

BACKGROUND OF INNOVATION STUDIES: TRENDS AND OPPORTUNITIES

ARCABOUÇO TEÓRICO DOS ESTUDOS DE INOVAÇÃO: TENDÊNCIAS E OPORTUNIDADES

Simone Sehnem * E-mail: simonesehnem_adm@yahoo.com.br

Ivone Junges** E-mail: ivone.junges@unisul.br

Cristina Martins** E-mail: crismartins2611@gmail.com

Dulcimar José Julkovski* E-mail: professordulcimar@gmail.com

Edson Kuzma* E-mail: edson.kuzma@gmail.com

Lucila M. S. Campos*** lucila.campos@ufsc.br

*Universidade do Oeste de Santa Catarina (UNOESC) / Chapecó, SC

**Universidade do Sul de Santa Catarina (UNISUL), Florianópolis, SC

***Universidade Federal de Santa Catarina (UFSC), Florianópolis, SC

Resumo: Este estudo tem como objetivo analisar as publicações progressas de inovação tendo em vista o tipo de inovação que estudam, barreiras à adoção/implementação, os facilitadores, atores envolvidos e os setores investigados. Foi conduzida uma revisão sistemática de literatura seguindo protocolo de pesquisa anteriormente validado. As evidências mapeadas mostram que há uma concentração de estudos voltados para inovações de processos e organizacionais, e constatamos que seus facilitadores e barreiras impactam sua plena implementação. Notavelmente, neste contexto, os stakeholders e os recursos tecnológicos são elementos essenciais para apoiar a adesão às inovações. A sustentabilidade é o contexto em que as inovações têm sido implementadas de forma mais intensa por meio de diferentes práticas, ferramentas e tecnologias associadas. Os aceleradores de inovações e as sinergias que criam são componentes essenciais para o sucesso das inovações. A partir desse panorama, foram criadas cinco propostas que sinalizam caminhos potenciais e promissores de pesquisa científica para o tema inovação.

Palavras-chave: Ecossistemas de inovação; Revisão Sistemática da Literatura; Drivers; Oportunidades.

Abstract: This study aims to analyse previous publications of innovation with a view towards the type of innovation they study, their barriers to adoption/implementation, the facilitators and actors involved, and the sectors that are investigated. A systematic literature review was conducted following a previously validated research protocol. Shows that there is a concentration of studies focused on process and organisational innovations, and we find that their facilitators and barriers impact their full implementation. Notably, in this context, stakeholders and technological resources are essential elements to support adherence to innovations. Sustainability is the context in which innovations have been most intensively implemented through different practices, tools, and associated technologies. Accelerators of innovations and the synergies they build are essential components for innovations to succeed. Based on this panorama, five proposals were created that signal potential promising scientific research avenues for the theme of innovation.

Keywords: Innovation Ecosystems; Systematic Literature Review; Drivers; Opportunities.

1 INTRODUCTION

Innovation is a consolidated theme in studies in the fields of administration and

business (BENITEZ; AYALA; FRANK, 2020). It translates into 408.340 articles published on the topic in the Scopus database (accessed on April 30, 2020), with 87.825 published in the Business, Management and Accounting area. 269.098 articles are featured in the Web of Science database, 545.488 in Science Direct, 533.328 in Ebsco, and 649.114 in the Wiley Online Library. Google Scholar, an academic database, presents some 4,200,000 entries (accessed on April 29, 2020). Recently, the innovation theme has aroused the interest of scientists and entrepreneurs with a more narrow focus; such areas include social innovation (DIONISIO; VARGAS, 2020), radical innovation (CZAKON et al., 2020), disruptive innovation (PALMIÉ et al., 2020), eco-inovations (LATUPEIRISSA; ADHARIANI, 2020), frugal innovation (SANTOS et al., 2020), design innovation (MAGISTRETTI et al., 2019), green inovation (LI; ZENG, 2020), sustainable innovation (WANG et al., 2020), and other approaches.

Considering this vast amount of previous studies, it is difficult to find gaps that may provide the opportunity to pursue original studies of relevance to the scientific environment and to society. One method researchers use is to collect systematic literature reviews. These reviews demonstrate, through systematic examination, the vital findings of previous studies. Moreover, such findings permit the identification of previous works' limitations and weaknesses and chart research avenues for future studies. This study articulates the following central research question: what is the profile of past innovation publications with regard to their type of innovation, their barriers to adoption/implementation, the facilitators and actors involved, and the sectors investigated? Based on this context, the present study has mapped 221 systematic literature reviews previously published on the theme of innovation and available in the Scopus database. The Scopus database was chosen due to its international projection; it is regarded as the largest and most complete database available to global researchers.

This study aims to analyse past publications on innovation with regard to the type of innovation pursued, barriers to their adoption/implementation, the facilitators and actors involved, and the sectors investigated. To this end, we made use of the meta-synthesis, which consists of systematising the main findings of previous studies. The justification for carrying out the study is based on the scientific notoriety that the broad theme of innovation has presented. Included in the broad theme of innovation are global events such as the coronavirus epidemic, environmental crises such as

climate change, rethinking the economy, the advent of the circular economy, the intense progress of technology with the creation of objects that challenge creativity and science and that impress people with their genius (virtual assistants, technological clothes, virtual dressing rooms, refrigerator of the future, cell phone of the future, and other artifacts). This study attempts to consolidate the great findings of previous studies in a single document, and from this mapped panorama, we propose avenues for further studies in the field of innovation.

Previous systematic reviews have different purposes and seek to systematise previous findings. The work of Smith et al. (2008) presents a holistic view of the factors that affect innovation management. Rossi et al. (2013) explore the innovative strategies undertaken by logistics providers in the eco-efficiency arena and the logistical and learning capabilities needed to achieve eco-efficiency in supply chains. Medeiros, Ribeiro, and Cortimiglia (2014) consolidate research and aggregated results from different studies on innovation of environmentally sustainable products. Breznik and Hisrich (2014) analyse the relationship between dynamic capabilities and innovative capabilities. Henry, Foss, and Ahl (2016) critically explore the types of methodological innovations needed in future scholarships. Schmitz et al. (2017) examine the scientific literature on innovation and entrepreneurship in the academic environment, describe how the field is organized, define main terms, theoretical frameworks, and empirical models with the goal of directing future research. Another study, by Prieto-Sandoval, Jaca, and Ormazabal (2018), proposes a consensual view of the basic notions of the circular economy structure; these authors highlight its relationship with eco-innovation. These previously cited studies and many others serve as a sample for the realisation of the meta-synthesis described in this article. The purpose of the meta-synthesis is to present a preliminary overview of the theme based on a qualitative analysis. In this way, it allows an in-depth understanding of the state-of-the-art on innovation. Above all, it allows structuring a promising path for new studies that can be original, unpublished, contemporary, and can generate insights for significant and effective contributions to society.

The theoretical contribution of this study refers to the creation of five propositions that signal great opportunities for the field of innovation. These propositions are especially vital when we consider the globe's environments of uncertainty, caution, and fear. The study is organized into sections. Section 2 deals

with innovation and its specificities. Section 3 presents the methodological path followed to conduct our meta-synthesis. Section 4 presents and discusses the results and includes proposals for future studies. Section 5 highlights final considerations, and it brings attention to our research's practical and theoretical contributions and managerial implications. It also highlights the limitations and recommendations for future studies. Finally, we include the relevant references that support our study.

2 INNOVATION BACKGROUND

Innovation consists in the application of new ideas that generate value to customers and contribute to an increase in organisational value (ALBLOOSHI *et al.*, 2020). It is a systematic process that seeks, in a deliberate and organized way, to change the analysis of opportunities and what benefits they may offer for economic and social innovation (SAUSEN; ROSSETTO; BEHLING, 2018). They are essential for increasing competitive advantage (PUSPITA; CHRISTIANANTA, ELLITAN, 2020) and improving business performance (DUAN; WANG; ZHOU, 2020). They can take a process, product, organisational, or marketing approach (Oslo Manual, 1990).

Other types of innovation recognized in the scientific literature are plentiful. Specifically, consider radical innovations (CZAKON *et al.*, 2020), disruptive innovations (MAHTO; BELOUSOVA; AHLUWALIA, 2020), social innovations (CAJAIBA-SANTANA, 2014), sustainable innovations (BOONS; LÜDEKE-FREUND, 2013), technological innovations (TEECE, 1986, SU; HELIAN; WANG, 2014), eco-innovations (MALDONADO-GUZMÁN; GARZA-REYES, 2020), knowledge innovations (CHIU; LIN, 2019), innovations in business models (SHAKEEL *et al.*, 2020; GULDMANN; HUULGAARD, 2020), management innovations (YANG *et al.*, 2020), health innovation (PROKSCH *et al.*, 2019), innovation capabilities (QI *et al.*, 2020), green innovation (ZHANG *et al.*, 2020), service innovation (FENG; MA, 2020), open innovation (LECKEL; VEILLEUX; DANA, 2020), incremental innovation (RAMPINO, 2011), and others. Clearly, innovation is a construct that is useful for different perspectives of many subject areas. One area that is most helpful for contributions to society is an applicability of new ideas operating in a different organisational context and using green economics capabilities (MEALY; TEYTELBOYM, 2020).

However, it is not always easy to implement innovations. There are several bar-

riers that hinder the incorporation of innovations, namely: resistance (KAUR *et al.*, 2020), partnerships between client and contractor (OZORHON *et al.*, 2014), the context in which innovation occurs (SANDBERG; AARIKKA-STENROOS, 2014), internal and external barriers (HÖLZL; JANGER, 2012), technology adoption costs (MOSTAGHEL, 2006), barriers to entry (D'ESTE *et al.*, 2012), skills to cooperate (Witte, 1977), new ideas, people, transactions, institutional context (REYNOLDS; HRISTOV, 2009), and barriers to innovate new products (LARSEN; LEWIS, 2007). Among the external barriers, according to Pinsky and Kruglianskas (2017), emphasis is given to an absence of infrastructure, a deficiency in training and education, and an absence of adequate legislation and qualified professionals. Some internal barriers, identified by Neely and Hill (1998), include organisational arrangements and rigid procedures, communication structures as barriers may be formal and hierarchical, conservatism, conformity and lack of vision, resistance to change and taking risks. Hence, it is vital to employ some strategies to win in a complex environment when the implementation of innovations is warranted.

