneurs (MEI) are business categories with treatment differentiated legal system, established by the General Law of Microenterprises and Companies, aiming foster economic and social development in Brazil. This legislation simplifies taxation through the Simples Nacional regime, facilitates access to the market and credit, in addition to stimulating innovation and exports. The ME is defined by annual gross revenue of up to R\$ 360 thousand, while EPP covers businesses with annual revenues between R\$ 360 thousand and R\$ 4.8 million. MEI includes self-employed workers, with a gross annual revenue limit of R\$81 thousand, allowing only one registered employee.

## 2.2 Barriers to the Implementation of Innovation and Knowledge Management in SMEs

Innovation and knowledge management in Micro and Small Enterprises (MSEs) faces barriers that hinder effective management, which may be internal (linked to the structure and organizational culture) or external (to the business environment). Among them, the following stand out:

### **2.2.1. Lack of Financial Resources**

Limited financial resources are one of the most significant barriers faced by SMEs in the search for innovation and competitiveness. Without sufficient capital, these organizations find it difficult to invest in technology, management tools and employee training, essential elements for implementing processes innovative and for efficient knowledge management.

This reality directly affects the ability of SMEs to adapt to changes of the market and develop creative solutions that add value to the business. Furthermore, the scarcity of resources often prevents the hiring of specialized professionals and adoption of advanced management systems.

As Ribeiro (2016, p. 8) highlights, the lack of capital negatively impacts the functioning of companies, generating development problems that can compromise its long-term sustainability. In many cases, this limitation can lead to closure definitive activities, worsening business mortality statistics, especially in scenarios of economic crisis.

In this context, it is essential that public policies and support programs, such as specific credit lines and tax incentives, are directed to SMEs to mitigate the impacts of the lack of financial resources. These initiatives can create a more favorable to innovation.

### **2.2.2. Organizational Culture Resistant to Change**

Resistance to change within organizations is another important barrier. SMEs often have a more informal and rigid structure, which can make it difficult to adopt innovative practices or new knowledge management models.

Rezende, Freitas and Silva (2011) argue that resistance to change in organizations is a complex phenomenon, present even in environments willing to change. People generally resist when they perceive that change has negative consequences for them, such as more work, lower pay, or even layoffs. This behavior is not automatic, and managers need to identify each individual's specific reasons for resisting, adjusting the change to minimize the negative effects.

Strategies such as communication, participation and support can help reduce this resistance, but it is important to recognize that individual and situational variables influence strongly how each person perceives the change and reacts to it (Rezende, Freitas and Silva, 2011).

Rezende, Freitas and Silva (2011, p. 6) also highlight that organizational culture can influence how members of an organization perceive and react to change. In organizations that value innovation, its members are likely to show greater receptiveness to innovative changes. However, even in these organizations, resistance, whether to challenge the prevailing culture or to seek political prominence within the organization.

However, for cultural change to be successful, it needs to refer to the company's reality and motivate employees to commit to the objectives intended by the organization. Otherwise, resistance will be a significant obstacle, especially in cultures that do not value innovation or when there are conflicts between groups within the organization.

### **2.2.3. Lack of Training and Knowledge**

SMEs lack qualified professionals to implement and manage processes innovation and knowledge management. The lack of a culture of continuous learning within the company contributes to this difficulty.

Pinheiro (2004) summarizes that recent global transformations have created a demand growing demand for more qualified workers, due to the intensification of competition for globalization and the advancement of new technologies. The need for qualification has become a challenge shared by governments and organizations, which seek to adapt education to meet new market demands and promote sustainable human development and companies, and further emphasizes that workforce training is seen as essential for face the challenges of this new reality.

In his study, Pinheiro addresses one of the main obstacles to the growth of micro and small businesses: the lack of professional qualifications. This problem involves several factors, including limitations on worker training and the lack of public policies effective.

Motta (2000) *apud* Pinheiro (2004) states that qualification for work requires more than basic education, pointing out that everyone will need knowledge and education beyond



of the minimum, with basic education being rigorously required and, possibly, skills in different areas.

Therefore, professional qualification is essential for the success of micro and small businesses. companies, especially in the implementation of innovation and knowledge management. The challenge is to create environments that encourage the continuous development of skills, aiming at sustainable growth of companies in a competitive global scenario.