Several researchers study the facilitators of innovation, integration, and leadership (OZORHON; ABBOTT; AOUAD, 2014), leverage of technology (PAROLIN; VASCONCELOS; BORDINGNON, 2006), internal competencies (Wicki and Hansen, 2020), organisational strategy (AMORIN; CARVALHO; MADEIRA, 2020), designing teams (BASON; AUSTIN, 2019) and learning-based leaders (WANG; SU; LI, 2020), enabling internal learning (BOGERS; LHUILLERY, 2011), changes in behavior leader (PENG, 2020), solving problems in teams (PARBOTEEAH; HOEGL; MUETHEL, 2015), creativity (KARLYING, 2005), safety climates (BECK; VILLARROEL; WALKER, 2013), mutual trust (DOVEYM, 2009), market conditions (SLATER; NARVER, 1994), the existence of resources (EISENHART; MARTIN, 2000), and the company's corporate social responsibility (HERRERA, 2015). Triggers – or factors that contribute to the success of innovation – may include innovative behavior (MONTALVO, 2006), technical innovations (ZOSSOU *et al.*, 2009), the mode of use, that is, how powerfully innovation is related to sensory and cognitive human skills, and with anthropometric measures (RAMPINO, 2011). The idea of shape, especially in products with strong aesthetic appeal (FIALKOWSKI; SCIAMANA; KISTMANN, 2018) is an innovation topic. Further, technology, determining where the starting point is to know how to take advantage of each process, and product technology (DESBARATS, 2017) are

additional considerations. The technology, especially digital platform activity for diffusion success of innovation, is very relevant in this scenario (CLAUSSEN; HALBINGER, 2020). Investing resources into innovative activities is another fruitful topic (COLOMBELLI *et al.*, 2019).

3 METHODOLOGICAL PATHWAY

To perform the meta-synthesis described in this article, a search for articles was carried out in the Scopus database, the largest database with indexed journals in the administration area. Search strings utilised were Innovation and “Systematic Literature Review”. It was the researchers' choice not to invest in strings with variations and use of Boolean terms, given that the purpose of the research adopts a more narrow scope, namely, innovation studies and systematic literature reviews. 670 different published documents were found. Inclusion criteria were included in the Business, Management and Accounting area. There were 221 articles left to be analysed. The time cut did not take into account an initial limit, only the final one that ended on March 28, 2020.

The articles were analysed one by one, following the completion of an Excel spreadsheet. To conduct this step, the Research Protocol by Tranfield, Denyer, and Smart (2003) was adopted. In this perspective, the following stages were followed to conduct the systematic literature review.

Table 1 - Stages of the Systematic Literature Review (continua)

Stages	Phases	Phases	Detailing
Stage I: Review Planning	<u>Phase 1</u>	Review Proposal	This study deals with the proposal to carry out a meta-synthesis of systematic literature reviews previously published on the theme of innovation. Our protocol includes the following axes:
	<u>Phase 2</u>	Development of a Review Protocol	<ul style="list-style-type: none"> a) Search strings used Innovation and “Systematic Literature Review”. b) Access to systematic reviews of the innovation literature available in the Scopus database. c) Criterion for inclusion of studies is the publication in the Business, Management and Accounting area. d) Be available in full, that is, in full text. e) The content of the article addresses the systematisation of previous publications of innovation, using a systematic literature review (SLR). Bibliometrics, meta-analyses, and meta-syntheses were not included in the analysed sample.

Table 1 - Stages of the Systematic Literature Review

(conclusão)

Stages	Phases	Phases	Detailing
Stage II: Conducting the Review	<u>Phase</u> <u>3</u>	Selection of studies	The selection of the studies consisted of inserting the search strings in the search field of the Scopus database. Restrict the search to Business, Management and Accounting. Download all articles available in full. Assess whether these studies are really systematic literature reviews. Start the tabulation of data in an Excel spreadsheet that contained specific columns to systematise the data of interest for this study, namely, type of innovation, barriers to adoption/implementation, facilitators and actors involved, and sectors investigated.
	<u>Phase</u> <u>4</u>	Summary of the data	The data were synthesized in graphs and tables to allow an understanding of the main categories of innovation previously defined, namely: type of innovation, barriers to adoption/implementation, facilitators and actors involved, and sectors investigated. The created classifications did not follow taxonomy and typologies of specific authors. But they were created <i>a posteriori</i> , by the emergence through reading in full the articles, groups, and creation of codes that express the predominant meanings mapped in the investigated context.
Stage III: Presentation of Results	<u>Phase</u> <u>5</u>	Data analysis	We devised an understanding of the panorama of innovation studies based on how they are executed, their approach, and what previous studies understand as opportunities for the advancement of innovation studies.
	<u>Phase</u> <u>6</u>	Discussions and conclusions	We reflected on the main findings and how representative they are for the managerial and academic scope. Based on the evidence of the study, propositions were constructed that allow the advance of the studies in innovation in the scope of administration and business in an unprecedented and original way. The conclusions were drawn in order to highlight the practical and theoretical contributions of the study. Special emphasis was given to the managerial implications of the findings.

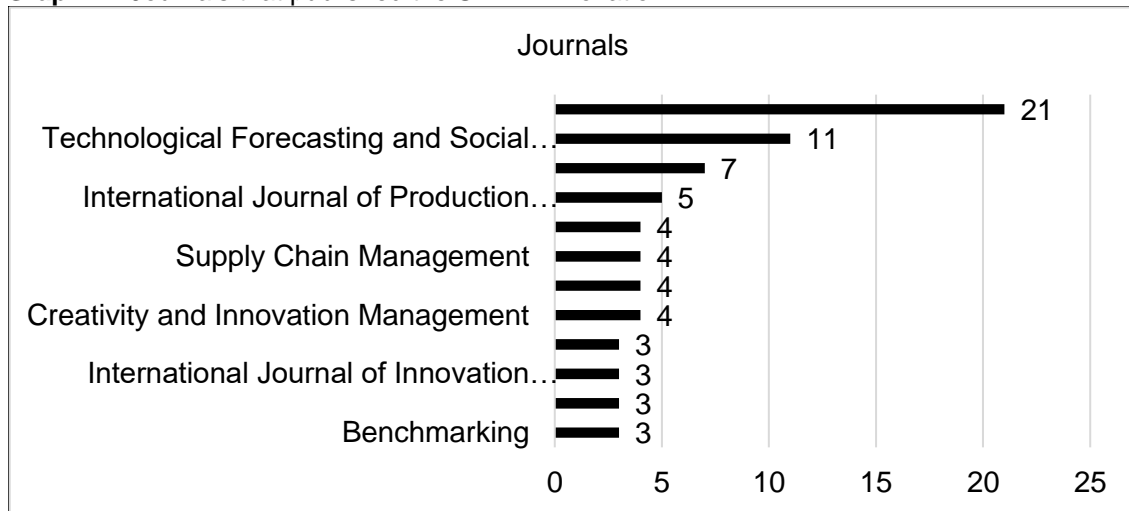
Based on the stages described in the research protocol, the results of the study are then presented.

4 DATA PRESENTATION AND ANALYSIS

As can be seen, there are three journals with more publications of SLR in innovation; other journals feature between 5 and 4 publications. In total, 125 distinct journals have published on the topic (Appendix A). Emphasis is given to the *Journal of Cleaner Production* and *Technological Forecasting & Social Change*, which together published 14.48% of the sample of studies analysed. Then, Graph 2 shows the top 30

journals consulted to build the systematic reviews, that is, which journals comprised the samples analysed by the 221 studies.

Graph 1 - Journals that published the SLR in innovation



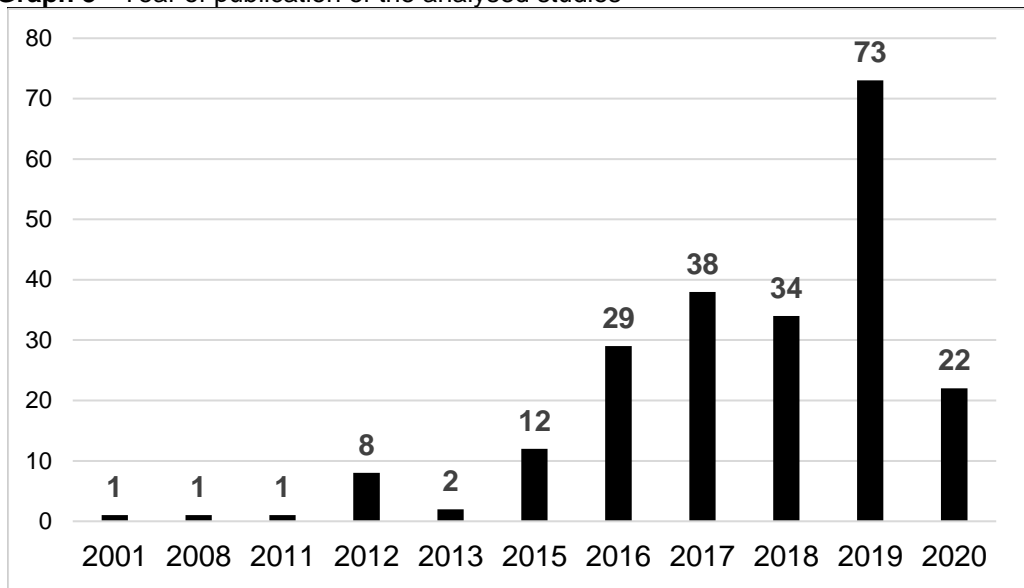
Graph 2 shows the most representative journals in the composition of the samples of the analysed SLRs. Around 804 different journals were accessed to build the research samples. The samples varied between 7 and 1.876 articles consulted to build the SLRs that comprised the sample analysed for this research. The databases consulted to map these studies were Scopus, ISI Web of Science, Science Direct, Emerald, Proquest, Ebsco, Google Scholar, Science Direct, PubMed, OvidMeline, Spring, Scielo, PlosOne, JSTOR, Medline, Sage, Wiley Online Library, Taylor & Francis. Those that were most accessed were Scopus, ISI Web of Science, and Ebsco. Many studies used a research protocol that follows the guidelines of Tranfield *et al.* (2003) and Denyer and Tranfield (2009).

Soon after, Graph 3 presents the publication year in which the studies were published.