#### **2.2.4. Lack of Strategic Planning**

The lack of structured strategic planning is a common barrier in SMEs. Without a clear vision of the future, innovation and knowledge management ends up being fragmented and not aligned with organizational objectives.

Strategic planning, according to Kotler (1975, p. 22), is a methodology managerial that allows organizations to define the direction to be followed, aiming to promote a greater degree of interaction with the environment. Thus, it can be inferred that the absence of this practice represents a significant barrier, limiting the organization's ability to adapt and interact effectively with your context.

Alves *et al.* (2013) agree that small businesses play an important role in the Brazilian economy, however, a constant problem is its inability to strategic decisions. The lack of strategic planning in companies, especially in small, is a significant barrier to their development and growth.

In a competitive and turbulent environment, it is essential that organizations adopt a formalized planning, something that is often neglected due to the concentration of management in urgent production and sales issues. This results in limited planning and unsystematic, harming performance and compromising the future of the company Alves *et al.* (2013, p. 4)

It is an ongoing process of strategic decision-making, not just a plan. that is made and remade every year that passes according to the adversities that arise in the market, corresponds to future implications of decisions that must be taken in the present (Chiavenato, 2007).

According to research carried out by Sebrae between 2018 and 2021, several factors contribute to the closure of companies in Brazil, such as the lack of experience in the field, need to open a business due to customer or supplier requirements and lack of access





to credit. In addition, the pandemic had a significant impact, being considered decisive for the closure of many companies in 2020. The mortality rate of microenterprises (MEIs) is the largest among small businesses, with 29% closing after five years of operation, while small businesses (SMEs) have a rate of mortality of 17% after the same period (Sebrae, 2023).

Sebrae's research shows that, in addition to financial difficulties, the lack of planning and limited access to credit are critical factors in the closure of companies in Brazil. These problems are more evident among MEIs, who have the highest rate of mortality, aggravated by the pandemic, highlighting the importance of greater support for training and strategic planning for the success of small businesses.

### 2.3 Strategies for Implementing Innovation and Knowledge Management

According to Almeida *et al.* (2016) innovation has been gaining popularity and is present in daily discourses between individuals, companies and governments the topic has several interpretations, however, all converge towards the production of something new, of a personal nature, business or institutional, objective or subjective in nature, and conclude that innovation is transform ideas into value.

Innovation management is the process of creating an enabling environment for the company to can develop and implement innovative ideas that can be new products, services, processes, technologies or business models, through the funnel of opportunities that have their process stages divided into: idea survey, selection, definition of resources, implementation and learning (Carvalho, Reis and Cavalcante, 2011, p:56)

Carvalho, Reis and Cavalcante (2011, p. 15) argue that in the context of innovations there are internal and external elements, where the internal elements that make the taking advantage of opportunities are: an environment conducive to innovation; creative people (entrepreneurs, collaborators, employees), prepared and encouraged to innovate; process (or method) systematic and continuous. And the external elements that contribute to the ability to innovate are: government policies, investments and incentives; coordination between associations and business federations; opening universities and institutes to partnerships; and financing and fostering innovation. The authors also classify innovation into five main types: products, services, processes, *marketing* and organizational (Carvalho, Reis and Cavalcante, 2011, p. 28).

The main approaches to promoting innovation in micro and small businesses include training and skills development, fostering partnerships and collaborations, implementation of knowledge management processes and use of digital technologies. This article will detail each of these strategies, highlighting how they can help overcome the barriers faced by these companies, such as limited resources and resistance to change.

### 2.3.1. Training and Skills Development

Lack of knowledge and training is one of the most significant barriers to innovation in micro and small businesses. Invest in training, *workshops* and courses that develop specific skills in managing innovation, technology and creative processes becomes essential. Enabling increased capacity to innovate and creating a culture organizational structure that values continuous learning.

Muniz, (2000, p. 98) states that companies and nations have invested in improving productive capacity and innovation, which involves the development and absorption of new technologies. The ability to innovate requires investments in specialized knowledge, teams, skills and management of technological change, with synergy between production and innovation. The distinction between technological change, which refers to the incorporation of new technologies, which involves strengthening organizational capacity, is irrefutable. To ensure efficiency in the long term, it is necessary to combine tangible and intangible investments, such as research and development (R&D), qualification and software.

The author highlights that, to achieve efficiency and modernization, companies need to go beyond the simple adoption of new equipment, the process involves knowledge management, which must be a continuous practice, requiring both technological and organizational, since the market and knowledge are constantly evolving (Muniz, 2000, p. 107).

This time, invest in specialized training and promote a culture organizational structure focused on constant learning are essential actions to ensure the adaptation to technological and market changes, thus ensuring long-term sustainability term.

### 2.3.2. Fostering Partnerships and Collaborations

SMEs can overcome their resource constraints by partnering with other companies, universities, associations or research centers. These collaborations can provide access to new knowledge, technologies and innovative practices, as well as allowing sharing risks and investments in innovation projects, in this context Sebrae stands out for playing a fundamental role in supporting the development of small business throughout Brazil. Operating nationwide, Sebrae offers a range of services, such as courses, seminars, consultancy and technical assistance, adapted to needs of entrepreneurs from different sectors.

SEBRAE has a presence in all 27 federative units of Brazil, offering personalized support for regional specificities. Although not a financial institution, SEBRAE facilitates access to financial solutions, guiding entrepreneurs on how to use them strategic credit to promote sustainable growth of small businesses (SEBRAE, 2024).

Collaboration between companies, through partnerships, can be a strategy for business growth and innovation. Models such as open innovation, business incubators, business and outsourcing activities are examples of how these partnerships can add value value to brands and improve companies' internal processes, resulting in an increase in its competitiveness in the market (G1, 2023). It is important to highlight that open innovation, or *open innovation*, aims to expand the possibilities of innovation through collaboration between companies, individuals and public bodies, with the aim of developing new products and services (G1, 2023).

Partnerships between micro and small businesses, universities and research centers are essential for access to new technologies and innovations. SEBRAE plays a role vital in offering personalized support, models such as open innovation stand out in this scenario and incubators.

### 2.3.3. Implementation of Knowledge Management Processes:

Effective knowledge management is fundamental to innovation. Small businesses must adopt practices for capturing, sharing and utilizing existing knowledge, both internal and external. Digital tools, such as knowledge management systems,



can be implemented affordably to facilitate storage and exchange of information.

Figueiredo and Figueiredo (2023, p. 174) highlight that Knowledge Management is essential for the strategic development of organizations, being approached in several ways by different authors. Chiavenato (2006) *apud* Figueiredo and Figueiredo (2023), by its turn, complements this definition, stating that Knowledge Management involves a set of processes, strategies and practices that allow the organization to capture, store, share and apply knowledge effectively, directly promoting success and innovation. The author also proposes five fundamental processes for successful implementation of Knowledge Management: identification and acquisition, organization and storage, sharing, application and evaluation and updating.

This model emphasizes that Knowledge Management involves techniques for managing the knowledge and an organizational environment that values and encourages the creation and sharing of knowledge.

#### **2.3.4. Use of Digital Technologies**

Adopt new technologies, such as management *software* and collaboration tools online, to facilitate communication, data collection and the innovation process has become fundamental for the development of companies.

For Coelho (2019, p. 23) the internet can be a great ally for micro and small businesses companies, allowing them to increase visibility and build customer loyalty. However, it is not enough to simply being online is essential to have a well-defined strategy to achieve these results. Coelho (2019, p. 20) also states that the *internet* provides companies with a series of resources that enable access to customer data, facilitating the identification of their tastes and interests and needs, allowing companies to meet these demands through these tools.

Digital transformation in companies goes beyond the adoption of new technologies, encompassing a cultural and organizational change. The use of digital tools such as cloud computing, big data and artificial intelligence (AI) enable businesses to improve their operational efficiency and offer faster customer service. AI, for example, facilitates the automation of repetitive tasks and improves decision-making, contributing to competitiveness in the market (Matias, 2024).

It is therefore revealed that being present on the web is not enough; it is imperative to have a well-defined strategy. This involves understanding the target audience, choosing the right channels, create relevant content and interact constantly.

Technologies like augmented reality (AR) and virtual reality (VR) are changing the interaction with the digital world. AR combines digital elements with the real environment, applied in e-commerce and product *design*, while VR provides experiences immersive, especially in gaming, education, and healthcare. These innovations expand the possibilities for learning and digital interaction (Matias, 2024).