Graph 2 - Top 30 journals that comprised the analysed SLR samples



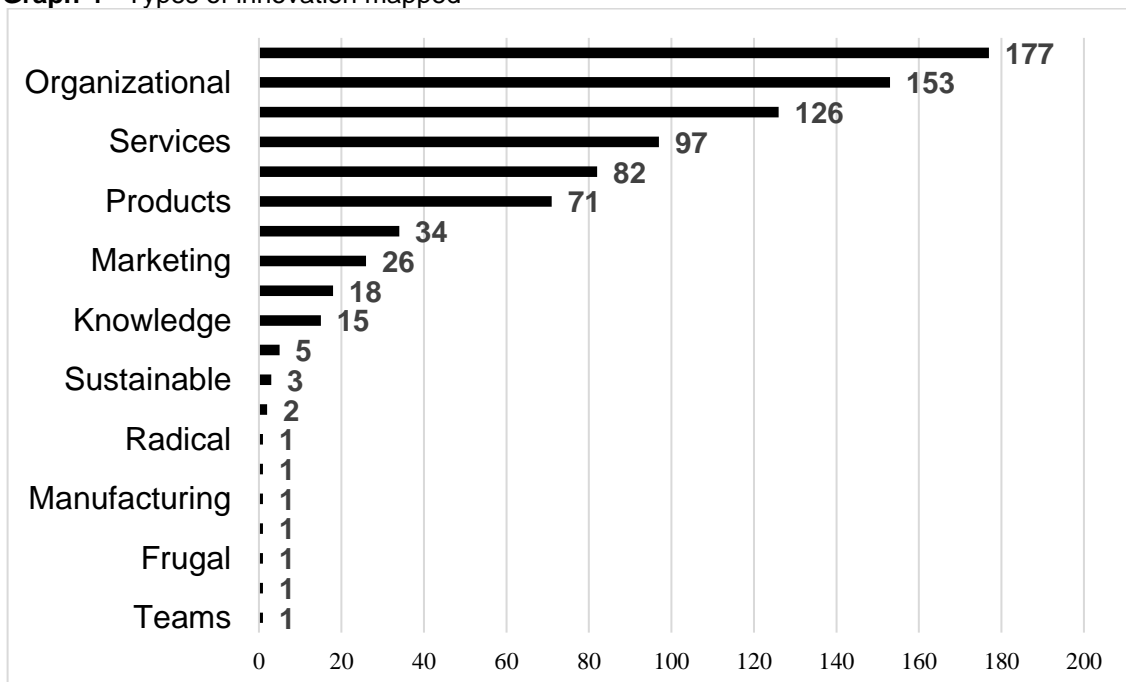
Graph 3 - Year of publication of the analysed studies



Graph 3 indicates that there is a concentration of studies in the last five years, with a steep increase in 2019 that tends to continue in 2020. Furthermore, that SLR in innovation are studies that are being carried out in the last two decades, with a marked growth noted in the past two years. In the years 2019 and 2020, 42,99% of the analysed studies were published.

In sequence, the focuses of the analysed studies on innovation are presented in Graph 4.

Graph 4 - Types of innovation mapped



This last graph shows that among the types of innovation examined, topics on organisational, services, products, marketing, and knowledge predominated. In other words, 80,09% of the analysed articles reported a focus on process innovation and 69,23% on organisational innovation, followed by 57,01% on technological innovation. Therefore, it is clear that several articles analysed addressed more than one type of innovation. Innovation in processes, organisation, and technologies has been the most prestigious approach in the scientific innovation literature analysed.

These findings establish a trend towards incremental innovations (SOUTO, 2015), where small changes can provide different results in the most diverse application contexts of innovation. Changes in business models, digitization, process virtualization, collaborative platforms and co-creation become especially relevant artifacts to generate progress for organisations. These premises are in line with market trends, scenarios of the global crisis caused by economic, health, and climate change aspects. A difficult scenario tends to create adaptive, flexible, resilient organisations capable of promoting changes based on creativity and investments in different alternatives.

Right after Table 2, it presents the facilitators and hinders of engagement with innovation.

Table 2 - Facilitators and hindrances for engaging with innovation (continua)

Category	Accelerators and Facilitators	Inhibitors, Barriers, and Blockers
Innovation in the individual context	<ul style="list-style-type: none"> - Collaborative processes - Access to knowledge - Employees who become entrepreneurs (with characteristics that identify innovation, take risks, are proactive) - Planned behavior - Innovative behavior - Social learning - Consumer perception - Trust between actors - Collective learning - Transparency of information - Individual employee initiatives - Accumulated experiences - Specialization - Employee commitment - Training of business, government and society actors 	<ul style="list-style-type: none"> - Ignorance of digital technologies - No access to digital technologies - Absence of incentives for the development of entrepreneurial employees - Lack of perception by the commercial customer segment regarding the value of sustainability initiatives - Lack of substitute alternatives - Neglecting people's behavior - Remuneration system - Lack of confidence - Communication problems - Absence of qualified people - Absence of environment and team spirit - Resistance - Mistrust

Table 2 - Facilitators and hindrances for engaging with innovation (continuação)

Category	Accelerators and Facilitators	Inhibitors, Barriers, and Blockers
Innovation in the context of technology	<ul style="list-style-type: none"> - Technological information - Technological innovations that emerge in everyday life - Patent bank - Sustainable technologies - Structures for the application of digital technologies - internet support, database, cloud data (to refine tourism, marketing, management, finance, etc.) - Information Technology - Innovation in packaging (safety, sustainability, communication) - Product quality - Cost 	<ul style="list-style-type: none"> - Lack of access to new technologies - Lack of technological infrastructure - Absence of social media dialogue strategies with customers. - Complex nature of digital services - Technological uncertainty
Innovation in the context of the product	<ul style="list-style-type: none"> - Logistics 4.0 - Cost, time, and quality 	<ul style="list-style-type: none"> - High costs - Low returns before scalability - Consumer distrust - Customer and user complaints - Costs of rapid product development - Uncertainty of demands - Trade barriers - Retail acceptance of innovation - Bureaucracy - Hierarchies - Time-consuming internal processes - Ignorance of the innovation process - Conservative strategies - Fads - Social pressures - Short-term market view - Absence of strategies compatible with consumption trends - Market barriers - Search for immediate results
Innovation in the context of processes	<ul style="list-style-type: none"> - Companies accept lower profits and profit margins - Performance measures - Implementing strategic alliances - Identification with the community - Long-term vision in family succession - Openness given by family businesses to innovative processes - Companies that accept consultancy as a driver of success - Innovative management techniques - Research and Development - Innovation performance management - Management and organisational marketing - Organisational culture for learning and collaboration - Innovation management with holistic management - Management Information System - Management strategies and practices - Sustainable business culture - Culture for innovation - Collaborative organisational culture - Organisational structure 	<ul style="list-style-type: none"> - Lack of data accuracy - Limited resources - Linear production system - Absence of sustainable production systems - Organisational configuration - Organisational culture not favorable to the learning and innovation process - Little investment in training - Conservative management models - Lack of expertise for innovation - Ignorance of the types of innovation - Lack of legitimacy - Difficulties to activate co-creation - Competitive intensity - Organisational complexity - Excessive controls - Divergent organisational tools - Governance - Organisational rigidity
Innovation in the context of strategy	<ul style="list-style-type: none"> - Companies accept lower profits and profit margins - Performance measures - Implementing strategic alliances - Identification with the community - Long-term vision in family succession - Openness given by family businesses to innovative processes - Companies that accept consultancy as a driver of success - Innovative management techniques - Research and Development - Innovation performance management - Management and organisational marketing - Organisational culture for learning and collaboration - Innovation management with holistic management - Management Information System - Management strategies and practices - Sustainable business culture - Culture for innovation - Collaborative organisational culture - Organisational structure 	<ul style="list-style-type: none"> - Lack of data accuracy - Limited resources - Linear production system - Absence of sustainable production systems - Organisational configuration - Organisational culture not favorable to the learning and innovation process - Little investment in training - Conservative management models - Lack of expertise for innovation - Ignorance of the types of innovation - Lack of legitimacy - Difficulties to activate co-creation - Competitive intensity - Organisational complexity - Excessive controls - Divergent organisational tools - Governance - Organisational rigidity
Innovation in the organisational context	<ul style="list-style-type: none"> - Companies accept lower profits and profit margins - Performance measures - Implementing strategic alliances - Identification with the community - Long-term vision in family succession - Openness given by family businesses to innovative processes - Companies that accept consultancy as a driver of success - Innovative management techniques - Research and Development - Innovation performance management - Management and organisational marketing - Organisational culture for learning and collaboration - Innovation management with holistic management - Management Information System - Management strategies and practices - Sustainable business culture - Culture for innovation - Collaborative organisational culture - Organisational structure 	<ul style="list-style-type: none"> - Lack of data accuracy - Limited resources - Linear production system - Absence of sustainable production systems - Organisational configuration - Organisational culture not favorable to the learning and innovation process - Little investment in training - Conservative management models - Lack of expertise for innovation - Ignorance of the types of innovation - Lack of legitimacy - Difficulties to activate co-creation - Competitive intensity - Organisational complexity - Excessive controls - Divergent organisational tools - Governance - Organisational rigidity

Table 2 - Facilitators and hindrances for engaging with innovation (conclusão)

Category	Accelerators and Facilitators	Inhibitors, Barriers, and Blockers
Innovation in the context of the network	<ul style="list-style-type: none"> - Supply chain - Efficiency of public services - Investment in urban infrastructure - Innovation ecosystems (actors, interactions, and mechanisms) - Supply chain integration and coordination - Reverse logistics (use of technology and sustainability as the main strategy for creating value for commercial consumers) 	<ul style="list-style-type: none"> - Distance from university research to market reality - Insecurity of digital systems - Little integration between the actors of the system. - Polarization of opinions in the productive sector - Fragility of interorganisational networks - Integration processes - Interest conflicts - Opportunisms - Creation of obstacles - Lack of relationship between actors - Privatization and commercialization of research results - Isolation from government, universities that have no entrepreneurial bias and industries - Difficulty activating the triple helix - Regulations - Contractual clauses in contracts - Contradictory agendas - Complexity - Fragmented management - Institutional uncertainty - Limited resources - Restricted resources - Financial restrictions - Absence of strategies to access resources - Lack of capabilities to manage resources - Lack of professionalization of access to digital media - Lack of institutional infrastructure - Absence of studies that signal trends - Conceptual divergence - Uncertainty - Marketing resources - Difficulty in accessing finance
Innovation in the institutional context	<ul style="list-style-type: none"> - External changes - Ambiguous and uncertain environments - Environment that encourages sustainability - Public policies focused on the sustainability and productivity of the territory - Patent registration - Government, university and company relationship (triple helix) - Renewable energy - Lean philosophy (search for efficiency and effectiveness) 	
Innovation in the context of available resources	<ul style="list-style-type: none"> - Innovation research funding - Professional management in terms of innovation - Information Technology Structure 	

Table 2 shows both the main facilitators and the hindrances of innovations. Given the great diversity of aspects that have been mapped, the code creation exercise allowed the creation of a *posteriori* analysis categories, which group the main findings, namely innovation in the individual context, in the context of technology, in the context of the product, of the processes, strategy, organisation, network, institutions, and available resources. It is noted that the individual context assumes an important representativeness both as a facilitator and a hindrance to innovation. People can be an innovation driver (SHIPTON *et al.*, 2005), an innovation trigger, or a barrier that creates difficulty for innovation. This allows us to understand that innovative organisations invest substantially in people, value people, motivate people, stimulate

the existence of creative and proactive processes (THOMPSON, 2004); they create synergies between people, promote internal campaigns to accelerate innovation based on people's skills, develop people's learning, and inspire people to generate insights that revolutionize organisations (MUMFORD, 2000). Soon after, in Table 3, the main agents supporting innovations are presented. These can also be known as enhancers, mechanisms for promoting innovation, promoting agents, or facilitators of innovations in organisations.

Table 3 - Main agents supporting innovations

Category	Supporting Agents	Category	Supporting Agents
Context	<ul style="list-style-type: none"> - Government actions - Favorable institutional environment for innovation - Interaction platforms 	Technology	<ul style="list-style-type: none"> - Big data - Blockchain technology - Digital technologies - Technology transfers - Technology parks
Stakeholders	<ul style="list-style-type: none"> - Local actors - Innovation clusters - Community 	Networks	<ul style="list-style-type: none"> - Knowledge ecosystems - Innovation ecosystems - Networks - Cooperation networks - Research networks - Interorganisational networks - Social networks - Triple helix active
Activators	<ul style="list-style-type: none"> - Government and private funding notices - Teams - Cooperation structures - Sectoral studies - Integration - Networking - Bodies that manage technology transfer - R&D - Partnerships - Favorable processes - Propensity for cooperation - Learning routines 	Policies	<ul style="list-style-type: none"> - Sustainability policy - Innovation policies

Table 3 groups the supporters of innovations in the analysis categories: context, stakeholders, activators, technologies, networks and policies. It is noted that the artifacts that activate innovation, whether through fostering, cooperation, partnerships, synergies, internal routines, integration, as well as networks are the elements that were most evidenced in previous studies. This allows us to infer that innovation is a collaborative process and that it is supported by systemic structures, structures of

integration, and continued interaction. It is these structures that tend to represent a noticeable contribution to the success of innovation, supported by appropriate technologies. Table 4 presents the main sectors/segments/subareas that are investing in innovation, based on what was reported in the innovation SLRs analysed.

Table 4 - Main sectors/segments/subareas surveyed in the analysed studies

Category	Supporters	Category	Supporters
Sustainability	<ul style="list-style-type: none"> - Eco Innovations - Sustainable innovations - Sustainable business models - Environmental management - Triple bottom line - Sustainable labels 	Innovation accelerators	<ul style="list-style-type: none"> - Promotion of entrepreneurship - Public administration - Organisational learning - Internal capabilities - Intrapreneurship
Synergies	<ul style="list-style-type: none"> - Production and supply chains - Co-creation - University and industry collaboration - Business Consulting 	Structures	<ul style="list-style-type: none"> - Smart cities - Lean culture - Digital transformation of business - Triple helix - Innovation ecosystems - Business models
Organisations	<ul style="list-style-type: none"> - Startups - Universities - Health system - Partnership between universities and industries - Fintechs - Family businesses - Technology-based companies - Production chains 	Process	<ul style="list-style-type: none"> - Management - Governance - Product development - Process dynamics - Determinants of innovation - Lean - Social media

Table 4 shows that sustainability has gained notoriety in the context of innovation. As such, many studies have directed its scope to the scope of sustainability and its specificities. Further, the organisational models in which this innovation is promoted are notable. However, the success of innovation is directly associated with processes, structures, and accelerated processes, functions that are capable of promoting synergies that activate the network. That success also depends upon the stakeholders who operate those networks producing products, services, and knowledge.

5 DISCUSSION

In this section, the objective is to discuss the main findings of the study and present a framework proposal that synthesizes the analysis of the research carried out. The data demonstrate that the innovation habitat and the organisational cultural are

essential and constitute premises and/or conditions for the effective adoption and diffusion of innovation in different organisational and institutional contexts. In this sense, the innovation environment that comprises innovation ecosystems with their respective mechanisms, makes up an environment conducive to the generation, adoption, and diffusion of different types of innovation in the most diverse market segments.

This entire arsenal to foster innovation is supported by technologies that shorten distances, bring stakeholders closer together, create synergies, activate new processes, and make the types of innovation in processes, organisations, and technologies more significant for the context of innovation. Although no specific theory has been mapped that supports the systematic innovation reviews analysed, it is understandable that the theory that best supports the investigated context is disruptive innovation. The Theory of Disruptive Innovation is the phenomenon by which an innovation transforms an existing market or sector via the introduction of simplicity, convenience, and accessibility in companies where complication and high cost are the status quo (CHRISTINSEN, 1997). In order to surprise the markets, companies seek to redefine the context by introducing a new product or idea (CHRISTENSEN; OVERDORF, 2000). These assumptions of the theory of disruptive innovation are constantly present in the systematic reviews evaluated. Although it was not mentioned repeatedly, the in-depth analysis refers to the precepts of this theory, and that makes this an important study finding. Furthermore, it is well known that innovation dialogues with Resource Based View, the theory of capabilities, the theory of signaling, the theory of social capital, the contingency theory, the theory of inventive problem solving, and the theory of factor motivation.

On the other hand, it is important to highlight that a systematic literature review is not necessarily concerned with mapping the theories that previous studies have addressed. Perhaps because of this, the element of theory addressed was evaluated in this study in a superficial way. Few studies have alluded to these aspects, such as Kuester, Konya-Baumbach, and Schuhmacher (2018), Chen, Liu, and Cheung (2014), De Jesus Pacheco *et al.* (2019), Abukhait and Pillai (2017), Gomes, Facin, and Horneaux Junior (2019), Binder (2019), and Montgomery, Squires, and Syed (2018). Another observation is the misuse of the term “theory”; some authors of previous studies reported on theoretical approaches or on subjects that were not consolidated

to warrant being named theories. This highlights the lack of academic maturity of the writers and presents a great opportunity for advances in innovation studies, which can appropriate administrative theories to generate relevant insights for the scientific progress of innovation.

Previous studies are of varying scope. Among these scopes, we highlight the investigation of disruptive innovation theory (MONTGOMERY; SQUIRES; SYED, 2018); basic innovations (HOSSAIN, 2018); social businesses (Akter *et al.*, 2019); business model innovation and validation (SILVA *et al.*, 2019); supply chain innovation (JAJJA *et al.*, 2019); the innovation capacity of the supplier (SIKOMBE; PHIRI; WRIGHT, 2019) and the small company (SAUNILLA, 2019); innovation and sustainability (LAZARETTI, *et al.*, 2019); the resources and resilience of innovative companies (SABAHI; PARAST, 2019); green innovation in value creation (SATTA; PAROLA, 2019); technology innovation (FREITAG *et al.*, 2019); the accelerators of innovation (CRISAN *et al.*, 2019); agents of social innovation (Adro and Fernandes, 2020); regional innovation strategies (RACHÃO *et al.*, 2019); innovative strategies in the context of corporate social innovations (DIONÍSIO; VARGAS, 2019); open innovation and co-creation (LOUREIRO; ROMERO; BILRO, 2019); open innovation in family businesses (GJERGJI *et al.*, 2019); commercialization and internationalization of innovation (BRACIO; SZARUKI, 2019); factors that enable collaborative innovation (SJÖÖ; HELLSTRÖM, 2019); management innovation (CERRUTI; TAVOLETTI; GRIECO, 2019); innovation processes in companies (TOMO *et al.*, 2019); innovation and triple helix (GALVÃO *et al.*, 2019); innovation ecosystems (GOMES *et al.*, 2016); a company's innovation capabilities (SOLAIMANI *et al.*, 2019); innovation in tourism (PIKKEMAAT; PETERS; BICHLER, 2019); radical innovation (GOMES; FACIN; HORNEAUX JUNIOR, 2019); technologies to promote innovations (MAGISTRETTI; DELL'ERA; VERGANTI, 2020); the synergy between innovation and lean philosophy in the context of services (LINS; ZOTES; CAIADO, 2019); the strategic management of technological innovation (DIAS; FERREIRA, 2019); blockchain technology (GROVER; JANSSEN; KAR, 2019); innovation and food (CAPPELLESSO; THOMÉ, 2019); digital transformation technologies (HAUSBERG *et al.*, 2019); among others.

This diversity shows that the construct innovation has extensive reach in scientific studies. It allows an emphasis on studies focused on tangible objects, such as product innovation and eco-innovations. But it also contributes substantially to the

improvement of relevant intangible aspects in the entrepreneurial context, such as, for example, the emphasis on studies on innovative capabilities, responsible innovation, technological capability, etc.

Therefore, it is notable that, although there are several published studies that systematise previous studies on innovations, the scopes addressed are very different. For example, Galvagno and Dalli (2014) present value co-creation, and Smith *et al.* (2008) offer research about the topic organisation's ability to manage innovation. In particular, they allow us to understand the originality of the present study, which seeks to show an overview of the most explored types of innovation in the literature. It should be noted that innovations in processes and organisations were highlighted. Associated with innovation are the many new business models in force (social businesses, fintechs, startups, sharing, leasing, blockchain, gigantic databases, and consumer monitoring technologies) promoted through access to websites and purchases made.

The most notable sectors/segments/areas in innovation studies are highlighted as follows: sustainability (via eco-labels, eco-efficiency, saving natural resources, green public procurement, sustainable entrepreneurship), health, sharing, collaborative models (co-creation, innovation open network, network innovation), cooperatives, tourism, industrial operations, the service sector supported by technologies, the structure of innovation ecosystems, social media, innovative business models (circular economy, leasing, sharing, adoption of Lean culture, among others). This evidence points to the versatility of innovation, which focuses on the materiality of natural resources, the fragility of life in the area of health. It highlights the aspects of entrepreneurship and leadership in companies and the innovation that fits in the moment of leisure in tourism enterprises. It fosters innovation in the operations of industries and encourages a culture of waste reduction in contexts of support structures for the service sector. This capillarity of innovation studies makes the theme remarkable; it is promising to think about future studies aimed at solving real problems in society when those goals are supported by the scientific literature on innovation theory.

Finally, what is new in this study is the mapping of an original panorama of previous studies, as recorded in Figure 1, that presents the framework summarising the main findings of our study.