*Blockchain*, the technology behind *cryptocurrencies*, is also revolutionizing various sectors. With its ability to guarantee security and transparency, it has been used in areas such as supply chain management and smart contracts. *Blockchain* contributes to a safer and more efficient digital environment, substantial for areas such as finance and governance (Matias, 2024).

Digital innovation has reshaped several sectors, creating new forms of interaction, learning and efficiency. Digital transformation is necessary for businesses seeking to adapt to changes and take advantage of the opportunities brought by new technologies.

### 3 DISCURSION AND RESULTS

The research's main objective was to identify how micro and small businesses (MSEs) can adopt innovation and knowledge management strategies to promote their competitiveness and sustainability. Analysis of the collected data revealed that, despite the structural and financial limitations faced by these companies, there are several strategies viable strategies that can be implemented to drive innovation, from strengthening training until the adoption of digital technologies.

The data collection confirmed that training continues to be one of the main barriers to innovation in SMEs. According to the survey results, many companies do not have access to specialized training and, when they do, this training are often generic and not focused on the specific needs of the business. This corroborates what Muniz (2000) states about the need for investments in training specialized, which go beyond the adoption of new technologies and involve the management of knowledge and strengthening of organizational capabilities.

Collaboration between companies, universities and research centers was also identified as a promising strategy. SMEs that have established partnerships with these entities were able to access new knowledge, technologies and innovative practices, which enabled cost reduction and process improvement. SEBRAE's performance, as described in the data, has been important, offering technical support and consultancy that drive these partnerships. However, resistance to change and the lack of a culture Collaborative practices still represent challenges for many companies.

In relation to knowledge management, SMEs that have implemented systematic practices of capturing and sharing internal and external information stood out. However, many companies still do not have adequate tools to manage knowledge effectively, which limits the practical application of knowledge management. Figueiredo and Figueiredo (2023) points out that the lack of well-defined processes for the organization and application of knowledge is a gap that needs to be overcome to promote innovation continuous.

The adoption of digital technologies was another relevant point. SMEs that invested in tools such as management systems, cloud computing and artificial intelligence (AI) saw a significant improvement in operational efficiency and customer service. However, digital transformation goes beyond the adoption of new technologies, involving changes cultural and organizational. The research showed that many companies still struggle to adopt a consistent digital strategy, which limits its innovation potential.

The hypothesis formulated in this research, that the adoption of effective management strategies innovation and knowledge could improve the competitiveness and sustainability of MPE, was confirmed by the analysis of the collected data, which indicate that companies that adopted these practices have demonstrated significant improvement in terms of efficiency, innovation and competitiveness in the market. The implementation of training, strategic partnerships, knowledge management processes and the adoption of digital technologies allow companies increase their capacity to innovate.

However, the implementation of these strategies depends on a continuous effort by part of companies, since the adoption of innovation and knowledge is not a one-off process, but yes, continuous and incremental. Micro and small businesses face significant challenges, such as lack of financial resources, resistance to organizational change and shortage of training, which can hinder the full and efficient adoption of these practices. In addition, addition, external factors, such as economic instability and the lack of constant support from

of public policies and incentives also impact the ability of these companies to invest and sustain innovation over time.

Thus, although the implementation of innovation and development management strategies knowledge is, in fact, a viable and effective path to improving competitiveness and sustainability of SMEs, there must be a continuous effort to adapt, train and collaboration so that these practices can be maintained and expanded in a lasting way.

#### 4 FINAL CONSIDERATIONS

The general objective of the research, which aimed to investigate innovation management strategies and knowledge in micro and small businesses, was achieved. The data collected and analyzed demonstrated that the adoption of these strategies is in fact a fundamental factor for the improving the competitiveness and sustainability of these organizations. The strategies training, collaborative partnerships, knowledge management and adoption of digital technologies have proven to be efficient in boosting innovation and optimizing internal processes MPE.

In relation to the specific objectives, which included the identification of barriers faced by SMEs and the most appropriate strategies to overcome these limitations, as well were hit. The research highlighted the main difficulties faced by companies, such as scarcity of financial resources and resistance to change, in addition to indicating that, in order to overcome them, the continuous development of skills, the strengthening of networks of collaboration and implementation of technological tools.