Figure 1 - Framework of the key aspects addressed in the SLRs

<p><u>Most representative journals:</u></p> <ul style="list-style-type: none"> - Journal of Cleaner Production - Technology Forecasting and Social Change - International Journal of Project Management - International Journal of Production Research - Technology in Society <p><u>Publications concentrated in the years</u> 2017, 2018, and 2019 2018 e 2019</p>	
<p><u>More representative innovations</u></p> <ul style="list-style-type: none"> - Lawsuit - Organisational - Technological - Services - Management - Products 	<p><u>Emerging Categories of Facilitators and Difficulties</u></p> <ul style="list-style-type: none"> - Innovation in the individual context - Innovation in the context of technology - Innovation in the context of the product - Innovation in the context of processes - Innovation in the context of the strategy - Innovation in the organisational context - Innovation in the context of the network - Innovation in the institutional context - Innovation in the context of available resources
<p><u>Supporters of Innovations</u></p> <ul style="list-style-type: none"> - Context - Stakeholders - Technology - Network - Activators - Policies 	<p><u>Representative Sectors / Segments in Innovation Research</u></p> <ul style="list-style-type: none"> - Sustainability - Accelerators of innovation - Synergies - Structures - Organisations - Lawsuit

Figure 1 shows the most relevant informations about our synthesis. Based on a thorough analysis of the limitations of previous studies, as well as its recommendations, this study presents some propositions that illustrate promising avenues for the advancement of studies in innovation.

Proposition 1: Adoption of process innovations, namely telemedicine and sustainable business models in uncertain scenarios.

A scenario of social isolation, diverse instabilities, concern for social inclusion, the democratization of access, and access to information for the care of life and health make technological artifacts relevant subsidies for human survival (KAMAL; SHAFIQ; KAKRIA, 2020). Innovating in processes becomes a promising path, as is the case with telemedicine. Telemedicine connects patients and medical staff (KAMAL; SHAFIQ; KAKRIA, 2020). It allows obtaining a second opinion, as well as personalized assistance for chronic patients, the elderly, and high-risk pregnant women (VINOETHINI *et al.*, 2020). It translates into process changes, which supply basic needs in remote geographical spaces (ZOB AIR; SANZOGNI; SANDHU, 2020). It makes information

accessible that was once accessible only to elite users. It corroborates with the goal of ensuring a healthy life and promoting well-being for all, at all ages, provided for in the SDGs (2015). It is a process change that plays a key role in the transition to a network model that favors prevention and personalization of care (PELTIER; DAHL; SWAN, 2020). Therefore, patients will be engaged to monitor indicators about their health, an action essential for their treatment (VINOTHINI *et al.*, 2020). In this way, they generate an empowerment that allows doctors to be released to care for other patients more effectively and remotely (KAMAL; SHAFIQ; KAKRIA, 2020).

Proposition 2: Consumer by consumer business models are facilitators of innovations in times of global crisis.

In times of crisis, adaptation, resilience, flexibility, tolerance, creativity, and the ability to adapt one's business to delivery strategies, virtual multi-platform marketing, and the generation of partnerships that strengthen are essential skills (PELTIER; DAHL; SWAN, 2020). Crises offer opportunities to shift businesses into digital formats. They demand investment in audiovisuals communicated on social media (DAVIS *et al.*, 2019). They become more attractive when they offer several options for online payment and shipping. They require investment in all stages that are part of the face-to-face sale, that is, from product presentation to post-sale. However, the steps are communicated via the online system, using videos, photos, or video calls.

Innovation accelerators are considered valuable resources to boost the company's results (OZORHON; ABBOTT; AOUAD, 2014). They may include robotics solutions for cognitive and security systems (PAROLIN; VASCONCELOS; BORDINGNON, 2006). This can keep the company competitive in the market, ensuring more agility, efficiency, and productivity for business (AMORIN; CARVALHO; MADEIRA, 2020). It is necessary to recognize the strategic value of accelerators so that they can support the transformation that the company seeks (PENG, 2020). Accelerators can create an ideal system or environment for the development, growth, and insertion of innovation (ZOSSOU *et al.*, 2009). The accelerators propose to contribute to the construction of innovation to deal with risks and uncertainties, refining the idea of the product or service and business orientation to know how to take advantage of each process and product technology (DESBARATS, 2017).

Proposition 3: Sustainable innovations and eco-innovations are promising in emerging business models in times of climate crisis.

The limits of the ecosystem motivate organisations to adopt eco-innovations and sustainable innovations to reduce the use of resources in production systems (PINSKI; KRUGLIANSKAS, 2017). There is a concern with the establishment of indicators that measure ecosystem resilience, quality of life, and economic performance (VEIGA, 2010). Furthermore, traditional models based on pollution control generate insufficiency in solving problems, especially climate change (RIBEIRO; KRUGLIANSKAS, 2011). The circular and sustainable business models appear as the opportunity to promote progress. They are supported by the perspective of sustainable innovation and eco-innovation.

Proposition 4: Innovations mediated by technologies are activators of emerging businesses in times of economic crisis.

Technology-mediated innovations impact cost savings (MOSTAGHEL, 2016). They make processes more agile. Digital transformations replace repetitive tasks performed manually (HAUSBER *et al.*, 2019), so trained professionals can give priority to the core business. There is more space to think, to create, to perform differently, and to transform businesses so they generate value for customers. Mobility increases through technologies supported by cloud computing. Remote work becomes a competitive advantage. Knowledge about the customer, communication, and the offer of personalized products compatible with the needs, desires, and profiles of customers is now mediated by technological artifacts. The generation of big data (CAPPELLESSO; THOMÉ, 2019), of long historical series is also essential for more assertive decision making and control of results. All of this is supported by efficient and innovative technologies. Finally, datacenters as a service, automatic backups and several layers of protection ensure that data is virtually incorruptible (ARUN; KUMAR, 2016). Backup in the cloud is another great ally of digitalized businesses, as it prevents the loss of sensitive information for decision making, even if an unforeseen situation happens (LI *et al.*, 2018). Finally, technologies contribute to the generation of quality and standardization, and they can also make products cheaper when compared to scale production.

Proposition 5: Difficulties in adhering to innovations are overcome by accelerators of innovations in crisis contexts and Future Earth Knowledge-Action Network on Systems. The accelerators of innovations are capable of providing paths, strategies, tools, and alternatives to overcome the difficulties of implementing

innovations (ALBORS-GARRIGOS, 2020). A suggestive example is the Future Earth Knowledge-Action Network on Systems (SHRIVASTAVA; RAIVIO; KASUGA, 2016), which addresses systems, processes, and conditions of production and consumption that generate well-being and little socio-environmental impact (SARKIS *et al.*, 2020).

6 FINAL REMARKS

The objective of this study was to analyse the previous innovation publications with regard to the type of innovation, barriers to adoption/implementation, facilitators and supporters, and sectors investigated. The evidence points to a prominence of studies aimed at process and organisational innovations, whose facilitators and barriers can be named by codes based on the dimensions of individual context, technology context, product context, process context, strategy context, organisational context, context of the network, institutional context, and context of available resources. Notoriously, the context, stakeholders, and technological resources are the essential elements to support the adhesion to innovations, having sustainability as the predominant locus of implementation, of the accelerators of innovations, and the synergies required for the success of innovations.

Based on the research evidence, the main theoretical contribution of the study is the development of avenues for advances in innovation studies, based on the most representative findings. This generated five propositions that can be validated in future studies. The practical contribution is to generate a diagnosis of the profile of previous studies of innovation SLRs. These findings, represented in Figure 1, show the key elements that are addressed in the innovation studies and serve as a guideline to establish a current panorama in the area.

The limitations of the research are associated with the large volume of localized materials. A thorough analysis can generate new categories of facilitators, barriers, and supporters of innovation. Especially if developments are made, a deeper understanding of the elements that significantly impact innovation can be generated. As a recommendation for future studies, it is suggested to repeat the same research protocol for theoretical-empirical innovation studies. Then, researchers should compare findings to verify the similarities and differences existing in the context of

systematic literature reviews and in the scope of studies applied to organisational contexts.

REFERENCES

- ADRO, F.; FERNANDES, C.I. Social innovation: a systematic literature review and future agenda research. **Int Rev Public Nonprofit Mark**, v. 17, p. 23–40, 2020. <https://doi.org/10.1007/s12208-019-00241-3>.
- AKTER, S.; JAMAL, N.; ASHRAF, M. M.; MCCARTHY, G.; VARSHA, P. The Rise of the Social Business in Emerging Economies: A New Paradigm of Development. **Journal of Social Entrepreneurship**, p. 1–18, 2019. <https://doi.org/10.1080/19420676.2019.1640772>
- ALBLOOSHI, M.; SHAMSUZZAMAN, M.; HARIDY, S. The relationship between leadership styles and organisational innovation: A systematic literature review and narrative synthesis. **European Journal of Innovation Management**, v. ahead-of-print No. ahead-of-print, 2020. <https://doi.org/10.1108/EJIM-11-2019-0339>
- ALBORS-GARRIGOS, J. Barriers and enablers for innovation in the retail sector: Co-innovating with the customer. A case study in grocery retailing. **Journal of Retailing and Consumer Services**, v. 55, 102077, 2020. <https://doi.org/10.1016/j.jretconser.2020.102077>
- ABUKHAIT, R.; PILLAI, R. Do employee resilience, focus on opportunity, and work-related curiosity predict innovative work behaviour? the mediating role of career adaptability. **International Journal of Business Innovation and Research**, v.13, n. 1, p. 92 – 111, 2017.
- AMORIM CARVALHO, J.C.; MADEIRA, M.J. Innovation as a driver for organisational strategy. **International Journal of Innovation and Learning**, v. 27, n. 2, p. 159-174, 2020. <https://doi.org/10.1504/IJIL.2020.105082>
- ARUN, R.; KUMAR, R. An evaluation of protection problems for cloud computing. **International Journal of Pharmacy and Technology**, v. 8, n. 4, p. 19429-19443, 2016.
- BALDWIN, J.; LIN, Z. Impediments to advanced technology adoption for Canadian manufacturers. **Research Policy**, v. 31, n. 1, p. 1–18, 2002. [https://doi.org/10.1016/S0048-7333\(01\)00110-X](https://doi.org/10.1016/S0048-7333(01)00110-X)
- BASON, C.; AUSTIN, R.D. The right way to lead design thinking. **Harvard Business Review**, p. 82-91, March-April, 2019.
- BECK, M.B.; VILLARROEL WALKER, R. Nexus security: governance, innovation and the resilient city. **Front. Environ. Sci. Eng.** v. 7, p. 640–657, 2013. <https://doi.org/10.1007/s11783-013-0549-5>.
- BENITEZ, G.B.; AYALA, N.F.; FRANK, A.G. Industry 4.0 innovation ecosystems: An evolutionary perspective on value cocreation. **International Journal of Production Economics**, v. 228, 107735, 2020.
- BINDER, P. A network perspective on organizational learning research in tourism and hospitality: A systematic literature review. **International Journal of Contemporary Hospitality Management**, v. 31, n. 7, p. 2602-2625. <https://doi.org/10.1108/IJCHM-04-2017-0240>

- BOGERS, M.; LHUILLERY, S. A Functional Perspective on Learning and Innovation: Investigating the Organization of Absorptive Capacity. **Industry & Innovation**, v. 18, n. 6, p. 581–610, 2011. <https://doi.org/10.1080/13662716.2011.591972>
- BOONS, F., LÜDEKE-FREUND, F. Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. **Journal of Cleaner Production**. 45, p. 9-19, 2013. <https://doi.org/10.1016/j.jclepro.2012.07.007>
- BRACIO, K.; SZARUKI, M. Commercialization of innovations through internationalization: a systematic literature review. **Business: Theory and Practice**, v. 20, p. 417-431. <https://doi.org/10.3846/btp.2019.39>
- BREZNIK, L., D.; HISRICH, R. Dynamic capabilities vs. innovation capability: are they related? **Journal of Small Business and Enterprise Development**, v. 21, n. 3, p. 368–384, 2014. <https://doi.org/10.1108/JSBED-02-2014-0018>
- CAJAIBA-SANTANA, G. Social innovation: Moving the field forward. A conceptual framework. **Technological Forecasting and Social Change**, v. 82, n. 1, p. 42-51, 2014. <https://doi.org/10.1016/j.techfore.2013.05.008>
- CAPPELLESSO, G.; THOMÉ, K.M. Technological innovation in food supply chains: systematic literature review. **British Food Journal**, v. 121, n. 10, p. 2413-2428, 2019. <https://doi.org/10.1108/BFJ-03-2019-0160>
- CERRUTI, C.; TAVOLETTI, E.; GRIECO, C. Management consulting: a review of fifty years of scholarly research. **Management Research Review**, v. 42, n. 8, p. 902-925, 2019. <https://doi.org/10.1108/MRR-03-2018-0100>
- CHEN, H.; LIU, H.; CHEUNG, H. Radical innovation, market forces, political and business relationships: A survey of Chinese firms. **Chinese Management Studies**, v. 8, n. 2, p. 218-240, 2014. <https://doi.org/10.1108/CMS-02-2014-0038>.
- CHIU, S.-H.; LIN, T.-Y. Evaluation of regional knowledge innovation system in China: An economic framework based on dynamic slacks-based approach. **Journal of Asian Finance, Economics and Business**, v. 6, n. 3, p. 141-149, 2019. <https://doi.org/10.13106/jafeb.2019.vol6.no3.141>
- CHRISTENSEN, C. M. The innovator's dilemma: when new technologies cause great firms to fail. New York: Harvard Business Review Press. 1997.
- CHRISTENSEN, C. M.; OVERDORF, M. Meeting the Challenge of Disruptive Change. **Harvard Business Review**, v. 78, n. 2, p. 66-76, 2000.
- CRİŞAN, E.L.; SALANŢĂ, I.I.; BELEIU, I.N. *et al.* A systematic literature review on accelerators. **J Technol Transf**, 2019. <https://doi.org/10.1007/s10961-019-09754-9>
- CZAKON, W.; NIEMAND, T.; GAST, J.; KRAUS, S.; FRÜHSTÜCK, L. Designing cooperation for radical innovation: An experimental study of managers' preferences for developing self-driving electric cars. **Technological Forecasting and Social Change**, v. 155, 119992, 2020. <https://doi.org/10.1016/j.techfore.2020.119992>

- DAVIS, E.C.; MENSER, T.; CERDA JUAREZ, A.; TOMASZEWSKI, L.E.; KASH, B.A. Examining healthcare systems: a market analysis for Kenya. **European Journal of Training and Development**, v. 43, n. 1/2, pp. 2-20, 2019. <https://doi.org/10.1108/EJTD-06-2016-0041>
- DE JESUS PACHECO, D. A.; TEN CATEN, C. S., JUNG, C. F.; NAVAS, H. V. G.; CRUZ-MACHADO, V. A.; TONETTO, L. M. State of the art on the role of the Theory of Inventive Problem Solving in Sustainable Product-Service Systems: Past, Present, and Future. **Journal of Cleaner Production**, v. 212, p. 489–504, 2019. <https://doi.org/10.1016/j.jclepro.2018.11.289>.
- DENYER, D.; TRANFIELD, D. Producing a Systematic Review. In: BUCHANAN; D. AND BRYMAN, A., Eds. **The Sage handbook of organizational research methods**. London: Sage, p. 671-689, 2009.
- DESBARATS, G. Silo-Busting to create great experiences for Internet of Things. **Design Management Review**, Boston, v. 28, Issue 1, 2017.
- D'ESTE, P.; IAMMARINO, S.; SAVONA, M.; VON TUNZELMANN, N. What hampers innovation? Revealed barriers versus deterring barriers. **Research Policy**, v. 41, n. 2, p. 482–488, 2012. <https://doi.org/10.1016/j.respol.2011.09.008>
- DIAS, C. S. L.; FERREIRA, J. J. What we (do not) know about research in the strategic management of technological innovation? **Innovation**, p. 1–23, 2019. <https://doi.org/10.1080/14479338.2019.1569464>
- DIONISIO, M.; DE VARGAS, E. R. Corporate social innovation: A systematic literature review. **International Business Review**, 101641, 2020. <https://doi.org/10.1016/j.ibusrev.2019.101641>
- DOVEY, K. The role of trust in innovation. **The Learning Organization**, v. 16, n. 4, p. 311-325, 2009. <https://doi.org/10.1108/09696470910960400>
- DUAN, Y.; WANG, W.; ZHOU, W. The multiple mediation effect of absorptive capacity on the organizational slack and innovation performance of high-tech manufacturing firms: Evidence from Chinese firms. **International Journal of Production Economics**, v. 229, 107754, 2020. <https://doi.org/10.1016/j.ijpe.2020.107754>
- EISENHARDT KM; MARTIN JA. The knowledge-based economy: from the economics of knowledge to the learning economy. In: **Employment and Growth in the Knowledge-Based Economy**, Foray, D. and Lundvall, B.A. (eds) OECD, Paris, 2000.
- FENG, C.; MA, R. Identification of the factors that influence service innovation in manufacturing enterprises by using the fuzzy DEMATEL method. **Journal of Cleaner Production**, v. 253, 120002, 2020. <https://doi.org/10.1016/j.jclepro.2020.120002>
- FIALKOWSKI, V.P.; SCIAMANA, J.L.; KISTMANN, V.B. Gestão de design externa como agente propulsor de inovação: um estudo de caso. In: SIMPÓSIO DE GESTÃO DE DESIGN, 6., 2018. [Anais...]. Curitiba, PR: Universidade Federal do Paraná, mar. 2018.
- FREITAG, M.S.B.; CAETANO, M.; ARANTES, F.P; AND PALA, V.A.F. New independent technology-based firms: differences from other NTBFs and future research agenda for technology innovation management. **International Journal of Entrepreneurship and Innovation Management**, v. 23, n. 1, p. 46, jan. 2019. <https://doi.org/10.1504/IJEIM.2019.10016786>

GALVAO, A.; MASCARENHAS, C.; MARQUES, C.; FERREIRA, J.; RATTEN, V. Triple helix and its evolution: a systematic literature review. **Journal of Science and Technology Policy Management**, v. 10, n. 3, p. 812-833, 2019. <https://doi.org/10.1108/JSTPM-10-2018-0103>

GJERGJI, R.; VISCONTI, F.; LAZZAROTTI, V.; MARCO, T.G. Open innovation in family firms: a systematic literature review. **Management Research**, v. 17, n. 3, p. 304-332, July 2019. <https://doi.org/10.1108/MRJIAM-03-2019-0913>

GOMES, L.A.V.; FACIN, A.L.F.; HORNEAUX JUNIOR, F. Building a bridge between performance management, radical innovation, and innovation networks: A systematic literature review. **Creativity and innovation management**, v. 28, n 4, p. 536-549, Dec. 2019. <https://doi.org/10.1111/caim.12348>

GOMES, L. A. DE V.; FACIN, A. L. F.; SALERNO, M. S.; IKENAMI, R. K. Unpacking the innovation ecosystem construct: Evolution, gaps and trends. **Technological Forecasting and Social Change**, 2016. <https://doi.org/10.1016/j.techfore.2016.11.009>

GROVER, P.; JANSSEN, M.; KAR, A.K. Diffusion of blockchain technology: Insights from academic literature and social media analytics. **Journal of Enterprise Information Management**, v. 32, n. 5, p. 735-757, 2019. <https://doi.org/10.1108/JEIM-06-2018-0132>

GULDMANN, E.; HUULGAARD, R.D. Barriers to circular business model innovation: A multiple-case study. **Journal of Cleaner Production**, v. 243,118160, 2020. <https://doi.org/10.1016/j.jclepro.2019.118160>

HAUSBERG, J.P.; LIERE-NETHELER, K.; PACKMOHR, S. *et al.* Research streams on digital transformation from a holistic business perspective: a systematic literature review and citation network analysis. **J Bus Econ** 89, 931–963, 2019. <https://doi.org/10.1007/s11573-019-00956-z>.

HENRY, C.; FOSS, L.; AHL, H. Gender and entrepreneurship research: A review of methodological approaches. **International Small Business Journal**, v. 34, n. 3, p. 217–241. <https://doi.org/10.1177/0266242614549779>.

HERRERA, M. E. B. Creating competitive advantage by institutionalizing corporate social innovation. **Journal of Business Research**, v. 68, n. 7, p. 1468–1474, 2015. <https://doi.org/10.1016/j.jbusres.2015.01.036>

HÖLZL, W.; JANGER, J. Innovation barriers across firms and countries. WIFO Working Papers. **Wien: Österreichisches Institut für Wirtschaftsforschung**, 2012. p. 426.