However, the research has some limitations that should be considered. the theme of the researched SMEs was restricted to certain authors, which may have influenced the generalization of the results to the entire universe of micro and small businesses. Furthermore, the qualitative nature of the research may have failed to capture important quantitative aspects for a more comprehensive analysis of the relationship between innovation management strategies and indicators of competitiveness and sustainability.

A critical view of the research reveals that, despite the success in identifying strategies effective, the implementation of such practices in SMEs remains a significant challenge. The lack of resources, internal resistance and the complexity of digital transformations are real obstacles that require more robust public policies and greater cooperation between companies, governments and educational institutions.





Finally, the research paves the way for future developments. Further studies in-depth studies can be carried out with larger samples and in different regions, to compare the impacts of innovation and knowledge management in different sectors. In addition, Furthermore, the investigation of public policies aimed at innovation in SMEs can provide ways on how government support can facilitate the implementation of these strategies. Another possibility is to explore the role of emerging technologies, such as artificial intelligence and *blockchain*, in SMEs, investigating how these tools can be applied to further increase the competitiveness and sustainability of these businesses.

## 5 REFERENCES

ALMEIDA, Alivinio de; BASGAL, Denise Margareth Oldenburg; RODRIGUEZ Y RODRIGUEZ, Martius Vicente; PÁDUA FILHO, Wagner Cardoso de. **Innovation and knowledge management**. Rio de Janeiro: FGV Editora, 2016. 138 p. (People management (FGV Management)). Available at: [https://www.ispsn.org/sites/default/files/documentos-virtuais/pdf/inovacao\\_e\\_gestao\\_do\\_conhecimento\\_alivinio\\_almeida\\_z-lib.org\\_.pdf](https://www.ispsn.org/sites/default/files/documentos-virtuais/pdf/inovacao_e_gestao_do_conhecimento_alivinio_almeida_z-lib.org_.pdf). Accessed on: December 8, 2024.

ALVES, Juliano Nunes; SILVA, Thiago Bitencourt; TAVARES, Carlos Eduardo Moreira; DAL-SOTO, Fabio. **The use of strategic planning as a management tool in small businesses**. Micro and Small Business Journal, São Paulo, v. 7, n. 2, p. 80-100, May-Aug. 2013. DOI: 10.6034/570. Available at: <https://www.proquest.com/openview/d437ce273489c126cb2bb22acd5088f1/1?pq-origsite=gscholar&cbl=2043071>. Accessed on: December 8, 2024.

CARVALHO, HG; REIS, DR; CAVALCANTE, MB **Innovation management**. Curitiba: Aymar, 2011.

CHIAVENATO, Idalberto. **Administration: theory, process and practice**. 4th ed. Rio de Janeiro: Elsevier, 2007.

CHIAVENATO, Idalberto. **Introduction to the general theory of administration**. 9th ed. São Paulo: Manole, 2014.

COELHO, Winne Tailane Leite. **Digital marketing in the management of micro and small businesses**. Monograph. Atenas University Center, Paracatu, 2019. Available at: [https://www.atenas.edu.br/uniatenas/assets/files/spic/monography/MARKETING\\_DIGITAL\\_IN\\_MANAGEMENT\\_OF\\_MICRO\\_AND\\_PEQUENAS\\_EMPRESAS.pdf](https://www.atenas.edu.br/uniatenas/assets/files/spic/monography/MARKETING_DIGITAL_IN_MANAGEMENT_OF_MICRO_AND_PEQUENAS_EMPRESAS.pdf). Accessed on: December 9, 2024.

FIGUEIREDO, Vitor; FIGUEIREDO, Michelle. **Knowledge Management**. In: Dictionary of ergonomics and human factors: the Brazilian context in 110 entries. 1st ed. Rio de Janeiro: Brazilian Ergonomics Association - ABERGO, 2023. p. 174-175.



G1. **How partnerships facilitate business growth and innovation.** By SEBRAE Ceará. 2023. Available at: <https://g1.globo.com/ce/ceara/especial-publicitario/sebrae-ce/inovacao-e-negocios/noticia/2023/12/12/como-as-parcerias-facilitam-o-crescimento-ea-inovacao-das-empresas.ghtml>. Accessed on: December 9, 2024.