HOSSAIN, M. Grassroots innovation: The state of the art and future perspectives. **Technology in Society**, 2018. <https://doi.org/10.1016/j.techsoc.2018.06.008>

JAJJA, M.S.S., ASIF, M., SHAH, S.A.A., AND CHATHA, K.A. Supply chain innovation research: content analysis based review. **Benchmarking: An International Journal**, v. 27, n. 2, p. 666-694, 2019. <https://doi.org/10.1108/BIJ-09-2018-0297>

KAMAL, S.A.; SHAFIQ, M.; KAKRIA, P. Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). **Technology in Society**. 60,101212, 2020. <https://doi.org/10.1016/j.techsoc.2019.101212>

KARLYING, A. **The sources of innovation and creativity**: national center on education and the economy (NCEE) Research Summary and Final Report by Karlyn Adams – July, 2005. Available on: <https://files.eric.ed.gov/fulltext/ED522111.pdf>. Accessed at: 1 maio 2020.

KAUR, P.; DHIR, A.; SINGH, N.; SAHU, G.; ALMOTAIRI, M. An innovation resistance theory perspective on mobile payment solutions. **Journal of Retailing and Consumer Services**, v. 55, p. 102059, 2020. <https://doi.org/10.1016/j.jretconser.2020.102059>

KUESTER, S.; KONYA-BAUMBACH, E.; SCHUHMACHER, M. C. Get the show on the road: Go-to-market strategies for e-innovations of start-ups. **Journal of Business Research**, v. 83, p. 65–81, 2018. <https://doi.org/10.1016/j.jbusres.2017.09.037>

LARSEN, P.; LEWIS, A. How award-winning SMEs manage the barriers to innovation. **Creativity and Innovation Management**, v. 16, n. 2, p. 142–151, 2007. <https://doi.org/10.1111/j.1467-8691.2007.00428.x>

LATUPEIRISSA, G.; ADHARIANI, D. External and internal economic impacts of eco-innovation and the role of political connections: a sustainability Narrative from an Emerging Market. **Journal of Cleaner Production**, 120579, 2020. <https://doi.org/10.1016/j.jclepro.2020.120579>

LAZARETTI, K.; GIOTTO, O.T.; SEHNEM, S.; BENCKE, F.F. Building sustainability and innovation in organizations. **Benchmarking: An International Journal**, v. 27, n. 7, p. 2166-2188, 2019. <https://doi.org/10.1108/BIJ-08-2018-0254>

LECKEL, A.; VEILLEUX, S.; DANA, L.P. Local Open Innovation: A means for public policy to increase collaboration for innovation in SMEs. **Technological Forecasting and Social Change**. 153,119891, 2020. <https://doi.org/10.1016/j.techfore.2019.119891>

LEITE, H.; HODGKINSON, I.R.; GRUBER, T. New development: 'Healing at a distance'—telemedicine and COVID-19. **Public Money and Management**. Article in Press, 2020. <https://doi.org/10.1080/09540962.2020.1748855>

LI, R.; WU, Q.; TAN, Y.; Zhang, J. On the optimal approach of survivable virtual network embedding in virtualized SDN. **IEICE Transactions on Information and Systems**, E101D, n. 3, p. 698-708, 2018. <https://doi.org/10.1587/transinf.2017EDP7291>

LI, D.; ZENG, T. Are China's intensive pollution industries greening? An analysis based on green innovation efficiency. **Journal of Cleaner Production**, v. 259, n. 120901, 2020. <https://doi.org/10.1016/j.jclepro.2020.120901>

LINS, M. G.; ZOTES, L. P.; CAIADO, R. Critical factors for lean and innovation in services: from a systematic review to an empirical investigation. **Total Quality Management & Business Excellence**, p. 1–26, 2019. <https://doi.org/10.1080/14783363.2019.1624518>

LOUREIRO, S. M. C., ROMERO, J., AND BILRO, R. G. Stakeholder engagement in co-creation processes for innovation: A systematic literature review and case study. **Journal of Business Research**, 2019. <https://doi.org/10.1016/j.jbusres.2019.09.038>

MAGISTRETTI, S., DELL'ERA, C., DE MASSIS, A., AND FRATTINI, F. Exploring the relationship between types of family involvement and collaborative innovation in design-intensive firms: insights from two leading players in the furniture industry. **Industry and Innovation**, 1–31, 2019. <https://doi.org/10.1080/13662716.2019.1623762>

- MAGISTRETTI, S.; DELL'ERA, C.; VERGANTI, R. Searching for the right application: a technology development review and research agenda. **Technological Forecasting and Social Change**, 151, 119879, 2020. <https://doi.org/10.1016/j.techfore.2019.119879>
- MAHTO, R.V.; BELOUSOVA, O.; AHLUWALIA, S. Abundance – A new window on how disruptive innovation occurs. **Technological Forecasting and Social Change**, v. 155, n. 119064, 2020. <https://doi.org/10.1016/j.techfore.2017.09.008>
- MALDONADO-GUZMÁN, G.; GARZA-REYES, J.A. Eco-innovation practices' adoption in the automotive industry. **International Journal of Innovation Science**. Article in press, 2020. <https://doi.org/10.1108/IJIS-10-2019-0094>
- MANUAL. OSLO. Department of Psychiatry, University of Oslo, Norway, 1995.
- MEDEIRO, J.F.; RIBEIRO, J.L.D.; CORTIMIGLIA, M. N. Success factors for environmentally sustainable product innovation: a systematic literature review. **Journal of Cleaner Production**, v. 65, p. 76-86, 2014. <https://doi.org/10.1016/j.jclepro.2013.08.035>
- MONTALVO, C. What triggers change and innovation? **Technovation**, v. 26, n. 3, p. 312–323, 2006. <https://doi.org/10.1016/j.technovation.2004.09.003>
- MONTGOMERY, N.; SQUIRES, G.; SYED, I. Disruptive potential of real estate crowdfunding in the real estate project finance industry: A literature review. **Property Management**, v.36, n. 5, p. 597-619, 2018. <https://doi.org/10.1108/PM-04-2018-0032>
- MOSTAGHEL, R. Innovation and technology for the elderly: Systematic literature review. **Journal of Business Research**, v. 69, n. 11, p. 4896–4900, 2016. <https://doi.org/10.1016/j.jbusres.2016.04.049>
- MUMFORD, M. D. Managing creative people: strategies and tactics for innovation. **Human Resource Management Review**, v. 10, n. 3, p. 313–351, 2000. [https://doi.org/10.1016/S1053-4822\(99\)00043-1](https://doi.org/10.1016/S1053-4822(99)00043-1)
- NEELY, A.; HILL, J. **Innovation and business performance**: a literature review. The Judge Institute of Management Studies. University of Cambridge, p.65, 1998.
- OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL. **Transformando nosso mundo**: a agenda 2030 para o desenvolvimento sustentável. Nova York: ONU, 2015.
- OZORHON, B., ABBOTT, C., AND AOUAD, G. Integration and Leadership as Enablers of Innovation in Construction: Case Study. **Journal of Management in Engineering**, v. 30, n. 2, p. 256–263, 2014. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000204](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000204)
- PALMIÉ, M.; WINCENT, J.; PARIDA, V.; CAGLAR, U. The evolution of the financial technology ecosystem: An introduction and agenda for future research on disruptive innovations in ecosystems. **Technological Forecasting and Social Change**, 119779, 2019. <https://doi.org/10.1016/j.techfore.2019.119779>
- PARBOTEEAH, K. P.; HOEGL, M.; MUETHEL, M. Team characteristics and employees' individual learning: a cross-level investigation. **European Management Journal**, v. 33, n. 4, p. 287–295, 2015. <https://doi.org/10.1016/j.emj.2015.02.004>

PAROLIN, S.R.H.; VASCONCELLOS, E.; BORDINGNON, J.A. Barreiras e facilitadores à inovação: o caso Nutrimental S/S. **Revista de Economia Mackenzie**, v. 4, n. 4, p. 12-34, 2006.

PELTIER, J.W.; DAHL, A.J.; SWAN, E.L. Digital information flows across a B2C/C2C continuum and technological innovations in service ecosystems: a service-dominant logic perspective. **Journal of Business Research**. Article in Press, 2020. <https://doi.org/10.1016/j.jbusres.2020.03.020>

PENG, Y.P. Relationship between job involvement, leader-member exchange, and innovative behavior of public librarians. **Journal of Librarianship and Information Science**, v. 52, n. 2, p. 441-450, 2020. <https://doi.org/10.1177/0961000618810378>

PIETRO-SANDOVAL, V.; JACA, C.; ORMAZABAL, M. Towards a consensus on the circular economy. **Journal of Cleaner Production**, v. 179, p. 605-615, 2018. <https://doi.org/10.1016/j.jclepro.2017.12.224>

PIKKEMAAT, B.; PETERS, M.; BICHLER, B. F. Innovation research in tourism: Research streams and actions for the future. **Journal of Hospitality and Tourism Management**, v. 41, p. 184-196, Dec. 2019. <https://doi.org/10.1016/j.jhtm.2019.10.007>

PINSKY, V.; KRUGLIANKAS, I. Inovação tecnológica para a sustentabilidade: aprendizados de sucessos e fracassos. **Estudos Avançados** 31, n.90, 2017. <https://doi.org/10.1590/s0103-40142017.3190008>

PROKSCH, D.; BUSCH-CASLER, J.; HABERSTROH, M.M.; PINKWART, A. National health innovation systems: Clustering the OECD countries by innovative output in healthcare using a multi indicator approach. **Research Policy**, v. 48, n. 1, p. 169-179, 2019. <https://doi.org/10.1016/j.respol.2018.08.004>

PUSPITA, L.E.; CHRISTIANANTA, B.; ELLITAN, L. The effect of strategic orientation, supply chain capability, innovation capability on competitive advantage and performance of furniture retailers. **International Journal of Scientific and Technology Research**, v. 9, n. 3, p. 4521-4529, 2020.

QI, Y.; MAO, Z.; ZHANG, M.; GUO, H. Manufacturing practices and servitization: The role of mass customization and product innovation capabilities. **International Journal of Production Economics**, v. 228, n. 107747, 2020. <https://doi.org/10.1016/j.ijpe.2020.107747>

RACHÃO, S.; FERNANDES, C.; BREDÁ, Z.; JOUQUES, V. Food tourism and regional development: a systematic literature review. **European Journal of Tourism Research**, v. 21, p. 33-49, March 2019.

RAMPINO, L. The Innovation Pyramid: a categorization of the innovation phenomenon in the product-design field. **International Journal of Design**. Taiwan, v. 5, n. 1, p. 3-16, 2011.

REYNOLDS, J.; HRISTOV, L. Are there barriers to innovation in retailing? **The International Review of Retail, Distribution and Consumer Research**, v. 19, n. 4, p. 317-330, 2009. <https://doi.org/10.1080/09593960903331295>

RIBEIRO, F. M.; KRUGLIANSKAS, I. Aspectos críticos da transição para um modelo de regulação ambiental voltado à sustentabilidade: proposta taxonômica. **Revista Interinstitucional de Psicologia**, v.4, n.SPE, p.122-30, 2011.

- ROSSI, S.; COLICCHIA, C.; COZZOLINO, A.; CHRISTOPHER, M. The logistics service providers in eco-efficiency innovation: an empirical study. **Supply Chain Management: An International Journal**, v. 18, n. 6, p. 583–603, 2013. <https://doi.org/10.1108/SCM-02-2012-0053>
- SABAHI, S.; PARAST, M. M. Firm innovation and supply chain resilience: a dynamic capability perspective. **International Journal of Logistics Research and Applications**, p. 1–16, 2019. <https://doi.org/10.1080/13675567.2019.1683522>
- SANDBERG, B., AARIKKA-STENROOS, L. What makes it so difficult?: a systematic review on barriers to radical innovation. **Industrial Marketing Management**, v. 43, n. 8, 1293–1305, 2014. <https://doi.org/10.1016/j.indmarman.2014.08.003>
- SANTOS, L.L., BORINI, F.M., OLIVEIRA JÚNIOR, M.M. In search of the frugal innovation strategy. **Review of International Business and Strategy**. Article in Press, 2020. <https://doi.org/10.1108/RIBS-10-2019-0142>
- SARKIS, J.; COHEN, M. J.; DEWICK, P.; SCHRÖDER, P. A Brave new world: lessons from the COVID-19 pandemic for transitioning to sustainable supply and production. **Resources, Conservation and Recycling**, 104894, 2020. <https://doi.org/10.1016/j.resconrec.2020.104894>
- SATTA, G.; PAROLA, F. Is tourism going green?: a literature review on green innovation for sustainable tourism. **Tourism Analysis**, v. 24, n. 3, p. 265-280. Jul. 2019. <https://doi.org/10.3727/108354219X15511864843803>
- SAUNILA, M. Innovation capability in SMEs: A systematic review of the literature. **Journal of Innovation & Knowledge**, 2019. <https://doi.org/10.1016/j.jik.2019.11.002>
- SAUSEN, F. P.; ROSSETTO, C. R.; BEHLING, H. P. Tipologias de Inovação: Um Estudo Exploratório em Organizações Empreendedoras. **Revista de Administração IMED**, v. 8, n. 2, p. 183-202, 2018. <https://doi.org/10.18256/2237-7956.2018.v8i2.2969>
- SHAKEEL, J.; MARDANI, A.; CHOFREH, A.G.; GONI, F.A.; KLEMEŠ, J.J. Anatomy of sustainable business model innovation. **Journal of Cleaner Production**, v. 261, n. 121201, 2020. <https://doi.org/10.1016/j.jclepro.2020.121201>
- SHEM S.; MAXWELL A.; PHIRI L. T. W. (Reviewing editor). Exploring tacit knowledge transfer and innovation capabilities within the buyer–supplier collaboration: a literature review. **Cogent Business & Management**, v. 6, n. 1, 2019. <https://doi.org/10.1080/23311975.2019.1683130>
- SHIPTON, H.; FAY, D.; WEST, M.; PATTERSON, M.; BIRDI, K. Managing People to Promote Innovation. **Creativity and Innovation Management**, v. 14, n. 2, p. 118–128, 2005. <https://doi.org/10.1111/j.1467-8691.2005.00332.x>
- SILVA, D.S.; GHEZZI, A.; AGUIAR, R.B.; CORTIMIGLIA, M.N. T. Lean Startup, Agile Methodologies and Customer Development for business model innovation: A systematic review and research agenda. **International Journal of Entrepreneurial Behavior & Research**, v. 26, n. 4, p. 595-628, 2019. <https://doi.org/10.1108/IJEBR-07-2019-0425>
- SHRIVASTAVA, P.; RAVIO, K.; KASUGA, F. *et al.* Future Earth Health Knowledge-Action Network. **Public Health Ver**, v. 37, n. 25. 2016. <https://doi.org/10.1186/s40985-016-0039-y>

SLATER SF; NARVER J. Does competitive environment moderate the market orientation performance relationship? **Journal of Marketing**, v. 58, p. 46-55, 1994. <https://doi.org/10.1177/002224299405800104>

SCHMITZ, A.; URBANO, D.; DANDOLINI, G.A. *et al.* Innovation and entrepreneurship in the academic setting: a systematic literature review. **Int Entrep Manag J**, v.13, p. 369–395, 2017. <https://doi.org/10.1007/s11365-016-0401-z>

SHRIVASTAVA, P.; RAIVIO, K.; KASUGA, F.; TEWKSBURY, J.; HAINES, A.; DASZAK, P. Future earth health knowledge-action network. **Public Health Reviews**, v. 37, n. 1, 2016. <https://doi.org/10.1186/s40985-016-0039-y>

SJÖÖ, K.; HELLSTRÖM, T. University–industry collaboration: a literature review and synthesis. **Industry and Higher Education**, 095042221982969, 2019. <https://doi.org/10.1177/0950422219829697>

SMITH, M.; BUSI, M.; BALL, P.; VAN DER MEER, R. Factors influencing an organisation's ability to manage innovation: a structured literature review and conceptual model. **International Journal of Innovation Management**, v. 12, n. 04, p. 655–676, 2008. <https://doi.org/10.1142/S1363919608002138>

SOLAIMANI, S.; VEEN, J.V.D.; SOBEK II, D.K.; GULYAZ, E.; VENUGOPAL, V. On the application of Lean principles and practices to innovation management: A systematic review. **The TQM Journal**, v. 31, n. 6, p. 1064-1092, 2019. <https://doi.org/10.1108/TQM-12-2018-0208>

SOUTO, J. E. Business model innovation and business concept innovation as the context of incremental innovation and radical innovation. **Tourism Management**, v. 51, p. 142–155, 2015. <https://doi.org/10.1016/j.tourman.2015.05.017>

SU, Y.; HELIAN, Z.; WANG, X. A study on the evaluation of technological innovation capability of regional high tech enterprise based on factor analysis. **BioTechnology: An Indian Journal**, v. 10, n. 9, p. 3096-3103, 2014.

TEECE, D.J. Profiting from technological innovation implications for integration, collaboration, licensing and public policy. **Research Policy**, v. 15, p. 285-305, 1986. [https://doi.org/10.1016/0048-7333\(86\)90027-2](https://doi.org/10.1016/0048-7333(86)90027-2)

TOMO, A.; MANGIA, G.; CONSIGLIO, S.; CANONICO, P. Innovation in knowledge-based professional service firms. an integrated conceptual model. **Technology Analysis & Strategic Management**, p. 1–19, 2019. <https://doi.org/10.1080/09537325.2019.1585801>

THOMPSON, J.L. Innovation through people. **Management Decision**, v. 42, n. 9, p. 1082-1094, 2004. <https://doi.org/10.1108/00251740410565127>

TRANFIELD, D.; DENYER, D.; SMART, P. Towards a methodology for developing evidence: informed management knowledge by means of systematic review. **British Journal of Management**, v. 14, p. 207-222, 2003. <https://doi.org/10.1111/1467-8551.00375>

VEIGA, J. E. da. Indicadores de sustentabilidade. **Estudos Avançados**, v. 24, n.68, p.39-52, 2010. <https://doi.org/10.1590/S0103-40142010000100006>

VINOTHINI, B.; ANITHA, R.; SASIREKHA, S.; MEENAKSHI DHANALAKSHMI, M.; SUPRIYA, U. A suvery report on role of iot in healthcare. **International Journal of Scientific and Technology Research**, v. 9, n. 2, p. 1225-1227, 2020.

WANG, Y.; LI, C.; ZHANG, D.; JIACONG, W.; LIU, Y. A deeper investigation of different types of core users and their contributions for sustainable innovation in a company-hosted online co-creation community. **Journal of Cleaner Production**, 120397, 2020. <https://doi.org/10.1016/j.jclepro.2020.120397>

WANG, Q.; SU, M.; LI, R. Is China the world's blockchain leader?: evidence, evolution and outlook of china's blockchain research. **Journal of Cleaner Production**, v. 264,121742, 2020. <https://doi.org/10.1016/j.jclepro.2020.121742>

WICKI, S.; HANSEN, E.G. Green technology innovation: Anatomy of exploration processes from a learning perspective. **Business Strategy and the Environment**, v. 28, n. 6, p. 970-988, 2020. <https://doi.org/10.1002/bse.2295>

WITTE, E. Power and innovation: a two-center theory. **International Studies of Management and Organization**, v. 7, n. 1, p. 47–70, 1977. <https://doi.org/10.1080/00208825.1977.11656219>

YANG, J.; ZHENG, Y.; GOU, X.; PU, K.; CHEN, Z.; GUO, Q., ...; ZHOU, Y. Prevalence of comorbidities in the novel Wuhan coronavirus (COVID-19) infection: a systematic review and meta-analysis. **International Journal of Infectious Diseases**, v. 96, n. 1137, p.429-430, Jul. 2020. <https://doi.org/10.1016/j.ijid.2020.03.017>

YUAN, Y.; LU, L.Y.; TIAN, G.; YU, Y. Business Strategy and Corporate Social Responsibility. **Journal of Business Ethics**, v. 162, n. 2, p. 359-377, 2020. <https://doi.org/10.1007/s10551-018-3952-9>

ZHANG, Y.; SUN, J.; YANG, Z.; WANG, Y. Critical success factors of green innovation: Technology, organization and environment readiness. **Journal of Cleaner Production**, v. 264, n. 121701, 2020. <https://doi.org/10.1016/j.jclepro.2020.121701>

ZOBAIR, K.M.; SANZOGNI, L.; SANDHU, K. Telemedicine healthcare service adoption barriers in rural Bangladesh. **Australasian Journal of Information Systems**, v. 24, n. 2165, 2020. <https://doi.org/10.3127/ajis.v24i0.2165>

ZOSSOU, E.; VAN MELE, P.; VODOUHE, S. D.; WANVOEKE, J. The power of video to trigger innovation: rice processing in central Benin. **International Journal of Agricultural Sustainability**, v. 7, n. 2, p. 119–129, 2009. <https://doi.org/10.3763/ijas.2009.0438>



Artigo recebido em: 04/02/2021 e aceito para publicação em: 07/06/2021
DOI: <http://dx.doi.org/10.14488/1676-1901.v21i2.4219>