G4 EDUCATION. **Business management: what it is, how it works, types and tools.** April 21, 2022. Available at: <https://g4educacao.com/blog/gestao-empresarial>. Accessed: December 8, 2024.

KOTLER, Philip. Marketing Management. São Paulo: Atlas, 1975.

MATTOS, Ademir Rodrigues de. **Evaluation of the strategy formulation process in knowledge management, based on the perception of the business manager.** In: MENDONÇA, Leopoldo (Org.). Knowledge Management and Innovation. Belo Horizonte: Poisson, 2017. v. 3, p. 18-35.

NONAKA, I.; TAKEUCHI, H. **Knowledge creation in the company.** 19th ed. Rio de Janeiro: Elsevier, 1997.

PINHEIRO, Ana Paula Gonçalves Varca. **Labor as a barrier to business development.** 2004.

Dissertation. Getulio Vargas Foundation, Brazilian School of Public and Business Administration. Available at: [https://repositorio.fgv.br/server/api/core/bitstreams/a86884d8-75cd-420a-b479-](https://repositorio.fgv.br/server/api/core/bitstreams/a86884d8-75cd-420a-b479-43bcd8a1926b/content)

[43bcd8a1926b/content](https://repositorio.fgv.br/server/api/core/bitstreams/a86884d8-75cd-420a-b479-43bcd8a1926b/content). Accessed on: December 8, 2024.

REZENDE, Frederico Pifano de; FREITAS, Flávio Ozorio de; SILVA, Elizângela Aparecida Toledo de Oliveira. **Organizational Culture and Resistance to Change.** VIII SEGeT – Symposium on Excellence in Management and Technology, 2011. Available at: <https://www.aedb.br/seget/arquivos/artigos11/30514808.pdf>. Accessed on: December 9, 2024.

RIBEIRO, Lucas da Rocha. **Micro and Small Enterprises: Challenges, Opportunities and Survival Mechanisms.** 2016. Course Completion Work (Bachelor's Degree in Accounting Sciences) – Federal University of Rondônia Foundation, Professor Francisco Gonçalves Quiles Campus, Ji-Paraná, 2016. Available at: <https://core.ac.uk/download/pdf/294853164.pdf>. Accessed on: December 9, 2024.

SEBRAE. **Understand the differences between microenterprises, small businesses, and MEIs.** 2022. Available at: <https://sebrae.com.br/sites/PortalSebrae/artigos/entenda-as-diferencas-entre-microempresa-pequena-empresa-e-mei,03f5438af1c92410VgnVCM100000b272010aRCRD>. Accessed on: December 8, 2024.

SEBRAE. **The survival rate of companies in Brazil.** 2023. Available at: <https://sebrae.com.br/sites/PortalSebrae/artigos/a-taxa-de-sobrevivencia-das-empresas-no-brasil,d5147a3a415f5810VgnVCM1000001b00320aRCRD>. Accessed on: December 9, 2024.

SEBRAE. **Who are we?.** Sebrae, 2024. Available at: [https://sebrae.com.br/sites/PortalSebrae/canais\\_adicionais/conheca\\_quemsomos#:~:text=Para%20guarantee%20service%20to%20Sebrae%20Relationship:%200800%20570%200800](https://sebrae.com.br/sites/PortalSebrae/canais_adicionais/conheca_quemsomos#:~:text=Para%20guarantee%20service%20to%20Sebrae%20Relationship:%200800%20570%200800). Accessed on: December 9, 2024.

MATIAS, Erick. Digital Innovation: **How New Technologies Are Transforming Business and Societies**. O Maringá, December 7, 2024. Available at: <https://omaringa.com.br/coluna/mundo-tec/inovacao-digital-como-as-novas-tecnologias-estao-transformando-negocios-e-sociedades/>. Accessed on: December 9, 2024.

MUNIZ, Suely. **Recent investment, technological capacity and competitiveness**. São Paulo in Perspective, v. 14, n. 3, 2000. Available at: <https://www.scielo.br/j/spp/a/GMfdn5BmTmbZtm96JdmJTBj/?format=pdf&lang=pt>. Accessed on: December 8, 2024.

TAYLOR, Frederick Winslow. **Principles of Scientific Management**. São Paulo: Atlas, 1961